



P.O. Box 8, 113 Lakeshore Drive; Pateros, WA 98846
 City Hall (509) 923-2571

WATER SYSTEM IMPROVEMENT NEWSLETTER

MAYOR

Mayor – Carlene Anders

STAFF

Clerk/Treasurer – Kerri Wilson

Deputy Clerk/Museum Coordinator –
 Cecilia Arellano

Building Inspector/Code Enforcement –
 Darren Moore

City Administrator – Jord Wilson

Sewer Plant Operator – Mike Lambert

Water Manager – Seth Lopez

Parks/Public Works – Shane Kelly

COUNCIL

Christine Perry

Adam Fritz

Mike Harding

George Brady

Megan Sherrard

2013 COUNCIL AUTHORIZES STUDY OF WATER SYSTEM

The City engineers, Varela and Associates began collecting data and studying the Pateros Water System. In August of 2014 Department of Health (DOH) approved the Water System Plan, and Council accepted the plan. What did that plan determine?

- Very high manganese levels
- Supply capacity barely adequate to meet peak period demands and does not meet City's reliability criteria.
- The wells are 50 years old, with unknown remaining service life.
- Storage capacity is below required minimum, and the 64 and 84-year-old concrete tanks are deteriorated and leak.
- Storage tanks are at too low an elevation to provide minimum required pressure and fire flow. As a

result, required fire flow is not met in residential areas, commercial areas and the school.

- Service pressure is less than the required minimum 30 psi in a few areas.
- Control system is old but functions adequately.
- Distribution system is adequately sized and in good condition
- Fire hydrant coverage is generally adequate throughout the system with a few exceptions.

7/17/2014 CITY RESERVOIR DRAINED DURING CARLTON COMPLEX FIRE.

As we later saw in the Wenatchee Sleepy Hollow fire and the Chelan Reach fire, City reservoirs are likely unable to keep up with large scale fires. Both Chelan and Wenatchee reservoirs were drained fighting those fires. However, the water system improvement project will help with fire protection and includes:

- Increase fire hydrant coverage
- Increase the reservoir size from 300,000 gallons to 500,000 gallons
- Increase pumping capacity, possibly adding a third well.
- Install a backup generator to keep the wells running during a power outage.

2015 CITY BEGINS SPENDING ITS OWN RESERVES FOR PROJECT

In 2014 and 2015 the City Council began preconstruction activities in preparation for the construction of new reservoir and wells. The City received a preconstruction grant, to help cover costs, but it was insufficient for the all of the required activities. With the approval of State Appropriations, the City began spending its own reserves on reimbursable activities. It was not until 2017 that the City began receiving reimbursements for eligible activities.

The City Mayor, Council, and staff have worked diligently with funders and legislators to secure a full funding package that the community could afford. **Almost 80% of the project is funded with grants.** It is anticipated that rates will go up after the project is completed, but only at minimum and reasonable levels.

2015 WATER STUDIES AND REQUIRED SURVEYS

The primary **Cultural Resource Surveys** for potential well, reservoir, and transmission line sites was completed in 2015. The surveys have been updated as the City added new potential locations.

GRANTS

| | | |
|--------|-------------|--|
| 5/2014 | \$25,000 | Community Development Block Grant (CDBG) Planning Only |
| 4/2016 | \$25,000 | Office of Drinking Water Preconstruction Grant |
| 1/2016 | \$1,788,000 | Washington State Direct Appropriations |
| 3/2016 | \$153,220 | FEMA Hazard Mitigation Grant (electric backup generator) |
| 7/2016 | \$2,700,000 | CDBG Economic Opportunity Grant |
| 3/2017 | \$1,067,000 | Washington Stated Direct Appropriations |

LOAN

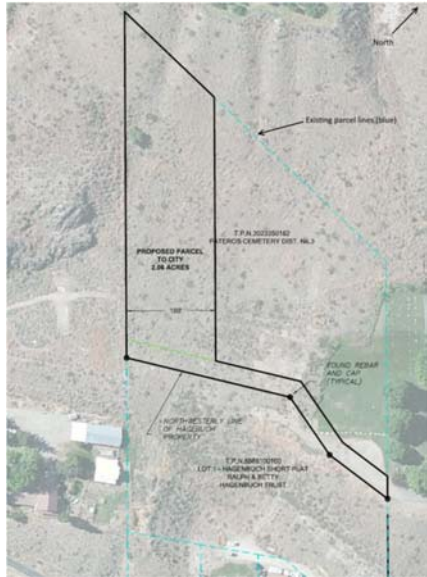
| | | |
|--------|--------------------|------------------------------------|
| 5/2016 | \$1,720,000 | USDA – Water Loan (40-year, 1.75%) |
| | \$7,478,220 | Total Funding |

In May of 2015, the City engineers completed two studies. The first, **The Reservoir Siting Feasibility Investigation** evaluated the advantages and disadvantages of the City using the existing tank site or the Cemetery site. The study considered land costs, construction costs, and transmission main costs. The study also compared advantages and disadvantages of construction types.

The second study was the **Groundwater Investigation**, and studied the most suitable place for the City to place 2-3 large municipal wells. GeoEngineers and Varela & Associates completed a hydrologic evaluation reviewing well logs and other available data. The evaluation considered manganese impacts, alternate locations, hydro geology, rehabilitation of existing wells, and drilling new wells.

2016 SITE ACQUISITION BEGINS

The City purchased four and a half acres of undeveloped land from the Pateros Cemetery District for the new reservoir.



City Reservoir Parcel on Cemetery Road

In 2012, the top water user in the City was the Cemetery District. From 2012-2016 the Cemetery District averaged 26.8 million gallons of water per year or 4.5 million gallons a month in water consumption. The City purchased the unused land in exchange for a new automatic irrigation system for the Pateros Cemetery. This should considerably reduce water consumption and provide much more reliable water for the lawn. The irrigation system will reduce cost of labor to the Cemetery District, as the old manual system

required someone to regularly change sprinklers. The Water Improvement Project will bring other benefits to the Cemetery District including the extension of paved and gravel road. In exchange for the temporary construction use of Cemetery property the City will also be removing brush and leveling the property for future expansion of the Cemetery. The Cemetery Board and the City feels like it is a win-win for everyone.

2012 WATER USE

Cemetery - 17.4% of Total

3.5 Acres - 16.8 Million Gallons of Water

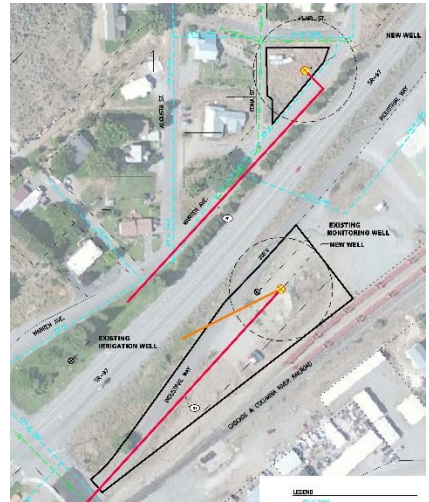
City Parks - 11.7% of Total

8 acres - 11.3 Million Gallons of Water

School District - 4.4% of Total

2.2 Acres - 4.2 Million Gallons of Water

The City also purchased a small unbuildable triangle lot on Pearl and Edna Street. The property along with the parcel the recycle center sits on has been approved by DOH for new City wells.



Well Sites on Pearl/Edna and Industrial Way

2017 PROJECT DESIGN

In May of 2017 the City engineers were in the final push to complete design document for the Water Improvement Project. A public meeting, May 23rd from 5pm to 6pm was scheduled for the public to review the design documents and ask questions of the engineers. Varela presented the project plans to the City Council.

RESERVOIR PROJECT

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

WELLS PROJECT

- (2016) Installation of Test Well
- Well Drilled at Industrial Way and Dawson
- Well Drilled at Pearl St. and Edna St.
- Third Well Site to be Determined

PROJECT TIMELINE

May-June 2017

- Public Review of Reservoir and Wells
- Send Projects out to Bid

July 2017

- Sign Contract for Well and Reservoir Construction

Summer 2017

- Reservoir Construction
- Drill Wells
- Pump Test Wells

Late Fall 2017

- Complete Reservoir Construction

Winter 2017-2018

- Design Pump Station, fire hydrant & distribution line improvements.
- Send out to Bid

Spring 2018

- Finish Reservoir Construction
- Construct pump station, fire hydrant improvements, and improvements to the distribution lines.
- Install backup generator for wells