



STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1445 North Orchard • Boise, Idaho 83706 • (208) 373-0550

C.L. "Butch" Otter, Governor
Toni Hardesty, Director

**RECERTIFICATION OF THE CITY OF EMMETT
SOURCE WATER PROTECTION PLAN
PWS# ID3230012**

Department of Environmental Quality (DEQ) is pleased to recertify the City of Emmett Source Water Protection Plan (SWPP), 2010.

The purpose of review and recertification is to verify that the SWPP meets the goals of the Safe Drinking Water Act and the requirements of the Idaho Source Water Protection Program.

This letter provides documentation that the City of Emmett Source Water Protection Plan meets these requirements

DEQ would like to commend the City and its planning team for their continued and proactive efforts to protect your drinking water resource now and into the future.

Dated this 14th day of July, 2010.


Tiffany Floyd

Assistant Regional Administrator, Boise DEQ

2010

Addendum:
Source Water
Protection Plan
Update for the
City of Emmett



Contents

I. INTRODUCTION.....	3
A. List of public water system(s) included in this plan:	3
B. PWS Sources Protected by this Plan:	3
II. IMPLEMENTATION EFFORTS	4
III. COMMUNITY PLANNING TEAM	5
A. Planning Team Members	5
B. Planning Team Coordination.....	5
IV. SOURCE WATER PROTECTION AREA	7
A. Source Water Protection Area.....	7
V. POTENTIAL SOURCES OF GROUND WATER/SURFACE WATER CONTAMINATION.....	7
A. Potential Contaminant Source Inventory	7
B. Contaminant Inventory Updates	15
C. Prioritization of Potential Contaminant Sources	15
VI. SOURCE WATER PROTECTION MANAGEMENT TOOLS	16
VII. CONTINGENCY PLAN	20
A. Existing Contingency Plan.....	20
B. Contingency Plan Update.....	21
VIII. NEW DRINKING WATER SOURCES	21
A. Delineations for New Sources.....	21
B. Protection Strategies for New Sources	21
IX. PUBLIC PARTICIPATION	21
X. REFERENCES.....	22
APPENDIX A - SOURCE WATER DELINEATIONS	23

ADDENDUM: SOURCE WATER PROTECTION PLAN UPDATE FOR:

CITY OF EMMETT PWS 3230012, 3230078

Date updated: July, 2010

The city of Emmett, Idaho completed a Source Water Protection¹ Plan in 2002. An update to that plan, including any updates to the delineation of the source water area, potential contaminants, and scheduled protection strategies are included below.

This plan will be submitted to the Idaho Department of Environmental Quality (DEQ) for state certification. The plan will be reviewed annually by the community planning team and updated every five years for state certification.

I. INTRODUCTION

The following steps have been completed as part of Emmett's efforts to update its Source Water Protection Plan. These steps are:

1. Formation of a Source Water Protection planning team
2. Delineation of the land area to be protected
3. Identification and ***prioritization*** of potential contaminant sources
4. Development and implementation of a management plan for drinking water source protection measures and activities
5. Preparing for the future through the development of a contingency plan, and planning for future drinking water sources

A. List the public water system(s) included in this plan:

- City of Emmett PWS# 3230012
- Shadow Butte Industrial Park PWS# 3230078

B. PWS Sources Protected by this Plan:

PWS Source Name	Ground water/Surface water/Spring(s)
ID3230012 Well #6	Ground Water
ID3230012 Well #8	Ground Water
ID3230012 Well #9	Ground Water
ID3230078 Well #1-East	Ground Water
ID3230078 Well #2-West	Ground Water

¹ The term "Source Water Protection" is the same as Drinking Water Protection for ground water sources of drinking water and Source Water Protection for ground water and surface water sources. The term "Source Water Protection" will be used throughout this Plan and is synonymous with Source Water/Drinking Water Protection.

II. IMPLEMENTATION EFFORTS

List what protection measures have been implemented to date from the initial Source Water Protection Plan (SWPP) and briefly discuss the success, and/or challenges, of the different protection measure and management tools that were used.

To date, the following source water protection implementation efforts are either ongoing or have been completed:

- **Coordinated with Emmett city government for passage of drinking water source protection ordinance. *Completed***
 - This implementation effort was not so much a challenge as it was time consuming. Emmett's original Source Water Protection Plan (2002) involved updating Emmett's Comprehensive Plan to include a wellhead protection ordinance (2002-2003). Emmett has also passed a cross-connection prevention ordinance adopted 12/18/2007 and a subdivision ordinance adopted 8/8/2000. Emmett is currently reviewing and updating its Wellhead Protection Ordinance to ensure that it reflects current information and verbiage. Public comment is targeted for late 2010.

- **Coordinating with Gem County Development Services Department for development and passage of a county-wide source water protection ordinance and/or overlay district. *Ongoing***
 - The biggest challenge with this effort has been the "waiting game". There are two separate commissions (Planning, and Zoning) that must be coordinated with. Delays in this effort are due in part because of the attention that has been focused on Gem County's confined animal feeding operation (CAFO) ordinance. Several residents that live west of Emmett in an area identified by DEQ as a nitrate priority area (NPA) have pushed for strengthening this ordinance; as a result, pursuit of a county-wide source water protection ordinance has not progressed as quickly as desired. Extensive research has provided information on source water protection efforts in other Idaho counties. This information (such as verbiage, content and format) has been passed on to the Gem County Development Services Department per its request. The Department will draft its own county-wide source water protection ordinance and/or source water protection district which will then be submitted to Gem County's Zoning Department for review. Coordination efforts with Gem County continue, with a target date for public comment on a draft source water protection ordinance by late 2010.

- **Provided public awareness and education materials and opportunities to water users. *Completed, and ongoing***
 - Mr. Bruce Evans continues to submit brief articles about source water protection to Emmett's local newspaper. He has also made source water protection materials available at Emmett's City Hall and at city council meetings. Literature has included

- Information on the SWPP and protection areas;
- Proper use and disposal of lawn and landscape fertilizers and pesticides;
- Notices of household hazardous waste disposal events at local waste transfer station;
- Water conservation

In addition, Emmett’s Public Works Department under the direction of Mr. Evans also provides cross connection prevention reminders. Regular drinking water source protection reminders have also been included with monthly water bills. A neighboring community water system (Pickett Corral), located east of Well #9’s drinking water source protection area, employs private septic systems for each residence. As a courtesy (and to protect the aquifer in that area), information on the care and maintenance of septic waste systems will also be provided to this water system through its representative, Mr. Carlos Bilbao, a planning team member.

III. COMMUNITY PLANNING TEAM

A planning team was established to review and update this plan.

A. Planning Team Members

List the planning team members and other source water protection participants and identify the team coordinator.

Bruce Evans	PLANNING TEAM COORDINATOR: City of Emmett; Superintendent of Public Works
Bill Butticci	City of Emmett; Mayor
Janice Simpson	City of Emmett Public Works Department; Secretary of Public Works
Scott Taylor	City of Emmett Public Works Department; Operator
Marge Lawrence	City of Emmett; City Clerk
Crystal Alsop	City of Emmett; Deputy City Clerk
Dee Turner	City of Emmett; Planning and Zoning Department
Cheryl Conrad	City of Emmett; Zoning Commission
Jack Dodson	Resident at large; Superintendent of Public Works, retired
Carlos Bilbao	Resident at large; neighboring community water system (Pickett Corral); Idaho State Representative
Brad Hawkins-Clark	Gem County Development Services Department
Anita Hendrix	Chairwoman, Joint Planning Commission for Planning and Zoning

B. Planning Team Coordination

- How often will the planning team meet?

At a minimum, the planning team will meet on an annual basis. Planning team meetings will be scheduled in advance to provide team members with sufficient notice so arrangements may be made to attend. This responsibility will be undertaken by the TEAM COORDINATOR.

- How will members of the community be allowed to participate?

Members of the community will be given the opportunity to participate in planning team meetings and are encouraged to attend. Notices of the dates, times and locations of all future planning team meetings will be advertised using, but not limited to, the suggestions listed below:

- Meeting notices and invitations to participate in planning team meetings enclosed in water bills;
- Flyers of meeting dates, times and locations posted at public locations, city and county offices;
- Announcements at city council meetings;
- Notice in local newspaper.

- What are the long-term goals and objectives?

The long-term goals and objectives of this process are to:

1. Protect the aquifer that serves as Emmett's source of drinking water;
2. Increase the level of public awareness and education within the community on the need to protect the valley's drinking water source by using opportunities for public outreach. The general land use immediately surrounding Emmett is a combination of agricultural and residential. Outside the city limits, rural residential, hobby farms and other agricultural practices (irrigated agriculture and cattle grazing) are the dominant land use. Because a part of the Emmett valley experiences periods of high water table levels and shallow ground water, and is an area of high agricultural chemical use, increasing nitrate levels in ground water is a concern. This protection plan has been developed and is being used as a long-term protection strategy for the aquifer that serves as a drinking water supply for the entire Emmett valley.
3. Coordinate with Gem County Planning, and Zoning Departments to develop a county source water protection ordinance and/or overlay district. The goal of this implementation item is to identify and protect drinking water protection areas within all of Gem County.
4. Provide public awareness of proper use and application of lawn and landscape fertilizers and pesticides. The goal of this implementation item is to reduce the level of nitrates and synthetic organic compounds from entering ground water due to accidental spills or improper use or disposal methods.
5. Increase public awareness of pesticide disposal events provided by the Idaho State Department of Agriculture. The goal of this implementation item is assist in providing an avenue for the public to properly dispose of agricultural chemicals thereby helping to reduce the level of nitrates and synthetic organic compounds from inadvertently entering ground water.
6. Increase public awareness of proper disposal of household hazardous wastes.

7. Increase public awareness of water use and its conservation in and around homes.
 - o How will this source water protection plan be made available to the community?
 - o Who do they contact regarding questions about the drinking water protection plan.

Copies of the protection plan will be made available for review at Emmett's City Hall and at the Gem County Planning office. In addition, additional copies will be kept at Emmett's Public Works Department office. For additional information, the public may contact Mr. Bruce Evans, Superintendent of Public Works at (208) 365-9569 or at emmettpublicwork@qwestoffice.net.

IV. SOURCE WATER PROTECTION AREA

A. Source Water Protection Area Delineation

Delineations are available in the Source Water Assessment Report. If the delineation has changed from the original protection plan or if there are additional sources not included in the original protection plan, attach a copy of a map of the delineated source water protection area and provide reference to how the delineation was performed, or attach a copy of the source water assessment report that includes the source water assessment area as an appendix to this plan.

The source water assessment areas for Emmett's Wells #6, #8 and #9 were delineated in the original Source Water Assessment report (DEQ, 2000). Two newly acquired drinking water sources from the Shadow Butte Industrial Park (Shadow Butte Well #1-East and Well #2-West), had their delineations performed by DEQ in 2008 and is included in this plan (Appendix A). This small water system (PWS 3230078) is owned and operated by the city of Emmett and currently only serves 25 residents, but is capable of supplying anticipated drinking water needs as this part of the Emmett valley is developed in the future.

V. POTENTIAL SOURCES OF GROUND WATER/SURFACE WATER CONTAMINATION

A. Potential Contaminant Source Inventory

List potential contaminants or attach the contaminant inventory result map(s) and associated list(s) of potential contaminant sources identified in the source water assessment report. In addition, the planning team will also need to perform the equivalent of an enhanced inventory (or update the enhanced inventory) which, at a minimum, includes an on-the-ground survey of the source water protection area and identification of significant historical potential contaminant sources for the area. *Note: Please indicate if there are no additional/or changes to the listing of potential contaminants found in the updated inventory.*

ENHANCED INVENTORY

Source Water Name: Well #6

Date of Inventory: April 8, 2010

Inventory completed by: Scott Taylor, City of Emmett; Melinda Harper, IRWA

Map ID#	¹ Contaminant Source	² TOT Zones	Source of Information	³ Potential Contaminants (if known)	Physical/GPS Coordinates	⁴ Priority Ranking
1	Hospital	0-3	Database Search	IOC, VOC, SOC		L
2	Hospital	0-3	Database Search	IOC		M
3	RICRIS; (Historic; business closed)	0-3	Database Search Enhanced Inventory 2010	IOC, VOC, SOC		M
4	SARA	0-3	Database Search	IOC, SOC		M
5	AST	0-3	Database Search	VOC, SOC		M
	Trucking Business	3-6	Enhanced Inventory 2010	IOC, VOC, SOC	N43°52.795 E116°29.553	L
	Supply/Building Business	3-6	Enhanced Inventory 2010	All Sources	N43°52.709 E116°29.986	L
	Fruit Shed, Commercial	3-6	Enhanced Inventory 2010	VOC, SOC	N43°52.712 E116°29.804	L
	Metals Plating Shop (historic; closed)	3-6	Enhanced Inventory 2010	VOC, SOC	N43°52.600 E116°29.908	M
	Printing Business	3-6	Enhanced Inventory 2010	VOC	N43°52.739 E116°29.380	M
6	Veterinarian	3-6	Database Search	IOC		M
	Bulk Oil Plant	0-3	Enhanced Inventory 2010	VOC, SOC	N43°52.750 E116°29.515	H

Map ID#	¹ Contaminant Source	² TOT Zones	Source of Information	³ Potential Contaminants (if known)	Physical/GPS Coordinates	⁴ Priority Ranking
	City Dump (Historic)	0-3	Enhanced Inventory 2010	IOC, VOC, SOC	N42°51.553 E116°27.206	M
	Trucking Business	0-3	Enhanced Inventory 2010	VOC, SOC	N43°52.795 E116°29.553	L
	Feed lot	0-3	Enhanced Inventory 2010	IOC, Microbials	N43°53.185 E116°27.290	M
	Last Chance Canal	3-6	Enhanced Inventory 2010	IOC, VOC, SOC		L
	Black Canyon Canal	6-10	Enhanced Inventory 2010	IOC, VOC, SOC		L
	Private Residences (Waste systems; wells; chemical storage)	6-10	Enhanced Inventory 2010	All sources		L
	Irrigated Agriculture	6-10	Enhanced Inventory 2010	IOC, VOC, SOC		L

¹RICRIS (Site regulated under **Resource Conservation Recovery Act, RCRA**). RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes; SARA (**Superfund Amendment and Reauthorization Act**). These sites store certain types and amounts of hazardous materials and must be identified under the **Community Right to Know Act**; AST (**Aboveground storage tank**).

²TOT=time-of-travel (in years) for a particle of ground water to reach the wellhead.

³IOC=inorganic compound; SOC=synthetic organic compound; VOC=volatile organic compound.

⁴Priority ranking assigned to potential contaminant sources based upon known or perceived threat to the aquifer. L=Low; M=Medium; H=High

Source Water Name: Well #8

Date of Inventory: April 8, 2010

Inventory completed by: Scott Taylor, City of Emmett; Melinda Harper, IRWA

Map ID#	¹ Contaminant Source	² TOT Zones	Source of Information	³ Potential Contaminants (if known)	Physical/GPS Coordinates	⁴ Priority Ranking
1	LUST (Status unknown)	0-3	Database Search	VOC, SOC		M

Map ID#	¹ Contaminant Source	² TOT Zones	Source of Information	³ Potential Contaminants (if known)	Physical/GPS Coordinates	⁴ Priority Ranking
2	Sweeping Service (Historic, closed; now private residence)	0-3	Database Search Enhanced Inventory 2010	VOC, SOC		L
3	State Government-Transportation	0-3	Database Search	IOC, VOC, SOC		M
4	CERCLA	0-3	Database Search	IOC, VOC, SOC		H
6	Storage- Household and Commercial	3-6	Database Search	IOC, VOC, SOC		H
7	State Government-Forestry	3-6	Database Search	VOC, SOC		M
8	Storage- Household and Commercial	6-10	Database Search	All sources		H
	Gas Station (Albertsons)	0-3	Enhanced Inventory 2010	VOC, SOC	N43°51.698 E116°29.512	M
	Gas Station (Maverik)	0-3	Enhanced Inventory 2010	VOC, SOC	N43°51.691 E116°30.044	M
	Last Chance Canal	3-6, 6-10	Enhanced Inventory 2010	IOC, VOC, SOC		L
	Private Residences (Waste systems; wells; chemical storage)	3-6, 6-10	Enhanced Inventory 2010	All sources		L
	Irrigated Agriculture	3-6, 6-10	Enhanced Inventory 2010	IOC, VOC, SOC		L

¹LUST (leaking underground storage tank); CERCLA (Comprehensive Environmental Response

Compensation and Liability Act). CERCLA, more commonly known as Superfund, is designed to clean up hazardous waste sites that are on the national priority list (NPL).

²TOT=time-of-travel (in years) for a particle of ground water to reach the wellhead.

³IOC=inorganic compound; SOC=synthetic organic compound; VOC=volatile organic compound.

⁴Priority ranking assigned to potential contaminant sources based upon known or perceived threat to the aquifer. L=Low; M=Medium; H=High

Source Water Name: Well #9
 Date of Inventory: April 8, 2010
 Inventory completed by: Scott Taylor, City of Emmett; Melinda Harper, IRWA

Map ID#	¹ Contaminant Source	² TOT Zone(s)	Source of Information	³ Potential Contaminants (if known)	Physical/GPS Coordinates	⁴ Priority Ranking
1	Storage - Household and Commercial	0-3	Database Search	IOC, VOC, SOC		H
	Last Chance Canal	0-3, 3-6	Enhanced Inventory 2010	All sources		L
	Black Canyon Canal	6-10	Enhanced Inventory 2010	All sources		L
	Irrigated Agriculture	0-3, 3-6, 6-10	Enhanced Inventory 2010	IOC, VOC, SOC		L
	Dump (Historic)	6-10	Enhanced Inventory 2010	IOC, VOC, SOC, Microbials	N42°51.553 W116°27.206	M
	Private Residences (Waste systems; wells; chemical storage)	0-3, 3-6, 6-10	Enhanced Inventory 2010	All sources		M

²TOT=time-of-travel (in years) for a particle of ground water to reach the wellhead.

³IOC=inorganic compound; SOC=synthetic organic compound; VOC=volatile organic compound.

⁴Priority ranking assigned to potential contaminant sources based upon known or perceived threat to the aquifer. L=Low; M=Medium; H=High

Source Water Name: Well #1-East (N43°51.763 W116°33.338)

Date of Inventory: April 8, 2010

Inventory completed by: Scott Taylor, City of Emmett; Melinda Harper, IRWA

Map ID#	¹ Contaminant Source	² TOT Zones	Source of Information	³ Potential Contaminants (if known)	Physical/GPS Coordinates	⁴ Priority Ranking
	Bi-Mart	6-10	Enhanced Inventory 2010	VOC	N43°51.649 W116°30.001	M
	Walgreens	6-10	Enhanced Inventory 2010	VOC	N43°51.693 W116°30.043	M

Map ID#	¹ Contaminant Source	² TOT Zones	Source of Information	³ Potential Contaminants (if known)	Physical/GPS Coordinates	⁴ Priority Ranking
	CAFO	0-3	Enhanced Inventory 2010	IOC, M	N43°53.176 W116°27.894	H
	Agriculture (Cattle business)	0-3	Enhanced Inventory 2010	VOC, SOC, M	N43°53.405 W116°27.448	L
	Sawyer Pond	0-3	Enhanced Inventory 2010	VOC	N43°51.069 W116°31.648	L
	Agriculture (Livestock Auction)	0-3	Enhanced Inventory 2010	IOC, VOC, M	N43°55.007 W116°31.607	L
	Industrial gravel pit operation	0-3	Enhanced Inventory 2010	IOC, VOC	N43°50.997 W116°30.898	H
	Industrial sand pit operation	0-3	Enhanced Inventory 2010	IOC, VOC	N43°51.687 W116°32.425	H
	Chemical Storage (Historic; closed)		Enhanced Inventory 2010	SOC, VOC	N43°51.046 W116°32.130	H
	Chemical Storage		Enhanced Inventory 2010	SOC, VOC	N43°51.240 W116°32.544	H
	Payette River	0-3, 3-6	Enhanced Inventory 2010	All sources		L
	Black Canyon Canal	0-3, 3-6	Enhanced Inventory 2010	All sources		L
	Railroad	0-3, 3-6	Enhanced Inventory 2010	All sources		M
	State Highway 52	0-3, 3-6	Enhanced Inventory 2010	All sources		M
	Irrigated Agriculture	0-3, 3-6	Enhanced Inventory 2010	IOC, SOC		L

Map ID#	¹ Contaminant Source	² TOT Zones	Source of Information	³ Potential Contaminants (if known)	Physical/GPS Coordinates	⁴ Priority Ranking
	Transportation Corridors	0-3, 3-6 6-10	Enhanced Inventory 2010	All sources		M
	Railroad	0-3, 3-6	Enhanced Inventory 2010	All sources		M
	Private Residences (Waste systems; wells; chemical storage)	0-3, 3-6	Enhanced Inventory 2010	All sources		L

¹CAFO (confined animal feeding operation).

²TOT=time-of-travel (in years) for a particle of ground water to reach the wellhead.

³IOC=inorganic compound; SOC=synthetic organic compound; VOC=volatile organic compound.

⁴Priority ranking assigned to potential contaminant sources based upon known or perceived threat to the aquifer. L=Low; M=Medium; H=High

Source Water Name: Well #2-West (N43°51.760 W116°33.370)

Date of Inventory: April 8, 2010

Inventory completed by: Scott Taylor, City of Emmett; Melinda Harper, IRWA

Map ID#	¹ Contaminant Source	² TOT Zones	Source of Information	³ Potential Contaminants (if known)	Physical/GPS Coordinates	⁴ Priority Ranking
	Bi-Mart	6-10	Enhanced Inventory 2010	VOC	N43°51.649 W116°30.001	M
	Walgreens	6-10	Enhanced Inventory 2010	VOC	N43°51.693 W116°30.043	M
	CAFO	0-3	Enhanced Inventory 2010	IOC, M	N43°53.176 W116°27.894	H
	Agriculture (Cattle business)	0-3	Enhanced Inventory 2010	VOC, SOC, M	N43°53.405 W116°27.448	L
	Agriculture (Livestock Auction)	0-3	Enhanced Inventory 2010	IOC, VOC, M	N43°55.007 W116°31.607	L
	Sawyer Pond	0-3	Enhanced Inventory 2010	VOC	N43°51.069 W116°31.648	L

Map ID#	¹ Contaminant Source	² TOT Zones (if known)	Source of Information	³ Potential Contaminants (if known)	Physical/GPS Coordinates	⁴ Priority Ranking
	Industrial gravel pit operation	0-3	Enhanced Inventory 2010	IOC, VOC	N43°50.997 W116°30.898	H
	Industrial sand pit operation	0-3	Enhanced Inventory 2010	IOC, VOC	N43°51.687 W116°32.425	H
	Chemical Storage (Historic; closed)	6-10	Enhanced Inventory 2010	SOC, VOC	N43°51.046 W116°32.130	H
	Chemical Storage	6-10	Enhanced Inventory 2010	SOC, VOC	N43°51.240 W116°32.544	H
	Payette River	0-3, 3-6	Enhanced Inventory 2010	All sources		L
	Black Canyon Canal	0-3, 3-6	Enhanced Inventory 2010	All sources		L
	Railroad	0-3, 3-6	Enhanced Inventory 2010	All sources		M
	State Highway 52	0-3, 3-6	Enhanced Inventory 2010	All sources		M
	Irrigated Agriculture	0-3, 3-6, 6-10	Enhanced Inventory 2010	IOC, SOC		L
	Transportation Corridors	0-3, 3-6, 6-10	Enhanced Inventory 2010	All sources		M
	Railroad	0-3, 3-6	Enhanced Inventory 2010	All Sources		M
	Private Residences (Waste systems; wells; chemical storage)	0-3, 3-6	Enhanced Inventory 2010	All sources		L

¹CAFO (confined animal feeding operation).

²TOT=time-of-travel (in years) for a particle of ground water to reach the wellhead.

³IOC=inorganic compound; SOC=synthetic organic compound; VOC=volatile organic compound.

⁴Priority ranking assigned to potential contaminant sources based upon known or perceived threat to the aquifer. L=Low; M=Medium; H=High