



**Public Health**  
Prevent. Promote. Protect.

**NORTH CENTRAL PUBLIC HEALTH DISTRICT**  
*"Caring For Our Communities"*  
419 East Seventh Street, The Dalles, OR 97058  
Phone: 541-506-2600 Fax: 541-506-2601  
Website: [www.ncphd.org](http://www.ncphd.org)

November 2, 2020

Matt Olson  
PWS #00911 Tooley Water District  
PO Box 699  
Newburg, OR 97132

Re: Nitrate Maximum Contaminant Level exceeded at Tooley Water District,  
PWS# 00911

Dear Matt,

Recent samples reported and confirmed for your water system indicate nitrate in drinking water exceeds the maximum contaminant level (MCL) of 10 mg/L.

- Water from Entry Point B from the Lower Well tested at 18.6mg/L on 10/16/2020 with a confirmation sample taken and results at 20.00 mg/L on 10/20/2020.

Drinking water with concentrations of nitrate above 10 mg/L can cause Methemoglobinemia or blue baby syndrome. There is also an increased risk of recurrent respiratory infections, thyroid dysfunction, negative reproductive outcomes and certain cancers including cancer of the stomach or bladder.

- 1) Please consult with North Central Public Health at 541-506-2753 within 30 days of the date of this letter so that you can respond to the contamination appropriately.
- 2) You must **submit a plan no later than February 1, 2021** identifying the corrective action you will take to reduce nitrate in drinking water to below the MCL. The corrective action plan must include a projected date by which you can, as quickly as possible, provide safe drinking water to water users. If water system modifications are necessary to resolve the contamination, the plan must include dates for the submission of plans to Drinking Water Services for review prior to construction.

Possible corrective actions to resolve the contamination include:

- Installing water treatment to remove nitrate or evaluating the effectiveness of existing treatment if applicable;
  - Disconnecting the water source from your water system and provide an approved alternate source of water;
  - Connecting to another public water system; or
  - Blending water sources so that nitrate is reliably and consistently below the MCL in drinking water.
    - Note- Recent samples have identified that the water from Entry Point A at the Upper Well tested at 9.36 mg/L on 10/22/2020. Blending the water from these two sources may not consistently lower nitrates to under 10 mg/L.
- 3) A public notice was required to be provided to customers of the water system within 24 hours of receiving the alert of MCL exceedance on October 20, 2020. The drinking water program received the systems public notice information on October 21, 2020. Public notice templates and information are available at request and online on the state drinking water webpage.
- If the lower well is turned back on for any reason: This notice **must** be re-issued within 24 hours and then every three months until the contamination has been resolved. You must submit a copy of the notice to Drinking Water Services within ten days of distributing the notice to customers.

The actions described in this letter are required by Oregon Administrative Rules 333-061-0025, 333-061-0030 and 333-061-0042. Thank you for your immediate attention to this matter.



Nicole Bailey  
Environmental Health Specialist Supervisor  
North Central Public Health District

CC: OHA-DWS Portland  
Attached: Circuit Rider Assessment

**Circuit Rider – Technical Assistance Contact**  
Oregon Health Authority/Drinking Water Services

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|--|--|--|
| <u>Reason</u><br><input type="checkbox"/> General Assistance<br><input type="checkbox"/> Emergency Assistance<br><input checked="" type="checkbox"/> Water Quality Issues<br><input type="checkbox"/> CT Tracer Study<br><input type="checkbox"/> Funding Applications<br><input type="checkbox"/> Other | <u>Investigation Type</u><br><input checked="" type="checkbox"/> Operations<br><input type="checkbox"/> SWTR<br><input type="checkbox"/> Material Recommendations<br><input type="checkbox"/> Process Testing<br><input type="checkbox"/> Equipment Status | <b>PWS ID: 41- 00911</b><br><br><u>Report Date:</u> 10/21/20<br><br><input checked="" type="checkbox"/> Ground water<br><input type="checkbox"/> Surface water |
|--|--|--|

Who Responded: Dan Vaage

Contact:  By Phone  In Field  Email

Summary: Tooley Water District (TWD) is a small groundwater system on the Columbia River in Wasco County. Their wells just tested high at 18.6 mg/L for nitrate in Well #1 and 20.0 mg/L in Well #2. The MCL for nitrate is 10 mg/L.

|               |                       |         |              |
|---------------|-----------------------|---------|--------------|
| Water System: | Tooley Water District | Phone:  | 541-340-0032 |
| Contact:      | John Amery            | County: | WASCO        |
| Location:     | The Dalles, OR        |         |              |

**Background/Problem Identification:**

Tooley Water District (TWD) is a small groundwater system on the Columbia River in Wasco County. One of their two wells just tested at 18.6 mg/L for nitrate in Well #1 and 20 mg/L in Well #2. The MCL for nitrate is 10 mg/L.

**Assistance Provided:**

The circuit rider reached out to John Amery of TWD on 10/22/20 to provide assistance. To address TWD's three concerns, we recommend the following:

- **Identify the source of the nitrate**  
Given the lack of an upper confining layer, the shallow depth of both wells, and the extreme proximity to agricultural activity, the source of the nitrate is said agricultural activity.
- **Develop a short term solution**  
The short term solution is to notify all users of the nitrate issue. This should have already been done via door-hangers, phone calls, and/or posting on the water district website. Currently there is no short term method to mitigate a nitrate issue without installation of equipment to remove the nitrate.
- **Develop a long term solution**  
TWD has a history of elevated nitrate in their raw well water. The nitrates are most likely coming from local agricultural activity and would be difficult to fully mitigate even if the fertilization ceased.

The recommended option for nitrate removal would be a selective ion-exchange resin filtration system. This system could be fed by both wells prior to distribution. Based on the population of TWD (42 persons) and an average Wasco County USGS 2015 domestic per capita per day water usage of 195 gallons, an average of 8,200 gallons would need to be produced per day, we recommend doubling this figure to account for seasonal increases in use and possible population increases. An ion-exchange system capable of treating 15,000 to 20,000 gallons per day with a small structure and all appurtenances has a total estimated cost of approximately \$20,000.

Reverse osmosis (RO) filtration can also be used to remove nitrates from well water. A 15,000 to 20,000 gallon per day RO system with a small structure and all appurtenances has a total estimated cost of approximately \$35,000.

**Follow-Up Actions Needed:**

The circuit rider is available to assist as needed to recommend treatment options, selection, and sizing.

**Technical Reports to be Prepared and Expected Timeframe:**

N/A

Sign: \_\_\_\_\_ Date: 10/23/2020

