

System Depreciation – Steps Check List

Detailed below are the steps to complete the System Depreciation Valuation for your water system. This process will provide your water system with a current valuation based on the age, maintenance and condition of your public infrastructure. It will also be used by the Mequon Water Utility to provide you with a system connection fee to help you and your residents determine if now is an appropriate time to convert to the municipal water supply.

Step 1: Obtain a copy of the Water Utility Plans for your system. The system operator may have a copy of these plans, they may be in the pump house, or you might be able to obtain a copy from the Engineering Department at the City of Mequon. These plans will determine the exact design of your water utility plant (mains, laterals, valves, hydrants, etc).

Step 2: Based upon the Water Utility Plans for your system, determine the following:

<i>Utility Plant Item</i>	<i># Units</i>	
6 inch Water Main		linear feet
8 inch Water Main		linear feet
12 inch Water Main		linear feet
6 inch valve and valve box		each
8 inch valve and valve box		each
12 inch valve and valve box		each
1 inch lateral		each
1-1/4 inch lateral		each
1-1/2 inch lateral		each
2 inch lateral		each
Hydrant assembly		each

Step 3: Go to the “System Valuation” tab in the “System Deprecation Valuation” spread sheet and populate the “# Units” for your system in the spread sheet based upon the table above.

Step 4: While still on the “System Valuation” tab, fill in the top Blue “Age of the system (yr)” cell. The “Age of the system” is determined by taking the current year and subtracting the year of construction (which should be stamped on your plans).

Step 5: With the assistance of your water system operator, or utilizing a consultant to study your system, perform an evaluation of your system and complete the “Inspection Checklist” for your system. The more details you can provide, the better. The “System Valuation” tab will require you to select one of the following categories, and we have detailed them to help you and your consultant/operator determine the appropriate category:

- **Excellent** – This infrastructure has been found in “Like new” condition. No wear is evident, the equipment operates smoothly without much resistance, and the appropriate (industry recommended) maintenance has been performed diligently and regularly. Valves perform complete shut down when exercised, almost all the curb stop boxes are locatable and keyable, curb stop valves turn easily, and hydrants do not shudder or thump when operated.
- **Good** – This infrastructure has been found to display moderate wear. The equipment operates smoothly, but may require an effort to turn. Maintenance has been performed in the past, but there are no records of maintenance performed, and it was not done as often as recommended by the industry. Valves may leak slightly when shut down. The majority of the curb stop valves are locatable and keyable, curb stop valves turn with some effort, and hydrants may be stiff when operated and a few may shudder or thump on close.
- **Fair** – This infrastructure has been found in a state of significant wear. Maintenance has not been performed in the past, and there are little to no records of any maintenance performed on the system. More than half the valve boxes are cracked or out of alignment. More than half the valves take a significant effort to close, or the valves leak significantly. The majority of the curb stop valves are not locatable and keyable, curb stop valves turn with significant effort, hydrants are very stiff to operate and a majority of them shudder or thump while closing.
- **Replace** – Either due to age of the system (50+ years old) or current condition of the infrastructure (never maintained or in a terrible state of disrepair) or combination of these two factors, the utility rate payers should not accept the liability of the existing system.

Step 6: Utilizing the results of the inspection, complete the “Depreciation Grade”(s) for the system in the “System Valuation” tab.

If you want to determine the maximum financial liability for your utility, select “Fair” for all of the “Depreciation Grades”. To determine the mid-range, select “Good” for all of the “Depreciation Grades”. To determine the minimum, select “Excellent” for all of the “Depreciation Grades”.

Step 7: You now should have a “Current System Value” for your system, and a “Depreciation” value for the system.

The “Current System Value” is the Replacement Cost of the system minus the “Depreciation” assessed to the system.

Step 8: Forward these results to the Mequon Water Utility, and we will complete the “Connection Charge Worksheet” and review your inspection and system valuation. The final product will be circulated for your review once complete.

Once we have provided you with the Connection Charge Worksheet, the Mequon Water Utility would be happy to meet with you and your residents to discuss the costs/benefits of connecting to the public water utility. The documents generated can be used to help educate the residents regarding the current condition of the water system, and can be used as either a tool to determine what infrastructure to maintain/replace, or as a basis to encourage connection to the public water supply.