WA CAFO Permit Fact Sheet

For Immediate Release: September 29, 2023

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CAFO Fact Sheet 12: Data Omission in a Scientific Document

One of the most important functions of government is gathering data and disseminating accurate information regarding affairs of the state. Mapping is an important aspect of this endeavor. A map of Yakima County would be deficient and misleading if the map omitted the City of Toppenish, the Naches River, or Snipes Mountain. Such a map would contribute to faulty decision-making.

In June 2023 the Lower Yakima Valley Groundwater Management Area (LYV GWMA) Implementation Team posted a document entitled, *Lower Yakima Valley Nitrate Mapping*, on the LYV GWMA website[1]. The document is available at https://www.yakimacounty.us/DocumentCenter/View/34873/Lower_Yakima_Valley_Nitrate_Mapping_final-6-16-23_clean_508-reduced and attached. This mapping ignored data from a comprehensive and ongoing Environmental Protection Agency (EPA) study of a "Dairy Cluster" north of the unincorporated Town of Outlook[2] that found some of the highest Nitrate-N readings in Washington State. Through omission of this significant information the Tetra Tech computers were able to conclude that Nitrate-N levels on and near the "Dairy Cluster" range from 0 to 10 mg/L. But this is not true.

Please see the maps below to understand how Tetra Tech Mapping mischaracterizes nitrate levels in the LYV. The *Lower Yakima Valley Nitrate Mapping* is attached, as well as the most recent quarterly report from the LYV Dairy Cluster.

[1] Lower Yakima Valley Groundwater Management Area. https://www.yakimacounty.us/541/Groundwater-Management →Studies & Data →GWMA Well & Nitrate Analysis →Tetra Tech Nitrate Mapping.

[2] U.S. Environmental Protection Agency, Region X, Lower Yakima Valley Groundwater. https://www.epa.gov/wa/lower-yakima-valley-groundwater

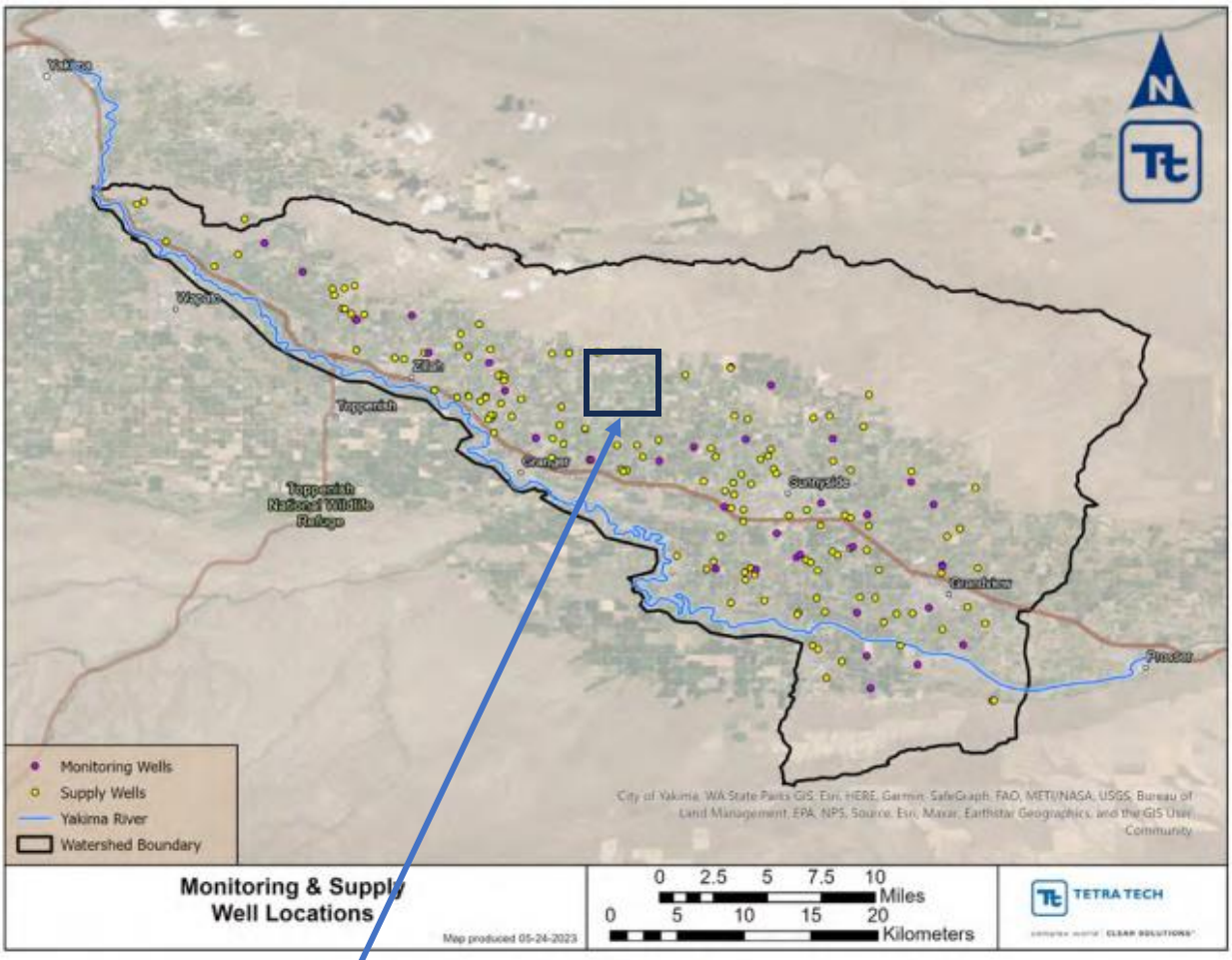
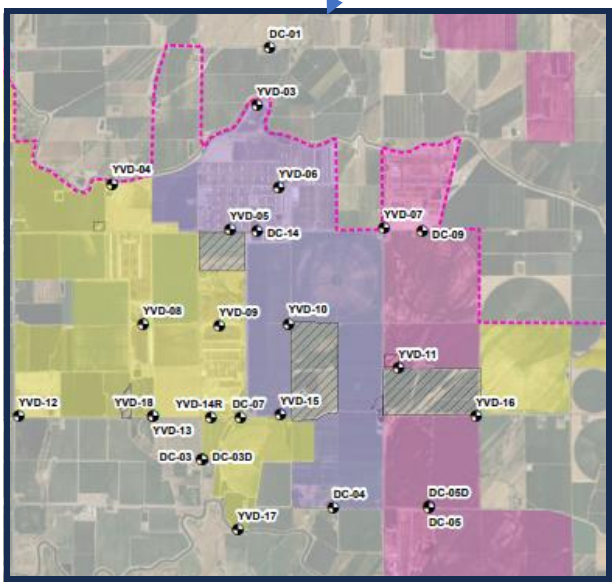
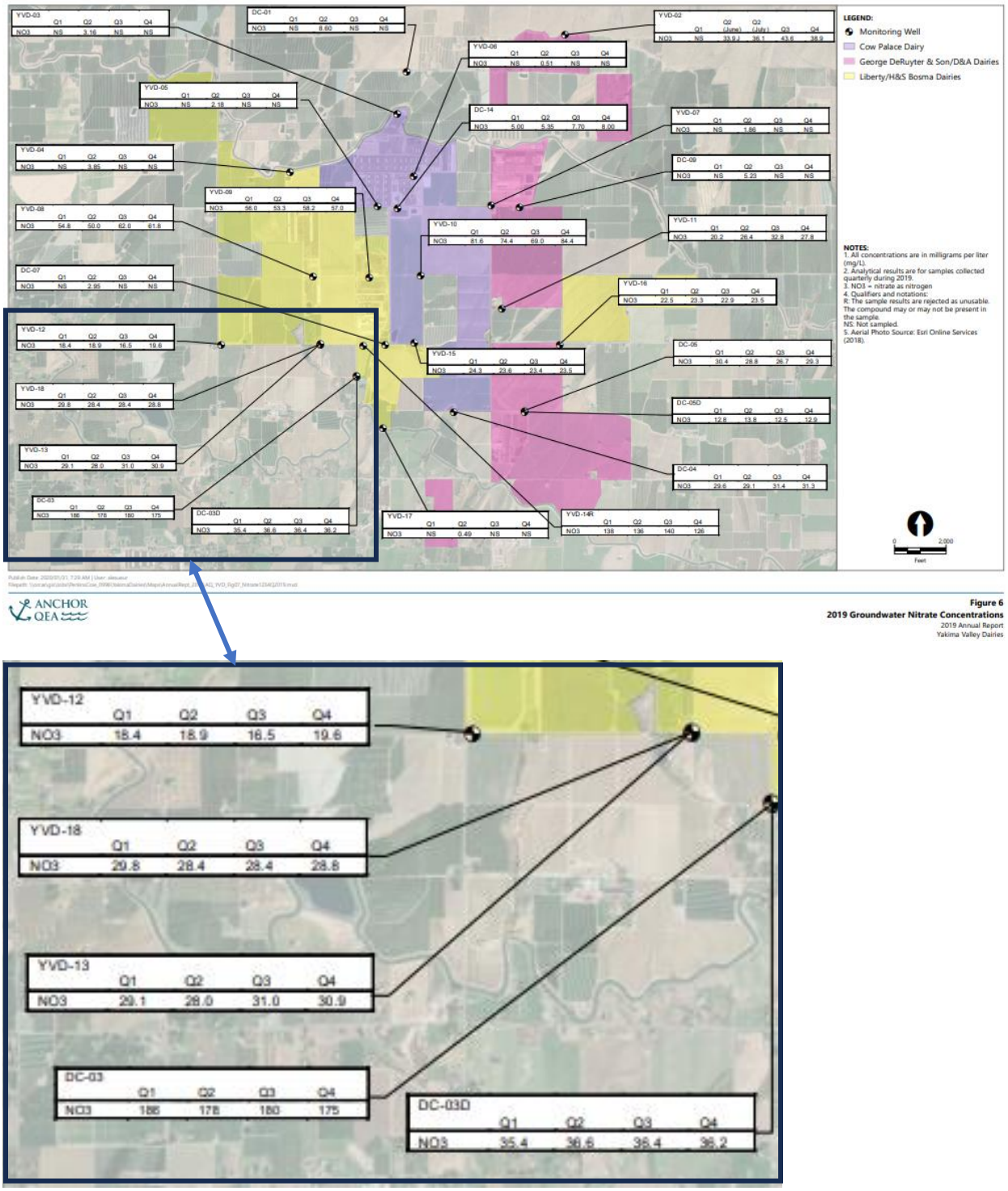


Figure 5-1. Locations of Wells for Nitrate Map Generations



Nitrate-N Readings from Page 227 of the 2019 EPA Progress Report for the "Dairy Cluster"[3]



[3] U.S. EPA Region X. Revised Yakima Valley Dairies 2019 Report. https://gaftp.epa.gov/region10/sites/yakima/Consent_Order_Deliverables/01__Annual_Progress_Reports/2019_Annual_Report/01__2019_Annual_Report_Body.pdf

As you can see, Nitrate-N levels in the five southwest "Dairy Cluster" monitoring wells ranged from 16.5 mg/L to 186 mg/L in 2019. Other documentation from the EPA website shows that 61% of domestic wells one mile down gradient from the "Dairy Cluster" delivered water with > 10 mg/L Nitrate-N in 2013.

It appears from Figure 5.1 above that Tetra Tech utilized few data points for the area north of Outlook, the "Dairy Cluster". Instead they programmed a computer to predict Nitrate-N levels based on adjacent readings.[4] Why did this happen when real data was available?

Here are copies of maps from *Lower Yakima Valley Nitrate Mapping.* A square for the "Dairy Cluster has been added for clarity.

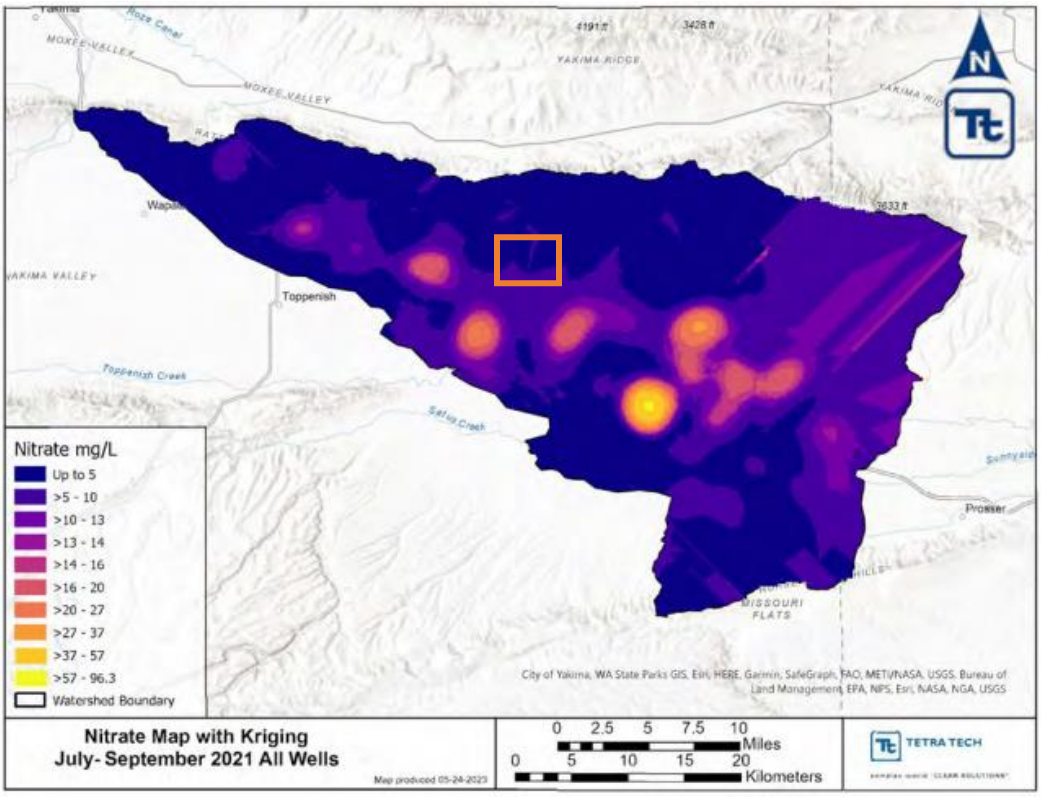


Figure 5-2. Nitrate Map with Kriging for the July-September 2021 Dataset for All Wells

[4] In addition to nitrate mapping the Tetra Tech document maps distance to groundwater. On page 11, regarding water level maps, the document says the area south of the Yakima River was not mapped due to insufficient data. To our reading data on the "Dairy Cluster" is equally insufficient when the calculations only involve the monitoring wells shown on Figure 5.1. Regarding water levels, Tetra Tech states, "The water level maps do not consider the three monitoring wells south of the Yakima River. Due to the paucity of data on the southern side of the river, excessive statistical noise was generating unrealistic results, and the decision was made, in consultation with Washington Departments of Ecology and Health to exclude these wells from the analysis. Therefore, the maps only show the water levels north of the Yakima River." Why didn't Tetra Tech make a similar exception for the "Dairy Cluster" if the agencies did not want to use EPA data?

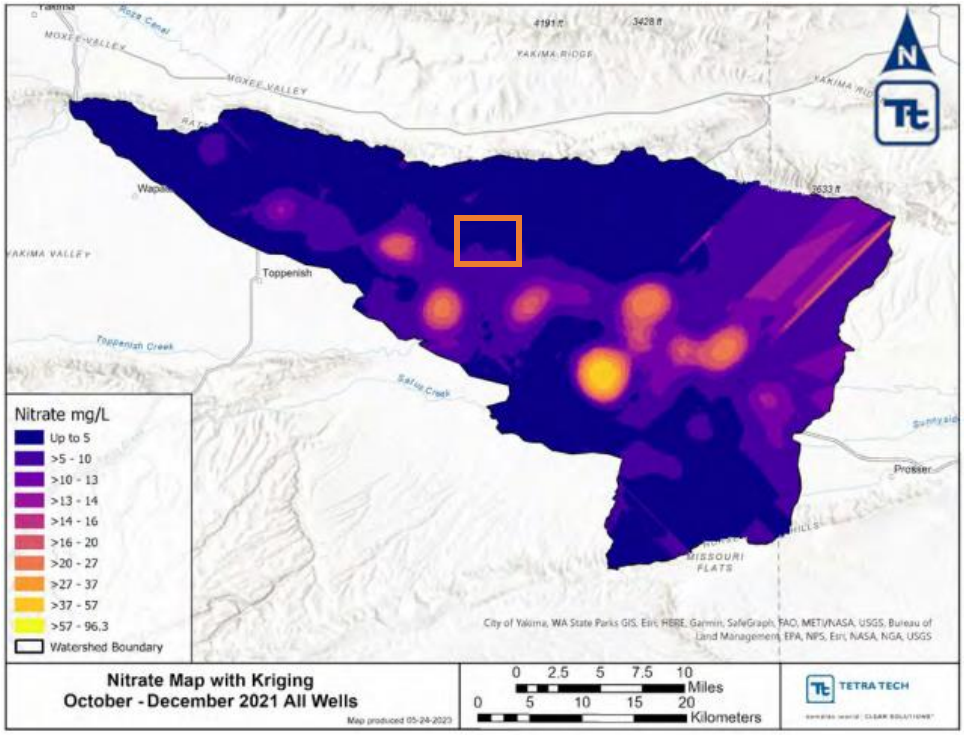


Figure 5-4. Nitrate Map with Kriging for the October-December 2021 Dataset for All Wells

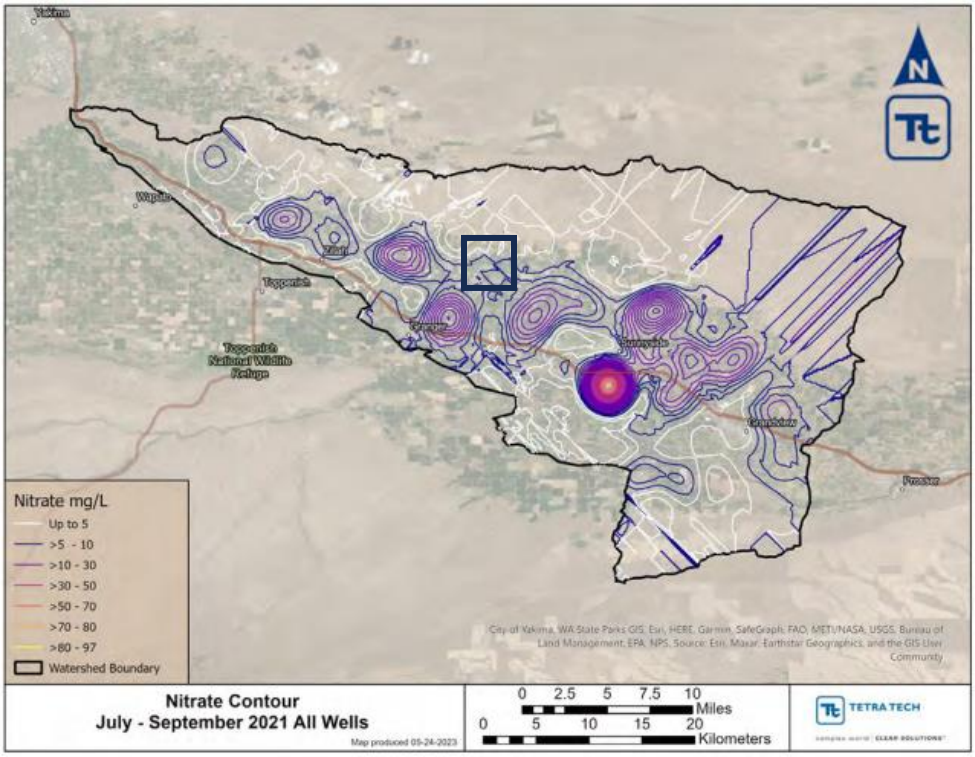


Figure 5-10. Nitrate Contour Map with Kriging for the July-September 2021 Dataset for All Wells

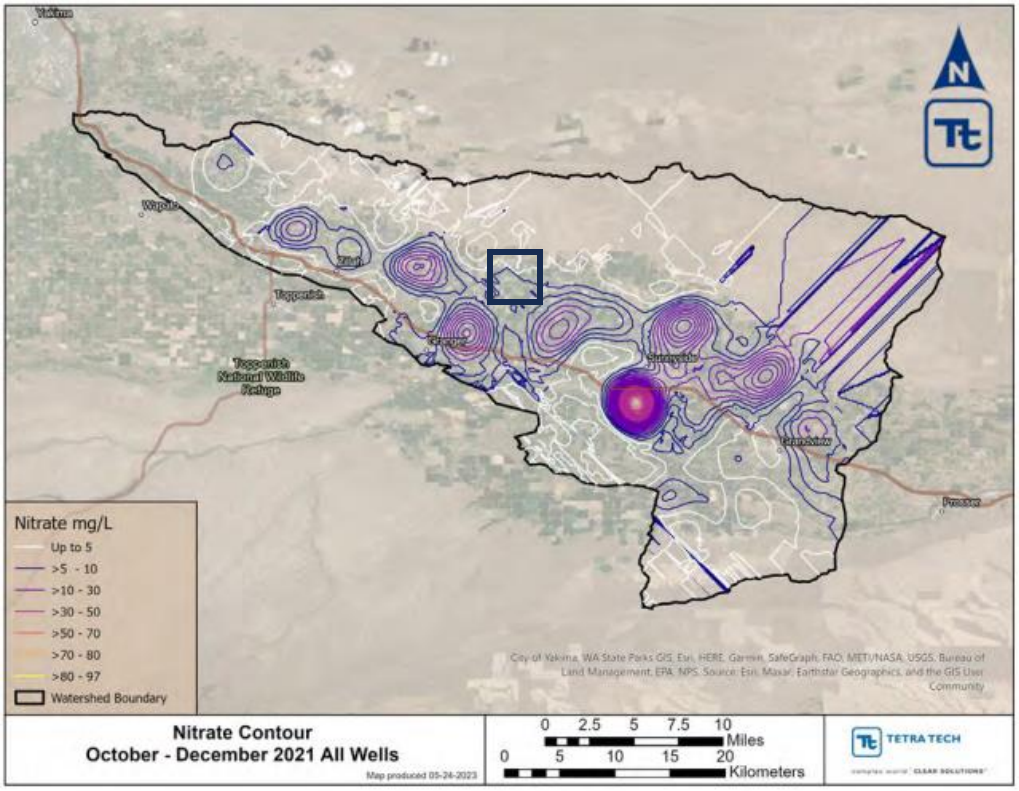


Figure 5-12. Nitrate Contour Map with Kriging for the October-December 2021 Dataset for All Wells

Background Information from the "Dairy Cluster"

In the 1990's the Community Association for Restoration of the Environment (CARE) sued the Henry Bosma Dairy for, among other acts, discharging manure directly into an irrigation return flow ditch in violation of the Clean Water Act.[5] The settlement led to a 2001 Valley Institute for Research and Education (VIRE) study that found high nitrate levels in South Yakima County near dairies in the Sunnyside area.[6]

Although authorities were aware of the nitrate problems as early as 2001, they took no action until 2008 when a reporter for the Yakima Herald Republic, Leah Beth Ward, published a three part series entitled "Hidden Wells, Dirty Water".[7] Ms. Ward asked the U.S. EPA to investigate

[5] Tebbutt Law. CARE versus Henry Bosma Dairy. https://scholar.google.com/scholar_case?case=11856725581497975208&q=Charles+Tebbutt&hl=en&as_sdt=2002

[6] Valley Institute for Research and Education. Quality of Groundwater in Private Wells in the Lower Yakima Valley. 2002. https://apps.ecology.wa.gov/publications/documents/0210074.pdf

[7] Yakima Herald Republic. Hidden Wells, Dirty Water. http://www.friendsoftoppenishcreek.org/cabinet/data/GWMA%20MR%20Attachment%2036%20Hidden%20Wells%20Dirty%20Water.pdf

under the Safe Drinking Water Act, which the EPA did. The agency designated the Lower Yakima Valley an "Environmental Showcase" and invested millions in the most thorough study of groundwater pollution from a CAFO dairy ever conducted. This was the beginning of EPA studies on the "Dairy Cluster".[8]

Authorities and stakeholders came together to decide on the best approach to address nitrates in Yakima groundwater. They chose formation of a groundwater management area, a GWMA. The LYV GWMA deliberated from 2012 to 2018 and produced a plan in 2019.[9]

CARE initially joined the LYV GWMA Advisory Committee but left the group in 2015 and elected to sue the five "Dairy Cluster" dairies for violation of the Resource Conservation and Recovery Act (RCRA). That litigation led to a landmark ruling by Judge Thomas Rice of the Ninth District Court that manure from industrial dairies when mishandled is a solid waste causing an immediate threat to human health.[10]

FOTC remained active in the LYV GWMA until the termination of the advisory committee in 2019. FOTC wrote a minority report[11] to highlight numerous errors, and unsuccessfully appealed certification of the LYV GWMA plan to the WA State Pollution Control Hearings Board.[12]

WAC 173-100-100 (6) (b) requires a GWMA Program to include a monitoring system for evaluating effectiveness. In 2019 the LYV GWMA completed a network of 30 monitoring wells. In 2021 with the addition of 140 domestic wells WA Ecology began a two-year study that drew samples every three months for two years to establish a baseline of nitrate levels in the area.[13] This network excluded the EPA "Dairy Cluster" but Ecology promised to solicit the EPA for data from that area. The results of Ecology's sampling are expected soon.

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[8] U.S. Environmental Protection Agency, Region X, Lower Yakima Valley Groundwater. https://www.epa.gov/wa/lower-yakima-valley-groundwater

[9] [9]Lower Yakima Valley Groundwater Management Area. https://www.yakimacounty.us/541/Groundwater-Management

[10] Tebbutt Law. CARE versus Cow Palace. 2015. http://www.charlietebbutt.com/files/CP%20Order%20Granting%20MSJ.pdf

[11] Friends of Toppenish Creek. LYV GWMA Minority Report. http://www.friendsoftoppenishcreek.org/issues/water.html

[12] PCHB Ruling. 2021. http://www.friendsoftoppenishcreek.org/cabinet/data/P19-060%20(FOTC)%20Final%20Order.pdf See also Lower Yakima Valley Groundwater at http://www.friendsoftoppenishcreek.org/index.html

[13] Lower Yakima Valley Groundwater Management Area. Initial Ambient Monitoring Well Report. 2019. https://www.yakimacounty.us/DocumentCenter/View/21633/GWAC-Presentation---Monitoring-Well-Report-Overview---2019620-v20-1

In 2020 the Washington State Dairy Federation and the cluster dairies filed a federal lawsuit challenging the EPA's research on the "Dairy Cluster".[14] The Ninth Circuit rejected their claims.[15]

FOTC has joined CARE and the Center for Food Safety (CFS) in legal action against several other LYV dairies. Findings are invariably the same. CAFO dairies in the LYV discharge pollutants to soil, ground, and surface water by over applying manure to cropland, through improperly managing manure, and from unlined or poorly lined manure lagoons.

In our most recent litigation FOTC, CARE, and CFS reached a settlement with DBD/SMD dairy that provides funding for research to evaluate ways to treat contaminated water in a shallow aquifer.[16] This is a first in Yakima County.

Analysis of Issues Related to Data Omission

Why was data from the "Dairy Cluster" omitted from the Tetra Tech Nitrate Mapping?

The scientific integrity of water quality characterization in the LYV is so very important that simple answers do not suffice. It is not enough to say that "someone" overlooked the "Dairy Cluster". FOTC has analyzed this issue using the five targeted questions below. We hope that Ecology will build upon our questions and help identify systemic problems with LYV GWMA information pathways. We ask:

1. Who benefits?
2. How does the money flow and who pays?
3. Who defines the issues?
4. Who suffers any adverse side effects?
5. What is the harm?

Who benefits (when "Dairy Cluster" data is omitted)?

Keeping the EPA data from public view goes a long way toward obscuring knowledge of CAFO related pollution, toward preventing use of these studies to enforce the Clean Water Act, and toward obstructing effective regulation of CAFO dairies. The dairy industry has

[14] Lower Valley Dairies Challenging EPA study. 2020. https://www.yakimaherald.com/news/lower_valley/lower-valley-dairies-challenging-epa-study-blaming-them-for-groundwater-pollution/article_86abfe21-a4a3-510f-9e8c-099d30f0079a.html

[15] U.S. Appeals Court Dismisses Dairy Federation's Challenge to EPA Report. https://www.yakimaherald.com/news/local/u-s-appeals-court-dismisses-dairy-federations-challenge-to-epa-report/article_4454a5b2-c9e7-58bf-a5df-e38a324ddf72.html

[16] CARE versus DBD Consent Decree. 2023. http://www.charlietebbutt.com/files/CAFOs/CARE%20v.%20DBD%20Consent%20Decree.pdf

unsuccessfully attempted to discredit the EPA's work on the Dairy Cluster" through the courts. Omitting EPA data from official analyses is another means of discrediting the EPA.

If the nitrate problem in the LYV is under-reported and under-estimated, then there will be fewer reasons to require CAFO dairies to install synthetic lagoons liners, acquire National Pollutant Discharge Elimination System (NPDES) permits, comply with dairy nutrient management plans, perform composting on impermeable surfaces, maintain robust riparian buffers, and take the many other actions necessary to protect waters of the state.

How does the money flow?

Taxpayers paid for the Tetra Tech Nitrate Mapping. We do not know the price tag. We do not know who suggested contracting with Tetra Tech to perform the analysis or whether there was open bidding. We do not know what related discussions took place at meetings of the LYV GWMA Implementation Team, because the public is excluded from those meetings, a possible violation of the Open Public Meetings Act. We do know that the WA Dairy Federation is represented on the LYV GWMA Implementation Team, and thus has a vote in decision-making. We have not seen a budget for the LYV GWMA Implementation Team.

If enforcement of the Clean Water act for CAFO dairies in Yakima County is delayed, there are financial benefits for dairies that will not be required to acquire National Pollution Discharge Elimination System (NPDES) permits. This in turn will give unpermitted dairies an economic advantage over permitted dairies.

Who defines the issues?

At this point in time it appears that the LYV GWMA Implementation Team defines the salient issues, at least for officials who attempt problem solving. The LYV GWMA Implementation Team is composed of representatives from the WA State Dept. of Ecology, the WA State Dept. of Health, the WA State Dept. of Agriculture, Yakima County, Yakima County Public Works, the Yakima Health District, the South Yakima Conservation District (Administrative Agency for the LYV GWMA), the Roza-Sunnyside Joint Board of Control, and the Washington Dairy Federation. There is no representation for the Yakama Nation, the Latino population in Yakima County, the EPA, social justice groups or environmental groups.

Who suffers any adverse side effects?

About 25,000 people who live in the LYV and draw water from domestic wells are at risk of drinking water with > 10 mg/L Nitrate-N. About 20% of this population draw water from wells with > 10 mg/ L Nitrate – N. Costs related to drinking water contaminated with nitrate and other pollutants have not been quantified. Costs may include medical bills for health issues due to unsafe drinking water, purchase of bottled water and installing water treatment systems, impact on livestock that drink contaminated water,

impacts on the flora and fauna in the soils of the LYV, groundwater discharge to the Yakima River, expenditure of public monies to help people access safe drinking water, drilling new wells, and tax payer expenditures to support the LYV GWMA implementation. For FOTC adverse side effects include the time and resources spent describing the impact of erroneous presentation of data when we would prefer to devote our efforts to actually helping affected friends and neighbors. Writing this letter alone has required over eight hours of our time.

The LYV has been designated an "underserved and overburdened" community. This means that the people who are impacted by inadequate studies are less likely to understand mischaracterizations and the consequences for public policy decision-making that may cause them to drink unsafe water. This impact is already felt in the City of Grandview where water from a municipal well with elevated Nitrate-N is blended with water from less contaminated municipal wells so the city can ensure safe drinking water.[17] This impact is already felt in the City of Mabton, where water quality issues worsen every year and the LYV GWMA failed to investigate properly.[18, 19]

The longer aquifers remain contaminated with nitrate and other pollutants, the longer the adverse impacts will last and the greater the cost to taxpayers.

What is the harm?

When officials make decisions based on incomplete information, the resulting actions fail to properly address causes and effects. Aquifers in the LYV will remain polluted if causes are not clearly identified and quantified. Groundwater pollution is both a local and national problem with serious consequences.

Trust in government is an ongoing issue for many reasons.[20] If the public believes that data gathered by executive agencies is not accurate, then trust in government diminishes. This leads to anger. If members of the public do not believe the information provided by authorities, then agencies will likely be forced to defend every decision they make under heightened scrutiny. This could become a downward spiral with serious long term consequences.

When government agencies act with scientific integrity everyone benefits.

FOTC has attached the most recent results from monitoring wells on the "Dairy Cluster". Contamination of the underlying aquifer is far from resolved.

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[17] FOTC LYV Minority Report. 2019. Page 58.
http://www.friendsoftoppenishcreek.org/cabinet/data/GWMA%20MR%20Plan%20XV.pdf

[18] FOTC "It's Not a Health Issue – Just Hydrogen Sulfide in Your Water."
http://www.friendsoftoppenishcreek.org/issues/people.html

[19] Mabton Water System Plan. 2013.
http://www.friendsoftoppenishcreek.org/cabinet/data/GWMA%20MR%20Attachment%2057%20Mabton%20WaterSystemPlan.pdf

[20] Pew Research Center. Public Trust in Government: 1958 – 2023.
https://www.pewresearch.org/politics/2023/09/19/public-trust-in-government-1958-2023/

Thank you for reading.

Friends of Toppenish Creek

You have received this Fact Sheet because you are on a list of potentially interested parties. If you do not want to receive further information, please contact Jean Mendoza at jeanrmendoza@icloud.com