

Source Water Assessment

A Hydrogeologic Susceptibility and Vulnerability Assessment for L & L Trailer Court, Anchorage, Alaska PWSID # 210396.001

DRINKING WATER PROTECTION PROGRAM REPORT 818

Alaska Department of Environmental Conservation

Source Water Assessment for L & L Trailer Court Anchorage, Alaska PWSID#210396.001

DRINKING WATER PROTECTION PROGRAM REPORT 818

The Drinking Water Protection Program is producing Source Water Assessments in compliance with the Safe Drinking Water Act Amendments of 1996. Each assessment includes a delineation of the source water area, an inventory of potential and existing contaminant sources that may impact the water, a risk ranking for each of these contaminants, and an evaluation of the potential vulnerability of these drinking water sources.

These assessments are intended to provide public water systems owners/operators, communities, and local governments with the best available information that may be used to protect the quality of their drinking water. The assessments combine information obtained from various sources, including the U.S. Environmental Protection Agency, Alaska Department of Environmental Conservation (ADEC), public water system owners/operators, and other public information sources. The results of this assessment are subject to change if additional data becomes available. If you have any additional information that may affect the results of this assessment, please contact the Program Coordinator of DWPP, (907) 269-7521.

CONTENTS

	Page		Page
Executive Summary	1	Inventory of Potential and Existing	-
Introduction	1	Contaminant Sources	4
Description of Anchorage Area, Alaska	1	Ranking of Contaminant Risks	4
L & L Trailer Court		Vulnerability of L & L Trailer Court	
Public Drinking Water System	3	Drinking Water Sources	4
L & L Trailer Court Protection Area	3	Summary	6
		References	7

TABLES

TABLE	1. Definition of Zones	3
	2. Susceptibility	4
	3. Contaminant Risks	5
	4. Overall Vulnerability	5

APPENDICES

APPENDIX

A. L & L Trailer Court Drinking Water Protection Area (Map 1).

- B. Contaminant Source Inventory for L & L Trailer Court (Table 1)
 Contaminant Source Inventory and Risk Ranking for L & L Trailer Court Bacteria and Viruses (Table 2)
 - Contaminant Source Inventory and Risk Ranking for L & L Trailer Court Nitrates/ (Table 3)
 - Contaminant Source Inventory and Risk Ranking for L & L Trailer Court Volatile Organic Chemicals (Table 4)

Contaminant Source Inventory and Risk Ranking for L & L Trailer Court – Heavy Metals, Cyanide and Other Organic Chemicals (Table 5)

Contaminant Source Inventory and Risk Ranking for L & L Trailer Court – Synthetic Organic Chemicals (Table 6)

Contaminant Source Inventory and Risk Ranking for L & L Trailer Court – Other Organic Chemicals (Table 7)

- C. L & L Trailer Court Drinking Water Protection Areas and Potential and Existing Contaminant Sources (Maps 2 through 5)
- D. Vulnerability Analysis for Contaminant Source Inventory and Risk Ranking for L & L Trailer Court Public Drinking Water Source (Charts 1 – 14)

Source Water Assessment for L & L Trailer Court Source of Public Drinking Water, Anchorage, Alaska

Drinking Water Protection Program Alaska Department of Environmental Conservation

EXECUTIVE SUMMARY

The public water system for L & L Trailer Court is a Class A (community) water system consisting of one well in the Anchorage area. Identified potential and existing sources of contaminants for L & L Trailer Court include: sewer lines, residential areas, roads, heavy equipment storage, print shops, electrical/computer manufacturing, recreational trails, roads, furniture/repair shops, motor vehicle waste disposal wells, underground fuel tanks, Leaking Underground Storage Tank (LUST) sites, recognized contaminated sites and various commercial and industrial activities. These identified potential and existing sources of contamination are considered sources of bacteria and viruses, nitrates and/or nitrites, volatile organic chemicals, heavy metals, synthetic organic chemicals and other organic chemicals. Overall, L & L Trailer Court received a vulnerability rating of Medium for bacteria and viruses, nitrate/nitrites and synthetic organic chemicals, High for volatile organic chemicals, inorganic chemicals and other inorganic chemicals.

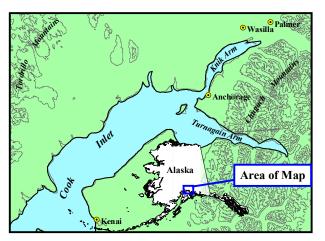


Figure 1. Index map showing the location of Anchorage, Alaska

INTRODUCTION

The Alaska Department of Environmental Conservation (ADEC) is completing source water assessments for all public drinking water sources in the State of Alaska. The purpose of this assessment is to provide public water system owners and/or operators, communities, and local governments with information they can use to preserve the quality of Alaska's public drinking water supplies. The results of this source water assessment can be used to decide where voluntary protection efforts are needed and feasible, and what efforts will be most effective in reducing contaminant risks to your water system.

This source water assessment combines a review of the natural conditions at the site and the potential and existing contaminant risks. These are combined to determine the overall vulnerability of the drinking water source to contamination.

DESCRIPTION OF THE ANCHORAGE AREA, ALASKA

Location

Anchorage, located in south-central Alaska, encompasses 1,698 square miles of land and 264 square miles of water. The area containing a majority of the urban development, commonly referred to as the Anchorage Bowl, encompasses approximately 180 square miles [*Partick, Brabets, and Glass, 1989*] and envelopes the low lands of the area. This area is bounded on the east by the Chugach Mountains and the north, west, and south by the Knik and Turnagain Arm of Cook Inlet (Figure 1). In recent times, urban development has extended eastward along the flanks of the Chugach Mountains. This area, known locally as the Anchorage Hillside, contains development at elevations exceeding 3,700 feet in elevation above sea level.

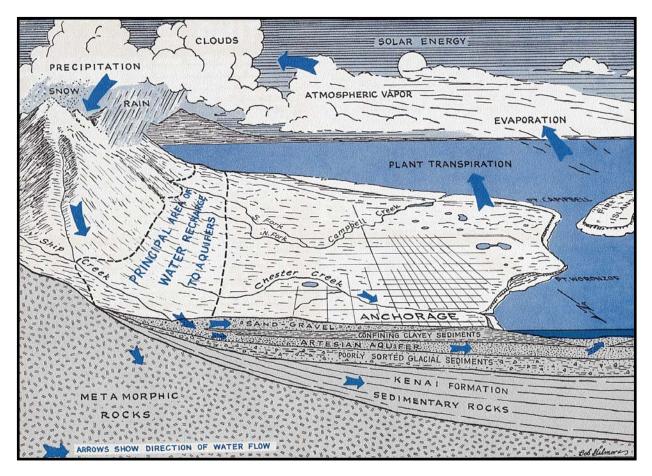


Figure 2. Generalized hydrologic cycle in the Anchorage area [Barnwell, George, Dearborn, Weeks, and Zenone, 1972].

Climate

The Anchorage area climate is somewhat transitional in that it does not experience large daily and annual temperature fluctuations like those experienced in the interior of Alaska nor does it experience high amounts of precipitation typified by gulf coast regions. Mean annual precipitation at the Anchorage International Airport is approximately 16 inches per year. On average, Anchorage receives a total snow accumulation of 69 inches per year. Precipitation generally increases inland toward the Chugach Mountains where annual precipitation may exceed 160 inches per year [*Barnwell, George, Dearborn, Weeks, and Zenone,* 1972]. Mean daily temperature ranges from 65° F during July to 8° F in January [*Western Regional Climate Center,* 2000].

Physiography and Groundwater Conditions

Surface elevations in the Anchorage area range from sea level at Knik and Turnagain Arms to well over 5,000 feet in the peaks that bound the area. Glacial moraine and outwash deposits primarily mantle the surface of the Anchorage Bowl. The backbone of the Chugach Mountains is composed primarily of metamorphic marine and volcanic rocks (bedrock). These high peaks that bound Anchorage's east side are flanked with colluvium or slope deposits. These slope deposits eventually grade into the glacial and stream deposits at lower elevations in the Anchorage Bowl.

In the Anchorage area, two principal groundwater flow systems or aquifers exist (see Figure 2). The upper unconfined aquifer or water-table aquifer is separated from a lower confined aquifer system by layers of silty, clayey glacially derived sediments (confining layer) [*Ulery and Updike*, 1983]. The lower confined aquifer system consists of a series of hydrologically interconnected layers and lenses of gravel, sand and silt that, collectively, form the confined aquifer. The confining layer ranges from 0 to 270 feet thick throughout the Anchorage area and generally thins with increasing distance from Cook Inlet, thus pinching out at the mountain front [*Patrick, Brabets, and Glass*, 1989].

Water enters or recharges these two aquifer systems in several different ways. Along the front of the Chugach Mountains, groundwater seeps from fractures in bedrock into the sediments. At these higher elevations, rain and snowmelt also enters the sediments. This area along the mountain front is considered the principal recharge area for wells in the Anchorage area. Precipitation in the low lands may also percolate directly into the ground. Lastly, aquifers may also be recharged by streams where surface water percolates into surrounding permeable sediments (losing reaches of streams). Groundwater flow in the confined aquifer is generally east to west from the mountain front toward Cook Inlet and Turnagain Arm, except in areas where the direction of flow is influenced by large municipal or industrial production wells. The direction of groundwater flow in the upper unconfined aguifer is more variable due to the influence from surfacial topography as well as its close connection with surface water bodies.

L & L TRAILER COURT PUBLIC DRINKING WATER SYSTEM

L & L Trailer Court is a Class A (community) water system. The system consists of one well in the Anchorage area. (See Map 1 of Appendix A).

The well is located near Chugach Way between Spenard Road and Arctic Blvd. at an elevation of approximately 75 feet above sea level.

The 1997 Sanitary Survey indicates that the well is installed with caps providing a sanitary seal. However, a rope penetrates the sanitary seal thus reduced the protectiveness of the seal. A properly installed sanitary seal may provide protection against contaminants from entering the source waters at the well casing. Records indicate that the well was installed prior to grouting regulations. Thus, it is assumed that the well was not grouted according to current ADEC regulations. Proper grouting provides added protection against contaminants traveling along the well casing and into source waters.

Records indicate that the well depth is 100 feet deep. The well log is unavailable. However, logs of nearby wells indicate that there is a confining layer from 18 feet to 54 feet below the surface. This confining layer may provide protection from contaminates entering the aquifer. However, the protectiveness of the clay layers tend to thin out towards the mountains allowing contaminants that enter the subsurface near the base of the mountains to enter the confined aquifer uninhibited by the absence of any protective layer.

This system operates 365 days per year and serves 50 residents through 36 service connections.

L & L TRAILER COURT PROTECTION AREA

In order to evaluate whether a drinking water source is at risk, we must first evaluate what are the most likely pathways for surface contamination to reach the groundwater. Some areas are more likely to allow contamination to reach the well than others. These areas are determined by looking at the characteristics of the soil, groundwater, aquifer, and well.

The most probable area for contamination to reach the drinking water well is the area that contributes water to the well, the groundwater recharge area. This area is designated as the Drinking Water Protection Area (DWPA). Because releases of contaminants within the DWPA are most likely to impact the drinking water well, this area will serve as the focus for voluntary protection efforts.

An outline of the immediate watershed was used to determine the size and shape of the DWPA for L & L Trailer Court. Available geology was also considered to take into account any uncertainties in groundwater flow and aquifer characteristics to arrive at a meaningful DWPA (Please refer to the Guidance Manual for Class A Public Water Systems for additional information).

The DWPAs established for wells by the ADEC are usually separated into four zones, limited by the watershed. These zones correspond to differences in the time-of-travel (TOT) of the water moving through the aquifer to the well. An analytical calculation was used to determine the size and shape of the DWPA. The input parameters describing the attributes of the aquifer in this calculation were adopted from the U.S. Geological Survey (*Patrick, Brabets, and Glass, 1989*), and State of Alaska Department of Water Resources (*Jokela et. al., 1991*).

The time of travel for contaminants within the water varies and is dependent on the physical and chemical characteristics of each contaminant. The following is a summary of the four DWPA zones and the calculated time-of-travel for each:

Table 1. Definition of Zones

Zone	Definition
А	¹ / ₄ the distance for the 2-yr. TOT
В	Less than the 2 year TOT
С	Less Than the 5 year TOT
<u>D</u>	Less than the 10 year TOT

INVENTORY OF POTENTIAL AND EXISTING CONTAMINANT SOURCES

The Drinking Water Protection Program has completed an inventory of potential and existing sources of contamination within L & L Trailer Court DWPA. This inventory was completed through a search of agency records and other publicly available information. Potential sources of contamination to the drinking water aquifer include a wide range of categories and types. Potential drinking water contaminants are found within agricultural, residential, commercial, and industrial areas, but can also occur within areas that have little or no development.

For the basis of all Class A public water system assessments, six categories of drinking water contaminants were inventoried. They include:

- Bacteria and viruses;
- Nitrates and/or nitrites;
- Volatile organic chemicals
- Heavy metals, cyanide, and other inorganic chemicals,
- Synthetic organic chemicals, and
- Other organic chemicals.

The sources are displayed on Maps 2 -5 in Appendix C and summarized in Table 1 of Appendix B.

RANKING OF CONTAMINANT RISKS

Once the potential and existing sources of contamination have been identified, they are assigned a ranking according to what type and level of risk they represent. Ranking of contaminant risks for a "potential" or "existing" source of contamination is a function of toxicity and volumes of specific contaminants associated with that source.

Tables 2 through 7 in Appendix B contain the ranking of potential and existing sources of contamination with respect to bacteria and viruses, nitrates and/or nitrites, volatile organic chemicals, heavy metals, synthetic organic chemicals, and other organic chemicals.

VULNERABILITY OF L & L TRAILER COURTDRINKING WATER SOURCE

Vulnerability of a drinking water source to contamination is a combination of two factors:

- Natural susceptibility; and
- Contaminant risks.

Each of the six categories of drinking water contaminants has been analyzed and an overall vulnerability score of 0 to 100 is ultimately assigned:

Natural Susceptibility (0 - 50 points)

+

Contaminant Risks (0 – 50 points)

=

Vulnerability of the

Drinking Water Source to Contamination (0 - 100). A score for the Natural Susceptibility is achieved by analyzing the properties of the well and the aquifer.

Susceptibility of the Wellhead (0 - 25 Points)

+

Susceptibility of the Aquifer (0 - 25 Points)

=

Natural Susceptibility (Susceptibility of the Well) (0-50 Points)

Table 2 shows the Susceptibility scores and ratings for the well serving L & L Trailer Court.

Table 2. Susceptibility of the well

	Score	Rating
Susceptibility of the	5	Low
Wellhead		
Susceptibility of the	11	Medium
Aquifer		
Natural Susceptibility	16	Low

Contaminant risks to a drinking water source depend on the type, number or density, and distribution of contaminant sources. This data has been derived from an examination of existing and historical contamination that has been detected at the drinking water source through routine sampling. It also evaluates potential sources of contamination. Table 3 summarizes the Contaminant Risks for each category of drinking water contaminants.

 Table 3.
 Contaminant Risks

-	~	
Category	Score	Rating
Bacteria and Viruses	30	High
Nitrates and/or Nitrites	35	High
Volatile Organic Chemicals	50	Very High
Heavy Metals, Cyanide, and		
Other Inorganic Chemicals	50	Very High
Synthetic Organic Chemicals	42	Very High
Other Organic Chemicals	50	Very High

Appendix D contains fourteen charts, which together form the 'Vulnerability Analysis' for a source water assessment for a public drinking water source. Chart 1 analyzes the 'Susceptibility of the Wellhead' to contamination by looking at the construction of the well and its surrounding area. Chart 2 analyzes the 'Susceptibility of the Aquifer' to contamination by looking at the naturally occurring attributes of the water source and influences on the groundwater system that might lead to contamination. Chart 3 analyzes 'Contaminant Risks' for the drinking water source with respect to bacteria and viruses. The 'Contaminant Risks' portion of the analysis considers potential sources of contaminants as well as a review of contamination that has or may have occurred, but has not arrived or been detected at the well. Lastly, Chart 4 contains the 'Vulnerability Analysis for Bacteria and Viruses'. Charts 5 through 14 contain the Contaminant Risks and Vulnerability Analyses for nitrates and nitrites, volatile organic chemicals, heavy metals, synthetic organic chemicals, and other organic chemicals, respectively.

Table 4 contains the overall vulnerability scores (0 - 100) and ratings for each of the six categories of drinking water contaminants. Note: scores are rounded off to the nearest five.

Table 4. Overall Vulnerability

Category	Score	Rating
Bacteria and Viruses	45	Medium
Nitrates and Nitrites	50	Medium
Volatile Organic Chemicals	65	High
Heavy Metals, Cyanide and		
Other Inorganic Chemicals	65	High
Synthetic Organic Chemicals	55	Medium
Other Organic Chemicals	65	High

Bacteria and Viruses

The contaminant risk for bacteria and viruses is high with sewer lines, residential areas and recreational trails presenting the most significant risk to the drinking water well Recent sampling of the well indicates that no bacteria and viruses have been detected in source waters. (See Chart 3 – Contaminant Risks for Bacteria and Viruses in Appendix D).

After combining the contaminant risk for bacteria and viruses with the natural susceptibility of the well, the overall vulnerability is medium.

Nitrates and Nitrites

The contaminant risk for nitrates and nitrites is high with sewer lines, residential areas, and recreational trails presenting the most significant risk to the drinking water well.

Sampling history indicates that nitrates have not been detected in source waters (See Chart 5 - Contaminant Risks for Nitrates and/or Nitrites in Appendix D).

After combining the contaminant risk for nitrates and nitrites with the natural susceptibility of the well, the overall vulnerability of the well to contamination is medium.

Volatile Organic Chemicals

The contaminant risk for volatile organic chemicals is very high with residential areas, sewer lines, roads, print shops, electrical/computer manufacturing and sign manufacturing presenting the most significant risk to the drinking water source

Recent sampling indicates that no volatile organic chemicals have been detected in the source waters. However, very low levels of volatile organic chemicals were detected in 1996 and 1992 (See Chart 7 – Contaminant Risks for Volatile Organic Chemicals in Appendix D). It is likely that these contaminants are due to laboratory error. No further detection has occurred.

After combining the contaminant risk for volatile organic chemicals with the natural susceptibility of the well, the overall vulnerability of the well to contamination is high.

Heavy Metals, Cyanide, and Other Inorganic Chemicals

The contaminant risk for heavy metals, cyanide and other inorganic chemicals is very high with sewer lines, roads, print shops, sign manufacturing and existing contamination presenting the most significant risk to the drinking water source.

Recent sampling indicates that arsenic was detected in the source waters above the current MCL of 0.01 mg/l (See Chart 9 – Contaminant Risks for Heavy Metals and Other Inorganic Chemicals in Appendix D). The MCL for arsenic has recently been lowered from 0.050 mg/l to 0.01 mg/l. At the time of sampling, the levels detected did not exceed the prior MCL of 0.050 mg/l.

According to the EPA, "Arsenic occurs naturally in rocks and soil, water, air, and plants and animals. It can be further released into the environment through natural activities such as volcanic action, erosion of rocks, and forest fires, or through human actions. Approximately 90 percent of industrial arsenic in the U.S. is currently used as a wood preservative, but arsenic is also used in paints, dyes, metals, drugs, soaps, and semi-conductors. Agricultural applications, mining, and smelting also contribute to arsenic releases in the environment." (USEPA, 2001). It is likely that the arsenic detected is from natural sources.

Studies have linked long-term exposure to arsenic in drinking water to cancer of the bladder, lungs, skin, kidney, nasal passages, liver, and prostate. Non-cancer effects of ingesting arsenic include cardiovascular, Pulmonary, immunological, neurological, and endocrine (e.g., diabetes) effects. Short-term exposure to high doses of arsenic can cause other adverse health effects, but such effects are unlikely to occur from U.S. public water supplies that are in compliance with the previous arsenic standard of 0.050 mg/l. (USEPA, 2001).

After combining the contaminant risk for heavy metals and other inorganic chemicals with the natural susceptibility of the well, the overall vulnerability of the well to contamination is high.

Synthetic Organic Chemicals

The contaminant risk for synthetic organic chemicals is very high with sewer lines, residential areas, nurseries, agricultural/chemical storage and furniture repair/finishing shops presenting the most significant risk.

The system has a waiver and recent sampling of synthetic organic chemicals has not occurred.

After combining the contaminant risk with the natural susceptibility of the well, the overall vulnerability to synthetic organic chemicals is medium.

Other Organic Chemicals

The contaminant risk for other organic chemicals is very high with sewer lines, residential areas, roads, heavy equipment storage, electrical/computer manufacturing and furniture repair/finishing shops presenting the most significant risk. The system has a waiver and recent sampling of other organic chemicals has not occurred. After combining the contaminant risk with the natural susceptibility of the well, the overall vulnerability to other organic chemicals is high.

SUMMARY

A *Source Water Assessment* has been completed for the source of public drinking water serving L & L Trailer Court. The overall vulnerability of this source to contamination is **Medium** for bacteria and viruses, nitrate/nitrites and synthetic organic chemicals, **High** for volatile organic chemicals, inorganic chemicals and other inorganic chemicals. This assessment of contaminant risks can be used as a foundation for local voluntary protection efforts as well as a basis for the continuous efforts on the part of L & L Trailer Court to protect public health. It is anticipated that *Source Water Assessments* will be updated every five years to reflect any changes in the vulnerability and/or susceptibility of L & L Trailer Court public drinking water source.

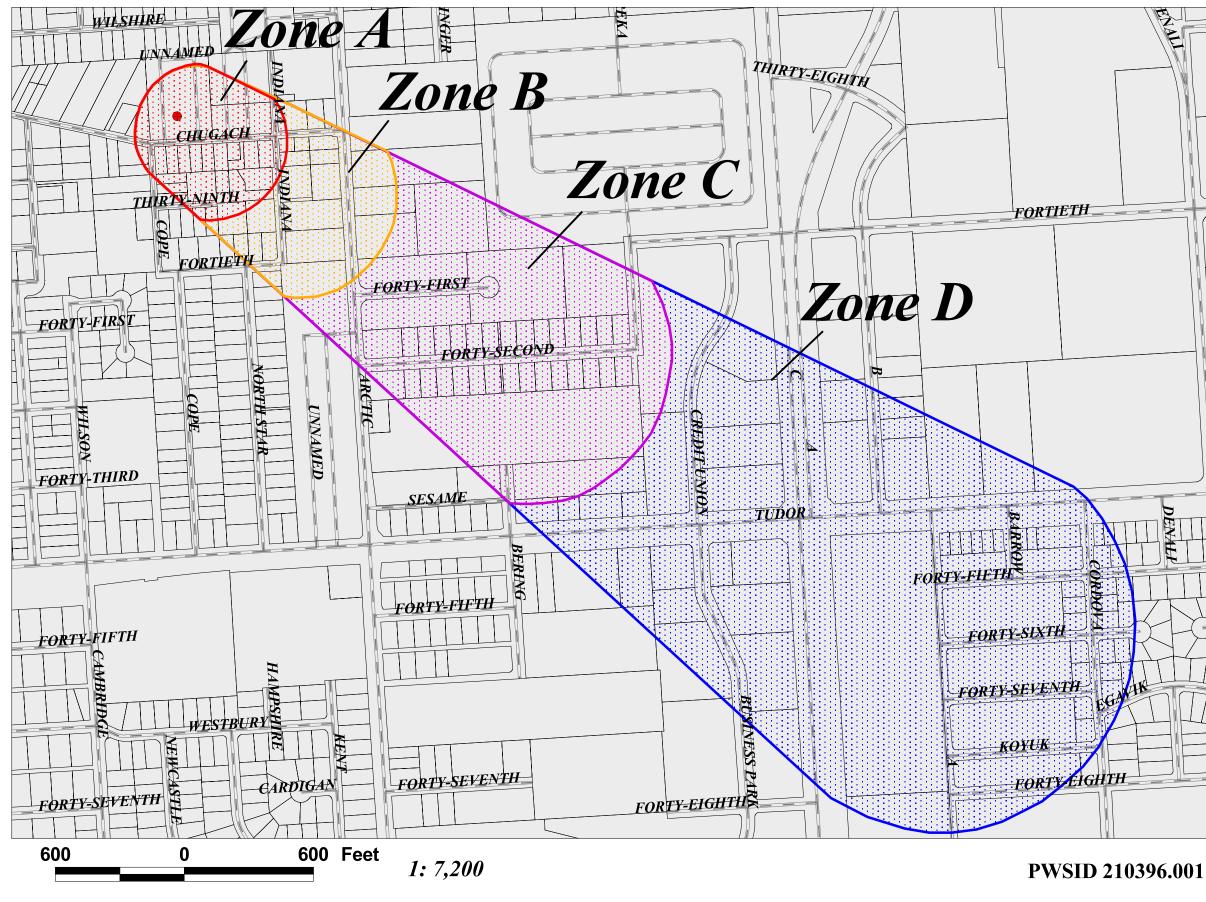
REFERENCES

- Barnwell, W.W., George, R.S., Dearborn, L.L., Weeks, J.B., and Zenone, C., 1972, Water for Anchorage: an atlas of the water resources of the Anchorage area, Alaska: U.S. Geological Survey Open-File Report, 76 p.
- Patrick, L.D., Brabets, T.P., and Glass, R.L., 1989, Simulation of ground-water flow at Anchorage, Alaska: U.S. Geological Survey Water-Resources Investigations Report 88-4139, 41p.
- Ulery, C.A. and Updike, R.G, 1983, Subsurface structure of the cohesive facies of the Bootlegger Cove Formation, Southwest Anchorage, Alaska: Alaska Division of Geological and Geophysical Surveys Professional Report 84, 5 p.
- Wang, B., Strelakos, P.M., and Jokela, B., 2000, Nitrate Source Indicators In Groundwater of the Scimitar Subdivision, Peters Creek Area, Anchorage Alaska: U.S. Geological Survey Water-Resources Investigations Report 00-4137, 25p.
- Western Regional Climate Center, 2000, August 24, Web extension to the *Western Regional Climate Center* [WWW document]. URL <u>http://www.wrcc.dri.edu/index.html</u>
- U.S. Environmental Protection Agency, 2001, Office of Water, National Primary Drinking Water Regulations, Consumer Factsheet on Arsenic. Retrieved August 2002. [WWW document]. URL http://www.epa.gov/safewater/ars/ars_rule_factsheet.html

APPENDIX A

L & L Trailer Court Drinking Water Protection Area Location (Map 1)

Drinking Water Protection Area for L & L Trailer Court





L & L Trailer Court Well

Zone A Protection Area

Several Months Travel Time

Zone B Protection Area

Less Than 2 Years Travel Time

Zone C Protection Area

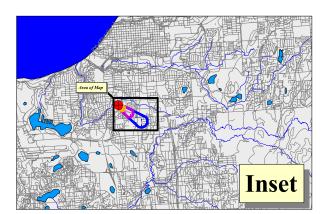
Less Than 5 Years Travel Time

Zone D Protection Area

Less Than 10 Years Travel Time

MOA Land Parcels

Roads





Map 1

APPENDIX B

Contaminant Source Inventory and Risk Ranking for L & L Trailer Court (Tables 1-7)

Contaminant Source Inventory for L & L Trailer Court

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Map Number	Comments
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-1	А	2	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-2	А	2	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-3	А	2	
Residential Areas	R01	R1-1	А	3	
Highways and roads, paved (cement or asphalt)	X20	X20-1	А	2	
Highways and roads, paved (cement or asphalt)	X20	X20-2	А	2	
Highways and roads, paved (cement or asphalt)	X20	X20-3	А	2	
Highways and roads, paved (cement or asphalt)	X20	X20-4	А	2	
Highways and roads, paved (cement or asphalt)	X20	X20-5	А	2	
Highways and roads, paved (cement or asphalt)	X20	X20-6	А	2	
Highways and roads, paved (cement or asphalt)	X20	X20-7	А	2	
Highways and roads, paved (cement or asphalt)	X20	X20-8	А	2	
Construction trade areas and materials	C09	C9-1	В	3	
Hardware stores	C17	C17-1	В	3	
Heavy equipment rental/storage	C18	C18-1	В	3	
Printers, publishers, copiers	C37	C37-1	В	3	
Printers, publishers, copiers	C37	C37-2	В	3	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-4	В	2	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-5	В	2	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-6	В	2	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-7	В	2	

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Map Number	Comments
Electrical, electronic, computer, and communications equipment/component manufacturing	I13	I13-1	В	3	
Sign manufacturing	139	I39-1	В	3	
Residential Areas	R01	R1-2	В	3	
Municipal or city parks (with green areas)	X04	X4-1	В	3	
Highways and roads, paved (cement or asphalt)	X20	X20-10	В	2	
Highways and roads, paved (cement or asphalt)	X20	X20-9	В	2	
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-1	В	3	
Dog walking areas/foot trails	X46	X46-1	В	3	
Dog walking areas/foot trails	X46	X46-2	В	3	
Orchards or nurseries	A10	A10-1	С	4	
Agricultural chemical sales/storage	C02	C2-1	С	4	
Construction trade areas and materials	C09	C9-2	С	4	
Construction trade areas and materials	C09	C9-3	С	4	
Construction trade areas and materials	C09	C9-4	С	4	
Construction trade areas and materials	C09	C9-5	С	4	
Construction trade areas and materials	C09	C9-6	С	4	
Florists	C12	C12-1	С	4	
Furniture manufacturing, repair, and finishing shops	C14	C14-2	С	4	
Hardware stores	C17	C17-2	С	4	
Hardware stores	C17	C17-3	С	4	
Heavy equipment rental/storage	C18	C18-2	С	4	
Laboratories (chemical, soils, and research)	C20	C20-1	С	4	
Motor/motor vehicle supplies stores	C28	C28-1	С	4	
Photography supplies/photo processing laboratories	C36	C36-1	С	4	
Printers, publishers, copiers	C37	C37-3	С	4	
Printers, publishers, copiers	C37	C37-4	С	4	

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Map Number	Comments
Printers, publishers, copiers	C37	C37-5	С	4	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-8-12	С	2	Zone C has 5 sewer lines
Asphalt and tar processing/storage	103	I3-1	С	4	
Electrical, electronic, computer, and communications equipment/component manufacturing	I13	I13-2	С	4	
Closed tanks, gasoline (underground)	T13	T13-1	С	4	
Closed tanks, lubricants or other petroleum products (underground)	T21	T21-1	С	4	
Contaminated sites, DEC recognized, non-Superfund, non-RCRA	U04	U7-1	С	4	File No. L69.4: 4333 Bering Street. Waste oil contamination of soil discovered in 1993. Remediation in progress. Priority: Medium
Highways and roads, paved (cement or asphalt)	X20	X20-10-14	С	2	Zone C has 4 roads
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-2	С	4	
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-3	С	4	
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-4	С	4	
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-5	С	4	
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-6	С	4	
Gasoline stations (without repair shop)	C15	C15-1	D	5	
Printers, publishers, copiers	C37	C37-4	D	5	
Injection wells (Class V) Motor Vehicle Waste Disposal Well	D42	D42-1	D	5	
Electrical, electronic, computer, and communications equipment/component manufacturing	I13	I13-3	D	5	
Lumber processing and preservation	N04	N4-1	D	5	
Tanks, diesel (underground)	T08	T8-1	D	5	
Tanks, gasoline (underground)	T12	T12-1	D	5	
Contaminated sites, DEC recognized, non-Superfund, non-RCRA	U04	U4-1	D	5	File No. CS100.158: 401 West Tudor Rd. Petroleum contaminaiton discovered during propery transfer.Site remediation completed. Priority: Medium

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Map Number	Comments
Contaminated sites, DEC recognized, non-Superfund, non-RCRA	U04	U7-2	D	5	File No. L 30.12: 150 W. Tudor Road. Petroleum contamination discovered in 1997, Groundwater contamination discovered in 1990. Extent of contamination is unknown. Priority: High
Contaminated sites, DEC recognized, non-Superfund, non-RCRA	U04	U8-1	D	5	File No. L55.96: 4300 B Street. Petroleum contamination of soil discovered during removal of underground fuel tank. Remediation completed. No further action needed. Priority: Low

Contaminant Source Inventory and Risk Ranking for

PWSID 210396.001

L & L Trailer Court Sources of Bacteria and Viruses

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Risk Ranking for Analysis	Map Number	Comments
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-1	А	Medium	2	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-2	А	Medium	2	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-3	А	Medium	2	
Residential Areas	R01	R1-1	А	Low	3	
Highways and roads, paved (cement or asphalt)	X20	X20-1	А	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-2	А	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-3	А	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-4	А	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-5	А	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-6	А	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-7	А	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-8	А	Low	2	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-4	В	Medium	2	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-5	В	Medium	2	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-6	В	Medium	2	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-7	В	Medium	2	
Residential Areas	R01	R1-2	В	Low	3	
Highways and roads, paved (cement or asphalt)	X20	X20-10	В	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-9	В	Low	2	
Municipal or city parks (with green areas)	X04	X4-1	В	Medium	3	

Table 2 (continued)

Contaminant Source Inventory and Risk Ranking for

PWSID 210396.001

L & L Trailer Court Sources of Bacteria and Viruses

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Risk Ranking for Analysis	Map Number	Comments
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-1	В	Medium	3	
Dog walking areas/foot trails	X46	X46-1	В	Low	3	
Dog walking areas/foot trails	X46	X46-2	В	Low	3	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-8-12	С	Medium	2	Zone C has 5 sewer lines
Highways and roads, paved (cement or asphalt)	X20	X20-10-14	С	Low	2	Zone C has 4 roads
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-2	С	Medium	4	
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-3	С	Medium	4	
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-5	С	Medium	4	
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-6	С	Medium	4	

Contaminant Source Inventory and Risk Ranking for

PWSID 210396.001

L & L Trailer Court Sources of Nitrates/Nitrites

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Risk Ranking for Analysis	Map Number	Comments
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-1	А	Medium	2	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-2	А	Medium	2	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-3	А	Medium	2	
Residential Areas	R01	R1-1	А	Low	3	
Highways and roads, paved (cement or asphalt)	X20	X20-1	А	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-2	А	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-3	А	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-4	А	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-5	А	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-6	А	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-7	А	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-8	А	Low	2	
Hardware stores	C17	C17-1	В	Low	3	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-4	В	Medium	2	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-5	В	Medium	2	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-6	В	Medium	2	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-7	В	Medium	2	
Residential Areas	R01	R1-2	В	Low	3	
Highways and roads, paved (cement or asphalt)	X20	X20-10	В	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-9	В	Low	2	

Table 3 (continued)

Contaminant Source Inventory and Risk Ranking for

PWSID 210396.001

L & L Trailer Court Sources of Nitrates/Nitrites

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Risk Ranking for Analysis	Map Number	Comments
Municipal or city parks (with green areas)	X04	X4-1	В	Medium	3	
Dog walking areas/foot trails	X46	X46-1	В	Low	3	
Dog walking areas/foot trails	X46	X46-2	В	Low	3	
Orchards or nurseries	A10	A10-1	С	Medium	4	
Florists	C12	C12-1	С	Low	4	
Hardware stores	C17	C17-2	С	Low	4	
Hardware stores	C17	C17-3	С	Low	4	
Agricultural chemical sales/storage	C02	C2-1	С	High	4	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-8-12	С	Medium	2	Zone C has 5 sewer lines
Highways and roads, paved (cement or asphalt)	X20	X20-10-14	С	Low	2	Zone C has 4 roads

Contaminant Source Inventory and Risk Ranking for

PWSID 210396.001

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Risk Ranking for Analysis	Map Number	Comments
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-1	А	Low	2	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-2	А	Low	2	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-3	А	Low	2	
Residential Areas	R01	R1-1	А	Low	3	
Highways and roads, paved (cement or asphalt)	X20	X20-1	А	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-1	А	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-2	А	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-3	А	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-4	А	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-5	А	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-6	А	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-7	А	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-8	А	Low	2	
Hardware stores	C17	C17-1	В	Low	3	
Heavy equipment rental/storage	C18	C18-1	В	Medium	3	
Printers, publishers, copiers	C37	C37-1	В	High	3	
Printers, publishers, copiers	C37	C37-2	В	High	3	
Construction trade areas and materials	C09	C9-1	В	Low	3	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-4	В	Low	2	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-5	В	Low	2	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-6	В	Low	2	

Table 4 (continued)

Contaminant Source Inventory and Risk Ranking for

PWSID 210396.001

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Risk Ranking for Analysis	Map Number	Comments
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-7	В	Low	2	
Electrical, electronic, computer, and communications equipment/component manufacturing	I13	I13-1	В	Very High	3	
Sign manufacturing	139	I39-1	В	Medium	3	
Residential Areas	R01	R1-2	В	Low	3	
Highways and roads, paved (cement or asphalt)	X20	X20-10	В	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-9	В	Low	2	
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-1	В	Low	3	
Orchards or nurseries	A10	A10-1	С	Low	4	
Furniture manufacturing, repair, and finishing shops	C14	C14-2	С	High	4	
Hardware stores	C17	C17-2	С	Low	4	
Hardware stores	C17	C17-3	С	Low	4	
Heavy equipment rental/storage	C18	C18-2	С	Medium	4	
Laboratories (chemical, soils, and research)	C20	C20-1	С	Low	4	
Motor/motor vehicle supplies stores	C28	C28-1	С	Low	4	
Photography supplies/photo processing laboratories	C36	C36-1	С	Medium	4	
Printers, publishers, copiers	C37	C37-3	С	High	4	
Printers, publishers, copiers	C37	C37-4	С	High	4	
Printers, publishers, copiers	C37	C37-5	С	High	4	
Construction trade areas and materials	C09	С9-2	С	Low	4	
Construction trade areas and materials	C09	C9-3	С	Low	4	
Construction trade areas and materials	C09	C9-4	С	Low	4	
Construction trade areas and materials	C09	C9-5	С	Low	4	

Table 4 (continued)

Contaminant Source Inventory and Risk Ranking for

PWSID 210396.001

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Risk Ranking for Analysis	Map Number	Comments
Construction trade areas and materials	C09	C9-6	С	Low	4	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-8-12	С	Low	2	Zone C has 5 sewer lines
Electrical, electronic, computer, and communications equipment/component manufacturing	I13	I13-2	С	Very High	4	
Asphalt and tar processing/storage	103	I3-1	С	Medium	4	
Closed tanks, gasoline (underground)	T13	T13-1	С	Medium	4	
Contaminated sites, DEC recognized, non-Superfund, non-RCRA	U04	U7-1	С	Medium	4	File No. L69.4: 4333 Bering Street. Waste oil contamination of soil discovered in 1993. Remediation in progress. Priority: Medium
Highways and roads, paved (cement or asphalt)	X20	X20-10-14	С	Low	2	Zone C has 4 roads
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-2	С	Low	4	
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-3	С	Low	4	
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-4	С	Low	4	
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-5	С	Low	4	
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-6	С	Low	4	
Gasoline stations (without repair shop)	C15	C15-1	D	High	5	
Printers, publishers, copiers	C37	C37-4	D	High	5	
Injection wells (Class V) Motor Vehicle Waste Disposal Well	D42	D42-1	D	High	5	
Electrical, electronic, computer, and communications equipment/component manufacturing	I13	I13-3	D	Very High	5	
Tanks, gasoline (underground)	T12	T12-1	D	High	5	
Tanks, diesel (underground)	T08	T8-1	D	High	5	

Table 4 (continued)

Contaminant Source Inventory and Risk Ranking for

PWSID 210396.001

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Risk Ranking for Analysis	Map Number	Comments
Contaminated sites, DEC recognized, non-Superfund, non-RCRA	U04	U4-1	D	Low	5	File No. CS100.158: 401 West Tudor Rd. Petroleum contaminaiton discovered during propery transfer.Site remediation completed. Priority: Medium
Contaminated sites, DEC recognized, non-Superfund, non-RCRA	U04	U7-2	D	High	5	File No. L 30.12: 150 W. Tudor Road. Petroleum contamination discovered in 1997, Groundwater contamination discovered in 1990. Extent of contamination is unknown. Priority: High
Contaminated sites, DEC recognized, non-Superfund, non-RCRA	U04	U8-1	D	Low	5	File No. L55.96: 4300 B Street. Petroleum contamination of soil discovered during removal of underground fuel tank. Remediation completed. No further action needed. Priority: Low

Contaminant Source Inventory and Risk Ranking for

PWSID 210396.001

L & L Trailer Court Sources of Heavy Metals, Cyanide and Other Inorganic Chemicals

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Risk Ranking for Analysis	Map Number	Comments
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-1	А	Low	2	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-2	А	Low	2	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-3	А	Low	2	
Residential Areas	R01	R1-1	А	Low	3	
Highways and roads, paved (cement or asphalt)	X20	X20-1	А	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-2	А	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-3	А	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-4	А	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-5	А	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-6	А	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-7	А	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-8	А	Low	2	
Hardware stores	C17	C17-1	В	Low	3	
Heavy equipment rental/storage	C18	C18-1	В	Low	3	
Printers, publishers, copiers	C37	C37-1	В	Medium	3	
Printers, publishers, copiers	C37	C37-2	В	Medium	3	
Construction trade areas and materials	C09	C9-1	В	Low	3	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-4	В	Low	2	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-5	В	Low	2	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-6	В	Low	2	

Table 5 (continued)

Contaminant Source Inventory and Risk Ranking for

PWSID 210396.001

L & L Trailer Court Sources of Heavy Metals, Cyanide and Other Inorganic Chemicals

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Risk Ranking for Analysis	Map Number	Comments
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-7	В	Low	2	
Electrical, electronic, computer, and communications equipment/component manufacturing	I13	I13-1	В	High	3	
Sign manufacturing	139	I39-1	В	Medium	3	
Residential Areas	R01	R1-2	В	Low	3	
Highways and roads, paved (cement or asphalt)	X20	X20-10	В	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-9	В	Low	2	
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-1	В	Low	3	
Furniture manufacturing, repair, and finishing shops	C14	C14-2	С	Low	4	
Hardware stores	C17	C17-2	С	Low	4	
Hardware stores	C17	C17-3	С	Low	4	
Heavy equipment rental/storage	C18	C18-2	С	Low	4	
Agricultural chemical sales/storage	C02	C2-1	С	Low	4	
Laboratories (chemical, soils, and research)	C20	C20-1	С	Low	4	
Photography supplies/photo processing laboratories	C36	C36-1	С	Medium	4	
Printers, publishers, copiers	C37	C37-3	С	Medium	4	
Printers, publishers, copiers	C37	C37-4	С	Medium	4	
Printers, publishers, copiers	C37	C37-5	С	Medium	4	
Construction trade areas and materials	C09	C9-2	С	Low	4	
Construction trade areas and materials	C09	C9-3	С	Low	4	
Construction trade areas and materials	C09	C9-4	С	Low	4	
Construction trade areas and materials	C09	C9-5	С	Low	4	
Construction trade areas and materials	C09	C9-6	С	Low	4	

Table 5 (continued)

Contaminant Source Inventory and Risk Ranking for

PWSID 210396.001

L & L Trailer Court Sources of Heavy Metals, Cyanide and Other Inorganic Chemicals

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Risk Ranking for Analysis	Map Number	Comments
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-8-12	С	Low	2	Zone C has 5 sewer lines
Electrical, electronic, computer, and communications equipment/component manufacturing	I13	I13-2	С	High	4	
Asphalt and tar processing/storage	103	I3-1	С	Low	4	
Highways and roads, paved (cement or asphalt)	X20	X20-10-14	С	Low	2	Zone C has 4 roads
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-2	С	Low	4	
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-3	С	Low	4	
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-4	С	Low	4	
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-5	С	Low	4	
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-6	С	Low	4	
Injection wells (Class V) Motor Vehicle Waste Disposal Well	D42	D42-1	D	High	5	
Electrical, electronic, computer, and communications equipment/component manufacturing	I13	I13-3	D	High	5	

Contaminant Source Inventory and Risk Ranking for

PWSID 210396.001

L & L Trailer Court Sources of Synthetic Organic Chemicals

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Risk Ranking for Analysis	Map Number	Comments
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-1	А	Low	2	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-2	А	Low	2	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-3	А	Low	2	
Residential Areas	R01	R1-1	А	Low	3	
Printers, publishers, copiers	C37	C37-1	В	Low	3	
Printers, publishers, copiers	C37	C37-2	В	Low	3	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-4	В	Low	2	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-5	В	Low	2	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-6	В	Low	2	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-7	В	Low	2	
Residential Areas	R01	R1-2	В	Low	3	
Municipal or city parks (with green areas)	X04	X4-1	В	Low	3	
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-1	В	Low	3	
Orchards or nurseries	A10	A10-1	С	High	4	
Furniture manufacturing, repair, and finishing shops	C14	C14-2	С	Medium	4	
Agricultural chemical sales/storage	C02	C2-1	С	High	4	
Photography supplies/photo processing laboratories	C36	C36-1	С	Low	4	
Printers, publishers, copiers	C37	C37-3	С	Low	4	
Printers, publishers, copiers	C37	C37-4	С	Low	4	
Printers, publishers, copiers	C37	C37-5	С	Low	4	

Table 6 (continued)

Contaminant Source Inventory and Risk Ranking for

PWSID 210396.001

L & L Trailer Court Sources of Synthetic Organic Chemicals

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Risk Ranking for Analysis	Map Number	Comments
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-8-12	С	Low	2	Zone C has 5 sewer lines
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-2	С	Low	4	
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-3	С	Low	4	
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-4	С	Low	4	
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-5	С	Low	4	
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-6	С	Low	4	
Lumber processing and preservation	N04	N4-1	D	High	5	

Contaminant Source Inventory and Risk Ranking for

PWSID 210396.001

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Risk Ranking for Analysis	Map Number	Comments
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-1	А	Low	2	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-2	А	Low	2	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-3	А	Low	2	
Residential Areas	R01	R1-1	А	Low	3	
Highways and roads, paved (cement or asphalt)	X20	X20-1	А	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-2	А	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-3	А	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-4	А	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-5	А	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-6	А	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-7	А	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-8	А	Low	2	
Hardware stores	C17	C17-1	В	Low	3	
Heavy equipment rental/storage	C18	C18-1	В	Medium	3	
Construction trade areas and materials	C09	C9-1	В	Low	3	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-4	В	Low	2	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-5	В	Low	2	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-6	В	Low	2	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-7	В	Low	2	
Electrical, electronic, computer, and communications equipment/component manufacturing	I13	I13-1	В	Very High	3	

Table 7 (continued)

Contaminant Source Inventory and Risk Ranking for

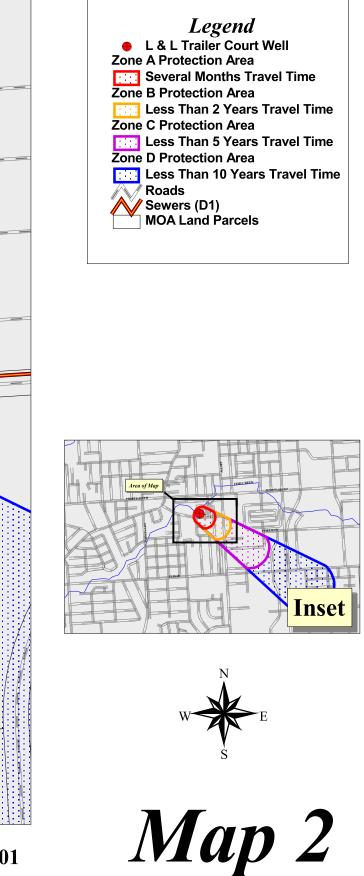
PWSID 210396.001

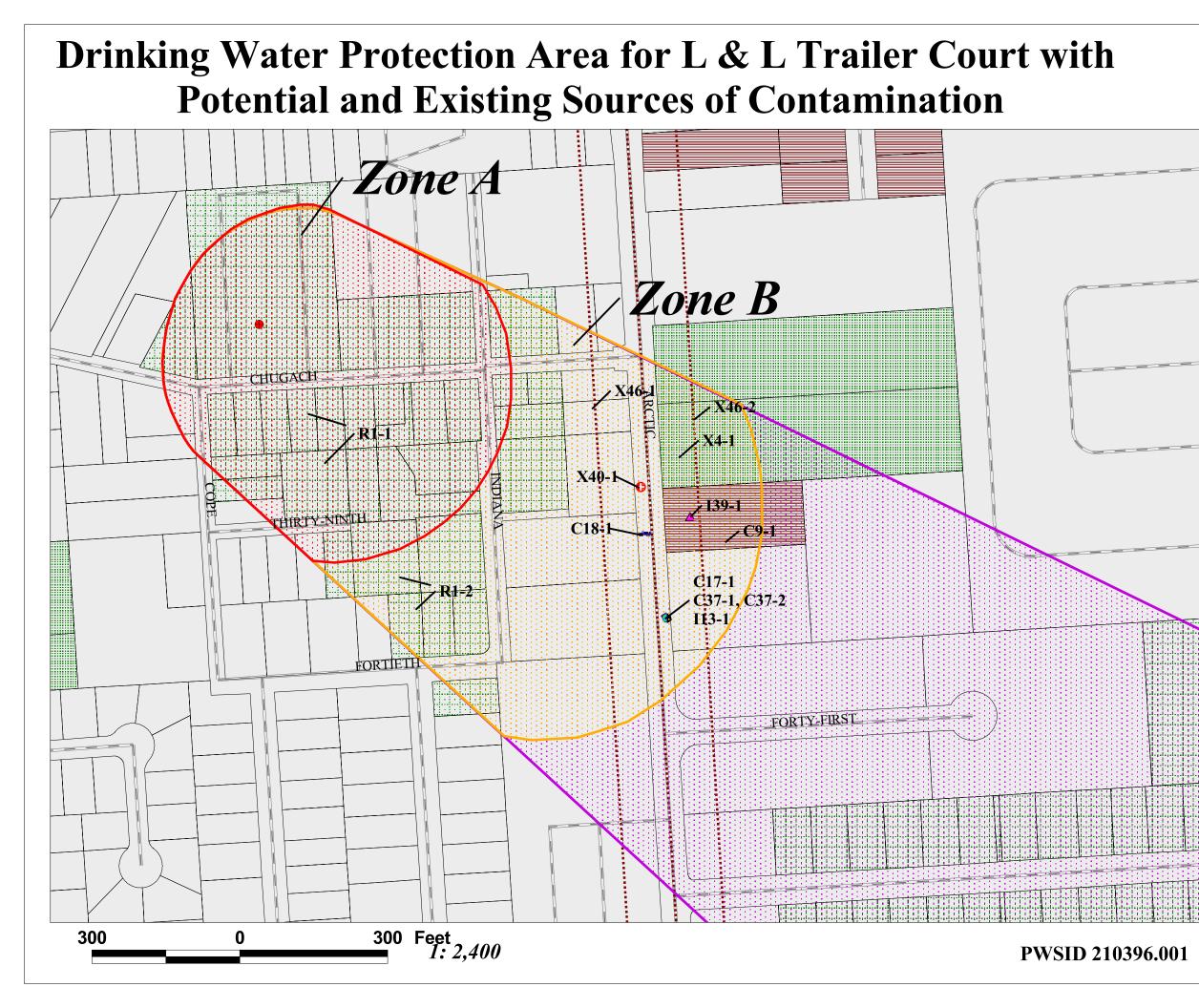
Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Risk Ranking for Analysis	Map Number	Comments
Residential Areas	R01	R1-2	В	Low	3	
Highways and roads, paved (cement or asphalt)	X20	X20-10	В	Low	2	
Highways and roads, paved (cement or asphalt)	X20	X20-9	В	Low	2	
Orchards or nurseries	A10	A10-1	С	Low	4	
Furniture manufacturing, repair, and finishing shops	C14	C14-2	С	Medium	4	
Hardware stores	C17	C17-2	С	Low	4	
Hardware stores	C17	C17-3	С	Low	4	
Heavy equipment rental/storage	C18	C18-2	С	Medium	4	
Photography supplies/photo processing laboratories	C36	C36-1	С	Low	4	
Construction trade areas and materials	C09	C9-2	С	Low	4	
Construction trade areas and materials	C09	C9-3	С	Low	4	
Construction trade areas and materials	C09	C9-4	С	Low	4	
Construction trade areas and materials	C09	C9-5	С	Low	4	
Construction trade areas and materials	C09	C9-6	С	Low	4	
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D1-8-12	С	Low	2	Zone C has 5 sewer lines
Electrical, electronic, computer, and communications equipment/component manufacturing	I13	I13-2	С	Very High	4	
Asphalt and tar processing/storage	I03	I3-1	С	High	4	
Highways and roads, paved (cement or asphalt)	X20	X20-10-14	С	Low	2	Zone C has 4 roads
Injection wells (Class V) Motor Vehicle Waste Disposal Well	D42	D42-1	D	High	5	
Electrical, electronic, computer, and communications equipment/component manufacturing	I13	I13-3	D	Very High	5	
Lumber processing and preservation	N04	N4-1	D	High	5	

APPENDIX C

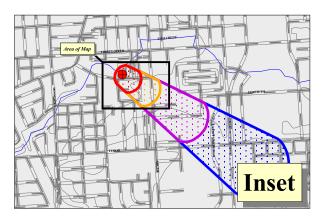
L & L Trailer Court Drinking Water Protection Area and Potential and Existing Contaminant Sources (Maps 2-5)

Drinking Water Protection Area for L & L Trailer Court with Potential and Existing Sources of Contamination Zone A × X20-1 ×20-5 X20-6 Zone B D1-1 X20-7 X20-4 **D1-6** D1+2 X20-D1-3 ×X20-10 X20-2 ∕ D1-7 THIRTY-NINTE X20-3 ARCTI NDIAN Zone C D -4 X20-9 / D1-5 FORTIETI RTY-SECO FORTY-FIRST Zone C has 5 sewer lines and 4 roads. RTH S 6 FORTY-SECOND TAR 300 **300 Feet** 0 1:3,600 **PWSID 210396.001**





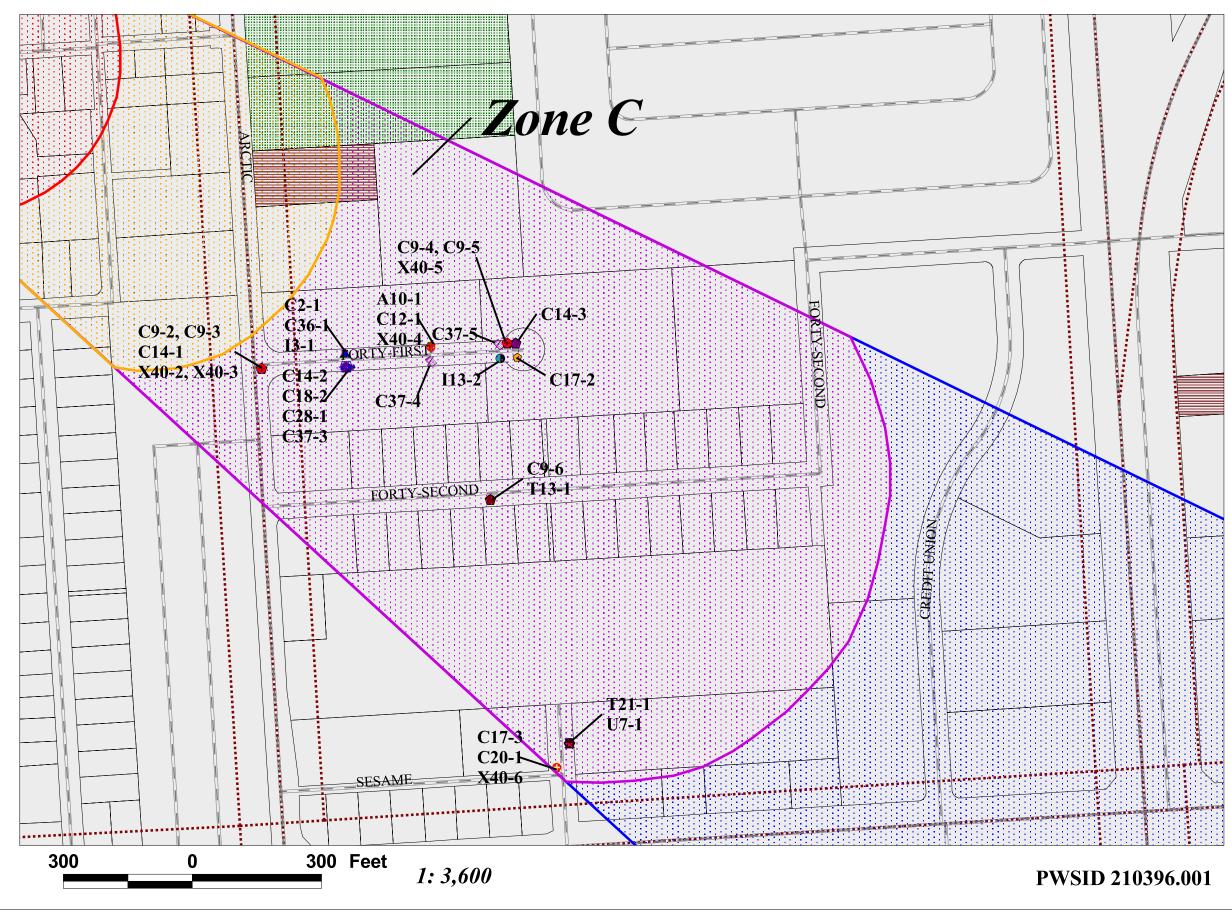


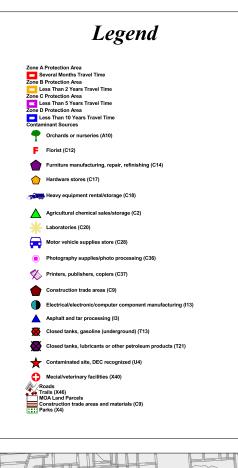


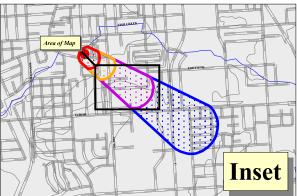


Map 3

Drinking Water Protection Area for L & L Trailer Court with Potential and Existing Sources of Contamination



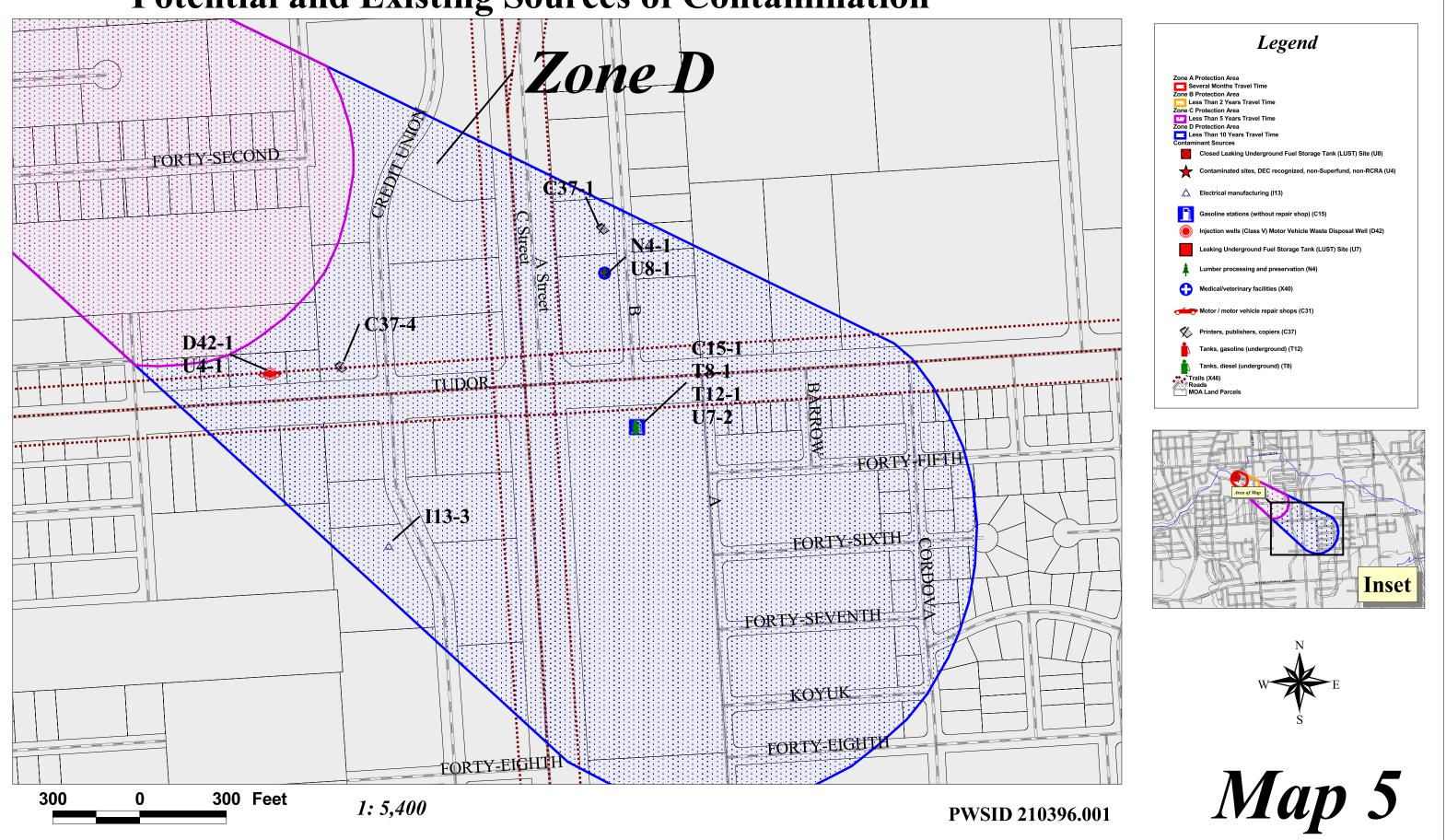






Map 4

Drinking Water Protection Area for L & L Trailer Court with Potential and Existing Sources of Contamination



APPENDIX D

Vulnerability Analysis for L & L Trailer Court (Charts 1-14)

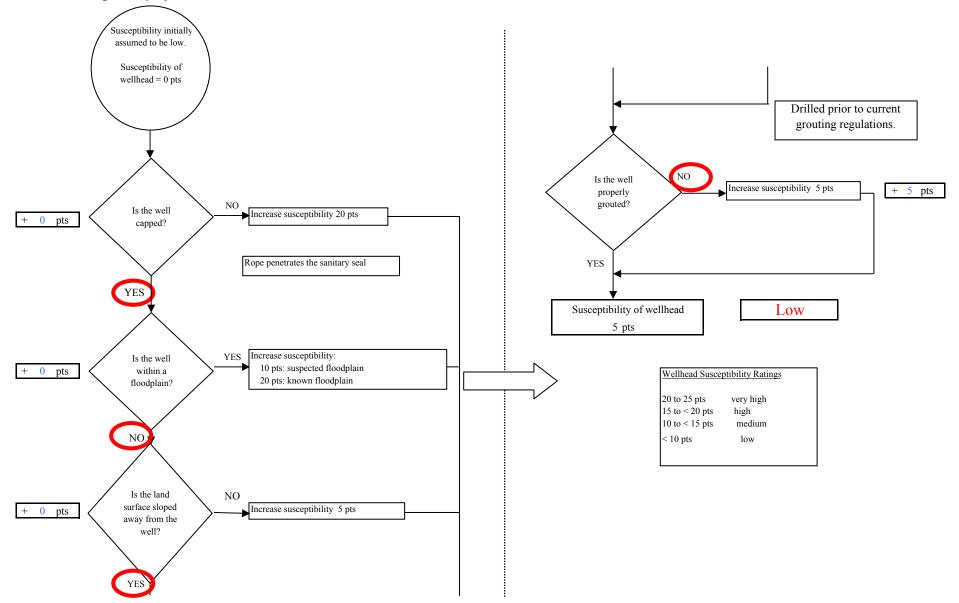
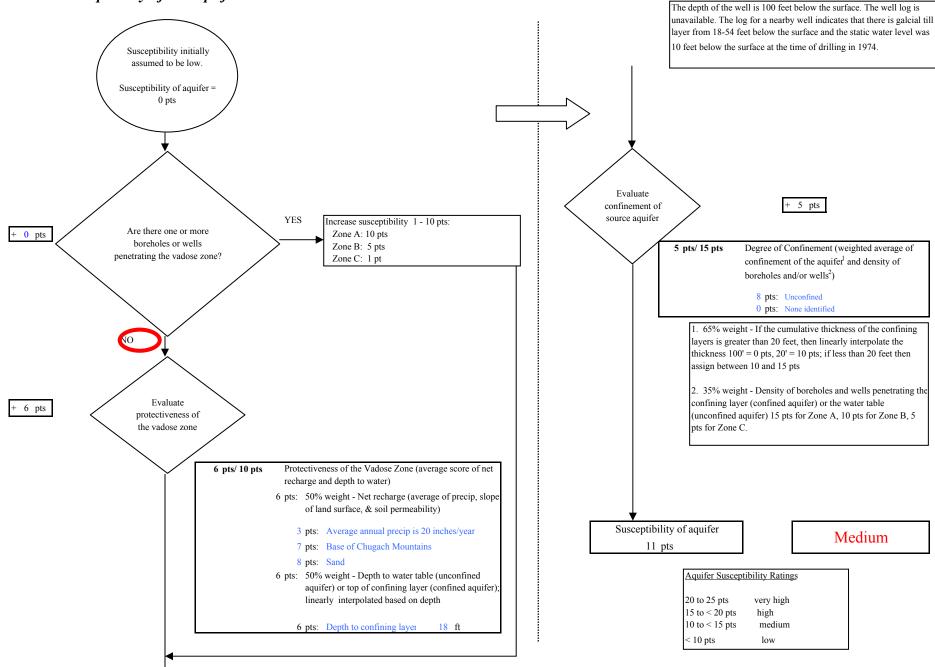
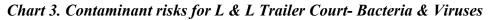
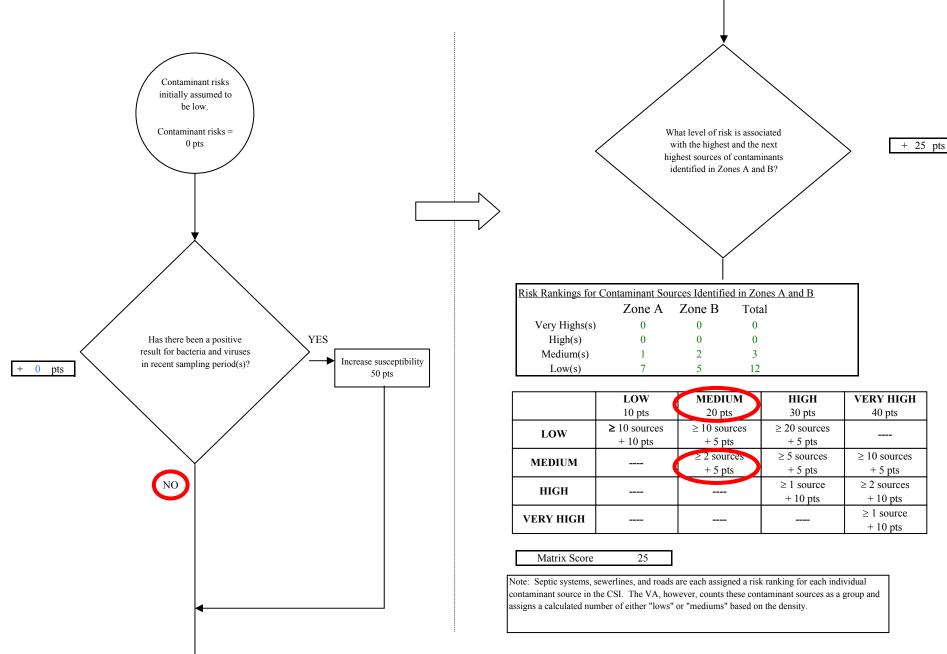


Chart 1. Susceptibility of the wellhead - L & L Trailer Court

Chart 2. Susceptibility of the aquifer - L & L Trailer Court







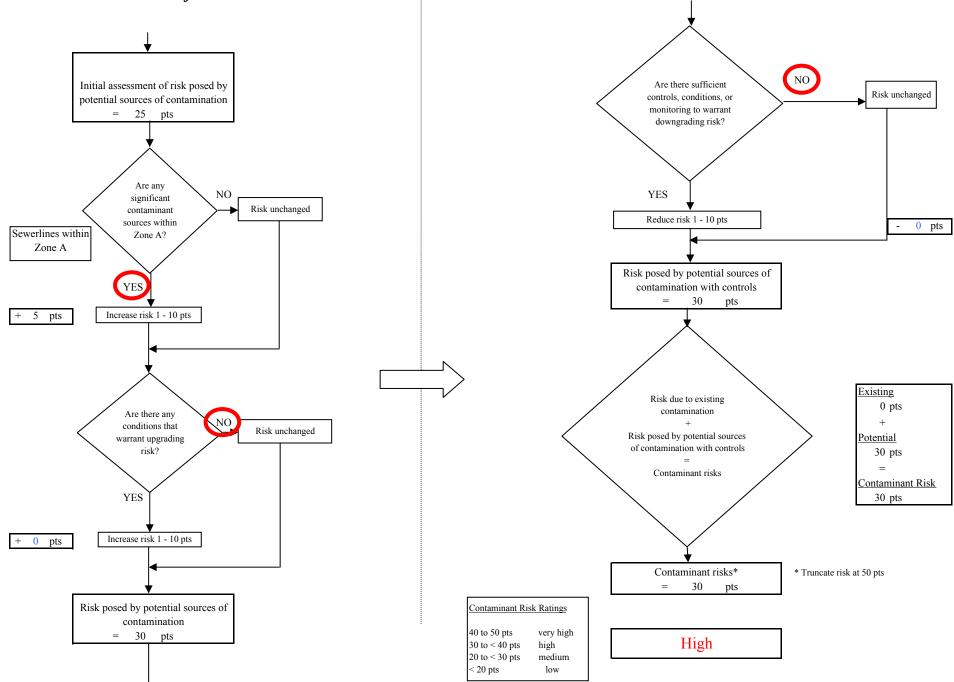


Chart 3. Contaminant risks for L & L Trailer Court-Bacteria & Viruses

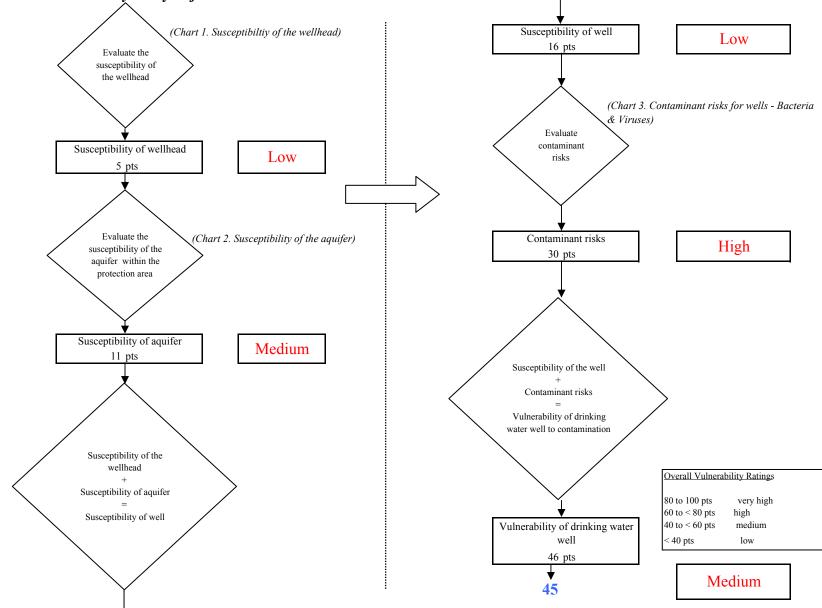


Chart 4. Vulnerability analysis for L & L Trailer Court- Bacteria & Viruses

Chart 5. Contaminant risks for L & L Trailer Court-Nitrates and Nitrites

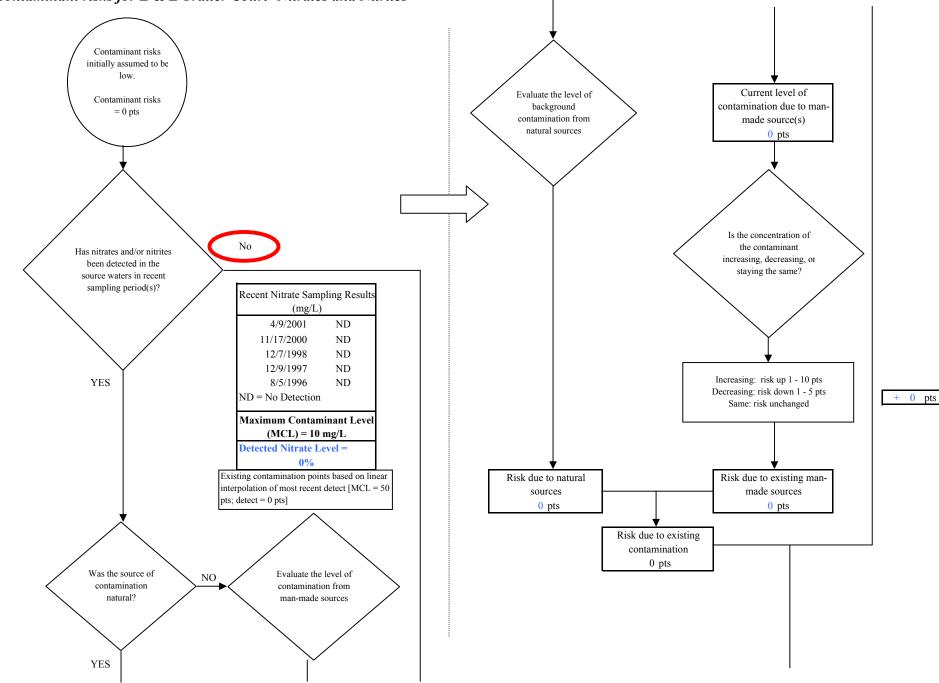
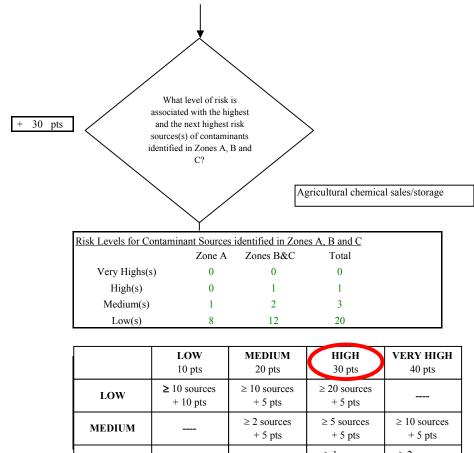


Chart 5. Contaminant risks for L & L Trailer Court-Nitrates and Nitrites



MEDIUM	 ≥ 2 sources + 5 pts	≥ 5 sources + 5 pts	≥ 10 sources + 5 pts
HIGH	 	≥ 1 source + 10 pts	$\ge 2 \text{ sources}$ + 10 pts
VERY HIGH	 		\geq 1 source + 10 pts

Matrix Score

Note: Septic systems, sewerlines, and roads are each assigned a risk ranking for each individual contaminant source in the CSI. The VA, however, counts these contaminant sources as a group and assigns a calculated number of either "lows" or "mediums" based on the density.

30

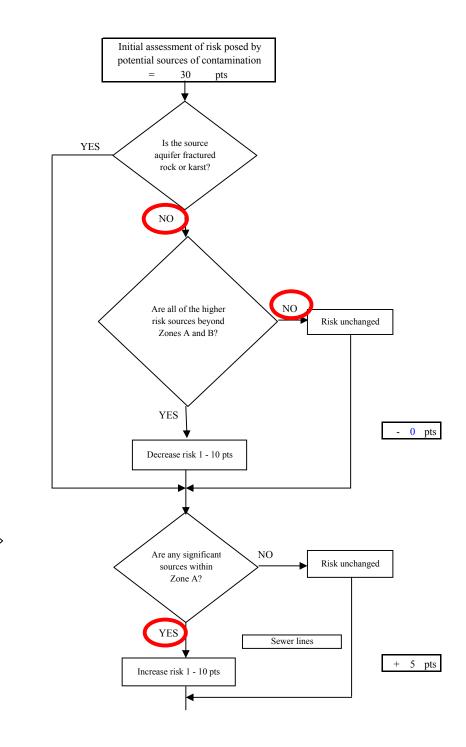
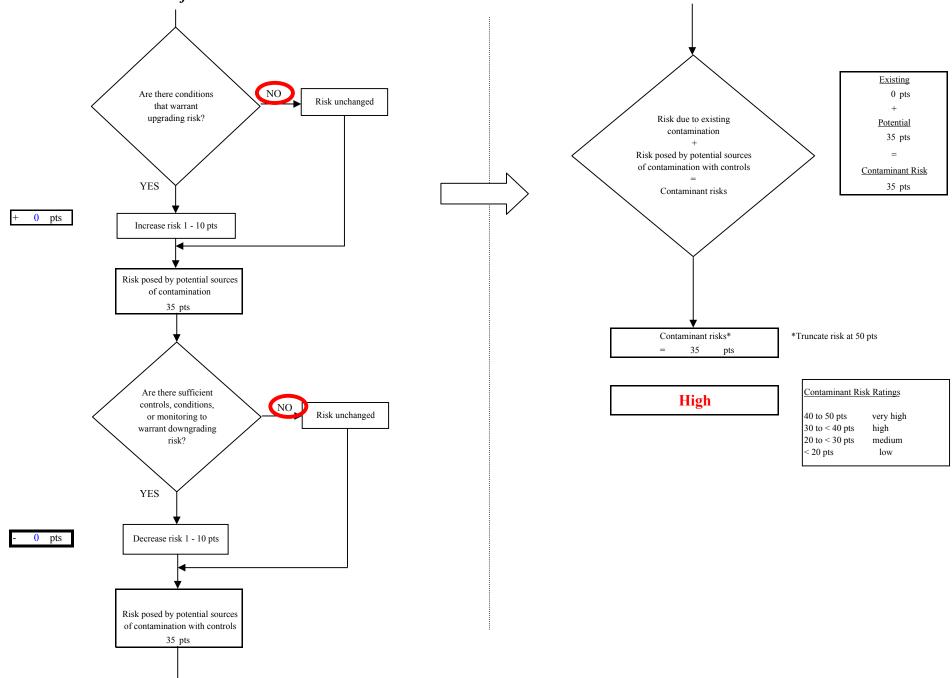


Chart 5. Contaminant risks for L & L Trailer Court-Nitrates and Nitrites



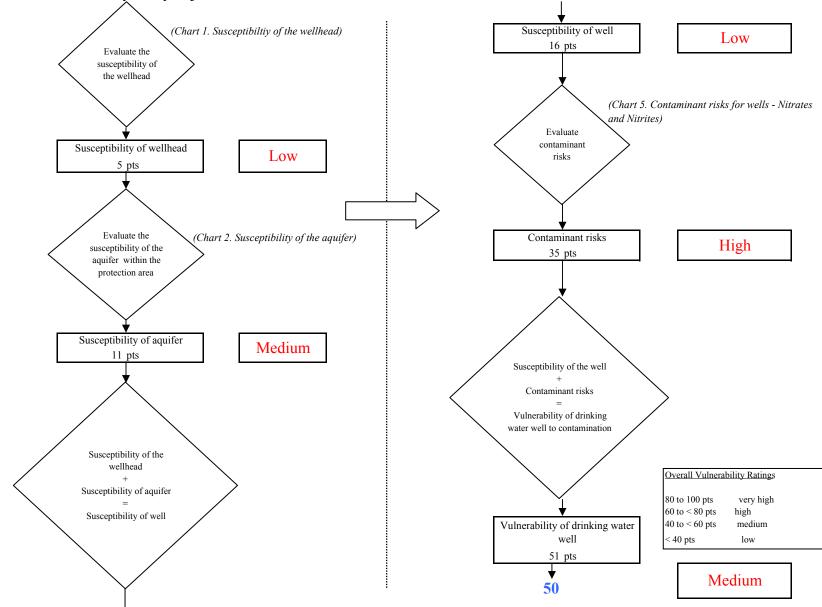


Chart 6. Vulnerability analysis for L & L Trailer Court-Nitrates and Nitrites

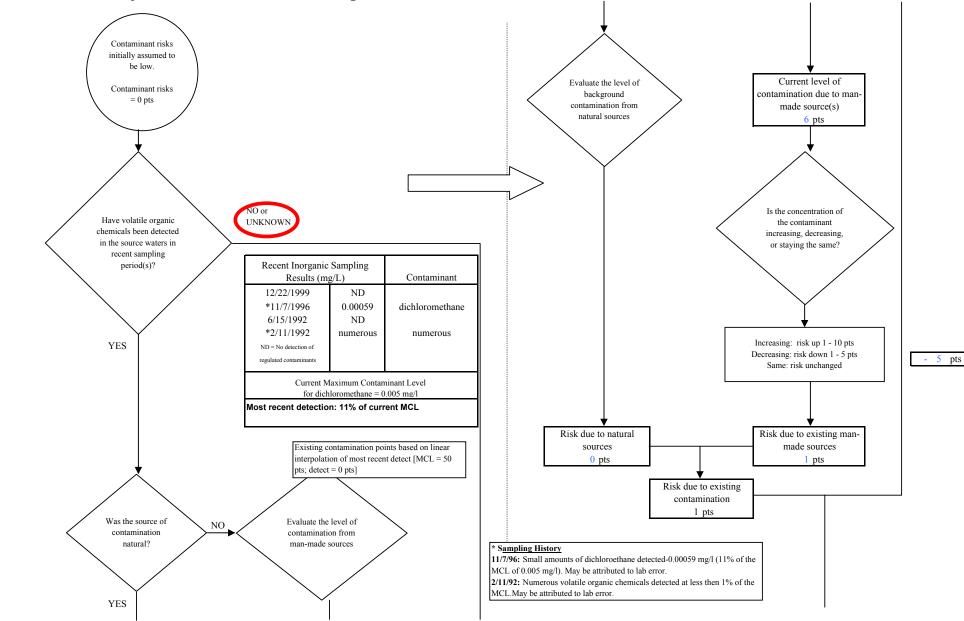


Chart 7. Contaminant risks for L & L Trailer Court- Volatile Organic Chemicals

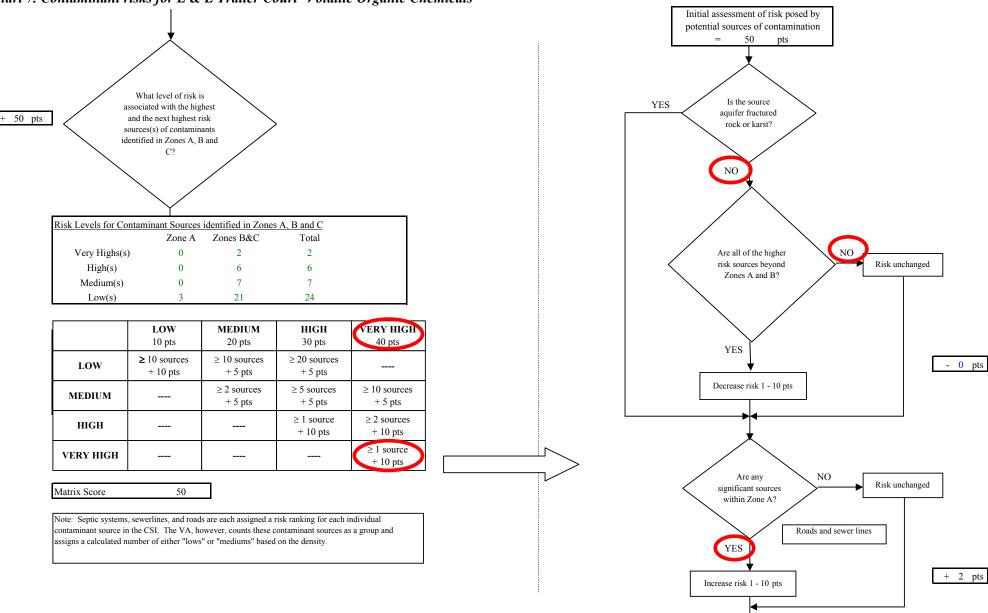


Chart 7. Contaminant risks for L & L Trailer Court- Volatile Organic Chemicals

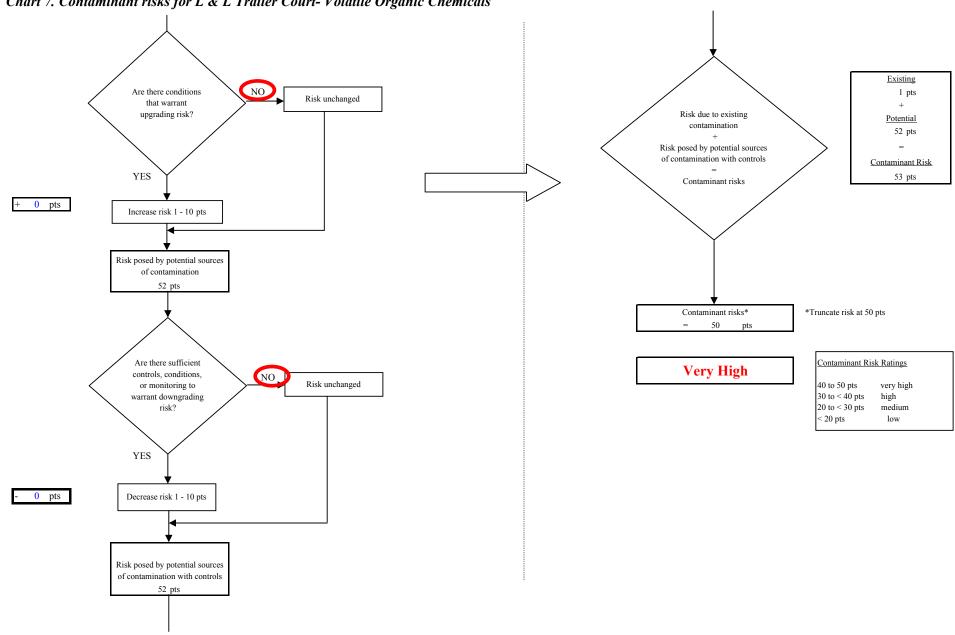


Chart 7. Contaminant risks for L & L Trailer Court- Volatile Organic Chemicals

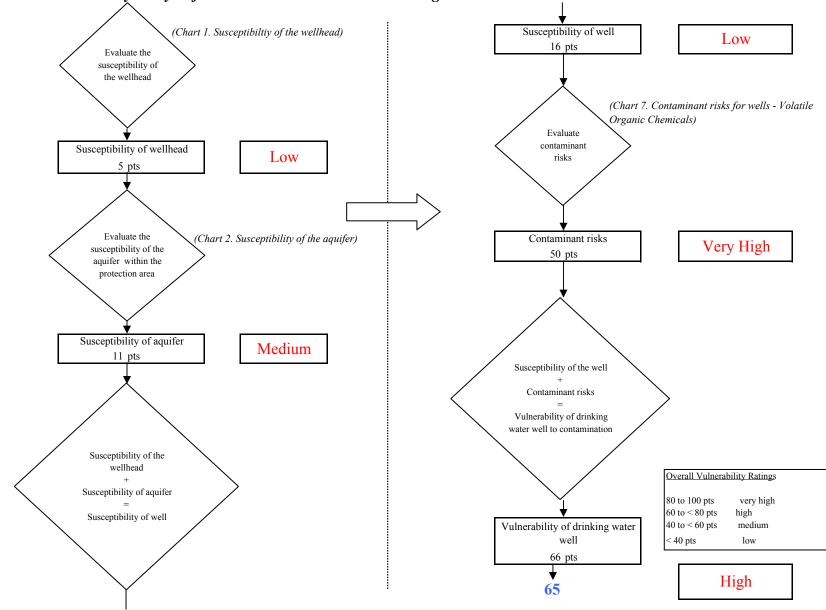
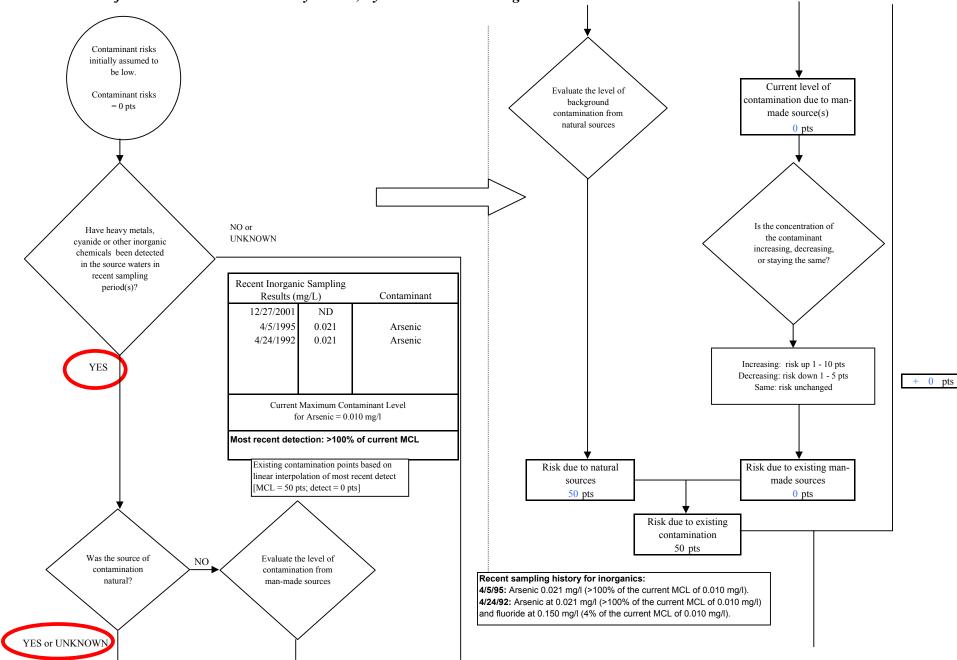


Chart 8. Vulnerability analysis for L & L Trailer Court- Volatile Organic Chemicals





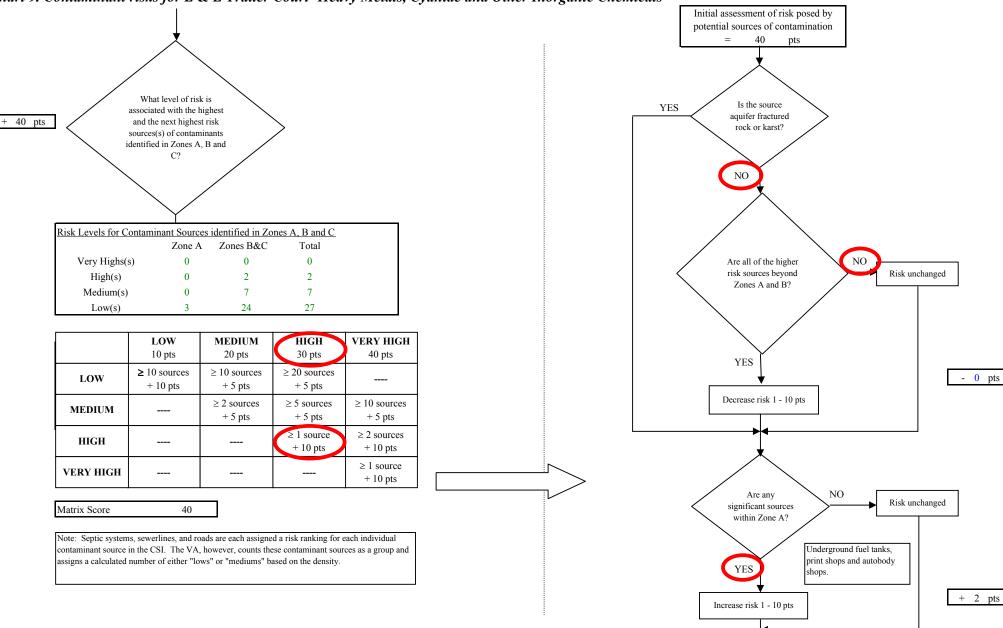


Chart 9. Contaminant risks for L & L Trailer Court- Heavy Metals, Cyanide and Other Inorganic Chemicals

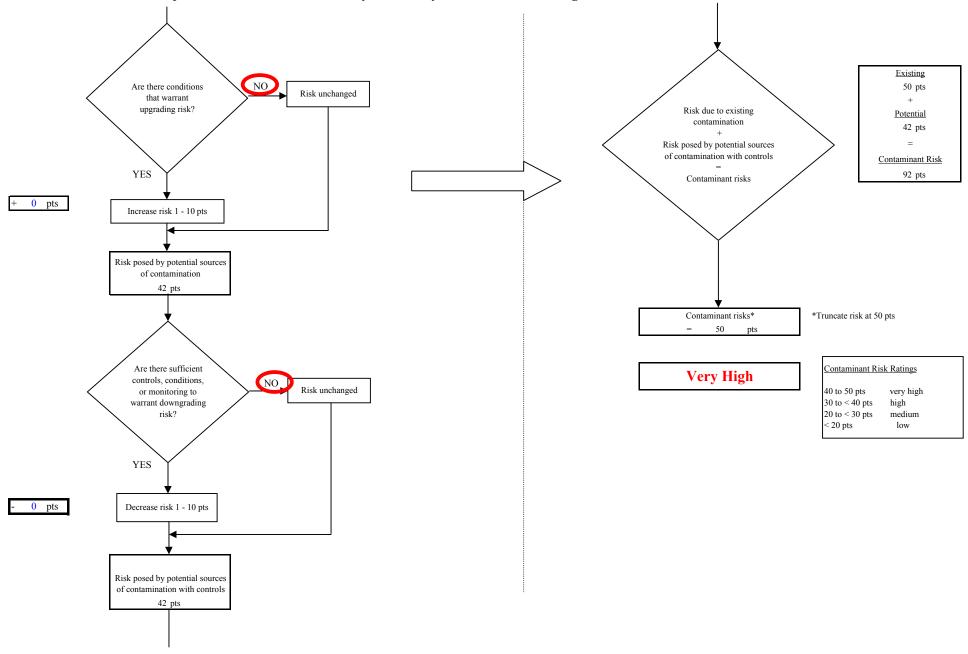


Chart 9. Contaminant risks for L & L Trailer Court- Heavy Metals, Cyanide and Other Inorganic Chemicals

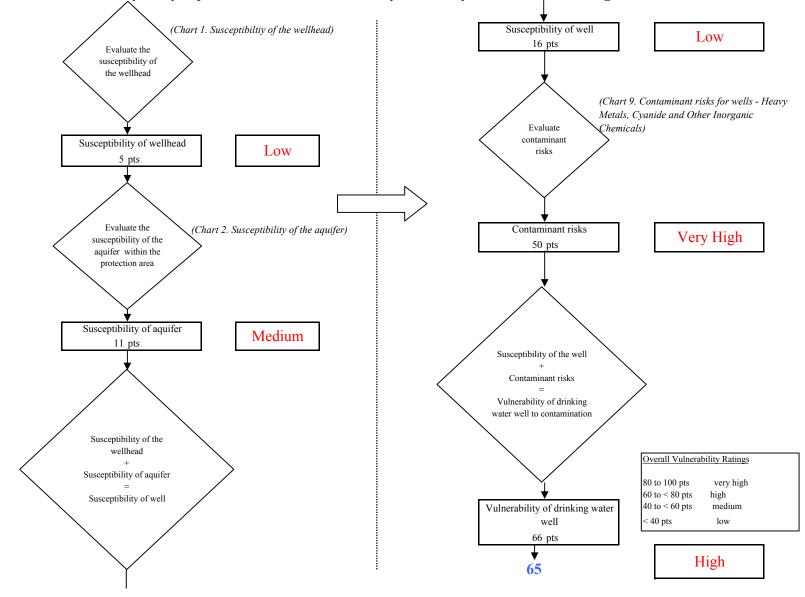
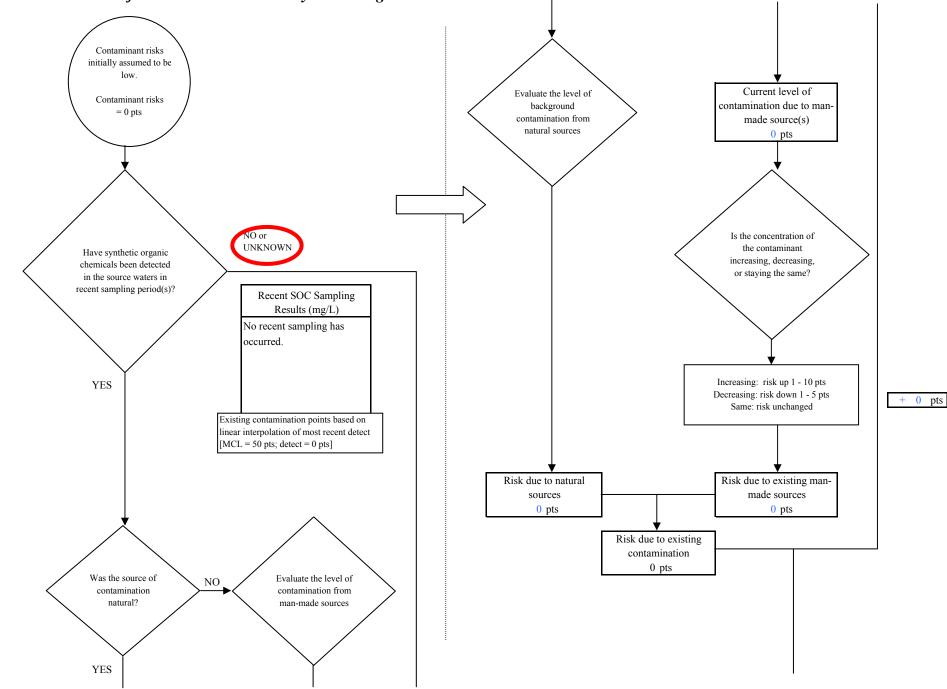
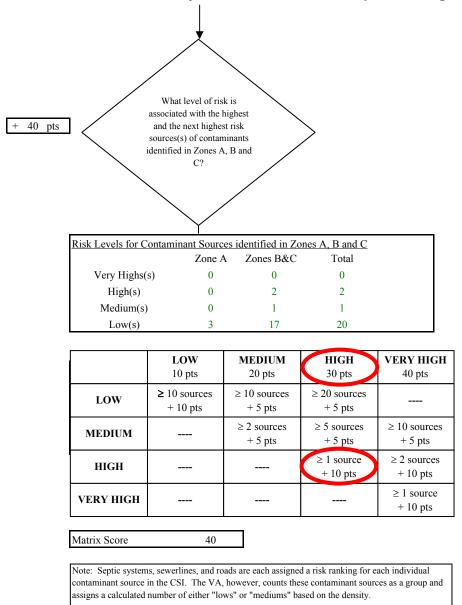
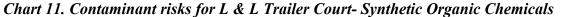


Chart 10. Vulnerability analysis for L & L Trailer Court- Heavy Metals, Cyanide and Other Inorganic Chemicals









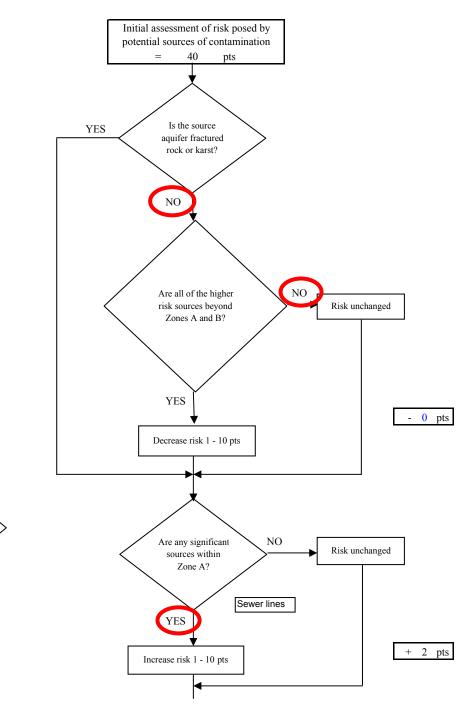
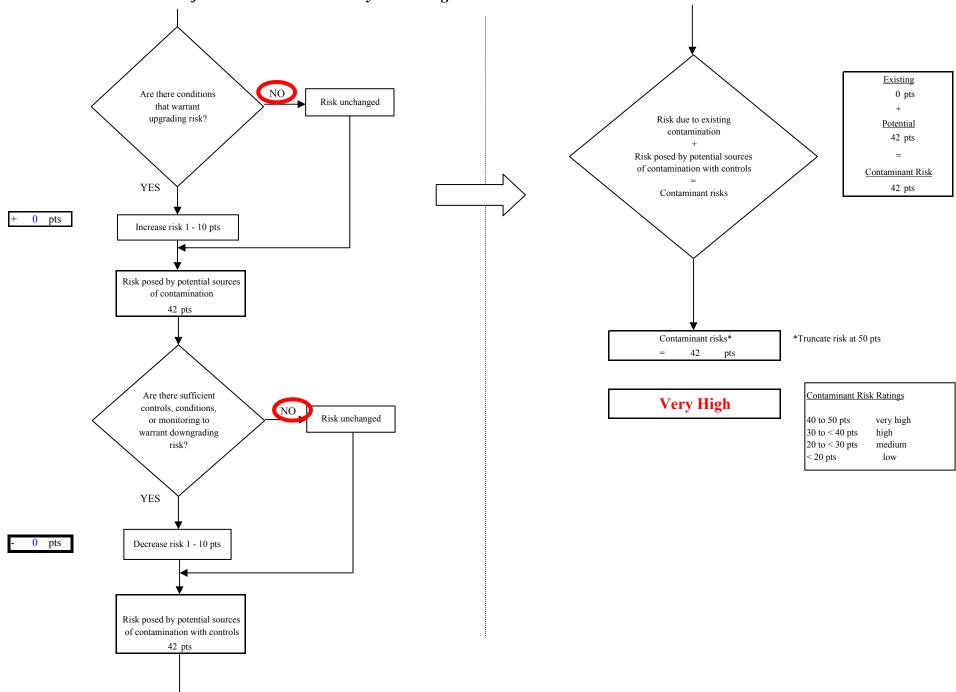


Chart 11. Contaminant risks for L & L Trailer Court-Synthetic Organic Chemicals



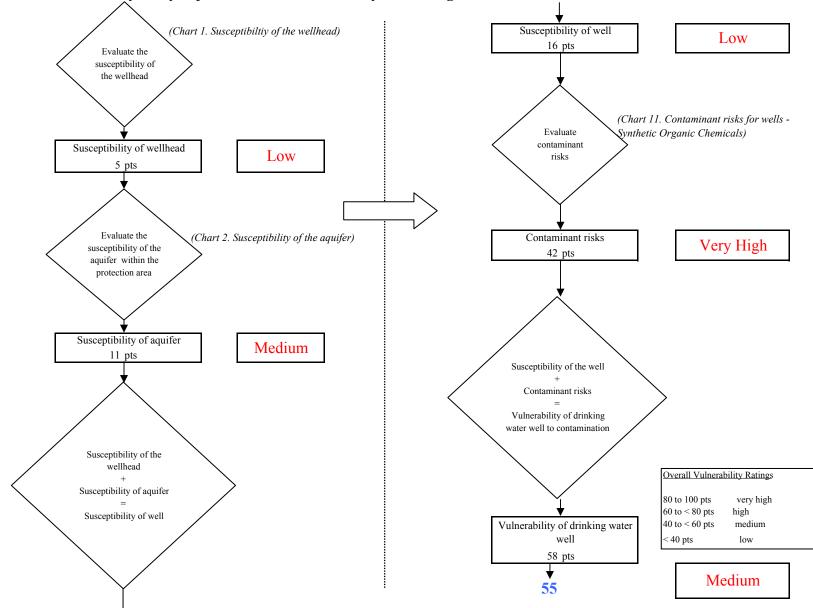
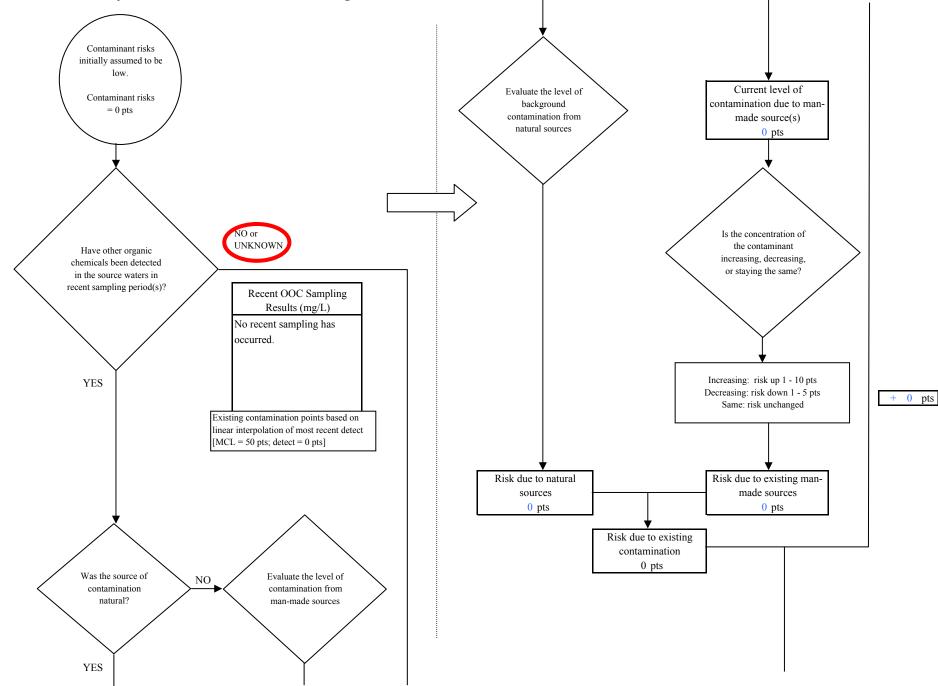


Chart 12. Vulnerability analysis for L & L Trailer Court-Synthetic Organic Chemicals

Chart 13. Contaminant risks for L & L Trailer Court- Other Organic Chemicals



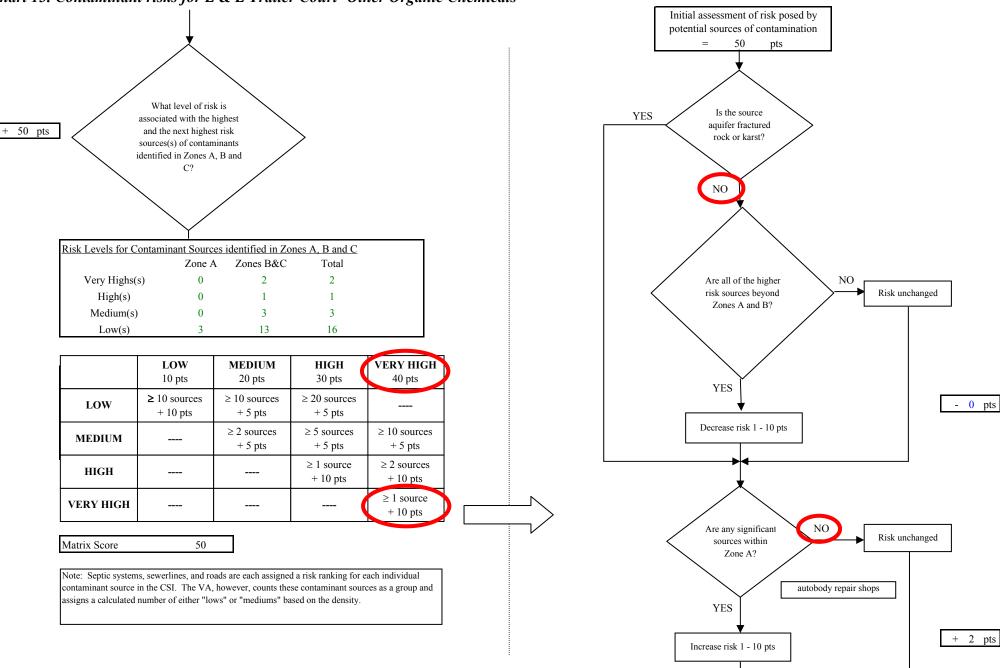
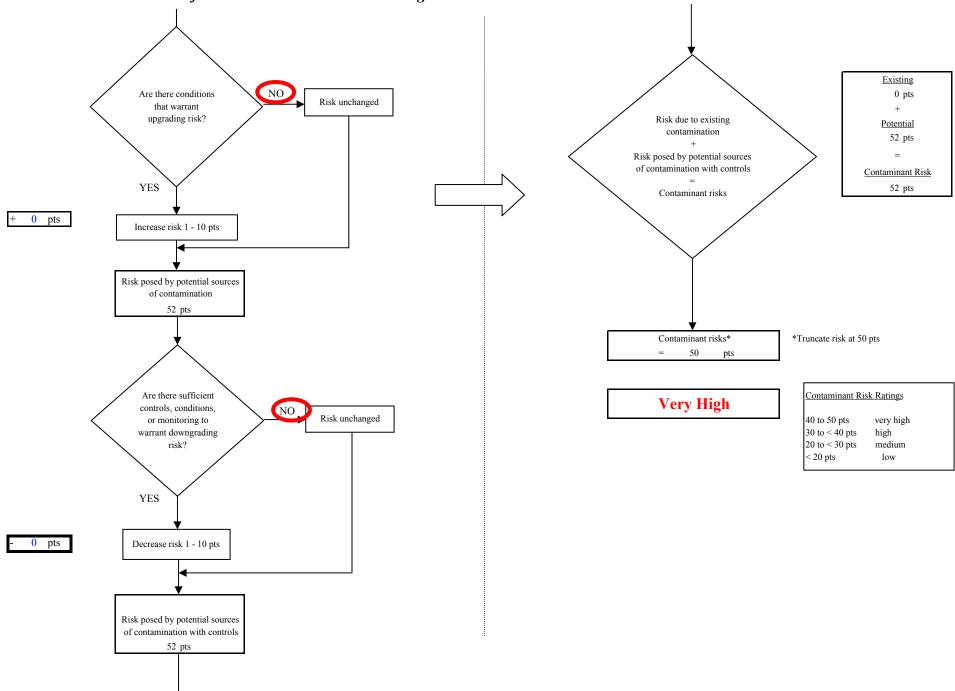


Chart 13. Contaminant risks for L & L Trailer Court- Other Organic Chemicals

Chart 13. Contaminant risks for L & L Trailer Court- Other Organic Chemicals



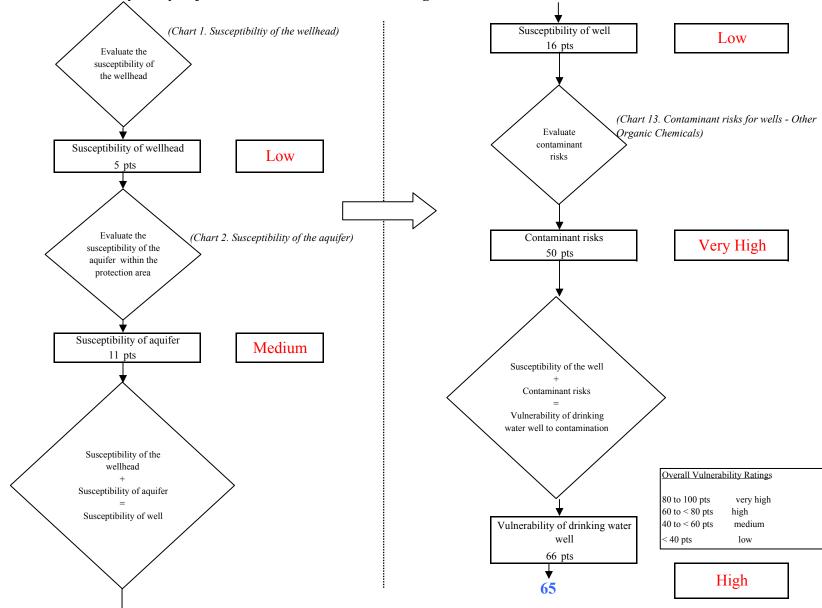


Chart 14. Vulnerability analysis for L & L Trailer Court- Other Organic Chemicals