Montana Bureau of Mines and Geology

Open-File Report

Corvallis School

Corvallis, Montana

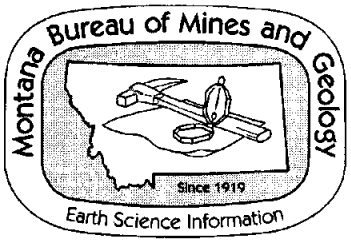
Source-Water Protection Plan

MBMG 399A

by

Ginette N. Abdo

Camela Carstarphen



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Public Water Supply #04041

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July 1999

ACKNOWLEDGMENTS

This source-water protection plan was completed by Joe Super, a high school science teacher at the Corvallis School, and the 1997 11th grade Natural Resource class, Ginette Abdo and Cam Carstarphen of the Montana Bureau of Mines and Geology.

The Corvallis School students who participated in this project collected ground-water level data, plotted the wells on topographic maps and aerial photographs, and constructed a ground-water flow map for the area. They were also involved in an inventory of potential ground-water contaminant sources near the school.

PURPOSE

To meet the requirements of the Safe Drinking Water Act (SDWA) as amended, Montana has implemented a source-water protection program in which each community submits a plan for certification review, following a format prescribed by the Montana Department of Environmental Quality (DEQ).

This report is intended to meet the technical requirements for the completion of the source-water protection plan for the Corvallis School, located in Corvallis, Montana as required by the SDWA. A source-water protection plan is designed to protect the ground water used by communities from contamination. The plan establishes protected areas around the wellhead that extend upgradient a prescribed distance. The areal extent of the upgradient protection area is determined by modeling the aquifer and projecting the well's capture zone. This "special protection region" is then inventoried to identify potential contaminant sources. Management of the potential contaminant sources is considered, and priorities are established. This long-term planning is necessary to provide an early warning mechanism in the event of upgradient contamination; however, preventing the contamination of a water supply through education and public awareness remains the primary goal.

Most instances of aquifer contamination become known when trace levels of a contaminant are detected through routine monitoring. Communities that have completed a source-water protection plan will have information on ground-water flow and aquifer hydraulic characteristics as well as a contaminant source inventory and thus will be in a good position to determine the best response to ensure the continued quality of the water supply.

CHAPTER 1
INTRODUCTION

The Community

Corvallis, Montana is located in the flood plain of the Bitterroot River along the eastern edge of the Bitterroot Valley. It is approximately 30 miles south of Missoula (figure 1). The town of Corvallis lies between the East Side Highway, and the Bitterroot River located 1.5 miles to the west. Within a four square-block area are the school, post office, one restaurant, a gas station, volunteer fire department and several churches. The town has been sewered since the early 1980's. The sewerage treatment facility is located northeast of the town and consists of a two-cell, aerated lagoon with discharge to four rapid-infiltration beds (Neil Consultants, 1998).

The water supply for the town is derived from individual and multi-family wells. There are also four small public water supplies. The school has taken a leadership role in working with the Montana Bureau of Mines and Geology to develop a source-water protection plan. The other public water supplies can benefit from these efforts by utilizing information compiled in this plan.

The community stretches out beyond town, west to the river and east onto stream terraces that rise above the town, such as the Hamilton Heights and Quast Benches, and up the Willow Creek drainage. Development of these benches began in the 1980's and continues today, with agricultural land being subdivided into small lots ranging in size from 2 to 10 acres. This growth trend is greatly transforming the landscape.

The economic base is increasingly varied. Forestry and agriculture have historically been the main employment industries for the valley; however, the service and tourism industries have taken an increasingly dominant role. Other small industries include Rocky Mountain Labs in Hamilton and numerous log home construction yards along Highway 93. A growing number of residents live in the valley but work in Missoula. Agriculture is largely restricted to the valley bottom and the eastside benches. Water for irrigation on the benches comes from a canal and ditch system that distributes water across the entire valley. The water sources for this system are the Bitterroot River and reservoirs located in the Bitterroot and Sapphire Mountains. Crops range from wheat to alfalfa with some areas in the valley bottom growing mint. In the early 1900's, the area was a large producer of apples, but few orchards are still in existence or production.

The Bitterroot valley offers world class fisheries, hunting and access to a large wilderness complex, the Selway-Bitterroot Wilderness that offers the day or weekend visitor rock climbing cliffs of granite and well-maintained hiking trails. These recreational opportunities have made the Bitterroot Valley not only a major tourism location but also a desirable place to live. This influx of people on a daily and seasonal basis is a major contribution to the local economy as well as an additional stress to resources and a challenge to modern resource management.

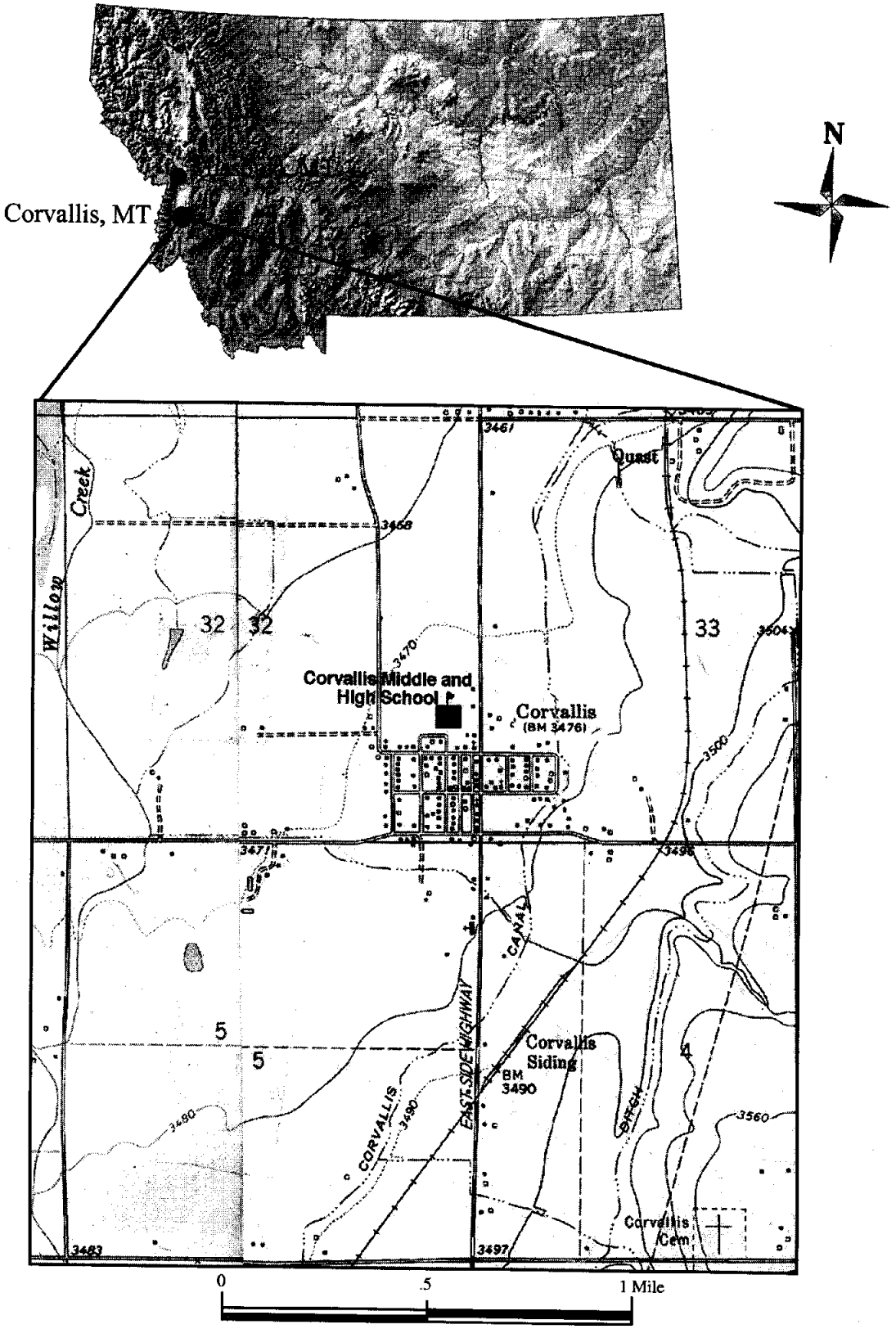


Figure 1. Location of Corvallis, Montana, with inset showing the location of Corvallis Middle and High School.

Corvallis School

The old high school building was originally built in 1915. This building was rebuilt after a fire in 1930. During the 1970's the middle school and high school gym were constructed. Additions to the school buildings were added onto through the past 20 years to accommodate increasing enrollment. Recently, there was a new addition that houses a library, classrooms, offices and a computer room to the old high school. The Edna Thomas Middle School is presently being rebuilt because of a fire in 1998. Since 1990, enrollment has increased by 40%, reflecting the increased population growth in the Bitterroot valley.

Geographic Setting

Corvallis is located in the Bitterroot valley, which is drained by the Bitterroot River. The river flows north from the confluence of its two tributaries, the East Fork and the West Fork, just south of Darby, northward towards Missoula where it joins the Clark Fork River on its journey to the Columbia River. The length of the valley is 60 miles, and its width averages five miles.

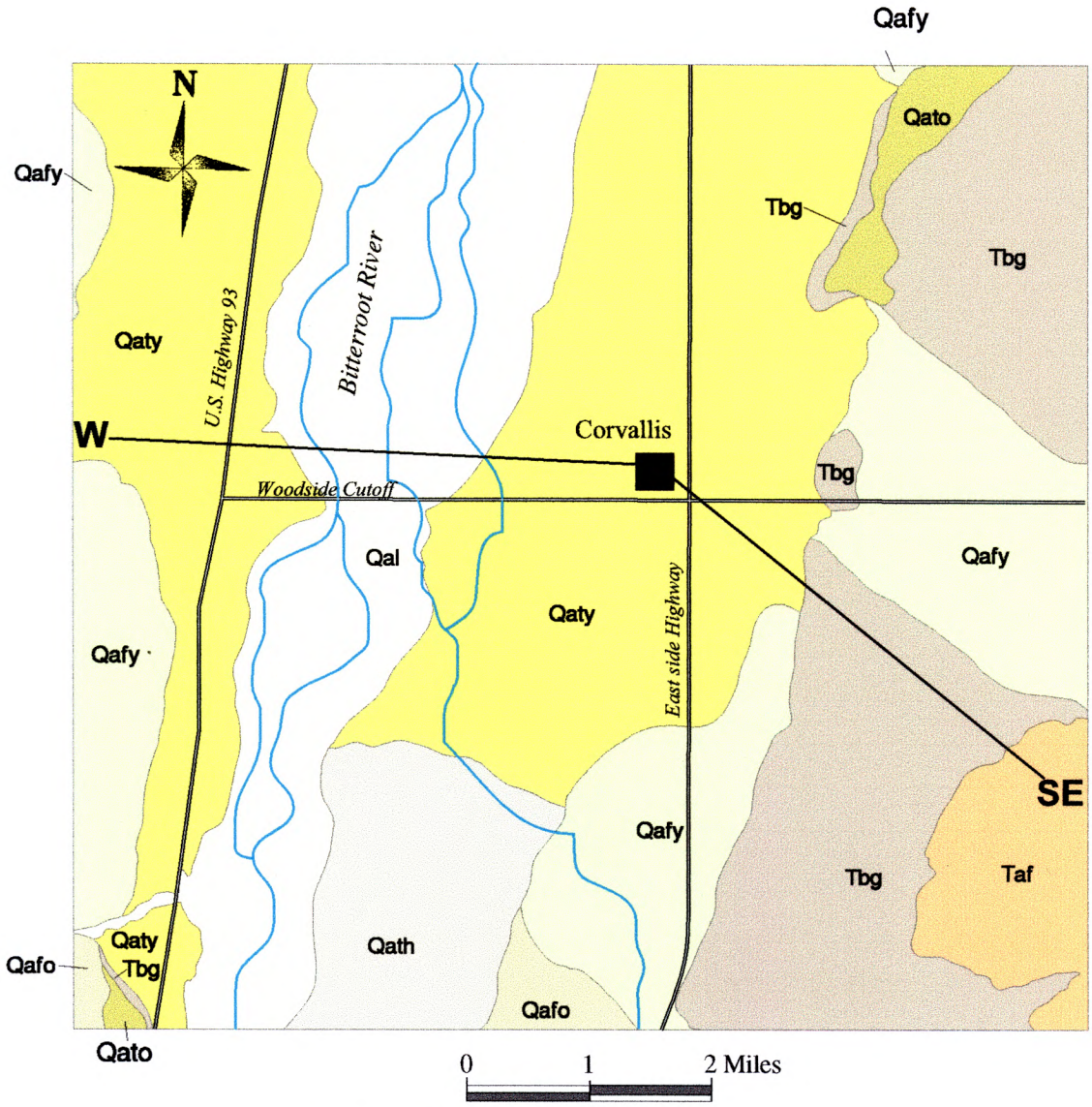
Near Corvallis, the valley is about seven miles wide and the inner flood plain width is three miles. Corvallis sits along the eastern edge of this lower flood plain where the wide drainage of Willow Creek enters the valley floor from the east (figure 1). The first terrace above the flood plain is known as the Hamilton Heights Bench. This bench is located southeast of the town and angles up to the front of the Sapphire Mountains, a gently ridged mountain chain forming the eastern flank of the Bitterroot valley. Only 1 ½ miles to the west of town, is the Bitterroot River, and the impressive front of the Bitterroot Mountains just several miles beyond.

In the Corvallis area, the valley floor is about 3500 feet above sea level. To the east, the Sapphire Range has peaks that are 8000 feet above sea level. To the west, some of the knife-edged ridges of the Bitterroot Mountains reach elevations up to 8800 feet above sea level. The Bitterroot valley is characterized by a semi-arid climate with an average annual rainfall of 12.2 inches and the average annual temperature is 46.3 °F. Rainfall is fairly uniform throughout the year with May and June typically being the wettest months (2 to 3 inches). Summer temperatures tend to reach their maximum in August (high 90° F's) and their lows in January and February (around 15 °F) (Hammer, 1998).

General Description of the Aquifer

A sand and gravel terrace deposited by the Bitterroot River underlies the town of Corvallis. A geologic map of the area is shown in figure 2 and a cross section is presented in figure 3. The terrace deposit (Qaty, figure 2) forms an aquifer that ranges in thickness from 40 to 80 feet. The sand and gravel contains sporadically interbedded clay lenses. These deposits overlie thick sequences of sand and gravel that are part of Ancestral Bitterroot River deposits of Tertiary age (Tbg, figure 2). To the east, the Ancestral Bitterroot River deposits form the first terrace of the eastside benches and bound the younger terrace alluvium.

The terrace deposit (Qaty) and Ancestral Bitterroot River deposits are composed of sediment derived from the erosion of the granitic Idaho batholith, and the various Belt sedimentary and meta-sedimentary rocks from the central Sapphires and volcanic rocks and quartzites of the southern Sapphire Mountains.



MAP UNITS

Qal	Alluvium of modern channels (Holocene)
Qath	Alluvial deposits of the Hamilton Terrace (late Pleistocene)
Qaty	Alluvial deposits of younger terraces (late Pleistocene)
Qato	Alluvial deposits of older terraces (Pleistocene)
Qafo	Alluvial fan deposits, older (Pleistocene)
Qafy	Alluvial fan deposits, younger (late Pleistocene)
Taf	Alluvial fan deposits (Pliocene)
Tbg	Ancestral Bitterroot River gravel (Oligocene to late Miocene)

Figure 2. Map showing the geology in the vicinity of the Corvallis School (Modified from Lonn and Sears, 1998).

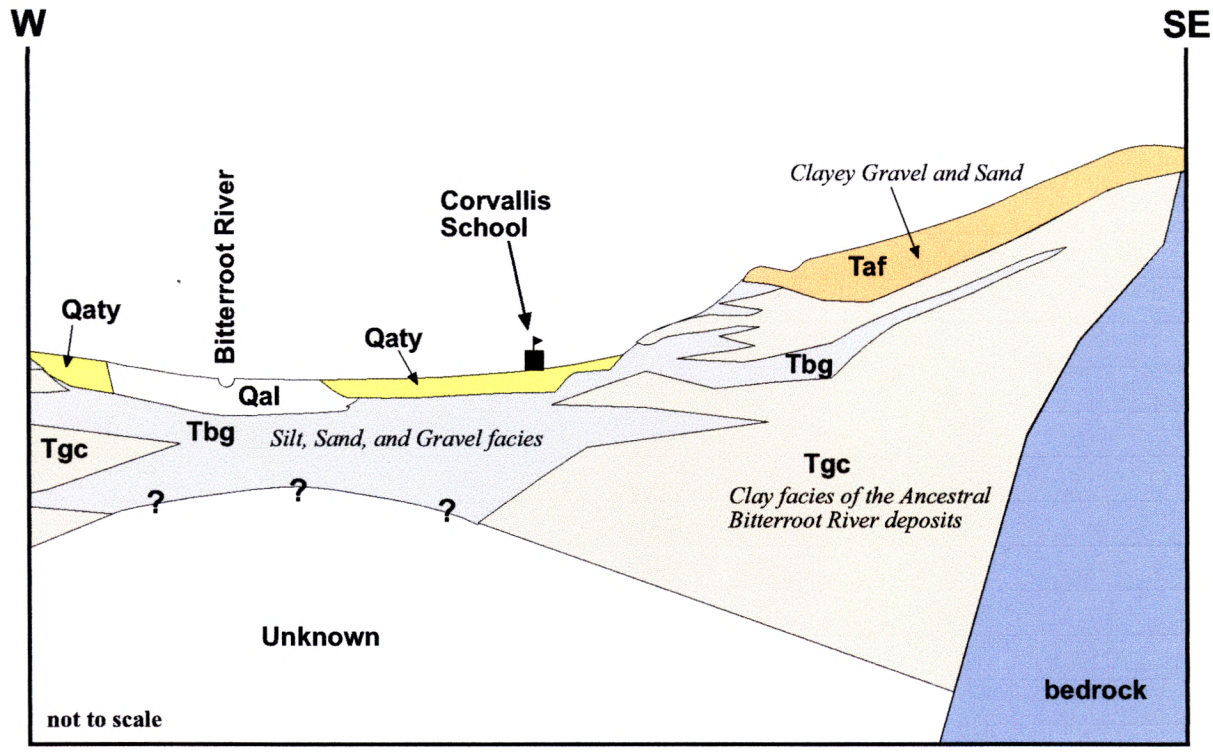


Figure 3. Geologic cross section through the Corvallis area. Line of cross section shown on figure 2.

The Public Water Supply

Recent enrollment records show that there are 857 students and about 112 staff that attend or work at the Corvallis Middle and High schools. Recently, the water system was reconfigured so that one well supplies the schools water needs. A schematic showing the well location and the main distribution pipes are included on Plate 1, appendix A.

The well was drilled in 1998 and is 136 feet deep. The water is distributed to the system from eight pressure tanks, four of which are located in the new high school addition and four in the new gym complex. This well is equipped with a 20 horsepower pump.

Source-Water Protection Plan Management

Daniel Sybirant and Larry Bayes will be responsible for implementing the source-water protection plan.

CHAPTER 2
DELINEATION

The purpose of this chapter is to describe how the source-water protection region for the Corvallis School well was determined. This "delineated area" defines the portion of the aquifer or ground-water flow system, which contributes water to the wells. The delineated area includes the zone of contribution to the well as determined by application of the analytical equations for ground-water flow and simple hydrogeologic mapping. The delineated source-water protection region for the Corvallis School has been subdivided into three regions for prioritization and ease in management. These three areas include the control zone, special protection region, and protection region.

The control zone is a 100-foot radius around each well. Certain spills or land-use activities in this zone have the potential to quickly impact the well; hence, control of potential contaminants is critical.

The special protection region represents the calculated zone of contribution for a distance of about one mile upgradient from the wells. The delineation was based on the proposed source-water protection region criteria for non-transient non-community public water supplies and on pumping and aquifer characteristics. Spills or leaks of certain contaminants and some land uses within this region are also considered likely to contaminate the well but early detection, response, and remediation will prevent the long-term loss of water quality.

The protection region represents a portion of the recharge area for the aquifer that contributes water to the Corvallis School water system.

Geologic Conditions and Aquifer Characteristics

The source well that currently supplies the schools water needs is completed in the coarse-facies of the Ancestral Bitterroot River deposit, which consists of channel gravel interfingering with clay and ash beds. In the Corvallis area, the Ancestral Bitterroot River deposit is believed to be around 2000 feet thick (Lonn, 1998). The drillers logs from several deeper wells within a mile of the school indicate the presence of one to five interbedded clay layers ranging in thickness from 3 to 40 feet (GWIC, 1998). The clay layers suggest that the aquifer may be semi-confined and less vulnerable to surface activities. The water level in the source well is about 16 feet below ground surface.

Overlying the Ancestral Bitterroot River deposit is the sand, silt and gravel terrace (Qaty, figure 2). Near Corvallis School, this deposit is around 50 feet thick. With no intervening layer of clay between the ground surface and the producing gravel, this aquifer is unconfined and vulnerable to surface activities.

Most of the wells in the area are completed in the terrace deposit (Qaty, figure 2), which is capable of producing large quantities of water. Seasonal ground-water fluctuations are on the order of 10 feet, with highs during late summer early fall and lows in the early spring. This is likely due to natural recharge from runoff and precipitation, and to a lesser degree, irrigation on

the terraces. Water levels are fairly shallow, and near the school, they are about 12 to 16 feet below ground surface. McMurtrey and others (1959) have reported a transmissivity value in the area of the Corvallis school on the order of 32,000 ft^2/day based on aquifer testing of the Fire Department well located a couple of blocks from the school.

A ground-water flow map of the shallow aquifer was compiled from data collected by Corvallis School students in September 1997. This map is shown in figure 4. Ground-water flow in this aquifer is towards the northwest. The gradient is about 0.0035. This agrees with gradient estimates in the alluvium obtained by Uthman (1988). The low gradient in the valley alluvium is probably due to the higher transmissivity of the sediment and low topographic relief. Closer to the valley margins, Uthman calculated a gradient of 0.039 feet/feet.

A ground-water sample collected from a school well that is no longer in service indicates that water quality in the terrace deposit contains a low concentration of dissolved solids (327 mg/L) and a pH of 7.6. The water is primarily calcium bicarbonate with minor amounts of magnesium, sodium, and sulfate. Iron and manganese were below instrument detection limits. Nitrates were also low (1.5 mg/L). The ground-water analysis from the well is included in appendix B.

Source Well(s)

The source well is 136 feet deep and 8 inches in diameter to 120 feet, and 6 inches in diameter from 120 to 136 feet. It is perforated from 107 to 134 feet. A submersible 20 horsepower pump was installed at 111 feet below ground surface. The well was grouted to a depth of 21 feet. A well log for this well is included in appendix C.

Delineation Method

The method used to calculate the control zone consists of using a fixed radius around each well. The WHPA Semi Analytical Model for Delineation of Wellhead Protection Areas (EPA, 1991a) and DEQ delineation criteria for non-transient non-community water supplies were used to define the special protection region. The Multiple Well Capture Zone module (MWCAP) was used in the semi-analytical model. A description of the module is included in appendix D. For a detailed discussion on the theoretical development of the module, the reader is referred to the model documentation (EPA, 1991). Hydrogeologic mapping was used to define the boundaries of the protection region.

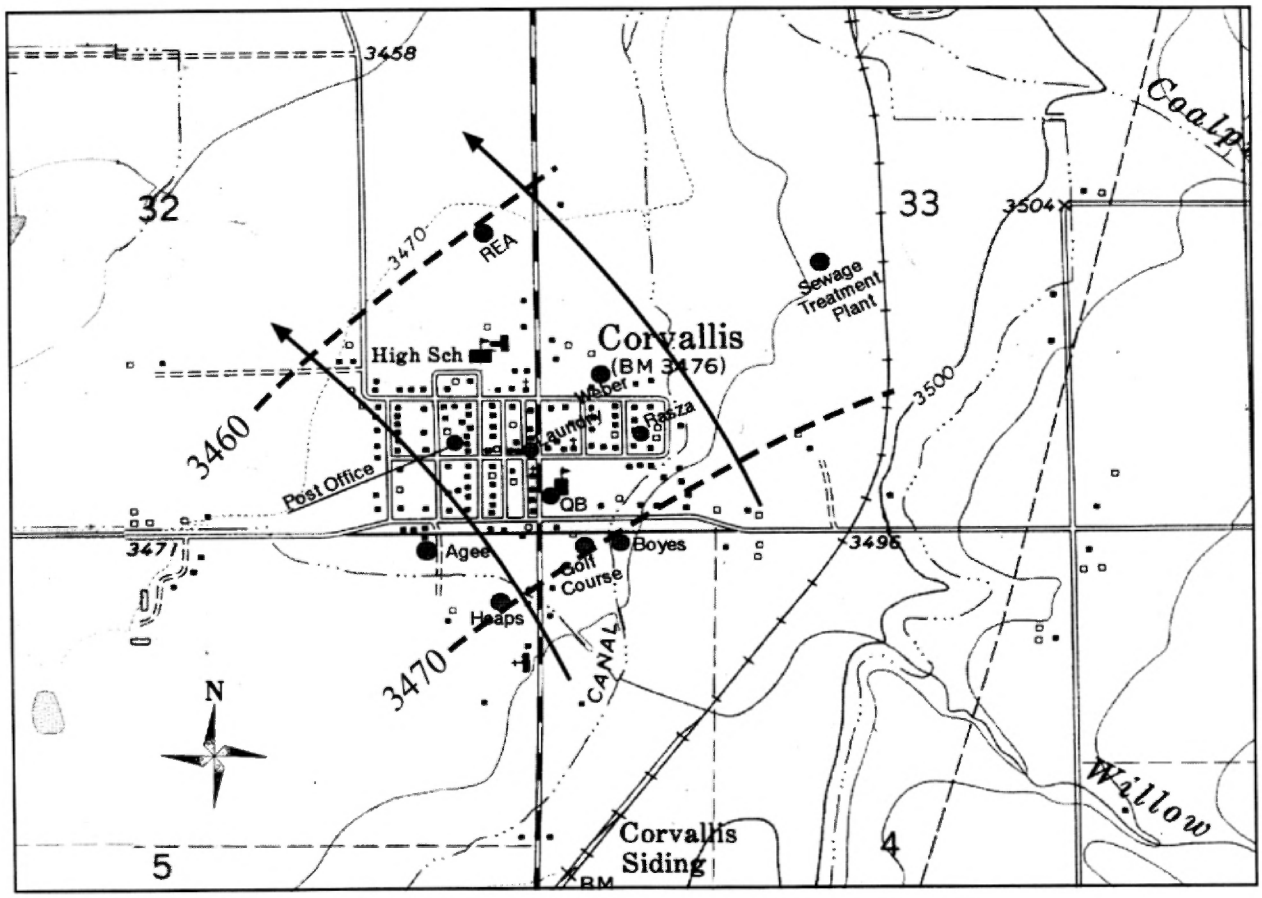
Control Zone

The control zone consists of an area within a fixed radius of 100 feet the well. The control zone is illustrated on figure 5.

Special Protection Region

The special protection region was initially delineated by using the semi-analytical model (EPA, 1991a). A special protection region was initially determined using a three-year time of travel.

The input parameters used in the model are listed below:



● Ground-water monitoring location

Ground-water flow direction

3470 Ground-water elevation, feet above sea level

Ground-water contour interval: 10 feet

Well owner	Ground-water elevation
Post Office	3465
Agee	3466
Heaps	3470
Golf Course	3468
Boyes	3473
QB	3463
Laundry	3465
Rasza	3469
Weber	3464
Sewage Treatment Plant	3462
REA	3461

Figure 4. Ground-water contour map, September 1997.

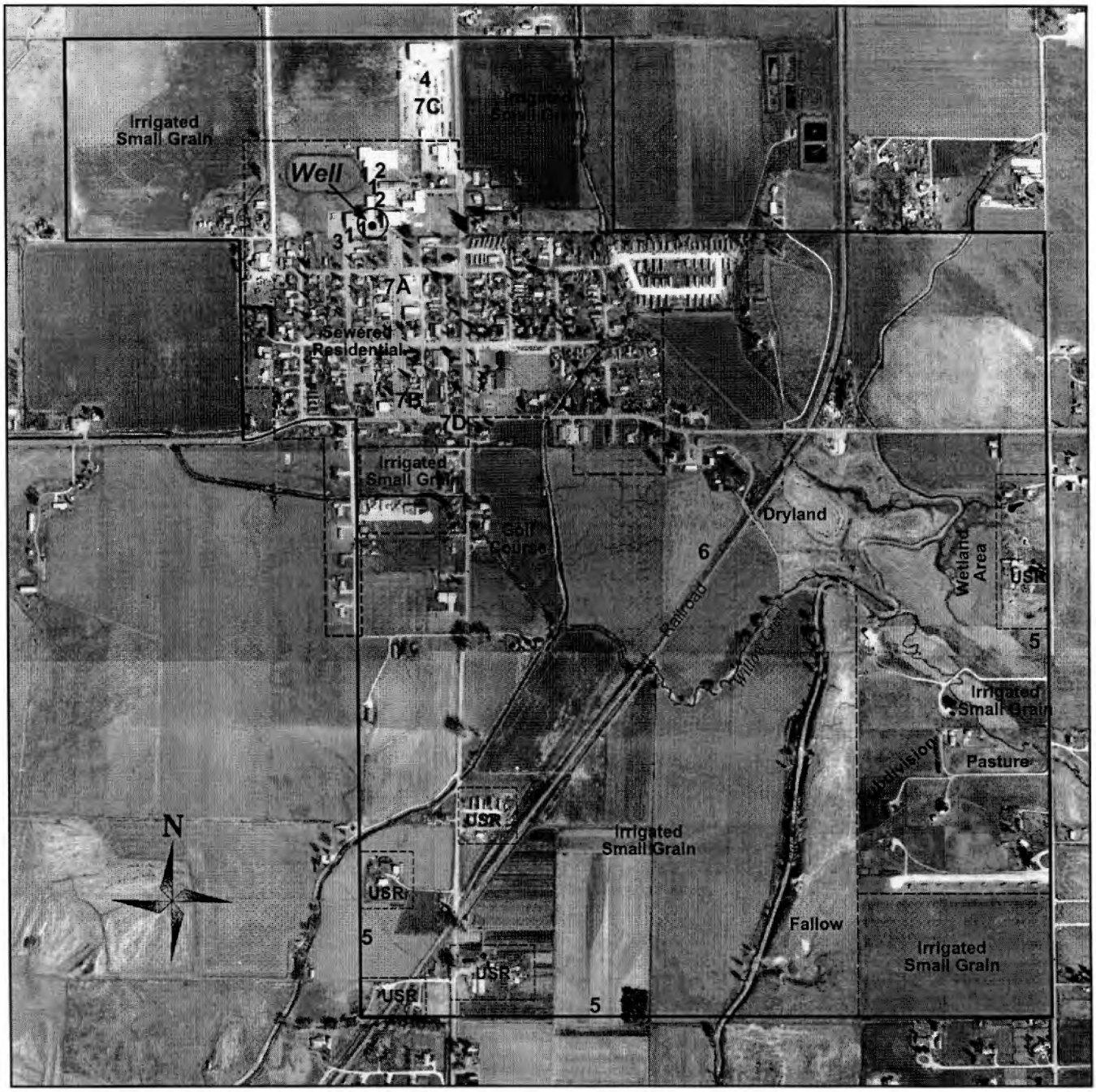


Figure 5. Aerial photgraph of Corvallis and surrounding area showing control zone and special protection region. Land uses and potential concerns to ground water (site ID numbers) are also shown on the map.

Aquifer Thickness (D): 27 feet

The well does not necessarily penetrate the complete thickness of the aquifer. A 27-foot saturated thickness was used for the well - the length of the screened interval.

Transmissivity: 570 ft^2/day

A transmissivity value of 570 ft^2/day (Uthman, 1988) was used in the delineation.

Effective Porosity: 0.15

This value is within the porosity range for sand and gravel (Freeze and Cherry, 1979).

Gradient: 0.0035 ft/ft

The gradient was obtained from the ground-water contour map compiled for this study in the shallow aquifer.

Angle of Ambient Flow: 130°

The ground-water flow direction helps define the shape of the special protection region. The WHPA semi-analytical model defines a value of 0° representing ground-water flow due east (90° due north). The angle of ambient flow was obtained from the ground-water flow map compiled for this project. Ground water near the school flows to the north–northwest.

Well Discharge: 3750 ft^3/day

The Manual of Small Public Water Supply Systems (EPA, 1991b) indicates a school with a cafeteria, gymnasium, or showers uses about 25 gallons per day per person. Current enrollment at the middle and high school is about 860 students and 112 staff personnel. Projection estimates from the school indicate about 1000 students by the year 2004–2005. Therefore, because of the fast growth rate in the area, the well discharge rate of 28,000 gpd (about 3750 ft^3/day) was defined on the basis of 1120 people with a water usage of 25 gpd/person.

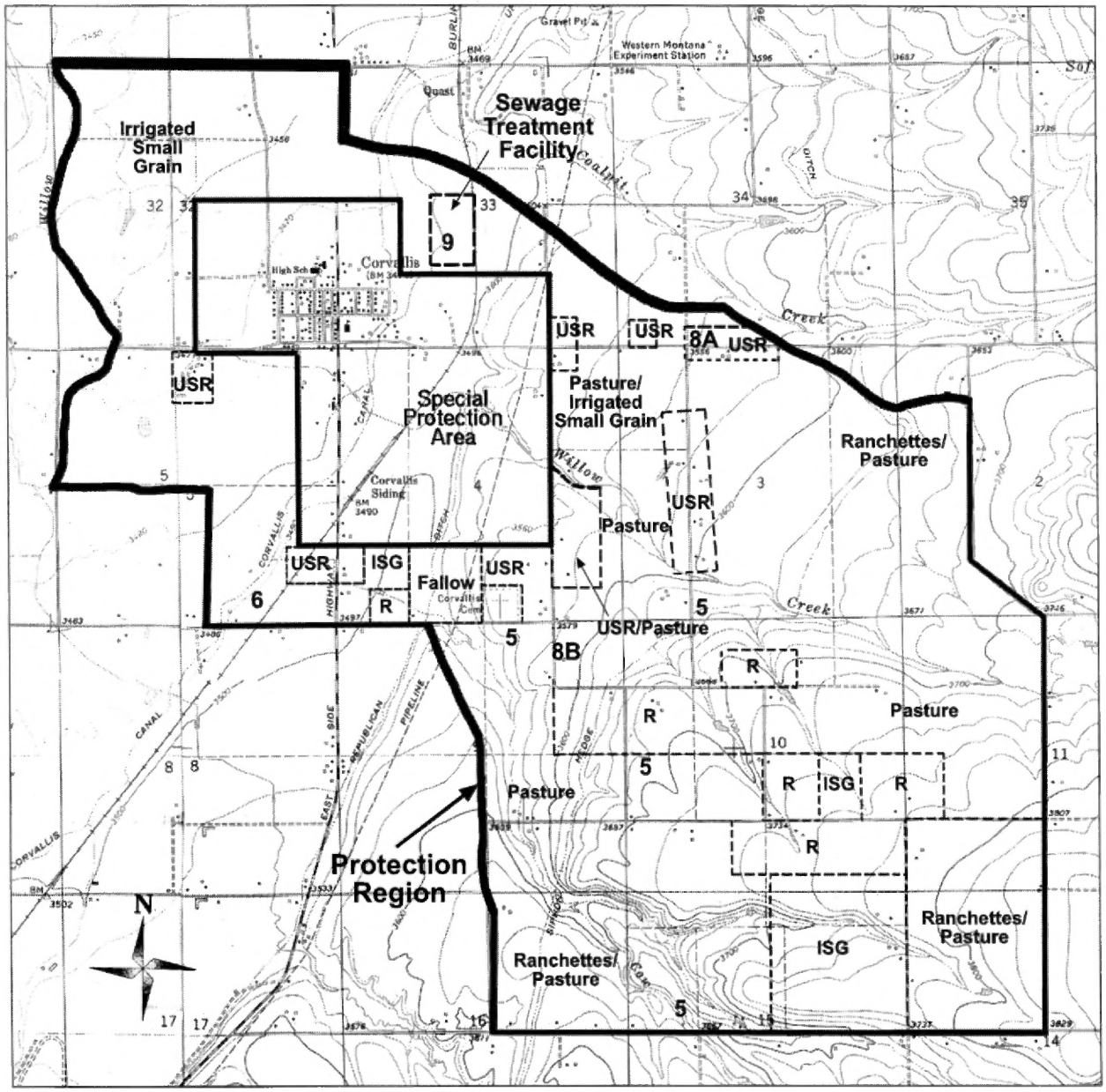
Time of Travel: Three-year

A three- year time of travel was used in the initial approximation.

The modeling results defined a special protection region that extended only about 1000 feet upgradient and about 300 feet downgradient. As a conservative approach, the special protection region was extended one-mile upgradient of the school. The one mile extent is the proposed criteria for non-community non-transient public water supplies (Meek, 1999). Potential variability in the ground-water flow direction was also factored into the delineation. The special protection region is shown on the aerial photograph on figures 5 and 6.

Protection Region

The protection region was identified using hydrogeologic mapping and the area was partially fit to recognizable boundaries such as transportation routes. The protection region is shown on figure 6. The upgradient extent of the protection area includes portions of the Willow and Coal Creek drainages and was extended south to Hamilton Heights Road. A topographic divide, just



USR Unsewered residential
R Ranchette
ISG Irrigated small grains
5 Site ID number
(Information in appendix E, inventory form 3)

Figure 6. The extent of the special protection and protection regions for the Corvallis School. Land uses and specific sites of concern are shown in the protection region.

south of Coalpit Creek, was used as the northwest boundary of the protection region. The eastern boundary is Willow Creek, which is about a mile downgradient from the school.

Assumptions

Several assumptions were associated with the delineation. To prepare the ground-water flow map, elevations for each well had to be estimated using the 20-foot contours shown on the topographic map. It was assumed that the ground-water gradient for the deeper aquifer was the same as the shallow aquifer.

When estimating the special protection region of the well using the modeling approach, it was necessary to assume values of transmissivity and porosity. Any errors associated with these estimates were compensated by extending the special protection region one-mile upgradient of the school.

The WHPA model assumes that the aquifer is isotropic and homogeneous. An aquifer is isotropic if hydraulic conductivity is the same regardless of the ground-water flow direction; it is homogeneous if its properties are uniform throughout. The model also assumes that the pumping well is screened across the entire saturated thickness of the aquifer and that it is pumped continuously at the same rate. The aquifer thickness is probably underestimated, resulting in a conservative delineation derived from the WHPA model. Finally, because the model is two-dimensional, it assumes that vertical flow within the aquifer is negligible.

Limiting Factors

Major assumptions used in the application of many ground-water flow models are 1) flow in the aquifer is uniform, and 2) flow in the aquifer is horizontal. A ground-water flow model for any specific set of conditions should be considered within these limitations, as ground-water flow is generally not uniform nor strictly horizontal. Any particular modeling effort merely represents the best estimate of ground-water flow conditions based on known and estimated hydrogeologic and pumping conditions and should be modified as additional information becomes available.

Specific limitations to this delineation include the transmissivity estimate for the aquifer and the assumption that the gradient and flow directions for the shallow and deeper aquifer are the same. The flow direction is valid within 45 degrees and the delineation is based on a maximum daily pumping rate. Since the special protection region was extended about 4000 feett greater than that defined by the WHPA model, this region should define an area that will still be safe as the water demand increases.

Ground Water under the Direct Influence of Surface Water

A preliminary assessment score sheet was completed the well (appendix E). The well scored 15 and is not considered under the influence of surface water.

CHAPTER 3
INVENTORY

A potential contaminant source inventory generally identifies all land uses in the delineated area and lists the location of certain land uses as well as potential contaminant sources in relation to the well. An intensive survey was conducted in the control zone and special protection region; potential contaminants also were inventoried in the protection region, but the effort was not as intensive due to the lower risk associated with this area.

Inventory Method

The methods used to inventory potential contaminant sources included a review of 7.5-min. topographic maps, an aerial photograph for transportation routes and land use, a windshield survey, door-to-door survey, and a search of DEQ's underground storage tank and the EPA Hazardous Waste Lists. Inventory sheets were completed for specific activities or sites of concern and are included in appendix F. Locations of these activities/sites for the control zone and special protection region were plotted on figure 5; and on a 7.5-min. topographic map for the protection region (figure 6).

Inventory Results/Control Zone

An inventory was performed within a 100-foot radius of the well. The control zone and inventory results are shown on figure 5. Identified concerns are listed on inventory form 1, appendix E. Sewer lines are present within the control zone of the well (plate 1, appendix A); however, the pipes are composed of PVC and exfiltration is unlikely to occur. Although utility trenches are generally a preferred pathway for migration of contaminants should a spill occur, this activity was not assigned an inventory number.

Within 100 feet of the well is the new gym building that also houses classrooms, a sidewalk, and a paved parking lot. The well is located within a 27 by 32-foot area that has been capped with cobbles.

Several drywells are located within 100 feet of the well (inventory form 1, site ID 1). The nearest drywell is within 20 feet of the well in an unpaved area about 17 by 27 feet. The topography within this small area is configured to channel runoff into the drywell. Runoff from the parking lot is channeled into four drywells located within the control zone. These drywells are not connected to the sewer system so that should a spill occur in the parking lot, potential contaminants would be channeled into the shallow ground-water system.

Inventory Results/Special Protection Region

The special protection region includes the town of Corvallis and surrounding area. The town contains a gas station, post office, laundry facility, car wash and several service stores. The town is connected to a sewer system and sewerage is treated in a treatment plant located outside the special protection region. The surrounding area mainly consists of unsewered residential sections, railroad right-of-way, county road rights-of-way, irrigated crop and pasture.

Two irrigation ditches cross the special protection region. The ditch companies were contacted as to their maintenance practices. Mowing controls plant growth along the main canals. However, if there is weed problem along Big Ditch, which is the upper ditch in the special protection region, the Ravalli County Weed District is contacted for site specific spraying. Because Big Ditch is located about 3400 feet upgradient of the school, the possibility of contaminated irrigation return flow was not considered a significant threat. Spraying on school grounds is minimal. A broad leaf herbicide was used on the football field last year (Super, 1998). Because herbicide usage is minimal, this land-use practice was not considered a significant concern.

Land uses in the special protection region are shown figure 5. Potential contaminant sources are discussed below with numbers referring to the site IDs. These sites are listed on inventory form 2, appendix F.

1- Drywells located on the school property are not connected to the sewer system; therefore runoff is channeled into the ground and can potentially impact the shallow ground-water system.

2- Although the school is connected to the sewer system, old septic systems are still present on the school grounds. Old septic systems, in the confines of the sewer district, most likely exist elsewhere. Septic systems can potentially impact ground-water quality resulting in elevated nitrate and bacteria. Septic systems other than the schools were not plotted on the inventory map.

3- A sewerage lift station is located on the school grounds. Malfunction of the system could result in overland flow of waste products.

4- Although the state has issued a waiver and the identification of transformers is no longer required for source-water plan inventories, the Ravalli County Electric Co-op (REC) was included in the inventory because of its proximity to the school. The REC stores utility power poles, transformers, regulators, oil circuit reclosers, and multiple other items associated with the construction of electrical power distribution facilities. All the transformers stored in the outdoor area have been tested to be below the minimum federal PCB standard. There are occasions when an oil filled device exceeds the minimum federal PCB standard. In this case, the device is removed from service and placed in an approved storage facility located on Ravalli Electric's property (Turner, 1998). A letter from REC regarding their practices is included in appendix F (attachment to inventory form 2).

5- The county does not spray within populated areas along county road rights-of-way in town; however, they do spray outside the town limits within the special protection region. The chemicals Tordon, 2,4-D and Escort may be sprayed depending on the types of weed present. Spraying usually occurs once a year; however, problem areas are sometimes visited more than once.

6- The railroad right-of-way is sprayed once a year in the spring for broad-leaf control with Oust and Telar. Follow-up occurs in July for those areas that were missed.

7- Of the 29 underground storage tanks listed in the DEQ data base for the Corvallis area, five of them were located in the special protection region. One tank has been filled with sand (DEQ #4-101848) and is not considered a concern. The four underground storage tanks noted within the region are located on figure 5 and additional information for each tank is presented in appendix F. These are:

7A	DEQ # 4-106257
7B	DEQ # 4-102402
7C	DEQ # 4-102905
7D	DEQ # 4-110839

Two of the sites have had leaky underground storage tanks. Corrective action was taken at DEQ # 4-106257 and the situation has been resolved. The petroleum release at DEQ #4-110839 has not been resolved. Appendix F includes documentation that discusses the status of each site.

Inventory Results/Protection Region

The main land uses within the protection region include unsewered residential, railroad right-of-way, county road rights-of-way, agriculture-irrigated crop, and agriculture-irrigated pasture. Figure 6 shows land uses within the protection region. Potential contaminant sources are discussed below with numbers referring to the site identification. These sites are listed on inventory form 3 (appendix F).

5- Herbicide usage along county road rights-of-way

6- Herbicide usage along the railroad right-of-way

8- Two locations that handle hazardous material
8E- 656 Willow Creek Road
8F- 876 Honey House Road

9- Sewerage Treatment Plant – Sewerage treatment consists of a two cell, partially aerated lagoon with discharge to four rapid infiltration beds. The treatment plant is located about half a mile cross ground-water gradient of the school. Although it was assigned an inventory number, it was not considered a significant concern.

Inventory Update

The operator will update the inventory every year. Changes in land uses or potential contaminant sources will be noted and additions made as needed. The complete inventory will be submitted to DEQ every five years to ensure recertification of the source-water protection plan.

Inventory Limitations

The inventory in the control zone was very thorough. The school grounds were inspected for all potential contaminant sources. The special protection region was inventoried partially on foot but mostly by a windshield survey. In the protection region, the inventory was conducted by a

windshield survey. Some minor hazards may have been missed in both areas. Septic systems (pre-sewered in town and outside the area) were not specifically located.

CHAPTER 4
MANAGEMENT

The goal of the source-water protection plan is to 1) protect the source water by keeping potentially polluting materials and activities out of the control zone, and 2) to manage the special protection region to ensure land use activities pose minimal threat to the source water.

Control Zone Management

The wellhead will be inspected annually to ensure that the cap is secure and in good condition. Although pesticides/herbicides are currently not used in the control zone, adoption of this plan would ban the use of chemicals in the future within a 100-foot radius of the well.

The main concern in the control zone is the drywells in the parking area that are not connected to the sewer system. If a spill were to occur in the parking lot, potential contaminants could be channeled into the ground-water system. Cars/trucks parked in the lot may also leak petroleum products that could be flushed into the drywells by precipitation/snowmelt events. Absorbent materials will be kept available in case a spill does occur. The Corvallis Fire Department and the Ravalli County Disaster and Emergency Services (DES) coordinator will be sent a summary of the source-water protection plan, so they are aware of ground-water susceptibility. In the future, the school may consider connecting the drywells to the sewer system or sealing them.

Special Protection Region Management

Within the special protection region several concerns were noted. The main management strategy in the special protection region is education. A summary of the Corvallis School Source-Water Protection Plan will be made available to the businesses described below. This summary will inform these businesses and residents of the source-water protection plan, potential sources of contamination to the ground water, and plans to manage these sources.

Drywells are used on the school grounds to control runoff and can potentially act as direct conduits to ground water. Management of this concern was described above in the control zone.

Although there is minimal usage of herbicide/pesticides along the ditches identified in the special protection area, present practices could change in the future. To take a conservative approach, the ditch owners will be given a summary of the source-water protection plan so that they are aware that land practices in the source-water protection region could affect the school's ground water. The Ravalli Electric Cooperative will be given a summary of the source-water protection plan and will be asked to inform the school should there be a spill/leak on their property.

The sewerage lift station is equipped with an alarm and monitored by the sewer system operator. The operator will be given a summary of the source-water plan and will be asked to notify the school if a problem occurs.

County weed control personnel and Montana Rail Link will be given a summary of the source-water protection plan so that they are informed of the extent of the source-water protection region.

The DEQ Petroleum Tank Release Division (406/444-5970) will be contacted to determine the status of the release at DEQ# 4-110839. The DEQ's Underground Storage Tank Division (406/444-5977) will be contacted every five years to determine if any new tanks were installed within the source-water protection region. The Petroleum Tank Release Division will also be contacted every five years to determine if any tanks have had a release and to determine if corrective actions were taken.

Law enforcement personnel will be asked to notify the school board if an accident along the roadways results in the release of a significant volume of gasoline or other contaminant.

Growth in the area is increasing and the land continues to be subdivided. This will increase the number of septic systems in the area, which can potentially impact the ground-water system. The local planning board will be given a summary of Corvallis School's Source-Water Protection Plan, so they are aware of the area that needs to be protected.

Protection Region Management

The potential threats in the protection region include herbicide use along county roads, railroad, and the ditches, and the continued growth the area is experiencing. These concerns will be managed as discussed above. The sewerage treatment plant operator will be given a summary of the source-water protection plan.

Management through Education

In all three zones - the control, special protection and protection regions, education will be the primary management strategy. An article will be written and submitted to the local newspaper summarizing the source-water protection plan for the Corvallis School. The school paper will also contain a news item discussing the source-water protection plan. The summary of the source-water protection plan will be completed by the Montana Bureau of Mines and Geology.

Management Implementation

Once the plan has been approved by the DEQ it will implemented. The superintendent will coordinate these efforts. Appendix G contains a list of the schools responsibilities that are necessary to implement their source-water protection plan.

CHAPTER 5
EMERGENCY PLANNING

The emergency plan identifies the principal threats to the source water, designates an emergency coordinator, and then describes potential responses planned in the event if a problem arises. Another important aspect of the plan is an estimate of the equipment and materials that would be needed in the event of an emergency, a description of how a short-term replacement water supply would be handled, and a description of the funding available to deal with an emergency response.

Identification of possible disruption threats

The principal threat to the public water supply has been identified as a spill, leak, or discharge in the control zone, which could contaminate the source water by entering through the well bore or perhaps along with contaminated shallow ground water through a spill or leak through the drywells. Included are spills from vehicles or from mobile liquid holding tanks. Several underground storage tanks were noted in the special protection region.

Designation of an emergency coordinator

The emergency coordinator for the Corvallis School is Larry Bayes. The contact phone number is (406) 961-4211. The backup emergency coordinator is Jim Rodriquez.

The emergency coordinator is familiar with the state and county DES procedures and is responsible for contacting the appropriate officials should a spill or other threat to the source water occur. The Ravalli County DES coordinator 24-hour phone number is (406) 375-6233. The State of Montana 24-hour Spill Hotline phone number is (406) 444-6911.

Equipment and material resources

The principal, identified threats to the well are generally limited to spills in the control zone. Resources that may be needed to respond to a spill are heavy equipment for berm and excavation work and absorbent materials. Heavy equipment for berm and excavation work can be contracted through Gasvoda Construction (406/ 961-4441). Should additional resources be needed due to the magnitude or chemical nature of a spill the Corvallis School will contract with an emergency response firm properly trained and equipped. A list of possible contractors is maintained and updated by the DEQ Enforcement Division (406) 444-0379.

A catastrophic water loss will require the contracted services of a water hauler, a design engineer, and a well driller.

Procedures to shut down the well

The well can be turned off and isolated from the water supply system by turning off the power to the pump. The breaker box, which controls the power supply to the pump, is located in the new high school addition (figure 7).

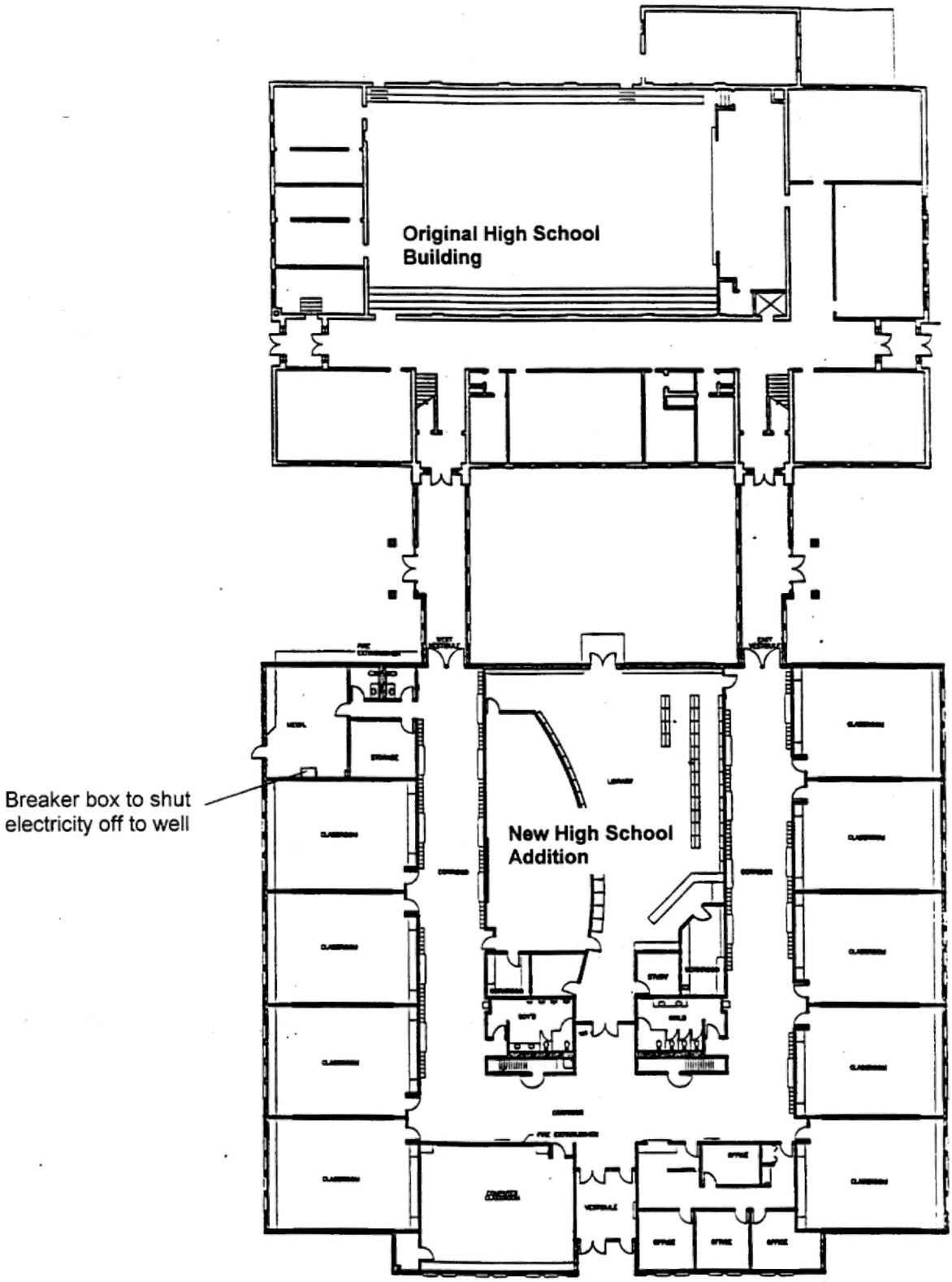


Figure 7. Location of power boxes to shut electricity off to wells.

Under ideal conditions the system can operate without the well for a few hours by carefully using water in the storage tanks. Well shut down is the responsibility of the operator or backup operators.

Coordination Procedures

The Corvallis School Source-Water Protection Plan will be made available to the Ravalli County DES coordinator. Additionally, reportable spills will be handled as per the mandated reporting requirements as follows:

> Agricultural chemical or fertilizer spills will be reported to the MT Department of Agriculture (406) 444-5400.
>
> Any refined petroleum product such as gasoline, diesel, asphalt, road oil, kerosene, fuel oil, and derivatives of mineral, animal, or vegetable oil spills in excess of 25 gallons will be reported to the DES hotline (406) 444-6911.

Procedures to communicate with water users

The nature of the public water supply should allow the well to be isolated from the distribution system in the event of a spill in the control zone that may threaten source-water quality. If it is determined that the source water was exposed to a contaminant the well will remain off line until sampling proves the water to be safe, an evaluation done in cooperation with the MT DEQ, Public Water Supply Section.

If there is a problem with the schools water supply, signs will be posted at all fountains, showers and sinks. The school board will also be informed of the problem and notices will be posted in the school paper.

Source of emergency water

If the well is out of service for more than several hours an emergency supply of water may need to be arranged. The short-term plan is to haul water using a DEQ approved water hauler from a DEQ approved water source. Should this be necessary, Kinetico, located in Hamilton, will be contacted to provide the drinking water needed for the school (406/363-1782).

Should a total loss of water occur, the services of a design engineer and well driller will be retained to assess the options. Plans and specifications for any new well will require DEQ-Public Water Supply Section review and approval prior to construction. If the shallow aquifer was not impacted, the possibility exists for connecting the school to the well that was previously used to supply water to the junior high and old high school.

Disinfection and resumption of water service

The well and storage tank can be disinfected for bacteriological contamination as per the Corvallis School standard disinfection and tank cleaning procedures under the direction of the operator.

Normal water service resumption will occur after sample results indicate the supply is safe as approved by DEQ-Public Water Supply Section and the operator.

Funds

General school funds would be used in the case of a water emergency at the school.

Important emergency contacts and phone

CONTACT NAME	TITLE	PHONE	RESPONSIBILITY
Larry Bayes	Maintenance supervisor	(406) 961-3201	supervisor- maintenance
Jim Rodriquez	Maintenance assistant	(406) 961-3201	maintenance
Ron Curly	Ravalli County DES coordinator	(406) 375-6233	county disaster/emergency coordinator
Montana 24-hr. Spill Hotline"		(406) 444-6911	All reportable spills.
Greg Murfitt	MT Dept of Agriculture	(406) 444-5400	All agricultural chemical or fertilizer spills or response questions.
DEQ Enforcement Division		(406)444-0379	Responds to any event that will pollute surface or ground water.

CHAPTER 6
ALTERNATE WATER SOURCES

The student population at the Corvallis School has been increasing because of the continued growth in the area. It is estimated that over the next seven years there will be about a 25% increase in the student population. The well servicing the school is in a productive aquifer and should be adequate to meet the growing needs of the school. Test pumping of the new well indicates there is sufficient water to supply not only the schools water needs but also irrigation water over the next 10 years.

References

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Appendix A

Appendix B

Montana Bureau of Mines and Geology
1300 West Park Street, Butte MT 59701 (406) 496-4167

Analytical Laboratory Report
Analysis Id: **1997Q0218**

State:	MT	**County:**	RAVALLI
Latitude - Longitude:	N W **Datum**	**Site Location:**	07N 20W 32 DAD 1
Topographic Map:		**Site Id:**	56537
Geologic Source:		**Project:**	
Drainage Basin:	BITTERROOT RIVER	**Station Id:**	
Agency + Sampler:	MBMG * GNA	**Sample Source:**	WELL
Field Number:	CORVALL	**Land Surface Altitude:**	
Date + Time:	29-AUG-96 13:47:00	**Sample Media:**	
Lab + Analyst:	MBMG * TSH	**Sustained Yield / Method:**	
Date Complete:	9-Oct-96	**SWL above (-) /below MP:**	
Release Flag:	YES	**Total Depth:**	40 ft - Reported
Sample Handling:	3120	**Casing Diameter (in):**	6
Method Sampled:	PUMPED	**Casing Type:**	
Procedure Type:	DISSOLVED	**First Completion Type:**	
Water Use:	PUBLIC WATER SUPPLY	**First Perforation Interval:**	

Site Name: CORVALLIS SCHOOL

	mg/L	meq/L		mg/L	meq/L
Calcium (Ca):	48.6	2.43	**Bicarbonate (HCO3):**	205.3	3.36
Magnesium (Mg):	10.	0.82	**Carbonate (CO3):**		
Sodium (Na):	10.	0.44	**Chloride (Cl):**	2.8	0.08
Potassium (K):	3.5	0.09	**Sulfate (SO4):**	10.9	0.23
Iron (Fe):	<.003	0.00	**Nitrate (as N):**	1.5	0.11
Manganese (Mn):	<.002	0.00	**Fluoride (F):**	<1.	0.00
Silica (SiO2):	34.1		**OrthoPhosphate (as P):**		
Total Cations:		3.78	**Total Anions:**		0.00

Field Chemistry and Other Analytical Results (units as specified).

Calculated Dissolved Solids:		**Total Hardness as CaCO3:**	162.51
Sum of Diss. Constituents:		**Field Hardness as CaCO3:**	
Field Conductivity (Micromhos):	341	**Total Alkalinity as CaCO3:**	
Lab Conductivity (Micromhos):	345.00	**Field Alkalinity as CaCO3:**	
Field pH:	7.32	**Ryznar Stability Index:**	0.00
Laboratory pH:	7.60	**Langlier Saturation Index:**	0.00
Water Temp. (C):		**Sodium Adsorption Ratio:**	0.34
Air Temp. (C):		**Field Redox (mV):**	
Nitrite (mg/L as N):	Not Rptd	**Field Dissolved O2 (mg/L):**	
Field Nitrate as N (mg/L):		**Phosphate, TD, (mg/L as P):**	Not Rptd
Ammonia (NH4):	Not Rptd	**Field Chloride (mg/L):**	
PCP's (ug/L):	Not Rptd	**PCB's (ug/L):**	Not Rptd

DISSOLVED Trace Element results (ug/L)

Aluminum (Al):	<30.	**Cadmium (Cd):**	<2.	**Mercury (Hg):**	Not Rptd	**Tin (Sn):**	Not Rptd
Antimony (Sb):	<2.	**Chromium (Cr):**	7.2	**Molybdenum (Mo):**	<10.	**Titanium (Ti):**	<10.
Arsenic (As):	2.3	**Cobalt (Co):**	<2.	**Nickel (Ni):**	3.8	**Thallium (Tl):**	Not Rptd
Barium (Ba):	72.9	**Copper (Cu):**	2.7	**Silver (Ag):**	<1.	**Vanadium (V):**	<5.
Beryllium (Be):	<2.	**Lead (Pb):**	3.3	**Selenium (Se):**	<1.	**Zinc (Zn):**	33.1
Boron (B):	<30.	**Lithium (Li):**	<6.	**Strontium (Sr):**	116.	**Zirconium (Zr):**	<20.
Bromide (Br):	<100.						

Explanation: mg/L = milligrams per Liter, ug/L = micrograms per Liter, meq/L = milliequivalents per Liter, ft = feet, mg/Kg = milligrams per Kilogram, pC/L = picoCuries per Liter

Qualifiers: A = Hydride atomic absorption, E = Estimated due to interference, H = Exceeded holding time, N = Spiked sample recovery not within control limits, P = Preserved sample, S = Method of standard additions, * = Duplicate analysis not within control limits.

Sample Condition: CLEAR

Field Remarks:

Lab Remarks:

Note: In correspondence, please refer to Lab Number: 1997Q0218 **Print Date: 15-Jan-99**

Appendix C

07N 20W 32 DDB

128181

Form No. 603 R2-97

File No. 5960

WELL LOG REPORT

1. WELL OWNER
Name CORVALLIS HIGH SCHOOL

2. CURRENT MAILING ADDRESS
CORVALLIS, MT. 59828

3. WELL LOCATION
NW ¼ SE ¼ SE ¼ Section 32
Township 7N N/S Range 20W E/W County RAVALLI
Govt Lot _____ , or Lot _____ , Block _____
Subdivision Name _____
Tract Number _____
Latitude _____ Longitude _____

4. PROPOSED USE: Domestic ☐ Stock ☐ Irrigation ☐
Other ☒ specify CORVALLIS HIGH SCHOOL

5. TYPE OF WORK:
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

6. DIMENSIONS: Diameter of Hole
Dia. 12 in. from 0 ft. to 21 ft.
Dia. 8 in. from 21 ft. to 136 ft.
Dia. _____ in. from _____ ft. to _____ ft.

7. CONSTRUCTION DETAILS:
Casing; Steel Dia. _____ in. from _____ ft. to _____ ft.
Threaded ☐ Welded ☒ Dia. 8 in. from +2 ft. to 120 ft.
Type _____ Wall Thickness .322
Casing; Plastic Dia. _____ in. from _____ ft. to _____ ft.
Threaded ☐ Welded ☐ Dia. 6 in. from 116 ft. to 136 ft.

PERFORATIONS: Yes ☒ No ☐
Type of perforator used TORCH
Size of perforations 5 in. by 5/32 in.
TORCH perforations from 107 ft. to 117 ft.
SKILL SAW perforations from 117 ft. to 134 ft.
_____ perforations from _____ ft. to _____ ft.

SCREENS: Yes ☐ No ☒
Manufacture's Name _____
Type _____ Model No. _____
Dia. _____ Slot size _____ from _____ ft. to _____ ft.
Dia. _____ Slot size _____ from _____ ft. to _____ ft.

GRAVEL PACKED: Yes ☐ No ☒ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

GROUTED: To what depth? 21 ft.
Material used in grouting 6 GL. WATER TO 94 SAK PORTLAND CEMENT

8. WELL HEAD COMPLETION:
Pitless Adapter Yes ☒ No ☐

9. WELL TEST DATA
The information requested in this section is required for all wells. All depth measurements must be from the top of the well casing.
All wells under 100 gpm must be tested for a minimum of one hour and provide the following information:
a) Air X Pump X Bailer _____
b) Static water level immediately before testing 16 ft. If flowing; closed-in pressure _____ psi _____ gpm.
c) Pumping level after one hour 73'.10" ft.
d) Recovery level 16.2 ft. Time of recovery _____ min/hrs.
e) Pumping rate 224 gpm.
Wells intended to yield 100 gpm or more shall be tested for a period of 8 hours or more. The test shall follow the development of the well, and shall be conducted continuously at a constant discharge at least as great as the intended appropriation. In addition to the above information, water level data shall be collected and recorded on the Department's "Aquifer Test Data" form.
NOTE: All wells shall be equipped with an access port 1/2 inch minimum or a pressure gauge that will indicate the shut-in pressure of a flowing well. Removable caps are acceptable as access ports.

10. PUMPING TEST DATA
a) Static level immediately before testing 16.2 ft.
b) Depth at which pump is set for test 111 ft.
c) Pumping rate 200 gpm.
d) Maximum drawdown 74 ft.
e) Duration of test: pumping time 8 HOURS hrs/min
recovery time _____ hrs/min.
f) Recovery level 16.2 ft.
g) Duration of time to recovery level 1.42 MIN hrs.

11. PUMP INSTALLATION INFORMATION
Installation depth 111 FEET
Actual pumping rate 200 GPM
Manufacturer's name SEE ATTACHED
Type _____ Model No. _____ H.P. _____

12. WAS WELL PLUGGED OR ABANDONED? Yes ☐ No ☑
If yes, how? _____

13. WELL LOG
PE

Depth (ft.) From	To	Formation
0	5	TOP SOIL
5	8	SANDY LOAM
8	21	SAND, GRAVEL, COBBLES
21	52	SAND & GRAVEL
52	65	GRAY, GREEN FLY ASH
65	78	SANDS, LIGHT & LIGHT GRAVEL
78	89	SAND & GRAVEL WITH
89	112	GRAVEL & LIGHT SAND
112	136	TIGHT PACK GRAVEL & SAND

☒ ADDITIONAL SHEETS ATTACHED

14. YELLOWSTONE CLOSURE AREA: WATER TEMPERATURE _____

15. DATE COMPLETED 04/17/98

16. DRILLER/CONTRACTOR'S CERTIFICATION
This well was drilled under my jurisdiction and this report is true to the best of my knowledge.
Date 04/22/98
ESLINGER DRILLING & PUMP SERVICE
Firm Name
897 MC WILLIAMS DRIVE CORVALLIS, MT.
Address
Signature _____ License No. 44

M:167190

Appendix D

7.0 Multiple Well Capture Zone Module (MWCAP)

7.1 Capabilities

MWCAP is designed to provide efficient delineation of steady-state, time-related and hybrid capture zones for one or more pumping wells in homogeneous aquifers. Each well specified may be operating in an aquifer without a lateral boundary (an areally infinite aquifer), or in an aquifer with a stream or a barrier boundary (semi-infinite aquifer). If a stream or barrier boundary is present, the angle of ambient flow in relation to the boundary, as well as the orientation of the boundary itself, may be completely arbitrary. MWCAP requires that stream or barrier boundaries be represented by straight lines in plan view.

Although multiple wells within a study area may be specified, MWCAP assumes that the wells operate independently of one another. Therefore, physical processes such as increased drawdown due to well interference effects are ignored.

MWCAP is very efficient due to the small number of pathlines required to delineate steady-state or hybrid capture zones. If a stream boundary is present and the capture zone intersects the stream, the zone of induced recharge from the stream to the well will be delineated automatically. MWCAP can also be used to delineate time-related capture zones.

7.2 Assumptions and Limitations

Capture zones delineated using MWCAP are valid for fully penetrating pumping wells screened in aquifers that are essentially homogeneous. Ground-water flow must be two-dimensional in the areal x-y plane, and therefore the aquifer may be confined or unconfined if the drawdown-to-initial saturated thickness ratio is small (less than about 0.1). A steady-state ground-water flow field is assumed.

If a stream or a barrier boundary is present, the boundary is assumed to be linear and fully penetrating. The latter assumption is often violated in cases where stream boundaries exist. The effect of a partially penetrating stream may be an important one and each application should be examined on a site-by-site basis. In general, the greater the depth and

breadth of the stream in relation to the aquifer thickness, the more valid the fully penetrating stream assumption. Also, stream boundary partial penetration effects decrease as the distance from the stream to the well increases. The stream and the aquifer are assumed to be in perfect hydraulic connection: the effects of a "clogging layer" between the streambed and the aquifer are not considered.

If, in actuality, the stream is partially penetrating and/or there is a clogging layer of fine grained material that lines the streambed, the capture zones obtained using MWCAP will be smaller than the "true" capture zones. The amount of error incurred will be dependent upon the degree to which the above assumptions are violated.

Capture zones for multiple pumping wells within a study area may be delineated with one run of MWCAP, but each well is assumed to operate independently of every other well. Therefore, each well may have a potentially unique set of input parameters. The effects of well interference (increased drawdown due to overlapping cones of depression) are neglected.

7.3 Input Requirements

The input requirements for MWCAP are outlined in Table 7.1. Note that the well-specific parameters must be input for each well specified in the study area.

Table 7.1

Input Requirements for MWCAP Module

Program Variable	Description
For each problem –	
IUNIT:	Default units of input parameters (feet and days or meters and days)
NWELL:	Number of pumping wells for which capture zones are to be delineated
XMIN:	Minimum x-coordinate of study area (ft or m)
XMAX:	Maximum x-coordinate of study area (ft or m)
YMIN:	Minimum y-coordinate of study area (ft or m)
YMAX:	Maximum y-coordinate of study area (ft or m)
DLMAX:	Largest allowable step length, $d\ell$ (see section 4.1)
For each well (I=1, NWELL) –	
XWELL(I):	x-coordinate of well (ft or m)
YWELL(I):	y-coordinate of well (ft or m)
QWELL(I):	Well discharge rate[a/] (ft^3/day or m^3/d)
TRAN(I):	Transmissivity of the aquifer (ft^2/d or m^2/d)
GRAD(I):	Regional hydraulic gradient (ft/ft or m/m)
ANGLE(I):	Angle of ambient ground-water flow (0-360°)
POR(I):	Aquifer porosity (dimensionless)
THICK(I):	Aquifer saturated thickness (ft or m)
IBOUND(I):	Associated boundary type (no boundary, stream boundary, or barrier boundary)
DSW(I):	Perpendicular distance from stream or barrier boundary to the well (ft or m)
THETA(I):	Orientation of stream or barrier boundary (0-360°)
ICZTYP(I):	Capture zone type option (steady-state, time-related, or hybrid)
TMCZ(I):	Time value associated with capture zone (days); time-related and hybrid capture zones only
NSTLIN(I):	Number of pathlines to be computed for the well in addition to pathlines delineated automatically by the code
ICZPLT(I):	Flag indicating if capture zone boundary is to be plotted

[a/] The sign (+,-) of the discharge rate does not need to be specified.

The MWCAP formulation is based on the uniform flow equations presented by Todd (1980).

The downgradient stagnation point (place in the ground-water flow field where ground water is not moving) is calculated using the following equation:

$-X_L = Q/(2\pi Kbi)$

Q = discharge rate of the well (ft^3/day)
π = 3.1416 (constant)
K = hydraulic conductivity (ft/day)
b = aquifer thickness (ft)
i = hydraulic gradient (dimensionless)

The upgradient time of travel distance is calculated using the following equation:

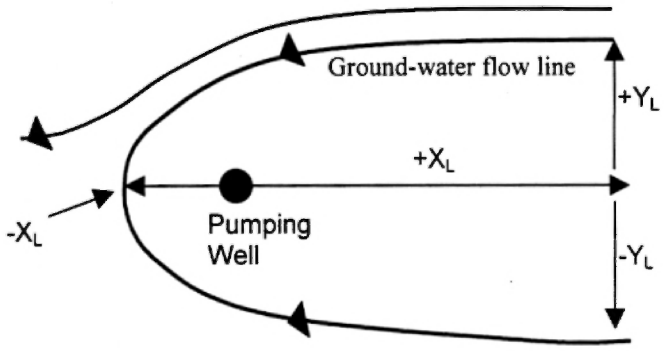
$+X_L = Kit/n$

X = distance from well to the time of travel limit (ft)
K = hydraulic conductivity (ft/day)
i = hydraulic gradient (dimensionless)
t = time of travel (days)
n = effective porosity

The boundary limit:

$Y_L = +/- Q/2Kbi$

Y_L = distance from well to the time of travel (days)
K = hydraulic conductivity (ft/day)
b = aquifer thickness (ft)
i = hydraulic gradient (dimensionless)
t = time of travel (days)
n = effective porosity (dimensionless)



Todd, D.K. 1980. Ground Water Hydrology. John Wiley and Sons Inc. New York, New York. 336 pp.

Appendix E

DEPARTMENT OF ENVIRONMENTAL QUALITY
METCALF BUILDING
POB 200901
Helena, MT 59601-0901

Preliminary Assessment of Groundwater Sources that may be under the Direct Influence of Surface Water

SYSTEM NAME Corvallis School PWS ID# Currently being assigned by DEQ
SOURCE NAME _____ COUNTY Ravalli
DATE 1/14/99 NC NTNC C POPULATION _____

Index Points

A. TYPE OF STRUCTURE (CIRCLE ONE)

(Well).....GO TO SECTION B
Spring..... 40
Infiltration Gallery..... 40

B. HISTORICAL PATHOGENIC ORGANISM CONTAMINATION

History or suspected outbreak of *Giardia*, or other pathogenic organisms associated with surface water, with current system configuration..... 40
No history or suspected outbreak of *Giardia*..... (0)

C. HISTORICAL MICROBIOLOGICAL CONTAMINATION (Circle all that apply)

Record of acute MCL violations of the Total Coliform Rule over the last 3 years (circle the one that applies)
No violations..... (0)
One violation..... 5
Two violations..... 10
Three violations..... 15

Record of non-acute MCL violations of the Total Coliform Rule over the last 3 years (circle the one that applies)
One violation or less..... (0)
Two violations..... 5
Three violations..... 10

DHES-verified complaints about turbidity..... 5

D. HYDROGEOLOGICAL FEATURES (Circle all that apply)

Horizontal distance between a surface water and the source*
greater than 500 feet..... (0)
250-500 feet..... 5
100-250 feet..... 10
less than 100 feet..... 15

E. WATER CONSTRUCTION (Circle all that apply)

Unknown well construction..... 30

Poorly constructed well (uncased, or casing not sealed to depth of at least 18 feet below land surface), or casing construction is unknown 15

In wells tapping unconfined or semiconfined aquifers, depth below land surface to top of perforated interval or screen

great than 100 feet.....	0
50 -100 ft.....	(5)
25 - 50 ft.....	10
0 - 25 ft.....	15
unknown.....	15

D. WELL INTAKE CONSTRUCTION

Unknown intake construction..... 25

In wells tapping unconfined or semiconfined aquifers, depth to static water level below land surface

greater than 100 feet.....	0
50 - 100 ft.....	5
0 - 50 ft.....	(10)
unknown.....	10

Poor sanitary seal, seal without acceptable material, or unknown seal type..... 15

ANALYST Cam Carstarphen TOTAL SCORE 15

PRELIMINARY ASSESSMENT DETERMINATION (circle the one that applies)

I) PASS: Well is classified as groundwater.
II) FAIL: Well must undergo further GWUDISW determination.
III) FAIL: Spring or infiltration gallery; must undergo futher GWUDISW determination.
IV) FAIL: Well will Pass if intake construction deficiencies (section F) are repaired.
V) FAIL: Well may PASS if well construction details (section E) become available.

COMMENTS This is a new well, just online since August 1st. Sampling began in June, and thus far there have been no violations. DEQ records have most of these results listed as 01044 - New Well.

Appendix F

PWSID Name & ID # 04041 Site ID Number 1
(Corresponds with map location number)

WHP Region Control Zone Inventory Person Gine He Abdo

Source-Water Protection Inventory Form 1

Site Name Corvallis School Owner Name

Site Address

City Zip Code County

Phone T/R/S

Lat/Long

Property owner (if different from above)

Address Phone

City Zip Code

NATURE OF PROPERTY

__Service Business __Industrial/Mfg. __Retail Business __Agricultural

__Residential ✓Government __Other (describe on back)

LAND USES or POTENTIAL CONTAMINANT SOURCES

Place a check by he letter or number of each land use activity or potential source found at this site. Also place the number or letter and the map locator number (found in upper right corner of this sheet) on the base map to indicate the location of each important land use activity or potential contaminant source. List the chemicals used or stored and approximate volume on back of the form. Also include any other important or useful site information.

__(A) Ag chemical use site
__(B) Brine pit
__(C) Chemical storage
__(D) Chemigation well
__(E) Chemical mixing/loading site
__(F) Drain ditch/canal
__(G) Feedlot
__(H) Grain storage
__(I) Greenhouse/nursery/orchard
__(J) Highway/county road
__(F) Injection well
__(L) Irrigated land
__(M) Irrigation canal
__(N) Land application of waste site
__(O) Landfill/dump
__(P) Mine/quarry/gravel pit
__(Q) Oil/gas well or exploration borehole
__(R) Pipeline
__(S) Railroad right-of-way
__(T) Salvage yard
__(U) Septic tank
__(V) Service Station dry well/sump
__(W) Storm water drain/sump
__(X) Stream/river/lake/pond
__(Y) Underground storage tank
__(Z) Utility substation/transformer storage
__(1) Wastewater lagoon
__(2) Water well in use
— drywells

Site ID Number 1

CHEMICALS USED OR STORED AT THIS SITE

Map Locator # and Source ID	Land Use	Associated Chemicals
Figure 5, Site ID 1	drywells	runoff from parking area – possibly petroleum products

Additional site information

Sketch of Site (optional)

PWSID Name & ID # 04041

Site ID Number 1,2,3,4,5,6,7
(Corresponds with map location number)

WHP Region _____

Inventory Person Ginette Abdo
Camela Carstarphen

Source-Water Protection Inventory Form 2

Site Name Corvallis School Owner Name _____

Site Address _____

City _____ Zip Code _____ County _____

Phone _____ T/R/S _____

Lat/Long _____

Property owner (if different from above) _____

Address _____ Phone _____

City _____ Zip Code _____

NATURE OF PROPERTY

__Service Business __Industrial/Mfg. __Retail Business __Agricultural

__Residential ✓Government __Other (describe on back)

LAND USES or POTENTIAL CONTAMINANT SOURCES

Place a check by he letter or number of each land use activity or potential source found at this site. Also place the number or letter and the map locator number (found in upper right corner of this sheet) on the base map to indicate the location of each important land use activity or potential contaminant source. List the chemicals used or stored and approximate volume on back of the form. Also include any other important or useful site information.

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__(E) Chemical mixing/loading site
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__(G) Feedlot
__(H) Grain storage
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✓(U) Septic tank
__(V) Service Station dry well/sump
__(W) Storm water drain/sump
__(X) Stream/river/lake/pond
✓(Y) Underground storage tank
✓(Z) Utility substation/transformer storage
__(1) Wastewater lagoon
__(2) Water well in use
— Drywells

Site ID Number 1,2,3,4,5,6,7

CHEMICALS USED OR STORED AT THIS SITE

Map Locator # and Source ID	Land Use	Associated Chemicals
Figure 5, site ID 1	dry wells	petroleum products
Figure 5, site ID 2	septic system	waste -
Figure 5, site ID 3	sewerage lift station	sewage
Figure 5, site ID 4	utility pole storage	oil, PCB's
Figure 5, site ID 5	herbicide/pesticides	chemicals
Figure 5, site ID 6	railroad right-of-way	herbicide
Figure 5, site ID 7	underground storage tanks	petroleum products

Additional site information

Sketch of Site (optional)

Site ID Number _____

CHEMICALS USED OR STORED AT THIS SITE

Map Locator # and Source ID	Land Use	Associated Chemicals
Figure 6, site ID 5	county road right of way	herbicide/
Figure 6, site ID 6	railroad right of way	herbicide
Figure 6, site ID 8	hazardous wastes	
Figure 6, site ID 9	sewerage treatment plant	sewage effluent

Additional site information

Sketch of Site (optional)

PWSID Name & ID # 04041

Site ID Number 5, 6, 8, 9
(Corresponds with map location number)

WHP Region Protection Region

Inventory Person Ginette Abdo
Camela Carstarphen

Source-Water Protection Inventory Form 3

Site Name Corvallis School Owner Name

Site Address

City Zip Code County

Phone T/R/S

Lat/Long

Property owner (if different from above)
Address Phone
City Zip Code

NATURE OF PROPERTY

__Service Business __Industrial/Mfg. __Retail Business __Agricultural

__Residential ✓Government __Other (describe on back)

LAND USES or POTENTIAL CONTAMINANT SOURCES

Place a check by he letter or number of each land use activity or potential source found at this site. Also place the number or letter and the map locator number (found in upper right corner of this sheet) on the base map to indicate the location of each important land use activity or potential contaminant source. List the chemicals used or stored and approximate volume on back of the form. Also include any other important or useful site information.

__(A) Ag chemical use site
__(B) Brine pit
✓(C) Chemical storage
__(D) Chemigation well
__(E) Chemical mixing/loading site
__(F) Drain ditch/canal
__(G) Feedlot
__(H) Grain storage
__(I) Greenhouse/nursery/orchard
✓(J) Highway/county road
__(F) Injection well
__(L) Irrigated land
__(M) Irrigation canal
__(N) Land application of waste site
__(O) Landfill/dump
__(P) Mine/quarry/gravel pit
__(Q) Oil/gas well or exploration borehole
__(R) Pipeline
✓(S) Railroad right-of-way
__(T) Salvage yard
__(U) Septic tank
__(V) Service Station dry well/sump
__(W) Storm water drain/sump
__(X) Stream/river/lake/pond
__(Y) Underground storage tank
__(Z) Utility substation/transformer storage
✓(1) Wastewater lagoon
__(2) Water well in use

Ravalli County Electric Co-op

NE 1051 Eastside Highway
P.O. Box 190
Corvallis, MT 59828-0190

October 28, 1998

Bureau of Mines and Geology
Montana Tech
ATTN: Ginette Abdo
1300 West Park Street
Butte, MT 59701-8997

Dear Mrs. Abdo:

It was very nice to meet Camela and discuss the issues concerning the Wellhead Protection project the Bureau of Mines and Geology is performing for the Corvallis School. Included in this letter are sections of a groundwater testing report MCS Environmental, Inc has been conducting for Ravalli Electric. The report contains wellhead-testing information from three monitoring well locations, and groundwater flow rates of the area.

In Camela's letter dated October 14, she posed three questions which I will address individually:

1) "What items are stored at your facility?"
Items that are stored on Ravalli Electric's property are: utility power poles, transformers, regulators, oil circuit reclosers, and multiple other items associated with the construction of electrical power distribution facilities.

2) "If transformers are one of the items, what is the composition of these transformers?"
Ravalli Electric is a leader in the PCB testing and mitigation program. We have taken a very proactive approach to the environmental concern over PCB regulation. Currently the Federal Standard for PCB mitigation is any oil filled device shall not contain a concentration of greater than 50 ppm of PCB material. Ravalli Electric has tested three-quarters of the transformers and all of the OCR's and regulators in service. Any new transformer that is purchased has less than 2 ppm of PCB concentration, and all the transformers stored in the outdoor area have been tested to be below the minimum Federal Standard. There are occasions that oiled filled devices that exceed the minimum Federal Standard are stored on Ravalli Electric's property. When a device is tested, and it is found to be exceeding the Federal limit, the device is immediately removed from service in the field and placed into an approved storage facility located on Ravalli Electric's property. The device is then shipped to an approved destruction and storage location within six months.

3) "Within the vicinity of the school, what is the composition of the transformers in use?"
The transformers that Ravalli Electric operates and maintains in the vicinity of the Corvallis School have been tested for PCB concentrations. All of the transformers are below the Federal Standard for PCB concentration. The pole-mounted transformers are filled with mineral oil, but the pad-mounted transformer near the new addition to the Middle School is filled with R-Temp fluid.

If there are any other questions you have, please feel free to contact me. I am hopeful the responses to your questions are adequate.

Sincerely,

Scott E Turner
Manager of Engineering and Operations

site id 7A
ID# 41-06257

DEPARTMENT O:
HEALTH AND ENVIRONMENTAL SCIENCES
Environmental Remediation Division
Underground Storage Tank Program
(406) 444-5970
FAX # (406) 444-1902

STATE OF MONTANA

OFFICE LOCATION: 2209 PHOENIX AVE. HELENA, MONTANA
MAILING ADDRESS: PO BOX 200901 HELENA, MT 59620-0901

July 25, 1994

Ms. Sue Jones
P.O. Box 698
Corvallis, Montana 59828

Subject: No Further Corrective Action Required For Petroleum release at the Former Cenex Station, 1026 West Main, Corvallis, MT; Facility ID# 41-06257

Dear Ms. Jones:

The Montana Department of Health and Environmental Sciences (MDHES) Underground Storage Tank Program has reviewed information associated with a petroleum release at the above-referenced location. Based on the available information, it appears that the corrective action was proper and that no further investigation or cleanup activities are needed. You may still be responsible for any damages not yet identified resulting from leaks, spills, or improper closure of the tank(s).

The decision that no further corrective action is required is based on the site visit by Mr. Monte Smith of the MDHES on May 21, 1993 and the closure samples from the December 2, 1992 removal of two gasoline tanks on the aforementioned property. Though the overexcavated soil from the gasoline UST removal was taken to an improper site, because of the small amount of soil (approximately five cubic yards) the MDHES has decided that no analytical testing of this soil is required.

The UST program has received the necessary information concerning the closure of the hydraulic lift UST also located at the site. Because hydraulic lift tanks are exempt from site assessments following tank closure (ARM 16.45.102A), and the hydraulic fluid tank is not related to the petroleum leak from the gasoline UST's, no further action is required regarding the hydraulic fluid tank.

Site ID A, page 2

The MDHES has removed your "leak file" from active status in the filing system. We will keep your file in a separate "resolved" section, so that if you need any information in the future or new problems with your site arise, then we can access the information easily.

If you have any questions concerning this letter please contact this office at (406) 444-5970. We appreciate your cooperation concerning corrective action requirements.

Sincerely,

Fritz E. Durham
Environmental Specialist

fed048.nfa

cc: Jean Riley, Executive Director, PTRCB
Facility file
Susan McAnally, UST Program

Site ID 73

Page 1

Notification for Underground Storage Tanks

Montana Department of Environmental Quality
Helena, MT 59620-0901

INSTRUCTIONS

Please **type or print in ink** all items except "signature" in section V. This form must be completed for each location containing underground storage tanks. If more than five (5) tanks are owned at this location, staple continuation sheets to the form.

TYPE OF NOTIFICATION

☐ A. NEW NOTIFICATION ☐ B. AMENDED ☐ C. CHANGE OF OWNER

___No. of Tanks at facility ___No. of continuation sheets attached

STATE USE ONLY

ID NUMBER 41-02402

DATE RECEIVED

PERMIT NUMBER 97-0012

A. Date Entered Into Computer
B. Data Entry Clerk Initials K
C. Owner was contacted to Clarify Responses. Comments

GENERAL INFORMATION

Notification is required by Federal and State law for all underground tanks that have been used to store regulated substances since January 1, 1974, and that are in the ground as of May 8, 1986, or that are brought into use after May 8, 1986. The information requested is required by Section 9002 of the Resource Conservation and Recovery Act, (RCRA), as amended, and by Title 16, Chapter 45, Subchapter 9, Administrative Rules of Montana (ARM).

The primary purpose of this notification program is to locate and evaluate underground tanks that store or have stored petroleum or hazardous substances. It is expected that the information you provide will be based on reasonably available records, or in the absence of such records, your knowledge, belief, or recollection.

Who Must Notify? Section 9002 of RCRA, as amended, and Title 16, Chapter 45, Subchapter 9, Administrative Rules of Montana (ARM) require that, unless exempted, owners of underground tanks that store regulated substances must notify designated State or local agencies of the existence of their tanks. Owner means—

a) in the case of an underground storage tank in use on November 8, 1984, or brought into use after that date, any person who owns an underground storage tank used for the storage, use, or dispensing of regulated substances, and

b) in the case of any underground storage tank in use before November 8, 1984, but no longer in use on that date, any person who owned such tank immediately before the discontinuation of its use.

An UST which is in the ground and not properly closed is deemed to be in use and is subject to notification requirements.

An owner of a underground storage tank system must amend the facility's current notification form whenever the facility has undergone any change which results in a change to the facility information or status.

What Tanks Are Included? Underground storage tank is defined as any one or combination of tanks that (1) is used to contain an accumulation of "regulated substances", and (2) whose volume (including connected underground piping) is 10% or more beneath the ground and (3) aboveground tanks with underground piping. Some examples are underground tanks storing: 1. gasoline, used oil, heating oil or diesel fuel, and 2. industrial solvents, pesticides, herbicides or fumigants.

What Tanks Are Excluded?

1. septic tanks;
2. pipeline facilities (including gathering lines) regulated under the Natural Gas Pipeline Safety Act of 1968, or the Hazardous Liquid Pipeline Safety Act of 1979, or which is an intrastate pipeline facility regulated under State laws;
3. surface impoundments, pits, ponds, or lagoons;
4. storm water or waste water collection systems;
5. flow-through process tanks;
6. liquid traps or associated gathering lines directly related to oil or gas production and gathering operations;
7. storage tanks situated in an underground area (such as a basement, cellar, mineworking, drift, shaft, or tunnel) if the storage tank is situated upon or above the surface of the floor.
8. Underground tanks and underground piping attached to aboveground tanks of 1,100 gallons or less located at a farm or private residence and storing noncommercial* motor fuel or heating oil if the tank was installed **before** April 27, 1995.

*"Noncommercial" means not used in the operation of a business other than the production of agriculture commodities.

What Substances Are Covered? The notification requirements apply to underground storage tanks that contain regulated substances. This includes any substance defined as hazardous in section 101 (14) of the comprehensive Environmental Response, Compensation and Liability Act of 1989 (CER-CLA), with the exception of those substances regulated as hazardous waste under Subtitle C of RCRA. It also includes petroleum, e.g., crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute).

When To Notify? 1. Owners of underground storage tanks and piping that were in use on May 8, 1986 or which were taken out of operation after January 1, 1974, but which were still in the ground on May 8, 1986, were required to notify on or before May 8, 1986. 2. Owners who bring underground storage tanks into use after May 8, 1986, must notify within 30 days of bringing the tanks into use. 3. Any amendment to facility information or status, including change in ownership, must be notified immediately.

Where to Notify? Send completed forms to:

Underground Storage Tank Program
Waste Management Division
Montana Department of Environmental Quality
PO Box 200901, Helena, MT 59620-0901 (406) 444-5970

Penalties: Any owner who fails to notify or submits false information is subject to a civil penalty of up to $10,000 per violation per day for each tank for which notification is not given or for which false information is submitted. Criminal penalties may also apply.

—FOR STATE USE ONLY—

I. OWNERSHIP OF TANK(S)

Larry Allen
Owner Name (Corporation, Individual, Public Agency, or Other Entity)

1000 Main Street
Mailing Address

Corvallis Mt. 59828
City State Zip Code

Ravalli
County

406-961-4830
Phone Number (include Area Code)

RECEIVED
JUN 24 1997
Department of Environmental Quality

II. LOCATION OF TANK(S)

A. (If the information requested below is the same as in Section I, mark this box ☐)

Corvallis Food Town
Facility Name or Company Site Identifier, as applicable

1000 Main Street
Street Address (P.O. Box not acceptable)

Corvallis Mt 59828
City State Zip Code

Ravalli
County Municipality

COPY

B. LEGAL DESCRIPTION:

Township____ N,S Range____ E,W Section____ ____ 1/4, ____ 1/4 Lot____

Latitude____° ____' ____" North Longitude____° ____' ____" West

III. TYPE OF OWNER		IV. INDIAN LANDS	
☐ Federal Government	☐ Commercial	Tanks are located on land within an Indian Reservation or on other trust lands. ☐	Tribe or Nation:
☐ State Government	☒ Private	Tanks are owned by native American nation, tribe, or individual. ☐	
☐ Local Government			

V. TYPE OF FACILITY

Select the Appropriate Facility Description (check as many as apply)

☒ Gas Station	____ Railroad	____ Trucking/Transport
____ Petroleum Distributor	____ Federal—Non-Military	____ Utilities
____ Air Taxi (Airline)	____ Federal—Military	____ Residential
____ Aircraft Owner	____ Industrial	____ Farm/Ranch
____ Auto Dealership	____ Contractor	____ Emergency Generator
____ Church	____ School	____ Other (Explain) ____

VI. CONTACT PERSON IN CHARGE OF TANKS

Name	Job Title	Address	Phone Number (Include Area Code)
Larry Allen	owner	1000 Main Street Corvallis, Mt	406-961-4830

VII. FINANCIAL RESPONSIBILITY

I have met the financial responsibility requirements in accordance with 40 CFR 280, Subpart H and Title 16, Chapter 45, Subchapter 8, Administrative Rules of Montana (ARM) L.A. (If yes, please initial)

Check All that Apply

☐ Self Insurance	☐ Guarantee	☒ Montana Petroleum Tank Release Cleanup Fund
☐ Commercial Insurance	☐ Surety Bond	☐ Trust Fund
☐ Risk Retention Group	☐ Letter of Credit	☐ Other Method Allowed Specify

COPY

VII. CERTIFICATION (Read and sign after completing all sections)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Name and official title of owner or owner's authorized representative (Please Print)	Signature	Date Signed
Larry Allen	Larry Allen	6/1797

EPA estimates public reporting burden for this form to average 30 minutes per response including time for reviewing instructions, gathering and maintaining the data needed and completing and reviewing the form. Send comments regarding this burden estimate to Chief, Information Policy Branch PM-223, U.S. Environmental Protection Agency, 401 M Street, Washington D.C. 20460, marked "Attention Desk Officer for EPA." This form amends the previous notification form as printed in 40 CFR Part 280, Appendix I. Previous editions of this notification form may be used while supplies last.

Site ID 71

page 3

FACILITY NAME _____ ID# 4-102402

IX. DESCRIPTION OF UNDERGROUND STORAGE TANKS (Complete for each tank at this location.)

—FOR STATE USE ONLY—	5	6			
Tank Identification Number	Tank No. 1	Tank No. 2	Tank No. ____	Tank No. ____	Tank No. ____
1. STATUS OF TANK (mark only one)	Compartment				
Currently in Use	X	X			
Temporarily Out of Use					
Permanently Out of Use					
Amendment of Information					
2. DATE OF INSTALLATION (mo. / year)	8 / 96	8 / 96	___ / ___	___ / ___	___ / ___
3. ESTIMATED TOTAL CAPACITY (gallons)	6,000	4,000			
4. TANK (Material) (Mark all that apply)					
Aboveground					
Asphalt Coated or Bare Steel					
Cathodically Protected Steel					
Epoxy Coated Steel					
Composite (Steel with Fiberglass)					
Fiberglass Reinforced Plastic	X	X			
Lined Interior					
Double Walled					
Polyethylene Tank Jacket					
Concrete					
Excavation Liner					
Unknown					
Is this tank part of a multi-compartment tank?	X	X			
Other, Please specify					
Has tank been repaired?					
5. PIPING (Material) (Mark all that apply)					
Aboveground					
Bare Steel					
Galvanized Steel					
Fiberglass Reinforced Plastic	X	X			
Copper					
Cathodically Protected					
Double Walled					
Secondary Containment					
Unknown					
Other, Please specify					

RECEIVED
JUN 24 1997
Department of Environmental Quality
Remediation Division

COPY

Site ID 7B

Page 3

Notification for Underground Storage Tanks

Montana Department of Health and Environmental Sciences
Cogswell Bldg., Helena, MT 59620

INSTRUCTIONS

Please **type or print in ink** all items except "signature" in section V. This form must be completed for each location containing underground storage tanks. If more than five (5) tanks are owned at this location, staple continuation sheets to the form.

TYPE OF NOTIFICATION

☐ A. NEW NOTIFICATION ☒ B. AMENDED ☐ C. CHANGE OF OWNER

___No. of Tanks at facility ___No. of continuation sheets attached

STATE USE ONLY

ID NUMBER 41-02402

DATE RECEIVED

PERMIT NUMBER 94-0850

A. Date Entered Into Computer

B. Data Entry Clerk Initials

C. Owner was contacted to Clarify Responses. Comments

GENERAL INFORMATION

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a) in the case of an underground storage tank in use on November 8, 1984, or brought into use after that date, any person who owns an underground storage tank used for the storage, use, or dispensing of regulated substances, and

b) in the case of any underground storage tank in use before November 8, 1984, but no longer in use on that date, any person who owned such tank immediately before the discontinuation of its use.

An UST which is in the ground and not properly closed is deemed to be in use and is subject to notification requirements.

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What Tanks Are Excluded?

1. septic tanks;
2. pipeline facilities (including gathering lines) regulated under the Natural Gas Pipeline Safety Act of 1968, or the Hazardous Liquid Pipeline Safety Act of 1979, or which is an intrastate pipeline facility regulated under State laws;
3. surface impoundments, pits, ponds, or lagoons;
4. storm water or waste water collection systems;
5. flow-through process tanks;
6. liquid traps or associated gathering lines directly related to oil or gas production and gathering operations;
7. storage tanks situated in an underground area (such as a basement, cellar, mineworking, drift, shaft, or tunnel) if the storage tank is situated upon or above the surface of the floor.

What Substances Are Covered? The notification requirements apply to underground storage tanks that contain regulated substances. This includes any substance defined as hazardous in section 101 (14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), with the exception of those substances regulated as hazardous waste under Subtitle C of RCRA. It also includes petroleum, e.g., crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute).

When To Notify? 1. Owners of underground storage tanks and piping that were in use on May 8, 1986 or which were taken out of operation after January 1, 1974, but which were still in the ground on May 8, 1986, were required to notify on or before May 8, 1986. 2. Owners who bring underground storage tanks into use after May 8, 1986, must notify within 30 days of bringing the tanks into use. 3. Any amendment to facility information or status, including change in ownership, must be notified immediately.

Where To Notify? Send completed forms to:

FEB 25 1994

Underground Storage Tank Program
Solid and Hazardous Waste Bureau
Montana Department of Health and Environmental Sciences
Cogswell Bldg., Helena, MT 59620 (406) 444-5970

MDHES
Solid and Hazardous Waste Bureau
UST/LUST PROGRAMS

Penalties: Any owner who fails to notify or submits false information is subject to a civil penalty of up to $10,000 per violation per day for each tank for which notification is not given or for which false information is submitted. Criminal penalties may also apply.

I. OWNERSHIP OF TANK(S)

Corvallis Textown Tony Allen
Owner Name (Corporation, Individual, Public Agency, or Other Entity)

Box 668
Mailing Address

Corvallis Montana 59828
City State Zip Code

Ravalli
County

406-961-4830
Phone Number (include Area Code)

II. LOCATION OF TANK(S)

A. (if the information requested below is the same as in Section I, mark this box ☒) X

Corvallis Textown Tony Allen
Facility Name or Company Site Identifier, as applicable

1000 Main Street
Street Address (P.O. Box not acceptable)

Corvallis Montana 59828
City State Zip Code

Ravalli
County Municipality

B. LEGAL DESCRIPTION:

Township ____ N S Range ____ E W Section ____ ____ 1/4, ____ 1/4 Lot ____

Latitude ____ ° ____ ' ____ " North Longitude ____ ° ____ ' ____ " West

COPY

—FOR STATE USE ONLY—

III. TYPE OF OWNER		IV. INDIAN LANDS	
☐ Federal Government	☑ Commercial	Tanks are located on land within an Indian Reservation or on other trust lands. ☐	Tribe or Nation:
☐ State Government	☐ Private		
☐ Local Government		Tanks are owned by native American nation, tribe, or individual. ☐	

V. TYPE OF FACILITY

Select the Appropriate Facility Description (check as many as apply)

✓ Gas Station	___ Railroad	___ Trucking/Transport
___ Petroleum Distributor	___ Federal—Non-Military	___ Utilities
___ Air Taxi (Airline)	___ Federal—Military	___ Residential
___ Aircraft Owner	___ Industrial	___ Farm/Ranch
___ Auto Dealership	___ Contractor	___ Emergency Generator
___ Church	___ School	___ Other (Explain) ______

VI. CONTACT PERSON IN CHARGE OF TANKS

Name	Job Title	Address	Phone Number (Include Area Code)
Larry Allen	Owner	1000 Main St.	406 961-4830 59828

VII. FINANCIAL RESPONSIBILITY

I have met the financial responsibility requirements in accordance with 40 CFR 280, Subpart H and Title 16, Chapter 45, Subchapter 8, Administrative Rules of Montana (ARM) — L.A. (If yes, please initial)

Check All that Apply

☐ Self Insurance	☐ Guarantee	☒ Montana Petroleum Tank Release Cleanup Fund
☐ Commercial Insurance	☐ Surety Bond	☐ Trust Fund
☐ Risk Retention Group	☐ Letter of Credit	☐ Other Method Allowed Specify ______

COPY

VII. CERTIFICATION (Read and sign after completing all sections)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Name and official title of owner or owner's authorized representative (Please Print)	Signature	Date Signed
Larry Allen	Larry Allen	2-9-94

EPA estimates public reporting burden for this form to average 30 minutes per response including time for reviewing instructions, gathering and maintaining the data needed and completing and reviewing the form. Send comments regarding this burden estimate to Chief, Information Policy Branch PM-223, U.S. Environmental Protection Agency, 401 M Street, Washington D.C. 20460, marked "Attention Desk Officer for EPA." This form amends the previous notification form as printed in 40 CFR Part 280, Appendix I. Previous editions of this notification form may be used while supplies last.

Site ID 7-2

Page 7

FACILITY NAME Corrillas Food Town ID# 4-102402

IX. DESCRIPTION OF UNDERGROUND STORAGE TANKS (Complete for each tank at this location.)

—FOR STATE USE ONLY—	4 ✓	2 ✓	3 ✓		
Tank Identification Number	Tank No. 1	Tank No. 2	Tank No. 3	Tank No.	Tank No.
1. STATUS OF TANK (mark only one)	10000	4000	4000		
Currently in Use	✓	✓	✓		
Temporarily Out of Use					
Permanently Out of Use					
Amendment of Information					
2. DATE OF INSTALLATION (mo. / year)	2-1-98	/	/	/	/
3. ESTIMATED TOTAL CAPACITY (gallons)	10,000	4,000	4,000		
4. TANK (Material) (Mark all that apply)					
Aboveground					
Asphalt Coated or Bare Steel					
Cathodically Protected Steel	✓				
Epoxy Coated Steel					
Composite (Steel with Fiberglass)					
Fiberglass Reinforced Plastic					
Lined Interior					
Double Walled					
Polyethylene Tank Jacket					
Concrete					
Excavation Liner					
Unknown					
Is this tank part of a multi-compartment tank?					
Other, Please specify					
Has tank been repaired?					
5. PIPING (Material) (Mark all that apply)					
Aboveground					
Bare Steel					
Galvanized Steel					
Fiberglass Reinforced Plastic	✓	✓	✓		
Copper					
Cathodically Protected					
Double Walled					
Secondary Containment					
Unknown					
Other, Please specify					

RECEIVED
FEB 25 1999
NMED
Solid and Hazardous Waste Bureau
UST/LUST PROGRAMS

COPY

—FOR STATE USE ONLY—	4	2	3		
Tank Identification Number	Tank No. 1	Tank No. 2	Tank No. 3	Tank No.	Tank No.
6. PIPING (Type) (Mark all that apply)					
Suction: no valve at tank	✓	✓	✓		
Suction: valve at tank					
Pressure					
Gravity Feed					
Has piping been repaired?					
7. SUBSTANCE CURRENTLY OR LAST STORED IN GREATEST QUANTITY BY VOLUME					
Gasoline	✓	✓	✓		
Diesel					
Gasohol					
Kerosene					
Heating Oil					
Used Oil					
Other, Please specify					
Hazardous Substance					
CERCLA name and/or,					
CAS Number					
Mixture of Substances					
Please specify					

X. TANKS OUT OF USE, OR CHANGE IN SERVICE

—FOR STATE USE ONLY—

1. Tank Closure					
A. removed or closed in place (mo./day/year)					
B. change in service					
2. Date Site Assessment Completed	__/__	__/__	__/__	__/__	__/__
Evidence of leak detected					

Comments

Location:

Initials of reviewer/date

Facility Summary for Facility ID # 4102402

Owner Name and Address: Larry Allen 1000 Main St Corvallis MT 59828

Facility ID	Location Name	Location Street Address	Location City	Zip
4102402	Corvallis Food Town	1000 Main Street	Corvallis	59828

Tank ID / Status	Installed / Age (yr)	Product / Capacity	Tank Mat'l of Construction / Secondary Option	Piping Material / Secondary Option	Piping Type	Tank Release Detection / Piping Release Detection	FR Met / Over/Spill/CP
1 Permanently Out of Use	4/24/84 14	Gasoline 10,000	Asphalt Coated or Bare Steel None	Bare Steel None	Not Listed	A B C D E F G H I J K ● B D E F G H I J K ●	Yes No No No
2 Permanently Out of Use	4/24/82 16	Gasoline 4,000	Asphalt Coated or Bare Steel None	Fiberglass Reinforced Plastic None	Safe Suction	A B C D E F G H ● J K L B D E F G H I ● K L	Yes Yes Yes No
3 Permanently Out of Use	4/24/82 16	Gasoline 4,000	Asphalt Coated or Bare Steel None	Fiberglass Reinforced Plastic None	Safe Suction	A B C D E F G H ● J K L B D E F G H I ● K L	Yes Yes Yes No
4 Currently in Use	2/1/94 04	Gasoline 10,000	STI-P3 None	Fiberglass Reinforced Plastic None	~~Safe Suction~~ ✓ Pressurized	A ● C D E F G H ● J K L B E F G H ● K L	Yes Yes Yes Yes
5 Currently in Use	8/1/96 01	Gasoline 6,000	Fiberglass Reinforced Plastic None	Fiberglass Reinforced Plastic None	Pressurized	A ● C D E F G H ● J K L ● E F G H ● J K L	Yes Yes Yes Yes
6 Currently in Use	8/1/96 01	Gasoline 4,000 ✓ DIESEL	Fiberglass Reinforced Plastic None	Fiberglass Reinforced Plastic None	Pressurized	A ● C D E F G H ● J K L ● E F G H ● J K L	Yes Yes Yes Yes

COPY

4/9/98

TANKS 4, 5 & 6: Using SIR for tank/line leak detection. Auto line leak detectors installed on all three lines.

Site ID #8 page 9

Tank/Piping Release Detection Codes

A Manual Tank Gauging	C Inventory Control	E Vapor Monitoring	G Interstit. Dbl-Wall Monitor	I SIR	K Deferred
B Tank/Line Tightness Testing	D ATG/Auto Line LD	F GW Monitoring	H Interstit. Sec. Con. Monitor	J Other Methods	L Not Listed

Report Generation Date: 5/28/98

Ravalli Co. Elec. Coop

Notification for Underground Storage Tanks

FORM APPROVED
OMB NO. 2050-0049
APPROVAL EXPIRES 6-30-88

FOR TANKS IN MT

RETURN COMPLETED FORM TO: Solid & Hazardous Waste Bureau, Dept. of Health & Environmental Science, Cogswell Building, Room B201, Helena, MT 59620, (406) 444-2821

STATE USE ONLY
I.D. Number 4102905
Date Received 6-22-88

GENERAL INFORMATION

Notification is required by Federal law for all underground tanks that have been used to store regulated substances since January 1, 1974, that are in the ground as of May 8, 1986, or that are brought into use after May 8, 1986. The information requested is required by Section 9002 of the Resource Conservation and Recovery Act, (RCRA), and the Montana Hazardous Waste Act, as amended.

The primary purpose of this notification program is to locate and evaluate underground tanks that store or have stored petroleum or hazardous substances. It is expected that the information you provide will be based on reasonably available records, or, in the absence of such records, your knowledge, belief, or recollection.

Who Must Notify? Section 9002 of RCRA, as amended, requires that, unless exempted, owners of underground tanks that store regulated substances must notify designated State or local agencies of the existence of their tanks. Owner means—

(a) in the case of an underground storage tank in use on November 8, 1984, or brought into use after that date, any person who owns an underground storage tank used for the storage, use, or dispensing of regulated substances, and

(b) in the case of any underground storage tank in use before November 8, 1984, but no longer in use on that date, any person who owned such tank immediately before the discontinuation of its use.

What Tanks Are Included? Underground storage tank is defined in Montana as any one or combination of tanks that (1) is used to contain an accumulation of "regulated substances" and whose volume is 10% or more beneath the ground, and (2) any underground piping connected to storage tanks containing regulated substances regardless of tank placement. If your tank is entirely above ground and you are reporting for underground piping only, you may disregard Part VI, items 4, 5, and 6. Some examples are underground tanks storing: **1.** gasoline, heating oil, used oil, or diesel fuel, and **2.** industrial solvents, pesticides, herbicides or fumigants.

What Tanks Are Excluded? Tanks removed from the ground are not subject to notification. Other tanks excluded from notification are:

1. septic tanks;
2. pipeline facilities (including gathering lines) regulated under the Natural Gas Pipeline Safety Act of 1968, or the Hazardous Liquid Pipeline Safety Act of 1979, or which is an intrastate pipeline facility regulated under State laws;
3. surface impoundments, pits, ponds, or lagoons;
4. storm water or waste water collection systems;
5. flow-through process tanks;
6. liquid traps or associated gathering lines directly related to oil or gas production and gathering operations;
7. storage tanks, situated in an underground area (such as a basement, cellar, mineworking, drift, shaft, or tunnel) if the storage tank is situated upon or above the surface of the floor.

What Substances Are Covered? The notification requirements apply to underground storage tanks that contain regulated substances. This includes any substance defined as hazardous in section 101 (14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), with the exception of those substances regulated as hazardous waste under Subtitle C of RCRA. It also includes petroleum, e.g., crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute).

Where To Notify? Completed notification forms should be sent to the address given at the top of this page.

When To Notify? 1. Owners of underground storage tanks in use or that have been taken out of operation after January 1, 1974, but still in the ground, must notify by May 8, 1986. **2.** Owners who bring underground storage tanks into use after May 8, 1986, must notify within 30 days of bringing the tanks into use.

Penalties: Any owner who knowingly fails to notify or submits false information shall be subject to a civil penalty not to exceed $10,000 for each tank for which notification is not given or for which false information is submitted.

INSTRUCTIONS

Please type or print in ink all items except "signature" in Section V. **This form must by completed for each location containing underground storage tanks.** If more than 5 tanks are owned at this location, photocopy the reverse side, and staple continuation sheets to this form.

Indicate number of continuation sheets attached: ☐

I. OWNERSHIP OF TANK(S)

Owner Name (Corporation, Individual, Public Agency, or Other Entity): Ravalli County Electric Coop

Street Address: P.O. Box 709 190

County: Ravalli

City: Corvallis State: mt. ZIP Code: 59828

Area Code: 406 Phone Number: 961-3001

Type of Owner (Mark all that apply ☒)

- ☒ Current
- ☐ Former
- ☐ State or Local Gov't
- ☐ Federal Gov't (GSA facility I.D. no. _____)
- ☒ Private or Corporate
- ☐ Ownership uncertain

II. LOCATION OF TANK(S)

(If same as Section 1, mark box here ☐)

Facility Name or Company Site Identifier, as applicable: Ravalli County Electric Coop

Street Address or State Road, as applicable: 1051 N.E. Eastside Highway

County: Ravalli

City (nearest): Corvallis State: mt. ZIP Code: 59828

Indicate number of tanks at this location: 3

Mark box here if tank(s) are located on land within an Indian reservation or on other Indian trust lands: ☐

III. CONTACT PERSON AT TANK LOCATION

Name (If same as Section I, mark box here ☐): Jerry Park

Job Title: Operations Mgr.

Area Code Phone Number: 406 961-3001

IV. TYPE OF NOTIFICATION

☒ Mark box here only if this is an amended or subsequent notification for this location.

COPY

V. CERTIFICATION (Read and sign after completing Section VI.)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Name and official title of owner or owner's authorized representative	Signature	Date Signed
Jerry Park Operations Mgr	Jerry Park	6/20/88

CONTINUE ON REVERSE SIDE

Owner Name (from Section I) _____ Location (from Section II) (Site ID 75, page 2 _____ Page No. _____ of _____ Pages

VI. DESCRIPTION OF UNDERGROUND STORAGE TANKS (Complete for each tank at this location.)

Tank Identification No. (e.g., ABC-123), or Arbitrarily Assigned Sequential Number (e.g., 1,2,3...)		Tank No.	Tank No.	Tank No. 5	Tank No.	Tank No.
1. Status of Tank (Mark all that apply ☒)	Currently in Use	☐	☐	☒	☐	☐
	Temporarily Out of Use	☐	☐	☐	☐	☐
	Permanently Out of Use	☐	☐	☐	☐	☐
	Brought into Use after 5/8/86	☐	☐	☒	☐	☐
2. Estimated Age (Years)				1 month		
3. Estimated Total Capacity (Gallons)				1000		
4. Material of Construction (Mark one ☒)	Steel	☐	☐	☒	☐	☐
	Concrete	☐	☐	☐	☐	☐
	Fiberglass Reinforced Plastic	☐	☐	☐	☐	☐
	Unknown	☐	☐	☐	☐	☐
	Other, Please Specify			Sti-P3		
5. Internal Protection (Mark all that apply ☒)	Cathodic Protection	☐	☐	☒	☐	☐
	Interior Lining (e.g., epoxy resins)	☐	☐	☐	☐	☐
	None	☐	☐	☐	☐	☐
	Unknown	☐	☐	☐	☐	☐
	Other, Please Specify					
6. External Protection (Mark all that apply ☒)	Cathodic Protection	☐	☐	☒	☐	☐
	Painted (e.g., asphaltic)	☐	☐	☐	☐	☐
	Fiberglass Reinforced Plastic Coated	☐	☐	☐	☐	☐
	None	☐	☐	☐	☐	☐
	Unknown	☐	☐	☐	☐	☐
	Other, Please Specify					
7. Piping (Mark all that apply ☒)	Bare Steel	☐	☐	☐	☐	☐
	Galvanized Steel	☐	☐	☒	☐	☐
	Fiberglass Reinforced Plastic	☐	☐	☐	☐	☐
	Cathodically Protected	☐	☐	☒	☐	☐
	Unknown	☐	☐	☐	☐	☐
	Other, Please Specify					
8. Substance Currently or Last Stored in Greatest Quantity by Volume (Mark all that apply ☒)	**a. Empty**	☐	☐	☒	☐	☐
	b. Petroleum					
	Diesel	☐	☐	☒	☐	☐
	Kerosene	☐	☐	☐	☐	☐
	Gasoline (including alcohol blends)	☐	☐	☐	☐	☐
	Used Oil	☐	☐	☐	☐	☐
	Other, Please Specify					
	c. Hazardous Substance	☐	☐	☐	☐	☐
	Please Indicate Name of Principal CERCLA Substance					
	OR					
	Chemical Abstract Service (CAS) No.					
	Mark box ☒ if tank stores a mixture of substances	☐	☐	☐	☐	☐
	d. Unknown	☐	☐	☐	☐	☐
9. Additional Information (for tanks permanently taken out of service)	a. Estimated date last used (mo/yr)	/	/	CLOSED 3/11/97	/	/
	b. Estimated quantity of substance remaining (gal.)					
	c. Mark box ☒ if tank was filled with inert material (e.g., sand, concrete)	☐	☐	☐	☐	☐

CCP

Notification for Underground Storage Tanks

FORM APPROVED
OMB NO. 2050-0049
APPROVAL EXPIRES 6-30-88

FOR TANKS IN **MT**

RETURN COMPLETED FORM TO: Solid & Hazardous Waste Bureau
Dept. of Health & Environmental Science
Cogswell Building, Room B201
Helena, MT 59620 (406) 444-2821

STATE USE ONLY
I.D. Number 410 2905
Date Received 4-29-86

GENERAL INFORMATION

Notification is required by Federal law for all underground tanks that have been used to store regulated substances since January 1, 1974, that are in the ground as of May 8, 1986, or that are brought into use after May 8, 1986. The information requested is required by Section 9002 of the Resource Conservation and Recovery Act, (RCRA), and the Montana Hazardous Waste Act, as amended.

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(b) in the case of any underground storage tank in use before November 8, 1984, but no longer in use on that date, any person who owned such tank immediately before the discontinuation of its use.

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3. surface impoundments, pits, ponds, or lagoons;
4. storm water or waste water collection systems;
5. flow-through process tanks;
6. liquid traps or associated gathering lines directly related to oil or gas production and gathering operations;
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Penalties: Any owner who knowingly fails to notify or submits false information shall be subject to a civil penalty not to exceed $10,000 for each tank for which notification is not given or for which false information is submitted.

INSTRUCTIONS

Please type or print in ink all items except "signature" in Section V. **This form must by completed for each location containing underground storage tanks.** If more than 5 tanks are owned at this location, photocopy the reverse side, and staple continuation sheets to this form.

Indicate number of continuation sheets attached: ☐

I. OWNERSHIP OF TANK(S)

Owner Name (Corporation, Individual, Public Agency, or Other Entity)
Ravalli County Electric Coop

Street Address
P.O. Box 109

County
Ravalli

City: Corvallis | State: mt. | ZIP Code: 59828

Area Code: 406 | Phone Number: 961-3001

Type of Owner *(Mark all that apply ☒)*

- ☒ Current
- ☐ Former
- ☐ State or Local Gov't
- ☐ Federal Gov't (GSA facility I.D. no. _____)
- ☒ Private or Corporate
- ☐ Ownership uncertain

II. LOCATION OF TANK(S)

(If same as Section 1, mark box here ☒)

Facility Name or Company Site Identifier, as applicable
Ravalli County Electric Coop

Street Address or State Road, as applicable
1051 NE East side Highway

County
Ravalli

City (nearest): Corvallis | State: mt | ZIP Code: 59828

Indicate number of tanks at this location: 2 4

Mark box here if tank(s) are located on land within an Indian reservation or on other Indian trust lands: ☐

III. CONTACT PERSON AT TANK LOCATION

Name (If same as Section I, mark box here ☐): Terry Park | Job Title: Operations Mgr. | Area Code: 406 | Phone Number: 961-3001

IV. TYPE OF NOTIFICATION

☐ Mark box here only if this is an amended or subsequent notification for this location.

V. CERTIFICATION (Read and sign after completing Section VI.)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Name and official title of owner or owner's authorized representative	Signature	Date Signed
Terry Park Operations Mgr	Terry Park	4/28/86

CONTINUE ON REVERSE SIDE

Owner Name (from Section I) _____ Location (from Section II) _____ Site ID #6, page 4 Page No. _____ of _____ Pages

VI. DESCRIPTION OF UNDERGROUND STORAGE TANKS (Complete for each tank at this location.)

Tank Identification No. (e.g., ABC-123), or Arbitrarily Assigned Sequential Number (e.g., 1,2,3...)		Tank No. 1 (All Fed)	Tank No. 2	Tank No. 3	Tank No. 4	Tank No.
1. Status of Tank (Mark all that apply ☒)	Currently in Use	X	X	X		
	Temporarily Out of Use					
	Permanently Out of Use				X	
	Brought into Use after 5/8/86					
2. Estimated Age (Years)		4 yrs.	4 yrs	1 yr.	25	
3. Estimated Total Capacity (Gallons)		1000	1000	1000	500	
4. Material of Construction (Mark one ☒)	Steel	X	X	X	X	
	Concrete					
	Fiberglass Reinforced Plastic					
	Unknown					
	Other, Please Specify					
5. Internal Protection (Mark all that apply ☒)	Cathodic Protection					
	Interior Lining (e.g., epoxy resins)	X	X	X		
	None					
	Unknown				X	
	Other, Please Specify					
6. External Protection (Mark all that apply ☒)	Cathodic Protection					
	Painted (e.g., asphaltic)	X	X	X		
	Fiberglass Reinforced Plastic Coated					
	None					
	Unknown				X	
	Other, Please Specify					
7. Piping (Mark all that apply ☒)	Bare Steel					
	Galvanized Steel	X	X	X	X	
	Fiberglass Reinforced Plastic					
	Cathodically Protected					
	Unknown					
	Other, Please Specify					
8. Substance Currently or Last Stored in Greatest Quantity by Volume (Mark all that apply ☒)	a. Empty					
	b. Petroleum					
	Diesel			X	X	
	Kerosene					
	Gasoline (including alcohol blends)	X	X			
	Used Oil					
	Other, Please Specify					
	c. Hazardous Substance					
	Please Indicate Name of Principal CERCLA Substance OR Chemical Abstract Service (CAS) No.					
	Mark box ☒ if tank stores a mixture of substances					
	d. Unknown					
9. Additional Information (for tanks permanently taken out of service)	a. Estimated date last used (mo/yr)	CLOSED 2/12/97	CLOSED 2/12/97		June 1985	
	b. Estimated quantity of substance remaining (gal.)				50 gals. will be removed 1986	
	c. Mark box ☒ if tank was filled with inert material (e.g., sand, concrete)					

removed from ground 4-7-88 replaced with new tank See closure file for details

Soil test Closure

COPY

Site id 7D; page 1

Notification for Underground Storage Tanks

FORM APPROVED
OMB NO 2050-0049
APPROVAL EXPIRES 6-30-88

FOR TANKS IN **MT**

RETURN COMPLETED FORM TO
Solid & Hazardous Waste Bureau
Dept. of Health & Environmental Science
Cogswell Building, Room B201
Helena, MT 59620
(406) 444-2821

STATE USE ONLY
I.D. Number 41-10839
Date Received 4-16-90

GENERAL INFORMATION

Notification is required by Federal law for all underground tanks that have been used to store regulated substances since January 1, 1974, that are in the ground as of May 8, 1986, or that are brought into use after May 8, 1986. The information requested is required by Section 9002 of the Resource Conservation and Recovery Act, (RCRA), and the Montana Hazardous Waste Act, as amended.

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INSTRUCTIONS

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Indicate number of continuation sheets attached [ ]

I. OWNERSHIP OF TANK(S)

Owner Name (Corporation, Individual, Public Agency, or Other Entity)
DR. Michael Lees

Street Address
999 Eastside HWY

County
Ravalli Co

City Corvallis State MT ZIP Code

Area Code Phone Number
961-3295

Type of Owner (*Mark all that apply* ☒)

☐ Current ☐ State or Local Gov't ☐ Private or Corporate
☐ Former ☐ Federal Gov't (GSA facility I.D. no. ____) ☐ Ownership uncertain

COPY

II. LOCATION OF TANK(S)

(If same as Section 1, mark box here ☐)

Facility Name or Company Site Identifier, as applicable
used to be a bulk plant service station

Street Address or State Road, as applicable
no idea how many

County
tanks there were pulled

City (nearest) State ZIP Code
previously due to lack of

All Ace

Indicate number of tanks at this location: 0

Mark box here if tank(s) are located on land within an Indian reservation or on other Indian trust lands ☐

III. CONTACT PERSON AT TANK LOCATION

Name (If same as Section I, mark box here ☐) Job Title Area Code Phone Number

IV. TYPE OF NOTIFICATION

☐ Mark box here only if this is an amended or subsequent notification for this location.

V. CERTIFICATION (Read and sign after completing Section VI.)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Name and official title of owner or owner's authorized representative	Signature	Date Signed

CONTINUE ON REVERSE SIDE

VI. DESCRIPTION OF UNDERGROUND STORAGE TANKS (Complete for each tank at this location.)

Tank Identification No. (e.g., ABC-123), or Arbitrarily Assigned Sequential Number (e.g., 1,2,3...)	Tank No. 1	Tank No. 2	Tank No.	Tank No.	Tank No.
1. Status of Tank (Mark all that apply ☒)					
Currently in Use	☐	☐	☐	☐	☐
Temporarily Out of Use	☐	☐	☐	☐	☐
Permanently Out of Use	☐	☐	☐	☐	☐
Brought into Use after 5/8/86	☐	☐	☐	☐	☐
2. Estimated Age (Years)					
3. Estimated Total Capacity (Gallons)					
4. Material of Construction (Mark one ☒)					
Steel	☐	☐	☐	☐	☐
Concrete	☐	☐	☐	☐	☐
Fiberglass Reinforced Plastic	☐	☐	☐	☐	☐
Unknown	☐	☐	☐	☐	☐
Other, Please Specify					
5. Internal Protection (Mark all that apply ☒)					
Cathodic Protection	☐	☐	☐	☐	☐
Interior Lining (e.g., epoxy resins)	☐	☐	☐	☐	☐
None	☐	☐	☐	☐	☐
Unknown	☐	☐	☐	☐	☐
Other, Please Specify					
6. External Protection (Mark all that apply ☒)					
Cathodic Protection	☐	☐	☐	☐	☐
Painted (e.g., asphaltic)	☐	☐	☐	☐	☐
Fiberglass Reinforced Plastic Coated	☐	☐	☐	☐	☐
None	☐	☐	☐	☐	☐
Unknown	☐	☐	☐	☐	☐
Other, Please Specify					
7. Piping (Mark all that apply ☒)					
Bare Steel	☐	☐	☐	☐	☐
Galvanized Steel	☐	☐	☐	☐	☐
Fiberglass Reinforced Plastic	☐	☐	☐	☐	☐
Cathodically Protected	☐	☐	☐	☐	☐
Unknown	☐	☐	☐	☐	☐
Other, Please Specify					
8. Substance Currently or Last Stored In Greatest Quantity by Volume (Mark all that apply ☒)					
a. Empty	☐	☐	☐	☐	☐
b. Petroleum					
Diesel	☐	☐	☐	☐	☐
Kerosene	☐	☐	☐	☐	☐
Gasoline (including alcohol blends)	☐	☐	☐	☐	☐
Used Oil	☐	☐	☐	☐	☐
Other, Please Specify					
c. Hazardous Substance	☐	☐	☐	☐	☐
Please Indicate Name of Principal CERCLA Substance					
OR Chemical Abstract Service (CAS) No.					
Mark box ☒ if tank stores a mixture of substances	☐	☐	☐	☐	☐
d. Unknown	☐	☐	☐	☐	☐
9. Additional Information (for tanks permanently taken out of service)					
a. Estimated date last used (mo/yr)	/	/	/	/	/
b. Estimated quantity of substance remaining (gal.)					
c. Mark box ☒ if tank was filled with inert material (e.g., sand, concrete)	☐	☐	☐	☐	☐

COPY

Phone Notification
Date 4-6-90 Time _____
From Tom Simpson
Title MT Tank Testing
By Jeff Kuhn DHES
Leak Discovered: Date 4-6-90 Time _____
Date 30-Day Leak Report Sent to Owner/Operator _____

Identification Information
Facility ID No. 10839
Tank ID No. _____
Leak Report ID No. _____

For State Use Only

UNDERGROUND STORAGE TANK INITIAL RESPONSE LEAK REPORT

ALL INFORMATION ON THIS FORM MUST BE REPORTED BY TELEPHONE TO THE AGENCY BELOW WITHIN 24 HOURS OF LEAK DISCOVERY.

UNDERGROUND STORAGE TANK PROGRAM
DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES
SOLID AND HAZARDOUS WASTE BUREAU
COGSWELL BUILDING, ROOM B201
HELENA, MT 59620
(406) 444-5970

Facility Information

Date 4-6-90
Facility Name Corvallis Chiropractic
Location/Address 999 East Side Hwy P.O. Box 376
City Corvallis Zip 59828 Phone 961-3295
Owner/Operator Dr. Michael Lees
Contact Person _____ Phone _____

Description of Loss (Indicate All Unknowns)

1. Product Lost: Type gasoline Estimated Loss unknown (gallons)

2. Type of Tank: Underground _____ Aboveground with Underground Pipe _____
Aboveground with Aboveground Pipe _____ Other (explain) _____

3. Product Lost From: Tank ✓ Pipe ✓ Overfill/Spill ✓
Other unknown

4. Cause of Loss: old service station

5. For Leaks, Describe Leaking Unit:
Age _____ Size/Capacity _____
Material of Construction: Steel _____ Galvanized Steel _____
Fiberglass _____ Other _____
Cathodically Protected _____ Coated _____ With _____

6. When Was Leak Discovered? today 4-6-90

7. Was Leak Discovered Through:
Visual ✓ Odors ✓ Complaint _____ Product Inventory _____
Leak Detection Equipment _____ Excavation ✓
System Test _____ Tested by _____
Other (describe) Soil borings by MT Tank Testing

Site id 72
page 4

DEPARTMENT OF
HEALTH AND ENVIRONMENTAL SCIENCES
Underground Storage Tank Program
(406) 444-5970

STAN STEPHENS, GOVERNOR

FAX # (406) 444-1499

STATE OF MONTANA

OFFICE LOCATION: 836 Front Street, Helena, Montana

MAILING ADDRESS: Cogswell Building, Helena, MT 59620

November 6, 1990

Adam Rys-Sikora
Montana Tank Testing
714 South 3rd West
Missoula, MT 59801

Re: Corvallis Chiropractic Clinic - Former Bulk Plant Facility, Corvallis, MT

Dear Mr. Rys-Sikora,

I have reviewed your report dated July, 1990 which you submitted on behalf of Dr. Michael Lees, Corvallis Chiropractic Clinic. It appears that hydrocarbon vapor levels have dropped significantly below levels initially discovered at the site. However, we can not provide closure of a site based on vapor levels alone. Typically, the department requires analytical results from soil and/or groundwater samples from the site. Specifically, you will need to provide soil sample results using EPA Method 8020 (BTEX) and EPA Method 418.1 modified (TPH). I suggest that you complete additional borings in the worst contaminated areas of the site and collect soil samples from several depth intervals. These results should verify the effects of bioremediation on the site.

If levels significantly exceed approximately 10 parts per million (ppm) total BTEX or 100 ppm TPH, the site may require additional remediation. Hydrocarbon concentrations below these levels may represent acceptable background levels of residual contamination.

Please be aware that a "site closure status" provided by this department in no way indemnifies the owner of the site for the purpose of a property transaction. We clearly acknowledge the fact that in many cases some residual hydrocarbon contamination exists following a "site clean up". The above clean up levels have not been formally adopted by the State of Montana, but they do represent levels which we interpret to represent an acceptably "clean site" for the purpose of closure.

If you have any questions or if I can assist you in any way, feel free to contact me.

Appendix G

Site id 9D
page 5

Sincerely,

Jeffrey A. Kuhn
Environmental Specialist
Underground Storage Tank Program

JAK.217

cc: Dr. Michael Lees, Corvallis Chiropractic, 999 Eastside Highway, Corvallis, MT 59828
John Geach, DHES - UST Program
John Anderson, Ravalli County Courthouse, P.O. Box 5019, Hamilton, MT 59840

Larry Bayes and Daniel Sybirant will be responsible for implementation of the plan. By adopting the Corvallis School Source-Water Protection Plan, the school administration agrees to the following responsibilities and obligations:

1) Update the plan every year. This includes identifying changes in land use or potential contaminant sources. Any changes will be submitted to the DEQ every five years to ensure recertification of the source-water protection plan.

2) Inspect both wellheads annually to ensure that the cap on the well is secure and undamaged.

3) Prohibit the use of herbicides/pesticides within 100 feet of the well.

4) Plug or connect draywells to the sewer system should the opportunity arise.

5) Provide the Corvallis Fire Department with a summary of the plan so they are aware of the source-water protection region and the susceptibility of groundwater if potential contaminants are flushed into the drywells.

6) Provide the Ravalli County Disaster and Emergency coordinator with a copy of the plan and ask to be notified if a spill occurs that might impact the aquifer. If a spill does occur school administrators will contact DEQ to investigate whether or not special action is required.

7) Provide a summary of the plan to:

   Ravalli Electric Cooperative - they will be asked to inform the school should there be a spill/leak on their property

   Sewer system operator - will be asked to notify the school if a problem occurs at the plant or the lift station

   County weed control – summary will provide information on the extent of the source water protection region

   Montana Rail Link – summary will provide information on the extent of the source water protection region

   Ditch owners – summary will provide information on the extent of the source water protection region

   Law enforcement personnel- will be asked to notify the school should an accident impact the groundwater

Ravalli County Planning Board – summary will provide information on the extent of the source water protection region

8) Contact DEQ Petroleum Tank Release Division to determine the status of the release at DEQ #4-110839. Contact the DEQ's Underground Storage Tank Division every 5 years to determine if there are any new tanks or leaky tanks in the special protection and protection areas.

9) Submit an article to the local and school newspaper summarizing the source-water protection plan.

—FOR STATE USE ONLY—					
Tank Identification Number	**Tank No. 1**	**Tank No. 2**	**Tank No.**	**Tank No.**	**Tank No.**
6. PIPING (Type) (Mark all that apply)					
Suction: no valve at tank					
Suction: valve at tank					
Pressure	X	X			
Gravity Feed					
Has piping been repaired?					
7. SUBSTANCE CURRENTLY OR LAST STORED IN GREATEST QUANTITY BY VOLUME					
Gasoline	X	X			
Diesel					
Gasohol					
Kerosene					
Heating Oil					
Used Oil					
Other, Please specify					
Hazardous Substance					
CERCLA name and/or,					
CAS Number					
Mixture of Substances					
Please specify					

X. TANKS OUT OF USE, OR CHANGE IN SERVICE

—FOR STATE USE ONLY—					
1. Tank Closure					
A. removed or closed in place (mo./day/year)					
B. change in service					
2. Date Site Assessment Completed	___/___	___/___	___/___	___/___	___/___
Evidence of leak detected					

Comments

Location:

Initials of reviewer/date