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| CITY OF MOLALLA WATER  C:\Users\nlennartz\Desktop\Logos for City\2 inch Emblem Spot.jpgTREATMENT PLANT | ALTERNATE INTAKE  VERN VALVE  OPERATION | DATE ISSUED  OCT-2015 |
| SOP  #10 |

***STANDARD OPERATING PROCEDURE***

**Overview**

In the event of high raw water turbidity or significant “fall color” the operator may need to use the Alternate Intake or “Vern Valve”. The Alternate intake is a series of 8” concrete bell and spigot pipe laid horizontally with no gaskets. This pipe is laid in the permeable soil and draws river water through the ground into the wet well. The result is raw water with significantly lower turbidity and slightly lower pH.

**Location**

Raw water pump station. There is a gate valve next to the east side of the pump station. See description on next page

**Operation**

It is recommended to switch to the Alternate Intake while the treatment plant is off but not necessary.

1. First, close 24” gate valve inside the pump station. This valve is the “red” valve stem with visual indicator on top. You may want to use the power head to close the valve, it will take approx. 30 minutes to fully close. If you use the electric power head make sure and close the last 1” of the valve manually so the gate valve is not damaged.
2. Next, open the gate valve “vern valve”, located on the east end on the outside of the pump station.
3. Make a note of the wet well level and watch draw down. Pump station will shut down at 40”.
4. Turn Treatment Plant back online and monitor treatment process, there will be a significant change in the dosage of the Primary coagulant (ACH). It takes approximately 15 minutes to see a change in raw water turbidity at the Treatment Plant.
5. If the pump station wet well level drops significantly (example 160” to 100”) you may need to reduce the flows of the treatment plant.
6. First set the flow to 1150-1200 gpm. Adjust chlorine accordingly.
7. If needed adjust flow to 1000 gpm, check pressure on influent line of the treatment plant for excess pressure, adjust butterfly valve so that there is no more than 15 lbs of pressure at the chemical injection point.
8. To set the flow at 900 gpm you must change to the 75 hp raw water pump. De-select 100hp pump from Filter #1 start sequence page on the SCADA computer. Then select the 75hp pump. If 75hp pump is selected for filter #3 & #4 you must first de-select it from the filter #3 & #4 influent sequence page. Adjust chlorine pump accordingly.

**Recommendations**

The raw water from the alternate intake is slightly lower in pH, if operating on the intake for more than several days you may need to adjust soda ash pump to compensate. Typically the raw water quality in the River will clear up slightly in 24 hrs.