WA CAFO Permit Fact Sheet

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TMDLs & Point Sources in WA CAFO Counties

FOTC has reviewed TMDLs for impaired water bodies or watersheds in Washington where CAFO dairies are located, specifically in Whatcom, Skagit, Snohomish, Yakima, Grant, and Franklin Counties. FOTC reviewed:

> Current Water Quality
> https://apps.ecology.wa.gov/ApprovedWQA/ApprovedPages/ApprovedSearch.aspx
>
> WA Ecology Permitting and Reporting Information System (PARIS) at
> https://apps.ecology.wa.gov/paris/PermitSearch.aspx

We found little attention to CAFO dairies as point sources of pollution:

Summary of Findings

Whatcom County:

Nooksack River Watershed (2000): "There are two dairies under the NPDES dairy general permit in the Nooksack watershed. . . . The implementation of the Washington State Dairy Nutrient Management Act may result in other dairies being covered by the NPDES Dairy permit and also receiving a wasteload allocation of zero."

This 2000 prediction did not play out. Currently there are only two permitted CAFOs in all Whatcom County where the largest numbers of dairies are located. One of the two facilities with an NPDE permits is just a 200 head heifer operation.

Johnson Creek Watershed (2000): "based on the Dairy Nutrient Management Program currently being conducted, some dairies may be issued a discharge permit

which would allow only those discharges caused by chronic or catastrophic storm events prompting an overflow from facilities designed for a 25-year, 24-hour storm event. Therefore, the waste load allocations for these streams will remain at zero."

There are many unpermitted CAFO dairies in this watershed, but no permitted dairies.

Skagit County:

Lower Skagit River Fecal Coliform TMDL (2000): "Tributaries such as Nookachamps Creek that contain significant amounts of farmland and rural residences are especially susceptible to pollution from improper agricultural practices and failing on-site systems. . .. The area contains over 50,000 acres of farmland with over 50 commercial dairy operations holding over 20,000 animals."

There is no mention of CAFOs as point sources. No waste load allocations (WLAs) for dairies.

Padilla Bay Tributaries Bacteria TMDL (2020): "WLAs are developed as part of a TMDL when National Pollution Discharge Elimination Systems (NPDES) regulated stormwater discharges are present (40CFR 130.2(h)) and contribute to pollutant loading. Five types of NPDES permits are present in the Padilla Bay watershed: municipal separate stormwater sewer systems (MS4s), sand and gravel stormwater, industrial stormwater, construction stormwater, and individual industrial permits."

There is no mention of Waste Load Allocations for CAFOs. There are no permitted CAFOs in this watershed or in Skagit County although both have many large dairies and Padilla Bay is seriously polluted with bacteria.[1]

Snohomish County:

Snoqualmie River TMDL (1994): No mention of dairies, although there are numerous dairies in the Snoqualmie River Valley.

Stillaguamish River Watershed Multi-parameter TMDL (2005): "The major source of FC contamination in most of the water bodies is nonpoint runoff from mixed land uses. The TMDL evaluation did not identify the FC load associated with specific properties or land uses for these water bodies. Therefore, most of the required reductions are load allocations to general nonpoint sources."

No mention of CAFO dairies although there are many in the area.

Pilchuck River Temperature and Dissolved Oxygen TMDL (2020): No mention of CAFOs or dairies.

Snohomish River Tributaries Bacteria TMDL (2001): "Agricultural inputs include animal waste from pasture and concentrated animal areas, waste storage facilities, land application, and stream access. . . . . Each of the three NPDES permitted commercial dairies located within the Snohomish tributaries watershed is allocated a fecal coliform wasteload of zero."

There are no longer any permitted CAFO dairies in the Snohomish River Valley or in Snohomish County.

Grant County

Quincy Wasteway Multiparameter TMDL (1998): No mention of CAFOs

There are four permitted beef CAFO feedlots with 15,000 to 50,000 head each in Grant County along with one egg CAFO.

Franklin County

Palouse River Fecal Coliform Bacteria TMDL (2010): "Nonpoint (diffuse) sources of FC bacteria are not controlled by discharge permits. Potential nonpoint sources in the study area include the following: • Livestock with direct access to streams and other poor management of livestock manure. • Poor management of pet waste. • Poorly constructed or maintained on–site septic systems. • Wildlife and background sources. FC bacteria from nonpoint sources are transported to the creeks by direct and indirect means. Manure that is spread over fields during certain times of the year can enter streams via direct discharge to the water, surface runoff, or fluctuating water levels. Often livestock have direct access to water. Manure is deposited in the riparian area where fluctuating water levels, surface runoff, or constant trampling can bring the manure into the water."

No mention of CAFOs as point sources. There are no permitted CAFOs in Franklin County, although there are some very large dairies and Darigold is building a plant near the City of Pasco that will process 8 million pounds of milk a day.[2]

Yakima County

Mid Yakima River Basin Bacteria TMDL (2020): "There is one publicly-owned treatment works (POTW) and numerous MS4 outfalls within the TMDL project

area. The City of Yakima, City of Union Gap, Yakima County, Yakima Valley Community College, and the Washington Department of Transportation (WSDOT) operate and maintain the TMDL project area's numerous MS4 systems. . . . The seasonal WLAs for the eleven fruit packing facilities were estimated at an essentially de minimis amount."

There is an unpermitted 6,000 head CAFO dairy in this basin that is not mentioned in the TMDL.

Lower Yakima River Suspended Sediment TMDL (1998): No mention of CAFOs as point sources. Authors assume that reductions in Total Suspended Sediment (TSS) will lead to reductions in pesticide pollution and reductions in bacteria.

Granger Drain Bacteria TMDL[3] (2001): "The only point sources of FC pollution in the Granger Drain watershed are fourteen CAFOs, which are all dairies and covered under an NPDES general dairy permit. All of these CAFOs have their wasteload allocations (WLAs) set at zero due to the "no discharge" requirement of the Washington Dairy Nutrient Management Act of 1998 (?), which only allows discharges in conjunction with greater than a 25-year, 24-hour storm event. Permits are not needed at this time for the remaining eight dairies and three small feedlots located in the Granger Drain watershed because they have not been found to discharge wastewater and therefore are not considered as CAFOs."

This is misleading. In 2002 the U.S. Court of Appeals for the 9th Circuit found that the Henry Bosma dairy discharged manure waste into Joint Drain 26.6 which empties into the Granger Drain which empties into the Yakima River.[4] Even today, the Henry Bosma dairy does not have an NPDES permit.

Two Examples of TMDLs in Washington

Johnson Creek Watershed TMDL in Whatcom County

One ongoing project is the multi-parameter TMDL for the 21 square mile (13,440 acre) Johnson Creek watershed in north central Whatcom County.[5] This flat watershed includes three creeks that feed Johnson Creek. The TMDL is designed to address impairments caused by low dissolved oxygen, high nutrients (nitrogen and phosphorous), and fecal coliform

Nearly 80 percent of the watershed is used for pasture, hayland, and associated activities. When this TMDL was created there were about 30 dairies in the watershed, but none of the dairies had National Pollutant Discharge Elimination System (NPDES) permits and none of the dairies are permitted today.

The TMDL requires dissolved oxygen levels > 8.0 mg/L and fecal coliform organism levels less than a geometric mean value of 100 colonies/100 mL. Ecology monitoring took place in 1990-1992 on three creeks, in 2002-2004 on two, and only on the largest creek in 2015.

It appears that Ecology relies heavily on the WA State Dept. of Agriculture for surface water testing in Eastern Whatcom County. WSDA sampling between 2017 and the present shows readings between non-detect and 92,000 colony forming units (cfu)/100 ml.[6]

It is instructive to look at one large, unpermitted CAFO located at a fork in Lindsay Creek upstream from that creek's confluence with Johnson Creek.

Recent WSDA monitoring along Trapline Road that runs along the west side of this dairy found:

Upstream		
Date	Reading CFU/100 ml	Organism
4/10/2023	38	E. coli
4/5/2023	<2	Fecal Coliform
4/5/2023	2	Fecal Coliform
4/10/2023	38	Fecal Coliform
4/10/2023	38	E. coli
Downstream		
Date	Reading CFU/100 ml	Organism
4/17/2023	1,200	Fecal Coliform
4/17/2023	76,000	Fecal Coliform
4/17/2023	3,100	E. coli
4/10/2023	11,000	E. coli
4/10/2023	34,000	Fecal Coliform
4/7/2023	9,400	E. coli
4/7/2023	11,300	Fecal Coliform
4/17/2023	550	E. coli

Granger Drain Fecal Coliform TMDL in Yakima County

The Granger Drain watershed covers approximately 18,000 acres (28 sq miles) of prime agricultural land north and east of the Lower Yakima River near the city of Granger. The main drain runs east to west from the unincorporated community of Outlook to the City of Granger, where it empties into the Yakima River. Miles of surface and buried subdrains feed the main drain.

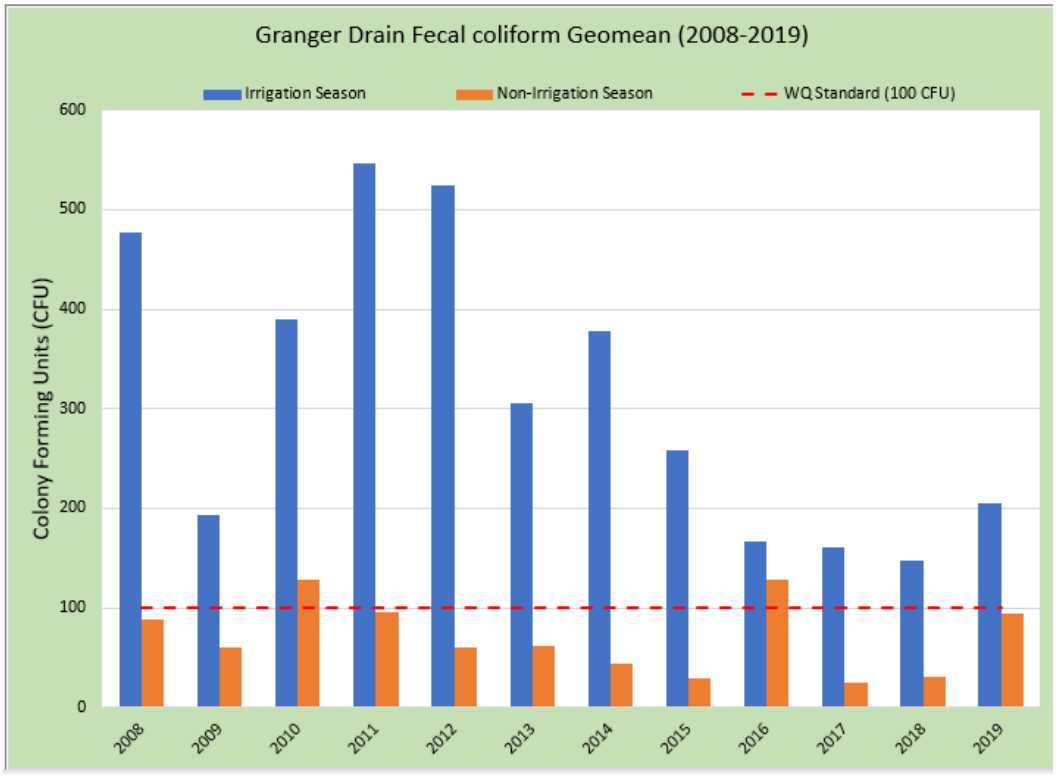
The Granger Drain TMDL set a target of a geomean for fecal coliform of 100 cfu/100 ml by the year 2012. [3] To the best of FOTC's knowledge this goal has not been achieved.

It appears that Ecology relies on water testing by the Roza Sunnyside Joint Board of Control (RSJBOC) to evaluate water quality in the Granger Drain. The RSJBOC takes samples at a site within the Granger city limits near where the drain empties into the Yakima River, miles downstream from the sources of bacteria. The most recent data available to FOTC comes from a public records request - available for the asking. Here is a summary table.

Fecal Coliform in Granger Drain from site at Granger, WA			
Date		CFU/100 ml Irrigation Season	CFU/100 ml Non-Irrigation Season
1/12/2016			40
1/12/2016			26
1/25/2016			27
2/9/2016			47
2/23/2016			7
3/8/2016			13
3/8/2016			13
4/12/2016		600	
5/3/2016		200	
5/23/2016		333	
6/15/2016		194	
6/15/2016		278	
7/5/2016		222	
7/26/2016		135	
8/16/2016		85	
9/6/2016		267	
9/27/2016		54	
10/18/2016			41
11/1/2016			33
11/1/2016			67
11/1/2016			51
11/15/2016			72
11/29/2016			800
11/29/2016			800
12/13/2016			72
12/13/2016			200
12/13/2016			100
12/27/2016			100
1/10/2017			51
2/7/2017			387
2/21/2017			1867
3/7/2017			33
4/11/2017		93	
5/2/2017		433	
5/23/2017		833	
6/13/2017		267	
6/13/2017		206	
7/5/2017		115	

7/5/2017		148	
7/25/2017		64	
8/15/2017		158	
9/5/2017		186	
9/26/2017		100	
9/26/2017		100	
10/17/2017			59
10/31/2017			18
11/15/2017			19
11/28/2017			27
12/13/2017			52
12/26/2017			50
1/10/2018			11
1/23/2018			25
1/23/2018			25
2/7/2018			24
2/20/2018			27
3/7/2018			30
3/7/2018			24

Here is a graph received from the same public records request.



Groundwater feeds the drains that feed Granger Drain.[3] Pollution of groundwater in this area by permitted CAFO dairies has been well documented elsewhere.[7, 8] The groundwater surface water connection is well established, and the chain of events is clear.

Conclusion

CAFO dairies discharge to surface waters, despite prohibitions in permits. There are only two permitted CAFOs in Whatcom County, although many CAFO dairies in that county are located next to rivers and streams. There are permitted dairies in Yakima County with well documented discharge to groundwater that feeds the drains that empty into the Yakima River.

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

1 Padilla Bay Freshwater Tributaries Fecal Coliform Bacteria Total Maximum Daily Load Report. 2020. https://apps.ecology.wa.gov/publications/documents/2010036.pdf

2 Cision PR Newswire. PASCO, Wash., Sept. 8, 2022 /PRNewswire/ -- Darigold, Inc. hosted a commemorative groundbreaking ceremony today at the site of its future Pasco production facility. The $600 million facility is slated to open in early 2024 and will process approximately 8 million pounds of milk per day when fully operational from more than 100 dairy farms in surrounding communities.

3 Granger Drain Fecal Coliform Bacteria Total Maximum Daily Load. 2001. https://apps.ecology.wa.gov/publications/documents/0110062.pdf

4 CARE v. Henry Bosma Dairy. 2002. Available at https://scholar.google.com/scholar_case?case=11856725581497975208&q=Charles+Tebbutt&hl=en&as_sdt=2002

5 WA Ecology. Johnson Creek Watershed Total Maximum Daily Load. 2000. Available at https://apps.ecology.wa.gov/publications/documents/0010033.pdf

6 See Surface Water Monitoring for Fecal Coliform Bacteria at https://www.arcgis.com/apps/webappviewer/index.html?id=5395274198aa4365b96fbaf01b4db43b&extent=-13894004.8062%2C6045956.0065%2C-13306968.4289%2C6336110.9659%2C102100

7 U.S. EPA. Lower Yakima Groundwater. https://www.epa.gov/wa/lower-yakima-valley-groundwater

8 Law Offices of Charlie Tebbutt. Cases. http://www.charlietebbutt.com/cases.html

Glossary

303(d) List: The term "303(d) list" or "list" is short for a state's list of impaired and threatened waters (e.g. stream/river segments, lakes). States are required to submit their list for EPA approval every two years. For each water on the list, the state identifies the pollutant causing the impairment, when known. In addition, the state assigns a priority for development of Total Maximum Daily Loads (TMDL) based on the severity of the pollution and the sensitivity of the uses to be made of the waters, among other factors (40 C.F.R. §130.7(b)(4)).

Clean Water Act: The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. 33 U.S.C. §1251 et seq.

TMDL: A TMDL is the calculation of the maximum amount of a pollutant allowed to enter a waterbody so that the waterbody will meet and continue to meet water quality standards for that particular pollutant. A TMDL determines a pollutant reduction target and allocates load reductions necessary to the source(s) of the pollutant.