

Public Utility Plan Element – Water

In concert with the Natural Resources Element, the protection of Traverse City’s natural resources, our Bay Front, the Boardman River, Boardman Lake, the wetlands, the parklands, rolling hills, and view sheds, are vital to our health, safety, welfare, economy and quality of life as a community. The Bay and other water sources provide for our drinking water, residential and commercial uses, fisheries, wildlife habitat and many recreational uses.

In addition, economic development, growth, and type of development will depend in great measure on the ability to treat and distribute clean water in the area. To that end, the general goals and objectives of the Water Plan Element are:

1. Water rates should encourage water usage consistent with local goals.
2. The treatment system should consist of state of the art technology.
3. An ongoing evaluation and assessment of the distribution system should be conducted.
4. A continued assessment of the Bulk Water Sale Agreements should be performed to monitor the demand for water from outside the City through the transmission system.
5. User rates should be sufficient to provide funds for operational costs and for maintaining infrastructure and its replacement. The City should make efforts through revisions to the Bulk Water Sale Agreements to insure that market rates reflect the total true cost of service.
6. Coordination amongst all City utilities should be insisted for all improvements.
7. Campus plans should include a hydraulic assessment of their impact on the water transmission and distribution system from the treatment plant.
8. Recognizing that the water utility has a regional impact, the City should be constantly coordinating with other governmental entities.

Neighborhood Type	Distribution Capacity	Intensity
TC 1	Minimal	Very Low
TC 2	Small	Low
TC 3	Small	Low/Moderate
TC 4	Medium	Moderate/High
TC 5	Large	High
Campus	Small/Medium/Large	Low/Moderate/High

Public Utility Plan Element - Stormwater

In concert with the Natural Resources Element, the protection of Traverse City's natural resources, our Bay Front, the Boardman River, Boardman Lake, the wetlands, the parklands, rolling hills, and view sheds, are vital to our health, safety, welfare, economy and quality of life as a community. The Bay and other water sources provide for our drinking water, residential and commercial uses, fisheries, wildlife habitat and many recreational uses.

In addition, economic development, growth, and type of development will depend in great measure on the ability to contain and treat storm water in the area. To that end, the general goals and objectives of the Stormwater Plan Element are:

1. Water quality is of more importance than the quantity of water being treated.
2. Coordinate with the Natural Resources Plan Element.
3. Manage stormwater to reduce deleterious impact on the bay and other bodies of water.
4. Conform to Best Management Practices for removal of sediment and other contaminants from stormwater released into natural water courses.
5. Strive to contain/retain water on site both to reduce loads on stormwater infrastructure and to allow sediments to settle out before the water is released.
6. Monitor the stormwater and sanitary sewer systems for illicit connections and maintain their separation.
7. Identify a dedicated and sustainable funding mechanism for the operation and maintenance and capital improvement of the stormwater system.
8. Require that a Stormwater runoff ordinance be maintained.
9. Encourage use of the City's tree canopy and street sweeping efforts where practicable to assist in natural cleaning of stormwater.
10. Campus Plans shall include a plan for stormwater management and provide for the continued repair and maintenance of that system.

Neighborhood Type	Level of Treatment	Design
TC 1	Onsite	Low Impact
TC 2	Onsite	Low Impact
TC 3	Onsite/Tie into System	Medium Impact
TC 4	Onsite/Tie into System	Moderate/High Impact
TC 5	Tie into System	Very High Impact
Campus	Onsite/Tie into System	Low/Medium/High Impact

Public Utility Plan Element - Sanitary Sewer

In concert with the Natural Resources Element, the protection of Traverse City’s natural resources, our Bay Front, the Boardman River, Boardman Lake, the wetlands, the parklands, rolling hills, and view sheds, are vital to our health, safety, welfare, economy and quality of life as a community. The Bay and other water sources provide for our drinking water, residential and commercial uses, fisheries, wildlife habitat and many recreational uses.

In addition, economic development, growth, and type of development will depend in great measure on the ability to treat waste water in the area. To that end, the general goals and objectives of the Sanitary Sewer Plan Element are:

1. The treatment system should consist of the most cost effective state of the art technology.
2. An ongoing evaluation and assessment of the collection system should be conducted.
3. A continued assessment of the Master Sewer Agreement should be performed to monitor the contribution of flow from outside the City into the collection system.
4. User rates should be sufficient to provide funds for operational costs and for maintaining infrastructure and its replacement. The City should make efforts through revisions to the Master Sewer Agreement to insure that market rates reflect the total true cost of service.
5. Coordination amongst all City utilities should be insisted for all improvements.
6. Campus plans should include a hydraulic assessment of their impact on the wastewater collection system to the treatment plant.
7. Recognizing that the sanitary sewer utility has a regional impact, the City should be constantly coordinating with other governmental entities.

Neighborhood Type	Collection Capacity	Intensity
TC 1	Minimal	Very Low
TC 2	Small	Low
TC 3	Small	Low/Moderate
TC 4	Medium	Moderate/High
TC 5	Large	High
Campus	Small/Medium/Large	Low/Moderate/High

Public Utility Plan Element – Electric

In concert with the Natural Resources Element, the protection of Traverse City’s natural resources, our Bay Front, the Boardman River, Boardman Lake, the wetlands, the parklands, rolling hills, and view sheds, are vital to our health, safety, welfare, economy and quality of life as a community. The function of our water, sanitary sewer, and storm water utilities are critical in accomplishing the above stated goal and these utilities can not function properly without a dependable and reliable source of electricity.

In addition, economic development, growth, and type of development will depend in great measure on the ability to provide reliable and inexpensive electricity. To that end, the general goals and objectives of the Electric Plan Element are:

1. Ensure employee and public safety.
2. The electric system should continue its upgrades with state of the art technology as deemed appropriate by staff.
3. An ongoing evaluation and assessment of the distribution and transmission systems should be conducted.
4. In order to maintain reliability, a system with redundancy is encouraged.
5. Sufficient local generation including distributive generation should be pursued commensurate with local support for such projects.
6. Coordination amongst all City utilities should be insisted for all infrastructure improvements.
7. Campus plans should include an assessment of electric requirements.
8. User rates should be kept as low as possible.
9. A balance between aesthetics and cost efficiency should be considered in determining the benefit of a capital project to the system as a whole.
10. Encourage energy conservation and educate customers to utilize electricity more efficiently.
11. Provide for proper disaster planning.
12. Any growth in the utility’s service territory should benefit the City residents and businesses.

Neighborhood Type	Distribution Capacity	Intensity
TC 1	Minimal	Very Low
TC 2	Small	Low
TC 3	Small	Low/Moderate
TC 4	Medium	Moderate/High
TC 5	Large	High
Campus	Small/Medium/Large	Low/Moderate/High