



## WATER SYSTEM IMPROVEMENT UPDATES

### MAYOR

Mayor – Carlene Anders

### STAFF

Clerk/Treasurer – Kerri Wilson  
 Deputy Clerk/Museum  
 Coordinator – Cecilia Arellano  
 City Administrator – Jord Wilson  
 Sewer Plant Operator –  
 Mike Lambert  
 Water/Public Works –  
 Devon Archambault  
 Parks/Public Works –  
 Justin Carrington

### COUNCIL

Christine Perry  
 Holly Bange  
 Mike Harding  
 George Brady  
 Megan Sherrard

### PROJECT STATUS

Starting in 2013 and continuing through 2016, the City was primarily conducting preliminary planning and funding strategies for the Water System Improvement project.

Construction of the reservoir and the wells began in earnest in mid-2017. Reservoir construction was awarded to Tapani Inc., out of Battle Ground, Washington, and well construction was awarded to Blue Star Enterprises Northwest Inc., out of the Tri-Cities.

### RESERVOIR PROJECT

Tapani requested a winter shutdown in November of 2017. If we have good spring weather, the goal is to start construction back up in March of 2018. Final construction of the reservoir is

### RESERVOIR PROJECT

- ✓ Site Excavation (2017)
- 500,000-gallon Concrete Reservoir (Started)
  - Isolation Valves
  - High-Low Level Alarm System
  - Drain & Overflow (Started)
  - Security Fencing
  - Reservoir Mixing Unit
  - Site Grading
  - Excavation Material Disposal
  - Piping
  - Remote Control System to Pumping Station
  - Power to Site
  - Road extension to site (Started)
  - De-chlorination Unit on Overflow (Started)
  - De-chlorination Station for Distribution Line Flushing

### WELLS PROJECT

- ✓ Installation of Test Well
- ✓ Well Drilled at Industrial Way and Dawson
- ✓ Well #3 Drilled at Pearl St. and Edna St.
- ✓ Well #4 Drilled in Downtown
- Pump Station # 3 (Design Started)
- Pump Station #4

### OTHER IMPROVEMENTS

- Mainline Loop on Industrial Way
- Added Fire Hydrants

*Reservoir Construction, November 2017*



expected to take about 90 days after spring startup.

### CHOOSING A WELL SITE

The process for choosing well sites has been long and challenging. In 2015 the City completed the required Cultural Resource Surveys for the project and a Ground Water Investigation Technical Report. This report considered:

- ✓ Groundwater supply capacity criteria
- ✓ Hydrogeologic evaluation & water rights
- ✓ Existing City wells and water supply
- ✓ Geologic conditions and performance
- ✓ Water quality
- ✓ Alternative supply and construction methods
- ✓ Cost estimates.

**The City and engineers reviewed over 30 well logs** to get a good understanding of hydrogeology. The City investigated 18 potential well sites.

Department of Health (DOH) has restrictions on the placement of municipal wells. **A City well must have “sanitary control” 100 feet around the well, and it must be more than 200 feet from surface water** (the Columbia and Methow Rivers.) Finding a vacant parcel that is at least 200’ wide is difficult in downtown Pateros.

The Investigation also told us that potential for a good well is as close to the downtown area as possible. The further away from the downtown, potential for acceptable water quantity declined.

The City needs to be able to pump 1000 gallons per minute (gpm) during peak season, in order to keep up with demand. Good

producing wells are vital for the system.

**In early 2017, City officials and the City engineers met with DOH during a walk-through inspection of potential well sites.** The results of that visit further narrowed the field of potential well sites. The City prioritized the property near the firehall and the property on Pearl and Edna as the two best spots for wells over the next best sites in the downtown area.

**The City drilled a monitoring well on the parcel next to the firehall, and found good quality water, with no contamination.** This was a green light, and the City began drilling its first well in late summer of 2017. However, after drilling down about 40 feet, the driller hit contaminated water.

The water and ground smelled of creosote. The well driller believed they could get past it and seal the well, but the City decided to abandon the location, because of the contamination.

**The Blue Star moved to the Edna-Pearl site and began drilling. Drilling went smooth, and water quantity and quality look to be great. Early testing show that the City may be able to pump between 900 and 1100 gallons per minute out of this well.** Additional development was performed to try and increase the productivity of the well and reduce the sand.

Water quality results have all been received, and they all look good, and within normal ranges for well water. **We are very optimistic about manganese levels in this well, which came back very low.**

**Because the City had a list of DOH approved alternative well sites, it did not have to send the well driller home.** This saved the City considerable mobilization costs.

The downtown well location was not necessarily ideal, but the next alternatives were even less.

The Mayor, Council, and staff have set out to get input on the development of the downtown well site and has been working on a strategy for the site that fits into the Community needs and business plans that were developed after the fire of 2014

### WATER DISRUPTIONS IN 2018

Lots of work and activity will be happening during 2018 to the water system. The City will be working hard to minimize disruptions. However, disruptions are anticipated as we break into mainlines, connect to new reservoir and pump stations, and abandon the old reservoirs. There will be manganese and sediment breaking loose during these disruptions.

#### Tips when experiencing manganese or sediments:

- ✓ **First, run cold water in your tub until the water runs clear. This will allow for sediment/manganese to work its way through the system.**
- ✓ **Take screens off sinks, and check for trapped particles if low pressure.**
- ✓ **Run cold water in your sinks till the water runs clear**
- ✓ **Check for discolored water before doing laundry or running the dishwasher. Re-wash, do not dry stained clothes.**
- ✓ **Other appliances, like icemakers, dishwasher, and washers may have screens.**
- ✓ **In some cases, slight discoloration may linger. This discoloration only affects the appearance of the water and not the quality. No health hazards are associated with discolored water from manganese and sediment.**