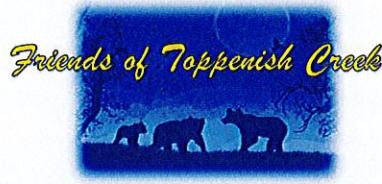


(1)



Oct. 1, 2021

Dear Yakima Health District:

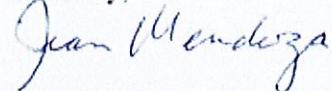
On September 29, 2021, the YHD received a report on the Lower Yakima Valley Groundwater Management Area (LYV GWMA) implementation. That report was incomplete. Here are additional facts:

- There is a difference between acute exposure to nitrates in drinking water and chronic exposure.^{1, 2, 3} For example: An infant may die from methemoglobinemia (acute) or an infant may grow into an adult with a lower IQ due to impaired oxygen delivery to the brain during early stages of growth and development (chronic).⁴
- Research by the WA State Dept. of Health confirms elevated methemoglobin blood levels in infants living in homes with elevated nitrates in well water.⁵
- Farm animals die from nitrate toxicity.⁶
- The LYV GWMA had a goal “to bring nitrate concentrations in groundwater to below the state drinking water standard.” That goal has not been achieved.⁷
- The LYV GWMA Final Report included a 14 page listing of research that studied adverse health effects from nitrates in drinking water.⁸ Strong evidence exists connecting nitrates in drinking water to certain cancers, thyroid disease, and neural tube defects. Women who are pregnant or trying to get pregnant should not drink water with > 10 mg/L nitrate nitrogen.¹²
- Certification of the LYV GWMA Program required formation of an Implementation Team and the designation of a lead agency. Yakima County declined that role, and the Yakima Health District declined that role. The South Yakima Conservation District accepted. The SYCD has a staff of two, a manager and a clerk. The SYCD now states on their website that

Yakima County is the lead agency.⁹ The LYC GWMA Implementation Team has not met since 2019.¹⁰

- Certification of the LYV GWMA Program required provision of safe drinking water to impacted residents of the lower valley. There is currently no such program.¹⁰
- The Environmental Protection Agency determined in 2012 that 65% of nitrates in LYV groundwater came from animal agriculture and 58% came from dairy cattle.¹¹
- Groundwater testing around a cluster of five LYV dairies found that 60% of domestic wells one mile down gradient had nitrate levels > 10 mg/L, the current safety standard.¹²
- Groundwater testing three miles downgradient from this cluster of dairies found that 30% of domestic wells had nitrate levels > 10 mg/L.¹³
- A domestic well downgradient from the cluster of dairies had nitrate levels > 100 mg/L.¹⁴
- A monitoring well on the dairy cluster had nitrate levels > 200 mg/L.¹⁵
- The LYV GWMA drilled 30 monitoring wells in 2018/2019. Initial sampling from those wells found 45% with nitrate levels > 10 mg/L.⁷
- The Implementation Team and Ecology did not continue sampling of the monitoring wells in 2019. Ecology has just re-started the sampling in July of 2021. Ecology needs two years of quarterly monitoring to establish a baseline for predicting trends in LYV groundwater nitrate levels.¹⁶
- Residents of the LYV currently have little accurate information on how to protect themselves from contaminated drinking water.

Sincerely,



Jean Mendoza

Executive Director, Friends of Toppenish Creek
3142 Signal Peak Road
White Swan, WA 98952

cc.

WA State Dept. of Health

WA State Dept. of Ecology

U.S. Environmental Protection Agency

1. Acute exposure: Contact with a substance that occurs once or for only a short time (up to 14 days)
Chronic exposure: Contact with a substance that occurs over a long time (more than 1 year)
ATSDR Glossary of Terms at
<https://www.atsdr.cdc.gov/glossary.html#Chronic%20Exposure>
2. ATSDR Case Studies in Environmental Medicine Nitrate/Nitrite Toxicity (2013) Available at
https://www.atsdr.cdc.gov/csem/nitrate_2013/docs/nitrite.pdf
3. EPA IRIS Assessment Plan for Nitrate and Nitrite. (2017) Available at
file:///C:/Users/Jean%20Mendoza/Downloads/NITRATE_NITRITE_IAP_DRAFT_PLAN.PDF
4. ATSDR Case Studies in Environmental Medicine Principles of Pediatric Environmental Health. (2012) Available at
https://www.atsdr.cdc.gov/csem/ped_env_health/docs/ped_env_health.pdf
5. Final Report: Dose Response of Nitrate and Other methemoglobin Inducers on Methemoglobin Levels in Infants. (2007) Available at
https://www.yakimacounty.us/DocumentCenter/View/9490/VanderSlice_Meth-Inducers-in-Infants_cfpub-epa-gov?bidId=
6. University of Missouri *In the last 30 days, 200 dead cows in the State of Missouri* (2019) Available at <https://www.agriculture.com/livestock/cattle/in-last-30-days-200-dead-cows-in-the-state-of-missouri>
7. Lower Yakima Valley GWMA Initial Ambient Monitoring Well Report. Available at
<https://www.yakimacounty.us/DocumentCenter/View/21633/GWAC-Presentation---Monitoring-Well-Report-Overview---2019620-v20-1>
8. Lower Yakima Valley Groundwater Management Program, Vol IV (2019) Available at
<https://www.yakimacounty.us/DocumentCenter/View/22178/GWMA-VolumeIV-MemberContributions-July2019>
9. South Yakima Conservation District. Education and Outreach. Available at
<https://www.sycd.us/education-outreach>
10. Information received through public records requests. Available on request.
11. EPA Lower Yakima Valley Project Nitrogen Loading Screening Analysis (2012) Available
<http://www.friendsofopenishecreek.org/cabinet/data/GWMA%20MR%20Attachment%2035%20EPA%20Nitrogen%20Budget%202012.pdf>
12. Yakima Dairies Consent Order Update 2014. Available at
<https://www.epa.gov/sites/default/files/2017-12/documents/lower-yakima-valley-groundwater-fact-sheet-december-2014.pdf>
13. Statement of Material Facts in Support of Motion for Summary Judgement, CARE v. Cow Palace. (2014) Available at <http://charlietebbutt.com/files/CP/211-1%20%20Stmnt%20of%20Material%20Facts.pdf>
14. The EPA reference dose (RfD) for nitrate is 1.6 mg nitrate nitrogen/kg body weight per day.
Most of the nitrate a human takes in is in the food we eat.

A 220 lb. man weighs 100 kg. The EPA RfD for nitrate nitrogen is 160 mg per day for this man. If he gets no nitrate nitrogen in his food (an impossibility) he can safely drink 1.6 liters or 6.4 glasses of water from this well.

A 22 lb. child weighs 10 kg. The EPA RfD for nitrate nitrogen is 16 mg per day for this child. If she gets no nitrate nitrogen in her food (an impossibility) she can safely drink .16 liters or 2/3 of a glass of water from this well.

15. A 200 lb. man can safely drink 3.2 glasses of water from this well, if he takes in no other nitrate nitrogen. A 22 lb. child can safely drink a third of a glass of water from this well, if she takes in no other nitrate nitrogen.
16. Quality Assurance Project Plan Lower Yakima Valley Groundwater Monitoring Network. (2021) Available at <https://apps.ecology.wa.gov/publications/documents/2103106.pdf>

(2)

Ryan Ibach

From: james wilson <jamwilson3@gmail.com>
Sent: Tuesday, October 12, 2021 4:27 PM
To: Ryan Ibach
Subject: Written communications

CAUTION : This email originated from outside of this organization. Please exercise caution with links and attachments.

What date was it decided that Yakima Co. DOH was not able to handle the pandemic and gave authority to the state?

Thank you