PWS-6 REPORTS

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TOPICS

- What is a PWS-6 Report?
- Source Water Protection Reviewer's Expectations?

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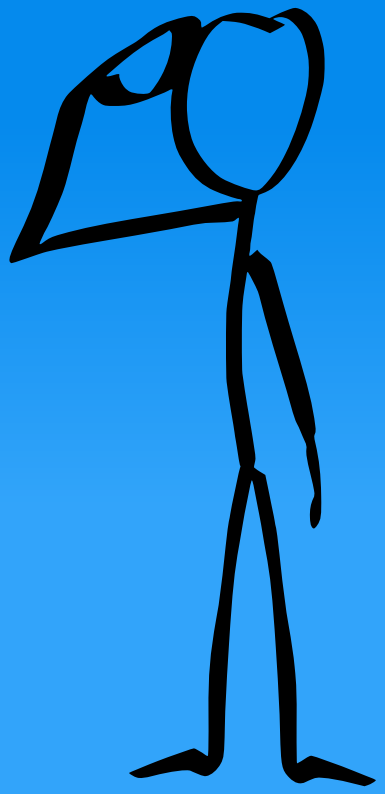
What Is A PWS-6 Report?

It is a report developed to ensure Source Water Protection Criteria are met for proposed wells or existing wells, to be used as drinking water wells

The basis for completion of a PWS-6 Report is found in DEQ Circular 3 “Standards for Small Water Systems”. Adopted by reference in ARM 17.36.126, 2023



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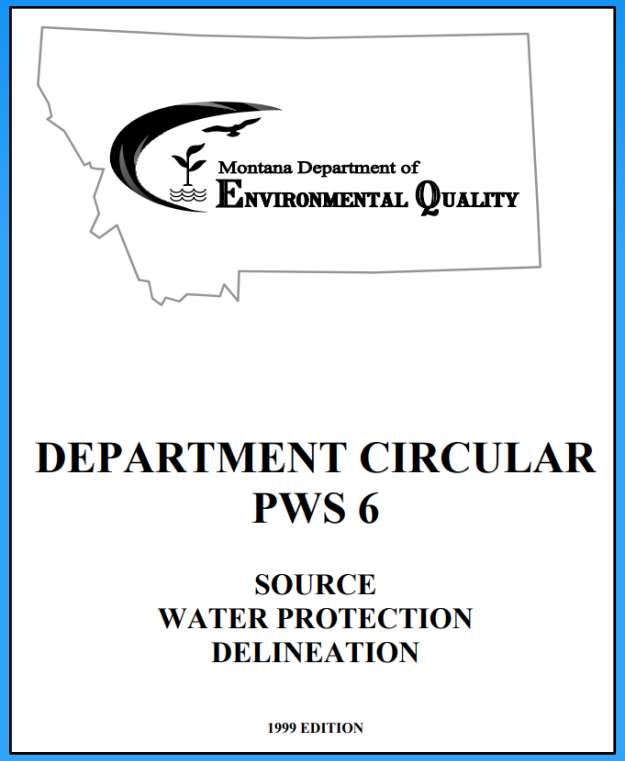
DEVELOPING A PWS-6 REPORT

Consult DEQ Circular PWS 6 Source Water Delineation



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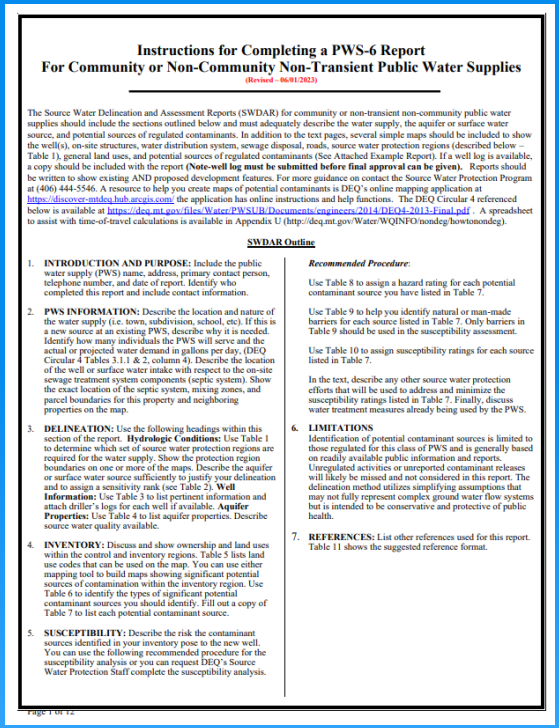
Use Templates For Guidance



Instructions for Completing a PWS-6 Report For Community or Non-Community Non-Transient Public Water Supplies

(Revised – 06/01/2023)

The Source Water Delineation and Assessment Reports (SWDAR) for community or non-transient non-community public water supplies should include the sections outlined below and must adequately describe the water supply, the aquifer or surface water source, and potential sources of regulated contaminants. In addition to the text pages, several simple maps should be included to show the well(s), on-site structures, water distribution system, sewage disposal, roads, source water protection regions (described below – Table 1), general land uses, and potential sources of regulated contaminants (See Attached Example Report). If a well log is available, a copy should be included with the report **(Note-well log must be submitted before final approval can be given).** Reports should be written to show existing AND proposed development features. For more guidance on contact the Source Water Protection Program at (406) 444-5546. A resource to help you create maps of potential contaminants is DEQ's online mapping application at https://discover-mtdeq.hub.arcgis.com/ the application has online instructions and help functions. The DEQ Circular 4 referenced below is available at https://deq.mt.gov/files/Water/PWSUB/Documents/engineers/2014/DEQ4-2013-Final.pdf . A spreadsheet to assist with time-of-travel calculations is available in Appendix U (http://deq.mt.gov/Water/WQINFO/nondeg/howtonondeg).

SWDAR Outline

1. **INTRODUCTION AND PURPOSE:** Include the public water supply (PWS) name, address, primary contact person, telephone number, and date of report. Identify who completed this report and include contact information.
2. **PWS INFORMATION:** Describe the location and nature of the water supply (i.e. town, subdivision, school, etc). If this is a new source at an existing PWS, describe why it is needed. Identify how many individuals the PWS will serve and the actual or projected water demand in gallons per day, (DEQ Circular 4 Tables 3.1.1 & 2, column 4). Describe the location of the well or surface water intake with respect to the on-site sewage treatment system components (septic system). Show the exact location of the septic system, mixing zones, and parcel boundaries for this property and neighboring properties on the map.
3. **DELINEATION:** Use the following headings within this section of the report. **Hydrologic Conditions:** Use Table 1 to determine which set of source water protection regions are required for the water supply. Show the protection region boundaries on one or more of the maps. Describe the aquifer or surface water source sufficiently to justify your delineation and to assign a sensitivity rank (see Table 2). **Well Information:** Use Table 3 to list pertinent information and attach driller's logs for each well if available. **Aquifer Properties:** Use Table 4 to list aquifer properties. Describe source water quality available.
4. **INVENTORY:** Discuss and show ownership and land uses within the control and inventory regions. Table 5 lists land use codes that can be used on the map. You can use either mapping tool to build maps showing significant potential sources of contamination within the inventory region. Use Table 6 to identify the types of significant potential contaminant sources you should identify. Fill out a copy of Table 7 to list each potential contaminant source.
5. **SUSCEPTIBILITY:** Describe the risk the contaminant sources identified in your inventory pose to the new well. You can use the following recommended procedure for the susceptibility analysis or you can request DEQ's Source Water Protection Staff complete the susceptibility analysis.

Recommended Procedure:

Use Table 8 to assign a hazard rating for each potential contaminant source you have listed in Table 7.

Use Table 9 to help you identify natural or man-made barriers for each source listed in Table 7. Only barriers in Table 9 should be used in the susceptibility assessment.

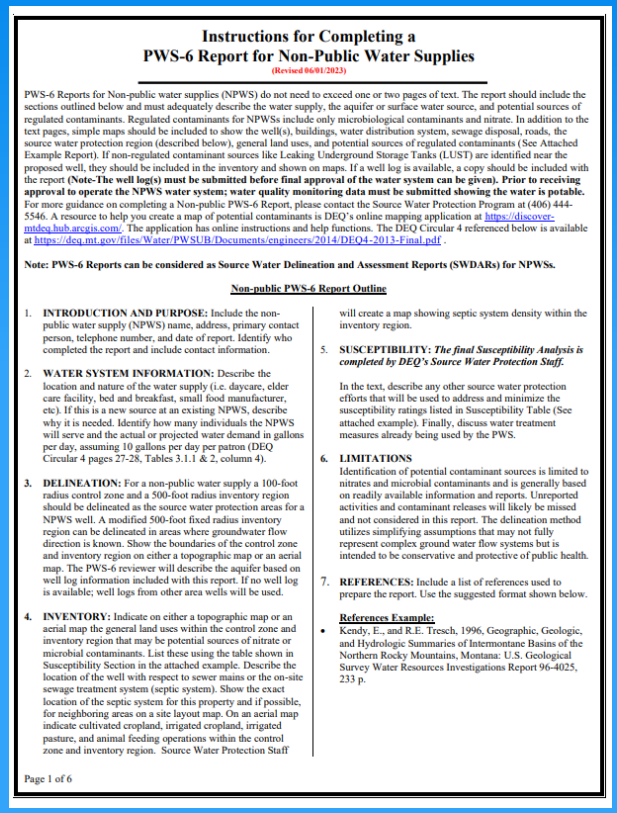
Use Table 10 to assign susceptibility ratings for each source listed in Table 7.

In the text, describe any other source water protection efforts that will be used to address and minimize the susceptibility ratings listed in Table 7. Finally, discuss water treatment measures already being used by the PWS.

6. **LIMITATIONS**
   Identification of potential contaminant sources is limited to those regulated for this class of PWS and is generally based on readily available public information and reports. Unregulated activities or unreported contaminant releases will likely be missed and not considered in this report. The delineation method utilizes simplifying assumptions that may not fully represent complex ground water flow systems but is intended to be conservative and protective of public health.
7. **REFERENCES:** List other references used for this report. Table 11 shows the suggested reference format.

Page 1 of 12

C or NC-NT PWS



Instructions for Completing a PWS-6 Report for Non-Public Water Supplies

(Revised 06/01/2023)

PWS-6 Reports for Non-public water supplies (NPWS) do not need to exceed one or two pages of text. The report should include the sections outlined below and must adequately describe the water supply, the aquifer or surface water source, and potential sources of regulated contaminants. Regulated contaminants for NPWSs include only microbiological contaminants and nitrate. In addition to the text pages, simple maps should be included to show the well(s), buildings, water distribution system, sewage disposal, roads, the source water protection region (described below), general land uses, and potential sources of regulated contaminants (See Attached Example Report). If non-regulated contaminant sources like Leaking Underground Storage Tanks (LUST) are identified near the proposed well, they should be included in the inventory and shown on maps. If a well log is available, a copy should be included with the report **(Note-The well log(s) must be submitted before final approval of the water system can be given). Prior to receiving approval to operate the NPWS water system; water quality monitoring data must be submitted showing the water is potable.** For more guidance on completing a Non-public PWS-6 Report, please contact the Source Water Protection Program at (406) 444-5546. A resource to help you create a map of potential contaminants is DEQ's online mapping application at https://discover-mtdeq.hub.arcgis.com/. The application has online instructions and help functions. The DEQ Circular 4 referenced below is available at https://deq.mt.gov/files/Water/PWSUB/Documents/engineers/2014/DEQ4-2013-Final.pdf .

Note: PWS-6 Reports can be considered as Source Water Delineation and Assessment Reports (SWDARs) for NPWSs.

Non-public PWS-6 Report Outline

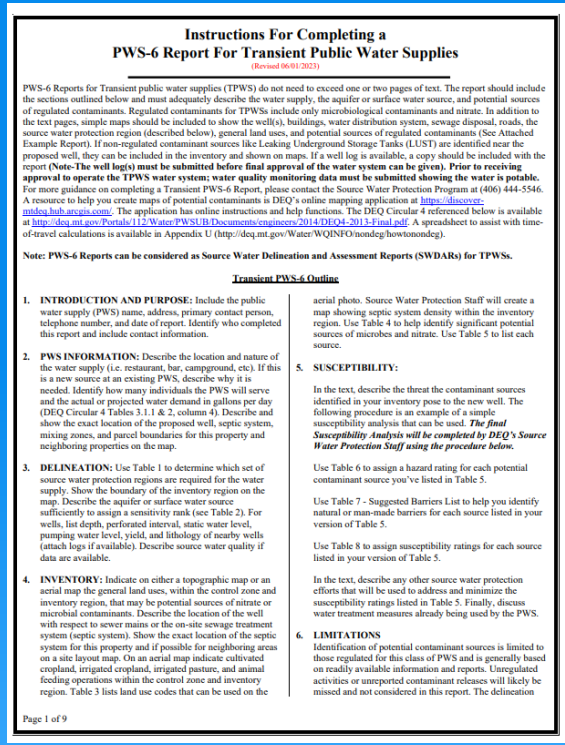
1. **INTRODUCTION AND PURPOSE:** Include the non-public water supply (NPWS) name, address, primary contact person, telephone number, and date of report. Identify who completed the report and include contact information.
2. **WATER SYSTEM INFORMATION:** Describe the location and nature of the water supply (i.e. daycare, elder care facility, bed and breakfast, small food manufacturer, etc). If this is a new source at an existing NPWS, describe why it is needed. Identify how many individuals the NPWS will serve and the actual or projected water demand in gallons per day, assuming 10 gallons per day per patron (DEQ Circular 4 pages 27-28, Tables 3.1.1 & 2, column 4).
3. **DELINEATION:** For a non-public water supply a 100-foot radius control zone and a 500-foot radius inventory region should be delineated as the source water protection areas for a NPWS well. A modified 500-foot fixed radius inventory region can be delineated in areas where groundwater flow direction is known. Show the boundaries of the control zone and inventory region on either a topographic map or an aerial map. The PWS-6 reviewer will describe the aquifer based on well log information included with this report. If no well log is available; well logs from other area wells will be used.
4. **INVENTORY:** Indicate on either a topographic map or an aerial map the general land uses within the control zone and inventory region that may be potential sources of nitrate or microbial contaminants. List these using the table shown in Susceptibility Section in the attached example. Describe the location of the well with respect to sewer mains or the on-site sewage treatment system (septic system). Show the exact location of the septic system for this property and if possible, for neighboring areas on a site layout map. On an aerial map indicate cultivated cropland, irrigated cropland, irrigated pasture, and animal feeding operations within the control zone and inventory region. Source Water Protection Staff will create a map showing septic system density within the inventory region.
5. **SUSCEPTIBILITY:** ***The final Susceptibility Analysis is completed by DEQ's Source Water Protection Staff.***

   In the text, describe any other source water protection efforts that will be used to address and minimize the susceptibility ratings listed in Susceptibility Table (See attached example). Finally, discuss water treatment measures already being used by the PWS.
6. **LIMITATIONS**
   Identification of potential contaminant sources is limited to nitrates and microbial contaminants and is generally based on readily available information and reports. Unreported activities and contaminant releases will likely be missed and not considered in this report. The delineation method utilizes simplifying assumptions that may not fully represent complex ground water flow systems but is intended to be conservative and protective of public health.
7. **REFERENCES:** Include a list of references used to prepare the report. Use the suggested format shown below.

   References Example:
   - Kendy, E., and R.E. Tresch, 1996, Geographic, Geologic, and Hydrologic Summaries of Intermontane Basins of the Northern Rocky Mountains, Montana: U.S. Geological Survey Water Resources Investigations Report 96-4025, 233 p.

Page 1 of 6

Non-Public Water Supplies



Instructions For Completing a PWS-6 Report For Transient Public Water Supplies

(Revised 06/01/2023)

PWS-6 Reports for Transient public water supplies (TPWS) do not need to exceed one or two pages of text. The report should include the sections outlined below and must adequately describe the water supply, the aquifer or surface water source, and potential sources of regulated contaminants. Regulated contaminants for TPWSs include only microbiological contaminants and nitrate. In addition to the text pages, simple maps should be included to show the well(s), buildings, water distribution system, sewage disposal, roads, the source water protection region (described below), general land uses, and potential sources of regulated contaminants (See Attached Example Report). If non-regulated contaminant sources like Leaking Underground Storage Tanks (LUST) are identified near the proposed well, they can be included in the inventory and shown on maps. If a well log is available, a copy should be included with the report **(Note-The well log(s) must be submitted before final approval of the water system can be given). Prior to receiving approval to operate the TPWS water system; water quality monitoring data must be submitted showing the water is potable.** For more guidance on completing a Transient PWS-6 Report, please contact the Source Water Protection Program at (406) 444-5546. A resource to help you create maps of potential contaminants is DEQ's online mapping application at https://discover-mtdeq.hub.arcgis.com/. The application has online instructions and help functions. The DEQ Circular 4 referenced below is available at http://deq.mt.gov/Portals/112/Water/PWSUB/Documents/engineers/2014/DEQ4-2013-Final.pdf. A spreadsheet to assist with time-of-travel calculations is available in Appendix U (http://deq.mt.gov/Water/WQINFO/nondeg/howtonondeg).

Note: PWS-6 Reports can be considered as Source Water Delineation and Assessment Reports (SWDARs) for TPWSs.

Transient PWS-6 Outline

1. **INTRODUCTION AND PURPOSE:** Include the public water supply (PWS) name, address, primary contact person, telephone number, and date of report. Identify who completed this report and include contact information.
2. **PWS INFORMATION:** Describe the location and nature of the water supply (i.e. restaurant, bar, campground, etc). If this is a new source at an existing PWS, describe why it is needed. Identify how many individuals the PWS will serve and the actual or projected water demand in gallons per day (DEQ Circular 4 Tables 3.1.1 & 2, column 4). Describe and show the exact location of the proposed well, septic system, mixing zones, and parcel boundaries for this property and neighboring properties on the map.
3. **DELINEATION:** Use Table 1 to determine which set of source water protection regions are required for the water supply. Show the boundary of the inventory region on the map. Describe the aquifer or surface water source sufficiently to assign a sensitivity rank (see Table 2). For wells, list depth, perforated interval, static water level, pumping water level, yield, and lithology of nearby wells (attach logs if available). Describe source water quality if data are available.
4. **INVENTORY:** Indicate on either a topographic map or an aerial map the general land uses, within the control zone and inventory region, that may be potential sources of nitrate or microbial contaminants. Describe the location of the well with respect to sewer mains or the on-site sewage treatment system (septic system). Show the exact location of the septic system for this property and if possible for neighboring areas on a site layout map. On an aerial map indicate cultivated cropland, irrigated cropland, irrigated pasture, and animal feeding operations within the control zone and inventory region. Table 3 lists land use codes that can be used on the aerial photo. Source Water Protection Staff will create a map showing septic system density within the inventory region. Use Table 4 to help identify significant potential sources of microbes and nitrate. Use Table 5 to list each source.
5. **SUSCEPTIBILITY:**

   In the text, describe the threat the contaminant sources identified in your inventory pose to the new well. The following procedure is an example of a simple susceptibility analysis that can be used. ***The final Susceptibility Analysis will be completed by DEQ's Source Water Protection Staff using the procedure below.***

   Use Table 6 to assign a hazard rating for each potential contaminant source you've listed in Table 5.

   Use Table 7 - Suggested Barriers List to help you identify natural or man-made barriers for each source listed in your version of Table 5.

   Use Table 8 to assign susceptibility ratings for each source listed in your version of Table 5.

   In the text, describe any other source water protection efforts that will be used to address and minimize the susceptibility ratings listed in Table 5. Finally, discuss water treatment measures already being used by the PWS.
6. **LIMITATIONS**
   Identification of potential contaminant sources is limited to those regulated for this class of PWS and is generally based on readily available information and reports. Unregulated activities or unreported contaminant releases will likely be missed and not considered in this report. The delineation

Page 1 of 9

T- PWS

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ACCESSING SWDARs & PWS-6 TEMPLATES

deq.mt.gov/water/Programs/dw-sourcewater

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PWS-6 SOURCE WATER PROTECTION REVIEWER'S EXPECTATIONS

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LEGIBLE MAPS

- Vicinity Map
- General Site Layout Map
- Distribution System Map
- Control Zone Map & Inventory Region Map [preferably aerial maps with well(s) and PCSs clearly identified]

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PWS INFORMATION

- State what type of PWS the well(s) are to serve
- Use appropriate PWS-6 Report template as guide
- Provide required information for that class of PWS (or non-public) well

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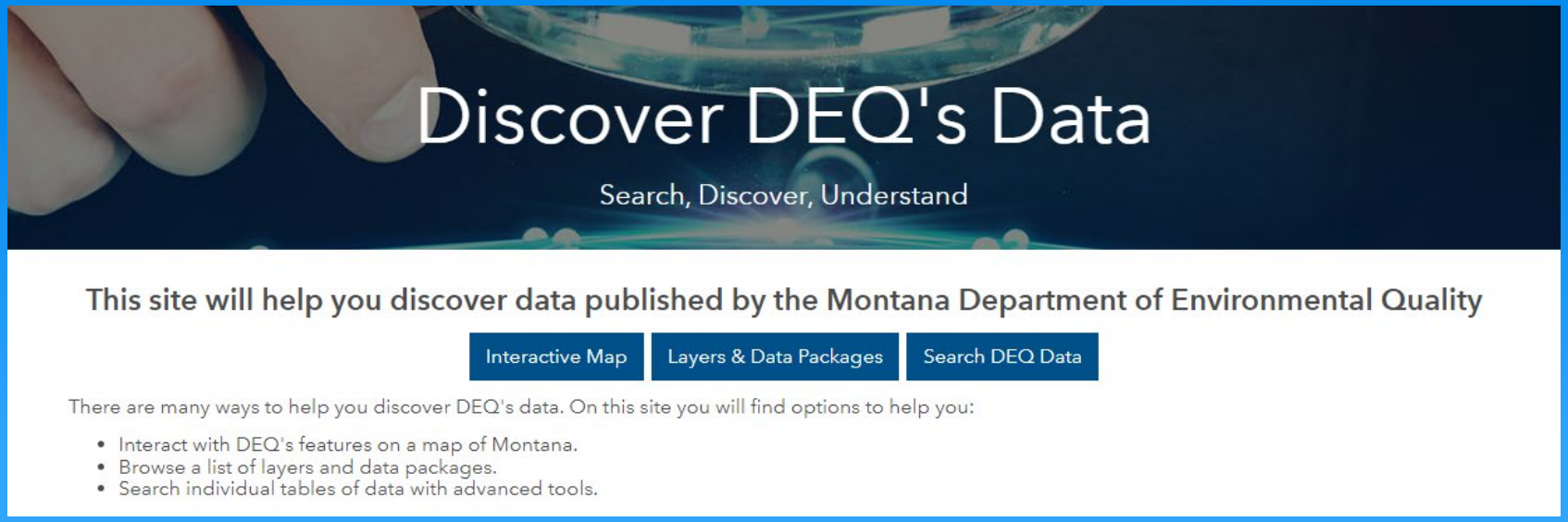
Discover DEQ's Data



discover-mtdeq.hub.arcgis.com

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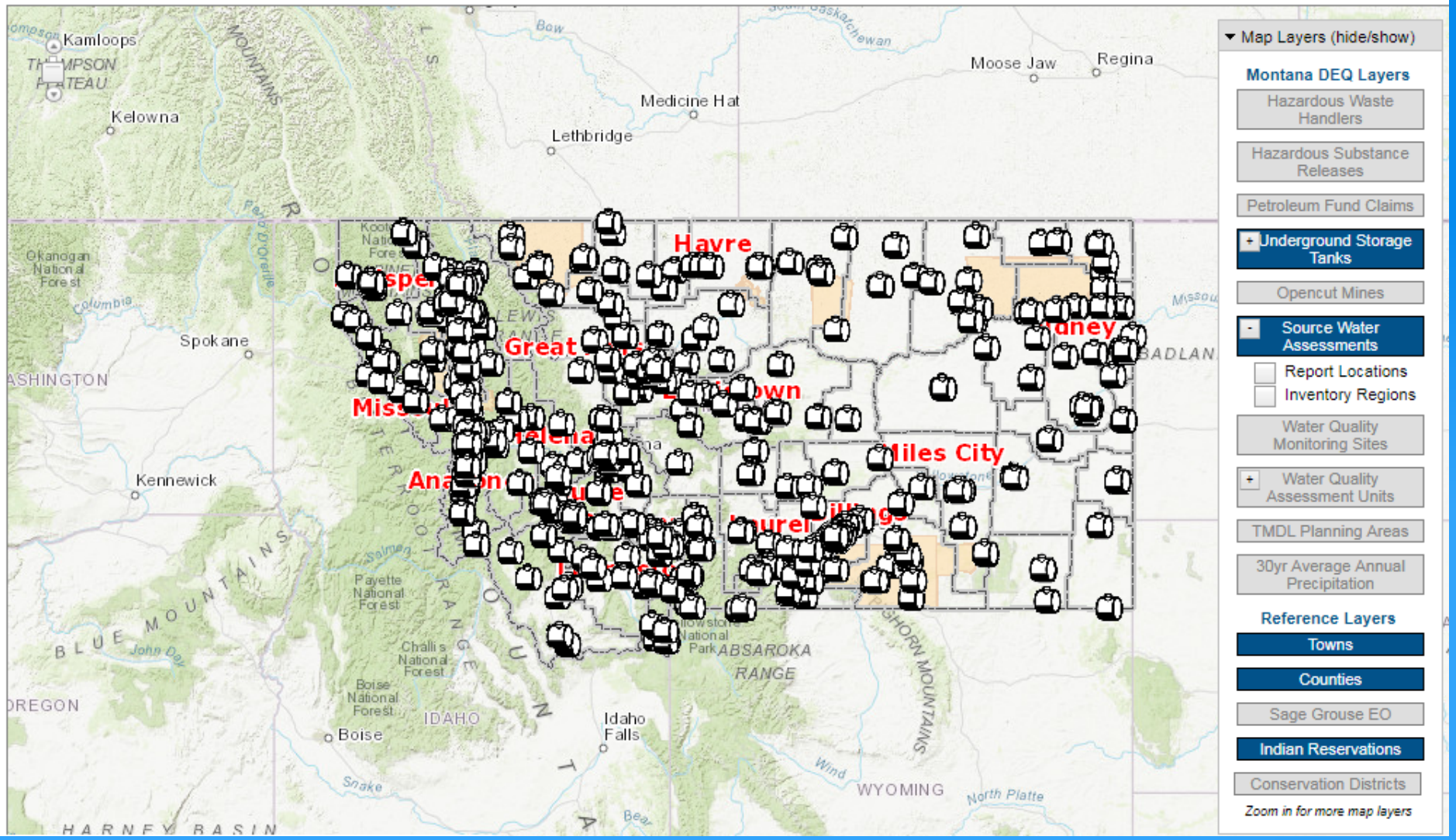
DEQ Mapping DEQ's Data

Help | About | Legend | Selections | Basemaps | Search | for Address: ex. 118 Roberts St, 59601 | Find Address



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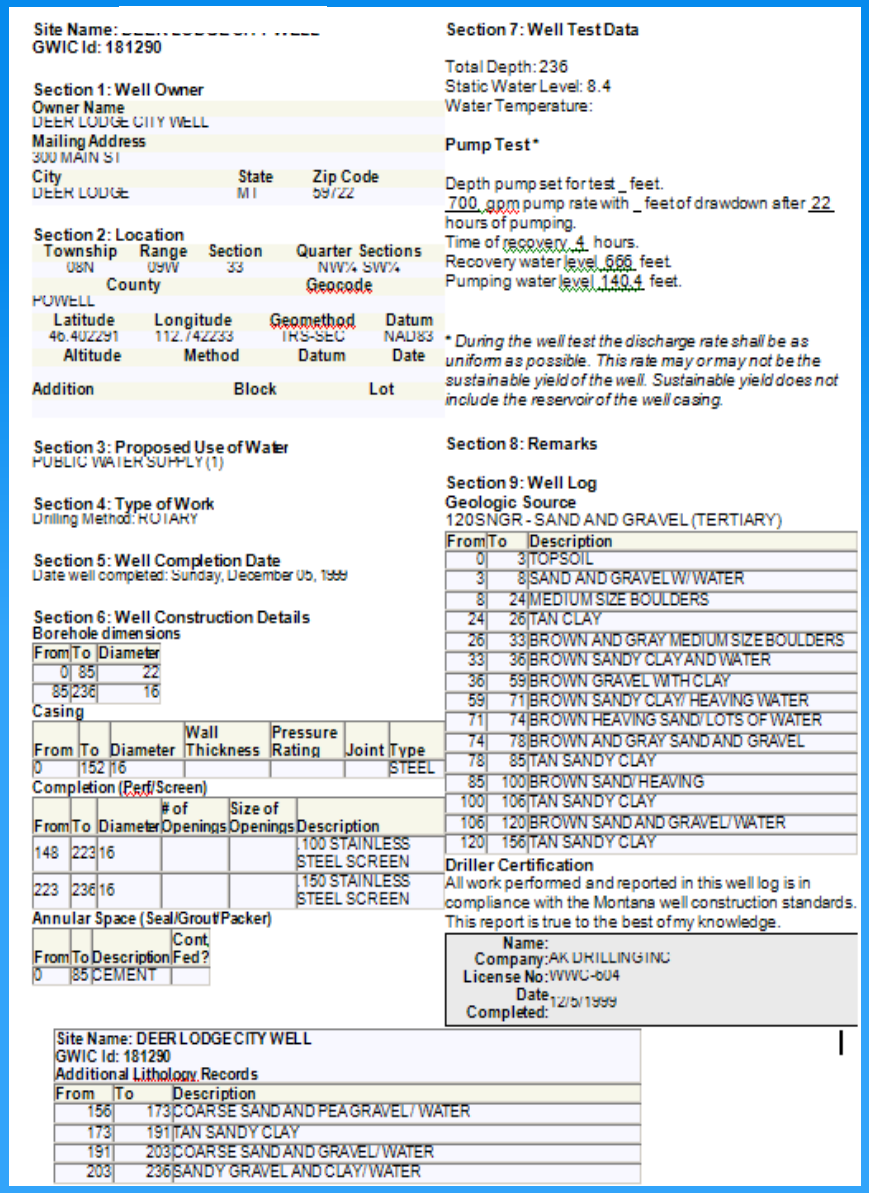
Driller's Well Log



Site Name: [illegible]
GWIC Id: 181290

Section 1: Well Owner

Owner Name
DEER LODGE CITY WELL

Mailing Address
300 MAIN ST

City	State	Zip Code
DEER LODGE	MT	59722

Section 2: Location

Township	Range	Section	Quarter Sections
08N	09W	33	NW¼ SW¼

County: POWELL
Geocode:

Latitude	Longitude	Geomethod	Datum
46.402291	112.742233	TRS-SEC	NAD83

Altitude	Method	Datum	Date

Addition: Block: Lot:

Section 3: Proposed Use of Water
PUBLIC WATER SUPPLY (1)

Section 4: Type of Work
Drilling Method: ROTARY

Section 5: Well Completion Date
Date well completed: Sunday, December 05, 1999

Section 6: Well Construction Details
Borehole dimensions

From	To	Diameter
0	85	22
85	236	16

Casing

From	To	Diameter	Wall Thickness	Pressure Rating	Joint	Type
0	152	16				STEEL

Completion (Perf/Screen)

From	To	Diameter	# of Openings	Size of Openings	Description
148	223	16			100 STAINLESS STEEL SCREEN
223	236	16			150 STAINLESS STEEL SCREEN

Annular Space (Seal/Grout/Packer)

From	To	Description	Cont. Fed?
0	85	CEMENT	

Section 7: Well Test Data

Total Depth: 236
Static Water Level: 8.4
Water Temperature:

Pump Test*

Depth pump set for test _ feet.
700 gpm pump rate with _ feet of drawdown after 22 hours of pumping.
Time of recovery 4 hours.
Recovery water level 666 feet.
Pumping water level 140.4 feet.

** During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.*

Section 8: Remarks

Section 9: Well Log
Geologic Source
120SNGR - SAND AND GRAVEL (TERTIARY)

From	To	Description
0	3	TOPSOIL
3	8	SAND AND GRAVEL W/ WATER
8	24	MEDIUM SIZE BOULDERS
24	26	TAN CLAY
26	33	BROWN AND GRAY MEDIUM SIZE BOULDERS
33	36	BROWN SANDY CLAY AND WATER
36	59	BROWN GRAVEL WITH CLAY
59	71	BROWN SANDY CLAY/ HEAVING WATER
71	74	BROWN HEAVING SAND/ LOTS OF WATER
74	78	BROWN AND GRAY SAND AND GRAVEL
78	85	TAN SANDY CLAY
85	100	BROWN SAND/ HEAVING
100	106	TAN SANDY CLAY
106	120	BROWN SAND AND GRAVEL/ WATER
120	156	TAN SANDY CLAY

Driller Certification
All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

Name:
Company: AK DRILLING INC
License No: WWC-604
Date Completed: 12/5/1999

Site Name: DEER LODGE CITY WELL
GWIC Id: 181290
Additional Lithology Records

From	To	Description
156	173	COARSE SAND AND PEA GRAVEL/ WATER
173	191	TAN SANDY CLAY
191	203	COARSE SAND AND GRAVEL/ WATER
203	236	SANDY GRAVEL AND CLAY/ WATER

http://mbmggwic.mtech.edu/

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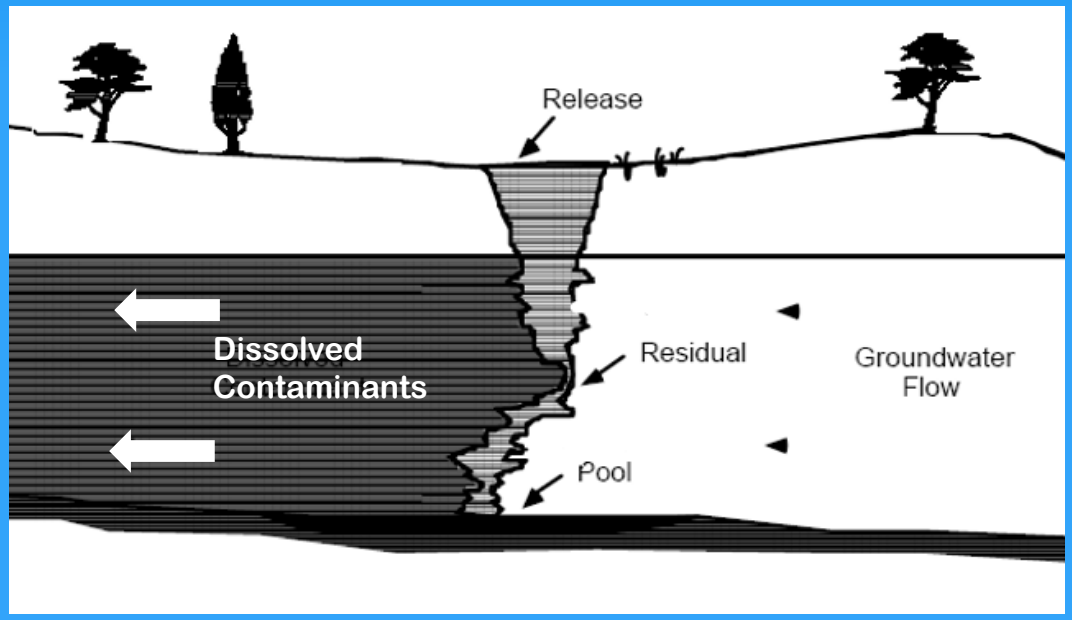
Aquifer (Source Water) Sensitivity

The relative ease with which a contaminant applied on, or near ground surface can migrate to an aquifer



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Aquifer Sensitivity Table

Table X. Source Water Sensitivity

High Source Water Sensitivity
Surface water and (GWUDISW)
Unconsolidated Alluvium (unconfined)
Fluvial-Glacial Gravel
Terrace and Pediment Gravel
Shallow Fractured or Carbonate Bedrock
Moderate Source Water Sensitivity
Semi-consolidated Valley Fill Sediments
Unconsolidated Alluvium (semi-confined)
Low Source Water Sensitivity
Consolidated Sandstone Bedrock
Semi-consolidated Valley Fill Sediments (confined)

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Delineation

- Fixed radius - Control Zone 100-foot diameter around well-head

- Fixed radius – Inventory Region 500-foot (non-public well),1,000-foot (confined), 1-mile (unconfined)

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Control Zone

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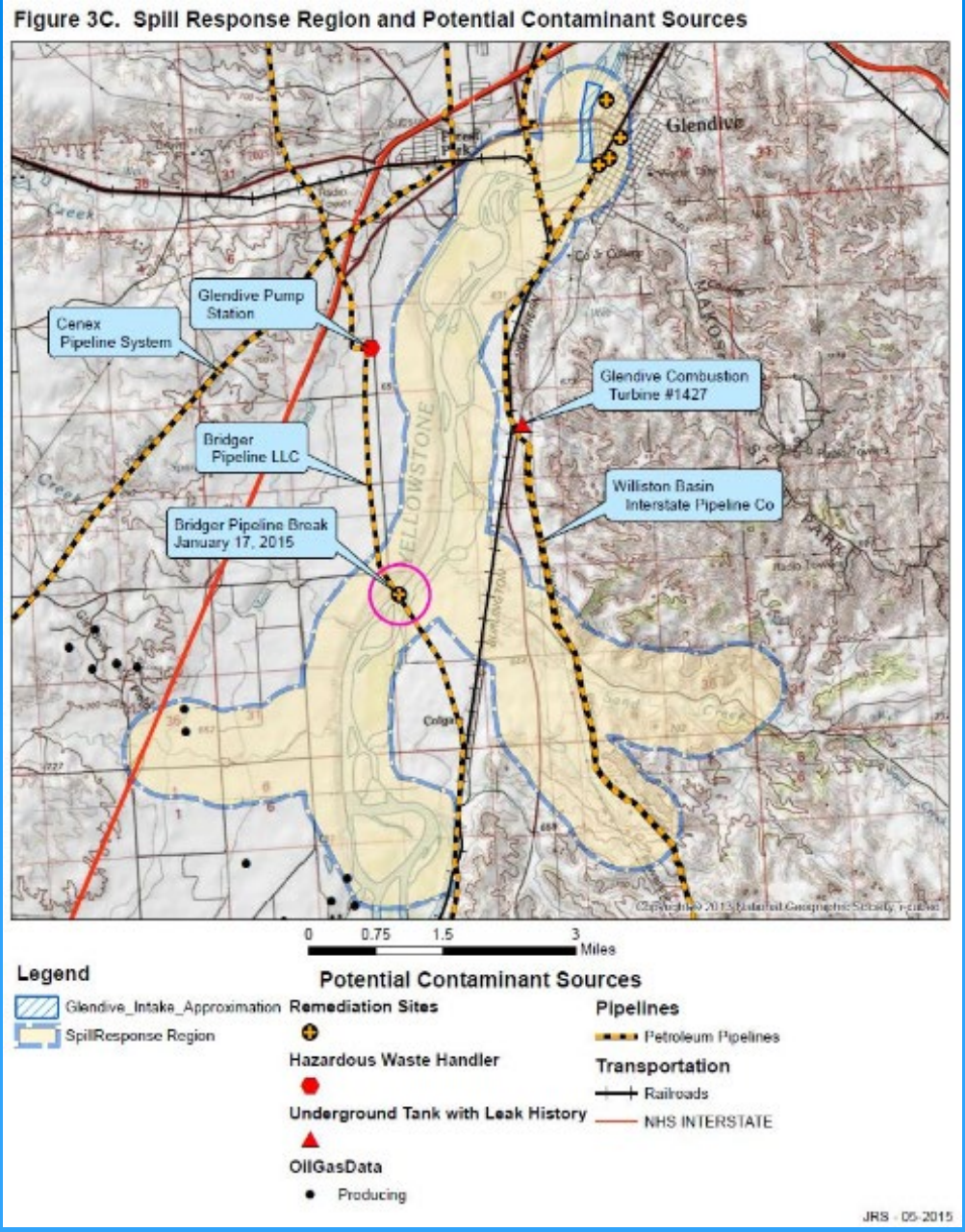
Inventory Region

Spill Response Region

“Control Zone” for a Surface Water Intake



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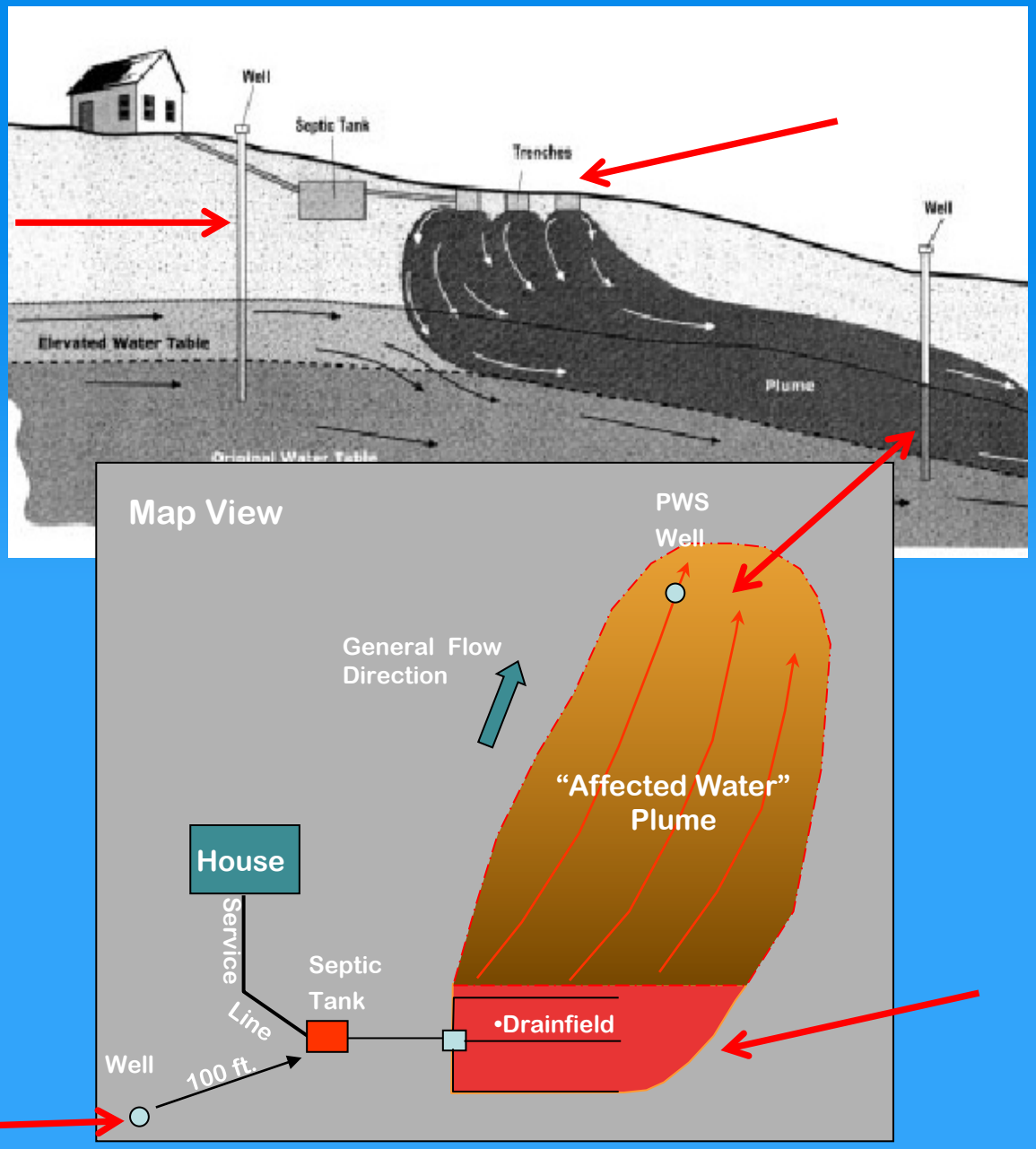
Susceptibility



The potential for a water supply to draw water contaminated by inventoried sources at concentrations that would pose concern

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SUSCEPTIBILITY ASSESSMENT

Table 8. Susceptibility Assessment for Significant Potential Contaminant Sources in the XYZ Community PWS Inventory Region.

Table 3. (MT SWPP Table 5). Significant potential contaminant sources for PWS X.

Source	Contaminants	Description *(Location and nature of hazard)*	Hazard Rating	Barriers	Susceptibility
Dryland Agricultural Crop Lands and grazing	SOC, Nitrate	52% ag-land in the inventory zone	High	Depth >50 ft. below water level Some Ag-land is down-gradient of well	Moderate
Sanitary Sewer Main near wells	Pathogens & Nitrates	About 20% sewered in Inventory Region	Moderate	Depth >50 ft. below water level	Moderate
Leaking Underground storage site (LUST)*	Gasoline	Just outside inventory zone	Moderate	Depth >50 ft. below water level	Moderate
Segment of Highway 287	Hazardous Materials (VOCs & SOCs)	Highway is east and outside of the Inventory Region	Low	Depth >50 ft. below water level	Low
Underground storage site (UST)	Gasoline	Approx. 500 feet south of well	High	Remediated as of 04/21/2006 Intake Depth >50 ft. below water level	Moderate
Montana Rail Link Railroad	Various organic chemicals	Segment is located west of well	High	Emergency response Down-gradient Location	Low
Wastewater Treatment Lagoons	Pathogens & Nitrates	Located north of the well site and outside the Inventory Region	Low	Depth >50 ft. below water level Lagoons are cross-gradient to well	Low

Susceptibility of a PWS To PCSs Procedure

- Determine Hazard
  - PCS Proximity or Density + PCS Type = Hazard
- Barriers
  - Natural
  - Engineered
  - Management Actions

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Hazard – Surface Water

Table B. Hazard of Potential Contaminant Sources

For **surface water sources**

Potential Contaminant Sources	High Hazard Rating	Moderate Hazard Rating	Low Hazard Rating
Point Sources of Nitrates or Pathogens	Potential for direct discharge to surface water	Potential for discharge to groundwater hydraulically connected to surface water	Potential contaminant sources in the watershed region
Point Sources of VOCs, SOCs, or Metals	Potential for direct discharge of large quantities from roads, rails, pipelines, or mines	Potential for direct discharge of small quantities to surface water	Potential for discharge to groundwater hydraulically connected to surface water
Septic Systems (density)	More than 300 per sq. mi.	50 – 300 per sq. mi.	Less than 50 per sq. mi.
Municipal Sanitary Sewer (percent land use)	More than 50 percent of region	20 to 50 percent of region	Less than 20 percent of region
Cropped Agricultural Land (percent land use)	More than 50 percent of region	20 to 50 percent of region	Less than 20 percent of region

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Hazard – Ground Water Source Unconfined

Table D. Hazard of Potential Contaminant Sources

For **wells drawing water from unconfined aquifers**

Potential Contaminate Sources within the Inventory Region	High Hazard Rating	Moderate Hazard Rating	Low Hazard Rating
Point Sources of All Contaminants	Within 1-year TOT	1 to 3-years TOT	Over 3-years TOT
Septic Systems	More than 300 per sq. mi.	50 – 300 per sq. mi.	Less than 50 per sq. mi.
Municipal Sanitary Sewer (percent land use)	More than 50 percent of region	20 to 50 percent of region	Less than 20 percent of region
Cropped Agricultural Land (percent land use)	More than 50 percent of region	20 to 50 percent of region	Less than 20 percent of region

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Hazard – Ground Water Source Confined

Table C. Hazard of Potential Contaminant Sources

For **wells drawing water from confined aquifers**

Potential Contaminate Sources within the Inventory Region	The PWS well is not sealed through the confining layer	Other wells in the Inventory Region are not sealed through the confining layer	All wells in the Inventory Region are sealed through the confining layer
Point Sources	High Hazard	Moderate Hazard	Low Hazard
Septic System Density (# per square mile)	High: > 300 Moderate: 50 to 300 Low: < 50	Moderate: > 300 Low: < 300	Low Hazard
Municipal or Community Sanitary Sewer Mains (% land are)	High: > 50 Moderate: 20 to 50 Low: < 20	Moderate: > 50 Low: < 50	Low Hazard
Cropland (% land use)	High: > 50 Moderate: 20 to 50 Low: < 20	Moderate: > 50 Low: < 50	Low Hazard

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Table 6. Relative susceptibility to specific contaminant sources as determined by hazard and the presence of barriers.

Presence of Barriers	Hazard		
	High	Moderate	Low
No Barriers	Very High Susceptibility	High Susceptibility	Moderate Susceptibility
One Barrier	High Susceptibility	Moderate Susceptibility	Low Susceptibility
Multiple Barriers	Moderate Susceptibility	Low Susceptibility	Very Low Susceptibility

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REFERENCES !

References Example:

Kendy, E., and R.E. Tresch, 1996, Geographic, Geologic, and Hydrologic Summaries of Intermontane Basins of the Northern Rocky Mountains, Montana: U.S. Geological Survey Water Resources Investigations Report 96-4025, 233 p.

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SOURCE WATER PROTECTION PROGRAM

(Revised 04/26/2022)

PWS-6 Review Checklist

The following items represent the minimum requirements for review and approval of PWS-6 reports submitted to DEQ by developers, PWS operators, landowners, or others. This checklist should be used in conjunction with the information and general format provided in the template for preparing PWS-6 documents. While the format of the template may be modified as needed, all requested information should be included for review and approval by the SWPP.

For any items that are not applicable, or information is not available, note in checklist column and provide an explanation. Attach additional sheets for explanation, if necessary.

Guide to understanding the review:

X: adequate information was provided **O**: information is missing
NA: the item in the check list is not applicable to this systems review
OK: more information could have been provided, but is not required

If there is a number next to the X or 0, it refers to a comment with the corresponding number listed at the end of the report.

PWS Name:	**Town:**	**County:**
PWSID#:	**EQ#:**	
Date To SWP:	**Expedited: Y_____ N_____**	
DEQ Review Engineer Name:		
SWP Contact:	**Operator Name:**	
	Phone:	
PWS – 6 Preparer:	**Name:**	
	Address:	
	Phone:	

Reviewer Signature: _____ Review Date 1: _____

Review Date 2: _____

REVIEW SUMMARY:

REVIEW CHECKLIST

Chapter 1 – Background

This section provides background information on the community served by the PWS	Present?
1. General description of the source water	
Clearly state what the source is: groundwater, spring, surface water	
2. Description of PWS, including:	
Source(s) of water	
Legal Location	
Aquifer lithology and well construction logs	
Distribution system layout or map	
Number of connections and users	
PWS treatment system	
Map showing general layout of the PWS	
3. Water quality:	
Describe background/regional water quality	
Table summarizing background water quality	

Comments:

Chapter 2 – Delineation

This section provides information on the hydrogeology of the PWS water supply	Present?
Hydrogeology	
Hydrogeologic conditions	
Summary of wells in area from GWIC database	
Geologic map(s) included (or valid justification for omission)	
Aquifer identification	
Geologic setting of aquifer	
Aquifer lithology	
Aquifer type (unconfined, confined, semi-confined)	
Connection with surface water	
Classify sensitivity of hydrogeologic setting of source water	
Conceptual model and assumptions	
Aquifer boundaries	
Aquifer recharge areas	
Groundwater flow directions	
Connection with surface waters	
Source information	
Well depth, construction details	
Well locations described and shown on maps	
Delineation methods and criteria	
Overview of approach used for delineation	
Identify management zones or regions	

Comments:

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Chapter 3 – Inventory

This section identifies all known potential contaminant sources that may affect the PWS.

	Present?
1. Inventory methods identified, or how was the inventory performed	
2. Appropriate databases searched, with potential sources identified	
Control Zone	
Does the PWS own and control the control zone?	
Description of land uses	
Description of potential contaminant sources	
Potential contaminant sources located on a base map	
Inventory Region	
Description of land uses	
Description of potential contaminant sources	
Potential contaminant sources located on a base map	
Surface Water Buffer	
Description of land uses	
Description of potential contaminant sources	
Recharge Region	
Description of land uses	
Description of large potential contaminant sources	
Large potential sources and land uses shown on a map	

Comments:

Chapter 4 – Susceptibility: Description of the threat the contaminant sources identified in your inventory pose to the new well. A procedure is presented in the PWS-6 template. The susceptibility assessment is provided in **Table 1** on the next page.

REFERENCES - List or bibliography of references for hydrogeologic information _____

APPENDICES

All necessary supporting information is included in appendices _____

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Chapter 4 – Susceptibility

Table 1. Susceptibility Assessment of Significant Potential Contaminant Sources

Potential Contaminant Source	Potential Contaminants	Hazard	Hazard Rating	Barriers	Susceptibility	Management Recommendation

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