BOARD MEMBER GUIDANCE MANUAL
Our Mission: "To provide the latest information, education, and technical assistance to protect our public waters and improve the quality of life in Minnesota."

The expertise of many individuals from the Minnesota Rural Water Association was utilized to bring together an overview of key elements in this manual. Some of those individuals include: Ruth Hubbard, Don Christianson, Lori Blair, Jennifer Koenig, Jeff Dale, Tim Hagemeier, Dave Neiman, Robyn Hoerr, Mike Roers, and Frank Stuemke.

This manual presents a summary of regulations applicable to water and/or wastewater systems. Should the summarized information in this document be inconsistent with a governing rule or statute, the language of the rule or statute prevails.

Minnesota Rural Water Association would like to thank John Schnickel, Minnesota Department of Health, for his contributions to this manual.

This manual is not intended to provide legal advice. If you need legal advice, you should always consult with your system’s attorney.

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Introduction

This manual is intended to provide information for board members, mayors, council members, and officials of water and/or wastewater systems. This manual is an effort to create an educational tool that will ultimately increase local leadership and the technical, financial, and managerial aspects of the water and/or wastewater system. This manual is designed to provide assistance on technical questions while aiding leaders in their day-to-day administration.

This manual is designed to be comprehensive enough to address most inquiries yet still fit into a briefcase for reference. This format will allow for periodic updates. This manual is an invaluable tool for experienced and newly appointed officials.

As an official of a water and/or wastewater system, you have undertaken a very important role. You can expect many rewarding and challenging experiences that will require you to assume many different roles. What you do now as an official will have a great impact on your system now and for many years to come! It is important that you understand your role and that you are familiar with the many rules and regulations governing your system. Water and wastewater systems can be publicly owned or privately owned. In either case, the decision making process is similar.

For the purposes of this manual, the term “board member” refers to the individual who shares in decision making including board members, directors, council members, mayors, commissioners, and other applicable officials. The term “system” refers to any organization that provides water and/or wastewater services to a group of users.
Chapter 1: Board Responsibility

Board Member Role and Responsibility

As a member of a governing body of a system, you are stewards of your community. You have been entrusted with providing a critical service to the public. The purpose of this manual is to increase your governing skills and your general knowledge on issues that affect your system now and in the future.

Board members have three general responsibilities. Each member of a utility governing board should:

- Learn about the operational requirements of the system.
- Learn about the administration of the system.
- Participate in decision-making in good faith at board meetings.

It is important that board members be informed about the responsibility and authority of the state agency charged with enforcing system requirements. The Minnesota Department of Health administers and enforces requirements of a drinking water system. The Minnesota Pollution Control Agency administers and enforces requirements of a wastewater system. Board members have the ultimate responsibility to ensure that their system follows the state’s laws and cooperates with their state regulatory agency.

Board members are part of a decision-making team. The entire board, not an individual board member, makes decisions about the system. Decisions must be made involving both short term and long term plans. The public are more likely to criticize a board member for not taking action than for making a decision in good faith.

Board members are expected to:

- Attend meetings.
- Be prepared for meetings.
- Represent the public.
- Learn how to fit on the decision-making team.
- Assume leadership roles.
- Maintain high ethical standards.
- Increase their expertise.

The obligations of the board members are to:

- Establish policies.
- Hire, supervise, and evaluate the utility superintendent or manager.
- Secure adequate funds.
- Monitor finances.
- Maintain and update long-range plans.

The governing body of a system works to insure that a sufficient, safe supply of water is provided to the community at a reasonable cost. Generally, any person who has the authority to
affect the safety, quantity, or quality of the treated or delivered water is considered a responsible party. You may be subject to liability claims, even held personally liable, if you have this authority and fail to comply with applicable laws that address public health, safety, and discrimination, whether you are a full time or part time employee, or an unpaid, volunteer board member.

Your best defense against liability is to:
- Stay informed regarding regulations.
- Know the potential liabilities.
- Stay educated about the operations and maintenance of your system.
- Make sure the appropriate safeguards, policies, and procedures are in place.

Types of Authorities

In addition to municipalities, there are other types of authorities which exist that provide water and/or wastewater services.

Joint Powers Board

Minnesota Statutes, Chapter 471.59, allows for a joint exercise of powers. In summary, a joint powers board is two or more governmental units, by agreement entered into through action of their governing bodies and by adoption of a joint powers agreement, may establish a joint board to issue bonds or obligations. In addition, Minnesota Statutes, Chapter 360.42, allows for municipalities to act jointly and provides the framework for which these joint powers must abide.

Subordinate Service District

Minnesota Statutes, Chapter 365A.01, defines a subordinate service district to mean a defined area within the town in which one or more governmental services or additions to town wide services are provided by the town especially for the area and financed from revenues from the area. Minnesota Statutes, Chapter 375B, allows for counties to create subordinate service districts.

Water and Sanitary Districts

Minnesota Statutes, Chapter 116A, allows for county boards, except the seven county metropolitan area, and district courts to authorize all necessary orders for, and cause to be constructed and maintained, public water or sewer systems or combined water and sewer systems. Minnesota Statutes, Chapter 115, allows for sanitary districts to be established by legislative action. Appendix C further defines the organizational structures used to manage community wastewater treatment systems.

Contract Agreements

Some governmental units choose to purchase water or wastewater treatment services from another governmental unit or neighboring community as an alternative to producing their own water or treating their own wastewater. In such cases, the governmental unit enters into a contractual agreement with another.
governmental unit. A sample water purchase agreement and a sample sewer use agreement are included in Appendix A and Appendix B of this manual.

Water System Definitions

Minnesota’s safe drinking water regulations established under the Federal Safe Drinking Water Act define a public water system (PWS) as “a system providing piped water for human consumption and either containing a minimum of 15 service connections, or serving at least 25 persons daily for (at least) 60 days a year.” The regulations also differentiate between Community Public Water Supply (C-PWS) systems and Noncommunity Public Water Supply (NC-PWS) systems.

Community Public Water Supply System (C-PWS)

A community public water system “serves at least 25 year-round residents, or serves 15 service connections used by year-round residents.”

- **Municipal Community** – these systems are owned by a municipality (i.e., “the city of.”).
- **Nonmunicipal Community** – a private party owns these systems (i.e., nursing homes, prisons, mobile home parks, housing developments, and apartments).

Noncommunity Public Water Supply System (NC-PWS)

- **Transient Noncommunity** – a PWS that serves at least 25 people at least 60 days of the year but does not serve the same 25 people over 6 months of the year. (i.e., restaurants, campgrounds, hotels, and churches).
- **Nontransient Noncommunity** – a NTNC-PWS system is “a public water supply that is not a community water supply and that regularly serves at least 25 of the same persons over six months per year” (i.e., factories, office buildings, day-care centers, and schools).

Water System Definitions

A wastewater system is defined by the amount of flow and whether a National Pollutant Discharge Elimination System (NPDES) permit is needed. (See Chapter 6 for additional information).

Systems Owned by Different Types of Organizations

Additionally, systems can be owned and operated in several different organizational structures. These include the following:

- City owned and is part of a city department which reports to a city council and mayor.
- City owned and operates under a city manager form of government.
- City owned and operates under a separate utility commission.
The system operates under a regional authority which serves more than one city or district. The board is comprised of representatives of each jurisdiction. This form can be a joint powers authority.

The wastewater collection system or the water distribution system is owned by the city but it purchases its water or contracts for the treatment of the sewage from another entity.

The system is owned by the county or township by petition of the utility customers. This type is called a subordinate service district.

The system is owned by a private party. This is more common with very small systems such as:
- Housing developments.
- Mobile home parks.
- Nursing homes.
- Prisons.

Appendix C further details the organizational structures used to manage systems.

**Owner’s Responsibilities of a System**

The majority of systems are owned by cities, counties, special service districts, or other political entities. Regardless of the type of ownership, the responsibilities are the same.

1. The owner must provide adequate financing both for construction and for operation and maintenance.
2. The owner must provide the leadership and responsibility for promoting the approval and sale of the necessary bond issues, for levying user charges, and for developing other fiscal programs needed to build and operate facilities.
3. The owner must install facilities that will have the adequate capacity to handle peak and average flows, both current flows and flows of the future. Collection system evaluation for heavy rainfall is critical in the plan development.
4. The owner must install facilities that can be economically, efficiently, and effectively operated and maintained. The owner should consider the facility’s licensing requirements for the type of facility being proposed before the design phase begins.
5. The owner must employ a competent and well-trained, licensed operating staff.
6. The owner must by ordinance, resolution, or regulation exercise control over that system.
7. The owner has the responsibility of enforcing compliance with all regulations of the system.
8. The owner has the responsibility to hire competent, knowledgeable, and experienced consultants and engineers.

“This is your system, so take ownership in that system.”
Chapter 2: System Laws and Regulations

Laws and Regulations

Public drinking water must meet strict standards regarding the quality of water provided. Board members should understand why these standards are needed. A review of the most important rules regarding drinking water and wastewater are explained in more detail in the following paragraphs.

Federal Safe Drinking Water Act (SDWA)

The Safe Drinking Water Act (SDWA) was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply. The law was amended in 1986 and 1996 and requires many actions to protect drinking water and its sources: rivers, lakes, reservoirs, springs, and groundwater wells. The SDWA authorizes the United States Environmental Protection Agency (US EPA) to set national health-based standards for drinking water to protect against both naturally-occurring and man-made contaminants that may be found in drinking water. The 1996 amendments greatly enhanced the existing law by recognizing source water protection, operator training, funding for water system improvements, and public information as important components of safe drinking water.

The SDWA consists of National Primary Drinking Water Standards and National Secondary Drinking Water Standards. The primary standards seek to protect drinking water quality by limiting the levels of specific contaminants that can adversely affect public health. The secondary standards are not enforceable and refer to standards of taste and odor and are not considered a health threat. A chart of both standards can be found in Appendix D of this manual or on EPA’s web site at: www.epa.gov.

Among others, some important regulations found in the SDWA include:

- **Consumer Confidence Reports** – all community water systems must prepare and distribute annual reports to the public about the water that they provide.
- **Drinking Water State Revolving Fund** – funding to help water systems make infrastructure or management improvements.
- **Microbial Contaminants and Disinfection Byproducts** – strengthens protection from microbial contaminants and has control over byproducts of chemical disinfection.
- **Operator Certification** – water operators must be certified and continue their education to ensure that systems are operated safely.
- **Public Information** – established a Safe Drinking Water Act hotline at 800-426-4791.
- **Source Water Assessment** – requires the development of source water assessments and wellhead protection plans.
• **Sampling and Reporting** - requires sampling and reporting from water suppliers. It also governs record keeping and public notification requirements for water suppliers.

**Federal Clean Water Act (CWA)**

An amendment in 1977 to the Federal Water Pollution Control Act became known as the Clean Water Act. The Act established the basic structure for regulating discharges of pollutants into waters and gives US EPA the authority to implement pollution control programs. The Act makes it unlawful for any person to discharge pollutants into navigable waters, unless a permit is obtained under its provisions.

Among others, some important regulations included in the Clean Water Act are:

- **Permits and Licenses** – established the National Pollutant Discharge Elimination System (NPDES) for obtaining permits when discharging pollutants into navigable waters.
- **Water Pollution Control Fund** – funding for construction of publicly-owned treatment works, implementing a management program, and developing and implementing a conservation and management plan.
- **State Disposal System (SDS) Permit** – regulating water discharges to the ground surface or subsurface.

**Role of the Minnesota Department of Health**

The Minnesota Department of Health is the primacy agency for drinking water regulations in Minnesota. Minnesota Rules, Chapter 4720 adopts the SDWA by reference with some amendments and includes sections on Wellhead Protection.

Minnesota Department of Health’s role and responsibilities in providing safe drinking water are:

- **Sampling** – performs most SDWA compliance monitoring.
- **Sanitary Surveys** – performs an on-site review of the adequacy of the water source, facilities, equipment, operation, and maintenance of a public water system.
- **Technical Assistance** – provides on-site technical assistance to public water systems.
- **Plan Review** – performs plan reviews (changes or additions to plumbing or treatment systems) for public water systems.
- **Source Water Protection** – assists in identifying source water protection measures.
- **Lab Certification** – laboratories that perform water analysis in Minnesota are required to be certified by MDH.
- **Training and Education** – provides training and educational materials.
- **Consumer Confidence Report (CCR)** – all community water systems receive a template CCR report from MDH each year.

“The Minnesota Department of Health is the primacy agency for drinking water regulations and the Minnesota Pollution Control Agency is the primacy agency for wastewater regulations.”
• **Certification** – water operator certification (Chapter 9400).
• **Wells** - well permitting and inspections (Chapter 4725).
• **Financing** – provides funding for water-related projects through the Drinking Water Revolving Loan Fund, based on the Project Priority List.

**Role of the Minnesota Pollution Control Agency**

The Minnesota Pollution Control Agency (MPCA) is the primacy agency for wastewater regulations in Minnesota. Minnesota Rules, Chapter 115, provides for the MPCA to administer and enforce all laws relating to the pollution of any of the waters in the state of Minnesota. Also, Minnesota Rules, Chapter 7077 and 7080, provides for the MPCA’s administration of financial assistance programs for the construction of municipal and on-site wastewater treatment systems.

In summary, Minnesota Pollution Control Agency’s powers and duties relating to the pollution of any waters of the state include:

• Investigating pollution of the waters of the state.
• Establishing reasonable pollution standards.
• Encouraging waste treatment.
• Enforcing reasonable orders, permits, variances, standards, rules, and schedules of compliance in order to prevent, control, or abate water pollution.
• Inspection of wastewater facilities.
• Providing training opportunities and technical assistance.
• Monitoring the discharge of sewage, including acting as the authority on National Pollutant Discharge Elimination System (NPDES) permit system.
• Regulating storm water discharges and compliance of storm water permits.
• Enforcing operator certification of wastewater systems (Chapter 9400).
• Developing River Basin Management Plans.
• Financing through the Water Pollution Control Revolving Fund, based on the Project Priority List.
• Maintaining the rules regarding soil-based sewage treatment; proposed rules 7080 and 7081.

**Wastewater Discharge Permit**

The National Pollutant Discharge Elimination System (NPDES) permit establishes a system of discharge permits. This permit defines the quality of effluent, outlines tests to be performed, frequency of testing, and an acceptable method of sampling. In addition, the permit may also establish:

• Pretreatment requirements.
• Seasonal requirements for different levels of treatment.
• Constraints on sludge disposal.
• A schedule for modification of the facility.
• Monitoring requirements for the receiving stream.
• Frequency of reporting.
• The classification of the facility.
• The operator’s classification of certificate to operate that facility.
• The description of the wastewater facility.

Role of the Minnesota Department of Natural Resources

The Department of Natural Resources manages water resources through a variety of programs. These programs include:

• **Shoreland Management Program** – seeks to enhance and preserve the quality of surface waters, shoreland properties, and ensures the sustainable use of water resources.

• **Floodplain Management Program** – promotes sound land use development in floodplain areas.

• **Public Waters Work Permit Program** – begun in 1937, this program regulates water development activities below ordinary high water levels in public waters and wetlands.

• **Water Appropriation Program** – Minnesota Statute 103G.265 requires the DNR to manage water resources to ensure adequate water supplies to meet long-range requirements. A water use permit from DNR is required for all users withdrawing more than 10,000 gallons of water per day or 1 million gallons per year. All permitted users are required to submit annual reports of water usage to the DNR.

• **Emergency and Conservation Plans** – required for public water suppliers serving over 1,000 people. Begun in 1996, these plans focus on preserving water supply sustainability and water conservation. The plan is required to be amended every 10 years.

A listing of the district offices for the Minnesota Department of Health, Minnesota Pollution Control Agency, and the Minnesota Department of Natural Resources is listed in Appendix E of this manual.

Role of the Minnesota Department of Labor and Industry

The Minnesota Department of Labor and Industry’s mission is to ensure Minnesota’s work and living environments are equitable, healthy, and safe. Some of the duties and powers of the Minnesota Department of Labor and Industry that relate to systems include:

• Enforcing Minnesota’s Plumbing Code (Chapter 4715).
• Inspections of facilities.
• Enforcing building codes and standards.
• Enforcing labor standards.
• Enforcing occupational health and safety.

Role of the Local Government Unit

Some cities and townships have adopted ordinances that comply with Minnesota Rules, Chapter 7080.1050, and administer their own local program. Chapter 7080.1050 can be found in Appendix R of this manual.
Chapter 3: Pre-Planning a Project

Assess the Current Situation

There are many reasons why your system may need to plan for a water or wastewater project. Some of those reasons may include:

- **Health issues** – your system is not able to remove contaminants from the drinking water or the wastewater is not being properly treated.
- **Violations** – your system is not in compliance with state regulations.
- **System growth** – your city is experiencing rapid growth and the old infrastructure can no longer support that growth.
- **Lack of a centralized system** – community may have individual wells and/or on-site wastewater treatment systems.

There should be a clear understanding of what the problems and issues are before looking for a solution. Whatever the reason may be, your system needs to take charge to properly plan for water and/or wastewater expansions and upgrades. Planning ahead is crucial to a successful project and will save time, money, and unexpected setbacks in the long run.

Form a Committee

Planning is a team effort. A committee can do a lot of the research that is needed for a successful project and help to make a good, informed decision about that project. First, consult with your system’s by-laws to discover the proper procedure for forming a committee and the committee’s functions. Following are some suggestions for a successful committee:

- Call meetings and set an agenda.
- Take minutes to record decisions and recommendations.
- Stay focused on the objective.
- Remember that the committee’s role is advisory only; full decision making power must come from the full board.

Identify Similar Systems

Identify and research similar systems that have been constructed in the past. Take advantage of the resources available to help you make an educated decision. Seek advice from the experts. Some resources available to help you include:

- Rural Development local office.
• Minnesota Rural Water Association’s technical assistance program.
• League of Minnesota Cities.
• Minnesota Department of Health district office.
• Minnesota Pollution Control Agency.
• University of Minnesota Extension Service.

The previously listed offices and agency’s contact information is compiled in Appendix E of this manual for easy reference. Many of these resources offer free or low-cost on-site technical assistance as well as invaluable information on project options.

**Regulations**

Remember to consider regulation requirements. Under the Safe Drinking Water Act (SDWA), public water systems must provide quality drinking water and protect its sources as well as follow national health-based standards. Similarly, the Clean Water Act (CWA) regulates discharges of pollutants into navigable waters. To meet these requirements, take into consideration the operation and maintenance requirements of your project. This is an important aspect not to overlook when considering what type of project is best for your system.

**Capacity Development**

The Safe Drinking Water Act (SDWA) requires new public water supply systems or systems applying for state revolving loan funds to demonstrate certain capabilities. Those water systems must have the managerial, financial, and technical capability to meet present and foreseeable regulations, provide adequate water service, and operate as financially viable entities. It is highly recommended that wastewater systems demonstrate these capabilities as well. This responsibility is referred to as “Capacity Development”.

These are three basic areas of operation for systems:

1. **Managerial Capacity** = the system has the institutional and administrative resources needed to comply with drinking water regulations. Managerial capacity includes: ownership accountability, staffing and organization, and effective external linkages.

2. **Financial Capacity** = the system possesses the financial resources needed to comply with drinking water requirements for both the short and long term. Financial capacity includes: revenue sufficiency, credit worthiness, and fiscal management and controls.
3. **Technical Capacity** = the system has the necessary technical infrastructure and competent trained staff needed to comply with drinking water regulations. Technical capacity includes: source water adequacy, infrastructure adequacy (including source treatment and storage distribution), and technical knowledge and ability to implement.

Management of a system requires an overall understanding of these three areas of activity. A self-assessment for capacity development can be found in Appendix F of this manual.

**Chapter 4: Working with an Engineer or Consultant**

**Selection and Use of Consultants**

Consultants may be used for the following purposes:

- Planning and designing new facilities or improvements to existing ones.
- Solving operation and maintenance problems.
- Operating the facility.
- Managing the construction of a project.
- Performing rate studies.
- Providing financial advice.
- Developing wellhead protection plans and source water protection plans.
- Writing grants.
- Providing technical assistance.

**Why Hire a Consultant?**

The system may hire a consultant for the following reasons:

- Skills that are not available on organization’s staff are needed.
- An independent opinion is needed.
- Existing staff doesn’t have the time required, degree, or license required.
- An authoritative report to state and federal agencies is needed.

**What Services Can an Engineer Provide?**

One type of consultant is a professional engineer. There are specific reasons you’d need to hire an engineer. All new systems or modifications to an existing system require the services of an engineer. The following list describes some of the services you would also need an engineer to perform:

- Feasibility Study.
- Preliminary Engineers Report.
- Design.
- Plans and specifications.
• Inspections.
• As-built maps.
• Operation and Maintenance Plan.

Request for Qualifications (RFQ) Selection Process

The RFQ process for RD Applicants requires:
• Prepared Statement of Work.
• Advertisement.
  o Local paper.
  o American Consulting Engineering Council or other trade bulletin.
  o RD list of engineering firms.
• Check References.
  o Engineer’s list and RD list of projects.
  o American Consulting Engineering Council’s guide for questions and interview procedures.
• Compiling a list of questions prior to the interview.
• Interview.
• Make Selection.

For more detailed instructions, review the American Consulting Engineering Council’s A Guide for the Selection of Design Professionals for Public Owners for more detailed instructions on the Request for Qualifications process. This guide is located on USDA RD’s web site at: http://www.rurdev.usda.gov/MNHome.html.

Request for Proposals (RFP) Selection Process

The first step in selecting an engineer is to list what is needed and what is to be accomplished. This is called a Request for Proposal (RFP). The RFP is a notification of the intent to obtain professional services. The RFP should be advertised in trade magazines, newsletters, newspapers, and sent directly to prospective engineering firms. Requesting qualifications is included in the RFP; the engineer is asked to list the experience, training, and past project history.

An important step in the selection process is to contact other systems that have used the engineers that respond to the Request for Proposal. Some questions to ask past clients of the engineering firm:

• Did the firm perform as expected?
• Was the work done on time?
• Was the work done within budget?
• Would you hire the firm again?

Some items to include in an RFP:

“The first step in selecting an engineer is to list what is needed and what is to be accomplished”
General items. These include the name, title, address of the person who is to receive the proposals; deadline for receipt and number of copies required; and how to submit questions about the RFP.

- Work statement. This section lays out what service is needed and states what tasks are to be done. This section also discusses what regulatory issues affect the task and the expected results and deadlines.
- Level of effort. Concentrate on receiving concepts and recommendations for the task.
- Criteria for evaluation. Describe your point system for grading the proposals. Point categories usually include experience, responsiveness to the RFP, personnel to be assigned to the task, and the cost.
- Method of contracting. This includes required state/local items such as performance requirements, payment schedules, and disclaimers.

In reviewing the proposals, concentrate on the qualifications of the firm’s staff that will be assigned to the project. Insist that the proposed project manager be present at the interview.

Once all RFP’s are received, it is suggested that the three best will be selected for final consideration. The engineering firms should be notified as to time, date, and location of interviews. Prospective engineering firms should be advised that no obligation or commitments are incurred by the community in announcing a Request for Proposal. It is the community’s intention to select the best qualified engineering firm after the appropriate interviews and evaluations. Do not base your decision on the cost of the firm, but instead base it on experience and which firm will deliver the best product for your individual project. After you have chosen a firm, you can then negotiate the costs associated with your project. The best qualified engineering firm will then enter into an agreement to prepare a Preliminary Engineering Report (PER).

The difference between a Request for Proposal (RFP) and a Request for Qualification (RFQ) is that a RFP is a document requesting experts to send in their proposals regarding your potential project and a RFQ is a document requesting experts send information regarding the approach to the project and their background with such projects.

Generally, you should seek a Request for Proposal (RFP) when you need:
- Specific information on an upcoming project.
- Engineers qualifications and experience.
- Cost of project.

Issue a Request for Qualifications (RFQ) when you need:
- Engineers qualifications and experience.

If a system is applying for funding with an agency, the system should always check...
with the funding source to determine if they require a RFP or a RFQ.

**Engineer Costs**

Once you have selected an engineer, negotiate the Preliminary Engineers Report costs based on your particular project needs. The basis for calculating costs is listed below.

- **Per Diem** - this is a cost per day rate and is used normally for small projects taking only a few days to accomplish.
- **Cost reimbursement** - services are paid on the basis of salary cost, overhead, and a fixed profit.
- **Lump sum or fixed price** - the scope of work is accomplished for a specified dollar amount.
- **Retainer** - this method is used when the scope of work is for a lengthy period.
- **Percentage** - this method is generally used and is preferred by engineers. The amount of their payment is based on the size and cost of the project. It is based on a percentage of the overall project cost.

**Working With the Engineering Firm**

Once the engineer is under contract, you should:

- Review what you want done once more to make sure there is no confusion.
- Make sure the engineer knows who to report to on the system’s staff.
- Meet regularly to discuss the progress to make sure the project stays on track.
- Review the engineer’s recommendations. This includes making sure that the proposed project is right, both financially feasible for construction but also for future operation and maintenance costs.
- Hire another engineering firm to review recommendations. This adds some cost to the project but may ensure that the project will solve existing problems at a reasonable financial cost.

**Feasibility Study/Preliminary Engineers Report (PER)**

A Preliminary Engineering Report (PER) should clearly describe the owner’s present situation, analyze alternatives, and propose a specific course of action from an engineering perspective. The level of effort required to prepare the report and the depth of analysis within the report are proportional to the size and complexity of the proposed project. Information provided in a PER is used to process funding requests with USDA Rural Development.

A PER should contain the following:

- **Project Planning Area** – describes the area under consideration.
- **Existing Facilities** – describes the condition of current facilities and its financial status.
- **Need for the Project** – describes the needs in the following order of priority: health, sanitation, and security; system operation and maintenance; and growth.
• **Alternatives Considered** – describes any reasonable alternatives that were considered in planning a solution to meet the identified need.

• **Selection of an Alternative** – present worth cost analysis (an engineering technique to evaluate present and future costs for comparison of alternatives) should be completed to compare feasible alternatives.

• **Proposed Project** – describes a fully developed description of the proposed project based on the preliminary description under evaluation of alternatives.

• **Conclusions and Recommendations.**

The consulting engineering firm will provide a Preliminary Engineering Report. This report should include the following:

• An overview of the problem the proposed project will address.

• An explanation of the desired effect of the project.

• Three proposed project alternatives with cost estimates for each alternative, estimated lifetime use for each alternative, and other infrastructure that may be affected by each proposed alternative.

• Estimated operation and maintenance cost of each alternative.

Once you have selected an engineer, negotiate the PER cost based upon your individual project needs.

**Technical Assistance Providers**

It may be valuable for your system to get an opinion from a technical assistance provider such as Minnesota Rural Water Association. A list of other technical assistance providers can be found in Appendix E of this manual. Among other things, technical assistance providers:

- Provide unbiased information.
- Compare same size systems.
- Perform rate analysis.
- Review plans on operational aspects.

**Second Opinion**

The system’s board may seek a second opinion of the Preliminary Engineering Report. This second opinion may come from another engineering firm with experience with projects similar to those proposed. There are other organizations (listed in Appendix E) that can review the PER so that all alternatives have been considered and to determine if those proposed alternatives are affordable for the community.

Some basic guidelines to follow when getting a second opinion:

- Courtesy among engineers is to notify the first firm that a second opinion is being researched.
- The second firm makes recommendations about the first opinion.
- Be upfront with the second firm and let them know if anything bothered you about the first opinion.
• Get all the answers to your questions.
• Take the time to review both sets of opinions thoroughly.
• The board has the final decision.

Chapter 5: Project Selection

Selecting a Project

Projects should be modest in design, size, and cost, and operated and constructed in an environmentally responsible manner. When selecting a project consider the following:

- **Location** – consider the legal and natural boundaries and any obstacles.
- **Environmental Resources Present** – consider important land resources (farmland, forestland, wetland, etc.) and environmental resources (endangered species).
- **Growth Areas and Population Trends** – consider areas of concentrated growth and projected planning areas based on historical records.

Project Costs

Estimate costs realistically. Provide actual costs for existing systems and projected costs for operating the system as improved. Base the costs on other existing facilities of similar size and complexity.

**Construction Costs versus Operation & Maintenance Costs**

It is important to consider operation and maintenance costs in addition to actual construction costs. Remember to include:

- Salaries and benefits.
- Water purchase.
- Taxes.
- Accounting and legal fees.
- Interest.
- Utilities, oil and fuel.
- Insurance.
- Annual repairs and maintenance.
- Supplies.
- Chemicals and testing.
- Office supplies and printing.
- Operator certification costs.
- Other miscellaneous costs.

These items all factor in to the total cost of your project.

"Maintenance work is essential to keep the system running efficiently and effectively."
Operation & Maintenance Considerations

Maintenance work is essential to keep the system running efficiently and effectively. However, it should be planned and scheduled in advance. When planning a project, the board should take the operation and maintenance requirements of the project into consideration. Once completed, the system may find out that the operation and maintenance of the system costs considerably more to run than they realized. The following is a review of some of the elements of routine system operation:

- **Maintenance.** The licensed operator must perform the day-to-day maintenance and preventative maintenance. Consider if the project will require expensive treatment or disinfection methods.

- **Installation of New Service.** This includes setting new meters and new water lines for new users, wastewater connections, and wastewater lines. Also, consider the time and expense of disconnecting and reconnecting system connections.

- **Maintaining Records and Reports.** Water and/or wastewater system personnel will need to maintain various reports and records for planning and proper management of the system operation.

- **Enforcement of System Rules and Regulations.** Operators are required to be certified to operate water and/or wastewater systems. Consider if a project will require the operator to hold a higher license or need training to test for a higher license. Also consider that if a system has a higher system classification, the system may need to pay a higher salary for the operator to run the system.

- **Correction of Potential Health Risks.** The operator must respond to any problems that might result in the delivery of unsafe water to users.

- **Participation in Continuing Education.** Water and/or wastewater systems will need to attend continuing education courses to keep their respective licenses up-to-date. This is a requirement under Minnesota Rules, Chapter 9400, discussed earlier.

System Classification

All water and wastewater systems are given a classification. All elements of the system (i.e. treatment, population, etc.) are given a point value and the total number of points corresponds to a classification level. The classification of all systems is based on the degree of hazard to the public health, together with the type of plant and the population affected. “A” facilities are the most complex systems while “D” facilities are the least complex systems. For water systems, Class “E” is the least complex.

Water Systems
Water systems are classified as A, B, C, D, or E systems.

**Wastewater Systems**

Wastewater systems with surface discharge are classified as A, B, C, or D facilities. Type S or collection systems are determined by the population of the community and are classified as S-A, S-B, S-C, or S-D facilities.

**Individual Sewage Treatment Systems (ISTS) and Midsized Sewage Treatment Systems (MSTS)**

ISTS is classified as 1-3 homes, MSTS as 3-30 homes and generating between 2,500-10,000 gallons of waste per day. The state of Minnesota requires individuals who install, site-evaluate, design, maintain, pump, or inspect ISTS and MSTS systems to be registered (training, exam, experience). These registered individual may only work under a licensed business or under a unit of government. A registration goes to an individual; a license goes to the business.

The MPCA administers Chapters 7080-7083, the state rule regulating all Individual and Midsized Sewage Treatment Systems. The University of Minnesota teaches the professional courses the lead to registration. Contact information for the University of Minnesota can be found in Appendix E of this manual.

**Operator Certification**

The licensed operator must hold the same or higher license as the system’s license classification. Minnesota Rules, Chapter 9400.0700, describing the requirements needed for operator licensing, can be found in Appendix G of this manual. In addition to this rule, for advanced ISTS or any MSTS, a Minnesota licensed and registered pumper is required to operate these systems. The proposed Minnesota Rule 7083, to be implemented in early 2007, introduces a new endorsement for a “service provider” who would be responsible for management activities beyond the scope of the current pumper for advanced treatment and MSTS.

**Plan Review**

There are two important reasons for plan review. The first is to verify that the design complies with Standards intended to protect public health. The second is to allow needed changes to be made during the design phase, not after construction when changes are often costly. The plan review process will help identify any potential deficiencies.

The owner of the system is responsible for submitting plans to the Minnesota Department of Health (drinking water) or Minnesota Pollution Control Agency (wastewater) for review and approval prior to installation. If you are working with a vendor or engineer, don’t just assume they will submit the plans.

**Plan Review Requirements for Water Systems**

Under Minnesota Rules Chapter 4720.0010, plan approval is required for all public water systems prior to installation, alteration, or extension of the water system.
• **Wells** – Plan approval is required for the installation of new wells and pump houses for community water systems, and for wells that are reconstructed or modified. Plan review is not required for new wells that will serve noncommunity water systems, except when a well is proposed to be converted from a non-public use.

• **Storage** – Plan approval is required for new or altered storage, including tank coatings.

• **Water Treatment** – Plans are required to be submitted to MDH for review and approval for all water treatment installations. If you are thinking about adding treatment, or installing chemical feed equipment to remove a regulated water contaminant, or to treat an aesthetic problem, you need to submit plans for review and approval. This applies to both noncommunity and community water systems. For noncommunity public water systems, plan review is not required for the installation of an ion exchange water softener.

• **Distribution** – Plan approval is required for both noncommunity and community water systems when 100 feet or more of distribution piping is added and when changes are made to existing piping. In addition to water mains, the distribution system may include plumbing in buildings for noncommunity systems.

**Plan Review Requirements for Wastewater Systems**

Under Minnesota Rules Chapter 7077.0272, plan approval is required for all wastewater treatment systems.

• **Municipal Wastewater Treatment Systems with flows greater than 10,000 gallons per day** – Plans must be prepared and signed by a professional engineer registered in Minnesota.

• **Individual, Midsized, and Large Sewage Treatment Systems** – All soil based treatment systems must be designed by a designer licensed by the MPCA. The type of designer required is dependent upon the amount and strength of the wastewater as well as the site characteristics. In addition, the MPCA requires all systems greater than 10,000 gallons per day have a professional engineer sign off on the plans.

• **Large ISTS (LSTS)** – All systems that are designed over 10,000 gallons per day are reviewed and permitted by the Minnesota Pollution Control Agency (MPCA). Both a designer and a professional engineer must be involved with the design of these systems. They can be separate people or the same person.

• **Facilities Plan Contents** – A facilities plan must address the following items:
  - Existing wastewater treatment system and problems that need correction.
  - Data describing existing and future residential and nonresidential wastewater flows and loadings.
  - An analysis of all feasible treatment alternatives including cost-effectiveness of alternatives considered, site assessments, and environmental impact study and comparison.
  - For ISTS systems, the facilities plan must include a determination of the operating condition of each ISTS, whether the service area can support a replacement ISTS system, and an assessment of the suitability of an ISTS that would serve multiple dwellings by an agency authorized individual.
Selected treatment alternatives analysis.

- **Public hearing** – before adopting the facilities plan, the municipality must hold at least one public hearing to discuss the proposed project.

- **Facilities plans supplement** – must be submitted to the commissioner with the facilities plans.

**Bidding Process & Contracts**

Once the engineering specifications are completed on a project, a competitive bid should be obtained. State regulations (M.S. 471.345, subd. 2) require that contracts for a project of $50,000 or more go through the competitive bidding process. The competitive bidding process applies to contracts for the sale or purchase of supplies, materials, or equipment or rental thereof and contracts for the construction alteration, repair, or maintenance of real or personal property. Requests for competitive bids must be advertised in the city’s official newspaper for at least 10 days.

The published notice for requests for bids should include the following:

- A description of the project or purchase.
- The availability of the specifications, such as city office, engineers office, etc.
- The last day of bid submission, time, and location.
- The time and place of bid opening.
- A statement of the city to reject all bids.

The city shall not open any bids until the time and location specified in the advertised notice. Once the bids have been opened, they should be examined for accuracy and compliance with the specifications. The consulting engineer usually performs this task. After this process is completed, the bid can be awarded to the lowest competent bidder or the bids can all be rejected. The project can be re-bid again with the original specifications or they can be amended and then re-bid.

These procedures are very general in nature. Additional information may be needed when bidding out projects. An experienced consulting engineer can be of assistance in this process. The League of Minnesota Cities also has information that can aid in the bidding process.

There are a number of requirements that must be considered when making a construction contract, including the following:

- **Bid Bonds.** Cities may require bidders to submit a bid bond with their bids. Generally, a bid bond ensures the city doesn’t waste time with a frivolous bid. It guarantees the successful bidder will enter into a contract with the bid submitted and provide the required bonds and insurance.

- **Contractor’s Bond.** Before any contract over $75,000 becomes binding, the contractor must provide a performance bond and a payment bond protecting the city and all damages arising out of the contract.
• **Non-Discrimination Clauses.** All contracts must contain a statement that the contractor promises not to discriminate against perspective employees because of race, creed, or color.

• **Workers’ Compensation.** A city may not enter into a contract for work until it has received from all contracting parties’ proof of compliance with the worker’s compensation insurance requirements, this also includes sub-contractors.

• **Income-Tax Withholding.** Cities may not make a final payment to a contractor until the contractor has shown proof of compliance with state income tax withholding requirements.

• **Audit Clauses.** A contract must include an audit clause that provides that the books, records, documents, and accounting procedures and practices of the contractor are subject to examination by the city, and the legislative auditor or state auditor, as appropriate. This applies only to the project contract.

• **Prompt Payment of Subcontractors.** A city contract must require that the primary contractor pay subcontractors within 10 days of the primary contractor’s receipt of payment from the city. The contract must also require payment of 1.5 percent interest if the payment is late.

• **No Damages for Delay Clause.** This clause is not enforceable if the delay was caused by the public entity or person acting on their behalf.

There are numerous other clauses that may be considered. It is recommended that the city attorney be involved in drafting and review of the contract(s).
Chapter 6: Types of Systems and Classification

There are many different types of systems. Each type of system has a different classification based on the complexity of the treatment required. A municipal system has a classification that ranges from an E to an A; the least complex system is an E and the most complex system is an A. Each component of the system has a point value assigned to it and the points for a system are totaled. The resulting total point value determines the classification of the system. Appendix G of this manual lists MDH and MPCA’s classification systems.

Listed below are some of the types of systems that are commonly installed in small communities along with the typical classification for that type of system. Because there are various combinations of treatment components that can be included with each type of system, it is difficult to categorize each one with 100% certainty.

It is important for each community’s board to get the proper information from the engineering firm on the proposed treatment system. The classification of the system will impact:

- The certified operator’s classification that will be hired.
- The cost of operating and maintaining the system.
- The knowledge and experience required to operate the system.

### Water System Classifications

<table>
<thead>
<tr>
<th>Type of System</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>A groundwater system, no treatment, population under 500</td>
<td>E</td>
</tr>
<tr>
<td>A groundwater system, wells, fluoridation, chlorination</td>
<td>D</td>
</tr>
<tr>
<td>Wells, fluoridation, chlorination, iron/manganese removal</td>
<td>C</td>
</tr>
<tr>
<td>Wells, fluoridation, chlorination, iron/manganese removal, softening, reverse osmosis</td>
<td>B</td>
</tr>
<tr>
<td>Wells, lime softening, or surface water treatment</td>
<td>A</td>
</tr>
</tbody>
</table>

### Wastewater System Classifications

<table>
<thead>
<tr>
<th>Type of System</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soil Based Sewage Treatment Systems:</td>
<td></td>
</tr>
<tr>
<td>1-3 homes, under 2,500 gallons per day</td>
<td>ISTS</td>
</tr>
<tr>
<td>4-15 homes, 2,500 – 4,999 gallons per day</td>
<td>LISTS</td>
</tr>
<tr>
<td>15-30 homes, 5,000 – 9,999 gallons per day</td>
<td>MSTS</td>
</tr>
<tr>
<td>Over 30 homes, Over 10,000 gallons per day</td>
<td>LSTS</td>
</tr>
</tbody>
</table>

Soil Based Treatment or Surface Discharge Systems:
>30 homes, and >10,000 gallons per day (requiring a NPDES/SDS permit) .......... D
This includes:
- Mounds, at-grades or standard trench.
- Conventional gravity sewer.
- Septic tank effluent gravity and pump.
- Grinder pump, pressure sewer, or vacuum sewers.
Rapid media filtration ....................................................................................................... D, C, B
Constructed wetlands ........................................................................................................ D, C, B
Recirculating media filters ............................................................................................ D, C, B
Stabilization ponds ......................................................................................................... D
Aerated ponds .................................................................................................................. D, C, B
Rotating biological contactor (RBC) ............................................................................... C, B, A
Trickling Filter ................................................................................................................ C, B, A
Activated sludge ............................................................................................................. C, B, A
Disinfection is one treatment process that may increase the classification of a treatment system, chlorination is typically used. Ultra-violet light is increasingly being used for disinfection. Additional treatment components may increase the classification of a system.
In addition to the above listed certificates, other certificates that may be required are:
- Biosolids land applicators certificate.
- Spray irrigation applicators certificate.
- Collection system certificate.

**System Types Summary**

It is important that the consulting engineering firm research the proposed system’s classification and explain the consequences of the classification to the board. Board members need to ask the appropriate questions with regard to this matter, such as:
- What classification will this treatment system have?
- What classification of operator is needed for this system?
- What kind of a salary or contract price will we need to pay to operate this system?
- How will this classification impact the overall cost of operation and maintenance?
- How much time is required to operate this system?
- If the proposed system is mechanical or quite complex, how will energy costs or chemical costs affect the overall cost of the system?
- How will the costs of repair or future replacement affect the overall cost of the system?
• What type of water or wastewater rate will need to be established in order to pay for the system and its operation and maintenance?
• Can the residents of the system afford it?

A summary of wastewater treatment options for communities is listed in Appendix H in the back of this manual.

Chapter 7: Funding Sources & Requirements

Funding Options

Federal, state, and local levels of financial assistance need to be considered when exploring the funding options available. Two terms that will come up frequently when researching funding options are Project Priority List (PPL) and Intended Use Plan (IUP). The PPL is prepared by Minnesota Pollution Control Agency (MPCA) for wastewater projects and by the Minnesota Department of Health (MDH) for water projects. Projects are listed in priority; the order is based on a priority point system established in Minnesota Rule.

The Public Facility Authority (PFA) reviews the PPL to determine how many systems will be funded in any given year. The number of projects eligible for construction in the following year is dependent on the availability of funds in any given year.

The PPL is a requirement to get funding through the Drinking Water Revolving Fund (DWRF) or the Water Pollution Control Fund (WPCF); however, all funding agencies will look at your project rating on the PPL to determine what projects should have funding priority. Public health concerns will always put your project toward the top of the list.

Additional information and the application for the water or wastewater PPL is available at www.positivelyminnesota.com

The IUP identifies projects and activities that PFA intends to fund in any given year. The IUP is only used by the PFA.

The following options are available to assist local governments and others with the construction of public infrastructure.

USDA Rural Development

USDA Rural Development provides funding to rural communities for clean water, efficient wastewater and sewer systems, and other essential community infrastructure through its Utilities and Community Facilities Programs. The Utilities Program offers water and waste disposal loans and grants. Funds are for community:

• Water.
• Sewer.
• Storm sewer.
• Solid waste systems.
• Fire trucks and ambulances.
• Community buildings.

Applicants must be unable to borrow money elsewhere at rates and terms to make the project affordable. Grants may be available depending upon median household income levels of the borrower. Security is usually a general obligation bond repaid by special assessments, user fees, or property taxes. USDA Rural Development’s Community Facilities Program offers funds for essential community facilities.

USDA Rural Development has 15 area offices located throughout the state of Minnesota for one-on-one assistance to borrowers. A listing of these offices is provided in Appendix I.

**Drinking Water Revolving Fund (DWRF)**

Drinking Water Revolving Funds, available through the Minnesota Department of Employment and Economic Development’s Public Facilities Authority in conjunction with the Minnesota Department of Health, provides below-market financing to local governments and other public water suppliers to upgrade and construct drinking water treatment, distribution, and storage facilities. Communities must qualify and be ranked high on the Project Priority List (PPL).

**Clean Water Revolving Fund (CWRF)**

Water Pollution Control Funds, available through the Minnesota Department of Employment and Economic Development’s Public Facilities Authority in conjunction with the Minnesota Pollution Control Agency, provides below-market financing to local governments to upgrade and construct wastewater treatment and collection facilities. Communities must qualify and be ranked high on the Project Priority List (PPL).

**Wastewater Infrastructure Fund (WIF)**

Wastewater Infrastructure Funds, available through the Minnesota Department of Employment and Economic Development’s Public Facilities Authority, provides supplemental grants and loans to assist municipalities with high-cost, high-priority needs to build cost effective wastewater projects that address existing environmental or public health concerns.

**Project Grants**

Project grants, available through the Minnesota Department of Employment and Economic Development’s Small Cities Development Program water and wastewater project grants, provides housing grant funds, public facility grants, and comprehensive grants.

**Interim Financing**

Interim Financing, available through Minnesota Rural Water Finance Authority’s Interim Construction Financing Program, provides low-cost interim
financing for communities which have received a permanent loan commitment from USDA Rural Development.

**Midi Loan Program Financing**

The MIDI Loan Finance Program available from Minnesota Rural Water Association provides Minnesota units of government with a quick and low-cost alternative to conventional G.O. Bond sales. It is most suitable for debt amounts of up to $1 million, which can be repaid in 15-years or less. The MIDI Loan program finances projects such as:

- City halls.
- Libraries.
- Hospitals.
- Community centers.
- Fire halls.

Appendix Q lists contacts for financing water and wastewater projects in Minnesota.

**Micro Loan Program Financing**

Minnesota Rural Water Association’s Micro Loan Program is designed to finance small projects from $30,000 to $200,000 at the lowest possible cost. Loans are simple, quick, have competitive interest rates, and low fixed-costs.

**MEGA Loan Program Financing**

Minnesota Rural Water Association’s Mega Loan Program makes available loans over $1 million. Obtain a custom quote online at: www.mrwa.com.

**NRWA Revolving Loan Fund Financing**

The National Rural Water Association (NRWA) Revolving Fund was established under a grant from the USDA/RUS to provide financing to eligible utilities for pre-development costs associated with proposed water and wastewater projects.

**Bonds**

According to the League of Minnesota Cities *Handbook for Minnesota Cities*, the controlling state law, Minnesota Statutes, Chapter 475, rarely uses the term “bond,” employing the more accurate term “obligation.” An “obligation” is defined as “a promise to pay a stated amount of money at a fixed future date, or on demand, made for the purpose of incurring debt.” A municipal bond is, in effect, a contract between the city and the bond owner. There is a vast array of these debt obligations, or bonds, and they can be classified by the security behind the bonds, the purpose for which the proceeds of the bonds will be used, and the user of the capital facility financed by the proceeds of the bonds.

**Bonds by Type of Security**
The League of Minnesota Cities Handbook for Minnesota Cities goes on to describe bonds by type of security: general obligation bonds, revenue bonds, and general obligation revenue bonds as listed on the next page.

**General Obligation (GO) Bonds**

Chapter 475 defines a general obligation as an obligation that promises (pledges) the full faith and credit of the issuing governmental unit to payment of principal and interest. The bond owner correctly understands this to mean that all assets and resources of the city, including the unlimited power to tax, will be used by the city to fulfill the city’s contract to pay back the amount of the bond with the amount of interest agreed upon. The security for a general obligation bond is the pledge of those resources and taxing powers.

**Revenue Bonds**

A revenue bond pledges to pay the bond owner principal and interest only from the revenues of the facility financed by the bond proceeds. The “hell-or-high-water” general obligation pledge is not involved.

The issuing city gives the owner additional assurance in the bond documents that it will operate the facility efficiently; impose the necessary charges for the use of the facility to ensure prompt and full payment of the bond; and give the holder rights to enforce those assurances, or “covenants,” as they are known. This type of bond is used typically for self-supporting utilities, such as health care facilities, electric utilities, recreational facilities, and municipal liquor stores. Revenue bonds typically also carry higher interest rates than general obligations because of the slightly higher risk of nonpayment. Normally, “net” revenues (i.e.; all, or “gross”, revenues less operating and maintenance expenses) are pledged, but a gross-revenue pledge is permitted by some statutes.

Cities may also issue tax increment revenue bond payable solely from the tax increment generated by the tax increment financing district.

**General Obligation (GO) Revenue Bonds**

Some statutes permit the city to pledge the full faith and credit and the revenues of the facility. This generally results in more favorable interest rates than for a pure revenue bond because the bond investor looks primarily to the general obligation pledge in analyzing the underlying credit. These types of bonds are widely used for sewer, water, and storm sewer utilities, and to a lesser degree, hospitals and nursing homes.

Other common bonds of this type, although not generally known as such, are general obligation improvement bonds and general obligation tax increment bonds, which pledge special assessments against benefited property or tax increments from a financing district as security but are backed by a general obligation pledge. These bonds are viewed by the investor as straight general obligations since the special assessments and increments are roughly equivalent to property taxes in their imposition and collection.

**Assessments**
Minnesota Statutes, Chapter 429 details the assessment procedure. The city must adopt a resolution approving the assessment. The assessment, with accruing interest, shall be a lien upon all private and public property included therein.

According to the League of Minnesota Cities *Handbook for Minnesota Cities*, special assessments are an indirect form of taxation. They are a compulsory charge on selected properties for a particular improvement or service that benefits the owners of the selected property. Special assessments are also in the public’s interest. Special assessments have three distinct characteristics:

- They are a compulsory levy a city uses to finance a particular public improvement program.
- The city levies the charge only against those particular parcels of property that receive some special benefit from the program.
- The amount of the charge bears a direct relationship to the value of the benefits the property receives.

Special assessments only apply to real estate and have three important applications:

- The first and most popular application is for financing new improvements, particularly when the city is converting new tracts of land to urban use. In this application, special assessments frequently pay for the opening and surfacing of streets; installation of utility lines; and, construction of curbs, gutters, and sidewalks.

- Special assessments may also underwrite the cost of major maintenance programs. Cities can finance large-scale repairs and maintenance operations on streets, sidewalks, sewers, and similar facilities with special assessments.

- Another use of special assessments is in the redevelopment of existing neighborhoods. Cities can use special assessments to good advantage when residential areas are confronted with progressive deterioration, or to make presently sound neighborhoods more desirable through the development of parks, playgrounds, tree plantings, and new street patterns.
Chapter 8: Finance

Sound financial management of your system is crucial to its success. This is the most important function of the board. In order to be effective in managing the system’s financial resources, the board has the following responsibilities:

- Maintain records related to quantity of water used by types of users, total water metered, water losses, and water production.
- Maintain good financial records.
- Consistently monitor expenses and income and set procedures that ensure that expenses are monitored and that all due incomes are received.
- Use short-term and long-term budgets to plan for the maintenance, improvement, expansion, and possible future replacement of the system.
- Set fair rates and keep rate structures in line with financial needs and plans.

Understanding Financial Statements

Financial reports are used to maintain the financial condition of a business and to:

- Compare current and previous year’s income and expenses.
- Identify areas of growth in income and expenses.
- Pinpoint potential financial problems.
- Identify the cost cutting measures.
- Inform lenders and owners about the status of their interests.
- Provide information on business tax liability.
- Determine the need for price increases.

The main elements of financial reports are:

- Balance Sheet.
- Income Statement.
- Retained Earnings Statement.
- Cash Flow Statement.

Every accounting entry in the general ledger contains both a debit and credit. Always remember that debits must equal credits. If not, the balance sheet will be “out of balance.” You must understand your accounts and whether they’re assets, liabilities, equity, income, or expense. A balance sheet records the assets and liabilities of an entity. An important equation to remember is
that Assets = Liabilities + Equity. Assets represent items of value that the system owns (i.e.: cash, investments, property, equipment, etc.). Two categories of assets are current assets and fixed assets. Current assets are funds which can be liquidated within one year (cash, investments, accounts receivable) and fixed assets are not easily liquidated (buildings, equipment, land). Liabilities represent payments due to vendors (i.e.: accounts payable, taxes payable, etc.). Liabilities are current and long term. Current liabilities are debts owed that will be paid within one year and long term liabilities are debts payable for longer than one year. Equity represents the difference between assets and liabilities.

An income statement records revenues and expenses. Revenues represent cash inflows and expenses represent cash outflows. Net income (or loss) represents that difference between the income and the expenses. At the end of the fiscal year, the income statement accounts are closed to retained earnings. Retained earnings represent the accumulation of net income (or losses) since the beginning of the entity.

A primary objective of analysis of financial statements is identifying major changes in trends, amounts, and relationships and investigating the reasons for those changes. A tool to help in identifying trends is using financial ratios. A current ratio or working capital ratio is one of the most commonly used ratios for determining the liquidity (your system’s ability to meet current liabilities). The current ratio is current assets divided by current liabilities. A common rule of thumb is that current assets should be twice the current liabilities.

It is usually a good idea to compare financial statements from one period to another. This can help identify areas and concerns that may have changed from time to time and offer an opportunity to take appropriate actions.

A good understanding of financial reports is crucial to the financial well being of a system. This knowledge applies itself to a good decision making process for the system.

**Depreciation**

Depreciation is the accounting method of spreading the cost of an asset over the useful life of that asset. It can also be described as the average decline in value of an asset. Because most assets lose their value over time, they must be replaced after the end of their useful life. Depreciation is an intangible expense and is listed on the income statement under expenses. The most common method of depreciation is a straight line method. This is when the expense of a fixed asset is evenly spread over its useful life. Depreciation is important to recognize because it allows the system to match its expenses with the income generated by means of those expenses and because it ensures that asset values in the balance sheet aren’t overstated. It is important to consider funding depreciation by setting aside a reserve amount. This will allow for easier replacement of assets when needed. If depreciation is funded, the money should be used for replacement items and not operating expenses.

**Budget**
The most basic financial tool for any organization is the budget. Budgets are used to project both revenues and expenditures for a given period. Budgets are planning tools. Budgeting links your system’s goals with achieving them. The budget-making process can help the board manage the system better by:

- Assuring the proper proportion of funds is spent in different budget categories.
- Comparing revenues vs. expenditures on operations, debt service, and reserves.
- Monitoring key measures of performance such as bill payment, unsold water, cost of production, etc.

Some suggestions to be considered during the budgeting process:

- Assumptions – a number of assumptions will need to be made since budgeting is dealing with the future and unknowns.
- Revenues – changes in revenues may result in fluctuations of expense items. Take trends and demographics into consideration when estimating revenues.
- Capital expenditures – consider what capital expenditures need to be made in the upcoming budget cycle.

The board or city council should document the approval of the budget in their meeting minutes.

**Governmental Accounting Standards Board’s Statement #34 (GASB 34)**

The Governmental Accounting Standards Board’s Statement #34 (GASB 34) revises several accounting and financial reporting practices for state and local governmental entities including publicly-owned systems. If your system is publicly-owned, you will need to follow GASB 34 requirements to obtain a “clean opinion” (i.e., a good credit rating) from an auditor. Without a clean opinion, you may face higher interest rates on loans and bonds and may be more closely scrutinized by regulators and public officials. Following GASB 34 standards will require publicly-owned water and/or wastewater systems to report the value of infrastructure assets and the cost of deferred maintenance. An accurate and up-to-date asset management plan will help you comply with this requirement. **Note:** If you operate a privately owned system, you do not need to comply with GASB 34. However, complying with generally accepted accounting principles (GAAP) makes sense for any system. Visit the Financial Accounting Standards Board (FASB) at [www.fasb.org](http://www.fasb.org) for more information on GAAP for private entities.

**Asset Management**

Board members of a system make critical decisions about the finances of their system. These decision makers need to understand the financial requirements related to the maintenance and replacement of the system’s equipment and assets.

Knowing what components the system has and what condition they are in will help maintain the safety, security, and reliability of the system. The first step in asset management is to inventory the various components of the system. An asset inventory can help in the following ways:
An asset inventory can assist in complying with state and federal regulations by helping prepare accurate budgets, identifying concerns, and preparing for future needs.

Knowing the system’s strengths and weaknesses will help to head off sudden and unexpected problems with the system’s operation.

Understanding the asset inventory of the system can help to spot gaps in the system’s security and create an opportunity to take steps to correct them.

Knowing the details of the system helps to explain its current condition and how it operates.

Understanding the system’s components will help answer questions from customers, state agencies, and the media.

An important part of conducting an asset inventory is determining when to repair, rehabilitate, or replace an asset. At some point, continuing to repair the asset will no longer be cost effective and the asset will need to be replaced.

Once the asset inventory is completed, an asset management plan should be developed. This plan will help prioritize the components that will need to be replaced or rehabilitated. This prioritization will aid in determining how much money is required and when the money is needed; therefore, it is also a useful tool in creating budgets.

**Strategic Planning**

An asset management plan is part of a larger management concept called strategic planning. Strategic planning helps the system prepare for and address anticipated and unexpected problems. It uses asset management to evaluate the system’s current physical condition, and it also evaluates the system’s financial and managerial situation. It requires board members to make fundamental decisions about the system’s purpose, structure, and functions.

**Strategic Budgeting**

Once the asset management plan is completed and the assets are prioritized, a determination should be made as to how much money will be needed to rehabilitate or replace the assets. Budgeting for these projects will help avoid large, unplanned expenditures in the future and will ensure that financial resources are used efficiently.

**Asset Management Plan Annual Review**

It is important to update the asset inventory and management plan annually. The system’s assets will continually change and priorities will change. An annual review will aid in providing for financial resources to cover costs of needed maintenance, replacement, and for necessary new projects of a system.

**System Insurance**
Insurance for system components should be considered. The components may include lift stations, water towers, and buildings, among many others. Coverage for fire, explosion, wind, and hail damage are common.

Public liability or general liability insurance covers claims resulting from bodily injury to private persons and/or damage to private property.

Systems should carry liability and collision insurance on equipment which is operated on public streets, alleys, and highways.

Management and administrative staff should have Director and Officer (D&O) Insurance. This helps protect board members and the system from liability of actions taken in managing the system. This is sometimes referred to as “errors and omissions” insurance.

**Audit Requirements**

The Office of the State Auditor audits the counties, cities, townships, and other governmental entities in Minnesota to ensure the financial integrity of local governments. The Office of the State Auditor holds local governments accountable for following established standards for proper handling of public funds and use of taxpayer dollars.

**USDA Rural Development Audit Requirements**

Projects funded by Rural Development are required to follow USDA’s audit requirements. Depending on your loan and entity type, USDA Rural Development has different requirements for audit procedures.

- An OMB Circular A-133 audit is required for borrowers in years in which $500,000 or more in total federal financial assistance is received. It will be done in accordance with the requirements of the Single Audit Act and OMB Circular A-133 and is due within 9 months of fiscal year end. It will be in accordance with RD requirements, using the RD Instruction 1780, Bulletin 1780-31.

- An audit is at RD’s discretion for public bodies and nonprofits receiving less than $500,000 in federal aid and having less than $1,000,000 in outstanding RD loan balance. Financial statements (Budget, Income and Equity, and Balance Sheet) are still required within 60 days of the fiscal year end in accordance with RD Instruction 7 CFR Part 1780, Section 1780.47.

- Agency audit for all other instances will be done in accordance with RD requirements, using the Government Auditing Standards (GAGAS) booklet and the RD Instruction 1780, Bulletin 1780-30 Water Programs Audit Guide and Compliance Supplement and is due within 150 days following fiscal year end.

RD Bulletins are available for download at:
[www.rurdev.usda.gov/RDU_Bulletins_Water_and_Environmental.html](http://www.rurdev.usda.gov/RDU_Bulletins_Water_and_Environmental.html)

Your organization will retain all records, books, and supporting material for three years after the issuance of audit reports.
Chapter 9: System Rates

A water system must provide an adequate and safe water supply to its customers. A wastewater system must provide a means to collect and treat sewage. In order to accomplish this, a sufficient amount of revenue is required. These are the main categories of expenses incurred with a water or wastewater system:

1. Operation and maintenance expenses.
2. New and replacement projects.
3. Debt service.
4. Customer service costs.

A further explanation of the expenses for each category is listed below:

1. Operation and maintenance expenses may be included in the following:
   - Pumping costs.
   - Treatment expenses.
   - Electrical.
   - Personnel.
   - Equipment.
   - Water and wastewater meters.

2. New and replacement projects can be:
   - Water mains.
   - Gate valves.
   - Fire hydrants.
   - Treatment plants.
   - Wells.
   - Lift station.
   - Manholes.
   - Sewer lines.
   - Treatment plants.
   - Maintenance buildings.
3. Debt service may include revenue or general obligation bonds to pay for major projects such as:
   - Treatment plant.
   - Distribution system.
   - Wells.
   - Buildings.
   - Wastewater collection system and/or lift stations.
   - Land acquisition.

4. Customer service costs may include:
   - Meter reading.
   - Meter repairs and replacement.
   - Billing.
   - Accounting.
   - Collection of unpaid bills.
   - Service connection and disconnection.

Water and Wastewater Rate Structures

The total cost of operation for your system now and your projected cost for the future will dictate how much income your system needs. Rates should be set based on actual expenses of the system, depreciation, and the needs in the upcoming years.

When considering a rate structure for your system, evaluate the characteristics of your system, its customer base, and your options for maintaining the predictability of rates and any rate increases. You should consider:

- **Rate Stability** – customers are more likely to pay for rate increases if their rates are stable. It is far better to increase rates by 2 percent per year than 10 percent once every 5 years.

- **Rate Predictability** – determine how much revenue you expect to take in the next year and the years to come. Predicting revenue can be difficult due to water usage varying from year to year. You should aim to generate and keep sufficient reserves so that your system can survive a significant decrease in water use.

- **Number of Customers** – the number of customers in your system (small or large customer base) should be taken into account when setting a rate structure.

- **Customer Classes** – consider if your system serves residential, industrial, commercial, or agricultural customers. The different customer classes have different costs to service.

- **Water Use** – examine your customer’s water use habits during peak and off-peak hours. Take into account that a family of four should not receive the same water bill as a car wash or Laundromat.

- **Customer Needs** – you may want to consider rate structures that allow for different rates for customers with different needs within a single customer class.
- **Strength of Wastewater** – rates are adjusted depending on the strength of wastewater. Some examples of rate structures are listed in the following paragraphs.

**Full-Cost Pricing**

Charging customers for the actual cost of water and/or wastewater service will guarantee you the revenue needed to cover the costs of operation, treatment, storage, and distribution and will provide funds for future investments. This is a concept called “full-cost pricing” or recovering the costs of running your system through user charges. Ideally, full-cost pricing:

- Ensures rates are a sufficient and stable source of funds. Charging for the full cost of delivering water and/or wastewater will ensure your system’s financial health, enabling you to provide safe water now and in the future.
- Provides information on costs to customers. Charging for the full cost of the service will help customers recognize the value of the service and be more mindful of their water use.

Other rate structures include:

**Base Fee/Charge Per 1,000 Gallons**

The concept of charging a base fee and then charging per thousand gallons used is that a base fee is charged for “water and/or wastewater availability” and then each customer is charged the same per 1,000 used. With a base fee and a charge per 1,000 gallons used:

- A base fee provides income even when no water is being used by the customer (customer is away for several months or the customer’s location is empty). This concept is called a water availability charge.
- Each customer is being charged fairly and paying for the water consumed in the per 1,000 gallons used charge.
- Water conservation is encouraged.

**One Charge/Flat Rates**

The concept of charging a flat rate to water and/or wastewater customers is that one fee for water and/or wastewater consumption is charged no matter what the water usage. A one charge rate (flat rate):

- Generally will not provide the income necessary to cover expenses. When production costs increase because of high consumption, income remains the same.
- Does not encourage water conservation because customers pay the same amount for water usage no matter how much water they consume.
- They are unfair to different customer categories. Large consumption customers pay the same as the small users.
- Is usually used when a system does not have water meters to accurately determine water usage per customer.

**Descending/Declining Rates**
The declining rate charge concept is that every 1,000 gallons used is charged less. With a declining rates structure:

- Each additional 1,000 gallons of water costs proportionally less than the previous 1,000 gallons.
- May not provide enough income to cover unexpected demands and future needs.
- Does not encourage water conservation. Large water users are charged less per 1,000 gallons than moderate users.
- Rewards heavy users. A person using just a few thousand gallons of water will pay more per 1,000 gallons than a person using several thousand gallons. For example, a resident who constantly waters his lawn uses 15,000 gallons per month and pays less for each 1,000 gallons than another resident who does not water his lawn and uses 5,000 gallons per month.

**Ascending/Increasing Rates**

The concept of an increasing rate charge is that users are charged slightly more per 1,000 gallons used. With an increasing rates structure:

- Each additional 1,000 gallons of water costs slightly more than the previous 1,000 gallons used.
- Increases income to the system.
- Encourages water conservation.
- Large families and businesses may see large water bills.

**Other Fees and Charges**

Other sources of revenue in a rate structure include:

- New service installation charges.
- Late payment charges.
- Reconnect fees and Disconnect fees.
- Re-reading of meter charges.
- Connection fees (hookup fees).
- WAC – water access charge.
- SAC – sewer access charge.

Take advantage of the assistance and advice of technical providers that can help your system review and determine if your water and/or sewer rate structure is meeting your system’s needs. Minnesota Rural Water Association (MRWA) has a free spreadsheet which calculates a system’s current water and/or sewer rates to determine if a system needs to increase rates or if a system has more expenses than income. The spreadsheet is available for download from MRWA’s web site at: www.mrwa.com or by calling MRWA’s office. A sample is provided in Appendix J of this manual.

**Water Meters**

“Water meters are referred to as the ‘cash registers’ of the water system.”
A water meter is used to measure water usage accurately. Water meters enable a water system to charge each customer fairly for the water actually used and help to conserve water. Water meters also help reduce the wastewater flow to treatment facilities. The water meter is used to determine the accurate billing for the wastewater system.

Water meters are referred to as the “cash registers” for the water system. Water meters are designed to be very accurate. Water meters must be:

- Installed properly.
- Sized properly for the water usage of the customer.
- Maintained properly.
- Repaired and/or replaced as necessary.

**Benefits of water meters include:**

- Increases the efficiency of the entire water system.
- Makes fire protection more efficient by increasing the water pressure in the mains.
- Allows money now spent for supplying excessive quantities of water to be diverted to more useful channels.
- Enables the water department to determine accurately the amount of water used by domestic, manufacturing, public, and other services.
- Permits the water department to supply a greater number of consumers, with a consequent increase in revenue, by reducing the per capita consumption.
- Prevents most consumers from having to pay for the excessive waste of others.
- Compels every customer to pay for the exact amount of water used or wasted.
- Enables the utility to deal justly and impartially with all.
- Lowers the operating cost of the system.
- Helps control the amount of wastewater discharged into the system.
Chapter 10: Ordinances and Policies

An ordinance is a statute or regulation enacted by a municipal body, such as a city government, which governs areas not already covered by state or federal law. Ordinances cover many areas from rate schedules to zoning, safety, and building issues. Minnesota Rural Water Association has a collection of sample ordinances available on their web site for use as model ordinances. They are available at: www.mrwa.com. The League of Minnesota Cities also has an extensive library of sample ordinances and guides available for download as well at www.lmc.org.

Water Ordinances

Responsibility for the management, maintenance, care, and operation of the water works system are addressed in water system ordinances. Examples of water system ordinances include:

- Regulating the water system.
- Water pipes and equipment responsibility.
- Prohibiting cross connections.
- Water meter policy.
- Private wells within city limits.
- Mandatory connection to municipal water system.
- Adopting a schedule of fees and charges for the water system.
- Lawn watering restrictions.
- Water purchase agreement.
- Availability charges.
- Water tower lease agreements.

A sample water use ordinance can be found in Appendix K of this manual.

Wastewater Ordinances

Responsibility for the management, maintenance, care, and operation of the wastewater system are addressed in wastewater system ordinances. Examples of wastewater system ordinances include:

- Establishing sewer use regulations.
- Discharging of storm water, groundwater, and surface water into the wastewater system.
- Charges for the connection and use of the wastewater system.
- Regulation of sump pump use and discharge.
- Establishing a schedule of fees and charges for the wastewater system.
- Sewer use agreements.
- Sewer availability charges.
- Storm sewer use.

A sample wastewater use ordinance can be found in Appendix L of this manual.

**Minnesota Cold Weather Rule**

Minnesota Statutes, Chapter 216B, describes how a municipality can handle disconnection of water services during cold weather to residents who are unable to pay for utility services. This rule applies to shutting off water if the primary heat source is related in any way to the water supply. A city is barred from shutting off water services to a residential unit during cold weather months, between October 15 and April 15, if that shut-off would in any way affect the primary heat source of the unit and the consumer complies with the provisions of the rule. A copy of the Cold Weather Rule is listed in Appendix M of this manual.

**Delinquent Accounts**

The League of Minnesota Cities research memo *Securing Payments of Utility Charges* defines some remedies for nonpayment of utility charges which are listed below. Nonpayment of any valid utility charge may trigger either a water shut-off or certification of the delinquency to the county auditor for collection with taxes if provided for in the city ordinance. A valid utility charge includes but is not limited to: deposits, meter charges, connection charges, flat rates, usage charges, penalties, and availability charges. There are some limits to keep in mind when seeking payment of unpaid utility charges.

- A city cannot withhold utility service and demand that a new owner pay delinquent charges incurred by the previous property owner before providing utility services.
- Most courts find that a municipal utility cannot require payment at one address for utility services delivered to a different address where one person owns both properties.
- A municipal utility probably cannot shut off one type of service due to nonpayment for some other city service.
- A municipal utility cannot disconnect or certify a consumer’s disputed charges while the consumer is going through the appropriate city authorized appeal process.
- Once a consumer has filed for bankruptcy, a municipal utility cannot shut off the service to collect or recover a claim against the debtor that arose before the beginning of the bankruptcy case. After 20 days, a bankruptcy court may let a city shut off utility service if the consumer does not provide adequate assurance of payment. A municipal utility cannot try to certify previous unpaid charges if a consumer has filed for bankruptcy.

**Due Process**

The League’s research memo goes on to explain due process. Minnesota law now recognizes consumers of utility services are entitled to the benefit of
continued utility service. This does not mean that service cannot be shut off for nonpayment or delinquent bills certified to be collected with taxes; it does mean consumers must be given notice of the pending action and a chance to protest it.

Due process is a two-step course of action and timelines are important:

1. A reasonable time before the shut-off or certification is scheduled to occur, the utility must give a consumer information or notice about the pending action, and in the same notice, a consumer’s right to protest it. The notice must clearly explain the process a customer can use to dispute a bill. In summary, some cities send a certified letter to the consumer’s last known address and if no response, a red tag with all information is tied to the front door of the property.

2. Due process requires that a municipal utility provide a consumer with an opportunity to discuss the situation with the city council or a person representing the city utility who has authority to either correct a charge or otherwise resolve the problem of non-payment.

Certification of Delinquent Water and Wastewater Charges

According to the League of Minnesota Cities research memo Securing Payments of Utility Charges, municipal water utilities in statutory or charter cities can certify unpaid water and sewer charges to the county auditor for collection with taxes. This can be done once per year or more often. The research memo also defines the advantages to certifying delinquent water and sewer charges as opposed to shutting off the water for nonpayment, including:

- Concerns about shutting off water services in cold weather are eliminated.
- The municipal utility does not have to investigate the residence or unit to determine if it is occupied.
- A municipal utility is protected if the property is sold after the delinquent charges are certified.
- Confusion is alleviated when joint owners of property disagree as to who is responsible for utility charges.
- Certified delinquent charges take priority over other unsecured creditors if a consumer later files for bankruptcy.
- Certification prevents large delinquent bills carrying over from year to year.
- Once delinquent bills are certified, staff time spent trying to collect payment is eliminated.

Not all delinquent water and sewer charges can be certified. If a property is sold before the charges are certified to the county auditor, the city probably cannot certify the charges against the new owner. Also, delinquent charges cannot be certified after a consumer files for bankruptcy protection.
Policies

A policy is an overall plan outlining the general goals and acceptable procedures of a governmental body. A policy guides employee conduct and procedure. In general, the board sets policy. Keeping policies up-to-date and in one location makes locating them easier. The policy manual covers all aspects of an organization, from employees and customers to board responsibilities. Listed below are sample policy topics:

- **Authority.**
  - Powers and duties.
  - Board member terms.
  - Meetings.
- **Code of ethics.**
- **Personnel.**
  - Hiring.
  - Background checks.
  - Terminating.
  - Daily operations.
  - Computer, e-mail, and internet usage.
  - Sexual harassment.
- **Customer relations.**
- **Finance.**
  - Accounting methods.
  - Budgets.
  - Purchasing.
  - Audits.
- **External relationships.**
  - Outside employment.
- **Building facilities.**
- **Equipment.**

Some sample policies can be found on Minnesota Rural Water Association’s web site at: [www.mrwa.com](http://www.mrwa.com) or the League of Minnesota Cities web site at: [www.lmc.org](http://www.lmc.org).
Chapter 11: Emergency Planning

Security of Your System

The events of past years have reinforced the importance of emergency planning for water and/or wastewater systems. Adequate security measures will help prevent the loss of water service or wastewater services from breaches in security. Preparing for emergencies can include anything from terrorists, vandals, and thieves to tornadoes and floods. There is no better way to be prepared than to have an emergency plan.

Emergency planning provides an opportunity for the board to carefully develop a blueprint and time for the employees to become familiar with how the plan should be carried out. It also allows the employees and board members to clearly understand their role in the emergency and to get started on implementation right away when disaster strikes. No matter how badly damaged your water and/or wastewater system is, an emergency plan will assist in resuming service much more quickly and efficiently.

Some steps to follow in developing a system’s security and emergency plan:

- **Conduct a Security Vulnerability Assessment (SVA)** – assess the system’s critical equipment, critical customers, and overall security measures.
- **Prepare an Emergency Response Plan (ERP)** – prepare a list of critical notification contacts, provide for a clear chain of command, take steps to plan for communication and notification to the public, consider an alternative water source, and the system’s plans, actions, and procedures.
- **Train Your Staff** – train your staff in emergency procedures, consider hosting mock disaster drills, and contact the necessary officials that an emergency plan has been put into place for your system.
- **Communicate the Plan** – effectively communicating the plan to the public and other emergency response organizations will exemplify good management and allow people to be assured should an emergency occur.

The federal Bioterrorism Act of 2002 required community water systems with populations served over 3,300 to conduct a vulnerability assessment on their water system and to complete an emergency response plan. In 2005, USDA Rural Development adopted this measure by reference for any water or wastewater system seeking permanent financing or having a current open loan through USDA Rural Development.
Security Vulnerability Assessments

A security vulnerability assessment (SVA) is the identification of weaknesses in water and/or wastewater system security, focusing on defined threats that could compromise its ability to meet its various service missions. Physical facilities pose a high degree of exposure to any security threat. A security vulnerability assessment should be performed on all components of a water and/or wastewater system. Water systems should assess their components in the following areas:

- Wellhead or surface water intake.
- Treatment plant.
- Storage tank(s).
- Pumps.
- Distribution systems.
- Other important components.

Wastewater systems should assess their components in the following areas:

- Collection system components such as lift stations and pumps.
- Treatment components such as the treatment plant, treatment pumps, and ponds.

In both cases, critical customers need to be identified and measures taken to protect their vulnerabilities. Once a vulnerability assessment has been completed, measures are then taken to address the areas of security that need enhancement. Security is not an end point but a goal that can be achieved through continued efforts to assess and upgrade your system. Remember: a security vulnerability assessment is a sensitive document. It should be stored separately in a secure place and access to the document should be limited to key personnel.

Emergency Response Plans

A security vulnerability assessment is a sensitive document.

An emergency response plan (ERP) should be developed based on the system’s vulnerability assessment. An emergency response plan is intended to be used for responding to any emergency and describes basic plans and procedures unique to the utility. Emergency response plans address the following areas:

- System specific information.
- Notification information.
- Chain of command.
- Communication and notification.
- Alternate water source (water system) or alternate treatment plan (wastewater system).
- Local emergency planning.
- Coordination.
- Safety and sample collection.
- Plans, actions, and procedures.
Coordination and communicating with all parties who are identified as part of the emergency response plan will help in an emergency situation. By contacting and working with these officials, everyone will understand their role in the event of an emergency. An emergency response plan can be designed to include individual action plans which can be used as “rip and run” sheets in the field in the event of a real emergency. Mock training sessions can be held to communicate the emergency response plan to all affected parties.

**Security Vulnerability Assessment & Emergency Response Templates**

Minnesota Rural Water Association, in conjunction with National Rural Water Association, has templates available to assist water and/or wastewater systems in Minnesota. The templates are interactive tools which guide the user through a series of questions to complete a vulnerability assessment and an emergency response plan for both water and/or wastewater systems. The templates are easy to use and are available in both PDF and Microsoft Word forms. The user starts by completing a contact information section and then proceeds to a security vulnerability assessment. Once the vulnerability assessment is complete, an emergency response plan can be generated with some additional questions. The templates are available by contacting the Minnesota Rural Water Association office as identified in Appendix E of this manual.

**Public Water Supply Emergency and Conservation Plans**

Water conservation issues in Minnesota have become increasingly important for consideration due to the rapid population growth of many small communities within and surrounding the Twin Cities Metropolitan area, as well as the larger population centers in greater Minnesota. In order to recognize and address concerns relating to the conservation, availability and sustainability of the state’s valuable water resources used for drinking water, the MN State Legislature passed MN Statue 103G.291 which requires all public water suppliers that serve more than 1,000 people to develop a *Water Emergency and Conservation Plan* approved by the MN Department of Natural Resources (MN DNR).

These plans were first required in 1996 and must be reevaluated and submitted to the MN DNR for approval every 10 years. At this time, most municipal water suppliers have completed their Emergency and Conservation Plans and have had them approved by the MN DNR. The second generation of Plan submittals will be phased in according to a MN DNR schedule between the plans, including the incorporation of the concept of sustainability of the water resources.

*Sustainable water use* is defined as the use of water for the needs of society, now and in the future, without unacceptable social, economic, or environmental consequences. Water withdrawals by public water suppliers and other users can impact natural resources and other water users. The potential for impacts must be considered when planning for development of new water sources of increased withdrawals. Some examples of natural resources of special concern with relation to sustainability are:

- Designated trout streams.
- Calcareous fens.
- Wetlands.
- Public waters.

"Water conservation can help reduce impacts on natural resources and increase sustainability of the water sources."
Another aspect of the Plan is the focus on water conservation. Water conservation can help communities avoid capital improvements which are only necessary to meet peak (summer) demands. Conservation can also help reduce impacts on natural resources and increase sustainability of the water sources.

The Emergency and Conservation Plan that the municipalities prepare for approval by the MN DNR also may be used to satisfy other requirements for State Drinking Water Revolving Fund applications, contingency planning for the State’s Wellhead Protection Rule and the Twin Cities Metro Area Water Supply Planning efforts. For example, each municipal supplier in the Twin Cities Metro Area is required to prepare a water supply plan as part of their local comprehensive plan (MN Statute 473.859). These communities should use the MN DNR Emergency and Conservation Plan materials to satisfy that requirement. The Emergency and Conservation Plan may also satisfy MN Rule 4720.5280 (Alternate Water Supply; Contingency Strategy) requirements for information in the public water supplier’s Wellhead Protection Plan relating to disruptions of the water supply caused by contamination or mechanical failure of the public water supply system.

Once completed, communities and utility boards must officially adopt the plan after it is approved by the DNR. In the Twin Cities Metropolitan Area the community officially adopts the plan after the Metropolitan Council review is completed.

More information on the MN DNR Emergency Conservation Plan requirements is available on the MN DNR web site at www.dnr.state.mn.us, or by contacting the DNR Waters Area Hydrologist. A copy of a Water Emergency and Conservation Plan Checklist and Plan is provided in Appendix N in the back of this manual.

**Minnesota’s Source Water Protection Program**

**What is Source Water Protection?**

The purpose of Source Water Protection is to help prevent contaminants from entering public drinking water sources.

There are three primary parts to Minnesota's Source Water Protection Program:

- **Wellhead Protection.**
- **Source Water Assessments.**
- **Protection of Surface Water Intakes.**

Each of these elements is described below in more detail.

**Wellhead Protection**

Wellhead Protection is designed to protect public water supply wells from becoming polluted by managing potential sources of contamination in the area that supplies water to a public well. Much can be done to prevent pollution, such as the wise use of land and chemicals. Public health is protected and expense of treating polluted water or drilling new wells is avoided through wellhead protection efforts.

States are required to have wellhead protection programs under the provisions of the 1986 amendments to the federal Safe
Drinking Water Act. A capture zone for the well (called the wellhead protection area) is designated and a plan is developed and implemented for managing potential contamination sources within the wellhead protection area. The Minnesota Department of Health (MDH) assigns staff in the Source Water Protection Unit as well as the Minnesota Rural Water Association to assist public water suppliers with preparing and implementing wellhead protection plans. MDH administers the state wellhead protection rule: Minnesota Rules, Chapter 4720.5100 - 4720.5590 that sets standards for wellhead protection planning.

Specific wellhead protection requirements vary for the different classifications of public water systems in Minnesota (transient noncommunity, nontransient noncommunity, and community). The requirements for each type of system are described below:

**Transient Noncommunity Public Water Systems**: Transient noncommunity water systems (such as resorts, restaurants, and churches) are required to delineate a 200-foot radius around the well, known as an inner wellhead management zone, and then inventory and manage potential contaminant sources within the inner wellhead management zone. These are the only required wellhead protection steps for transient noncommunity public water systems (although they are encouraged to pursue additional wellhead protection activities).

**Community and Nontransient Noncommunity Public Water Systems**: Community and nontransient noncommunity public water systems are required to delineate, inventory, and manage an inner wellhead management zone. Additionally, they must also create a formal wellhead protection plan. The wellhead protection planning process itself is broken down into two parts. Part 1 involves delineation of the wellhead protection area and drinking water supply management area, as well as an assessment of the well(s) vulnerability. Part 2 involves the creation of the wellhead protection plan itself, including goals, objectives, plan of action, evaluation program, and contingency plan.

**Source Water Assessments**

The 1996 amendments to the federal Safe Drinking Water Act require states to produce source water assessments for all their public water systems and to make the results of those assessments available to the public. MDH has recently completed assessments for the over 7,000 public water systems in the state. The types of facilities for which assessments have been completed range from small businesses on their own well to large city water systems using several different water sources.

A Source Water Assessment is a document produced by MDH staff and intended to provide basic information to public water suppliers and the general public regarding: 1) where their drinking water comes from (a well, lake, or river), and 2) the degree to which it may be impacted by potential sources of contamination.

Source water assessments were created by MDH using existing data such as water sampling results, water system surveys, and well records. For systems using surface water, the assessment was created in consultation with representatives from the public water system.

Specifically, a source water assessment includes the following:
The status of a public water system's source water protection plan.
A description of the water source(s) used by the public water system.
A determination of the susceptibility of the water sources to contamination.
A list of contaminants of concern for the water source(s) and potential contaminant sources that could impact the water supply.

Please note that these assessments focus on the source of water, rather than the finished water supplied to customers at their taps. A public water system may treat the water to protect and improve its quality before it reaches the consumer.

Some of the ways source water assessments are being used include:

- **By the Public** - to understand where their drinking water comes from.
- **By Contamination Cleanup Programs** - to set priorities and determine the level of cleanup needed.
- **By Permitting Programs** - to assess if a proposed land use has the potential to adversely impact a public water supply.
- **By MDH** - when bringing water suppliers into the wellhead protection program.

A "source water assessment" and a “wellhead protection plan” are two different documents, with separate and distinct purposes. However, the source water assessment can aid a water system in its wellhead protection planning process and provides an update of the system's progress in source water protection. Note that the source water assessment is produced by MDH, while the wellhead protection plan is developed by the water system and its wellhead protection planning team.

Assessments are now available to the public on MDH’s source water protection unit web site at: [http://www.health.state.mn.us/divs/eh/water/swp/swa/index.htm](http://www.health.state.mn.us/divs/eh/water/swp/swa/index.htm).

**Protection of Surface Water Intakes**

Protection for surface water intakes is not required, but many of Minnesota's 24 community water supply systems that use surface water have expressed interest in developing protection plans.

The Minnesota Department of Health has convened a work group to help determine how these plans should be prepared and who should approve them. The work group has prepared a guidance document to define Minnesota's approach to source water protection for surface water intakes.

**For More Information**

For more information about Source Water Protection, contact the Minnesota Department of Health, Source Water Protection Unit at 651-201-4700.
Chapter 12: Personnel

There are numerous laws that deal with personnel issues. Some examples are:

- **Discrimination in Employment** - The Fifth and Fourteenth Amendments to the U.S. Constitution protect against discrimination. Also, **Title VII of the Civil Rights Act of 1964** prohibits discrimination in many more aspects of the employment relationship. Employees and applicants are protected from discrimination on the basis of race, color, religion, national origin, disability, age, and sex with respect to qualification, hiring, discharge, recall, layoff, promotion, transfer, compensation, conditions, privileges, or responsibilities of employment or sexual harassment. This Act also provides **Equal Employment Opportunity (EEO)** protection. A **job description** with requirements for each position in your organization will help avoid discrimination accusations.

- **Age Discrimination in Employment Act (ADEA)** - Enacted in 1967, this Act protects individuals who are 40 years of age or older.

- **Title 1 and Title V of the Americans With Disabilities Act of 1990 (ADA)** – prohibits employment discrimination against qualified individuals with disabilities in the private sector and in state and local government.

- **Equal Pay Act of 1963** – protects men and women who perform substantially equal work in the same establishment from sex-based wage discrimination.

The U.S. Equal Employment Opportunity Commission (EEOC) enforces all of the laws listed above. The EEOC also provides oversight and coordination of all federal equal employment opportunity regulations, practices, and policies. Other applicable laws dealing with personnel issues include:

- **Workers Compensation** – Under Minnesota Statute 176.021, every employer is liable to pay compensation in every case of personal injury or death of an employee arising out of and in the course of employment. Minn. Stat. 176.181, subd.2 requires employers who have not been approved for self-insurance to provide workers compensation insurance for their employees.

- **Fair Labor Standards Act of 1938** – This Act provides standards for overtime pay, penalties for failure to pay, and federal minimum wage.

- **Workplace Safety and Health** – The Occupational Safety and Health Act (OSHA) of 1970 requires employers to furnish a workplace that is free from recognized hazards that cause, or are likely to result in, death or serious physical harm.

- **Family and Medical Leave Act of 1993** – covered employers must grant up to a total of 12 workweeks of unpaid leave during any 12-month period for one or more of the following reasons:
  - For the birth and care of the newborn child of the employee.
  - For placement with the employee of a son or daughter for adoption or foster care.
  - To care for an immediate family member (spouse, child, or parent) with a serious health condition.
  - To take medical leave when the employee is unable to work because of a serious health condition.
Employee Policy and Procedures Manual

Following is a listing of some items to consider when preparing an Employee Policy and Procedures Manual.

- Purpose – express the need to practice fairness to all employees.
- Equal Employment Policy – express the need to avoid discrimination; that all persons are entitled to equal treatment; that employment opportunities are and shall be given to qualified existing staff members as well as outside applicants; and how you will handle advancement and/or promotions.
- Appearance/Dress Code – address proper attire for the position and if uniforms are provided, address if employees are required to wear them.
- Occupational Injuries and Accidents – list of procedures to follow and who to notify.
- Safety – develop a safety policy for employees to follow.
- Jury Duty – address how jury duty will be handled.
- Classification of Employment – address the chain of command and make sure that each position has a title and job description. Other items to address include overtime, salary or hourly positions, and on-call positions.
- Hours of Work – identify work time and time card requirements.
- Probationary Period – consider establishing a probationary period for new employees.
- Conflict of Interest – consider what would constitute a conflict of interest.
- Performance Reviews – consider who will perform the review and how often.
- Training, Education, and Travel Expenses – consider what expenses to approve and if receipts are required.
- Religious or Political Activities – consider what activities will be allowed during working hours.
- Company Owned Vehicle Use – establish a vehicle use policy.
- Holidays – identify which holidays are observed and payment of holidays.
- Sick Leave, Vacation Leave, Bereavement Leave, Maternity/Paternity Leave, or Personal Leave – identify policies to handles these types of leaves.
- Health Insurance and Retirement – identify how these are to be paid.
- Severance Pay – consider if you will provide severance pay to terminated employees.
- Leave of Absence – consider if you will allow a paid or unpaid leave of absence.
- Dismissal – consider who has authority to terminate employees and what would be cause for termination.
- Grievance Procedure – consider how an employee can appeal action taken against him or her.
- Drug Screening and Driving Records – consider how these items will be handled.
Pay Equity/Comparable Worth

Minnesota state law requires all public jurisdictions to eliminate any sex-based wage inequities in compensation. Pay Equity is a method of eliminating discrimination against women who are paid less than men for jobs requiring comparable levels of expertise. A policy to establish pay equity usually means: 1) that all jobs will be evaluated and given points according to the level of knowledge and responsibility required to do the job; and 2) that salary adjustments will be made if it is discovered that women are consistently paid less than men for jobs with similar points. It is important to remember that pay equity laws in Minnesota address only sex-based wage disparities and not all types of wage disparities. More information on complying with Minnesota’s Pay Equity laws can be found on the Minnesota Department of Employee Relations web site at: http://www.mmb.state.mn.us/comp-pay-equity.

Water/Wastewater System Personnel

There are three broad categories of work that must be performed in the functioning of a small water/wastewater system:

- Operation and maintenance.
- System management.
- Office management.

System Operation and Maintenance

The choice of system operator is one of the most important decisions that board members make. The system operator should be viewed as a professional who provides a vital service to the system by insuring its smooth functioning. The operator should be given the support and flexibility needed to perform the job well.

The operator performs another important job in serving as chief advisor to the board. When the system’s board plans, creates policy, or changes the operation of the system, the operator is usually the main source of information. The system needs to have a back up operator to perform the operator’s duties when the operator is on vacation, sick leave, etc.

Operator Requirements

It is important that the operator have a basic mechanical aptitude and the ability to understand and perform all phases of operation and maintenance of a water/wastewater system. The operator’s basic knowledge, skills, and training may include the following:

- Appropriate operator certificate to operate the system.
- Sufficient training and experience to protect the public health.
- Knowledge of state and federal regulations affecting the system.
- Knowledge of all aspects of the system.
- Understanding of emergency procedures.
- Skill to maintain water quality (water) and effluent standards (wastewater).
- Record keeping and good public relation skills.
- A willingness to participate in continuing education programs.
Continuing Education

Continuing education is important for a large or small system. It is an essential way for staff to stay up-to-date on new technology and new requirements. In fact, operators of water and/or wastewater systems must attend continuing education to renew their respective licenses as per M.S. Chapters 9400 and 7080. There are many free and fee-based training sessions offered by different entities. Minnesota Rural Water Association offers free training to water and/or wastewater personnel as well as some fee-based training for other system personnel throughout the year. You can find a joint training calendar on Minnesota Rural Water Association’s web site (www.mrwa.com) which lists different training opportunities offered by state agencies, organizations, and associations. In addition, the University of Minnesota offers professional pre-licensing and continuing education courses for ISTS and MSTS designers, operators, installers, inspectors, and pumpers. Detailed can be viewed at http://septic.umn.edu.

Operator Certification Renewal Requirements

All operators need to complete continuing education in order to renew their certificates and remain certified. The amount of continuing education hours will depend on the system’s classification. Operator certification certificates are valid for three years. The continuing education must be completed before the certificate expires. The table below lists the contact hours needed per certification class.

<table>
<thead>
<tr>
<th>Certification Class</th>
<th>Contact Hours</th>
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<tbody>
<tr>
<td>A</td>
<td>32</td>
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<td>B</td>
<td>24</td>
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<td>E</td>
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Contract Operations

A system may decide to contract with an operator for system operations. Both the Minnesota Department of Health (water) and the Minnesota Pollution Control Agency (wastewater) have guidelines that systems must follow when contracting with an operator. These guidelines can be found in Appendix O of this manual. It is important to remember that the owner of the system is still responsible for the actions of the certified operator that they contract with.

System Management

The board may delegate certain responsibility and authority of the system. This may be made to an operator (if it is a very small system) or a clerk/administrator. The system manager has the authority to make some decisions for the system. However, this authority comes from the board. All decisions continue to be the responsibility of the board.
The system manager may perform the following:

- Enforce the objectives and policies of the board.
- Keep the board informed of system activities, both operational and financial.
- Represent the system in official or community affairs.
- Plan for long term projects.
- Advise the board on financial aspects of the system.

Office Management

Most systems designate the duties of the office management. This may be a clerk, bookkeeper, or an administrator. The duties of the office manager may include those of the system manager. The office manager’s duties may include the following:

- Coordinate the financial management of the system.
- Perform secretarial duties for the board.
- Greets office visitors and answers telephone calls.
- Coordinates the start or reconnection of water service.
- Answers customer questions and complaints.
- Explains system policy and procedures.
- Coordinates system correspondence.
- Coordinates and maintains the financial business of the system.

Job Description

A job description is a written document that outlines the duties, responsibilities, and specifications applicable to the work assignment of an employee. It is generally broken down into four parts:

- Title of the job.
- Summary of the job.
- Duties involved.
- Specifications of the job.

A job description provides both the employee and management with a written outline as to all of the duties that are involved in a particular job. This provides for a mutual understanding and unity of purpose in the work that is to be performed.

Chain of Command

It is important for an organization to run effectively and efficiently. These are some essential rules to consider:

- Each person should have clearly defined responsibilities.
- Each person should have authority needed to meet those responsibilities.
- Every staff member must know the proper chain of command.
• Each person must know who the supervisor is.
• No one should have more than one boss.
• No one should directly supervise more than 5 employees.
• Criticism should be made privately.
• Promotions, wage changes, and disciplinary action should be approved by the supervisor directly responsible for that person.

Personnel Records

Personnel records are an important part of managing an organization. Personnel records must be kept private. Minnesota Statutes, Chapter 181.980, protects personnel records of employees. The records may include the following:
• Original application form.
• Notes from the initial interview.
• Insurance and tax forms.
• Performance appraisal forms.
• Salary history.
• Sick leave and vacation history.
• Training and certification achievements.
• Disciplinary letters or forms.
• Notes from an exit interview when the employee leaves.

Employee Benefit Package

There are several advantages to both the employee and the employer when a good benefit package is offered. Some of the advantages include:
• Attracting and retaining the best qualified employees.
• Employee security and job satisfaction.
• A competitive employer with other prospective employers.
• It marks a quality organization.
• It rewards the local community by helping to keep valuable and productive people.

There are mandatory and optional benefits to be considered when developing a benefit package. Some of the mandatory benefits are:
• FICA (Social Security) employer’s portion.
• Federal unemployment.
• State unemployment.
• Workers compensation.
• Public Employees Retirement Association (PERA) for municipal employees only.
Here is a partial list of some optional employee benefits:

- Health and/or dental insurance.
- Retirement.
- An Individual Retirement Account (IRA) or a Simplified Employee Pension (SEP).
- Vacation.
- Sick leave.
- Funeral leave.
- Disability insurance.
- Leave without pay.
Chapter 13: Board Meetings

Any type of system will need to hold board meetings. Board meetings are a time to make important decisions about the system. These meetings can be at various intervals as required by the needs of the system. It is common to have monthly meetings. Regardless of the frequency of these meetings, they should be held regularly to allow both the public and the board members to schedule for meetings that are held at known times, dates, and locations. This creates stability in the governing of the system.

An important step in holding a successful meeting is to have a well prepared agenda. An agenda helps the board members stick to the subject matter at hand and to not wander off on other subjects. The agenda should be prepared and sent to every board member well in advance of the meeting. Each board member should review the agenda thoroughly. When there are questions concerning items on the agenda, the board member should ask questions of the staff ahead of the meeting.

By-Laws

By-Laws are rules or laws governing the internal affairs of an organization that set forth the policies, procedures, and responsibilities of the governing body. By-laws should be reviewed on a regular basis and updated as needed. The governing board through official action and proper documentation must accept the by-laws. Each member of the governing body should be familiar with the by-laws and have a copy of them for reference.

By-Laws should cover the following:

- Basic organizational structure.
- Meetings.
  - Types, how meetings are handled, and how often.
- Governing body.
  - Number of members.
  - How to become a member.
  - Term.
  - Procedures.
  - Duties.

Minnesota Open Meeting Law

Minnesota Statute Chapter 13D, Minnesota’s Open Meeting Law, requires that meeting of governmental bodies generally be open to the public. The purpose of Minnesota’s Open Meeting Law is to:

- Prohibit actions taken in a secret meeting without the public’s knowledge.
- Affirm the public’s right to be informed.
- Allow the public to present its views to the governmental body.
The law applies to all levels of state and local government. Meetings must be open to the public and votes in open meetings must be recorded in a journal that is open to the public. Votes of each member must be recorded on appropriations of money. The law requires that public bodies give proper notice of their meetings. Public bodies must keep a schedule of regular meetings on file in their offices and post notice of special meetings on their primary bulletin board in their office or publish notice in the entity’s official newspaper at least three days before the meeting and to mail a notice to persons who have requested such. The law also requires that any printed material prepared and distributed for an open meeting be available for inspection by the public.

Some exceptions to the Open Meeting Law include:

- Certain meetings involving employee evaluation or discipline must be closed.
- A meeting may be closed to discuss labor negotiations.
- The law permits closed meetings based on a limited attorney-client privilege.
- A meeting may be closed to address certain security issues.
- A meeting may be closed to discuss certain issues relating to government property sales or purchases.
- Before closing a meeting, the specific reasons for permitting the meeting to be closed and the subject to be discussed shall be stated on public record.
- Meetings are closed for discussion only. No votes may be conducted in a closed meeting.

Violations of the Open Meeting Law can include personal liability up to $300 for a single intentional occurrence and forfeiture of office if three intentional violations occur.

**Board Meeting Agenda**

A typical agenda usually includes the following:

- Call to order.
- Proof of quorum.
- Recognition of visitors.
- Read and approve minutes.
- Presentation of financial report.
- Committee reports.
- Unfinished business.
- New business.
- Announcements.
- Adjournment.

**Making Motions**

Making motions is very important. Each member should say “I would like to make a motion” or “I move that” when deciding when to make a motion since this alerts the secretary that an important part of the minutes is about to happen. Motions should be as short as possible, concise, and on a single subject. Some main motion fundamentals are:
• Only make one motion at a time
• Amend the motion - **OR**
• Refer the motion to committee - **OR**
• Table the motion - **OR**
• Postpone the motion - **OR**
• Withdraw the motion.

Most organizations follow “Robert’s Rules of Order.” If your board chooses to do so, it should be stated in the by-laws. Some guidelines in making motions are:

1. A member can make a motion and will be recognized when no other business is on the floor. The member then presents the motion.
2. Another member seconds the motion. If there is no second, the motion dies.
3. If there is a second, the motion is restated by the person making the motion or as written by the secretary. Any motion made and seconded must be written to ensure accuracy.
4. The chairperson calls for a discussion. The member making the motion is entitled to be recognized first. Each member may make comments twice but are allowed the second comment only after all others have had the opportunity to comment once. Discussion is limited to 3 minutes per comment unless the chairperson decides that discussion can be extended. If there is no discussion, the chairperson may call for a vote.
5. An amendment to the motion can be made when a member is recognized by the chairperson and another seconds the amendment. Discussion follows in a similar manner as above.
6. When a vote is called for, the vote is announced and the exact motion and the vote by each member are recorded in the minutes.
7. If a member is disruptive and refuses to follow the rules, that member may be asked to leave.
8. If the chairperson does not follow the rules prescribed in the by-laws, members may ask for a procedural explanation from the chairperson.

A copy of Parliamentary Procedures at a Glance can be found in Appendix P of this manual.

**Board Meeting Minutes**

Meeting minutes are the official record of the board’s actions and votes. Minutes also are:

- Official public record.
- A legal record that must be precise and accurate.
- Required to be published or posted.

Minutes should include:

- Time, date, and location of the meeting.
- A list of board members present and absent.

“Remember, the board sets the goals and policies that guide the board and staff.”
• All motions with the exact wording.
• Name of each board member that made and seconded motions.
• The vote of each board member.
• Time, date, and location of next meeting.
• Time the meeting was adjourned.

The board members and the manager are a team. Remember, the board sets the goals and policies that guide the board and staff. These policies determine what the organization will do. The manager and staff implement these policies.

**Conflict Resolution**

Occasionally, major disagreements between board members arise. Some tips for resolution of disagreements include:

• Debate can sometimes become very emotional. Stick to issues and try to understand the others point of view.
• Remain open.
• Do not look for blame or excuses.
• Be curious about the real message.
• Ask effective questions.
• Remain action orientated. Focus on solutions and make a commitment to act.
• Focus on issue at hand.
• Keep an open mind: don’t take sides without researching the issues.
• Separate the people from the problem:
  • What is the perception of the conflict?
  • Deal with emotional issues.
  • Communicate the conflict.

**Media Relations**

When dealing with the media, remember to:

• Be open and honest.
• Give them time and respect.
• Treat them the way you want to be treated.
• They can be a great friend or a difficult foe.
• Appoint one spokesperson to deal with media issues.

Don’t be afraid to ask if you can read an article/press release prior to it being aired or printed. This will ensure accuracy and understanding of the press release.
Chapter 14: Safety

The Occupational Safety and Health Administration (OSHA) was established by Congress to reduce workplace hazards and to achieve better health and safety conditions in the workplace.

OSHA develops standards or regulations that:
- Identify possible workplace hazards.
- Require and explain procedures, equipment, and training employers and employees must use to reduce hazards and work safely.

Employers must:
- Follow all OSHA rules that apply to them.
- Provide a place of employment free from recognized hazards.
- Provide safety training, personal protective equipment (PPE), and working conditions that are safe and healthy.

AWAIR Program

Minnesota OSHA statutes require many employers to develop and use a formal workplace accident and injury reduction (AWAIR) program. Employers are required to develop and implement a written safety and health program with specific actions designed to reduce the incidence of workplace accidents and injuries.

An employer covered by this OSHA requirement must establish a written AWAIR program with clearly stated goals and objectives for meeting those goals. The program must describe:

1) How supervisors and employees are responsible for implementing the program and how continued participation of management will be established, measured, and maintained.
2) The methods used to identify, analyze, and control new or existing hazards, conditions, and operations.
3) How the plan will be communicated to all affected employees so that they are informed of work-related hazards and controls.
4) How workplace accidents will be investigated and corrective action implemented.
5) How safe work practices and rules will be enforced.

An employer must conduct and document a review of the workplace accident and injury reduction (AWAIR) program at least annually and document how procedures set forth in the program are met.

There are other safety programs that an employer is required to follow. These programs require a written explanation of how the safety hazard will be reduced and the training that will be provided for the employees to reduce or eliminate that hazard.
Some of the following safety topics may apply to a typical system:

- Confined space entry.
- Trenching and shoring.
- Material safety data sheets.
- Fire extinguishers.
- Drug and alcohol testing.
- Lockout/tagout.
- Self contained breathing apparatus.
- Blood borne pathogens.
- Personal protective equipment.

In addition to the above listed topics, there may be other safety issues that a system must address. There are organizations and safety consultants that can aid in complying with the Minnesota OSHA requirements. Visit www.doli.state.mn.us for a detailed list.
Chapter 15: Board Development

Your primary responsibility as a board member is to protect and serve the public. It’s a tough job, full of long hours, tough decisions, and high visibility. Your actions now directly affect the citizens in your community, customers of your system, and your employees today and for future generations to come!

According to the *Water Board Bible*, there are several things you can do to prepare for the future to keep your board and system viable:

- Use more on-site, free technical assistance,
- Have all board members go to training regularly,
- Develop an annual business plan and use it,
- Participate in discussion groups, hearing, and conference sessions.

“Your primary responsibility as a board member is to protect and serve the public.”

Board Member Code of Ethics

Make a commitment to the continued success of your system. Review the following code of ethics and remember that as a board member I WILL…

- Represent the interests of all people served by this organization.
- Not use the organization or my service on this board for my own personal advantage or for the individual advantage of my friends or supporters.
- Keep confidential information confidential.
- Approach all board issues with an open mind, prepared to make the best decision for the whole organization.
- Do nothing to violate the trust of those who elected me to the board or of those we serve.
- Focus my efforts on the mission of the organization and not on my personal goals.
- Never exercise authority as a board member except when acting in a meeting with the full board or as I am delegated by the board.

Final Thoughts

Your job as a board member is a tough one! Your citizens, customers, and employees count on you to plan for the future. By envisioning your system’s regulatory, financial, and operational needs, you can position your system to meet that future.