Staff Report
11/13/12

Water System Plan

A number of misconceptions seem to have arisen about our proposed water system plan update. This report will hopefully clear some issue up.

First, it’s important to realize that the proposed water system plan is simply an update of a plan passed in 1998. The old plan already had most of the features of the new plan, including a discussion on water conservation and capital improvement needs.
A comparison of the two plans follows, as well as responses to the questions Katie Walker brought to council at the last meeting.

WATER SYSTEM PLAN COMPARISON

1998 Plan	2012 Update
Chapter 1 Existing Water System	Chapter 1 preceded by an Executive Summary
• Only one reservoir at that time	We now have 2 reservoirs
• 206 customers	We now have about 344
Chapter 2 Basic Planning Data	Chapter 2
• Residential meters being installed at that time	Meters are reaching expected life
• ERU of 350	ERU of 461
• Forecasted population of 849 in 2012	Forecasting 2,875 by 2017
Chapter 3 Water Conservation Program	Chapter 4
• Promoted efficient water use under RCW 43.20.230	Now also regulated by RCW 90.46
• State required the city to install meters	State sets a standard of 10% water loss
• Demand side – show consumption history with billing	Need to verify/replace meters
Chapter 4 System Analysis	Chapter 3
• There was a need for a second reservoir and/or a second well	Still need a second well
• Established monitoring requirements	Continued
• Need to install a 12 inch main to loop the system	Still needed
• Water treatment required to eliminate corrosion	Completed
• Conservation necessary to maximize available water rights	Water leakage is an issue
• No Water Quality Discussion	Includes discussion on Water Quality
Chapter 5 Water System Improvement Plan	Chapter 7
• Well source meter	Completed, but not adequate
• Consumption meter installation	Completed, but meters are aging
• Telemetry improvements	Completed, more needed
• Corrosion Control Treatment system	Completed
• Second well	Still needed
• Second reservoir	Completed
• Reservoir loop	Still Needed
Chapter 6 Financial Program	Chapter 8
• City needs to increase service rates and connection fees	Completed in 2010
• City needs a capital improvement plan	In Progress
Chapter 7 Operations and Maintenance	Chapter 6
• No comment	Includes Cross Connection Control Program adopted in 2003
	Chapter 5 Source Water Protection
	This is a new chapter required by state law.

Responses to Katie Walker's Questions

Q. Table 4-2 creates a red flag, which states, "Reduce the customer consumption by 10% over the 20-year period." I am confused how will this be implemented?

A. Table 4-2 refers to DSL (Distribution System Losses). The system currently loses 34.1%. The goal is to reduce the loss of (or unaccounted for) water to 10%. This has nothing to do with property rights. We hope to correct much of the water loss through meter replacement and by repairing any leaks in transmission pipes.

Q. Table 2-11 seems to be a scare tactic by projecting our community's numbers to increase 1,353 in population growth. In the past 7 years we have only grown at a max of 100 or so occupants. This number seems extremely off.

A. While this does seem high, it should be noted that this is just an estimate. The original WSP produced in 1998 projected the population in 2012 to be 849. In reality we now have 1000. When planning it is always better to plan for more than enough than not enough.

Q. Table 2-10 showing the build out population to max out in the year 2017, to 2875 where Stevenson alone is at 1,473 in 2011, this number with no foreseeable business growth in our town looks to be a miss hope and a way of manipulating the water "plan". With an annual growth of 5.2% the numbers do not add up.

A. These numbers are estimates based upon past growth rates. Starting with the population of 965 in 2011 and multiplying this by 4.35% each year (see the paragraph on page 2-7 explaining the reasoning for the use of 4.35%) the numbers in Table 2-10 are accurate. Again, these are estimates used for projection purposes.

Q. Why does the city wish to convert from chlorine gas to liquid sodium hypochlorite especially when disinfection is not required?

A. The city, as a supplier of public drinking water, must comply with standards established by the Federal Safe Drinking Water Act which includes disinfection (see WAC246-290-451). The city has been using chlorine gas which is toxic and poses dangers to the public and operations staff. Liquid sodium hypochlorite has the same efficacy and residual protection as chlorine gas but is safer to handle.

Q. Table 3-2: Does it mean that the fluoride level will be 4.0 if this plan is voted in to existence and can you explain the rest of the table standards?

A. Table 3-2 lists the Maximum Contaminant Levels (MCL) for each of the chemicals listed. MCL's are the minimum standards for water quality as established by WAC 246-290-310. For Fluoride the maximum contaminant level is 4.0 milligrams per liter. This does not say that the city is adding Fluoride to the water. This is only establishing a maximum level should fluoride be present.

Q. It says in the plan, "The City has adequate storage for the 6- and 20-year planning periods with the two existing reservoirs." If this is true then why is this plan being approached?

A. The Water System Plan was first written and approved in 1998. The current version is simply an update of this plan. When first written the city had only one reservoir. By planning appropriately, we were able to have a second reservoir constructed providing adequate and redundant storage. The WSP also covers a number of other factors including pumping capacity. We are also updating this plan because state law requires us to do so.

Q. As shown in Table 1, the City has water rights totaling 1,000 gallons per minute (gpm) based on instantaneous withdrawal. Our projected maximum withdraw is stated at 445 gpm. With this being said we are half the capacity. Is this an emergency at the moment or can it be viewed in a sinking fund approach?

A. While you are correct that the city has water rights totaling 1000 gpm, our pump is only capable of pumping 600 gpm. Using the estimated demand in Table 2-13, we will not have enough volume by 2017. Given that the construction of an additional well is costly and time consuming, there is not enough time nor available funds to use a "sinking fund approach". Further we need a second well as a backup in case the existing well ever fails. While this is not currently an emergency, we are trying to avoid one.

Q. Table E-11 shows "Meter Replacement Program," Will this be residential meters and is this a need at the moments?

A. We were unable to locate the referenced Table E-11. The Meter Replacement Program is located in Chapter 7, Capital Improvement Program. The city has a number of meters, both residential and commercial. These need to be replaced as they fail. At this moment, the city does not have any replacement meters on hand in case a meter does fail. The average life of a meter is around 10-12 years. With this in mind, we should keep an active replacement program going.

Q. In table 6-2 who is the head utilities manager and why are they not listed?

A. The head utilities manager is now Bryan Hendrickson. At the time of the printing of this "draft" revision to the WSP, the position was vacant following the retirement of the previous head utilities manager.