

US EPA ARCHIVE DOCUMENT

Tools for Effective Source Water Protection:

DWMAPS and the Source Water Collaborative



Bo Williams, Biologist
Drinking Water Protection Division
OGWDW/Office of Water

Region 10 Harmful Algal Blooms Workshop
March 30th, 2016

Presentation Overview



Objective: Demonstrate and discuss publically-available tools and resources for addressing Harmful Algal Blooms (HABs)

- EPA's Drinking Water Mapping Application to Protect Source Water (DWMAPS)
 - *Key Queries and data for addressing HABs*
 - *HABs use cases*
- National Source Water Collaborative:
 - *Conservation toolkits and educational materials*
 - *Collaboration and partnership*
 - *Website and online resource library*

Source Water in the News

Record bloom

The toxic-algae bloom on the Ohio River covers more than two-thirds of the river's length. It started upstream of Wheeling, W.Va., and was first spotted on Aug. 19. As of Friday, the bloom stretched to Tell City, Ind., about 650 miles downstream. The bloom produces a toxin that can sicken people and kill pets, and it is costing water-treatment plants along the river hundreds of thousands of dollars to treat.



- 500,000 without water in Toledo, Ohio
- 600 mile bloom on Ohio River

EPA Source Water Protection



The Source Water Protection Program :

1. Seeks and facilitates collaboration with partners at all levels
2. Offers tools and resources to stakeholders
3. Funds and supports SWP at regional, state, and watershed levels
4. Facilitates application of Clean Water Act and other U.S. environmental regulations

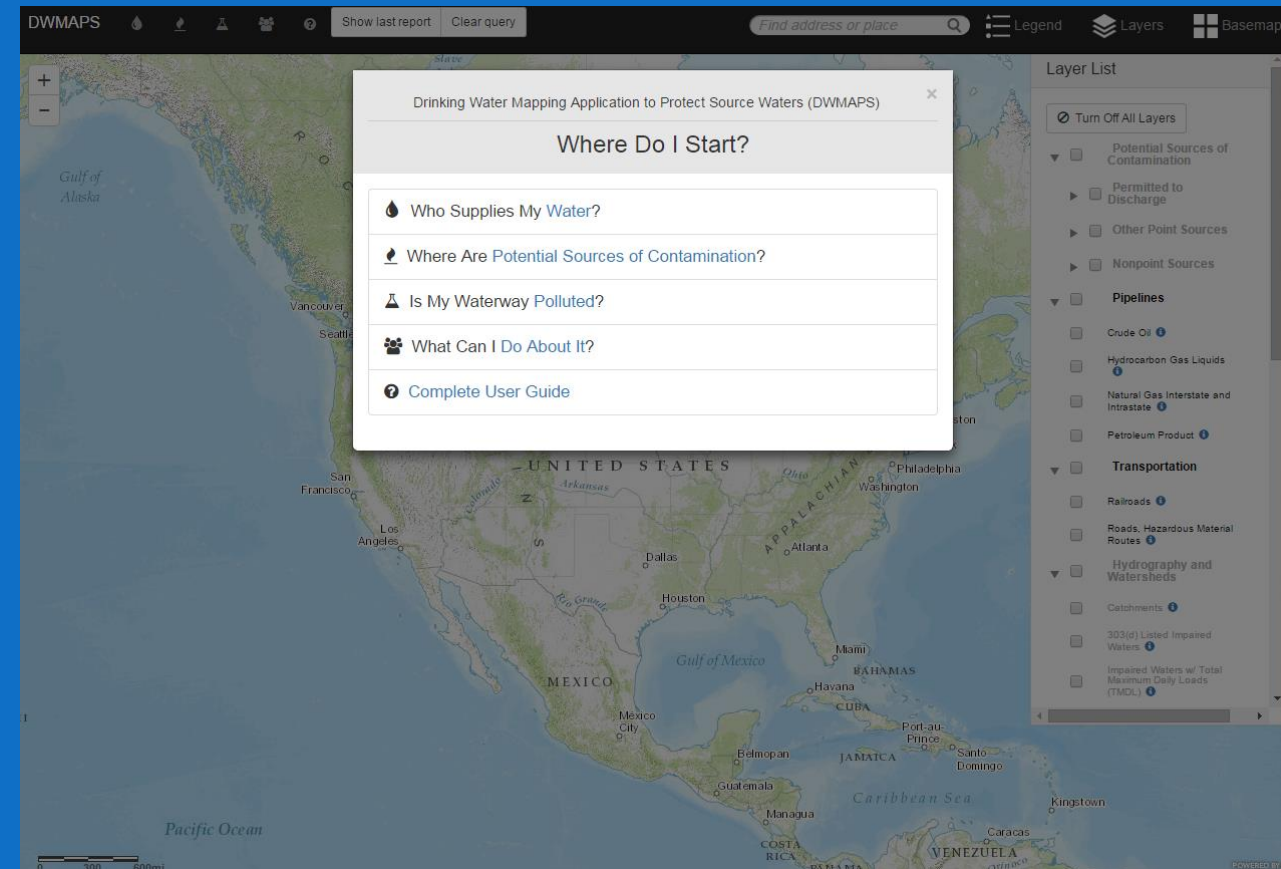
DWMAPS: Drinking Water Mapping Application to Protect Source Waters



Project Goals: Provide a nationwide online mapping tool for data critical to drinking water source protection. DWMAPS Public is available.

Key Data and Databases

- Drinking Water Information System (SDWIS)
- Facility Registry Service (FRS)
- EPA Attains
- USGS



With DWMAPS you can:











- ✓ Find drinking water and watershed data to support source vulnerability assessments
- ✓ Identify potential sources of contamination, point and non-point
- ✓ Promote integration of drinking water protection activities with other environmental program (Clean Water Act)
- ✓ Identify watershed stakeholders, potential partners, and watershed projects

DWMMAPS: Secure Versions








	DWMMAPS Version			
	Federal	State	Utility	Public
Pick any point on a map, look upstream for potential sources of contamination (PSC)	X	X	X	X
Overlay CWA and drinking water information	X	X	X	X
Map PSCs in any location in country (point sources, nonpoint, land use, etc.)	X	X	X	X
Share data with local GIS systems via web services	X	X	X	X
Secure log in	X	X	X	
Run searches* on all drinking water facilities in one PWS	X	X	X	
Run searches* on all drinking water facilities in one county	X	X		
Run searches* on all drinking water facilities in one state	X	X		
Run searches* on all drinking water facilities in the USA	X			

DWMAPS      Show last report Clear query Find address or place  Legend  Layers  Basemap










Drinking Water Mapping Application to Protect Source Waters (DWMAPS)

Where Do I Start?

-  Who Supplies My Water?
-  Where Are Potential Sources of Contamination?
-  Is My Waterway Polluted?
-  What Can I Do About It?
-  Complete User Guide


Layer List









☐ Turn Off All Layers

- ☐ Potential Sources of Contamination
 - ☐ Permitted to Discharge
 - ☐ Other Point Sources
 - ☐ Nonpoint Sources
- ☐ Pipelines
 - ☐ Crude Oil 
 - ☐ Hydrocarbon Gas Liquids 
 - ☐ Natural Gas Interstate and Intrastate 
 - ☐ Petroleum Product 
- ☐ Transportation
 - ☐ Railroads 
 - ☐ Roads, Hazardous Material Routes 
- ☐ Hydrography and Watersheds
 - ☐ Catchments 
 - ☐ 303(d) Listed Impaired Waters 
 - ☐ Impaired Waters w/ Total Maximum Daily Loads (TMDL) 

0 300 600mi






Internet Explorer

POWERED BY
Esri, HERE, DeLorme, FAO, NOAA, USGS, EPA 

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Skagit County

View Public Water System information

 **EPA** United States Environmental Protection Agency

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Safe Drinking Water Information System (SDWIS) Federal Reporting Services

You are here: [EPA Home](#) » [Your Drinking Water](#) » [SDWIS Federal Reports Search](#) » [Report Options](#) » [SDWIS PWS Search](#)

Your Drinking Water Query results from SDWIS Fed Reporting Services

PWS ID	WA5379500
PWS Name	SKAGIT COUNTY PUD 1 JUDY RES
PWS Type	Community water system
Owner Type	Local government
Primary Source	Surface water
Primacy Type	State
Is Wholesaler?	Yes
Population Served	65118
County Served	Skagit

Related Info

- [Your Drinking Water](#)
- [Safe Drinking Water Act](#)
- [Consumer Confidence Reports](#)
- [Safe Drinking Water Hotline](#)
- [Drinking Water Mapping Application](#)
- [Contact Us about Your Drinking Water](#)

Find Drinking Watershed information

DWMAPS

Show last report

Clear query

Mount Vernon WA

Legend

Layers

Basemap

+

-

Watershed Information

Point location

Latitude

Longitude

48.428417 -122.305626

Q

Search

Watershed name*	% of watershed covered by a source water protection area	Surface water intake density	Ground water well density
Nookachamps Creek	89%	2	5

Showing 1 to 1 of 1 entries

*Links are to a larger hydrologic unit that includes your watershed. Names may differ.

More Information

Safe Drinking Water Information from SDWIS Federal

Consumer confidence reports

For more information on your drinking water supplier, please contact your state agency at <http://www.asdwa.org/index.cfm?fuseaction=Page.ViewPage&PageID=794>

Close

Legend

Selected HUC12 matching query

1 watershed(s) found.

The screenshot displays a web-based map application. At the top, there is a search bar containing the text "Mount Vernon WA". To the left of the search bar are icons for "Show last report" and "Clear query". To the right are icons for "Legend", "Layers", and "Basemap". The map itself shows a watershed area around Mount Vernon, WA, with the Skagit River and Clear Lake visible. A legend titled "# Surface Water Sources in Watershed" is open on the right, showing a color scale from 0 (white) to 11-50 (dark purple). The map includes a scale bar (0 to 2 miles) and a north arrow. The interface also shows a search bar with "Mount Vernon WA" and a "Legend" button.

% of watershed covered by a source water protection area

69%

View Drinking Watershed information

Lower Skagit Watershed



Surf Your Watershed
Home
Adopt Your Watershed
Help

Surf Your Watershed

Contact Us Search: ☐ All EPA ☒ This Area Go

You are here: [EPA Home](#) » [Water](#) » [Wetlands, Oceans, & Watersheds](#) » [Watersheds](#) » [Adopt Your Watershed](#) » [Surf Your Watershed](#) » Lower Skagit Watershed -- 17110007

Lower Skagit Watershed -- 17110007

Lower Skagit

Watershed Profile

Watershed Name: Lower Skagit
USGS Cataloging Unit: 17110007
WA 2nd Congressional District

[Citizen-based Groups at work in this watershed](#) (Provided by [Adopt your Watershed](#))

[Water quality monitoring data from this watershed](#) (Provided by STORET)

[Environmental Websites Involving this Watershed](#)

Assessments of Watershed Health

- [Impaired Water for this watershed](#)
- [Assessed Waters by Watershed](#)
 - [Washington](#)

Information provided by the United States Geological Survey (USGS) [EXIT Disclaimer](#)

- [Stream Flow](#) (Source: USGS)
- [Science in Your Watershed](#)
- [Water use data \(1985-2000\)](#): Information about the amount of water used and how it is used.
- [Selected USGS Abstracts](#)

Places Involving this Watershed

Counties:

- [Snohomish](#)
- [Skagit](#)

National Estuary Programs:

- [Puget Sound](#)

States:

- [Washington](#)

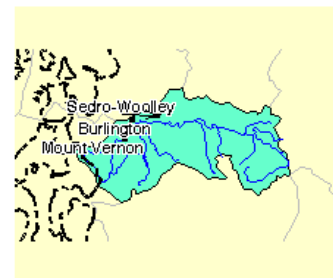
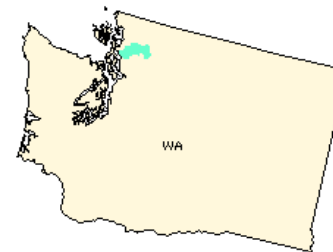
Other Watersheds Upstream:






- [Upper Skagit](#)
- [Puget Sound](#)

Other Watersheds Downstream:

- [Puget Sound](#)






Visit the [Envirofacts Warehouse](#) to retrieve environmental information from EPA databases on [Air](#), [Community Water Sources](#), [Water Dischargers](#), [Toxic Releases](#), [Hazardous Waste](#), and [Superfund Sites](#). Geographic searches include zip code, city, EPA Region, or county.



DWMAPS      Show last report Clear query Find address or place Legend Layers Basemap

Drinking Water Mapping Application to Protect Source Waters (DWMAPS)

Where Do I Start?

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Layer List

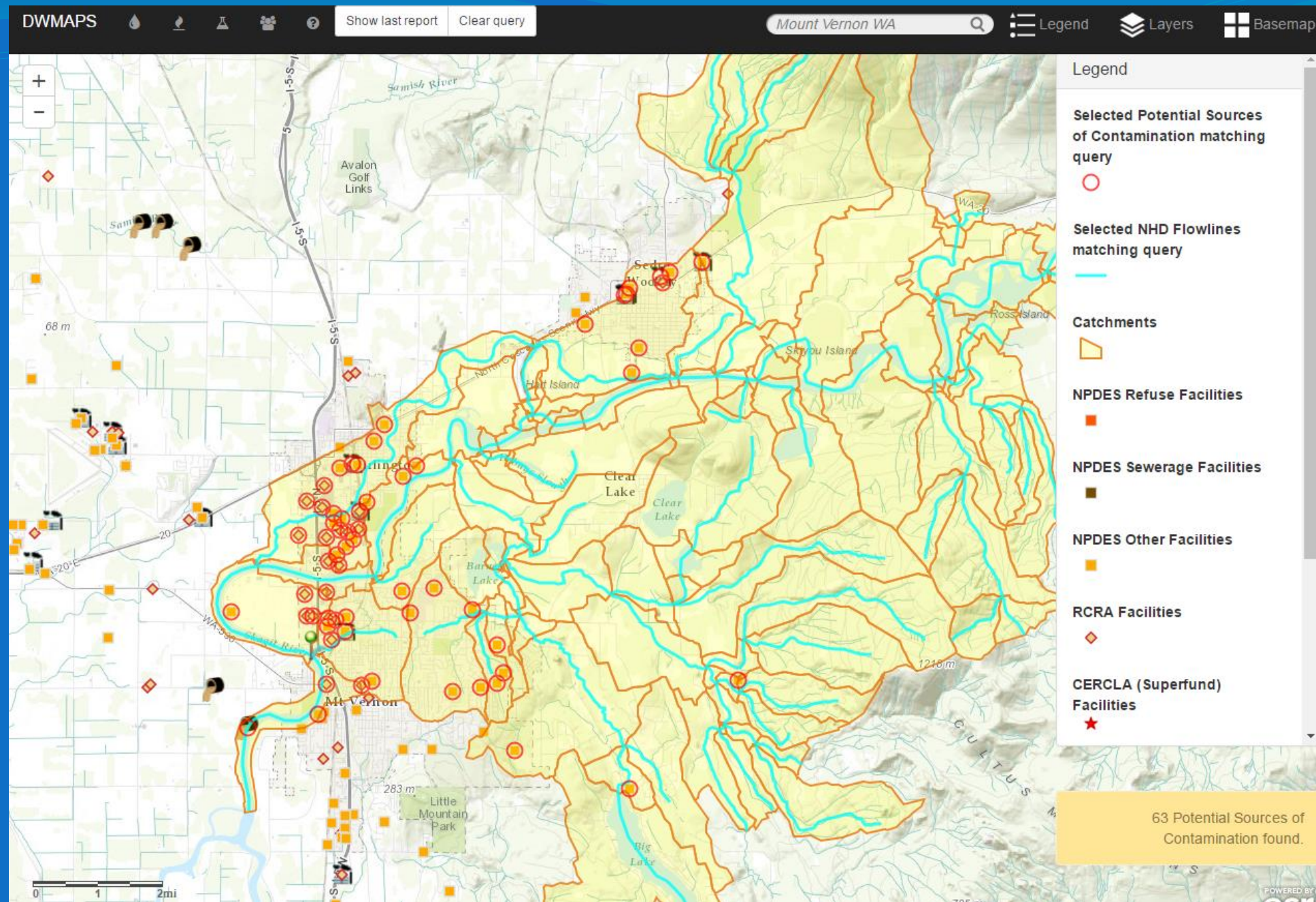
☒ Turn Off All Layers

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0 300 600mi

POWERED BY

Find Potential Sources of Contamination upstream



View facility
compliance
reports

Skagit County
Sewer

✓ The URL you requested has changed. You have been redirected to the new URL. Please update your bookmarks.

You are here [Home](#) » Detailed Facility Report

Detailed Facility Report

+ Expand All - Collapse All

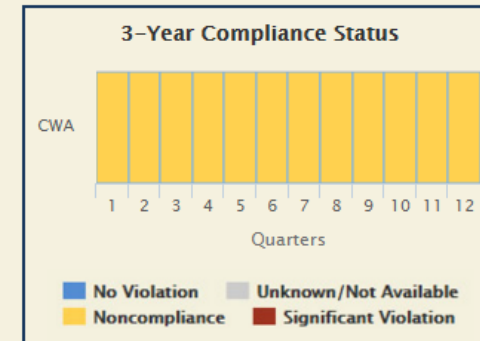
Report Violation Report Data Error Data Dictionary Print Help

Facility Summary



SKAGIT COUNTY SEWER DIST 2 BIG LAKE WWTP
17079 STATE ROUTE 9, MOUNT VERNON, WA
98274 ⓘ

FRS ID: [110015547808](#)
EPA Region: 10
Latitude: 48.397744
Longitude: -122.235612
Locational Data Source: FRS
Industry: Sewerage Systems
Indian Country: N



Enforcement and Compliance Summary ⓘ

Statute	Insp (5 Years)	Date of Last Inspection	Current Compliance Status	Qtrs in NC (of 12)	Qtrs in Significant Violation	Informal Enforcement Actions (5 years)	Formal Enforcement Actions (5 years)	Penalties from Formal Enforcement Actions (5 years)	EPA Cases (5 years)	Penalties from EPA Cases (5 years)
CWA	1	12/17/2013	Noncompliance	12	0	1	--	--	--	--

Related Reports

- [CWA Pollutant Loading Report](#)
- [CWA Effluent Charts](#)

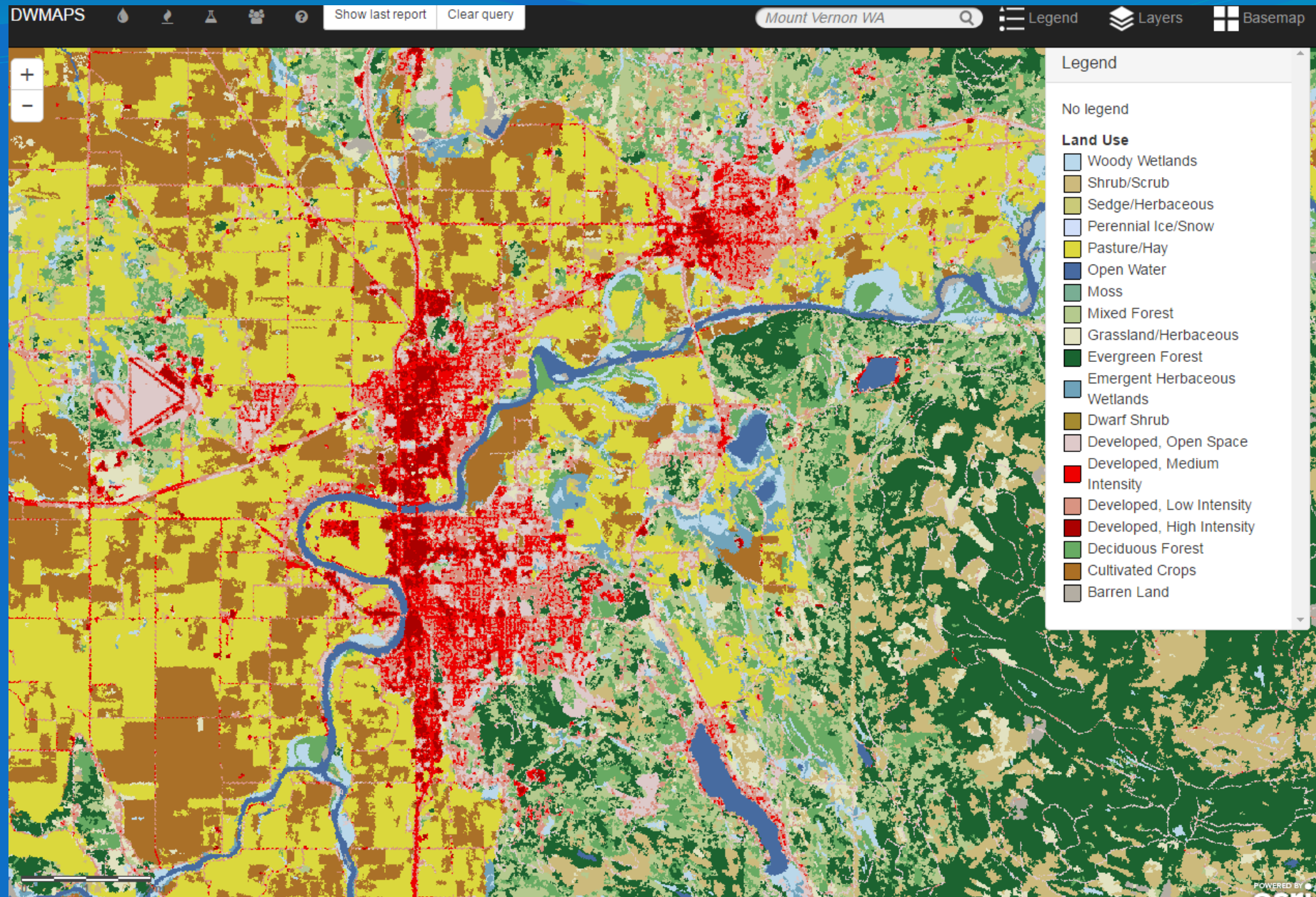
Regulatory Information

Clean Air Act (CAA): No Information
Clean Water Act (CWA): Minor, Permit Effective ([WA0030597](#))
Resource Conservation and Recovery Act (RCRA): No Information
Safe Drinking Water Act (SDWA): No Information

Other Regulatory Reports

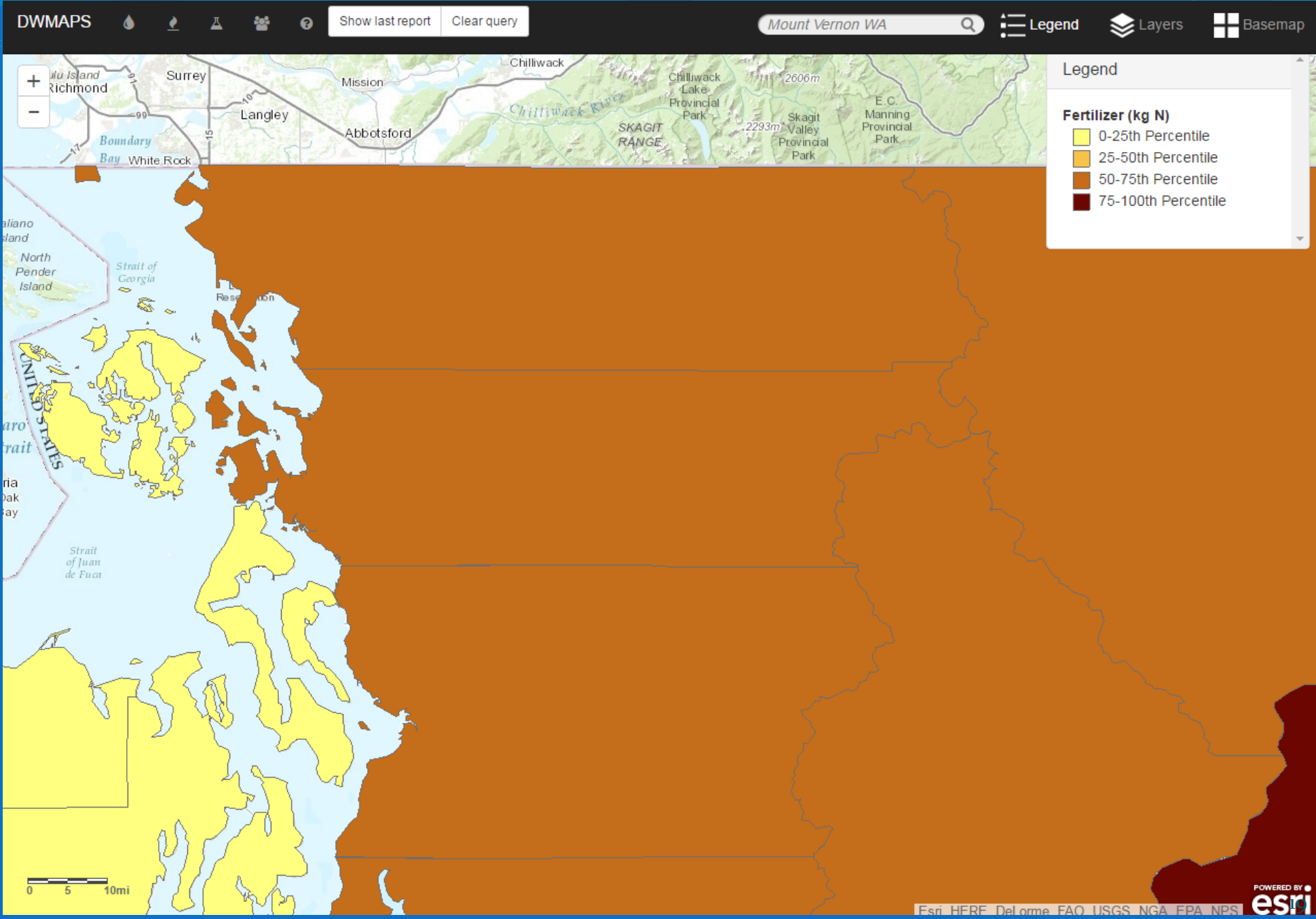
Air Emissions Inventory (EIS): No Information
Greenhouse Gas Emissions (eGGRT): No Information
Toxic Releases (TRI): No Information

[Go To Enforcement/Compliance Details](#)



View land
use/land cover

Fertilizer sales



Is my water
polluted?

Clean Water Act Analysis Tool

☒ Assessed waters

☐ Designated uses

☐ 303(d) listed impaired waters

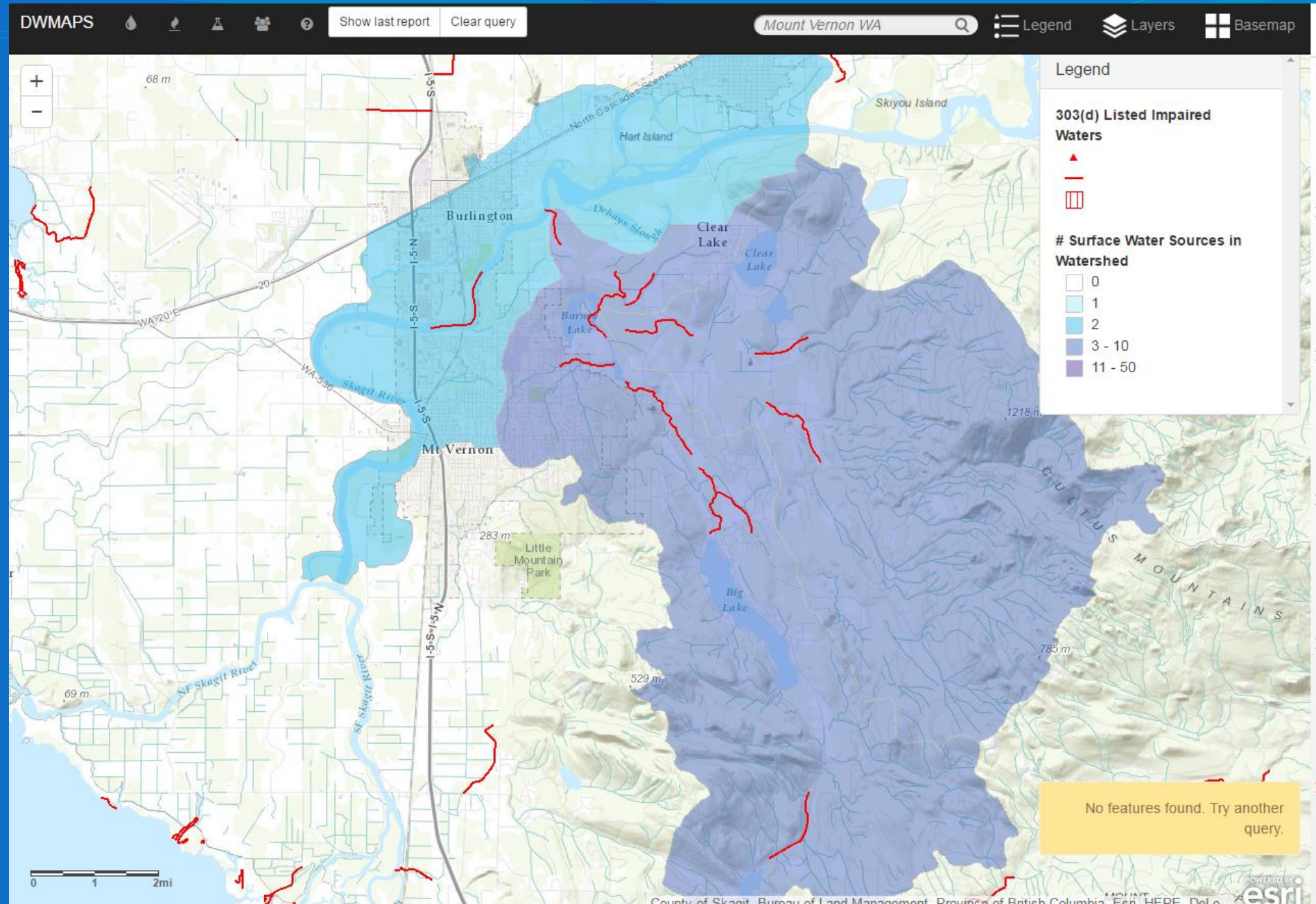
☐ Impaired waters w/ TMDLs for

☐ NPDES permitted dischargers for

OK

Close

Waters impaired by algal growth



Waterbody Quality Assessment Report

Nookachamps Creek

Waterbody Quality Assessment Report

[Return to home page](#)

On This Page

- [Causes of Impairment](#)
- [TMDLs That Apply to This Waterbody](#)
- [Previous Causes of Impairment Now Attaining All Uses](#)

State: [Washington](#)

Waterbody ID:

Other ID: WALZ60MT-6.701

State List ID: WALZ60MT-6.701

Location: Wc Watercourse/Lower

Address/Upper Address:

Lz60mt/6.701/7.976

State Waterbody Type:

Stream/Creek/River

EPA Waterbody Type: Rivers and

Streams

Water Size:

Units: miles

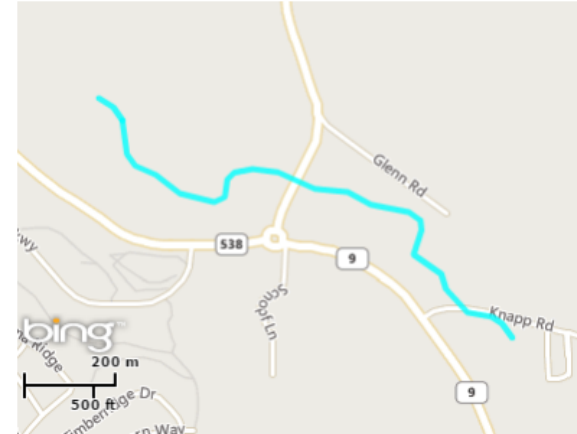
Watershed Name: [Lower Skagit](#)

[Waterbody History Report](#)

Data are also available for these

years: [2002](#)

2004 Waterbody Report for Nookachamps Creek



Click on the waterbody for an interactive map

Causes of Impairment for Reporting Year 2004

What can I
do about it?

319 Grants and
watershed
organizations

319 Grants and Source Water Collaborative Information

Point location

Latitude Longitude

48.418900 -122.311733

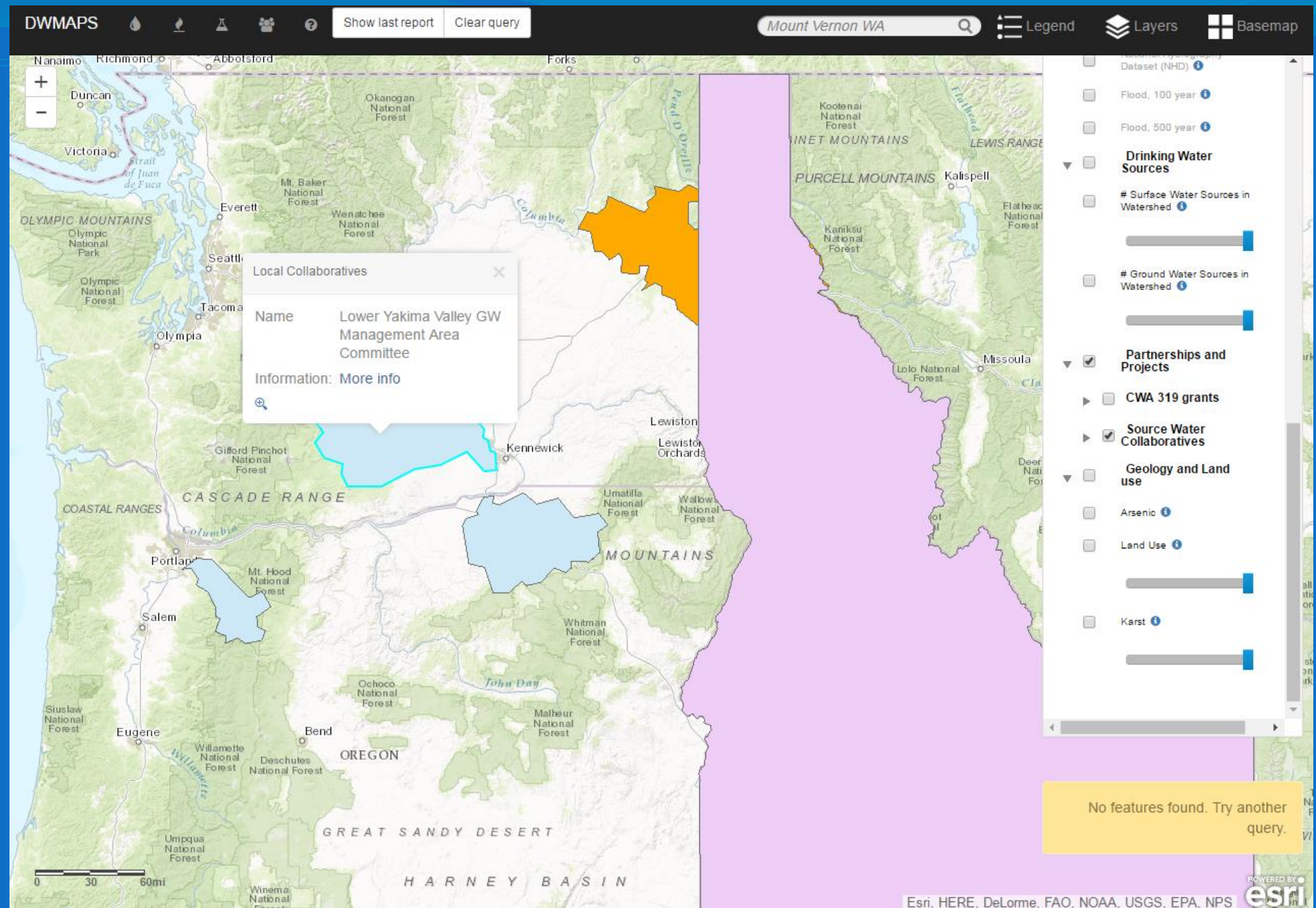
Nonpoint source control projects

Search

10

State or watershed	Project title	Project type	Start date	Status	Grant allocation (\$)
Nookachamps Creek	Matching Proj: City of Bellingham Water Quality and Habitat Improvement Project - City of Bellingham	Fisheries Projects	01/07/2009		\$0
Nookachamps Creek	Matching: Trumpeter Creek Riparian and Channel Restoration - Skagit County Public Works	Riparian Projects	12/01/2014		\$0
Nookachamps Creek	Skagit County Water Quality Improvement Project - Skagit Conservation District	Other Restoration/Protection/P...	11/01/2008		\$1,935
Nookachamps Creek	Matching Project: Natural Resource Stewardship Program - Skagit County Public Works	BMP Design/Implementation	12/28/2008		\$0
WA	2008 Environmental Marketing Workshop for Eastern Washington - WA Dept of Ecology	Local (Specific Target) Education/Information Programs	09/17/2007		\$5,460
WA	Financial and Data Administration	Nonpoint Source Program Overall Coordination/Management	07/01/2007	On Schedule	\$220,672
WA	Financial and Data Administration	Nonpoint Source Program Overall Coordination/Management	07/01/2009	On Schedule	\$271,798
WA	Financial and Data Administration	Nonpoint Source Program Overall Coordination/Management	07/01/2011	On Schedule	\$194,188

Source Water Collaboratives



Recap



- Drinking water information
- Watershed health, water quality, land use
- Potential sources of contamination, point and non-point
- Clean Water Act programs and designations
- Partnerships and watershed projects

National Source Water Collaborative



- 26 national organizations
- 10 years
- Members represent private and public sectors, diverse missions
- Supports members activities to reduce HABs risk factors and mitigate effects



National Source Water Collaborative



Amplifying and Funding pilot projects and workshops

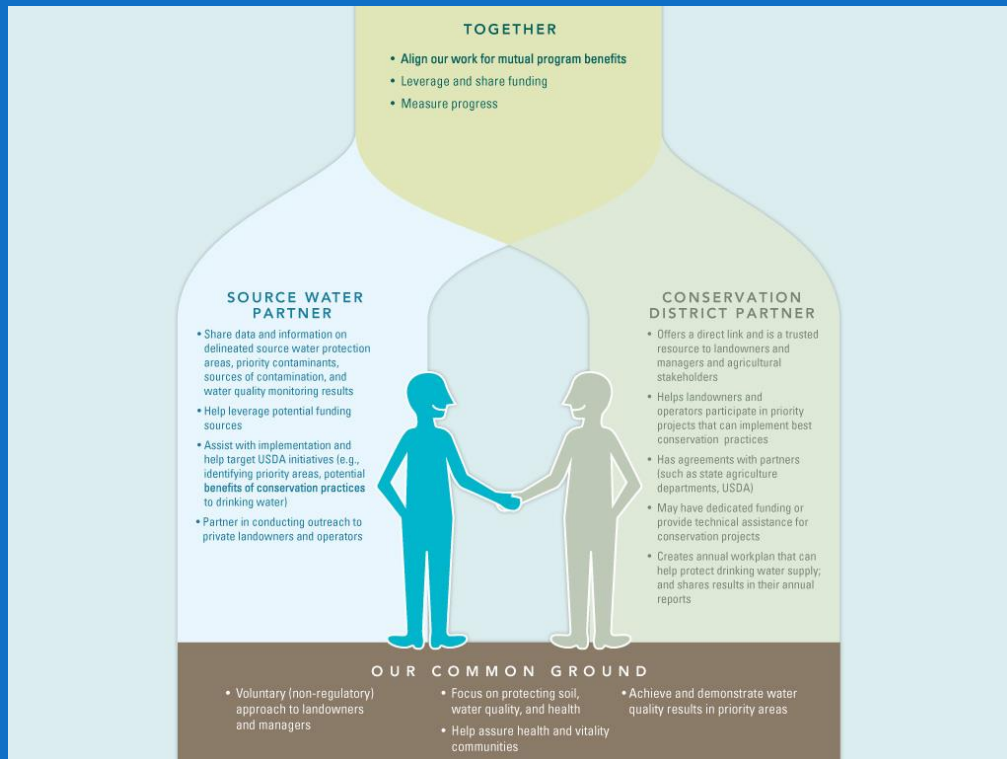
- EPA sponsored workshops from 2010-2015
- Iowa Source Water Agricultural Collaborative
 - Installed wetlands to reduce nitrate levels in drinking water
 - Accessed USDA-NRCS Conservation Innovation Grant
 - Reduced nitrates in Remsen drinking water supply by 40%
- Partners: EPA, NRCS, USDA-FS, Iowa Corn Growers Association, Iowa AWWA



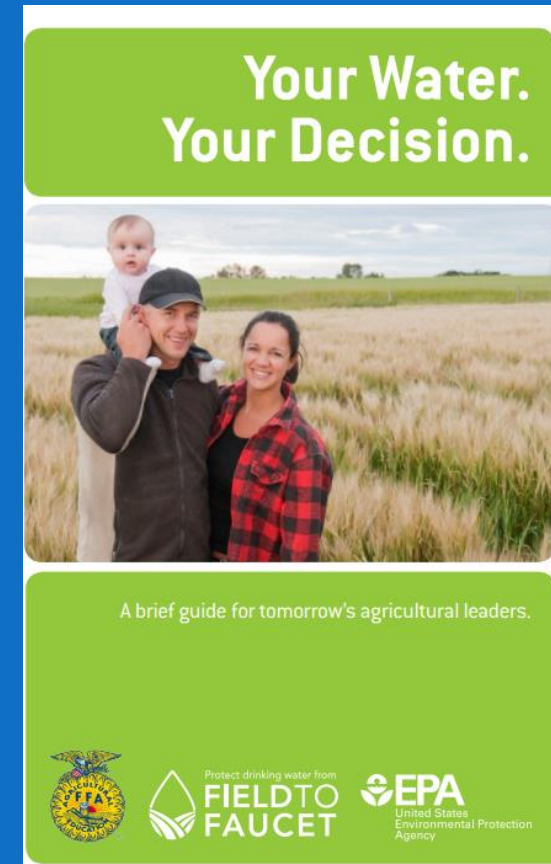
National Source Water Collaborative



Producing conservation toolkits and educational materials



Agriculture-Source Water
Collaboration Toolkit



Field to Faucet

National Source Water Collaborative



New Website





Thank you!