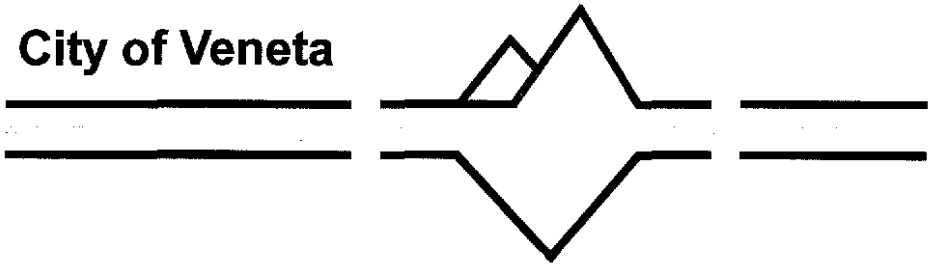
VENETA DRINKING WATER PROTECTION PLAN

City of Veneta



June 2000

Student
Originated
Studies

Veneta Drinking Water

Protection Plan

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Abstract

Groundwater is a critical natural resource from which Veneta gets its drinking water. It is in every community's best interest to protect this resource from contamination. Once groundwater becomes contaminated it is extremely expensive and difficult to remedy. In response to the federal Safe Drinking Water Act of 1986, the Oregon Department of Environmental Quality (DEQ) administers a voluntary drinking water protection program, which includes a certification option for communities who complete acceptable plans. The program is built on the premise that local communities are best able to identify and address groundwater contamination concerns within their areas. Veneta recently completed these efforts, which resulted in the *Veneta Drinking Water Protection Plan.*

The DEQ and Oregon Health Division (OHD) developed a guidance manual to assist local communities in preparing a drinking water protection program. Through a Student Originated Studies (SOS) grant from the Community Service Center at the University of Oregon, a graduate student coordinated the creation of a protection program and plan resulting in this document.

Veneta City Council appointed a Drinking Water Protection Committee. The committee developed the *Veneta Drinking Water Protection Plan* tailoring the plan to the conditions present in Veneta. As the necessary first part of the plan, Oregon Health Division completed the delineation of the drinking water protection area—the area on the surface that overlies the aquifer that supplies water to the municipal wells. The committee and DEQ collaborated in conducting an inventory of potential sources of contamination. DEQ's technical assistance and the committee's knowledge of local conditions proved fruitful for inventory efforts.

The committee developed management goals and strategies designed to reduce the risk of groundwater contamination. Public education forms a large part of the management strategies. Management strategies, along with the contingency plan and the new well site analysis, form Veneta's plan to protect its drinking water.

Acknowledgements

Dedicated community volunteers of the Veneta area made the completion of this document and the creation of a drinking water protection program possible. Funding for project coordination was made available by the Community Service Center at the University of Oregon. Lane Council of Governments, with a grant from the Environmental Alliance for Senior Involvement; the Oregon Department of Environmental Quality; and Oregon Health Division provided necessary technical assistance. Steve Gray and the West Lane News provided excellent press coverage.

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Preface

The City of Veneta identified the development of a drinking water protection plan[1] as a work task element in their periodic review process, the process of updating their comprehensive plan.

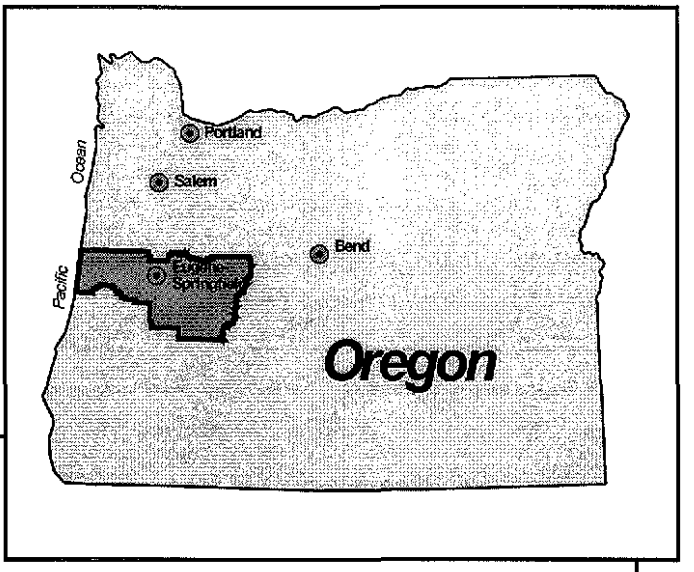
The University of Oregon Community Service Center (CSC) awarded Student Originated Studies (SOS) grant money to a graduate student in the Community and Regional Planning program to provide assistance to the City of Veneta to develop a drinking water protection plan. SOS funding provides a connection between the educational experience of graduate students and the needs of Oregon communities, while incorporating government agencies and community volunteers in the projects. Additionally the Environmental Alliance for Senior Involvement (EASI) provided funds for the project.

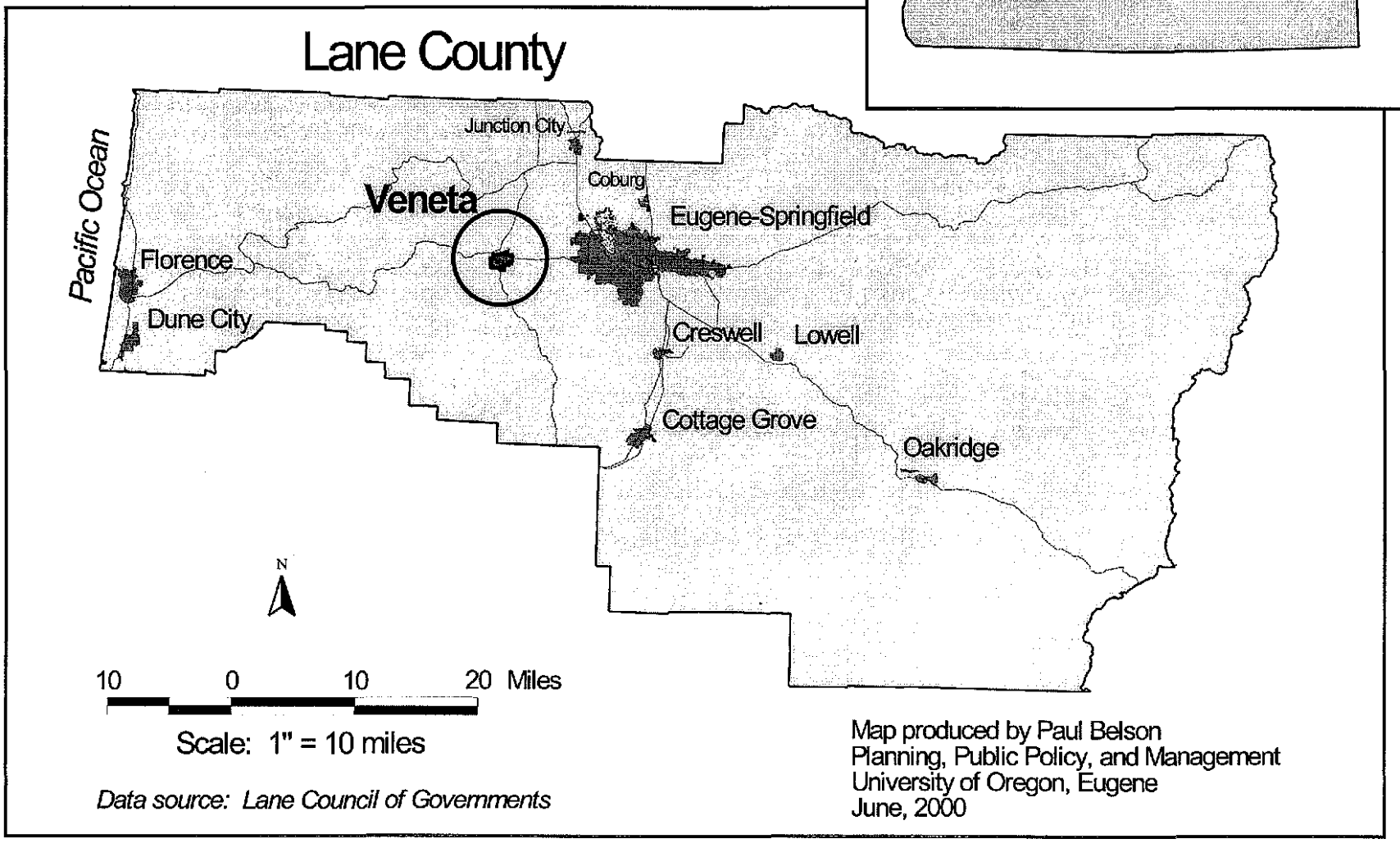
This project is modeled after *Junction City Drinking Water Protection Plan*, and *Coburg Drinking Water Protection Plan*, each produced by Lane Council of Governments (LCOG). Both these plans were created as pilot projects to test the use of the *Oregon State Wellhead Protection Program Guidance Manual*. The *Guidance Manual* was created to assist Oregon communities in developing "Wellhead Protection Plans." Based on the Coburg and Junction City plans, LCOG produced a step-by-step document, *How to Develop a Drinking Water Protection Plan: A Model to Follow* (draft), which outlines how to develop similar plans and provides assistance in following the state manual.

Lane Council of Governments, Oregon Health Division, Oregon Department of Environmental Quality, and Oregon State University Extension Service provided technical assistance for this project.

[1] Referred to in periodic review documents as "wellhead protection plan."

Map One: Location of Veneta





Chapter One: Introduction

Chapter One: Introduction

Purpose

This plan closely follows the Oregon state program for protecting public water systems from contamination, administered by Oregon Department of Environmental Quality (DEQ). The overriding purpose of this project is to create a drinking water protection plan for the City of Veneta. There are six interrelated goals of the project:

- Delineate the Drinking Water Protection Area for Veneta's existing wells.
- Conduct an inventory of potential sources of contamination within the Drinking Water Protection Area.
- Develop a management plan for the Drinking Water Protection Area designed to reduce risk of groundwater contamination.
- Develop a contingency plan for possible interruption and/or contamination of Venta's water supply.
- Develop new well site location criteria and evaluate potential new well locations from a groundwater protection perspective.

Plan Organization

This plan is organized into eight chapters. The first four chapters provide background, context, and information that support and provide the foundation of planning efforts.

Chapter One: "Introduction", provides background information including an outline of the document, the project's purpose, and public involvement.

Chapter Two: "Community Profile", provides contextual information about the Veneta community including the geography, natural environment, population, and development and land use.

Chapter Three: "Groundwater Overview", provides an introduction to groundwater. This chapter discusses the hydrologic cycle, aquifers, and groundwater to provide context for understanding the resource.

Chapter Four: "Delineation of the Drinking Water Protection Area", provides a summary of the delineation method and characteristics of the aquifer.

Chapter Five: "Inventory of Potential Contamination Sources", summarizes the inventory results of potential sources of contamination within the Drinking Water Protection Area.

The next three chapters make up the plan aspect of this document. They detail steps to be taken for achieving goals all designed to reduce risk of groundwater contamination.

Chapter Six: "Management of the Drinking Water Protection Area", details the goals and specific strategies designed to reduce risk of groundwater contamination.

Chapter Seven: "Contingency Plan", identifies primary threats leading to contamination and/or interruption of Veneta's drinking water. This chapter also details procedures to follow in response to a spill event.

Chapter Eight: "New Well Site Analysis", provides criteria for choosing a new well site and identifies five suitable sites in Veneta from a drinking water protection perspective.

Background

The federal Safe Drinking Water Act was created in 1974 to ensure that public drinking water supplies and systems do not adversely affect the health of the public. Amendments to the act in 1986 required each state to develop programs to "protect wellhead areas within their jurisdiction from contaminants which may have any adverse effect on the health of persons." Each state can determine the methods of compliance. The act specified that states had to submit individual protection programs to the Environmental Protection Agency (EPA) for approval, enabling flexibility in creating programs although there are minimum requirements.

In Oregon, the Department of Environmental Quality (DEQ) is the lead agency for the state drinking water program working in conjunction with Oregon Health Division (OHD). The Wellhead Advisory Committee, formed to develop the program, proposed a mandatory program. The 1993 legislature failed to approve the mandatory program. Instead DEQ administers the program as voluntary compliance with the Safe Drinking Water Act.

The 1996 amendments to the Safe Drinking Water Act allow for expansion of the program to include surface water systems. This is in addition to groundwater systems. The amendments require public water system assessments to comply with health standards.

Implementation

The drinking water protection program in Oregon is a collaborative effort between many state agencies with DEQ being the lead agency. In general, OHD delineates and provides technical assistance for groundwater systems, which are the majority of Oregon's public water systems. DEQ handles surface water systems. It should be emphasized that local communities have great control over the composition of their protection programs.

In practice DEQ and OHD provide assistance to priority areas in terms of risk, and to communities that are committed to the completion of drinking water protection programs. If plans contain the required components, communities and municipalities can submit completed plans for certification by the state. The benefits of certification include reduced monitoring requirements, greater success in funding for upgrades, and plan credibility and recognition. This plan serves to meet that requirement.

In assisting local communities to create drinking water protection programs, DEQ and OHD have produced the *Oregon Wellhead Protection Program Guidance Manual.* The *Guidance Manual* outlines and details a procedure for creating a protection program, and it details the certification requirements.

Public Involvement

The voluntary nature of the Drinking Water Protection Program means that citizens are the ongoing key to efforts to protect and promote clean drinking water.

The start of Veneta's process of forming a drinking water protection plan followed a period of intense public involvement planning in the community. This meant that many citizens were unavailable to commit to another project; solicitations for committee members received few positive responses. However, a Drinking Water Protection Committee was formed. The committee was composed of three members of the community who are dedicated public participants, Veneta public work director, and a consultant from Lane Council of Governments. Familiar with the Veneta community, the committee tailored the recommendations in the *Guidance Manual* to fit local conditions.

This plan, while similar to others, is unique to the Veneta area. The Drinking Water Protection Committee guided the entire process. First, the committee studied the water protection area and assisted with the inventory of potential sources of contamination. The committee then decided which management strategies, designed to minimize risk to groundwater, were most applicable.

The committee then tailored the Contingency Plan and New Well Site Analysis to circumstances unique to Veneta.

The committee augmented the process by conducting public presentations and preparing newspaper articles to get the word out (see Appendix A). The committee organized a public workshop specifically to generate feedback on management strategies. Additionally, preliminary draft management strategies were announced in the local newspaper, *West Lane News*, and made available for review and comment. Before adoption, this plan was made available for review by the public.

The committee members and other citizens of the Veneta area will continue to have a key role in groundwater protection; volunteers must provide implementation of the plan. An active and conscientious citizenry is instrumental in the protection of groundwater into the future. Veneta is fortunate to have a group of dedicated community participants who guide planning efforts and proved essential to the development of this plan.

Chapter Two:
Community Profile

Chapter Two: Community Profile

Geography

Located in Lane County at the southern end of the Willamette Valley, Veneta is situated about 15 miles west of Eugene (see Map One). The town exists along State Highway 126, which bisects Veneta. Commercial activity concentrates along this travel corridor as well as in the downtown area. Highway 126 receives a great deal of travel; it is the main travel route between Eugene-Springfield and the coast. To the immediate north of the City is Fern Ridge Reservoir, a U.S. Army Corps. of Engineers site.

Natural Environment

A large part of eastern Veneta exists in a floodplain. There are 42 acres of identified floodplain in Veneta. Identified in the Veneta area are 52 cataloged wetlands totaling some 203 acres. The Long Tom River flows adjacent to the city in the northwest corner. Veneta is part of the upper Long Tom River drainage area. The Long Tom River empties into Fern Ridge Reservoir north of the city.

The mostly flat landscape of the area rises towards the west and becomes more mountainous closer to the coast range. The southwest corner of the city, known as the Bolton Hill area, slopes steeply from grades of 15 percent up to 20 percent and higher.

Loams and silty clay loam soils comprise the soil make-up of the Veneta area. Loam soils have fair to good drainage characteristics, while clay loam soils are poor soils for wastewater drainage. The soil make-up of Veneta is adequate for agriculture, but poor for septic drainage. As a result of heavy rainfall, combined with flat terrain and poor draining soils, water tables around Veneta rise and standing water is common. This results in poor septic drainage in many areas of Veneta. This is particularly important for the eastern section of the city in which septic systems are the sole method of waste disposal and consequently may have implications for groundwater contamination.

Population

Portland State University's Center for Population Research and Census estimates Veneta's 1998 population at 2,950 people. As a residential community for the larger metro area, growth pressures exist and will likely

increase Veneta's population. A large amount of developable land exists within Veneta's Urban Growth Boundary.

Veneta City Council projected Veneta's population to increase to 4,800 to 5,760 people by the year 2020. The age distribution of Veneta is comparable with Lane County with the bulk of the population being in the 20-44 age range.

Development and Land Use

Veneta's *Comprehensive Plan* reflects the city's situation as primarily a residential community to the greater Eugene-Springfield metro area. Most of the land area is intended for residential use. Additionally, as with many small communities wanting to encourage economic growth, there is more land devoted to industry than is currently utilized; much of the industrial lands are vacant. The land use component of the *Comprehensive Plan* is comprised of eight land use designations:

- Industrial
- Industrial/Commercial
- Commercial
- Medium Density Residential
- Low Density Residential
- Rural Residential
- Public
- Open Space

Urban Services Boundary

The *Comprehensive Plan* distinguishes between an urban growth boundary and an urban services boundary. These are two different things in Veneta. The city limits includes all land within the urban growth boundary. The area within the urban services boundary includes the north section of town and the western half of the city and is the priority area for service improvements. The residential area in the east part of the city and a section of commercial land use along Highway 126 are outside the urban services area. What this means is that the Rural Residential zone will not see service improvements, such as wastewater availability, for at least twenty years, even though the area is within Veneta city limits.

Residential Development

Residential development is the dominant land use in Veneta. Some 60 percent of structures in Veneta are single-family detached dwellings. The rural nature of Veneta, and its close proximity to the Eugene-Springfield metropolitan area attracts residents to the area and facilitates this development pattern. More

than 70 percent of Veneta resident workers commute to the Eugene-Springfield metro area for employment.

The Rural Residential zone poses special concern for groundwater protection in Veneta's situation. This zone covers a large part of Veneta. In this zone, hookup to city wastewater services is not a requirement. Thus septic issues may be a serious one for groundwater protection. Additionally, uses in this zone include crop cultivation and small-scale agriculture including farm animals. Furthermore, commercial agricultural uses are a conditional use. Such uses include goat and cattle dairies. No provisions are provided for water protection or other environmental concerns in the conditional use requirements. There are requirements relating to scale of agriculture, which may indirectly relate to environmental conditions, but most likely scale is limited for nuisance and visual reasons. The results of such agricultural practices (residual runoff e.g.) in this zone could be a serious source of groundwater contamination.

The *Comprehensive Plan* calls for the eventual elimination of the Rural Residential zone. The plan designates a change from Rural Residential to an urban level of use including city services, although this will likely not happen for at least twenty years.

Industrial Development

The Industrial zones of Veneta permit typical uses related to industrial manufacturing and warehousing. The Industrial zones are located along and north of Highway 126. They include automotive and equipment related businesses. Uses that may have detrimental impacts on the public health safety and welfare require conditional use permits. This includes emissions standards, noise standards, and sewer/wastewater standards. However, there is no provision in this zone addressing contamination to groundwater. The industrial zone may therefore contain potential contamination sources such as hazardous materials storage and fuel storage.

Commercial Development

Veneta's commercial zones contain typical business uses such as retail stores, office/professional use, and repair services. The commercial zones lies along Territorial Road at the city center and along highway 126. Automotive repair is a conditional use in this zone. Again, conditional use specifies nuisances to public welfare, but does not specify potential groundwater contamination. Nuisances specified in this zone include smoke, odors, noise, vibrations, dust, heat, and electromagnetic glare. Such uses would require a conditional use permit.

Comprehensive Plan Update

Veneta is in the process of updating their *Comprehensive Plan.* Although proposed changes remain preliminary and are not adopted at this time, changes to Veneta's *Comprehensive Plan* will impact future land use and thus may affect groundwater protection.

Rural Residential

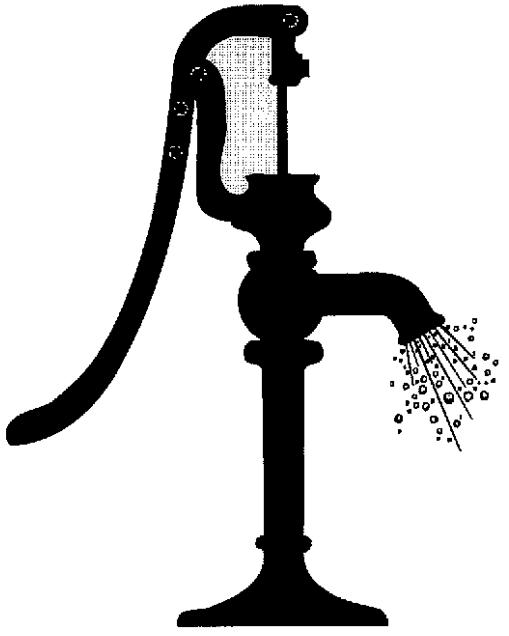
From a groundwater protection perspective, the most notable change to Veneta's land use designations involves its Rural Residential classification. The amount of land designated as Rural Residential decreases under the draft comprehensive plan. Expansion of the city wastewater treatment capacity means that city services will be expanded eastward. Rural Residential now begins approximately one-half mile east of Territorial Road along Hunter Road. Rural Residential designation shifts about one-third of a mile to the east, in some places further. The areas previously designated Rural Residential will become Low Density Residential and Medium Density General Residential, each serviced by wastewater treatment.

The significance for groundwater protection is that Rural Residential areas are not serviced by city wastewater sewer services, potentially posing threats to groundwater via failing septic systems or overly dense concentrations of septic use. The expansion of the wastewater treatment capacity may decrease this type of potential contamination source.

Specific Development Plans

The Draft Comprehensive Plan Diagram calls for two planned developments in Veneta: Northeast Veneta Employment Center and Southwest Veneta Neighborhood Center. These two areas incorporate mixed-uses through zoning. The designated land uses remain essentially the same.

Chapter Three:
Groundwater Overview



Chapter Three: Groundwater Overview

Introduction

This chapter provides an overview of groundwater. The information contained in this chapter is not specific to the Veneta area, but rather provides a framework from which to understand the nature of groundwater and its protection. With a working knowledge of groundwater processes and the terminology used to describe it, citizens can make better decisions about how to protect and manage groundwater resources.

To understand how groundwater becomes contaminated and thus how to prevent contamination, an understanding of the nature of groundwater must be grasped. A better understanding of the processes that influence groundwater will yield greater understanding of the need for protecting groundwater resources.

Hydrologic Cycle

Groundwater is one component of a larger system called the hydrologic cycle. The **hydrologic cycle** can be thought of as a global pumping system through which water moves. Water continually moves through this cycle. In the hydrologic cycle, water exists in three different forms: gaseous water vapor, water as snow and ice, and water in its liquid form.

Appreciating that water moves and flows through the cycle is important. The division of water in the cycle in its different stages and places is somewhat misleading. Rather than being static, water moves dynamically and readily crosses boundaries and definitions. Thus contaminants released in any part of the hydrologic cycle can potentially affect groundwater quality. Natural mechanisms can mitigate the effects of pollutants. Precipitation can significantly dilute pollutants and bacterial organisms can metabolize organic substances. Often, however, these natural mitigation mechanisms become overloaded.

Energy derived from the sun powers the hydrologic cycle. Through condensation and precipitation, water moves from the atmosphere to the Earth's surface. Once on the surface, water as a liquid is found as surface water or subsurface water; water either moves through the cycle as surface runoff or water moves below the surface. **Surface water** refers to water found in lakes, rivers, and oceans. Surface runoff collects in streams and rivers and makes its way to the oceans. **Subsurface water** includes soil water and groundwater. Water that has infiltrated the surface enters the soil zone and

moves as soil water. Water that has percolated below the water table line moves as groundwater (see next section).

Water returns to the atmosphere by evaporation, transforming liquid water to water vapor. Water is also transpired to the atmosphere through the biological processes of plants. In this system, water is neither gained nor lost. However, the *amount* of water that is *usable* varies depending on present conditions.

Groundwater

Water that has percolated from the surface into the ground and collects in an aquifer forms **groundwater**. Water from precipitation infiltrates the surface and seeps into the ground. The amount of water that penetrates the surface and becomes groundwater varies greatly depending on the surface composition. Rather than being underground lakes or streams, groundwater exists in the spaces of subsurface material—sand, gravel e.g.—below the water table. The spaces are called **pores** (see figure 3.1). The more open space there is, the more porous the soil composition. In very porous material such as sand, as much as 50 percent of annual precipitation can seep into the ground. In other less porous materials such as clays, the amount of water that seeps into the ground may range from 5 to 20 percent. The amount of water that seeps into the ground also depends on other factors such as evaporation rates. In warmer seasons and climates, evaporation rates elevate and the percentage of water entering the ground lowers. Precipitation that does not penetrate the ground becomes surface water in lakes and rivers.

The subsurface area is divided into zones (see figure 3.1). Below the land surface exists the **zone of aeration**, which is further divided into other zones such as the soil zone. The zone of aeration typically contains some water, but this zone is not saturated and thus does not contain groundwater; the pores are partially filled with water. Groundwater occurs in the **zone of saturation**. In this zone, the pores are completely filled with water—saturated. The point at which the zone of saturation begins is the **water table**. The depth of the water table and thus the zone of saturation vary seasonally. In many areas of the country, water tables levels peak in winter and spring. During this time water usage lowers, and recharge—water input—increases from precipitation and snowmelt. During summer months, there typically is less precipitation and less recharge from snowmelt. Additionally, higher usage occurs as plants take up more water and human water usage increases. Early fall finds many water tables at their lowest point in the year.

Aquifers

The subsurface material that contains significant amounts of water that can be extracted is an **aquifer**. Groundwater exists in an aquifer. Aquifers are either confined or unconfined (see figure 3.2). Permeable materials overlie **unconfined aquifers**. These aquifer types are typically shallow and are susceptible to contamination since contaminants can readily enter these systems. A **confined aquifer** is surrounded by relatively low permeability material, such as clay or impermeable rock.

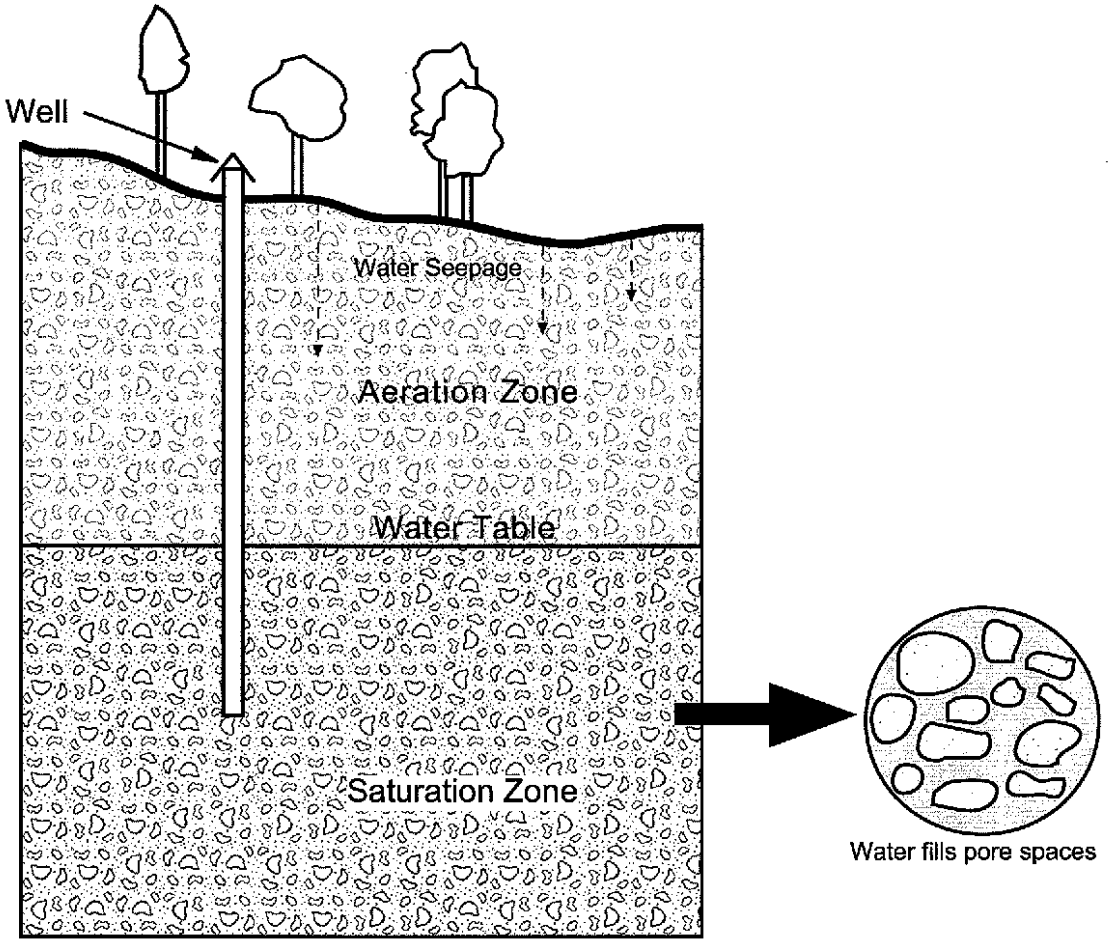
Aquifers replenish or **recharge** with water from precipitation or surface water that percolates through the unsaturated zone into the aquifer. The area of land that contributes to recharging an aquifer is of particular interest when planning for groundwater protection; potential contaminants can enter the aquifer in the recharge area. Thus, protection measures are sometimes concentrated in this area.

Groundwater recharge rates are difficult to estimate. Recharge rates depend on the permeability of the material above the aquifer—the unsaturated zone. Sand and gravel in this zone will recharge at faster rates than clays. Recharge may be estimated as a percentage of precipitation.

Groundwater exits the ground at **discharge points**. Typical discharge points occur as groundwater seepage into wetlands, and discharge into lakes and streams. Springs are visible, dramatic groundwater discharge points. If the water table is close to the surface, plants can transpire groundwater out of the aquifer. This occurs because groundwater is close enough to the surface to interact with plant roots.

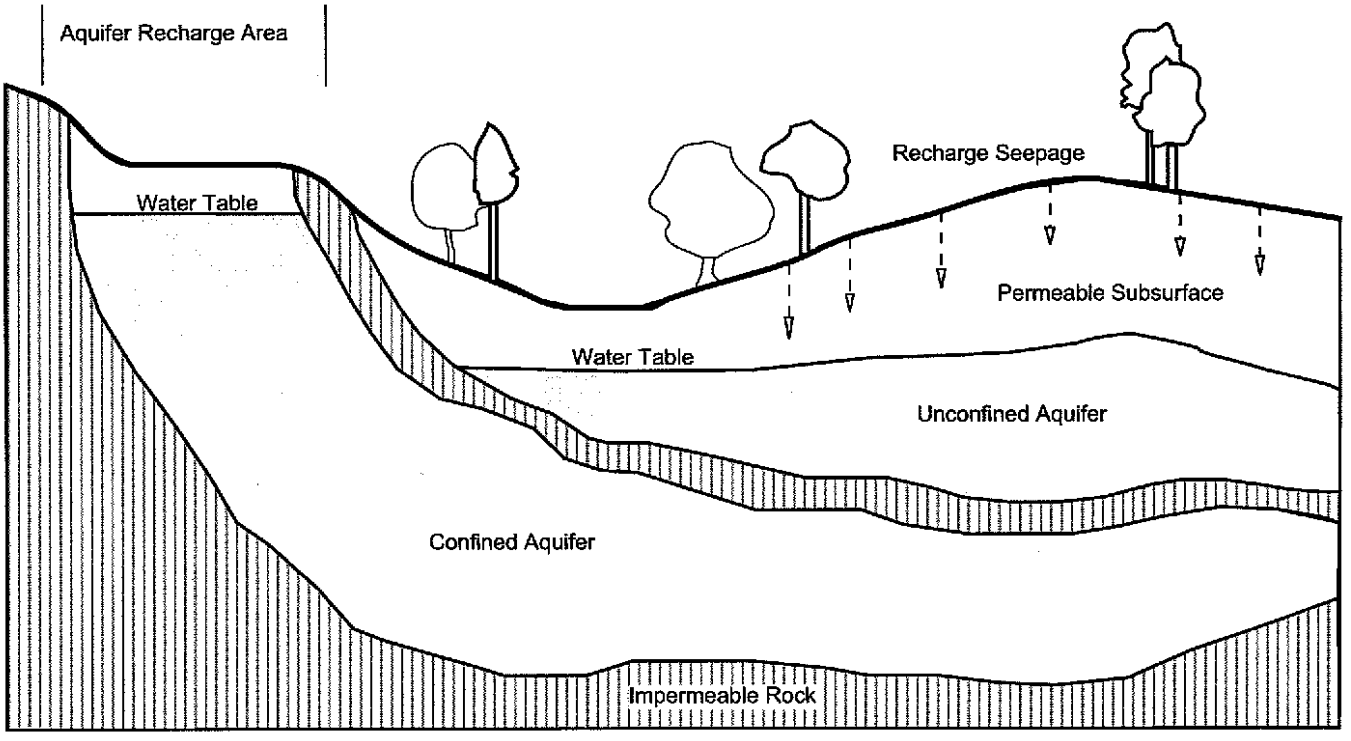
Groundwater moves in an aquifer from the recharge area to discharge areas. Groundwater movement responds to gravity, pressure and friction. Rates of groundwater flow vary. In general, compared to surface water, groundwater moves slowly through an aquifer. It is common for groundwater to move only a few inches per day. Rates are determined by aquifer permeability and hydraulic conditions. When considering groundwater contamination, groundwater movement plays an important role in determining the potential effects of pollutants that may enter the system.

Figure 3.1: Zone of Aeration and Zone of Saturation



Groundwater occurs in the saturated zone. In this zone spaces between particles, the pores, are completely filled or saturated with water. Wells enter this zone and access the stored water. The zone of aeration typically has some water in the pores while the rest of the space is filled with air.

Figure 3.2: Confined and Unconfined Aquifers



Seepage from the surface permeates through the subsurface and collects in an unconfined aquifer. An unconfined aquifer is more susceptible to contamination as water permeating through the subsurface, possibly carrying contaminants with it, enters the unconfined aquifer.

A confined aquifer has a relatively impermeable barrier protecting it from potential contaminants that may be carried down by percolating water. Impermeable layer may be material such as rock or thick clay.

Chapter Four:
Delineation of the Drinking Water Protection Area

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Introduction

Oregon Health Division provided delineation of Veneta's Drinking Water Protection Area. This chapter contains excerpts from the *Source Water Assessment Report* prepared for Veneta by Oregon Health Division.

The Drinking Water Protection Area (DWPA) is defined as the area on the surface that overlies that portion of the aquifer that supplies water to a well or spring. If a contaminant is released at the land surface, the contaminant can be carried by infiltrating precipitation down to the capture zone for the well or spring, and be transported laterally to the well or spring by groundwater movement in the aquifer.

The delineation of the DWPA is a fundamental aspect of any Drinking Water Protection Plan. For the City of Veneta, this process specifically identifies the aquifer that is supplying water to the well. Map two at the end of this chapter illustrates Veneta's DWPA. Included on this map are land use, urban services boundary, inventory results and municipal wells. The map of the DWPA provides the public water system administrator and/or the community with the knowledge of the area around the well where contamination poses the greatest threat to the drinking water supply. This allows the public water system administrator and/or community to develop management strategies that will have the most impact on protecting the water supplied by the well.

Veneta's DWPA is divided into four areas based on time-of-travel (TOT) zones. Time of travel zones indicate the amount of time it takes groundwater to move from that zone to the discharging well, i.e., 1-, 2-, 5- and 10-year time-of-travel zones. The delineated drinking water protection area and identified zones allow the City of Veneta to focus its management strategies and resources on the areas where the most benefit to the drinking water resource will occur (see Map 2).

The delineation of the DWPA requires an understanding of the regional geology and hydrogeology of the area of interest. This information is summarized below.

Regional Geology

The area is located within the upper Willamette River basin in that part of west-central Oregon that lies between the Coast and Cascade Ranges in the Pacific Border physiographic province (Frank, 1973). The principle geologic units found in the area are the Holocene Younger Alluvium, the Pleistocene and Holocene Older Alluvium, the Eocene and Oligocene Fisher Formation, the undated Spencer Formation and the Eocene Tyee Formation together with Oligocene or younger igneous intrusive rocks.

Regional Hydrogeology

On the basis of the geologic, hydrologic, and physiographic conditions, the study area is divided into two major areas: the lower flatter topography that is transitional to the shoreline area of Fern Ridge Reservoir and an upland area of steeper topography, e.g., Bolton Hill. Older alluvial deposits underlie the lowland. These deposits contain the most productive aquifers. In this area, the alluvial deposits are semi-confined to unconfined in nature and discharge to rivers or local streams. The consolidated rocks (i.e., siltstone, sandstone, etc.) that comprise the bulk of the upland areas, and underlie the alluvial deposits, generally yield small to moderate quantities of water to wells, are generally confined and are generally not hydraulically connected to the alluvial aquifers. Locally, groundwater may be saline in nature because of the longer residence time of the water in these rocks.

Delineation Methodology

The delineation involved using the pump rate of the well, characteristics of the aquifer, including thickness and permeability, and the nature of area groundwater flow. These parameters determined the capture zone of the well, i.e., that part of the aquifer that supplies water to the well.

Pump Rate of the Well

During the delineation process an attempt is made to estimate current and future (expanded) water demand(s) placed on the well(s) in question without exceeding the physical or legal capacity of the well(s). All groundwater based DWPA delineations require a water use estimate to determine the volume of aquifer potentially utilized by the water system. In Oregon, the maximum pumping capacity of any given well is established by well design, aquifer characteristics, and water use law.

Although Veneta has a number of wells, only two of them, wells 4 and 9, are projected for use to supply the community with drinking water. Discussions with water system personnel indicate that well 4 is limited in its pumping to a maximum of 270-280 gallons per minute (gpm). Higher levels of pumping of well 4 would cause air entrainment. For purpose of the delineation effort, a pumping rate of 275 gpm (52940 ft^3/day) was used. The pump rate of well 9 is typically 350 gpm, although rates as high as 700 gpm are possible. To account for the potential of growth in the community, the 350 gpm was increased by 125 percent to 437.5 gpm (84225 ft^3/day) for modeling purposes.

Aquifer Characteristics

For the purpose of delineating the 93DWPA, well reports from the area were examined to determine the nature of the aquifer and the thickness of the part of the aquifer that is being tapped by wells 4 and 9. The aquifer supplying the City of Veneta well is composed of Older Alluvium sand and gravel, sand and silt deposits that were deposited by ancient river systems draining the Coast Range Mountains. Well logs typically indicate 25 to 40 feet of silt and/or clay deposits immediately below the surface, although this layer is less than 10 feet thick in the vicinity of Dunham Avenue.

The fine-grained layer is underlain by a series of sand, gravel, and sand and gravel to a depth of at least 180 feet in the vicinity of wells 4 and 9. These alluvial sediments thin markedly to the west and south. Well logs indicate that there may have been some topography on the Tyee Formation surface when the alluvium was deposited, e.g., a well at 25421 E Bolton Road appears to encounter Tyee Formation rocks at a depth of only 30 feet; alluvial sediments are not described in the well log. Alluvial sediments are found in wells to the southwest, e.g., along Erdmann Way. Perhaps the area near the E. Bolton Road site represents a small hill that existed on the Tyee surface prior to deposition of the alluvium.

Older underlying sedimentary rocks of the Tyee Formation are encountered at a depth of approximately 160 feet in western Veneta (well 8) and are exposed at the surface at Bolton Hill west of the community. City well 8 appears to penetrate approximately 23 feet into the underlying Tyee Formation. The more saline character of groundwater reported from the Tyee Formation may explain the observation that groundwater from well 8 has approximately four times the sodium concentration as other City wells.

The Older Alluvium aquifer is considered to behave as a semi-confined to unconfined aquifer with the fine-grained deposits at the surface serving as the confining unit at least part of the year. Several drillers report encountering water in this fine-grained layer. Based on reported and measured static water levels, and the lithologies reported in the well logs, the coarser-grained

sediments immediately below the fine-grained layer are considered to be saturated during the wet season. Static water levels rise above this level indicating a measure of confinement.

The aquifer thickness estimate is dependent on two factors; (1) the total thickness of the water-bearing zone(s) intercepted by the uncased hole, well screens, or perforations, and (2) the degree to which the open hole, well screens, and perforations penetrate the water-bearing zone(s). This information is usually collected from a single well log that may not include an adequate amount of information about the aquifer and well screen/perforation placement. The goal of the thickness adjustment is to provide a reasonable estimate that will not grossly exceed the actual effective aquifer thickness surrounding the well(s).

Both wells 4 and 9 are variably screened within the depth range of 75 to 180 feet below the surface. For purpose of modeling, an aquifer thickness of 40 feet was chosen. This thickness is considered a conservative estimate of true thickness and as such, will provide an added element of protection for the community.

Nature of Groundwater Flow

The surface of the water table is not flat. There are areas where this surface is at a higher elevation and areas where it is lower. Groundwater naturally flows from areas where the water table is high to where it is low. The elevation of the surface is generally referred to as the hydraulic head, therefore, groundwater flows from where it has a high hydraulic head to where the head is lower. How fast groundwater moves depends on the difference in hydraulic head, i.e., the gradient, and the hydraulic conductivity.

A regional water-level map for the southern Willamette Valley area including the Veneta region is available (Frank, 1973). This map indicates that groundwater flows in a northwest direction beneath Veneta. This direction, however, was based on only two wells in the Veneta area and, as a consequence, six additional wells, City wells 1, 2 and 7, and wells at 87701 Erdman Way, 25498 East Bolton Hill Road and 25446 Hunter Road, were selected for measurement during this study. These measurements were contoured and indicate a more complex configuration of water levels in the area. Based on this new data, groundwater is actually flowing in an east-northeasterly direction. Further, the shape of the contours indicate a significant impact on the direction of groundwater flow by local streams. Groundwater clearly discharges to the West Fork Coyote Creek and the small easterly flowing stream between Hunter and Bolton Hill Roads.

Groundwater Recharge

The head distribution and resulting direction of groundwater flow indicate that much of the recharge to the aquifer supplying Veneta must come from direct infiltration of precipitation in the immediate Veneta area between the wells and Bolton Hill to the west. Recharge may also come from infiltration of runoff from Bolton Hill. An additional source of recharge may be groundwater from the underlying Tyee Formation. Limited data is available, however the City's well number 2 penetrates into the underlying Tyee Formation and provides static water levels for the upper silt/clay (8 feet), the sand and gravel aquifer (54 feet) and the underlying sedimentary rock (35 feet).

The static water level for well 2 indicates that there is a downward gradient from the silt/clay to the underlying sand and gravel aquifer. This downward trend is reflected in several other wells and is considered to reflect conditions area-wide. The data also suggests that there is an upward gradient from the Tyee into the sand and gravel aquifer. If this is the case, there may in fact be some recharge to the aquifer from below in areas where fractures or other pathways exist that allow groundwater from the sedimentary aquifer to flow upwards into the sand and gravel aquifer.

The average direction of groundwater flow toward wells 4 and 9 was determined to be N70E. The slope of the water level surface was measured from figure 1 to be 0.0015 feet/foot.

Modeling of the Drinking Water Protection Area

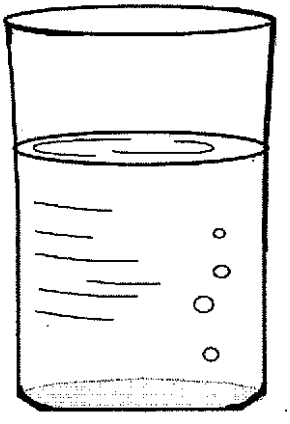
The delineation of the DWPA for the City of Veneta was accomplished using the two-dimensional analytical model RESSQC, distributed by the U.S. EPA. The model solves an equation for groundwater flow based on input regarding site-specific characteristics. The model portrays a steady-state condition, i.e., groundwater flow is not influenced by time e.g., wells coming on and off, and calculates the movement of groundwater back in time as a function of the hydraulic head distribution as modified by the operation of the public water supply wells. The model output is a map that shows the well and the pathlines followed by the water molecules. The path lines can be displayed for any groundwater time-of-travel. A limitation to the model is that it must assume that the aquifer is uniform in character in all directions. For this reason, it is very important to provide input parameters to the model that are representative of the actual variations observed in the area of interest.

For the purpose of providing the community with a tool to prioritize the development of management strategies, the DWPA is divided in to several different Time-of-Travel (TOT) zones: 1-year, 2-year, 5-year and 10-year

TOTs and is illustrated on Map Two at the end of this chapter. It is important to realize, therefore, that the delineation provided in this report only identifies the area overlying the next 10 years of drinking water. In fact, the actual zone of contribution (ZOC) for Veneta's wells is much larger.

The TOTs provide the community with knowledge of the length of time it would take a contaminant, once delivered to the aquifer, to travel to the well. For example, a contaminant in the aquifer at the 2-year TOT boundary would move to the well within 2 years.

Chapter Five:
Inventory of Potential Contamination Sources



Chapter Five: Inventory of Potential Contamination Sources

Introduction

The purpose of the inventory step is to identify potential contamination sources in the Drinking Water Protection Area (DWPA). The DWPA, determined by the delineation process, formed the study area (see Map Two). The rationale for conducting an inventory is to identify potential threats to clean drinking water with the goal of minimizing risk of contamination. Map Two provides a graphic representation of the inventory results.

The inventory process focuses on facilities or land use activity that stores, uses or produces groundwater contaminants. In conducting the inventory, on-site visits were not conducted. Instead, assumptions were made regarding land use practices, specifically that any particular land use does not incorporate good management practices. This serves two functions. First and foremost, this assumption ensures that *as many as possible* of potential sources of contamination are considered, thereby approaching more comprehensiveness in risk reduction. In order to adequately reduce the possibility of contamination, "worse-case" scenarios were assumed. Secondly, assumptions are necessary for making the inventory procedure practical and non-intrusive.

The inventory provides the basis from which management strategies are developed. Management strategies address, in part, the results of the inventory. It must be stressed that the inventory identifies only potential sources of contamination. When good management practices are employed, contamination is not likely to occur.

Groundwater Contaminants

There are essentially three broad categories of potential groundwater contaminants:

1. Micro Organisms (e.g. viruses, bacteria)
2. Inorganic chemicals (e.g. metals, nitrates)
3. Organic chemicals (e.g. petroleum products, solvents, pesticides)

Methodology

Conducting the inventory required employing a variety of methods. Identifying past, current, and future land uses in Veneta formed the base level of analysis. Inventory methods involved analyzing land use documents, land use maps, and aerial photos.

With assistance from DEQ, a visual "drive by" inventory was conducted noting land use activities considered potential sources of contamination as indicated in the *Guidance Manual*[1]. The *Guidance Manual's* guideline for potential sources of contamination bases its recommendations on historic activities of land use activities, types of chemicals typically used or stored at facilities, as well as information from DEQ databases (see Appendix A). General and specific land uses were plotted on the working map and assigned risk ratings. The risk rating process assigns high, medium, or low risk to a potential contamination source.

Risks were based on the *Guidance Manual* recommendations and DEQ's methodology. Determination of risk is based on site-specific susceptibility, contaminant characteristics (e.g. transport processes, toxicity), degree of governmental control/regulation of a substance or land use, and historic data pertaining to past frequency of contaminant release based on land use. The process of assigning risks assumes that the land use activity does not utilize good management practices and thus is a potential source of contamination. This enables Veneta to approach greater reduction of groundwater contamination risk.

The inventory was conducted according to the delineation Time of Travel (TOT) areas corresponding to Veneta's two municipal wells.

Inventory Methods

- Generated 1" = 400ft. scale map showing delineation areas, Time of Travel (TOT) zones, wells, tax lots, roads, and current land use;
- Reviewed aerial photographs;
- Performed "drive-by" visual survey;
- Augmented inventory with local knowledge;
- Identified specific land uses;
- Assigned risk rating; and
- Analyzed and plotted agency databases (see Appendix A).

With working map and summary table of potential contaminants from DEQ (see Appendix A), the citizen committee plotted the inventory points on the

[1] Table 3-2: Potential Sources of Groundwater Contamination, pg. 3-33 to 37.

working map. Using different colored dots identifying high, medium, and low risk, gave a visual representation of the potential areas of concern by highlighting the concentration of contamination sources. The committee was also able to add additional potential contamination sources based on past land use and clarify questions generated by the preliminary inventory.

Inventory Results Summary

The following sections provide a summary of the inventory results. Map Two provides a graphical representation of the inventory. The inventory results are grouped according to whether the potential contamination sources occur in either the Drinking Water Protection Area (DWPA) for municipal well four or well nine. The results are further organized according to the Time of Travel (TOT) zone and risk to groundwater. TOT zones are divided into one year, two years, five years, and ten years. Risk is identified either as higher, moderate, or lower. In general, land use activities in the shorter TOT zone and of higher risk are of greater concern for groundwater protection, although this may not always be the case as some higher risk activities of concern occur in the ten-year TOT zones.

Well Four

Municipal well four exists adjacent to Veneta's city park. This well supplies Veneta with drinking water throughout the year. The primary land use surrounding this well is residential and commercial. The one-year TOT zone has relatively few risks. The five and ten year TOT zones have the greatest aggregate amount of potential sources of contamination. Additionally, five non-operating municipal wells, which have not been properly abandoned, occur in the DWPA for well four, posing a considerable potential risk to drinking water.

For well four, the total identified aggregate inventory follows:

- 18 higher risk potential sources of contamination;
- 14 moderate risk potential sources of contamination; and
- 3 lower risk potential sources of contamination.

It should be noted that some of the identified sources of contamination are an amalgamation of many risks. This is especially true for "housing" as a risk, which typically contains many individual housing units but is considered a single source of potential contamination for practicality.

A detailed listing of the inventory results for well four follows. Results are grouped by land use except where a land use category becomes inappropriate.

Numbers indicate the number of sites inventoried as a potential source of contamination.

One Year Time of Travel (TOT) Zone

Higher Risk

Non-operating municipal well #2

Moderate Risk

City Park Pool
Housing—approximately 20 lots

Lower Risk

Elementary School

Two Year Time of Travel (TOT) Zone

Higher Risk

Non-operating municipal well #1
Historic gas station

Moderate Risk

Water Treatment Plant
Railroad transportation corridor
Commercial—1
Housing—approximately 10 lots

Lower Risk

No sources identified

Five Year Time of Travel (TOT) Zone

Higher Risk

Non-operating municipal well
Non-operating municipal well #7
Commercial (auto)—3
Leaking Underground Storage Tank (LUST) site—1

Moderate Risk

Transportation corridor—2
Housing—approximately 140 lots/units

Lower Risk

Fire Station

Ten Year Time of Travel (TOT) Zone

Higher Risk

Non-operating municipal well
Commercial—5
Industrial—1
Transportation—1
Housing historic high-density septic
LUST site—2

Moderate Risk

Commercial—1
Transportation corridor—2
Housing—approximately 140 lots/units
Historic logging pond sites—2

Lower Risk

Commercial—1

Table 5.1 below provides a tabular summary of the inventory of potential contamination sources for well four. The information in the table shows total quantity of contamination sources in Veneta.

Table 5.1: Number of Potential Contamination Sites by TOT Zone for Well Four

	High Risk Sites	Moderate Risk Sites	Lower Risk Sites	*Total*
One Year TOT	1	2	1	4
Two Year TOT	2	4	0	6
Five Year TOT	6	3	1	10
Ten Year TOT	11	5	1	17
Total	20	14	3	37

Source: Oregon Department of Environmental Quality and original research

Well Nine

Municipal well nine exists in the eastern portion of Veneta, near the intersection of Huston and Tidball Roads. In practice this well operates mainly during the dry summer months when water usage peaks. Most of the surrounding land use is rural residential. All of the land use in the DWPA surrounding well nine operates on septic systems and will continue for the foreseeable future. High-density housing occurs in all the TOT zones for well nine, and consequently presents a concern for groundwater protection. Specifically, septic contamination is most serious in the shorter TOT zones because bacterial contaminants typically do not persist as long as other contaminant types. For this reason, septic concerns may post less of a concern for groundwater protection in the ten year TOT zone.

For well nine, the total identified aggregate inventory follows:

- 15 higher risk potential sources of contamination;
- 12 moderate risk potential sources of contamination; and
- 5 lower risk potential sources of contamination.

It should be noted that some of the identified sources of contamination are an amalgamation of many risks. This is especially true for "housing" as a risk, which typically contains many individual housing units but is considered a single source of potential contamination for practicality.

A detailed listing of the inventory results for well nine follows. Results are grouped by land use except where a land use category becomes inappropriate. Numbers indicate the number of sites inventoried as a potential source of contamination.

One Year Time of Travel (TOT) Zone

Higher risk

High-density housing septic—approximately 10-15 lots/units
Residential scrap yard—1

Moderate risk

Transportation corridor—2
Irrigated crops
Housing with boarding stables—4

Lower Risk

Housing low-density rural—approximately 8 lots/units

Two Year Time of Travel (TOT) Zone

Higher Risk

Housing high-density septic—approximately 10-12 lots/units
Commercial (auto)—2
LUST & ECSI site—1

Moderate Risk

Irrigated crops
Commercial—1
Transportation corridor—1

Lower Risk

Housing low-density septic—approximately 6 lots/units
Mini Storage facility—1

Five Year Time of Travel (TOT) Zone

Higher Risk

Irrigation well—1
Housing high-density septic—approximately 15-20 lots/units

Commercial/industrial (auto)—2

Moderate Risk

Commercial—1

Lower Risk

Low-density housing septic—30 lots/units

Ten Year Time of Travel (TOT) Zones

Higher Risk

Commercial (auto)—3
ECSI site—1
Housing high-density septic—25-30 lots/units (south)

Moderate Risk

Commercial—1

Lower Risk

Housing low-density septic—approximately 25 lots/units

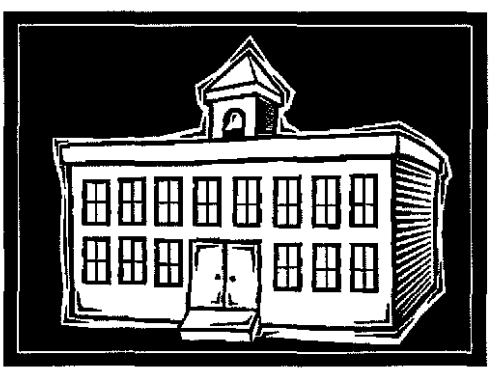
Table 5.2 below provides a tabular summary of the inventory for well nine. The information in the table shows total quantity of contamination sources in Veneta.

Table 5.2: Number of Potential Contamination Sites by TOT Zone for Well Nine

	High Risk Sites	Moderate Risk Sites	Lower Risk Sites	*Total*
One Year TOT	2	7	1	10
Two Year TOT	4	3	2	9
Five Year TOT	4	1	1	6
Ten Year TOT	5	1	1	7
Total	15	12	5	32

Source: Oregon Department of Environmental Quality and original research

Chapter Six:
Management of the Drinking Water Protection Area



Chapter Six: Management of the Drinking Water Protection Area

Introduction

This chapter contains Management Strategies developed by the Drinking Water Protection Committee. Management Strategies form the heart of efforts to provide a safe and long-term source of clean water.

There are nine goals followed by strategies intended to achieve the respective goals. Goals are broad and provide directional areas of focus. Strategies are more specific and describe a course of action. Education and public awareness form a large focus of management efforts.

Goals and Strategies

Goal 1: Implementation

The Drinking Water Protection Team recognized that implementation would be a key component in the effort to minimize the risk of groundwater contamination. This goal identifies implementation as a priority. In a sense this is the first step in protecting drinking water.

Strategy 1.1: Identify and research funding sources for plan implementation

- Facilitate private-public partnerships
- Research and identify grant opportunities.

Strategy 1.2: Seek out interested community members to participate on citizen task force on drinking water protection as a standing committee

- Encourage participation in drinking water protection. Citizen ownership of this plan's implementation will make protecting Veneta's groundwater a success.

Goal 2: Public Education and Notification

This goal seeks to inform citizens about groundwater and the need for preventing contamination. Public education is vital to the success of protection efforts. Additionally, education efforts should be varied and target a wide range of community members. The team developed the following strategies as ways to achieve this goal.

Strategy 2.1: Install notification signs

- Position signs at key intersections and entries to the Drinking Water Protection Area (DWPA). Additionally, signs should be tastefully constructed and be changed periodically. Signs increase awareness for people entering the DWPA and serve as reminders that care should be taken in this area.

Strategy 2.2: Create school education program

- Adopt-a-well program. In this program students would learn by focusing their educational experience around a particular well, perhaps within a specific Time of Travel (TOT) Zone. Additionally, the students could educate the residents and landowners within the area by handing out educational pamphlets the students developed.
- Create a groundwater science project. By involving teachers and students in a school science education project, Veneta can create increased awareness of its drinking water source.

Strategy 2.3: Produce Education pamphlet

- Create pamphlets for different land uses: residential, commercial/industrial, and rural. Pamphlets provide basic educational information about Veneta's drinking water and the importance of protecting this resource.

Factual pamphlets may include the following content by land use type:

Residential: Groundwater basics information including a basic diagram, map of DWPA, proper use and storage of household chemicals including alternative chemicals, reducing household hazardous products, reducing household hazardous waste,

hazardous materials collection sites, proper lawn care for drinking water protection.

Commercial/industrial: Groundwater basics information including a basic diagram, map of the DWPA, encourage "best management practices", encourage safe storage and use of chemicals, encourage spill response plans, encourage proper hazardous materials disposal.

Rural Residential: Groundwater basics information including a basic diagram, map of DWPA, encourage proper septic maintenance including use of less harmful cleaners, encourage manure management plans for livestock, encourage safe use and storage of chemicals, encourage proper well maintenance and construction.

Specific Developments: If Veneta's future land use designation includes specific developments, informative pamphlets should be developed for these areas taking into consideration the location and land uses included in the development.

Strategy 2.4: Handouts with development permits

- Development permits provide an opportunity to inform developers about the need for groundwater protection. Pamphlets should be included with permits by land use as in the above strategy and should contain similar information.

Strategy 2.5: Notify citizens in Drinking Water Protection Area (DWPA)

- Provide variety of notifications to residences and business in the DWPA. Notification provides basic awareness that people are living and working above the water source for the city. Notification can take a variety of forms but should include a letter of notification and could include a map of the DWPA. Notification should stress the importance of contamination prevention. Notification to those in the one and two year TOT zones should be drafted to highlight the increased risk of activities in these zones.

- Provide special notification to those in the aquifer recharge zone, south and west of Veneta where Bolton Hill meets the flat area. Notification should include information about the importance of this groundwater recharge area and the need to prevent contaminants entering the aquifer at this point.

Strategy 2.6: Identify target groups for education opportunities

- Involve active members of the community. Community organizations have vital roles in the community. Identifying and informing these groups provides a key for protecting groundwater.

Strategy 2.7: Distribute *Home-a-Syst: Homestead Assessment System*

- Produced by Oregon State University Extension Service, the *Home-a-Syst* packet contains fact sheets and worksheets designed for rural homesteads to assess their homesteads from a groundwater protection standpoint. Topics include wells, chemical storage and use, septic systems, site design, and livestock management.

Goal 3: Well Health Program

Improperly constructed, sealed, and abandoned wells pose considerably high risk of groundwater contamination. Anecdotal evidence suggests that there are a potentially large amount of private wells in the Veneta area that need attention. Thus the team included well health as a management goal. The following strategies address well health.

Strategy 3.1: Produce information pamphlet for landowners about proper well maintenance including sealing and abandonment of unused wells. A well health pamphlet should contain the following information:

- Diagram of properly sealed and constructed well
- Well inspection basics
- Proper well abandonment
- Proper well construction
- List of further resources

Strategy 3.2: Work with Lane County Extension Service to make voluntary site visits to help property owners assess risk.

Strategy 3.3: Investigate potential funding sources for well maintenance, upgrade and abandonment.

- Develop a cost share program
- Research and identify grant sources

Goal 4: Septic System Health

A significant part of the Drinking Water Protection Area contains residences and some businesses that treat wastewater using septic systems. Furthermore, the area contains soils poorly suited to septic systems. This coupled with a high winter season water table may pose concern for groundwater. The following strategy informs residents about septic system issues of concern.

Strategy 4.1: Produce and distribute a septic system pamphlet to owners not served by city wastewater sewer that includes:

- Importance of periodic testing of septic system
- Need for regular maintenance, cleaning and pumping of septic systems
- Alternative cleaners not harmful to groundwater
- Signs of failing septic systems
- List of "dos and don'ts" for septic system owners

Goal 5: Remediation: *problem remedies*

The Drinking Water Protection Team felt that existing problems should be dealt with and remedied. This goal identifies the most pressing needs from a drinking water protection standpoint and provides strategies to remedy the situations.

Strategy 5.1: Properly abandon unused city wells as identified in the inventory results

Strategy 5.2: Request DEQ update and priority status for LUST and ECSI sites

- Request priority remediation status from DEQ for sites in Veneta registered on DEQ database lists: Leaking Underground Storage Tanks (LUST) and one Environmental Cleanup Site Information System (ECSI). Such sites present known risks to Veneta's groundwater. This strategy also requests status clarification and updates from DEQ. Additionally, an estimated date of cleanup completion for Veneta sites should be requested. Refer to DEQ Underground Storage Tank program (see references).

Strategy 5.3: Encourage participation in Oregon's Voluntary Cleanup Program

> *"The Oregon Department of Environmental Quality (DEQ) Voluntary Cleanup Program (VCP), developed in 1991, provides an avenue for owners and operators of contaminated property to investigate and clean up their sites with DEQ oversight. The VCP is designed so responsible parties and DEQ can work in partnership to efficiently investigate and clean up releases of hazardous substances. Through environmental cleanup, the VCP facilitates the use, sale, refinancing, and/or redevelopment of contaminated property...."* (www.deq.state.or.us)

The Voluntary Cleanup Program is designed for contaminated sites where the owner would like to clean up the site, for example as facilitating the sale or redevelopment of property.

Goal 6: Intervention: *head off occurrence*

Strategy 6.1: Implement Pollution Prevention Measures

- Produce and distribute pollution prevention fact sheet, samples available from DEQ
- Encourage participation in DEQ Green Permits program
- Encourage participation in DEQ Pollution Control Facilities Tax Credit Program

Strategy 6.2: Apply for periodic DEQ hazardous waste collection

Strategy 6.3: Monitor groundwater periodically for contaminants of concern

- Place monitoring wells strategically to detect contaminants moving toward the municipal wells. Veneta will be in a better position to prepare for likely scenarios by detecting contaminants in the groundwater *before* they appear at the municipal wells and enter the water system.

Goal 7: Form Intergovernmental Agreement with Lane County

A portion of Veneta's DWPA to the north and east exists within Lane County's jurisdiction. Early on the team decided that this could be an opportunity for collaboration. Activities and actions within Lane County purview may adversely affect Veneta's groundwater quality. An agreement with the county and the City of Veneta can resolve the shortcomings of political boundaries.

Strategy 7.1: Create an agreement containing the following:

- Recognition of Veneta's Drinking Water Protection Area by Lane County
- Notification of actions within Lane County jurisdiction and within Venta's Drinking Water Protection Area

Goal 8: Zoning and Regulation

Most of the goals and management strategies focus on public education and awareness. While this information is crucial to the protection of Veneta's drinking water, the committee also decided that some regulatory changes are necessary to adequately address certain issues.

Strategy 8.1: Septic system minimum density

- Within the two and one year Time of Travel for well nine, limit septic system density to no greater than one units per two acres to reduce the risk of contamination.

Strategy 8.2: Develop criteria from which to create future regulations pertaining to the use of chemicals of concern.

- Criteria to be developed include types of chemicals, quantity, storage, and chemical use.

Strategy 8.3: Create development permit conditions for facilities that use chemicals of concern.

- Require incorporation of "Best Management Practices" (BMPs) as a condition of permit approval for commercial/industrial facilities that utilize Dense Non-Aqueous Phase Liquids (DNAPLS), "sinker" chemicals, and any other contaminants of concern. BMPs included would be those pertaining to design and operation of facilities that meet the objective of preventing contamination from escaping into the groundwater[1].

Strategy 8.4: Business licenses chemical use disclosure

- Include chemical use and storage disclosure form to be filled out by applicant when granting or renewing business licensees.

Goal 9: Water Conservation Program

Conservation measures protect drinking water resources by using less of the resource and thereby reducing the risk that contaminants will be drawn to the well. Use of less water also allows more time for cleanup and remediation if a contaminant is released. Additionally, contaminants in the groundwater will have more time to be broken down by natural processes if less water is drawn from the wells.

Strategy 9.1: Include a conservation program as part of utility plans

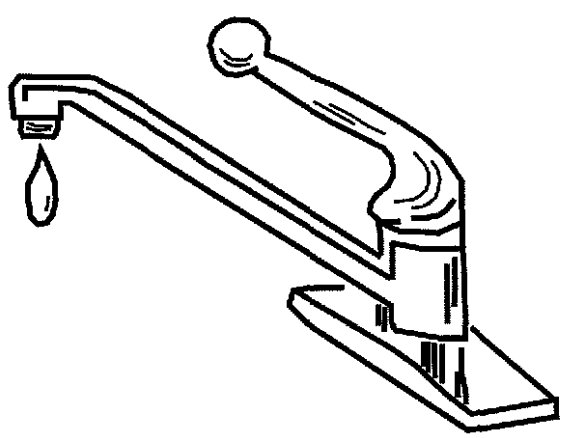
- A water conservation program will be included as part of Veneta's water master plan.

Strategy 9.2: Provide incentives for water use reduction

- Structure water utility rates to encourage water use reduction. Financial incentives reward those who actively reduce water usage.

[1] See *Oregon State Wellhead Protection Guidance Manual*, 3-58 to 3-62, for description of BMPs.

Chapter Seven:
Contingency Plan



Chapter Seven: Contingency Plan

Introduction

The management strategies of this plan provide mechanisms designed to reduce risk to groundwater contamination. In the event that a spill or other contamination release happens, Veneta should be prepared to deal with such an occurrence. The contingency plan describes procedures for responding to a contaminant release or disruption in Veneta's water supply.

Contingency Plan Elements

Veneta's contingency plan addresses the ten elements required by the Oregon Drinking Water Protection Program as indicated in the *Guidance Manual*. These elements include:

1. Potential Threats to the Drinking Water Supply,
2. Protocols for Incidence Response,
3. Prioritization of Water Usage,
4. Key Personnel and Development of Notification Roster,
5. Short and Long Term Water Supply Replacement,
6. Short and Long Term Water Conservation,
7. Plan Updating and Review,
8. Personnel Training,
9. Provisions for Public Education, and
10. Logistical and Financial Resources.

1. Potential Threats to the Drinking Water Supply

Primary threats to Veneta's drinking water supply stem from 1) an interruption of water delivery or 2) contamination of the groundwater supply. The Drinking Water Protection Committee identified the most likely events that could cause an interruption in drinking water delivery and/or contamination of the water supply.

A. Mechanical problems: power outage, broken main, pump failures;
B. Detection of contaminant at wellhead(s);
C. Chemical spills within Drinking Water Protection Area;
D. Contamination from Leaking Underground Storage Tanks;
E. Sabotage

2. Protocols for Incident Response

This section details the appropriate responses for the most likely threats of section 1 above, specifically threats A through D. Threat E, sabotage, could include any of the following items and be addressed under that category.

A. Mechanical-related interruptions:

- Rely on reservoir capacity of 2.5 million gallons providing 2 ½ to 5 days of drinking water depending on conservation measures.
- Switch to power generators.
- Apply conservation measures as in section six.
- Implement water replacement measures.

B. Detection of contaminant at one or both wellheads.

Response to detection of contaminants at the wellheads depends on whether the substance reaches or exceeds the Maximum Contaminant Level (MCL) as measured during the monitoring process. The MCL is considered the maximum concentration that a contaminant can be present in the drinking water without posing a significant health risk. If the contaminant reaches the MCL level, Oregon Health Division must be notified. If the contaminant is present yet below the MCL level, regular monitoring should occur to assess the status of the contaminant concentration.

If contaminants approaching the MCL are detected at the wellhead, Veneta should follow the following protocol.

- Shut down the contaminated wells.
- Determine if water distribution system is contaminated.
- Implement containment procedures to prevent contaminant from spreading throughout the distribution system.
- Determine if reservoir is contaminated.
- Identify any private wells that may need to be shut down to reduce flow of contaminant towards the wells.
- Send news release to local media.
- Notify residents and businesses about the need for conservation measures.
- Cooperate with agencies investigating the contaminant.

C and D. Chemical spills within Drinking Water Protection Area including Highway/Railroad Spills

Response to chemical spills depends on in which Time of Travel (TOT) zone the spill occurs. Generally, the closer the spill is to the wells, the more

immediate and critical the appropriate response. This section outlines protocols according to TOT zone.

Within the one year Time of Travel (TOT)

- Contact 911 to report the spill or accident for appropriate dispatch response.
- Approach area with minimal risk to personnel.
- Contact Oregon Fire Marshall to determine type of chemical spilled and chemical characteristics.
- Follow communication procedures contained in section four of this contingency plan.
- Request responders inform Veneta regarding the nature of spill and chemicals used.
- Inform response team that spill is within Veneta's Drinking Water Protection Area.
- Upon notification of spill determine if it is necessary to shut down the well(s). If spill is closer to the well than the one year TOT, shut down the well until threat to water supply is contained.
- Determine if the nature of the contaminant spilled warrants shutting down other wells.
- Implement conservation plan if necessary.
- Have containment and absorbent material available.
- Identify any private wells that will need to be shut down to slow distribution of contaminant.
- Notify businesses and residences about conservation measures.
- Send news to media.
- Leave cleanup to responsible party.
- If spill occurs at a local facility, coordinate with facility's contingency/spill plan.
- Coordinate with state agencies regarding community's extended role.

Within two to ten year Time of Travel (TOT)

- Contact 911 to report the spill or accident for appropriate dispatch response.
- Approach area with minimal risk to personnel.
- Contact Oregon Fire Marshall to determine type of chemical spilled and chemical characteristics.
- Follow communication procedures contained in section four of this contingency plan.
- Request responders inform Veneta regarding the nature of spill and chemicals used.
- Inform response team that spill is within Veneta's Drinking Water Protection Area.
- Have containment and absorbent material available.

- Leave cleanup to responsible party.
- If spill occurs at a local facility, coordinate with facility's contingency/spill plan.
- Coordinate with state agencies regarding community's extended role.

3. Prioritization of Water Usage

This element of the contingency plan prioritizes the community's need for water in the event that the public supply becomes interrupted. In the event that both city wells four and nine are shut down, priority of usage from highest to lowest was identified as follows:

1. Hospitals and medical facilities
2. Residential
3. Schools
4. Senior living facilities
5. Fire department*
6. Subsistence gardens #
7. Agricultural irrigation
8. Industrial and commercial
9. Public parks
10. Other uses

* It was assumed that the fire department did not need drinking quality water and could in an emergency acquire water from another source.
# This distinguishes between gardens for food and purely ornamental gardens.

4. Key Personnel Notification Roster

In the event of an emergency situation involving the city's water supply, key people should be notified and response protocols coordinated between city, county, and other agency personnel. A successful response greatly depends on coordination and clear role definitions between local and regional personnel.

This plan identifies the typical procedure that would follow in the event of a spill or contaminant release. It is assumed that the spill is significant and an emergency situation.

- On site party calls 911.
- Based on site report, 911 dispatch notifies appropriate responders. Most likely this will be Veneta Lane County Fire District #1 and the Lane County Sheriff's department.
- One of several available personnel from Lane County Fire District will take the role of "Incident Commander." Often this person is the first capable party on the scene. The Incident Commander will

contact the Oregon Emergency Response System which will dispatch a Regional HAZMAT team if the situation and/or contaminant is beyond local equipment or personnel capabilities. The incident command system is dynamic—as events unfold, roles and responsibilities may change as the situation evolves. Typically Lane County Sheriff or other law enforcement may be the first on the scene and establish command until the Fire District personnel arrive.

- If a spill occurs within Veneta's DWPA, Veneta's Public Works Director should be quickly notified to enact any precautions for drinking water safety.
- The incident commander will establish unified Command. This is a cooperative structure which may involve the Fire District, Lane County Sheriff, HAZMAT response team, Oregon Department of Transportation, and other agencies as the situation warrants.

Key Personnel and their roles

Veneta Public Works Director, Jerry Shanbeck 935-2191

This individual coordinates necessary efforts and responses on the local level, making decisions regarding the operation of the public water system. This person also provides technical assistance for response procedures and works with other officials in providing information and press releases. Other local officials will need to be contacted by the public works director or other local coordinator. Such individuals include:

- Veneta City Manager (Jan Wellman, 935-2191)
- Veneta Mayor (Tim Brooker, 935-2191)
- Veneta City Council (935-2191)
- Veneta Public Works Department (935-3680)

Veneta Lane County Fire District #1 Division Chief (Doug Perry, 541-935-2226)

Several personnel at the Fire District are trained and capable of taking on the role of incident commander. The Fire District will determine if local personnel can adequately and safely respond to a spill event. The Incident Commander will contact the Oregon Emergency Response System, which in turn will dispatch a Regional HAZMAT team if the situation and/or contaminant is beyond local equipment or personnel capabilities. If it is determined that local response is adequate, available fire district personnel will determine and direct the course of action.

Lane County Sheriff Office, Emergency Response Coordinator (Ike Jensen, 682-4160)

This individual is responsible for coordinating response efforts if the situation is beyond the capabilities of the district. The Emergency Response Coordinator notifies the County Public Health Department and the Oregon Emergency Response system. Typically the incident commander notifies the Emergency Response Coordinator if additional resources are needed.

Media and emergency announcement systems

- West Lane News (935-1882; FAX 935-4082)
- Register-Guard (Joe Mosley 485-1234; FAX 683-7631)
- Emergency Alerting System (EAS), for advising residents and other people's through media primarily radio/TV/cable. This system is typically activated by incident commander.
- Community Emergency Notification System (CENS), a computer activated information system with 30-45 second message of notice over telephone to all residents within 2 minutes. Typically activated by the incident commander upon request, this system is an expensive method of notice most likely reserved for major spills, such as from a chemical manufacturer.

5. Short and Long Term Water Supply Replacement

In the event of an emergency interrupting Veneta's water supply, the minimum needs of the community must be met. Additionally, the replacement supply must meet applicable health standards.

Short-term supply—a few hours or days
Intermediate-term—ranging from days to weeks
Long-term supply—permanent alternative supply

Potential short-term drinking water sources:

- Bottled water
- National Guard tank trucks

Intermediate-term drinking water sources:

- Import water from neighboring sources following OHD safety and hauling procedures
- National Guard tank trucks
- Temporary treatment facility such as a mobile treatment operation

Long-term drinking water sources:

- Develop additional storage facility
- New well
- Develop a necessary treatment facility

Note: all replacement sources should be accompanied by conservation measures.

6. Short and Long Term Water Conservation

In the event of an emergency, conservation of water use will lessen demands on Veneta's water supply. This element details water conservation measures that could be implemented in the event of an interruption of drinking water delivery. Conservation measures should be implemented in conjunction with section three of this contingency plan, "Prioritization of Water Usage." The extent of conservation measure will depend upon the extent of the emergency and the extent of water availability.

Conservation measures that can be applied across all land uses are listed below, followed by measures specified by land use:

- Provide water for drinking purposes only*
- Administer fines for violators of water misuse or overuse in the event of a water shortage emergency (this requires and ordinance in place).
- Make water available for limited duration each day.
- Develop and odd/even day water usage plan whereby half the town would use water on odd days and the other half on even days.
- Review industrial/commercial uses on a case-by-case basis to determine level of water usage and degree of need.
- Encourage businesses to develop in house conservation measures prior to an emergency.
- Provide information about the emergency and conservation measures needed.

* Intended for human use.

Municipal

City parks will not be irrigated, city pool will not be filled, fire drills and cleaning of equipment will not take place, and only essential city functions will operate.

Residential

In serious water shortages, residences should use water only for drinking and food preparation. Common conservation measures for residences include not watering lawns nor washing cars, not using drinking water for laundry, and using water sparingly for washing. Residents should be informed about these and other possible conservation measures.

Industrial/Commercial

Some businesses will likely already have a conservation plan in place for their particular place of business. If not, creation of such a plan should be encouraged. In the event of a water shortage it is in businesses best interest to already have a plan in place. The committee concluded that, in the event of a serious water shortage, essential businesses only should receive water. That is, businesses that provide essential services such as providing food or health care.

Schools

Veneta schools will not irrigate their grounds. This is typically the most consumptive use of water in the schools. It was thought by the committee that schools could take on a vital community role, such as a storage facility or information center, in the event of a water shortage.

7. Plan Updating and Review

This contingency plan's effectiveness will be evaluated, reviewed and updated. The public works director will review any personnel changes and make adjustments to the plan at least annually. The public works director will notify personnel of any changes to this contingency plan.

8. Personnel Training

To be effective, contingency plans must rely on properly trained people operating within a well-organized system with up-to-date information. State emergency responders have been professionally trained to deal with HAZMAT responses. Several local fire personnel are trained to take on the role of incident commander. Local fire personnel also receive HAZMAT awareness and defensive operations training. Awareness training enables personnel to recognize hazardous materials identification tags and the appropriate safety responses. Operations training is at the defensive level, meaning that personnel are trained for containment, rather than cleanup and handling. Training and equipping Veneta staff for HAZMAT response is not feasible at

Training and equipping Veneta staff for HAZMAT response is not feasible at this time. However Veneta staff should be trained for heavy equipment operation, public information distribution, and knowledgeable about this plan and its components.

9. Provisions for Public Education

Educational materials build and maintain support for the plan and can encourage assistance and understanding when contingency planning is put into effect. Management strategies developed for Veneta's plan have a strong educational component that satisfies this section of the contingency plan.

This contingency plan contains unique elements that require additional educational measures. Before an emergency occurs, residences and businesses should be informed about conservations measures outlined in section six of this chapter. Informational pamphlets detailing water conservation measures to be taken should be produced and distributed. The plan should be distributed to schools in the area, Lane County Fire district #1, Lane County Sheriff, and Lane County Emergency Coordinator (Ike Jensen).

10. Logistical and Financial Resources

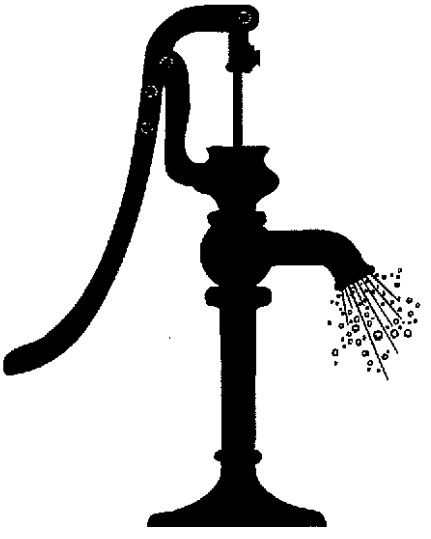
Veneta should participate in an emergency response situation only to the extent of providing needed information and providing assistance regarding the water system, the Drinking Water Protection Area, and particular needs of the community. The city should *not* attempt clean-up efforts on their own; this should be left the qualified technicians. Containment tactics may be appropriate in certain circumstances.

The party responsible for a spill is generally legally obligated to report and provide for clean up. Appropriate clean-up measures depend on the nature and extent of the spill and the type and quantity of contaminant released. The City may need to finance contamination clean up and/or water treatment if the responsible party is unknown or is the city itself.

Partial funding sources:

- State and/or federal emergency funds
- Available city funds:
  - Veneta City Council can allocate funds in an emergency situation
  - Veneta City Manager and Public Works Director have discretionary role in allocating emergency funds
- Bond measures for long term remedies

Chapter Eight:
New Well Site Analysis



Chapter Eight: New Well Site Analysis

Introduction

Projections indicate that Veneta will soon outgrow its current drinking water capacity. The *Water Master Plan* indicates that Veneta will eventually need two new wells to meet capacity. Evaluating potential sites from a groundwater risk perspective allows the city to select new well sites that have relatively low-risk potential. Additionally, the city can develop proactive approaches to guiding land use activities that protect the area surrounding municipal wells. This chapter provides selection criteria from which potential well sites can be evaluated.

Currently at the time of this plan's development and writing, the process of selecting a new well site has commenced. However, a specific site had not yet been recommended. This chapter concludes with recommendations of general areas in Veneta that meet most of the criteria developed by the drinking water protection committee.

Selection Criteria

The committee developed six criteria to assist in choosing locations for new well sites. From a drinking water protection perspective, these criteria were viewed as important factors in locating a new well. The following criteria consider land use and land ownership as well as physical characteristics. When it is time for the selection of a new well site, it is suggested that consideration be given to a new well site's level of contamination risk using the criteria listed below.

Infiltration risk: Soil and sub-soil characteristics influence the permeability of the land surface, which in turn influences the ability of a contaminant to enter the aquifer. Other physical factors also affect drinking water contamination. A susceptibility analysis conducted as part of the *Source Water Assessment Report,* prepared for Veneta by Oregon Health Division, provides a map indicating areas of lower and higher susceptibility. Areas of lower susceptibility are preferred locations for new well sites.

Risk associated with current land uses: Existing land uses vary in risk to groundwater; some land uses present low risk of groundwater contamination while others are pose higher risk of contamination. A

desirable new well site is one that currently has predominantly lower risk of groundwater contamination.

Risk associated with future land uses: Future land uses should be analyzed for their potential risk to groundwater. If future land uses slated for an area include high-risk uses, this can increase a site's risk of contamination. Future land uses anticipated for Veneta will be indicated by plan designations in the city's Comprehensive Plan. Additionally, local officials and community members often know more specific development scenarios.

Risk associated with transportation corridors: Transportation corridors present unique risks to groundwater because of the potential for accidents and the city would not likely be know the quantity, frequency, and type of contaminants being transported. Locating wells such that their one or two year Time of Travel zones are intersected by transportation corridors (particularly hwy. 126 and the adjacent railroad) pose increased risk of contamination.

City ownership or legal control of well property: City ownership or easement control of the property on which a well is located is considered an important factor in protection efforts. Having control over land uses and activities immediately surrounding the well helps ensure protection of this most critical area. This is most easily achieved when the site is located within city limits.

Number of owners in the area: Protecting and managing a drinking water protection area is generally more difficult and complex with increasing numbers of property owners in the area. With greater numbers of property owners, there is increased chance that some of the owners will not be supportive of drinking water protection efforts.

Recommended New Well Site Locations

The following section describes general areas in Veneta chosen by the committee as acceptable well site locations by the above criteria. The five locations recommended indicate general areas rather than specific sites and can serve as a guide for well site considerations. Refer to table 8.1 and Map 3.

Site A

Location: This site is located near Hunter Road just west of Baker and Fern Meadows Lane.

The future and current land uses for Site A present low risk of groundwater contamination—some large vacant lots and medium density rural residential uses. The sensitivity analysis indicates that this site is located where the aquifer is less sensitive to contamination. The site is located within Veneta city limits giving the city opportunity for influencing land uses in the vicinity.

One disadvantage to Site A is that the one or two year TOT would likely intersect two transportation corridors, Highway 126 and the adjacent railroad. This would pose increased risk of contamination from spills resulting from accidents.

Site B

Location: East of Huston Road in the southeast corner of the DWPA between the five and ten year TOT.

The current and future land uses of Site B pose very little risk of groundwater contamination; land uses are predominantly vacant or rural residential in character and of low density. The area is contains few land owners; lot sizes are large. Additionally Site B is in an area of lower aquifer sensitivity, and far from transportation corridors of concern.

Site B is located outside the city limits, potentially giving the city less control over land use activities that might occur in the vicinity.

Site C

Location: East of Huston Road and North of Hwy. 126, between the ten and five year TOT.

Current and future land uses in the area surrounding Site C present low risk of groundwater contamination. The predominant land use is lower density rural residential in character. The area is of lower aquifer sensitivity, and some distance from transportation corridors of concern. Additionally, anecdotal evidence suggests that water quality is good in this area.

Site C is located outside the city limits, potentially giving the city less control over land use activities the might occur in the vicinity.

Site D

Location: Site D is located north of Jeans Road east of Veneta city limits and west of Huston Road. The area is between the ten and five year TOT.

Current and future land uses in this area pose low risk of groundwater contamination. Current land uses are composed of large vacant lots and low density residential. The area is far from transportation corridors of concern and the aquifer sensitivity is low.

Similar to sites B and C, Site D is located outside the city limits, potentially giving the city less control over land use activities the might occur in the vicinity.

Site E

Location: Site E is located north of Todd Way and south of Veneta city limits just outside the ten-year TOT.

Current land uses for Site E present little risk of groundwater contamination; the area is mostly vacant and the area north of Veneta city limits is an Army Corps of Engineers wildlife preservation. Lots sizes are large, and the aquifer sensitivity is low. Towards Todd Way, the lot sizes decrease indicating a larger number of owners. The area is within Veneta city limits allowing the city to influence land uses in the vicinity. Additionally the City of Veneta owns a number of lots in this area.

A major drawback to Site E is that future plan designations identify this area as the "Northeast Veneta Employment Center" zoned as industrial. However, not all industrial uses pose the same risk of groundwater contamination. Industrial land uses in this area may possibly be directed away from higher risk activities. Land use controls should address the types and quantities of chemicals used to reduce the risk of potential contamination.

Summary

Table 8.1 below provides a summary evaluation of the five locations. Selection criteria are found on the left column. If the location meets the criteria, a "yes" is indicated. Where locations do not meet some of the criteria, those criteria are highlighted and indicated by "no."

All the locations proposed meet the criteria of low current land use risk and low aquifer sensitivity. Three of the sites (B, C, and D) are outside Veneta City limits.

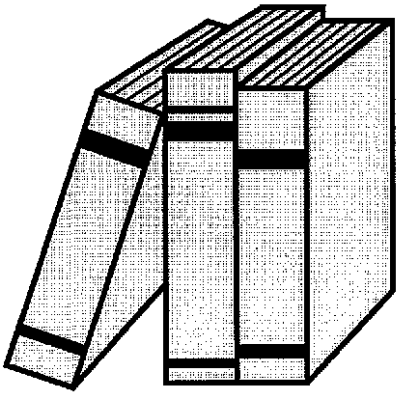
Ideally this analysis should be used in conjunction with a hydrologic study. Where beneficial hydrologic characteristics and the recommended well site locations overlap may be the best location for a new well.

Table 8.1: Evaluation of Proposed New Well Site Locations

	Site A	Site B	Site C	Site D	Site E
Selection Criteria					
Low aquifer sensitivity	Yes	Yes	Yes	Yes	Yes
Low risk current land uses	Yes	Yes	Yes	Yes	Yes
Low risk future land uses	Yes	Yes	Yes	Yes	No
Low risk of transportation corridor	No	Yes	Yes	Yes	Yes
Within Veneta city limits	Yes	No	No	No	Yes
Low number of owners	No	Yes	Yes	Yes	No

Source: Veneta Drinking Water Protection Committee

References and Sources



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Witten, Jon and Scott Horsley. *A Guide to Wellhead Protection.* 1995. American Planning Association Publications.

Contacts and Resources

Oregon Department of Environmental Quality:

(503) 229-5696 or (800) 452-4011
http://www.deq.state.or.us/

Drinking Water Protection Program:

Sheree Stewart, Program Coordinator
Phone: (503) 229-5413
Fax: (503) 229-6037
e-mail: stewart.sheree@deq.state.or.us
http://waterquality.deq.state.or.us/wq/swap/swapcover.htm

Underground Storage Tank program:

811 SW 6th Avenue
Portland, OR 97204
1-800-742-7878
http://www.deq.state.or.us/wmc/tank/ust-lust.htm

Solid Waste Program: Household Hazardous Waste.

DEQ Solid Waste Policy and Program Development Section
811 SW Sixth Avenue
Portland, OR 97204
(503) 229-5913 or 1-800-452-4011
email ALSDORF.william.h@deq.state.or.us
http://www.deq.state.or.us/wmc/solwaste/hhw.html

Oregon Health Division

800 NE Oregon Street
Portland, OR 97232
(503) 731-4000
http://www.ohd.hr.state.or.us/

Drinking Water Protection Program

Dennis Nelson, Groundwater Coordinator
442 "A" Street
Springfield, OR 97477
Phone: (541) 726-2587
Fax: (541) 726-2596
e-mail: dennis.o.nelson@state.or.us
http://www.ohd.hr.state.or.us/cehs/dwp/welcome.htm

Oregon State University Extension Service

Gail Glick Andrews, Extension Water Quality Educator
Bioresource Engineering
116 Gilmore Hall
Corvallis, Oregon 97331-3906
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FAX: (541) 737-2082
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Appendix A

Veneta Inventory Tables

Notes and Acronyms for Table 1 and Table 2

Sites and areas identified in these Tables are only potential sources of contamination to the drinking water. Environmental contamination is not likely to occur when contaminants are used and managed properly.

Total number of sources listed in Table 1 in the DWPA may not add up to the total number of potential contaminants sources in Table 2 because more than one type of potential contaminant source may be present at any given facility.

Data collected by EE of Oregon's Department of Environmental Quality (DEQ) in 10/99.

Acronyms:

AST - Aboveground Storage Tank
DEQ - Oregon Department of Environmental Quality
DRYCLEANER - DEQ's Drycleaner database
DWPA - Drinking Water Protection Area
ECSI - DEQ's Environmental Cleanup Site Information database
HWIMSY - DEQ's Hazardous Waste Information Management System database
LUST - DEQ's Leaking Underground Storage Tank database
NPDES - National Pollution Discharge Elimination System
PCS - Potential Contaminant Source
PWS - Public Water System
SFM - State Fire Marshall's database of hazardous materials
SIS - DEQ's Source Information System database which includes WPCF and NPDES permits
SWMS - DEQ's Solid Waste Management System database
UST - DEQ's Underground Storage Tank database
UST - Underground Storage Tank
WPCF - Water Pollution Control Facility
WRD -Oregon Water Resources Division database for water rights information system

TABLE 1. SUMMARY OF POTENTIAL CONTAMINANT SOURCES BY LAND USE, CITY OF VENETA, PWS NO. 4100920

COMMERCIAL/INDUSTRIAL SOURCES		Relative Risk Ranking	Total In DWPA
AUTOMOBILES	BODY SHOPS	HIGHER	2
	CAR WASHES	MODERATE	1
	GAS STATIONS	HIGHER	5
	REPAIR SHOPS	HIGHER	8
BOAT SERVICES/REPAIR/REFINISHING		HIGHER	0
CEMENT/CONCRETE PLANTS		MODERATE	0
CHEMICAL/PETROLEUM PROCESSING/STORAGE		HIGHER	0
DRY CLEANERS		HIGHER	1
ELECTRICAL/ELECTRONIC MANUFACTURING		HIGHER	0
FLEET/TRUCKING/BUS TERMINALS		HIGHER	0
FOOD PROCESSING		MODERATE	0
FURNITURE/LUMBER/PARTS STORES		MODERATE	1
HOME MANUFACTURING		HIGHER	0
JUNK/SCRAP/SALVAGE YARDS		HIGHER	1
MACHINE SHOPS		HIGHER	1
MEDICAL/VET OFFICES [1]		MODERATE	1
METAL PLATING/FINISHING/FABRICATION		HIGHER	0
MINES/GRAVEL PITS		HIGHER	0
OFFICE BUILDINGS/COMPLEXES		LOWER	0
PARKING LOTS/MALLS - > 50 SPACES		HIGHER	2
PHOTO PROCESSING/PRINTING		HIGHER	0
PLASTIC/SYNTHETICS PRODUCER		HIGHER	0
RESEARCH LABORATORIES		HIGHER	0
RV/MINI STORAGE		LOWER	1
WOOD PRESERVING/TREATING		HIGHER	0
WOOD/PULP/PAPER PROCESSING AND MILLS		HIGHER	0
OTHERS (LIST)			
LOGGING RELATED INDUSTRY		MODERATE	1

RESIDENTIAL/MUNICIPAL SOURCES	Relative Risk Ranking	Total In DWPA
AIRPORT - MAINTENANCE/FUELING AREA	HIGHER	0
APARTMENTS AND CONDOMINIUMS	LOWER	0
CAMPGROUNDS/RV PARKS [1]	LOWER	0
CEMETERIES - PRE-1945	MODERATE	0
DRINKING WATER TREATMENT PLANTS	MODERATE	1
FIRE STATION	LOWER	1
FIRE TRAINING FACILITIES	MODERATE	0
GOLF COURSES	MODERATE	0
HOUSING - HIGH DENSITY - > 1 HOUSE/0.5 ACRES	MODERATE	4
LANDFILL/DUMPS [1]	HIGHER	0
LAWN CARE - HIGHLY MAINTAINED AREAS	MODERATE	0
MOTOR POOLS	MODERATE	0
PARKS	MODERATE	0
RAILROAD YARDS/MAINTENANCE/FUELING AREAS	HIGHER	0
SCHOOLS	LOWER	1
SEPTIC SYSTEMS - HIGH DENSITY - > 1/ACRE [1]	HIGHER	3
SEWER LINES - CLOSE PROXIMITY TO PWS [1]	HIGHER	1
UTILITY STATIONS - MAINTENANCE TRANSFORMER STORAGE	HIGHER	0
WASTE TRANSFER/RECYCLING STATIONS [1]	MODERATE	1
WASTEWATER TREATMENT PLANTS/COLLECTION STATIONS [1]	MODERATE	0
OTHERS (LIST)		
CITY POOL	LOWER	1

NOTES/KEY:

[1] - Potential Source of Microbial Contamination

[2] - Drip Irrigated crops, such as vineyards and some vegetables, are considered lower risk than spray irrigation

[3] - Septic Systems located within the 2-year time-of-travel (TOT) for wells are considered moderate risks.

TABLE 1. SUMMARY OF POTENTIAL CONTAMINANT SOURCES BY LAND USE, CITY OF VENETA, PWS NO. 4100920

AGRICULTURAL/FOREST SOURCES		Relative Risk Ranking	Total in DWPA
AUCTION LOTS[1]		HIGHER	0
BOARDING STABLES [1]		MODERATE	1
CONFINED ANIMAL FEEDING OPERATIONS (CAFOS) [1]		HIGHER	0
CROPS - IRRIGATED - BERRIES, HOPS, MINT, ORCHARDS, VINEYARDS/NURSERIES, GREEN HOUSES, VEGETABLES, ETC.		MODERATE[2]	2
CROPS - NONIRRIGATED - CHRISTMAS TREES, GRAINS, GRASS SEEDS, HAY, PASTURE		LOWER	0
FARM MACHINERY REPAIR		HIGHER	0
GRAZING ANIMALS - > 5 LARGE ANIMALS OR EQUIVALENT/ACRE [1]		MODERATE	0
LAGOONS/LIQUID WASTES [1]		HIGHER	0
LAND APPLICATION SITES [1]		MODERATE	0
MANAGED FOREST LANDS	BROADCAST FERTILIZED AREAS	LOWER	0
	CLEARCUT HARVESTED - < 35 YRS.	MODERATE	0
	PARTIAL HARVESTED - <10 YRS.	MODERATE	0
	ROAD DENSITY - > 2 MI./SQ. MI.	MODERATE	0
PESTICIDE/FERTILIZER/PETROLEUM STORAGE, HANDLING, MIXING, & CLEANING AREAS		HIGHER	1
RECENT BURN AREAS - < 10 YRS.		LOWER	0
OTHERS (LIST)			

MISCELLANEOUS SOURCES		Relative Risk Ranking	Total in DWPA
ABOVE GROUND STORAGE TANKS		MODERATE	3
CHANNEL ALTERATIONS - HEAVY		LOWER	0
COMBINED SEWER OUTFALLS [1]		LOWER	0
STORMWATER OUTFALLS [1]		LOWER	0
COMPOSTING FACILITIES [1]		MODERATE	0
HISTORIC GAS STATIONS		HIGHER	1
HISTORIC WASTE DUMPS/LANDFILLS [1]		HIGHER	0
HOMESTEADS - RURAL	MACHINE SHOPS	HIGHER	0
	SEPTIC SYSTEMS < 1/ACRE [1]	LOWER(3)	1
INJECTION WELLS/DRYWELLS/SUMPS - CLASS V UICS [1]		HIGHER	0
KENNELS - > 20 PENS [1]		LOWER	0
MILITARY INSTALLATIONS		HIGHER	0
RANDOM DUMPSITES		MODERATE	0
RIVER RECREATION - HEAVY USE [1]		LOWER	0
SLUDGE DISPOSAL AREAS [1]		MODERATE	0
STORMWATER RETENTION BASINS [1]		MODERATE	0
TRANSMISSION LINES - RIGHT-OF-WAYS		LOWER	0
TRANSPORTATION CORRIDORS	FREEWAYS/STATE HIGHWAYS	MODERATE	2
	RAILROADS	MODERATE	2
	HERBICIDE USE AREAS	MODERATE	0
	RIVER TRAFFIC - HEAVY	LOWER	0
	STREAM CROSSING - PERENNIAL	LOWER	0
UNDERGROUND STORAGE TANKS	CONFIRMED LEAKING TANKS - DEQ LIST	HIGHER	3
	DECOMMISSIONED - INACTIVE	LOWER	0
	NON-REGULATED TANKS - < 1,100 GALS	HIGHER	0
	NOT YET UPGRADED OR REGISTERED TANKS	HIGHER	0
	UPGRADED AND/OR REGISTERED - ACTIVE	LOWER	2
	STATUS UNKNOWN	HIGHER	1
UPSTREAM RESERVOIRS		LOWER	0
WELLS/ABANDONED WELLS		HIGHER	4
LARGE CAPACITY SEPTIC SYSTEMS -CLASS V UIC (SERVES >20 PEOPLE) [1]		HIGHER	0
OTHERS (LIST)			

NOTES/KEY:

(1) - Potential Source of Microbial Contamination

(2) - Drip irrigated crops, such as vineyards and some vegetables, are considered lower risk than spray irrigation

(3) - Septic Systems located within the 2-year time-of-travel (TOT) for wells are considered moderate risks.

TABLE 2. INVENTORY RESULTS - LIST OF POTENTIAL CONTAMINANT SOURCES; CITY OF VENETA, PWS NO. 4100920

REFERENCE NO. (SEE FIGURE 2)	PCS TYPE	PCS NAME	APPROXIMATE LOCATION	TIME OF TRAVEL ZONE	CITY	RELATIVE RISK RANKING	METHOD FOR LISTING
1	AUTO - REPAIR SHOPS	DICK'S DIESEL SERVICE	NORTHEAST CORNER BROADWAY AND 6TH/24917 BROADWAY	BETWEEN 2-YR AND 5-YR	VENETA	HIGHER	FIELD OBSERVATION
2	AUTO - REPAIR SHOPS	POODLE CREEK BOYS	NORTHWEST CORNER BROADWAY AND 2ND	BETWEEN 2-YR AND 5-YR	VENETA	HIGHER	FIELD OBSERVATION
3	UNDERGROUND STORAGE TANK - CONFIRMED LEAKING TANKS - DEQ LIST	US WEST	SOUTHEAST CORNER BROADWAY AND 2ND	BETWEEN 2-YR AND 5-YR	VENETA	HIGHER	DATABASE; FIELD OBSERVATION; INTERVIEW
4	MEDICAL/VET OFFICE	VENETA VETERINARY HOSPITAL	NORTHEAST CORNER TERRITORIAL AND DUNHAM ROAD	WITHIN 2-YR	VENETA	MODERATE	FIELD OBSERVATION
5	HOUSING - HIGH DENSITY > 1 HOUSE/0.5 ACRE/SEPTIC SYSTEMS HIGH DENSITY > 1/ACRE	HIGH DENSITY HOUSING/HIGH DENSITY SEPTIC	HOUSING EAST OF 25251 HUNTER ROAD	WITHIN 2-YR	VENETA	HIGHER	FIELD OBSERVATION; INTERVIEW
6	HOUSING - HIGH DENSITY > 1 HOUSE/0.5 ACRE	HIGH DENSITY HOUSING ON SEWER	HOUSING WEST OF 25251 HUNTER ROAD	WITHIN 2-YR	VENETA	MODERATE	FIELD OBSERVATION; INTERVIEW
7	AUTO REPAIR SHOPS/UNDERGROUND STORAGE TANKS - STATUS UNKNOWN	OREGON DEPARTMENT OF TRANSPORTATION	EAST END OF LUTHER	WITHIN 2-YR	VENETA	HIGHER	DATABASE; FIELD OBSERVATION
8	PARKING LOTS/MALLS > 50 SPACES	WEST LANE CENTER (SHOPPING CENTER)	TERRITORIAL AND HWY 126 (NORTH SIDE OF HWY 126)	BETWEEN 2-YR AND 5-YR	VENETA	HIGHER	FIELD OBSERVATION
9	DRY CLEANERS	FERN RIDGE CLEANERS	88348 TERRITORIAL ROAD/NORTH OF HWY 126	BETWEEN 2-YR AND 5-YR	VENETA	HIGHER	DATABASE; FIELD OBSERVATION
10	AUTO - GAS STATION/AUTO - CARWASHES/UNDERGROUND STORAGE TANK - UPGRADED OR REGISTERED - ACTIVE	VENETA CHEVRON	24927 HWY 126	BETWEEN 2-YR AND 5-YR	VENETA	HIGHER	DATABASE; FIELD OBSERVATION
11	HISTORIC GAS STATIONS	VENETA AUTO SHOP	NORTHEAST CORNER HUNTER AND TERRITORIAL	WITHIN 2-YR	VENETA	HIGHER	DATABASE; FIELD OBSERVATION
12	SCHOOLS	VENETA ELEMENTARY SCHOOL	NORTHEAST CORNER MCCUTCHEON AVE AND TERRITORIAL	WITHIN 2-YR	VENETA	LOWER	FIELD OBSERVATION
13	FIRE STATIONS	LANE COUNTY FIRE DISTRICT #1	WEST SIDE TERRITORIAL/SOUTH OF HUNTER	WITHIN 2-YR	VENETA	LOWER	FIELD OBSERVATION
14	PESTICIDE/FERTILIZER/PETROLEUM STORAGE/HANDLING	OREGON STATE FORESTRY OFFICE	87950 TERRITORIAL	BETWEEN 2-YR AND 5-YR	VENETA	HIGHER	DATABASE; FIELD OBSERVATION
15	AUTO - GAS STATION/UNDERGROUND STORAGE TANK - CONFIRMED LEAKING/AUTO - REPAIR SHOP	LANE COUNTY MAINTENANCE/PUBLIC WORKS	24974 BOLTON HILL ROAD WEST OF OREGON DEPARTMENT OF FORESTRY	BETWEEN 5-YR AND 10-YR	VENETA	HIGHER	DATABASE; FIELD OBSERVATION
16	PARKING LOTS/MALLS > 50 SPACES	FERN RIDGE CENTER	TERRITORIAL /LUTHER (SOUTH OF HWY 126)	WITHIN 2-YR	VENETA	HIGHER	FIELD OBSERVATION
17	AUTO - GAS STATIONS/ABOVE GROUND STORAGE TANKS	JERRY BROWN CO. CFN CARD LOCK	25095 JEANS ROAD/NORTH OF HWY 126	BETWEEN 5-YR AND 10-YR	VENETA	MODERATE	FIELD OBSERVATION
18	RV/MINI STORAGE	BROADWAY MINI STORAGE	88188 6TH STREET	BETWEEN 2-YR AND 5-YR	VENETA	LOWER	FIELD OBSERVATION
19	DRINKING WATER TREATMENT PLANT	VENETA WATER TREATMENT PLANT	EAST END EAST BROADWAY	WITHIN 2-YR	VENETA	MODERATE	DATABASE; FIELD OBSERVATION
20	OTHER - CITY POOL/ABOVE GROUND STORAGE TANKS	VENETA CITY POOL	EAST END EAST BROADWAY	WITHIN 2-YR	VENETA	MODERATE	DATABASE; FIELD OBSERVATION
21	WELLS/ABANDONED WELLS	CITY OF VENETA WELLS #1 AND 5	NORTHEAST OF WELL #4/EAST END OF NORTHEAST BROADWAY	WITHIN 2-YR	VENETA	HIGHER	FIELD OBSERVATION
22	WELLS/ABANDONED WELLS	CITY OF VENETA WELL #7	SOUTHEAST CORNER HWY 126 AND TERRITORIAL	BETWEEN 2-YR AND 5-YR	VENETA	HIGHER	FIELD OBSERVATION
23	WELLS/ABANDONED WELLS	CITY OF VENETA WELL #8	NORTH OF INTERSECTION OF 6TH AND EAST BROADWAY	BETWEEN 2-YR AND 5-YR	VENETA	HIGHER	FIELD OBSERVATION
24	TRANSPORTATION CORRIDORS - FREEWAYS/STATE HIGHWAYS	HWY 126	NORTH OF CITY OF VENETA WELL #4	WITHIN 2-YR	VENETA	MODERATE	FIELD OBSERVATION
25	TRANSPORTATION CORRIDORS - RAILROADS	SOUTHERN PACIFIC RAILROAD	NORTH OF CITY OF VENETA WELL #4	WITHIN 2-YR	VENETA	MODERATE	FIELD OBSERVATION

information continued on next page

TABLE 2. INVENTORY RESULTS - LIST OF POTENTIAL CONTAMINANT SOURCES; CITY OF VENETA, PWS NO. 4100920

REFERENCE NO. (SEE FIGURE 2)	POTENTIAL IMPACTS	DATABASE LISTINGS	COMMENTS
1	SPILLS, LEAKS, OR IMPROPER HANDLING OF AUTOMOTIVE CHEMICALS AND OTHER WASTE MATERIALS DURING STORAGE AND DISPOSAL MAY IMPACT THE DRINKING WATER SUPPLY.	NONE	NONE
2	SPILLS, LEAKS, OR IMPROPER HANDLING OF AUTOMOTIVE CHEMICALS AND OTHER WASTE MATERIALS DURING STORAGE AND DISPOSAL MAY IMPACT THE DRINKING WATER SUPPLY.	NONE	NONE
3	EXISTING CONTAMINATION FROM SPILLS, LEAKS, OR IMPROPER HANDLING OF STORED MATERIALS MAY IMPACT THE DRINKING WATER SUPPLY.	UST SITE WITH STATUS UNKNOWN. LUST SITE WITH STATUS UNKNOWN. SFM LIST WITH THE FOLLOWING MATERIALS ON SITE: FUEL OIL (AST) AND SULFURIC ACID	NONE
4	SPILLS, LEAKS, OR IMPROPER HANDLING OF AUTOMOTIVE CHEMICALS AND OTHER WASTE MATERIALS DURING STORAGE AND DISPOSAL MAY IMPACT THE DRINKING WATER SUPPLY.	NONE	NONE
5	IMPROPER USE, STORAGE, AND DISPOSAL OF HOUSEHOLD CHEMICALS INCLUDING CLEANERS, VEHICLE MAINTENANCE PRODUCTS, POOL CHEMICALS, PESTICIDES, HERBICIDES AND FERTILIZERS MAY IMPACT THE DRINKING WATER SUPPLY. IMPROPER INSTALLATION, USE, AND/OR MAINTENANCE OF SEPTIC SYSTEMS AND WELLS MAY CAUSE CONTAMINATION. STORMWATER RUN-OFF OR INFILTRATION MAY CARRY CONTAMINANTS TO DRINKING WATER SUPPLY. CUMULATIVE EFFECTS OF MULTIPLE SEPTIC SYSTEMS IN AN AREA MAY IMPACT DRINKING WATER SUPPLY.	NONE	NONE
6	IMPROPER USE, STORAGE, AND DISPOSAL OF HOUSEHOLD CHEMICALS INCLUDING CLEANERS, VEHICLE MAINTENANCE PRODUCTS, POOL CHEMICALS, PESTICIDES, HERBICIDES AND FERTILIZERS MAY IMPACT THE DRINKING WATER SUPPLY. IMPROPER INSTALLATION, USE, AND/OR MAINTENANCE OF SEP	NONE	NONE
7	SPILLS, LEAKS, OR IMPROPER HANDLING OF AUTOMOTIVE CHEMICALS AND OTHER WASTE MATERIALS DURING STORAGE AND DISPOSAL MAY IMPACT THE DRINKING WATER SUPPLY. SPILLS, LEAKS, OR IMPROPER HANDLING OF STORED MATERIALS MAY IMPACT THE DRINKING WATER SUPPLY.	NONE	NONE
8	SPILLS AND LEAKS OF AUTOMOTIVE FLUIDS IN PARKING LOTS MAY IMPACT THE DRINKING WATER SUPPLY.	NONE	NONE
9	SPILLS, LEAKS, OR IMPROPER HANDLING OF DRY CLEANING SOLVENTS AND OTHER CHEMICALS DURING TRANSPORTATION, USE, STORAGE AND DISPOSAL MAY IMPACT THE DRINKING WATER SUPPLY.	SFM LIST WITH THE FOLLOWING MATERIALS ON SITE: PERCHLOROETHYLENE. DRYCLEANERS DATABASE WITH UNKNOWN FACILITY TYPE.	NONE
10	SPILLS, LEAKS, OR IMPROPER HANDLING OF FUELS AND OTHER MATERIALS DURING TRANSPORTATION, TRANSFER, AND STORAGE MAY IMPACT THE DRINKING WATER SUPPLY. IMPROPER MANAGEMENT OF VEHICLE WASH WATER MAY RESULT IN SOAPS, OILS, GREASES, AND METALS IMPACTING THE DRINKING WATER SUPPLY. SPILLS OR IMPROPER HANDLING DURING TANK FILLING OR PRODUCT DISTRIBUTION MAY IMPACT THE DRINKING WATER SUPPLY.	UST SITE WITH A STATUS OF AT LEAST ONE UST IS UPGRADED TO DEQ 1998 TECHNICAL STANDARDS. PWS SHOULD VERIFY IF ALL TANKS HAVE BEEN UPGRADED.	NONE
11	HISTORIC SPILLS, LEAKS, OR IMPROPER HANDLING OF SOLVENTS AND PETROLEUM PRODUCTS MAY IMPACT THE DRINKING WATER SUPPLY. ABANDONED UNDERGROUND STORAGE TANKS MAY BE PRESENT.	UST LIST WITH A STATUS OF DECOMMISSIONING IN PROGRESS AT TIME OF INVENTORY	NONE
12	OVER-APPLICATION OR IMPROPER HANDLING OF CLEANING PRODUCTS, PESTICIDES OR FERTILIZERS USED ON THE SCHOOL GROUNDS MAY IMPACT DRINKING WATER. INADEQUATE MAINTENANCE OF SEPTIC SYSTEMS AND VEHICLE MAINTENANCE WASTES MAY CONTRIBUTE CONTAMINANTS.	NONE	NONE
13	SPILLS, LEAKS, OR IMPROPER HANDLING OF CHEMICALS AND OTHER MATERIALS DURING TRANSPORTATION, USE, STORAGE AND DISPOSAL MAY IMPACT THE DRINKING WATER SUPPLY.	NONE	NONE
14	LEAKS, SPILLS AND IMPROPER HANDLING OF PESTICIDES, FERTILIZERS AND PETROLEUM PRODUCTS MAY IMPACT DRINKING WATER SOURCE.	LUST LIST WITH A STATUS OF DEQ HAS DETERMINED NO FURTHER ACTION IS NECESSARY AT THE SITE. SFM LIST WITH THE FOLLOWING MATERIALS ON-SITE: VARIETY OF PESTICIDES, PETROLEUM DISTILLATES, AND ETHANOL	NONE
15	SPILLS, LEAKS, OR IMPROPER HANDLING OF FUELS AND OTHER MATERIALS DURING TRANSPORTATION, TRANSFER, AND STORAGE MAY IMPACT THE DRINKING WATER SUPPLY. EXISTING CONTAMINATION FROM SPILLS, LEAKS, OR IMPROPER HANDLING OF STORED MATERIALS MAY IMPACT THE DRINKING WATER SUPPLY. SPILLS, LEAKS, OR IMPROPER HANDLING OF AUTOMOTIVE FLUIDS, SOLVENTS, AND REPAIR MATERIALS DURING TRANSPORTATION, USE, STORAGE AND DISPOSAL MAY IMPACT THE DRINKING WATER SUPPLY.	UST LIST WITH UNKNOWN STATUS. LUST LIST WITH A STATUS OF DEQ HAS DETERMINED NO FURTHER ACTION IS NECESSARY AT THE SITE.	NONE
16	SPILLS AND LEAKS OF AUTOMOTIVE FLUIDS IN PARKING LOTS MAY IMPACT THE DRINKING WATER SUPPLY.	NONE	NONE
17	SPILLS, LEAKS, OR IMPROPER HANDLING OF FUELS AND OTHER MATERIALS DURING TRANSPORTATION, TRANSFER, AND STORAGE MAY IMPACT THE DRINKING WATER SUPPLY. SPILLS, LEAKS, OR IMPROPER HANDLING OF STORED MATERIALS MAY IMPACT THE DRINKING WATER SUPPLY.	SFM LIST WITH THE FOLLOWING MATERIALS ON-SITE: DIESEL(AST) AND GASOLINE(AST)	NONE
18	SPILLS, LEAKS, OR IMPROPER HANDLING OF AUTOMOTIVE CHEMICALS AND OTHER WASTE MATERIALS DURING STORAGE AND DISPOSAL MAY IMPACT THE DRINKING WATER SUPPLY.	NONE	NONE
19	TREATMENT CHEMICALS AND EQUIPMENT MAINTENANCE MATERIALS MAY IMPACT GROUNDWATER OR SURFACE WATER SOURCE.	SFM MATERIALS AT SITE INCLUDE SODA ASH (BAG) AND SODIUM HYPOCHLORITE (PLASTIC OR NONMETALLIC DRUM)	NONE
20	SPILLS, LEAKS, OR IMPROPER HANDLING OF STORED MATERIALS MAY IMPACT THE DRINKING WATER SUPPLY.	SFM LIST WITH THE FOLLOWING MATERIALS ON-SITE: SODIUM HYPOCHLORITE.	NONE
21	IMPROPERLY INSTALLED OR MAINTAINED WELLS AND ABANDONED WELLS MAY PROVIDE A DIRECT CONDUIT FOR CONTAMINATION TO GROUNDWATER AND DRINKING WATER SOURCE.	NONE	PERCHLOROETHYLENE DETECTED IN WELL #1
22	IMPROPERLY INSTALLED OR MAINTAINED WELLS AND ABANDONED WELLS MAY PROVIDE A DIRECT CONDUIT FOR CONTAMINATION TO GROUNDWATER AND DRINKING WATER SOURCE.	NONE	SODIUM DETECTED IN WELL #7
23	IMPROPERLY INSTALLED OR MAINTAINED WELLS AND ABANDONED WELLS MAY PROVIDE A DIRECT CONDUIT FOR CONTAMINATION TO GROUNDWATER AND DRINKING WATER SOURCE.	NONE	SODIUM DETECTED IN WELL #8
24	VEHICLE USAGE INCREASES THE RISKS FOR LEAKS OR SPILLS OF FUELS AND OTHER HAZARDOUS MATERIALS THAT MAY IMPACT DRINKING WATER. ROAD BUILDING, MAINTENANCE, AND USAGE MAY CONTRIBUTE TO INCREASED EROSION AND SLOPE FAILURE CAUSING TURBIDITY IN DRINKING WATER SOURCE. OVER-APPLICATION OR IMPROPER HANDLING OF PESTICIDES OR FERTILIZERS MAY IMPACT THE DRINKING WATER SUPPLY.	NONE	NONE
25	RAIL TRANSPORT INCREASES THE RISKS FOR LEAKS OR SPILLS OF FUELS AND OTHER HAZARDOUS MATERIALS THAT MAY IMPACT DRINKING WATER. INSTALLATION AND MAINTENANCE OF TRACKS MAY CONTRIBUTE TO INCREASED EROSION AND SLOPE FAILURE CAUSING TURBIDITY IN DRINKING WATER SOURCE. OVER-APPLICATION OR IMPROPER HANDLING OF PESTICIDES ADJACENT TO TRACKS MAY IMPACT THE DRINKING WATER SUPPLY.	NONE	NONE

TABLE 2. INVENTORY RESULTS - LIST OF POTENTIAL CONTAMINANT SOURCES; CITY OF VENETA, PWS NO. 4100920

REFERENCE NO. (SEE FIGURE 2)	PCS TYPE	PCS NAME	APPROXIMATE LOCATION	TIME OF TRAVEL ZONE	CITY	RELATIVE RISK RANKING	METHOD FOR LISTING
26	HOUSING - HIGH DENSITY > 1 HOUSE/0.5 ACRE/SEPTIC SYSTEMS HIGH DENSITY > 1/ACRE	HIGH DENSITY HOUSING/HIGH DENSITY SEPTIC	EAST OF 25251 HUNTER ROAD	BETWEEN 2-YR AND 5-YR	VENETA	HIGHER	FIELD OBSERVATION; INTERVIEW
27	UNDERGROUND STORAGE TANK-CONFIRMED LEAKING/UNDERGROUND STORAGE TANK - UPGRADED AND REGISTERED/AUTO - GAS STATION	SUNNYSIDE (NEW TEXACO)	25547 HWY 126	WITHIN 2-YR	VENETA	HIGHER	DATABASE; FIELD OBSERVATION; INTERVIEW
28	AUTO - REPAIR SHOPS	TRACY MCGEE'S AUTO SALES	25613 HWY 126	WITHIN 2-YR	VENETA	HIGHER	DATABASE; FIELD OBSERVATION; INTERVIEW
29	AUTO - REPAIR SHOPS	UNKNOWN AUTO REPAIR SHOP	WEST OF SUNNYSIDE ON HWY 126	WITHIN 2-YR	VENETA	HIGHER	FIELD OBSERVATION
30	AUTO - GAS STATIONS/ABOVE GROUND STORAGE TANKS	PACIFIC PRIDE CARD LOCK	NORTHEAST CORNER HUSTON AND HWY 126 (NORTH OF HIGHWAY)	WITHIN 2-YR	VENETA	MODERATE	FIELD OBSERVATION
31	MACHINE SHOP/OTHER - LOGGING - RELATED INDUSTRY	PIONEER RESOURCES	25330 JEANS ROAD	BETWEEN 5-YR AND 10-YR	VENETA	HIGHER	DATABASE; FIELD OBSERVATION
32	AUTO - REPAIR SHOPS	WOODALL'S REPAIR SHOP	25821 HWY 126	WITHIN 2-YR	VENETA	HIGHER	FIELD OBSERVATION
33	AUTO - BODY SHOP/AUTO - REPAIR SHOPS	C AND L AUTOMOTIVE	25808 HWY 126	WITHIN 2-YR	VENETA	HIGHER	DATABASE; FIELD OBSERVATION; INTERVIEW
34	AUTO - BODY SHOP	HIGH TECH COLLISION	WEST OF C AND L ON HWY 126	WITHIN 2-YR	VENETA	HIGHER	FIELD OBSERVATION
35	WASTE TRANSFER/RECYCLING STATION	VENETA GARBAGE SERVICE	JUST OFF HWY 126 - PWS NEEDS TO VERIFY NEW LOCATION	WITHIN 2-YR	VENETA	MODERATE	FIELD OBSERVATION
36	JUNK/SCRAP/SALVAGE YARDS	VENETA AUTO RECYCLERS	SOUTHEAST END OF TIDBALL/25650 TIDBALL	BETWEEN 5-YR AND 10-YR	VENETA	HIGHER	FIELD OBSERVATION
37	HOUSING - HIGH DENSITY > 1/0.5 ACRE/SEPTIC SYSTEMS - HIGH DENSITY - >1/ACRE	W SIDE HUSTON RD/HIGH DENSITY HOUSING W/SEPTIC	SOUTH OF WELL #9/W SIDE HUSTON ROAD	WITHIN 2-YR	VENETA	HIGHER	FIELD OBSERVATION
38	HOMESTEADS - RURAL - SEPTIC SYSTEMS < 1/ACRE	E SIDE HUSTON RD/LOW DENSITY HOUSING W/SEPTIC	SOUTH OF WELL #9/E SIDE HUSTON ROAD	WITHIN 2-YR	VENETA	LOWER	FIELD OBSERVATION
39	FURNITURE/LUMBER/PARTS STORES	NAPA AUTO PARTS	25901 HWY 126	BETWEEN 5-YR AND 10-YR	VENETA	MODERATE	FIELD OBSERVATION
40	WELLS/ABANDONED WELLS	IRRIGATION WELL	WEST - SOUTHWEST OF WELL #9/SOUTHEAST CORNER OF BAKER AND HUNTER	WITHIN 2-YR	VENETA	HIGHER	DATABASE
41	CROPS - IRRIGATED	IRRIGATED CROPS NEAR IRRIGATION WELL	SOUTHEAST CORNER OF BAKER AND HUNTER	WITHIN 2-YR	VENETA	MODERATE	DATABASE
42	CROPS - IRRIGATED	IRRIGATED CROPS	BETWEEN RAILROAD LINES AND HUNTER AND HUSTON/E OF BAKER	WITHIN 2-YR	VENETA	MODERATE	DATABASE
43	TRANSPORTATION CORRIDORS FREEWAYS/STATE HIGHWAYS	HWY 126	RUNS EAST TO WEST NORTH OF WELL #9	WITHIN 2-YR	VENETA	MODERATE	FIELD OBSERVATION
44	TRANSPORTATION CORRIDORS - RAILROADS	SOUTHERN PACIFIC RAILROAD	RUNS EAST TO WEST NORTH OF WELL #9/PARALLEL AND SOUTH OF HWY 126	WITHIN 2-YR	VENETA	MODERATE	FIELD OBSERVATION
45	BOARDING STABLES	BOARDING STABLES NEAR WELL #9	JUST WEST OF WELL #9	WITHIN 2-YR	VENETA	MODERATE	FIELD OBSERVATION
46	SEWER LINES IN CLOSE PROXIMITY TO WELL	SEWER LINES IN CLOSE PROXIMITY TO WELL#4	WITHIN 2-YEAR TOT FOR CITY OF VENETA WELL #4	WITHIN 2-YR	VENETA	HIGHER	INTERVIEW

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Sites and areas identified in this Table are only potential sources of contamination to the drinking water. Environmental contamination is not likely to occur when contaminants are used and managed properly.

TABLE 2. INVENTORY RESULTS - LIST OF POTENTIAL CONTAMINANT SOURCES; CITY OF VENETA, PWS NO. 4100920

REFERENCE NO. (SEE FIGURE 2)	POTENTIAL IMPACTS	DATABASE LISTINGS	COMMENTS
26	IMPROPER USE, STORAGE, AND DISPOSAL OF HOUSEHOLD CHEMICALS INCLUDING CLEANERS, VEHICLE MAINTENANCE PRODUCTS, POOL CHEMICALS, PESTICIDES, HERBICIDES AND FERTILIZERS MAY IMPACT THE DRINKING WATER SUPPLY. IMPROPER INSTALLATION, USE, AND/OR MAINTENANCE OF SEPTIC SYSTEMS AND WELLS MAY CAUSE CONTAMINATION. STORMWATER RUN-OFF OR INFILTRATION MAY CARRY CONTAMINANTS TO DRINKING WATER SUPPLY CUMULATIVE EFFECTS OF MULTIPLE SEPTIC SYSTEMS IN AN AREA MAY IMPACT DRINKING WATER SUPPLY.	NONE	NONE
27	SPILLS OR IMPROPER HANDLING DURING TANK FILLING OR PRODUCT DISTRIBUTION MAY IMPACT THE DRINKING WATER SUPPLY. SPILLS, LEAKS, OR IMPROPER HANDLING OF FUELS AND OTHER MATERIALS DURING TRANSPORTATION, TRANSFER, AND STORAGE MAY IMPACT THE DRINKING WATER SUPPLY.	ECSI SITE WITH A STATUS OF "REFERRED TO LUST PROGRAM". UST LIST WITH AT LEAST ONE UST HAS BEEN UPGRADED TO DEQ 1998 TECHNICAL STANDARDS. PWS SHOULD VERIFY IF ALL TANKS HAVE BEEN UPGRADED. LUST SITE WITH UNKNOWN STATUS	NONE
28	SPILLS, LEAKS, OR IMPROPER HANDLING OF AUTOMOTIVE CHEMICALS AND OTHER WASTE MATERIALS DURING STORAGE AND DISPOSAL MAY IMPACT THE DRINKING WATER SUPPLY.	NONE	NONE
29	SPILLS, LEAKS, OR IMPROPER HANDLING OF AUTOMOTIVE CHEMICALS AND OTHER WASTE MATERIALS DURING STORAGE AND DISPOSAL MAY IMPACT THE DRINKING WATER SUPPLY.	NONE	NONE
30	SPILLS, LEAKS, OR IMPROPER HANDLING OF FUELS AND OTHER MATERIALS DURING TRANSPORTATION, TRANSFER, AND STORAGE MAY IMPACT THE DRINKING WATER SUPPLY. SPILLS, LEAKS, OR IMPROPER HANDLING OF STORED MATERIALS MAY IMPACT THE DRINKING WATER SUPPLY.	NONE	NONE
31	SPILLS, LEAKS, OR IMPROPER HANDLING OF SOLVENTS, METALS, AND OTHER CHEMICALS OR MATERIALS DURING TRANSPORTATION, USE, STORAGE AND DISPOSAL MAY IMPACT THE DRINKING WATER SUPPLY. (ADD SOMETHING ABOUT LOGGING ACTIVITIES.)	SFM LIST WITH THE FOLLOWING MATERIALS ON-SITE: ETHYLENE GLYCOL, MISC. PETROLEUM DISTILLATES AND WASTE PETROLEUM PRODUCTS	NONE
32	SPILLS, LEAKS, OR IMPROPER HANDLING OF AUTOMOTIVE CHEMICALS AND OTHER WASTE MATERIALS DURING STORAGE AND DISPOSAL MAY IMPACT THE DRINKING WATER SUPPLY.	SFM LIST WITH THE FOLLOWING MATERIALS ON-SITE: USED MOTOR OIL (AST)	NONE
33	IMPROPER MANAGEMENT OF VEHICLE PAINTS, THINNERS, AND PRIMER PRODUCTS MAY IMPACT THE DRINKING WATER SUPPLY. SPILLS, LEAKS, OR IMPROPER HANDLING OF AUTOMOTIVE CHEMICALS AND OTHER WASTE MATERIALS DURING STORAGE AND DISPOSAL MAY IMPACT THE DRINKING WATER SUPPLY.	ECSI SITE WITH A STATUS OF STATE EXPANDED PRELIMINARY ASSESSMENT RECOMMENDED	NONE
34	IMPROPER MANAGEMENT OF VEHICLE PAINTS, THINNERS, AND PRIMER PRODUCTS MAY IMPACT THE DRINKING WATER SUPPLY.	NONE	NONE
35	IMPROPER MANAGEMENT OF WATER CONTACTING WASTE MATERIAL MAY IMPACT THE DRINKING WATER SUPPLY.	NONE	FACILITY RELOCATED/PWS SHOULD VERIFY EXACT LOCATION DURING ENHANCED INVENTORY
36	SPILLS, LEAKS, OR IMPROPER HANDLING OF AUTOMOTIVE CHEMICALS AND OTHER WASTE MATERIALS DURING STORAGE AND DISPOSAL MAY IMPACT THE DRINKING WATER SUPPLY.	NONE	NONE
37	IMPROPER USE, STORAGE, AND DISPOSAL OF HOUSEHOLD CHEMICALS INCLUDING CLEANERS, VEHICLE MAINTENANCE PRODUCTS, POOL CHEMICALS, PESTICIDES, HERBICIDES AND FERTILIZERS MAY IMPACT THE DRINKING WATER SUPPLY. IMPROPER INSTALLATION, USE, AND/OR MAINTENANCE OF SEPTIC SYSTEMS AND WELLS MAY CAUSE CONTAMINATION. STORMWATER RUN-OFF OR INFILTRATION MAY CARRY CONTAMINANTS TO DRINKING WATER SUPPLY. CUMULATIVE EFFECTS OF MULTIPLE SEPTIC SYSTEMS IN AN AREA MAY IMPACT DRINKING WATER SUPPLY.	NONE	NONE
38	IF NOT PROPERLY SITED, DESIGNED, INSTALLED, AND MAINTAINED, SEPTIC SYSTEMS CAN IMPACT DRINKING WATER. USE OF DRAIN CLEANERS AND DUMPING HOUSEHOLD HAZARDOUS WASTES CAN RESULT IN GROUNDWATER CONTAMINATION.	NONE	NONE
39	TREATMENT CHEMICALS AND EQUIPMENT MAINTENANCE MATERIALS MAY IMPACT GROUNDWATER OR SURFACE WATER SOURCE.	NONE	NONE
40	IMPROPERLY INSTALLED OR MAINTAINED WELLS AND ABANDONED WELLS MAY PROVIDE A DIRECT CONDUIT FOR CONTAMINATION TO GROUNDWATER AND DRINKING WATER SOURCE.	NONE	LOCATION AND TYPE OF USE BASED ON OREGON WATER RESOURCES DEPARTMENT WATER RIGHTS INFORMATION SYSTEM. PWS SHOULD VERIFY DURING ENHANCED INVENTORY
41	OVER-APPLICATION OR IMPROPER HANDLING OF PESTICIDES, FERTILIZERS AND HERBICIDES MAY IMPACT DRINKING WATER. EXCESSIVE IRRIGATION MAY CAUSE TRANSPORT OF CONTAMINANTS TO GROUNDWATER OR SURFACE WATER THROUGH RUNOFF.	NONE	LOCATION AND TYPE OF USE BASED ON OREGON WATER RESOURCES DEPARTMENT WATER RIGHTS INFORMATION SYSTEM. PWS SHOULD VERIFY DURING ENHANCED INVENTORY
42	OVER-APPLICATION OR IMPROPER HANDLING OF PESTICIDES, FERTILIZERS AND HERBICIDES MAY IMPACT DRINKING WATER. EXCESSIVE IRRIGATION MAY CAUSE TRANSPORT OF CONTAMINANTS TO GROUNDWATER OR SURFACE WATER THROUGH RUNOFF.	NONE	LOCATION AND TYPE OF USE BASED ON OREGON WATER RESOURCES DEPARTMENT WATER RIGHTS INFORMATION SYSTEM. PWS SHOULD VERIFY DURING ENHANCED INVENTORY
43	POSSIBILITY FOR SPILLS AND LEAKS TO IMPACT DRINKING WATER. ROAD BUILDING AND CORRIDOR MAINTENANCE MAY CONTRIBUTE TO INCREASED EROSION AND TURBIDITY IN DRINKING WATER SOURCE. OVER-APPLICATION OR IMPROPER HANDLING OF PESTICIDES, FERTILIZERS AND HERBICIDES	NONE	NONE
44	RAIL TRANSPORT INCREASES THE RISKS FOR LEAKS OR SPILLS OF FUELS AND OTHER HAZARDOUS MATERIALS THAT MAY IMPACT DRINKING WATER. INSTALLATION AND MAINTENANCE OF TRACKS MAY CONTRIBUTE TO INCREASED EROSION AND SLOPE FAILURE CAUSING TURBIDITY IN DRINKING WATER SOURCE. OVER-APPLICATION OR IMPROPER HANDLING OF PESTICIDES ADJACENT TO TRACKS MAY IMPACT THE DRINKING WATER SUPPLY.	NONE	NONE
45	IMPROPER STORAGE AND MANAGEMENT OF ANIMAL WASTES AND WASTEWATER IN AREAS OF CONCENTRATED LIVESTOCK MAY IMPACT DRINKING WATER.	NONE	NONE
46	IF NOT PROPERLY DESIGNED, INSTALLED, AND MAINTAINED, SEWER LINES CAN IMPACT DRINKING WATER, ESPECIALLY ADJACENT TO A WATERBODY OR WITHIN THE 2-YEAR TIME-OF-TRAVEL ZONE FOR DRINKING WATER WELLS.	NONE	NONE

Sites and areas identified in this Table are only potential sources of contamination to the drinking water. Environmental contamination is not likely to occur when contaminants are used and managed properly.

Appendix B

Newspaper Articles and Flyers

WEST LANE NEWS
March 30, 2000

Wellhead group aims for safe water supply

BY STEVE GRAY
News Editor

VENETA — A committee, whose purpose is to look at Veneta's groundwater situation with the intention of providing the city with good quality drinking water in the future, will hold a community workshop next week.

The meeting will be held at the Veneta Community Center on April 6 at 7 p.m. The public is invited to attend and is encouraged to offer their input.

The Veneta Wellhead Protection Committee is headed by Paul Belson, a graduate student from the University of Oregon, who is doing the study as his masters' project.

"This project is about trying to be proactive in protecting Veneta's drinking water," Belson said. "Veneta's source comes from groundwater. It hits the surface and filters down and collects in an aquifer. The city has two wells that tap into that."

The wells are located at the corner of Huston and Tidball Roads and at the Veneta City Park. They are called Well 9 and Well 4 respectively. Well 4 pumps all the time and has a better quality of water. Well 9, meanwhile, is the larger of the two and handles the majority of the city's water flow during the high usage in the summer months.

Whether solo or combined, Public Works Director Jerry Shanbeck said that the city's treatment plant can handle 350 gallons of water a minute from the wells.

Groundwater is water that is can be

See WATER, page 16

West Lane News, March 30, 2000

Water from page 1

found in the open spaces between soil, rock, and sediment particles under the earth's surface. However, it does not occur as underground lakes or rivers. Groundwater is derived when precipitation falls to the ground and is absorbed by an aquifer, such as sand or gravel, located beneath the surface. The aquifer is then able to provide water to wells. The top of the aquifer is what is known as the water table. Whatever activity going on at or just below the surface has the potential to contaminate the groundwater because precipitation has to travel through it to reach the water table.

With that in mind, drinking water protection was one of the items the city identified that it wanted to look at as part of its comprehensive plan update.

"The whole goal of the meeting is that the committee and I have developed management strategies to try and protect this (water) resource and that's what we want the input on from the people in the community," Belson said.

Among the topics to be discussed at the public meeting will be the project's origins, the Oregon Department of Environmental Quality's program overview, a review of the groundwater basics, a presentation of a water delineation map, and the committee's management strategies.

"The idea is to create an awareness that activities on the surface, affects drinking water," Belson said, adding that those activities could be commercial or residential and range from washing a car or spraying fertilizer to leaky septic systems or any kind of spills that occur.

The groundwater project is not so much looking at the city's water quality now but more of what can be done in the future to protect the city's source.

"A large part of our strategy to preventing this stuff (water contamination) is public education," Belson said. "A lot of people might not know that they are living on top of their drinking water and that what they do may affect the quality of that water."

That could include everyone in Oregon, not just Veneta. According to an information sheet supplied by Belson, more than 70 percent of people in the state depend in part on groundwater for their source of drinking water. Those same Oregonians also use one billion gallons of groundwater a day.

The thing that concerns Belson most about the quality of water in Veneta are improperly sealed wells where drilling provides a conduit for chemicals.

"If they (chemicals) get near the well, they can go right down into the water," he said and added that a fact sheet will be provided at the meeting to let people know how a well can be sealed.

"Our goal is to deliver safe quality drinking water to the public and this is one aspect of doing that," Shanbeck said of the committee project. "Planning for emergencies and contingencies, that's what it's all about."

So far, Belson likes what he has seen regarding the committee, the city's water, and its citizens.

"It's going really well," he said. "It's an awesome project. We're learning a lot and the community is going to get a plan and hopefully they'll have strategies to protect their drinking water. It's pretty much a win-win situation.

"It seems like this community has members really interested and active in the community and care about what happens," he continued. "I think it's great and shows they have a healthy, vibrant community."

Following the meeting, the committee will take the public's input and reformulate its water protection strategies. Then it will deliver its report and offer recommendations to the Veneta Planning Commission in the spring and early summer.

Veneta Wellhead Protection group outlines strategies

BY STEVE GRAY
News Editor

VENETA — The Veneta Wellhead Protection Committee, which is looking at ways to ensure the city has quality drinking water in the future, presented some of its management strategies at a public meeting last week.

In addition to the management strategies, the April 6 meeting included presentations by Dennis Nelson from the Oregon Health Division and Elizabeth Essecks from the Oregon Department of Environmental Quality. They discussed what groundwater is as well as the statewide program for protecting groundwater. There was also a presentation of a water delineation map of the city.

Groundwater is water that can be found in the open spaces between soil, rock, and sediment particles under the earth's surface. However, it does not occur as underground lakes or rivers. Groundwater is derived when precipitation falls to the ground and is absorbed by an aquifer, such as sand or gravel, located beneath the surface. The aquifer is then able to provide water to wells. The top of the aquifer is known as the water table. Whatever activity going on at or just below the surface has the potential to contaminate the groundwater because precipitation has to travel through it to reach the water table.

With that in mind, the city identified drinking water protection as one of the items it wanted to look at as part of its comprehensive plan update.

The committee looking into the city's water quality is headed by Paul Belson, a graduate student from the University of Oregon, who is doing the study as his masters' project.

"We presented very briefly the inventory of potential contamination sites and what that would be is any site that stores, uses, or produces chemicals of concern," Belson said, adding that chemicals of concern are anything that can contaminate groundwater.

Belson stressed that the sites in question were only potential in nature and that only two or three sites in the city were known to have contamination problems. He added that it was important that people understand that although there are a couple of contamination problems, the rest of Veneta's water is perfectly fine.

"The key is to identify the potential sites to reduce the risk," he said. "But the major part (for the committee) is management strategies."

After the presentations, the dozen or so members of the audience were able to mark the strategies they felt were most important. Among those, Belson said, were keeping the public informed, implementing the goals, and intervening before a problem gets too big such as controlling pollution or increasing the city's hazardous waste collection.

Other strategies unveiled by the committee were having a well health program where people properly maintain their wells, having a septic system health program where people would be encouraged to properly maintain their system, and doing remediation where wells could be abandoned and priority status could be requested from the DEQ on contaminated sites. More strategies included having an intergovernmental agreement with Lane County because part of the area in question lies within the county's jurisdiction, passing zoning and regulation measures to combat areas where most of the contamination occurs, and having a water conservation program.

Belson and Jerry Shanbeck, Veneta's public works director, were pleased with how the meeting went. "I think we had useful information for the people that were there," Shanbeck said. "We got some priorities established and a list of strategies to obtain those goals."

In addition to getting the public's input at last week's meeting, the committee is still looking for more feedback. A copy of the committee's strategies is available for viewing at City Hall or through the mail to those who request it.

Belson encourages Veneta residents to look over the strategies and give their own input by April 24 at which time all the city's responses will be collected, analyzed, and compiled for the committee's draft report. The report is expected to come out at the end of May. However, that version will contain more than just the management strategies. The committee's final report will go before the planning commission sometime this summer.

"This is an on-going long-term process to protect groundwater for the future," Belson said. "It's really important for the city's health and prosperity."

Water quality subject of well, septic workshops

BY STEVE GRAY
News Editor

VENETA — The Veneta Wellhead Protection Committee is sponsoring two public classes regarding septic systems and wells Thursday, May 18 at the Fern Ridge Library.

The classes are free of charge and are led by Gail Andrews, water quality educator for the Oregon State University Extension Service.

The committee, which is developing a drinking water protection plan for the City of Veneta, is sponsoring the event because of its concerns that a number of Veneta residences with septic systems sit close enough to the city's wells to be a potential risk. In addition, several private wells, including old, inactive ones, could also be a source of contamination. As a result, the committee wants the public to be informed about the potential contamination and proper care of septic systems and wells.

Those concerned about their water quality can have a free water screening for nitrates done at the workshop. To do the test, one needs to bring a half-cup of untreated well water. Sterile bottles, which are needed to check for coliform bacteria will also be available at the meeting as well as at Veneta City Hall from May 18 to 24. The bottles will be collected at city hall around noon on both May 23 and 25 for delivery to the OSU lab. Test results cannot be used to meet real estate transfer requirements, however, because OSU's lab is not certified.

The first class will take place from noon to 1 p.m. on May 18 and will be an overview of the evening's discussion. The second class will occur from 7 p.m. to 9 p.m. and will be split into two sessions. The first hour will be on septic systems while the second hour will cover well water. Space is limited so pre-registration is required. To reserve a place in the class For those unable to make the classes, there will be some well water clinics throughout the day, which will have informational displays, a number of free or low-cost publications, free well water screening for nitrates, and bottles for bacteria testing. The clinics run from 11 a.m. to noon, 1 p.m. to 2 p.m., 5 p.m. to 7 p.m., and 9 p.m. to 9:30 p.m.

For more information contact, Paul Belson, head of the Wellhead Protection Committee at 935-2191 or Andrews at (541) 737-6294.

West Lane News June 15, 2000

Veneta to focus on drinking water plan

BY JENNIFER SAVAGE
Of the News

The Veneta City Council Monday night took steps toward protecting Veneta's drinking water.

The council Paul Belson explain the results of the drinking water protection committee work on development of a wellhead protection plan for Veneta.

Belson outlined goals and strategies for the board to consider as it works its way toward adopting a wellhead protection plan, which would be aimed at preventing contamination of the city's groundwater sources.

Some of the goals of the plan include identifying and researching funding sources, educating the public, implementing well and septic system health programs, forming a governmental agreement with Lane County and conserving water. Belson did this study as a part of his master's thesis and as part of a work project for periodic review from the city of Veneta.

"These are some good suggestions," said Mayor Tim Booker. "This lays the groundwork to begin to take control of our drinking water. This brings to mind the things we need to do to protect our drinking water."

Councilman Fred Miller called the presentation an eye-opener. The council will continue studying Berlson's presentation before adopting a wellhead protection plan for Veneta, the mayor said.

In other business, the council held a public hearing on the budget for 2000-2001 fiscal year. With little discussion, the council closed the hearing and is expected to pass the budget resolution at its next meeting June 26.

City Administrator Jan Wellman reported to the council that the sewer expansion project is under way and construction is expected to begin any day.

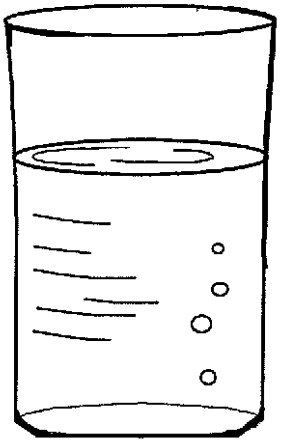
"The schedule is developing quickly," he said and construction crews are already preparing a work site for the project. Wellman also reported that some of the earth removed to make way for the sewer line down the length of Hunter street will be recycled and used in the sewer surge basin as a bedding layer before a thick plastic is put in place.

"It will be used as a protective layer," he said.

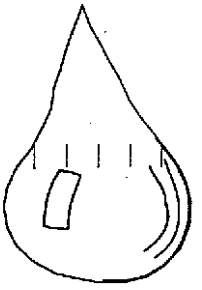
The sewer project is expected to be complete in 240 days.

Veneta Drinking Water Protection

Volunteers Needed



Veneta gets its drinking water from groundwater sources--water that has seeped into the ground. This resource is vital to the health of the community. In an effort to help prevent contamination to this resource, Veneta is engaged in the creation of a Groundwater Protection Plan. Coordinated by a graduate planning student from the University of Oregon, this project will help protect Veneta's drinking water.



Sources of groundwater pollution are common and may include:

- → Septic Systems
- → Household chemicals
- → Pesticides and fertilizers
- → Industrial & agricultural waste

GET INVOLVED

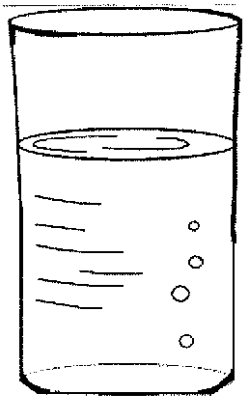
Protection Veneta's groundwater is a proactive and responsible thing to do. Once groundwater becomes polluted it is extremely difficult and expensive to remedy. If possible at all, cleaning may take decades.

Help protect Veneta's drinking water by participating on the groundwater protection committee. Citizen effort is what will make this plan successful. Your input is vital. The committe will meet three times throughout the project as needed beginning this October.

To get involved and learn more about the project, contact **Paul Belson** at the City of Veneta, 935-2191 or email Paul: rbelson@darkwing.uoregon.edu

City of Veneta

Veneta Drinking Water Protection Workshop



Thursday April 6, 2000. 7-9 pm
Veneta Community Center
25192 East Broadway

Veneta's source for drinking water comes from groundwater—water that has seeped into the ground and is "stored" in an aquifer. Human activities on the surface have the potential to adversely affect the quality of the water underground. Once this groundwater resource becomes contaminated, cleanup efforts are extremely expensive and can take decades. Additionally, other sources of water may have to be found at considerable expense.

Veneta is currently creating a plan to proactively protect its drinking water source. The drinking water protection team has developed *DRAFT* Strategies to reduce the risk of groundwater contamination. The Drinking Water Protection Plan is part of the city's effort to update its Comprehensive Plan. Elements of the Drinking Water Protection Plan involving changes to Veneta's Comprehensive Plan will be before the planning commission and the city council for public hearings this spring and summer.

Your input into the drafted strategies is valuable. Participate in the drinking water protection workshop and help determine how Veneta can best prevent contamination to this precious resource!

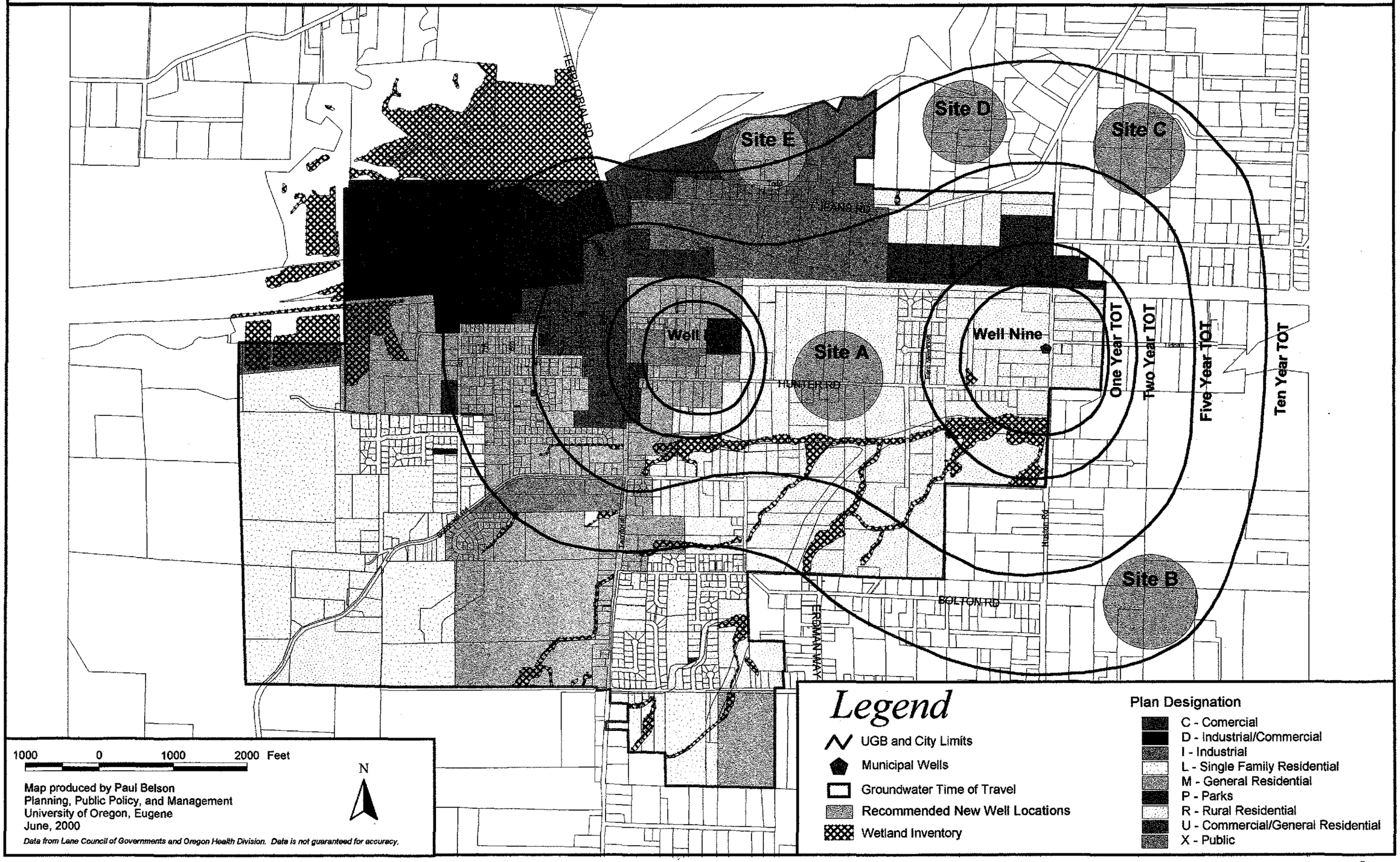
Workshop Schedule

7:00 – 7:30	**Guest presentations**
7:30 – 8:00	**Management Strategies presentation**
8:00 – 9:00	**Workshop groups**

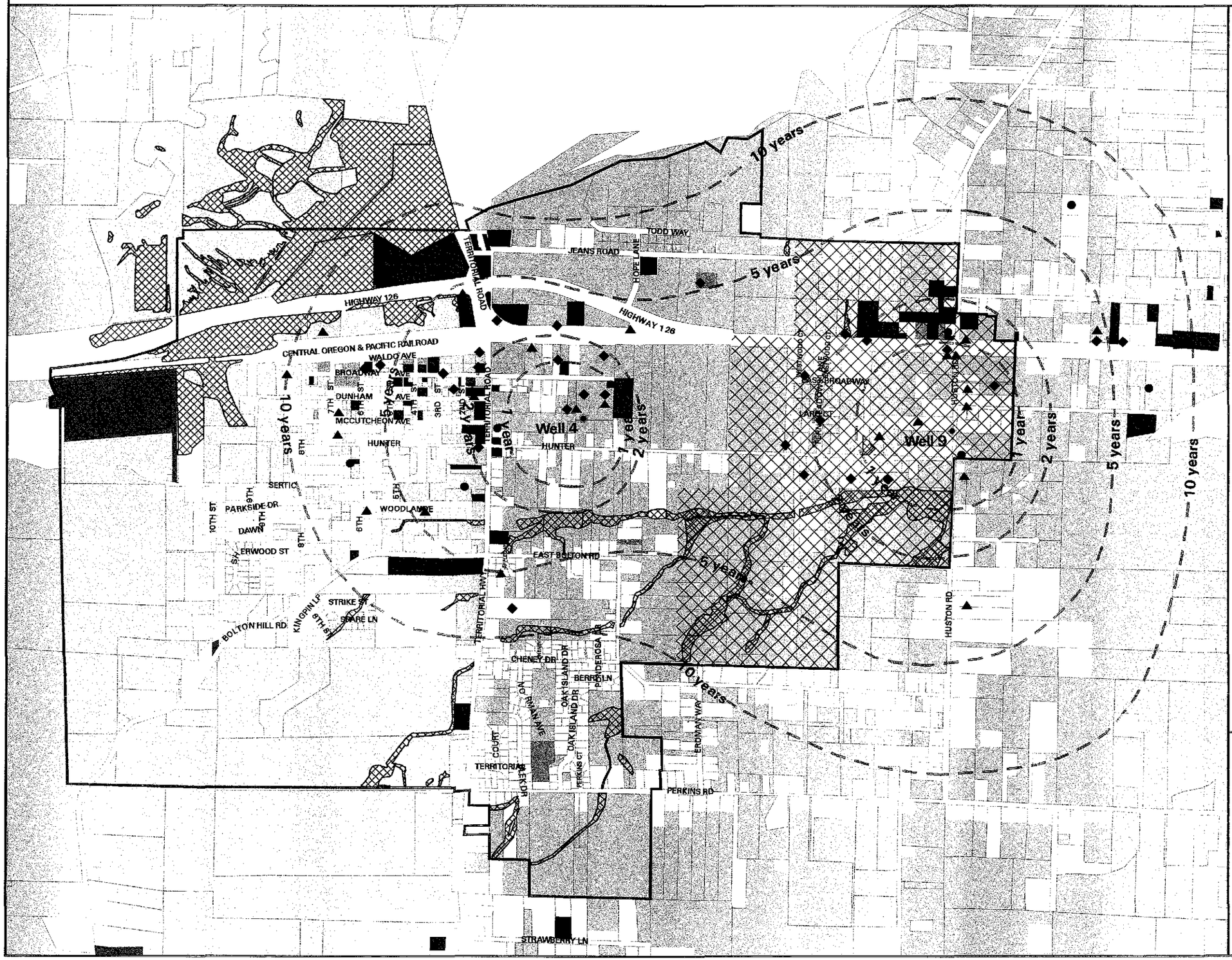
Location is wheelchair accessible (WCA). Communication interpreter, including American Sign Language (ASL) interpretation, is available with 48 hours notice.

Contact Paul Belson, project coordinator 935-2191, rbelson@darkwing.uoregon.edu; or Jerry Shanbeck, City of Veneta Public Works, 935-2191 or by TYY Telecommunications Relay Service 1-800-735-1232.

Map 3: Veneta Plan Designation and Recommended New Well Locations



MAP 2: GENERAL LAND USE AND GROUNDWATER TIME OF TRAVEL



LEGEND

- City Limits/UGB
- Delineated Groundwater Time-of-travel Zones
- Area of City without Sanitary Sewers
- Local Wetlands Inventory

General Land Uses

- Single-Family Residential
- Multi-Family Residential
- Commercial (Services & Trade)
- Industrial
- Transportation Related
- Utilities
- Parks and Recreation
- Public and Semi-Public
- Undeveloped
- Roads & other non-taxlotted areas

Potential Contaminant Sources

- ● Low Risk
- ▲ Moderate Risk
- ◆ High Risk

0′ 1200′ 2400′

Lane Council of Governments
125 East 8th Avenue
Eugene, OR 97401
June, 2000