

# CITY OF WINLOCK

## REPORT FOR CITY COUNCIL

### Water/Sewer Department

Rodney Cecil

2022

### 2022 UPDATE

See web page for past updates

#### **Treatment Plant Upgrade:**

The treatment plant is performing as it should. No major issues with any of the upgrades and the membranes are performing as they should. The plant continues to struggle a bit when we get high flows in the winter. The membranes are rated to process 1500 GPM however, they can only do that for short periods. The optimal setting for the membranes is around 1050 GPM. We have polymer on site for the winter months. The polymer makes it so the membranes can process more flow.

We have added some new upgrades: new 3171 pump, 2 new composite samplers, 2 davit cranes, a blower crane, new DO probe, new mixers for the basins, some new panel boxes, new mini excavator, combo vac truck/sweeper and a sewer jetter. We will continue to upgrade our older equipment so that our maintenance costs will be lower.


One area we will be addressing will be our membrane thickening system. The thickening system is working as it should, but we need to have more flexibility when it comes to freeing up digester space. We are looking into grants for a belt press. This will allow us to process waste more and process the sludge into a cake. This will drive down hauling costs, as we can haul once every 2 years and it is cheaper to transport.

The magnesium unit we installed to address our copper limits has been working very well, we have not exceeded our copper limit as of this writing.

#### **Sewer I&I Projects**

Inflow and infiltration are when storm water gets into the collection system through cracks, roots, and side sewers. The normal amount we process in the summer months is around 80,000-100,000 gallons per day. In the winter months it can get as high as 2.0 MGD but averages around 300,000-500,000 gallons per day. This causes our membranes to work harder and can lead to bypasses to the Olequa Creek. These bypasses are regulated by the Department of Ecology. We have had 8 bypasses since 2014

We are in the process of applying for another Ecology I&I Grant for the year 2022-2023. This will hopefully take care of the rest of the I&I issues we are having down at the sewer plant. The first project was completed in 2019 and it dropped our I&I around 30%. There was an I&I report done in 2012 that identified hot spots in the collections system that need to be addressed. We are hoping to complete the issues that were identified in that report.



We have also been addressing I&I issues in-house when they pop up. We are checking all the manholes in the city for infiltration and will start addressing those.

I&I is an issue for all collection systems. All you can do is strive to minimize it where you can. Grants are the best way to achieved this.

### **New Well Project:**

This is through Cardinal Glass and their requirement to return approximately 157-acre feet back into our infrastructure. This new well will get us approximately 72-acre feet returned into the system. Some of this came from a transfer of water rights from the Mickelsen farm. The well has been completed and all the required testing has been done. The programming is complete. We should be able to put this well online by the end of September 2022. The pandemic and supply issues dragged this construction project on longer then expected. The well is rated to pump around 160GPM, however DOH only approved 125GPM, and right now we can't exceed 70,000 GPD at this location due to the limit on the water rights assigned to this location. We will apply for the full 160 GPM at a later date.

### **Increase of Water Rights/Connections and Water Loss:**

Our water rights at this present time are 560-acre feet per year. Last year we used around 400-acre feet. We are also approved for 1,244 connections. At the time of this writing, we still have around 356 connections available. Cardinal Glass still owes us around 79-acre feet. They returned 78.5-acre feet out of there obligated 157-acre feet which is allotted to the SR 505 well.

We dropped our water loss down from around 38.5% to just a little over 10% as of this writing. DOH requires that utilities keep their water loss under 10% so we are trending in the right direction. The Water and Sewer Department along with the Public Works Department has been working as hard to identify and repair all leaks when we find them. Our engineer is working on getting us more connections through the DOH due to this drop in our leaks. This could get the City of Winlock up to around 200 more connections. This report is scheduled to be submitted within the next few weeks. This project is being paid for by the City of Winlock.

The Exeter development has around 175-acre feet of seasonal irrigation water rights that will be converted into municipal water rights that will then be transferred to the city system. Exeter will also be providing a new well and reservoir out at the industrial park. We should see some additional connections when the reservoir is built out, and when we find out from Ecology how many water rights will convert from irrigation to municipal. I am hopeful that this will bring an additional 300-700 connections into the city system. This part of the process can take from 1-3 years to complete. The reservoir should be built out in 2023. This increases our storage capacity to around 1,228,000 for fire suppression, pressure regulation and high demand usage which will also address the limiting factor in water connections.

We also have some reservations that were approved at some point in the past. .33CFS is allotted from the Olequa Creek and we have around 1.80 CFS allotted from the Cowlitz Basin. We also have several other water rights that go back to 1950. All of these potential sources are being explored.

The Mickelsen land just on the south side of SR 505 also has a water right of around 92-acre feet of irrigation that was not sold in the Exeter deal and will at some point come into the city system as well.

I will update you when I get the exact number of connections.

## **Industrial Park**

All the water and sewer utilities in the industrial park have been installed and are operational. The booster station is online and so is the sewer station. They are working as expected. The generator for the booster complex has been delivered and is being installed as of this writing. We will soon have another reservoir at this location, and we will be upgrading our water PLC to communicate with the industrial park and our existing system.

The SR 505 sewer station is running as it should. There were some minor computer glitches, but those have been addressed. We are still waiting on the repair of one meter.

Right now, Exeter is doing some groundwork to build out 3 new buildings. There is some groundwork being done on the Crow site also (formally Benyorya). There is also some work that will start being done on the N. Military Road upgrades and the SR 505 upgrades. I will update you when I know more.

## **Galvanized Replacement Project: Part 1 COMPLETED**

This project is underway. They will be replacing service lines down SE First St, Rice St, Canyon St, Allegra Villa, and Arden Ave. This will hopefully bring our water loss in our system down the required 10% per year required by DOH. Right now, we are at around 39%. This project is expected to last about 60-90 days depending on conditions. This was from a \$750,000 grant.

## **Galvanized Replacement Project: Part 2 2022**

This project was mostly completed in August of 2022. We still have areas that were added at the last second. The following was done: New 6 inch line up Washington Street, a new 2 inch line along Dexter Ave. and Washington St, 6 inch line down Benton Ave and up W Walnut St, a new 2 inch line along Kerron Ave and over to the plaza, a new 6 inch line down Shannon Lewis Ln and SE Front St and stubbed out so we can continue to run all the way down SE Front St and move all the meters that are presently on SE First St. We added new valves and some new hydrants. Areas still to be completed: the Allegra Villa meter, new valve replacement at the corner of Walnut St and NE First St, and a new 2-inch line along Cedar St in downtown Winlock. All services along all these upgrades were changed out to poly. This was from a \$750,000 grant. This project should be wrapped up by the end of September 2022

NOTE: We are also working in-house every year to replace service connections that are galvanized and changing them out to poly.

## Internal Projects and Updates


### **Water System:**

1. **PRV maintenance:** We have done some maintenance on many of our PRV, but I believe we need to upgrade most of our PRV stations as they are nearing the end of their lifecycle. We will be looking for grants to accomplish this work.

### PROGRAMS: 2022

The following programs and procedures have been initiated:

1. **Cross Connection Program:** This program is 100%. We are fully compliant with the cross-connection's requirement under **WAC 246-290-490**.
2. **Valve Exercise Program:** This program is about 25% complete. The valves have not been exercised in so long that when we do exercise them the valve stems are breaking. We will need to get some valve inventory on hand so we can replace them when they break.
3. **Valve Replacement Program:** Will replace as funds allow.
4. **Meter Replacement Program:** We have replaced around 85% of all our meters with Kamstrup radio read meters. Most of the meters we have left are 1" and larger and will probably be replaced at a later date.
5. **Hydrant Maintenance Program:** This program is about 95% complete. We are still working to get all these projects done. We have several hydrants that still operate but need some maintenance.
6. **System Flushing and Pressure Checks:** We did do some partial flushing this year but will develop a plan in conjunction with the fire department.
7. **Leak Maintenance and Water Loss:** We check all high meter reads to identify leaks on the customer side of the meter. We monitor our wells usage—vs—consumption to gauge our water loss. We are down from 45% to around 12%. We aggressively try to repair all known leaks as soon as possible. It has taken several years to get to this point.
8. **Consumer Education Program:** We have started a customer education program on how to conserve water and avoid cross connections issues. These will be done via mailings.
9. **Preventive Maintenance Programs:** We have implemented a record keeping database and a preventive maintenance schedule for all equipment in the Water and Sewer Department. We do maintenance every year and sometime 2x per year. The goal is to extend the life of all our equipment. I also have a full inventory of all our equipment. We have started our equipment upgrade program.
10. **Water and Sewer Training Program:** This is our 6th year of volunteer training at the Water and Sewer Department. We took 2022 off from training.

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11. **Evaluations:** I also do yearly job evaluations on the persons that I supervise. Right now, that would be James Agren and Heather Luurs.

### **Pending Projects:**

1. We are set up to loop SE Front St. We have a stubbed out 6-inch line that was done as part of the galvanized project that will allow us to tie on and continue down the street. This will allow the meters that are on SE First St to be moved to SE Front St. We will be looking for grants to continue this work.

Thank you for your time,

Rodney Cecil

Water/Sewer Superintendent