

Source Water Assessment

A Hydrogeologic Susceptibility and Vulnerability Assessment for Saint Andrew Parish Well #1 Public Drinking Water System, Eagle River, Alaska PWSID# 218748.001

DRINKING WATER PROTECTION REPORT 1861

Alaska Department of Environmental Conservation

February, 2011

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The Drinking Water Protection (DWP) team of the Drinking Water 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. It is anticipated this assessment will be updated every five years to reflect any changes in the vulnerability and/or susceptibility of public drinking water source. If you have any additional information that may affect the results of this assessment, please contact DWP staff at #1-866-956-7656.

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Source Water Assessment for Saint Andrew Parish Well #1 Source of Public Drinking Water, Eagle River, Alaska

Drinking Water Protection

Alaska Department of Environmental Conservation EXECUTIVE SUMMARY

The public water system for Saint Andrew Parish Well #1 is a Non-Transient Non-Community (NTNC)Water System consisting of one well on 16300 Domain Lane, Eagle River, Alaska. An assessment of the susceptibility of the wellhead and aquifer to contamination, and the vulnerability of the public water system to potential and existing contamination were evaluated as of February 2011. The wellhead received a susceptibility rating of Low and the aquifer received a susceptibility rating of High. Combining these two ratings produces a Low rating for the natural susceptibility of the well. Identified potential and existing sources of contamination for the Saint Andrew Parish Well #1 public drinking water system include a car wash, construction trade areas, a dry cleaner, a florist, a gasoline station, a laboratory, motor vehicle shops, a pest extermination service, a pet groomer, pharmacies, a photography processing laboratory, sewer lines, a large-capacity septic system, recycling facilities, quarries, residential areas, residential septic systems, contaminated sites, parks, roads, pipelines, RV park, medical facilities, a meat processor, and an ammunition manufacturer. These are considered sources of bacteria and viruses, nitrates and/or nitrites, volatile organic chemicals (VOCs), heavy metals, cyanide, and other inorganic chemicals, synthetic organic chemicals (SOCs), and other organic chemicals (OOCs).

Combining the natural susceptibility of the well with the six (6) contaminant risk categories, the public water system for Saint Andrew Parish Well #1 received an overall vulnerability rating of **High** for bacteria and viruses, **High** for nitrates and/or nitrites, **High** for VOCs, **High** for heavy metals, cyanide, and other inorganic chemicals, **Medium** for SOCs, and **High** for OOCs.

SAINT ANDREW PARISH WELL #1 PUBLIC DRINKING WATER SYSTEM

Saint Andrew Parish Well #1 public water system is a Non-Transient Non-Community (NTNC) Water System. The system consists of one well on the church lot off Glenn Highway in Eagle River, Alaska (Section 11, T14N, R02W, Seward Meridian) (See Map 1 of Appendix A). Eagle River is located within the

Municipality of Anchorage, between Fort Richardson and the Chugach State Park. The area north of Fort Richardson to the municipal boundary includes Eagle River, Chugiak, Birchwood, Peters Creek, Thunderbird Falls, and Eklutna. These communities lie between the Chugach Mountains and the Knik Arm. (Please see the inset of Map 1 in Appendix A for location). The 2000 Census found a population of 22,000 in Eagle River and an additional 8,000 in the settlements further north (ADCCED).

The Eklutna Water Treatment Facility supplies the Eagle River area water system and the Eagle River Wastewater Treatment Plant provides sewerage services. Waste Management Company offers refuse collection services for disposal in the Anchorage regional landfill on Hiland Road (ADCCED).

Glacial and alluvial forces have shaped the Eagle River valley and Chugach mountain front in this area. These forces have resulted in the U-shaped river valleys and moraine-mantled mountain flanks of the mountain front and lakes, streams and undulating ridges and hills of the glaciated lowlands extending to the Knik Arm (Munter, J.A. and Allely, R.D., 1992)

Most of the soils in the area provide good sources of sand, gravel and topsoil. The deposition of silt, clay and organic "muck" in old lakes and depressions means that some areas have soil conditions that vary over relatively short distances.

According to the well log and flow test report, the depth of the well is 183 feet below ground surface and is screened from 162 feet to 163 feet below ground surface. This well penetrated relatively impermeable zones of clay and mixed clay approximately 72.5 feet thick, and the aquifer appears to be under hydrostatic pressure based on a high static water level relative to the depth of the aquifer. Based on this, the well is assumed to be completed in a confined aquifer, or an aquifer under hydrostatic pressure.

The Saint Andrew Parish Well #1 public water system serves approximately four thousand (4,000) non-residents through one (1) approved service connection.

SAINT ANDREW PARISH WELL #1 DRINKING WATER PROTECTION AREA

The pathways most likely for surface contamination to reach the groundwater are identified as the first step in determining a drinking water system's risk. 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 drinking water protection area. The drinking water protection area is the area circling the well (the area influenced by pumping) and also the area upgradient of the well, usually forming a parabola shape. Because releases of contaminants within the protection area are most likely to impact the well, this area will serve as the focus for voluntary protection efforts.

There are many different methods for calculating the size of protection areas. Drinking Water Protection (DWP) uses a combination of two simple groundwater flow equations, the Thiem and uniform flow equations for all groundwater wells screened in unconsolidated material. The orientation of the protection zone is then drawn using a water table elevation map (if available) or a land surface elevation map of the area. The protection zone calculated by the DWP is an estimate using the available information and resources, and may differ slightly from the actual capture zone. Because of uncertainties and changing site conditions, a factor of safety is added to the protection zone to form the drinking water protection area for the well.

The parameters used to calculate the shape of this protection area are general for the whole alluvial plain and were obtained from various United States Geological Survey (USGS) reports, area well logs, and the Groundwater textbook by Freeze and Cherry (1979).

The drinking water protection areas (DWPAs) established for wells by the DEC are usually separated into two 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 protection area. 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.

The confined aquifer of this area consists of multiple sandy and gravelly units of varying lateral continuity and is recharged from local precipitation and snowmelt through the overlying aquifers. (Munter, J.A. and Allely, R.D., 1992)

Because of uncertainties and changing site conditions, a factor of safety is added to the drinking water protection area for the well.

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 two protection area zones for wells and the calculated time-of-travel for each:

Table 1. Definition of Zones

Zone	Definition
A	Several months time-of-travel
В	Less than the 2 year time-of-travel

The DWPA for the Saint Andrew Parish Well #1 found on Map 1 of Appendix A will serve as the focus for voluntary protection efforts.

INVENTORY OF POTENTIAL AND EXISTING CONTAMINANT SOURCES

Drinking Water Protection (DWP) has completed an inventory of potential and existing sources of contamination within the Saint Andrew Parish Well #1 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 Non-Transient Non-Community public water system assessments, the following six categories of drinking water contaminants were inventoried:

- 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 Map 2 of 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 each 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

combination of toxicity and volume associated with that source. Rankings include:

LowMediumHighVery High

The time-of-travel for contaminants within the water varies and is dependent on the physical and chemical characteristics of each contaminant.

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

VULNERABILITY OF SAINT ANDREW PARISH WELL #1 PUBLIC DRINKING WATER SYSTEM

The vulnerability of public drinking water systems to regulated contaminants is determined by assessing the susceptibility of the wellhead, the susceptibility of the aquifer and the potential contaminant sources identified within the DWPA.

Drinking Water Protection staff developed a vulnerability assessment tool that assigns a vulnerability risk ranking based upon various factors associated with the well, aquifer and potential and existing contaminants identified within the DWPA.

Factors contributing to the susceptibility of the wellhead are: whether the sanitary seal in place, protection from flooding, and if the well casing is properly grouted.

The wellhead for the Saint Andrew Parish Well #1 received a **Low** susceptibility rating. Department records indicate that the well is capped with a sanitary seal, the land surface is sloped away from the well, and the well is properly grouted. A sanitary seal prevents potential contaminants from entering the well while sloping of the land surface and grouting help to prevent potential contaminants from traveling down the outside of the well casing.

Factors contributing to the susceptibility of the aquifer are: whether the aquifer is confined or unconfined, whether the well is completed in unconsolidated or fractured bedrock, whether other wells and bore holes are penetrating the aquifer and, if applicable, and the characteristics of the confining layer.

The aquifer that the Saint Andrew Parish Well #1 well is completed in is confined by approximately seventy-two (72) cumulative feet of confining layers (clay and mixed clay). Confining layers may help inhibit

transport of contaminants to the aquifer. It received a **High** susceptibility rating because of the presence several drinking water wells penetrating the vadose zone in the protection area. The presence of other wells penetrating the vadose zone of the protection area can allow contaminants to travel into the shared aquifer with precipitation and runoff.

Table 2 summarizes the susceptibility scores and ratings for Saint Andrew Parish Well #1.

Table 2. Susceptibility

	Rating
Susceptibility of the	Low
Wellhead	
Susceptibility of the	High
Aquifer	
Natural Susceptibility	Low
*	Low

The Contaminant Risk was derived from an evaluation of the routine sampling results of the water system and the presence of potential sources of contamination. Contaminant risks to a drinking water source depend on the type and distribution of contaminant sources.

Table 3 summarizes the Contaminant Risks for each category of drinking water contaminants.

Table 3. Contaminant Risks

Category	Rating
Bacteria and Viruses	Very High
Nitrates and/or Nitrites	Very High
Volatile Organic Chemicals	Very High
Heavy Metals, Cyanide, and	
Other Inorganic Chemicals	Very High
Synthetic Organic Chemicals	Medium
Other Organic Chemicals	Very High

Finally, an overall vulnerability is determined for each water system by combining each of the contaminant risk scores with the natural susceptibility score:

Natural Susceptibility

+
Contaminant Risks

=
Vulnerability of the
Drinking Water Source to Contamination

Table 4 contains the overall ratings for each of the six categories of drinking water contaminants.

Table 4. Overall Vulnerability

Category	Rating
Bacteria and Viruses	High
Nitrates and Nitrites	High
Volatile Organic Chemicals	High
Heavy Metals, Cyanide, and	
Other Inorganic Chemicals	High
Synthetic Organic Chemicals	Medium
Other Organic Chemicals	High

Bacteria and Viruses

The large-capacity septic system and the drycleaner's water disposal well in the protection area represent the greatest risk for bacteria and viruses to the drinking water well.

Only a small amount of bacteria and viruses are required to endanger public health. Coliform bacteria are found naturally in the environment and although they aren't necessarily a health threat, it is an indicator of other potentially harmful bacteria in the water, more specifically, fecal coliform bacteria and E. coli which only come from human and animal fecal waste (EPA, 2002). Harmful bacteria can cause diarrhea, cramps, nausea, headaches, or other symptoms (EPA, 2002). No total coliform or fecal coliform have been detected for this well. After combining the contaminant risk for bacteria and viruses with the natural susceptibility of the well, the overall vulnerability of the well to contamination is **High**.

Nitrates and Nitrites

The ammunitions manufacturing, large-capacity septic system and the drycleaner's water disposal well in the protection area represent the greatest risk for nitrates and nitrites to this source of public drinking water.

Nitrates are very mobile, moving at approximately the same rate as water. Nitrates have not been detected within source waters.

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 **High**.

Volatile Organic Chemicals

The car wash, drycleaner and it's disposal well, gasoline station, motor vehicle waste disposal wells, gasoline and diesel tanks, a contaminated site, printer/publisher, cement manufacturing, and a machine/metal work shop represent the greatest risk for volatile organic chemicals (VOCs) to the well.

VOCs have not been detected within source waters. 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 drycleaner's disposal well, motor vehicle disposal wells, recycling facilities and a machine/metal work shop in the protection area represent the greatest risk for inorganic chemicals to the well.

After combining the contaminant risk for heavy metals, cyanide 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 pest extermination service, pet groomer, photography supplies/laboratory, sewer lines, large-capacity septic system, motor vehicle waste disposal wells, residential areas, residential septic systems, parks, medical facilities, printer/publisher, and machine/metal work shop, represent the greatest risk for synthetic organic chemicals (SOCs) to the well.

No SOCs have been detected for this well. After combining the contaminant risk for SOCs with the natural susceptibility of the well, the overall vulnerability of the well to contamination is **Medium**.

Other Organic Chemicals

The drycleaner's disposal well, oil and gas pipelines, cement manufacturing, ammunitions manufacturing, and a machine/metal work shop represent the greatest risk for other organic chemicals (OOCs) to the well.

OOCs have not been sampled from this well. After combining the contaminant risk for OOCs with the natural susceptibility of the well, the overall vulnerability of the well to contamination is **High**.

Using the Source Water Assessment

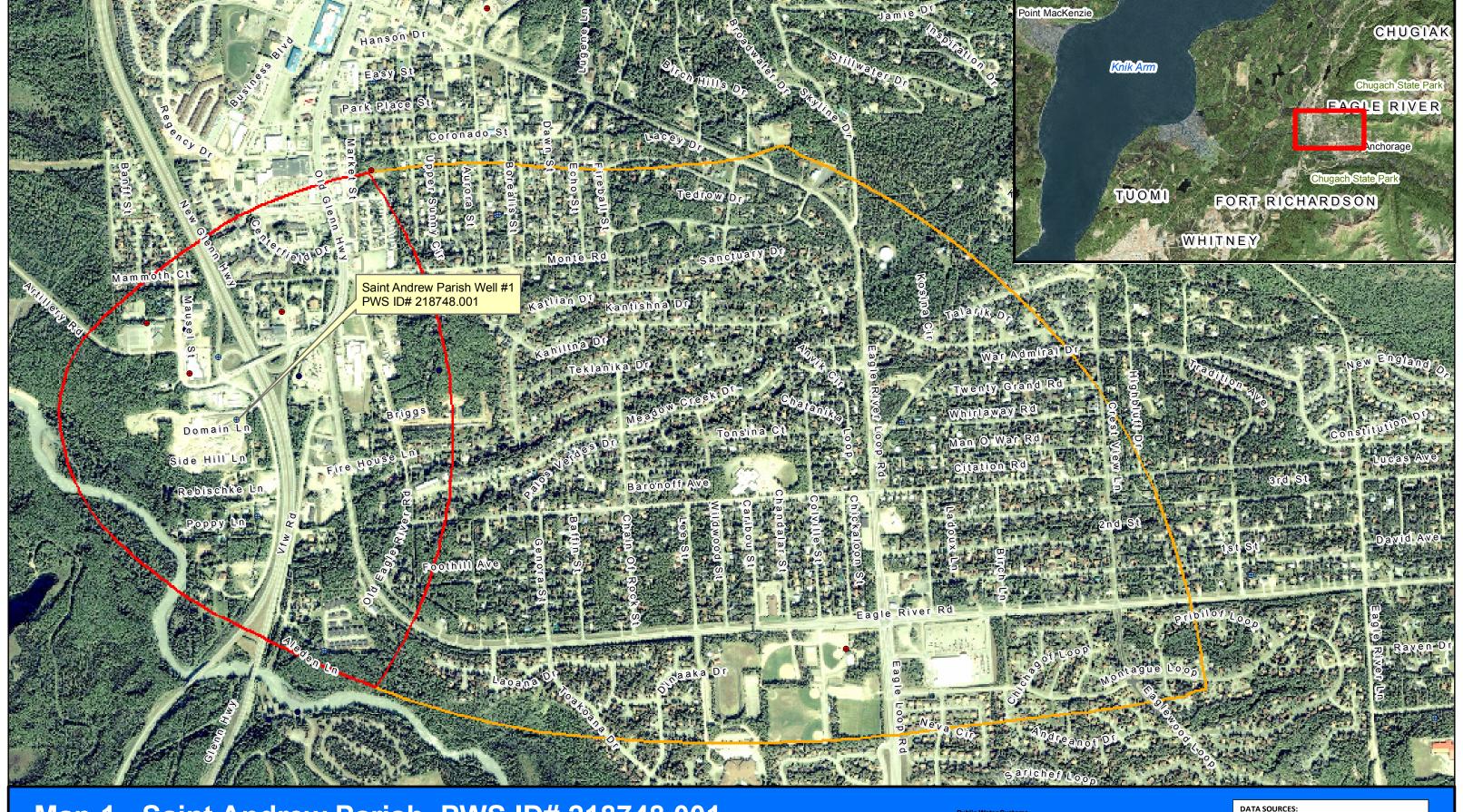
This assessment of contaminant risks can be used as a foundation for local voluntary protection efforts as well as a basis for the continuous efforts on the part of Saint Andrew Parish Well #1 to protect public health. It is anticipated that Source Water Assessments will be updated every five years to reflect any changes in the vulnerability and/or susceptibility of the Saint Andrew Parish Well #1 drinking water source.

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- Munter, J.A., and Allely, R.D., 1992, Water-Supply Aquifers at Eagle River, Alaska: State of Alaska Division of Geological & Geophysical Surveys Professional Report 108, 20p., 4 sheets, scale 1:12,000
- United States Environmental Protection Agency (EPA), 2008 [WWW document], URL http://www.epa.gov/safewater/contaminants/index.html

APPENDIX A

Saint Andrew Parish Well #1
Drinking Water Protection Area Location Map
(Map 1)



Map 1 - Saint Andrew Parish, PWS ID# 218748.001



1:11,100



Aerial Imagery: Virtual Earth, Microsoft Live Search Maps (http://maps.live.com); Anchorage Ard MS Image

Public Drinking Water Sources: Alaska Department of

<u>Drinking Water Protection Areas:</u> Alaska Department

APPENDIX B

Contaminant Source Inventory and Risk Ranking for Saint Andrew Parish Well #1 (Tables 1-7)

Contaminant Source Inventory for SAINT ANDREW PARISH

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Map Number	Comments
Car washes with engine or undercarriage cleaning	C08	C08-01	A	2	Best Car Wash & Lube - 11115 Old Eagle River Rd
Construction trade areas and materials	C09	C09-01	A	2	Lee's Custom Design - 11517 Old Glenn Hwy
Construction trade areas and materials	C09	C09-04	A	2	Peppers Construction - 10224 W. Frontage Rd
Construction trade areas and materials	C09	C09-09	A	2	Weldin Construction Inc 10421 VFW Rd. #206
Dry cleaners	C10	C10-01	A	2	Candy's Cleaners - 11401 Old Glenn Hwy #110D
Florists	C12	C12-01	A	2	Floral Expressions by Carrs - 11431 Business Park Blvd
Gasoline stations (with repair shop)	C16	C16-01	A	2	Eagle River Shell - 11301 Old Glenn Hwy
Laboratories (chemical, soils, and research)	C20	C20-02	A	2	Huntington Consulting - 10421 VFW Rd. #203
Lubrication shops	C25	C25-01	A	2	Alaska Qwik Lube, Inc - 11136 Chugiak Dr
Motor /motor vehicle repair shops	C31	C31-03	A	2	GLE River RV Parts & Repair - 10103 VFW Rd
Motor /motor vehicle repair shops	C31	C31-04	A	2	Johnson's Tire Service - 16400 Brooks Loop, Eagle River, AK
Motor /motor vehicle repair shops	C31	C31-05	A	2	Dave Miller's Services - 11135 Ashley Park Ln
Motor /motor vehicle repair shops	C31	C31-06	A	2	Sam & Son's Performance - 11127 Old Eagle River Rd
Pest extermination services/pesticide sales	C33	C33-01	A	2	Statewide Clearing Inc 16244 Poppy Ln
Pet groomers	C34	C34-01	A	2	Ravenwood Veterinary Clinic - 11525 Old Glenn Hwy
Pharmacies (with on-site wastewater disposal)	C35	C35-01	A	2	Carrs Qulaity Ctr - 11431 Business Blvd
Pharmacies (with on-site wastewater disposal)	C35	C35-02	A	2	Family Pharmacy - 11432 Business Blvd
Photography supplies/photo processing laboratories	C36	C36-01	A	2	Eagle River Photo - 11432 Business Blvd
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D01-01-54	A	2	Identified 54 sewerlines - mains in Zone A
Injection wells (Class V) Large-Capacity Septic System (Drainfield Disposal Method)	D10	D10-01	A	2	Rivers Edge Condo - Septic System
Injection wells (Class V) Industrial Process Water & Water Disposal Wells	D40	D40-01	A	2	Candy's Cleaners - 11401 Old Glenn Hwy #110D
Injection wells (Class V) Motor Vehicle Waste Disposal Well	D42	D42-01	A	2	Eagle River Shell - 11301 Old Glenn Hwy
Injection wells (Class V) Motor Vehicle Waste Disposal Well	D42	D42-02	A	2	Qwik Lube (Eagle River) - Brooks & Chugiak Dr

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Map Number	Comments
Recycling and waste reduction facilities	D57	D57-01	A	2	Alaska ATV Salvage - 11029 Cross Dr
Recycling and waste reduction facilities	D57	D57-01	A	2	Arctic Express Towing - 17010 Lynne Dr
Quarries (sand, gravel, rock, other?)	E10	E10-01	A	2	Eagle Dome Aggregate, Inc Eagle Dome Pit
Quarries (sand, gravel, rock, other?)	E10	E10-02	A	2	Eagle River Pit
Sign manufacturing	I39	I39-01	A	2	Universal Sign & Lighting Shop - 10441 VFW Rd
Residential Areas	R01	R01-01	A	2	Identified approximately 23 Acres of Residential Area in Zone A
Septic systems (serves one single-family home)	R02	R02-01-05	A	2	5 Inferred Residential Septics identified in Zone A
Tanks, diesel (above ground)	T06	T06-02	A	2	Matanuska Telephone Association - 10901 Old Eagle River Rd. Anchorage Fire Department tanks - fuel oil (diesel)
Tanks, diesel (underground)	T08	T08-01	A	2	Eagle River Shell - 11301 Old Glenn Hwy
Closed tanks, diesel (underground)	T09	T09-01	A	2	MOA - Fire Station #11 - Mile 0.25, Eagle River Rd. (Diesel)
Tanks, gasoline (above ground)	T10	T10-01	A	2	Eagle River Shell - 11301 Old Glenn Hwy/ Anchorage Fire Dept tanks - Unleaded Gasoline Supreme.
Tanks, gasoline (underground)	T12	T12-01	A	2	Carr's Fuel Center Eagle River - 11409 Business Blvd. (Gasoline)
Tanks, gasoline (underground)	T12	T12-02	A	2	Carr's Fuel Center Eagle River - 11409 Business Blvd. (Gasoline)
Tanks, gasoline (underground)	T12	T12-03	A	2	Eagle River Shell - 11301 Old Glenn Hwy (Gasoline)
Tanks, gasoline (underground)	T12	T12-04	A	2	Eagle River Shell - 11301 Old Glenn Hwy (Gasoline)
Closed tanks, gasoline (underground)	T13	T13-01	A	2	MOA - Fire Station #11 - Mile 0.25 Eagle River Rd. (Gasoline)
Tanks, heating oil, nonresidential (underground)	T16	T16-01	A	2	Alaska Qwik Lube, Inc - Lt.11, Blk 1, Brooks & Chugach Dr. Qwik Lube oil Change (Heating Oil)
Tanks, heating oil, nonresidential (underground)	T16	T16-02	A	2	Alaska Qwik Lube, Inc - Lt.11, Blk 1, Brooks & Chugach Dr. Qwik Lube oil Change (Heating Oil)
Tanks, heating oil, nonresidential (underground)	T16	T16-03	A	2	Alaska Qwik Lube, Inc - Lt.11, Blk 1, Brooks & Chugach Dr. Qwik Lube oil Change (Heating Oil)
Tanks, lubricants or other petroleum products (aboveground)	T18	T18-01	A	2	AK Qwik Lube - Box 11136 Chugiak Dr. Possible WASTE OIL contamination from Anchorage Fire Department tanks.
Wastewater Holding Tank	T22	T22-01	A	2	Texaco Frontier Service - 11301 Old Glenn Hwy. Business name is now Eagle River Shell at this location. Possible UNLEADED GASOLINE contamination from Anchorage Fire Department tanks.
Contaminated sites, DEC recognized, non-Superfund, non-RCRA	U04	U04-01	A	2	Eagle River Shopping Center. Status: Cleanup Complete - Institutional Controls. CS Risk Ranking: De Minimis Exposure. Contaminated Sites Database Hazard ID: 4118 Heating Oil (Benzene and DRO) found floating on groundwater.

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Map Number	Comments
Contaminated sites, DEC recognized, non-Superfund, non-RCRA	U04	U04-02	A	2	Eagle River Road Commercial Site. Status: Cleanup Complete. Contaminated Sites Database Hazard ID: 1787. PCE and TPH contamination in soils and groundwater. 10 private and 3 public drinking water wells identified w/n 1/4 mi radius.
Contaminated sites, DEC recognized, non-Superfund, non-RCRA	U04	U04-03	A	2	The Delta Companies - ~11933 Town Park Circle. Status: Active. Contaminants: Chromium, DRO, RRO. ETM Groundwater Ingestion: Pathway Incomplete.
Open Leaking Underground Fuel Storage Tank (LUST) Sites	U07	U07-01	A	2	Frontier Texaco (Former Unocal - #5773). Status: Active. Contaminated Sites Database Hazard ID: 23579. Soil and groundwater petroleum hydrocarbon (Benzene, DRO, GRO) contamination from UST facility documented in 1986. CS Risk: Pathway Incomplete.
Open Leaking Underground Fuel Storage Tank (LUST) Sites	U07	U07-02	A	2	Chevron - #1252 - 11836 Old Glenn Hwy. Status: Active. Hazard ID#: 23705. Contaminants: DRO, Benzene. ETM - Groundwater Ingestion: HIGH POTENTIAL EXPOSURE (Initial - 4/17/08 and Updated Ranking - 1/30/09)
Closed Leaking Underground Fuel Storage Tank (LUST) Sites	U08	U08-06	A	2	Matanuska Telephone Association Eagle River CO. Status: Cleanup Complete. Contaminates Sites Database Hazard ID: 24802.
Water supply wells	W09	W09-01	A	2	Public Water System Class C, Active
Water supply wells	W09	W09-02	A	2	Public Water System Class C, Active
Water supply wells	W09	W09-03	A	2	Public Water System Class A, Active
Water supply wells	W09	W09-04	A	2	Public Water System Class B, Active
Water supply wells	W09	W09-05	A	2	Public Water System Class B, Active
Water supply wells	W09	W09-06	A	2	Public Water System Class C, Inactive
Water supply wells	W09	W09-07	A	2	Public Water System Class C, Inactive
Water supply wells	W09	W09-08	A	2	Public Water System Class A, Active
Water supply wells	W09	W09-09	A	2	Public Water System Class A, Active
Water supply wells	W09	W09-10	A	2	Public Water System Class B, Active
Municipal or city parks (with green areas)	X04	X04-03	A	2	Chugach State Park
Government vehicle maintenance facilities	X19	X19-01	A	2	Eagle River Fire Dept - 16741 Fire House Ln.
Highways and roads, paved (cement or asphalt)	X20	X20-01-38	A	2	38 Anchorage roads identified in Zone A.
Highways and roads, paved (cement or asphalt)	X20	X20-156-157	A	2	Glenn Hwy - South Bound and North Bound.
Motor vehicle/general storage yards/facilities	X27	X27-03	A	2	Storage Bin - 16630 Artillery Rd.
Pipelines (oil and gas)	X28	X28-01	A	2	Oil and Gas Pipeline - 20" line.
Campgrounds and RV Parks	X35	X35-01	A	2	Hidden haven RV Park - 10011 Aleden Ln.

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Map Number	Comments
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-01	A	2	Aurora Helath Care Clinic at 12320 Old Glenn Highway, Eagle River, AK.
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-03	A	2	Centerfield Dental Center - 16635 Centerfield Dr. #205.
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-04	A	2	Eagle River Orthodontics - 16635 Centerfield Dr. #201.
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-05	A	2	Eagle River Primary Care Clinic - 11462 Business Blvd.
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-06	A	2	Eagle River Smiles: Enghirst Bryan DDS - 11431 Business Blvd #5
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-08	A	2	Four Paws Animal Hospital - 11431 Business Blvd. #16
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-09	A	2	Kirk T Moss Family Practice - 11432 Business Blvd. Cannot confirm business and location but other medical offices are at the the same address.
Kennels	X49	X49-01	A	2	Eagle River Pet Grooming - 16433 Artillery Rd.
Appliance repair shops	C03	C03-01	В	2	Allied Plumbing & Heating - 19408 Whirlaway Rd
Construction trade areas and materials	C09	C09-02	В	2	McDonlad's Custom Craft - 9716 E. Chichagof Loop
Construction trade areas and materials	C09	C09-03	В	2	Olympia Drywall - 10455 Chatanika Loop
Construction trade areas and materials	C09	C09-05	В	2	PJM Development/Peppers Construction - 11424 Lower Sunny Cir
Construction trade areas and materials	C09	C09-06	В	2	Quick Fix - 10316 Crest View Ln
Construction trade areas and materials	C09	C09-07	В	2	Sudsbury's & Sons - 11239 Aurora St
Construction trade areas and materials	C09	C09-08	В	2	Thurston Enterprises - 9808 Chatham Cir
Heavy equipment rental/storage	C18	C18-01	В	2	All Seasons Svc - 18809 Whirlaway Rd
Heavy equipment rental/storage	C18	C18-02	В	2	D L Enterprises - 12420 Spring Brook Drive, Eagle River, AK 99577-7548
Heavy equipment rental/storage	C18	C18-03	В	2	M & J Svc Inc - 11441 Celestial St
Laboratories (chemical, soils, and research)	C20	C20-01	В	2	Gleason Research - 19214 1st St
Motor vehicle dealerships - cars, trucks, motor cycles, ATV's, snow machines, boats (without service department)	C26	C26-01	В	2	Talon Industries - 11406 Echo St
Motor/motor vehicle supplies stores	C28	C28-01	В	2	Alaska Wing Covers - 18521 Whirlaway Rd
Motor /motor vehicle repair shops	C31	C31-01	В	2	A Plus Towing - Mile 24 Glenn Highway
Motor /motor vehicle repair shops	C31	C31-02	В	2	Alaska Mobile ATV Repair - 4640 Birdsong Drive, Eagle River, AK
Printers, publishers, copiers	C37	C37-01	В	2	Aurora Printing Sales - Wildwood Ln

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Map Number	Comments
Taxidermists	C41	C41-01	В	2	Hunter's Horn Taxidermy Svc 11416 Echo St
Welding shops	C43	C43-01	В	2	Alaska Welding Specialists - 11341 Echo St
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D01-55-278	В	2	Identified 224 sewerlines - mains in Zone B
Beverage industry	I07	I07-01	В	2	Alaskan Soda Co 10316 Lee St
Cement manufacturing	I08	I08-01	В	2	Borealis Construction Co 10825 Neacola Cir
Explosives and ammunitions manufacturing	I15	I15-01	В	2	Arctic Ammunition Co - 11141 Katlian Dr
Machine and metal work shops	I23	I23-01	В	2	Custom Services - 11316 Lower Sunny Cir
Stone and clay processing/manufacturing	I43	I43-01	В	2	Primitive Palatte - Old Glenn Hwy
Meat processing	N05	N05-01	В	2	Game Meat Processing - 11437 Echo St
Residential Areas	R01	R01-02	В	2	Identified approximately 496 Acres of Residential Area in Zone B
Septic systems (serves one single-family home)	R02	R02-06-80	В	2	75 Inferred Residential Septics identified in Zone B
Tanks, diesel (above ground)	T06	T06-01	В	2	ASD Gruening Junior High School - 9601 Lee St. Anchoarge Fire Department tanks - fuel oil (diesel).
Tanks, diesel (above ground)	T06	T06-03	В	2	ASD Gruening Junior High School - 9601 Lee St. Anchorage Fire Department tanks - fuel oil (diesel).
Tanks, diesel (underground)	T08	T08-02	В	2	AS Gruening Junior High School - 9601 Lee St. (Diesel)
Contaminated sites, DEC recognized, non-Superfund, non-RCRA	U04	U04-04	В	2	Tweed Excavating - Spring Brook Dr. Status: Cleanup Complete. Contaminants: DRO. No ETM ratings.
Closed Leaking Underground Fuel Storage Tank (LUST) Sites	U08	U08-01	В	2	MOA - AWWU Well #54. Status - Cleanup Complete. Contaminated Sites Database Hazard ID: 23337
Closed Leaking Underground Fuel Storage Tank (LUST) Sites	U08	U08-02	В	2	Enstar - Eagle River Operations. Status: Cleanup Complete. Contaminated Sites Database Hazard ID: 24870.
Closed Leaking Underground Fuel Storage Tank (LUST) Sites	U08	U08-03	В	2	Northshore Ventures Eagle River 7-11 #68. Status: Cleanup Complete. Contaminated Sites Database Hazard ID: 23581. TCE, BTEX detected at waste oil UST. Monitoring well testing show non-detect or <mcl.< td=""></mcl.<>
Closed Leaking Underground Fuel Storage Tank (LUST) Sites	U08	U08-05	В	2	MOA - Fire Station #11. Status: Cleanup Complete. Contaminated Sites Database Hazard ID: 23748. Case is closed.
Water supply wells	W09	W09-11	В	2	Public Water System Class A, Inactive
Water supply wells	W09	W09-12	В	2	Public Water System Class A, Inactive
Water supply wells	W09	W09-13	В	2	Public Water System Class A, Active
Water supply wells	W09	W09-14	В	2	Public Water System Class A, Active

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Map Number	Comments
Water supply wells	W09	W09-15	В	2	Public Water System Class B, Active
Municipal or city parks (with green areas)	X04	X04-01	В	2	Palos Verdes Park
Municipal or city parks (with green areas)	X04	X04-02	В	2	Eliasson Park
Highways and roads, paved (cement or asphalt)	X20	X20-39-156	В	2	118 Anchorage roads identified in Zone B.
Motor vehicle/general storage yards/facilities	X27	X27-01	В	2	American Moving Systems, Inc 19231 Adak Cir
Motor vehicle/general storage yards/facilities	X27	X27-02	В	2	Gantner Transport Inc 11416 Fireball St
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-02	В	2	Awareness Independent Distr 18634 Whirlaway Rd
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-07	В	2	Healthsouth Medical Clinic - 10928 Eagle River Rd. #150

Contaminant Source Inventory and Risk Ranking for SAINT ANDREW PARISH

Sources of Bacteria and Viruses

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Risk Ranking for Analysis	Map Number	Comments
Dry cleaners	C10	C10-01	A	Low	2	Candy's Cleaners - 11401 Old Glenn Hwy #110D
Pharmacies (with on-site wastewater disposal)	C35	C35-01	A	Low	2	Carrs Qulaity Ctr - 11431 Business Blvd
Pharmacies (with on-site wastewater disposal)	C35	C35-02	A	Low	2	Family Pharmacy - 11432 Business Blvd
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D01-01-54	A	Medium	2	Identified 54 sewerlines - mains in Zone A
Injection wells (Class V) Large-Capacity Septic System (Drainfield Disposal Method)	D10	D10-01	A	High	2	Rivers Edge Condo - Septic System
Injection wells (Class V) Industrial Process Water & Water Disposal Wells	D40	D40-01	A	High	2	Candy's Cleaners - 11401 Old Glenn Hwy #110D
Injection wells (Class V) Motor Vehicle Waste Disposal Well	D42	D42-01	A	Low	2	Eagle River Shell - 11301 Old Glenn Hwy
Injection wells (Class V) Motor Vehicle Waste Disposal Well	D42	D42-02	A	Low	2	Qwik Lube (Eagle River) - Brooks & Chugiak Dr
Residential Areas	R01	R01-01	A	Low	2	Identified approximately 23 Acres of Residential Area in Zone A
Septic systems (serves one single-family home)	R02	R02-01-05	A	Low	2	5 Inferred Residential Septics identified in Zone A
Wastewater Holding Tank	T22	T22-01	A	Low	2	Texaco Frontier Service - 11301 Old Glenn Hwy. Business name is now Eagle River Shell at this location. Possible UNLEADED GASOLINE contamination from Anchorage Fire Department tanks.
Municipal or city parks (with green areas)	X04	X04-03	A	Medium	2	Chugach State Park
Highways and roads, paved (cement or asphalt)	X20	X20-01-38	A	Low	2	38 Anchorage roads identified in Zone A.
Highways and roads, paved (cement or asphalt)	X20	X20-156-157	A	Low	2	Glenn Hwy - South Bound and North Bound.
Campgrounds and RV Parks	X35	X35-01	A	Low	2	Hidden haven RV Park - 10011 Aleden Ln.
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-01	A	Medium	2	Aurora Helath Care Clinic at 12320 Old Glenn Highway, Eagle River, AK.
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-03	A	Medium	2	Centerfield Dental Center - 16635 Centerfield Dr. #205.

Contaminant Source Inventory and Risk Ranking for SAINT ANDREW PARISH 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	X40-04	A	Medium	2	Eagle River Orthodontics - 16635 Centerfield Dr. #201.
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-05	A	Medium	2	Eagle River Primary Care Clinic - 11462 Business Blvd.
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-06	A	Medium	2	Eagle River Smiles: Enghirst Bryan DDS - 11431 Business Blvd #5
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-08	A	Medium	2	Four Paws Animal Hospital - 11431 Business Blvd. #16
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-09	A	Medium	2	Kirk T Moss Family Practice - 11432 Business Blvd. Cannot confirm business and location but other medical offices are at the the same address.
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-09	A	Medium	2	Kirk T Moss Family Practice - 11432 Business Blvd. Cannot confirm business and location but other medical offices are at the the same address.
Kennels	X49	X49-01	A	Medium	2	Eagle River Pet Grooming - 16433 Artillery Rd.
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D01-55-278	В	Medium	2	Identified 224 sewerlines - mains in Zone B
Beverage industry	I07	I07-01	В	Low	2	Alaskan Soda Co 10316 Lee St
Meat processing	N05	N05-01	В	Medium	2	Game Meat Processing - 11437 Echo St
Residential Areas	R01	R01-02	В	Low	2	Identified approximately 496 Acres of Residential Area in Zone B
Septic systems (serves one single-family home)	R02	R02-06-80	В	Low	2	75 Inferred Residential Septics identified in Zone B
Municipal or city parks (with green areas)	X04	X04-01	В	Medium	2	Palos Verdes Park
Municipal or city parks (with green areas)	X04	X04-02	В	Medium	2	Eliasson Park
Highways and roads, paved (cement or asphalt)	X20	X20-39-156	В	Low	2	118 Anchorage roads identified in Zone B.
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-02	В	Medium	2	Awareness Independent Distr 18634 Whirlaway Rd
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-07	В	Medium	2	Healthsouth Medical Clinic - 10928 Eagle River Rd. #150

Contaminant Source Inventory and Risk Ranking for SAINT ANDREW PARISH

PWSID 218748.001

Sources of Bacteria and Viruses

Contaminant Contaminant Source Type

Source ID

CS ID tag Zone

Risk Ranking for Analysis

Map Number

Comments

Contaminant Source Inventory and Risk Ranking for SAINT ANDREW PARISH Sources of Nitrates/Nitrites

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Risk Ranking for Analysis	Map Number	Comments
Dry cleaners	C10	C10-01	A	Low	2	Candy's Cleaners - 11401 Old Glenn Hwy #110D
Florists	C12	C12-01	A	Low	2	Floral Expressions by Carrs - 11431 Business Park Blvd
Pharmacies (with on-site wastewater disposal)	C35	C35-01	A	Low	2	Carrs Qulaity Ctr - 11431 Business Blvd
Pharmacies (with on-site wastewater disposal)	C35	C35-02	A	Low	2	Family Pharmacy - 11432 Business Blvd
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D01-01-54	A	Medium	2	Identified 54 sewerlines - mains in Zone A
Injection wells (Class V) Large-Capacity Septic System (Drainfield Disposal Method)	D10	D10-01	A	High	2	Rivers Edge Condo - Septic System
Injection wells (Class V) Industrial Process Water & Water Disposal Wells	D40	D40-01	A	High	2	Candy's Cleaners - 11401 Old Glenn Hwy #110D
Quarries (sand, gravel, rock, other?)	E10	E10-01	A	Low	2	Eagle Dome Aggregate, Inc Eagle Dome Pit
Quarries (sand, gravel, rock, other?)	E10	E10-02	A	Low	2	Eagle River Pit
Residential Areas	R01	R01-01	A	Low	2	Identified approximately 23 Acres of Residential Area in Zone A
Septic systems (serves one single-family home)	R02	R02-01-05	A	Low	2	5 Inferred Residential Septics identified in Zone A
Wastewater Holding Tank	T22	T22-01	A	Low	2	Texaco Frontier Service - 11301 Old Glenn Hwy. Business name is now Eagle River Shell at this location. Possible UNLEADED GASOLINE contamination from Anchorage Fire Department tanks.
Municipal or city parks (with green areas)	X04	X04-03	A	Medium	2	Chugach State Park
Highways and roads, paved (cement or asphalt)	X20	X20-01-38	A	Low	2	38 Anchorage roads identified in Zone A.
Highways and roads, paved (cement or asphalt)	X20	X20-156-157	A	Low	2	Glenn Hwy - South Bound and North Bound.
Campgrounds and RV Parks	X35	X35-01	A	Low	2	Hidden haven RV Park - 10011 Aleden Ln.
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-01	A	Low	2	Aurora Helath Care Clinic at 12320 Old Glenn Highway, Eagle River, AK.
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-03	A	Low	2	Centerfield Dental Center - 16635 Centerfield Dr. #205.

Contaminant Source Inventory and Risk Ranking for SAINT ANDREW PARISH Sources of Nitrates/Nitrites

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	X40-04	A	Low	2	Eagle River Orthodontics - 16635 Centerfield Dr. #201.
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-05	A	Low	2	Eagle River Primary Care Clinic - 11462 Business Blvd.
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-06	A	Low	2	Eagle River Smiles: Enghirst Bryan DDS - 11431 Business Blvd #5
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-08	A	Low	2	Four Paws Animal Hospital - 11431 Business Blvd. #16
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-09	A	Low	2	Kirk T Moss Family Practice - 11432 Business Blvd. Cannot confirm business and location but other medical offices are at the the same address.
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-09	A	Low	2	Kirk T Moss Family Practice - 11432 Business Blvd. Cannot confirm business and location but other medical offices are at the the same address.
Kennels	X49	X49-01	A	Medium	2	Eagle River Pet Grooming - 16433 Artillery Rd.
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D01-55-278	В	Medium	2	Identified 224 sewerlines - mains in Zone B
Explosives and ammunitions manufacturing	I15	I15-01	В	Very High	2	Arctic Ammunition Co - 11141 Katlian Dr
Meat processing	N05	N05-01	В	Low	2	Game Meat Processing - 11437 Echo St
Residential Areas	R01	R01-02	В	Low	2	Identified approximately 496 Acres of Residential Area in Zone B
Septic systems (serves one single-family home)	R02	R02-06-80	В	Low	2	75 Inferred Residential Septics identified in Zone B
Municipal or city parks (with green areas)	X04	X04-01	В	Medium	2	Palos Verdes Park
Municipal or city parks (with green areas)	X04	X04-02	В	Medium	2	Eliasson Park
Highways and roads, paved (cement or asphalt)	X20	X20-39-156	В	Low	2	118 Anchorage roads identified in Zone B.
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-02	В	Low	2	Awareness Independent Distr 18634 Whirlaway Rd
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-07	В	Low	2	Healthsouth Medical Clinic - 10928 Eagle River Rd. #150

Contaminant Source Inventory and Risk Ranking for SAINT ANDREW PARISH Sources of Nitrates/Nitrites

PWSID 218748.001

Contaminant Contaminant Source Type

Source ID

CS ID tag

Zone

Risk Ranking for Analysis

Map Number **Comments**

Contaminant Source Inventory and Risk Ranking for SAINT ANDREW PARISH

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Risk Ranking for Analysis	Map Number	Comments
Car washes with engine or undercarriage cleaning	C08	C08-01	A	High	2	Best Car Wash & Lube - 11115 Old Eagle River Rd
Construction trade areas and materials	C09	C09-01	A	Low	2	Lee's Custom Design - 11517 Old Glenn Hwy
Construction trade areas and materials	C09	C09-04	A	Low	2	Peppers Construction - 10224 W. Frontage Rd
Construction trade areas and materials	C09	C09-09	A	Low	2	Weldin Construction Inc 10421 VFW Rd. #206
Dry cleaners	C10	C10-01	A	High	2	Candy's Cleaners - 11401 Old Glenn Hwy #110D
Gasoline stations (with repair shop)	C16	C16-01	A	High	2	Eagle River Shell - 11301 Old Glenn Hwy
Laboratories (chemical, soils, and research)	C20	C20-02	A	Low	2	Huntington Consulting - 10421 VFW Rd. #203
Lubrication shops	C25	C25-01	A	Medium	2	Alaska Qwik Lube, Inc - 11136 Chugiak Dr
Motor /motor vehicle repair shops	C31	C31-03	A	Medium	2	GLE River RV Parts & Repair - 10103 VFW Rd
Motor /motor vehicle repair shops	C31	C31-04	A	Medium	2	Johnson's Tire Service - 16400 Brooks Loop, Eagle River, AK
Motor /motor vehicle repair shops	C31	C31-05	A	Medium	2	Dave Miller's Services - 11135 Ashley Park Ln
Motor /motor vehicle repair shops	C31	C31-06	A	Medium	2	Sam & Son's Performance - 11127 Old Eagle River Rd
Pest extermination services/pesticide sales	C33	C33-01	A	Low	2	Statewide Clearing Inc 16244 Poppy Ln
Pet groomers	C34	C34-01	A	Low	2	Ravenwood Veterinary Clinic - 11525 Old Glenn Hwy
Photography supplies/photo processing laboratories	C36	C36-01	A	Medium	2	Eagle River Photo - 11432 Business Blvd
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D01-01-54	A	Low	2	Identified 54 sewerlines - mains in Zone A
Injection wells (Class V) Large-Capacity Septic System (Drainfield Disposal Method)	D10	D10-01	A	Low	2	Rivers Edge Condo - Septic System
Injection wells (Class V) Industrial Process Water & Water Disposal Wells	D40	D40-01	A	High	2	Candy's Cleaners - 11401 Old Glenn Hwy #110D
Injection wells (Class V) Motor Vehicle Waste Disposal Well	D42	D42-01	A	High	2	Eagle River Shell - 11301 Old Glenn Hwy

Contaminant Source Inventory and Risk Ranking for SAINT ANDREW PARISH

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Risk Ranking for Analysis	Map Number	Comments
Injection wells (Class V) Motor Vehicle Waste Disposal Well	D42	D42-02	A	High	2	Qwik Lube (Eagle River) - Brooks & Chugiak Dr
Quarries (sand, gravel, rock, other?)	E10	E10-01	A	Low	2	Eagle Dome Aggregate, Inc Eagle Dome Pit
Quarries (sand, gravel, rock, other?)	E10	E10-02	A	Low	2	Eagle River Pit
Sign manufacturing	I39	I39-01	A	Medium	2	Universal Sign & Lighting Shop - 10441 VFW Rd
Residential Areas	R01	R01-01	A	Low	2	Identified approximately 23 Acres of Residential Area in Zone A
Septic systems (serves one single-family home)	R02	R02-01-05	A	Low	2	5 Inferred Residential Septics identified in Zone A
Tanks, diesel (above ground)	T06	T06-02	A	Medium	2	Matanuska Telephone Association - 10901 Old Eagle River Rd. Anchorage Fire Department tanks - fuel oil (diesel)
Tanks, diesel (underground)	T08	T08-01	A	High	2	Eagle River Shell - 11301 Old Glenn Hwy
Closed tanks, diesel (underground)	T09	T09-01	A	Medium	2	MOA - Fire Station #11 - Mile 0.25, Eagle River Rd. (Diesel)
Tanks, gasoline (above ground)	T10	T10-01	A	Medium	2	Eagle River Shell - 11301 Old Glenn Hwy/ Anchorage Fire Dept tanks - Unleaded Gasoline Supreme.
Tanks, gasoline (underground)	T12	T12-01	A	High	2	Carr's Fuel Center Eagle River - 11409 Business Blvd. (Gasoline)
Tanks, gasoline (underground)	T12	T12-02	A	High	2	Carr's Fuel Center Eagle River - 11409 Business Blvd. (Gasoline)
Tanks, gasoline (underground)	T12	T12-03	A	High	2	Eagle River Shell - 11301 Old Glenn Hwy (Gasoline)
Tanks, gasoline (underground)	T12	T12-04	A	High	2	Eagle River Shell - 11301 Old Glenn Hwy (Gasoline)
Closed tanks, gasoline (underground)	T13	T13-01	A	Medium	2	MOA - Fire Station #11 - Mile 0.25 Eagle River Rd. (Gasoline)
Tanks, heating oil, nonresidential (underground)	T16	T16-01	A	Low	2	Alaska Qwik Lube, Inc - Lt.11, Blk 1, Brooks & Chugach Dr. Qwik Lube oil Change (Heating Oil)
Tanks, heating oil, nonresidential (underground)	T16	T16-02	A	Low	2	Alaska Qwik Lube, Inc - Lt.11, Blk 1, Brooks & Chugach Dr. Qwik Lube oil Change (Heating Oil)
Tanks, heating oil, nonresidential (underground)	T16	T16-03	A	Low	2	Alaska Qwik Lube, Inc - Lt.11, Blk 1, Brooks & Chugach Dr. Qwik Lube oil Change (Heating Oil)

Contaminant Source Inventory and Risk Ranking for SAINT ANDREW PARISH

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Risk Ranking for Analysis	Map Number	Comments
Wastewater Holding Tank	T22	T22-01	A	Medium	2	Texaco Frontier Service - 11301 Old Glenn Hwy. Business name is now Eagle River Shell at this location. Possible UNLEADED GASOLINE contamination from Anchorage Fire Department tanks.
Contaminated sites, DEC recognized, non-Superfund, non-RCRA	U04	U04-01	A	Low	2	Eagle River Shopping Center. Status: Cleanup Complete - Institutional Controls. CS Risk Ranking: De Minimis Exposure. Contaminated Sites Database Hazard ID: 4118 Heating Oil (Benzene and DRO) found floating on groundwater.
Contaminated sites, DEC recognized, non-Superfund, non-RCRA	U04	U04-02	A	Low	2	Eagle River Road Commercial Site. Status: Cleanup Complete. Contaminated Sites Database Hazard ID: 1787. PCE and TPH contamination in soils and groundwater. 10 private and 3 public drinking water wells identified w/n 1/4 mi radius.
Contaminated sites, DEC recognized, non- Superfund, non-RCRA	U04	U04-03	A	Low	2	The Delta Companies - ~11933 Town Park Circle. Status: Active. Contaminants: Chromium, DRO, RRO. ETM Groundwater Ingestion: Pathway Incomplete.
Open Leaking Underground Fuel Storage Tank (LUST) Sites	U07	U07-01	A	Low	2	Frontier Texaco (Former Unocal - #5773). Status: Active. Contaminated Sites Database Hazard ID: 23579. Soil and groundwater petroleum hydrocarbon (Benzene, DRO, GRO) contamination from UST facility documented in 1986. CS Risk: Pathway Incomplete.
Open Leaking Underground Fuel Storage Tank (LUST) Sites	U07	U07-02	A	Very High	2	Chevron - #1252 - 11836 Old Glenn Hwy. Status: Active. Hazard ID#: 23705. Contaminants: DRO, Benzene. ETM - Groundwater Ingestion: HIGH POTENTIAL EXPOSURE (Initial - 4/17/08 and Updated Ranking - 1/30/09)
Closed Leaking Underground Fuel Storage Tank (LUST) Sites	U08	U08-06	A	Low	2	Matanuska Telephone Association Eagle River CO. Status: Cleanup Complete. Contaminates Sites Database Hazard ID: 24802.
Government vehicle maintenance facilities	X19	X19-01	A	Medium	2	Eagle River Fire Dept - 16741 Fire House Ln.
Highways and roads, paved (cement or asphalt)	X20	X20-01-38	A	Low	2	38 Anchorage roads identified in Zone A.
Highways and roads, paved (cement or asphalt)	X20	X20-156-157	A	Low	2	Glenn Hwy - South Bound and North Bound.
Motor vehicle/general storage yards/facilities	X27	X27-03	A	Low	2	Storage Bin - 16630 Artillery Rd.
Pipelines (oil and gas)	X28	X28-01	A	Medium	2	Oil and Gas Pipeline - 20" line.
Campgrounds and RV Parks	X35	X35-01	A	Low	2	Hidden haven RV Park - 10011 Aleden Ln.

Contaminant Source Inventory and Risk Ranking for SAINT ANDREW PARISH

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	X40-01	A	Low	2	Aurora Helath Care Clinic at 12320 Old Glenn Highway, Eagle River, AK.
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-03	A	Low	2	Centerfield Dental Center - 16635 Centerfield Dr. #205.
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-04	A	Low	2	Eagle River Orthodontics - 16635 Centerfield Dr. #201.
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-05	A	Low	2	Eagle River Primary Care Clinic - 11462 Business Blvd.
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-06	A	Low	2	Eagle River Smiles: Enghirst Bryan DDS - 11431 Business Blvd #5
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-08	A	Low	2	Four Paws Animal Hospital - 11431 Business Blvd. #16
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-09	A	Low	2	Kirk T Moss Family Practice - 11432 Business Blvd. Cannot confirm business and location but other medical offices are at the the same address.
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-09	A	Low	2	Kirk T Moss Family Practice - 11432 Business Blvd. Cannot confirm business and location but other medical offices are at the the same address.
Appliance repair shops	C03	C03-01	В	Low	2	Allied Plumbing & Heating - 19408 Whirlaway Rd
Construction trade areas and materials	C09	C09-02	В	Low	2	McDonlad's Custom Craft - 9716 E. Chichagof Loop
Construction trade areas and materials	C09	C09-03	В	Low	2	Olympia Drywall - 10455 Chatanika Loop
Construction trade areas and materials	C09	C09-05	В	Low	2	PJM Development/Peppers Construction - 11424 Lower Sunny Cir
Construction trade areas and materials	C09	C09-06	В	Low	2	Quick Fix - 10316 Crest View Ln
Construction trade areas and materials	C09	C09-07	В	Low	2	Sudsbury's & Sons - 11239 Aurora St
Construction trade areas and materials	C09	C09-08	В	Low	2	Thurston Enterprises - 9808 Chatham Cir
Heavy equipment rental/storage	C18	C18-01	В	Medium	2	All Seasons Svc - 18809 Whirlaway Rd
Heavy equipment rental/storage	C18	C18-02	В	Medium	2	D L Enterprises - 12420 Spring Brook Drive, Eagle River, AK 99577-7548

Contaminant Source Inventory and Risk Ranking for SAINT ANDREW PARISH

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Risk Ranking for Analysis	Map Number	Comments
Heavy equipment rental/storage	C18	C18-03	В	Medium	2	M & J Svc Inc - 11441 Celestial St
Laboratories (chemical, soils, and research)	C20	C20-01	В	Low	2	Gleason Research - 19214 1st St
Motor vehicle dealerships - cars, trucks, motor cycles, ATV's, snow machines, boats (without service department)	C26	C26-01	В	Low	2	Talon Industries - 11406 Echo St
Motor/motor vehicle supplies stores	C28	C28-01	В	Low	2	Alaska Wing Covers - 18521 Whirlaway Rd
Motor /motor vehicle repair shops	C31	C31-01	В	Medium	2	A Plus Towing - Mile 24 Glenn Highway
Motor /motor vehicle repair shops	C31	C31-02	В	Medium	2	Alaska Mobile ATV Repair - 4640 Birdsong Drive, Eagle River, AK
Printers, publishers, copiers	C37	C37-01	В	High	2	Aurora Printing Sales - Wildwood Ln
Taxidermists	C41	C41-01	В	Medium	2	Hunter's Horn Taxidermy Svc 11416 Echo St
Welding shops	C43	C43-01	В	Medium	2	Alaska Welding Specialists - 11341 Echo St
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D01-55-278	В	Low	2	Identified 224 sewerlines - mains in Zone B
Cement manufacturing	I08	I08-01	В	High	2	Borealis Construction Co 10825 Neacola Cir
Explosives and ammunitions manufacturing	I15	I15-01	В	Medium	2	Arctic Ammunition Co - 11141 Katlian Dr
Machine and metal work shops	123	I23-01	В	High	2	Custom Services - 11316 Lower Sunny Cir
Meat processing	N05	N05-01	В	Medium	2	Game Meat Processing - 11437 Echo St
Residential Areas	R01	R01-02	В	Low	2	Identified approximately 496 Acres of Residential Area in Zone B
Septic systems (serves one single-family home)	R02	R02-06-80	В	Low	2	75 Inferred Residential Septics identified in Zone B
Tanks, diesel (above ground)	T06	T06-01	В	Medium	2	ASD Gruening Junior High School - 9601 Lee St. Anchoarge Fire Department tanks - fuel oil (diesel).
Tanks, diesel (above ground)	Т06	T06-03	В	Medium	2	ASD Gruening Junior High School - 9601 Lee St. Anchorage Fire Department tanks - fuel oil (diesel).

Contaminant Source Inventory and Risk Ranking for SAINT ANDREW PARISH

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Risk Ranking for Analysis	Map Number	Comments
Tanks, diesel (underground)	T08	T08-02	В	High	2	AS Gruening Junior High School - 9601 Lee St. (Diesel)
Contaminated sites, DEC recognized, non- Superfund, non-RCRA	U04	U04-04	В	Low	2	Tweed Excavating - Spring Brook Dr. Status: Cleanup Complete. Contaminants: DRO. No ETM ratings.
Closed Leaking Underground Fuel Storage Tank (LUST) Sites	U08	U08-01	В	Low	2	MOA - AWWU Well #54. Status - Cleanup Complete. Contaminated Sites Database Hazard ID: 23337
Closed Leaking Underground Fuel Storage Tank (LUST) Sites	U08	U08-02	В	Low	2	Enstar - Eagle River Operations. Status: Cleanup Complete. Contaminated Sites Database Hazard ID: 24870.
Closed Leaking Underground Fuel Storage Tank (LUST) Sites	U08	U08-03	В	Low	2	Northshore Ventures Eagle River 7-11 #68. Status: Cleanup Complete. Contaminated Sites Database Hazard ID: 23581. TCE, BTEX detected at waste oil UST. Monitoring well testing show non-detect or <mcl.< td=""></mcl.<>
Closed Leaking Underground Fuel Storage Tank (LUST) Sites	U08	U08-05	В	Low	2	MOA - Fire Station #11. Status: Cleanup Complete. Contaminated Sites Database Hazard ID: 23748. Case is closed.
Highways and roads, paved (cement or asphalt)	X20	X20-39-156	В	Low	2	118 Anchorage roads identified in Zone B.
Motor vehicle/general storage yards/facilities	X27	X27-01	В	Low	2	American Moving Systems, Inc 19231 Adak Cir
Motor vehicle/general storage yards/facilities	X27	X27-02	В	Low	2	Gantner Transport Inc 11416 Fireball St
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-02	В	Low	2	Awareness Independent Distr 18634 Whirlaway Rd
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-07	В	Low	2	Healthsouth Medical Clinic - 10928 Eagle River Rd. #150

Contaminant Source Inventory and Risk Ranking for SAINT ANDREW PARISH

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Risk Ranking for Analysis	Map Number	Comments
Car washes with engine or undercarriage cleaning	C08	C08-01	A	Medium	2	Best Car Wash & Lube - 11115 Old Eagle River Rd
Construction trade areas and materials	C09	C09-01	A	Low	2	Lee's Custom Design - 11517 Old Glenn Hwy
Construction trade areas and materials	C09	C09-04	A	Low	2	Peppers Construction - 10224 W. Frontage Rd
Construction trade areas and materials	C09	C09-09	A	Low	2	Weldin Construction Inc 10421 VFW Rd. #206
Florists	C12	C12-01	A	Low	2	Floral Expressions by Carrs - 11431 Business Park Blvd
Gasoline stations (with repair shop)	C16	C16-01	A	Low	2	Eagle River Shell - 11301 Old Glenn Hwy
Laboratories (chemical, soils, and research)	C20	C20-02	A	Low	2	Huntington Consulting - 10421 VFW Rd. #203
Lubrication shops	C25	C25-01	A	Low	2	Alaska Qwik Lube, Inc - 11136 Chugiak Dr
Motor /motor vehicle repair shops	C31	C31-03	A	Medium	2	GLE River RV Parts & Repair - 10103 VFW Rd
Motor /motor vehicle repair shops	C31	C31-04	A	Medium	2	Johnson's Tire Service - 16400 Brooks Loop, Eagle River, AK
Motor /motor vehicle repair shops	C31	C31-05	A	Medium	2	Dave Miller's Services - 11135 Ashley Park Ln
Motor /motor vehicle repair shops	C31	C31-06	A	Medium	2	Sam & Son's Performance - 11127 Old Eagle River Rd
Pest extermination services/pesticide sales	C33	C33-01	A	Low	2	Statewide Clearing Inc 16244 Poppy Ln
Pharmacies (with on-site wastewater disposal)	C35	C35-01	A	Low	2	Carrs Qulaity Ctr - 11431 Business Blvd
Pharmacies (with on-site wastewater disposal)	C35	C35-02	A	Low	2	Family Pharmacy - 11432 Business Blvd
Photography supplies/photo processing laboratories	C36	C36-01	A	Medium	2	Eagle River Photo - 11432 Business Blvd
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D01-01-54	A	Low	2	Identified 54 sewerlines - mains in Zone A
Injection wells (Class V) Large-Capacity Septic System (Drainfield Disposal Method)	D10	D10-01	A	Low	2	Rivers Edge Condo - Septic System
Injection wells (Class V) Industrial Process Water & Water Disposal Wells	D40	D40-01	A	High	2	Candy's Cleaners - 11401 Old Glenn Hwy #110D

Contaminant Source Inventory and Risk Ranking for SAINT ANDREW PARISH

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Risk Ranking for Analysis	Map Number	Comments
Injection wells (Class V) Motor Vehicle Waste Disposal Well	D42	D42-01	A	High	2	Eagle River Shell - 11301 Old Glenn Hwy
Injection wells (Class V) Motor Vehicle Waste Disposal Well	D42	D42-02	A	High	2	Qwik Lube (Eagle River) - Brooks & Chugiak Dr
Recycling and waste reduction facilities	D57	D57-01	A	High	2	Arctic Express Towing - 17010 Lynne Dr
Recycling and waste reduction facilities	D57	D57-01	A	High	2	Alaska ATV Salvage - 11029 Cross Dr
Sign manufacturing	I39	139-01	A	Medium	2	Universal Sign & Lighting Shop - 10441 VFW Rd
Residential Areas	R01	R01-01	A	Low	2	Identified approximately 23 Acres of Residential Area in Zone A
Septic systems (serves one single-family home)	R02	R02-01-05	A	Low	2	5 Inferred Residential Septics identified in Zone A
Tanks, gasoline (above ground)	T10	T10-01	A	Medium	2	Eagle River Shell - 11301 Old Glenn Hwy/ Anchorage Fire Dept tanks - Unleaded Gasoline Supreme.
Tanks, gasoline (underground)	T12	T12-01	A	Medium	2	Carr's Fuel Center Eagle River - 11409 Business Blvd. (Gasoline)
Tanks, gasoline (underground)	T12	T12-02	A	Medium	2	Carr's Fuel Center Eagle River - 11409 Business Blvd. (Gasoline)
Tanks, gasoline (underground)	T12	T12-03	A	Medium	2	Eagle River Shell - 11301 Old Glenn Hwy (Gasoline)
Tanks, gasoline (underground)	T12	T12-04	A	Medium	2	Eagle River Shell - 11301 Old Glenn Hwy (Gasoline)
Tanks, heating oil, nonresidential (underground)	T16	T16-01	A	Low	2	Alaska Qwik Lube, Inc - Lt.11, Blk 1, Brooks & Chugach Dr. Qwik Lube oil Change (Heating Oil)
Tanks, heating oil, nonresidential (underground)	T16	T16-02	A	Low	2	Alaska Qwik Lube, Inc - Lt.11, Blk 1, Brooks & Chugach Dr. Qwik Lube oil Change (Heating Oil)
Tanks, heating oil, nonresidential (underground)	T16	T16-03	A	Low	2	Alaska Qwik Lube, Inc - Lt.11, Blk 1, Brooks & Chugach Dr. Qwik Lube oil Change (Heating Oil)
Tanks, lubricants or other petroleum products (aboveground)	T18	T18-01	A	Low	2	AK Qwik Lube - Box 11136 Chugiak Dr. Possible WASTE OIL contamination from Anchorage Fire Department tanks.
Wastewater Holding Tank	T22	T22-01	A	Medium	2	Texaco Frontier Service - 11301 Old Glenn Hwy. Business name is now Eagle River Shell at this location. Possible UNLEADED GASOLINE contamination from Anchorage Fire Department tanks.

Contaminant Source Inventory and Risk Ranking for SAINT ANDREW PARISH

Contaminant Source ID	CS ID tag	Zone	Risk Ranking for Analysis	Map Number	Comments
U04	U04-03	A	Low	2	The Delta Companies - ~11933 Town Park Circle. Status: Active. Contaminants: Chromium, DRO, RRO. ETM Groundwater Ingestion: Pathway Incomplete.
X04	X04-03	A	Low	2	Chugach State Park
X19	X19-01	A	Low	2	Eagle River Fire Dept - 16741 Fire House Ln.
X20	X20-01-38	A	Low	2	38 Anchorage roads identified in Zone A.
X20	X20-156-157	A	Low	2	Glenn Hwy - South Bound and North Bound.
X28	X28-01	A	Low	2	Oil and Gas Pipeline - 20" line.
X40	X40-01	A	Low	2	Aurora Helath Care Clinic at 12320 Old Glenn Highway, Eagle River, AK.
X40	X40-03	A	Low	2	Centerfield Dental Center - 16635 Centerfield Dr. #205.
X40	X40-04	A	Low	2	Eagle River Orthodontics - 16635 Centerfield Dr. #201.
X40	X40-05	A	Low	2	Eagle River Primary Care Clinic - 11462 Business Blvd.
X40	X40-06	A	Low	2	Eagle River Smiles: Enghirst Bryan DDS - 11431 Business Blvd #5
X40	X40-08	A	Low	2	Four Paws Animal Hospital - 11431 Business Blvd. #16
X40	X40-09	A	Low	2	Kirk T Moss Family Practice - 11432 Business Blvd. Cannot confirm business and location but other medical offices are at the the same address.
X40	X40-09	A	Low	2	Kirk T Moss Family Practice - 11432 Business Blvd. Cannot confirm business and location but other medical offices are at the the same address.
C03	C03-01	В	Low	2	Allied Plumbing & Heating - 19408 Whirlaway Rd
C09	C09-02	В	Low	2	McDonlad's Custom Craft - 9716 E. Chichagof Loop
	X04 X19 X20 X20 X28 X40	Source ID CS ID tag U04 U04-03 X04 X04-03 X19 X19-01 X20 X20-01-38 X20 X20-156-157 X28 X28-01 X40 X40-01 X40 X40-03 X40 X40-04 X40 X40-05 X40 X40-06 X40 X40-08 X40 X40-09 X40 X40-09 C03 C03-01	Source ID CS ID tag Zone U04 U04-03 A X04 X04-03 A X19 X19-01 A X20 X20-01-38 A X20 X20-156-157 A X28 X28-01 A X40 X40-01 A X40 X40-03 A X40 X40-04 A X40 X40-05 A X40 X40-06 A X40 X40-08 A X40 X40-09 A	Source ID CS ID tag Zone for Analysis U04 U04-03 A Low X04 X04-03 A Low X19 X19-01 A Low X20 X20-01-38 A Low X20 X20-156-157 A Low X28 X28-01 A Low X40 X40-01 A Low X40 X40-03 A Low X40 X40-04 A Low X40 X40-05 A Low X40 X40-06 A Low X40 X40-09 A Low X40 X40-09 A Low X40 X40-09 A Low X40 X40-09 A Low	Source ID CS ID tag Zone for Analysis Number U04 U04-03 A Low 2 X04 X04-03 A Low 2 X19 X19-01 A Low 2 X20 X20-01-38 A Low 2 X20 X20-156-157 A Low 2 X40 X40-01 A Low 2 X40 X40-01 A Low 2 X40 X40-03 A Low 2 X40 X40-04 A Low 2 X40 X40-05 A Low 2 X40 X40-06 A Low 2 X40 X40-09 A Low 2 X40 X40-09 A Low 2 X40 X40-09 A Low 2

Contaminant Source Inventory and Risk Ranking for SAINT ANDREW PARISH

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Risk Ranking for Analysis	Map Number	Comments
Construction trade areas and materials	C09	C09-03	В	Low	2	Olympia Drywall - 10455 Chatanika Loop
Construction trade areas and materials	C09	C09-05	В	Low	2	PJM Development/Peppers Construction - 11424 Lower Sunny Cir
Construction trade areas and materials	C09	C09-06	В	Low	2	Quick Fix - 10316 Crest View Ln
Construction trade areas and materials	C09	C09-07	В	Low	2	Sudsbury's & Sons - 11239 Aurora St
Construction trade areas and materials	C09	C09-08	В	Low	2	Thurston Enterprises - 9808 Chatham Cir
Heavy equipment rental/storage	C18	C18-01	В	Low	2	All Seasons Svc - 18809 Whirlaway Rd
Heavy equipment rental/storage	C18	C18-02	В	Low	2	D L Enterprises - 12420 Spring Brook Drive, Eagle River, AK 99577-7548
Heavy equipment rental/storage	C18	C18-03	В	Low	2	M & J Svc Inc - 11441 Celestial St
Laboratories (chemical, soils, and research)	C20	C20-01	В	Low	2	Gleason Research - 19214 1st St
Motor/motor vehicle supplies stores	C28	C28-01	В	Low	2	Alaska Wing Covers - 18521 Whirlaway Rd
Motor /motor vehicle repair shops	C31	C31-01	В	Medium	2	A Plus Towing - Mile 24 Glenn Highway
Motor /motor vehicle repair shops	C31	C31-02	В	Medium	2	Alaska Mobile ATV Repair - 4640 Birdsong Drive, Eagle River, AK
Printers, publishers, copiers	C37	C37-01	В	Medium	2	Aurora Printing Sales - Wildwood Ln
Taxidermists	C41	C41-01	В	Low	2	Hunter's Horn Taxidermy Svc 11416 Echo St
Welding shops	C43	C43-01	В	Low	2	Alaska Welding Specialists - 11341 Echo St
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D01-55-278	В	Low	2	Identified 224 sewerlines - mains in Zone B
Cement manufacturing	I08	I08-01	В	Medium	2	Borealis Construction Co 10825 Neacola Cir
Explosives and ammunitions manufacturing	I15	I15-01	В	Medium	2	Arctic Ammunition Co - 11141 Katlian Dr
Machine and metal work shops	I23	I23-01	В	High	2	Custom Services - 11316 Lower Sunny Cir
Stone and clay processing/manufacturing	I43	I43-01	В	Medium	2	Primitive Palatte - Old Glenn Hwy

Contaminant Source Inventory and Risk Ranking for SAINT ANDREW PARISH

PWSID 218748.001

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Risk Ranking for Analysis	Map Number	Comments
Residential Areas	R01	R01-02	В	Low	2	Identified approximately 496 Acres of Residential Area in Zone B
Septic systems (serves one single-family home)	R02	R02-06-80	В	Low	2	75 Inferred Residential Septics identified in Zone B
Municipal or city parks (with green areas)	X04	X04-01	В	Low	2	Palos Verdes Park
Municipal or city parks (with green areas)	X04	X04-02	В	Low	2	Eliasson Park
Highways and roads, paved (cement or asphalt)	X20	X20-39-156	В	Low	2	118 Anchorage roads identified in Zone B.
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-02	В	Low	2	Awareness Independent Distr 18634 Whirlaway Rd
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-07	В	Low	2	Healthsouth Medical Clinic - 10928 Eagle River Rd. #150

Contaminant Source Inventory and Risk Ranking for SAINT ANDREW PARISH

Sources of Synthetic Organic Chemicals

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Risk Ranking for Analysis	Map Number	Comments
Pest extermination services/pesticide sales	C33	C33-01	A	Low	2	Statewide Clearing Inc 16244 Poppy Ln
Pet groomers	C34	C34-01	A	Low	2	Ravenwood Veterinary Clinic - 11525 Old Glenn Hwy
Photography supplies/photo processing laboratories	C36	C36-01	A	Low	2	Eagle River Photo - 11432 Business Blvd
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D01-01-54	A	Low	2	Identified 54 sewerlines - mains in Zone A
Injection wells (Class V) Large-Capacity Septic System (Drainfield Disposal Method)	D10	D10-01	A	Low	2	Rivers Edge Condo - Septic System
Injection wells (Class V) Motor Vehicle Waste Disposal Well	D42	D42-01	A	Low	2	Eagle River Shell - 11301 Old Glenn Hwy
Injection wells (Class V) Motor Vehicle Waste Disposal Well	D42	D42-02	A	Low	2	Qwik Lube (Eagle River) - Brooks & Chugiak Dr
Residential Areas	R01	R01-01	A	Low	2	Identified approximately 23 Acres of Residential Area in Zone A
Septic systems (serves one single-family home)	R02	R02-01-05	A	Low	2	5 Inferred Residential Septics identified in Zone A
Municipal or city parks (with green areas)	X04	X04-03	A	Low	2	Chugach State Park
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-01	A	Low	2	Aurora Helath Care Clinic at 12320 Old Glenn Highway, Eagle River, AK.
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-03	A	Low	2	Centerfield Dental Center - 16635 Centerfield Dr. #205.
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-04	A	Low	2	Eagle River Orthodontics - 16635 Centerfield Dr. #201.
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-05	A	Low	2	Eagle River Primary Care Clinic - 11462 Business Blvd.
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-06	A	Low	2	Eagle River Smiles: Enghirst Bryan DDS - 11431 Business Blvd #5
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-08	A	Low	2	Four Paws Animal Hospital - 11431 Business Blvd. #16

Contaminant Source Inventory and Risk Ranking for SAINT ANDREW PARISH PWSID 218748.001

Sources of Synthetic Organic Chemicals

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	X40-09	A	Low	2	Kirk T Moss Family Practice - 11432 Business Blvd. Cannot confirm business and location but other medical offices are at the the same address.
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-09	A	Low	2	Kirk T Moss Family Practice - 11432 Business Blvd. Cannot confirm business and location but other medical offices are at the the same address.
Printers, publishers, copiers	C37	C37-01	В	Low	2	Aurora Printing Sales - Wildwood Ln
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D01-55-278	В	Low	2	Identified 224 sewerlines - mains in Zone B
Machine and metal work shops	I23	I23-01	В	Low	2	Custom Services - 11316 Lower Sunny Cir
Residential Areas	R01	R01-02	В	Low	2	Identified approximately 496 Acres of Residential Area in Zone B
Septic systems (serves one single-family home)	R02	R02-06-80	В	Low	2	75 Inferred Residential Septics identified in Zone B
Municipal or city parks (with green areas)	X04	X04-01	В	Low	2	Palos Verdes Park
Municipal or city parks (with green areas)	X04	X04-02	В	Low	2	Eliasson Park
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-02	В	Low	2	Awareness Independent Distr 18634 Whirlaway Rd
Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes)	X40	X40-07	В	Low	2	Healthsouth Medical Clinic - 10928 Eagle River Rd. #150

Contaminant Source Inventory and Risk Ranking for SAINT ANDREW PARISH Sources of Other Organic Chemicals

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Risk Ranking for Analysis	Map Number	Comments
Car washes with engine or undercarriage cleaning	C08	C08-01	A	Medium	2	Best Car Wash & Lube - 11115 Old Eagle River Rd
Construction trade areas and materials	C09	C09-01	A	Low	2	Lee's Custom Design - 11517 Old Glenn Hwy
Construction trade areas and materials	C09	C09-04	A	Low	2	Peppers Construction - 10224 W. Frontage Rd
Construction trade areas and materials	C09	C09-09	A	Low	2	Weldin Construction Inc 10421 VFW Rd. #206
Gasoline stations (with repair shop)	C16	C16-01	A	Medium	2	Eagle River Shell - 11301 Old Glenn Hwy
Lubrication shops	C25	C25-01	A	Medium	2	Alaska Qwik Lube, Inc - 11136 Chugiak Dr
Motor /motor vehicle repair shops	C31	C31-03	A	Medium	2	GLE River RV Parts & Repair - 10103 VFW Rd
Motor /motor vehicle repair shops	C31	C31-04	A	Medium	2	Johnson's Tire Service - 16400 Brooks Loop, Eagle River, AK
Motor /motor vehicle repair shops	C31	C31-05	A	Medium	2	Dave Miller's Services - 11135 Ashley Park Ln
Motor /motor vehicle repair shops	C31	C31-06	A	Medium	2	Sam & Son's Performance - 11127 Old Eagle River Rd
Photography supplies/photo processing laboratories	C36	C36-01	A	Low	2	Eagle River Photo - 11432 Business Blvd
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D01-01-54	A	Low	2	Identified 54 sewerlines - mains in Zone A
Injection wells (Class V) Large-Capacity Septic System (Drainfield Disposal Method)	D10	D10-01	A	Low	2	Rivers Edge Condo - Septic System
Injection wells (Class V) Industrial Process Water & Water Disposal Wells	D40	D40-01	A	High	2	Candy's Cleaners - 11401 Old Glenn Hwy #110D
Injection wells (Class V) Motor Vehicle Waste Disposal Well	D42	D42-01	A	Medium	2	Eagle River Shell - 11301 Old Glenn Hwy
Injection wells (Class V) Motor Vehicle Waste Disposal Well	D42	D42-02	A	Medium	2	Qwik Lube (Eagle River) - Brooks & Chugiak Dr
Quarries (sand, gravel, rock, other?)	E10	E10-01	A	Low	2	Eagle Dome Aggregate, Inc Eagle Dome Pit
Quarries (sand, gravel, rock, other?)	E10	E10-02	A	Low	2	Eagle River Pit

Contaminant Source Inventory and Risk Ranking for SAINT ANDREW PARISH

Sources of Other Organic Chemicals

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Risk Ranking for Analysis	Map Number	Comments
Residential Areas	R01	R01-01	A	Low	2	Identified approximately 23 Acres of Residential Area in Zone A
Septic systems (serves one single-family home)	R02	R02-01-05	A	Low	2	5 Inferred Residential Septics identified in Zone A
Wastewater Holding Tank	T22	T22-01	A	Medium	2	Texaco Frontier Service - 11301 Old Glenn Hwy. Business name is now Eagle River Shell at this location. Possible UNLEADED GASOLINE contamination from Anchorage Fire Department tanks.
Government vehicle maintenance facilities	X19	X19-01	A	Medium	2	Eagle River Fire Dept - 16741 Fire House Ln.
Highways and roads, paved (cement or asphalt)	X20	X20-01-38	A	Low	2	38 Anchorage roads identified in Zone A.
Highways and roads, paved (cement or asphalt)	X20	X20-156-157	A	Low	2	Glenn Hwy - South Bound and North Bound.
Motor vehicle/general storage yards/facilities	X27	X27-03	A	Low	2	Storage Bin - 16630 Artillery Rd.
Pipelines (oil and gas)	X28	X28-01	A	High	2	Oil and Gas Pipeline - 20" line.
Appliance repair shops	C03	C03-01	В	Low	2	Allied Plumbing & Heating - 19408 Whirlaway Rd
Construction trade areas and materials	C09	C09-02	В	Low	2	McDonlad's Custom Craft - 9716 E. Chichagof Loop
Construction trade areas and materials	C09	C09-03	В	Low	2	Olympia Drywall - 10455 Chatanika Loop
Construction trade areas and materials	C09	C09-05	В	Low	2	PJM Development/Peppers Construction - 11424 Lower Sunny Cir
Construction trade areas and materials	C09	C09-06	В	Low	2	Quick Fix - 10316 Crest View Ln
Construction trade areas and materials	C09	C09-07	В	Low	2	Sudsbury's & Sons - 11239 Aurora St
Construction trade areas and materials	C09	C09-08	В	Low	2	Thurston Enterprises - 9808 Chatham Cir
Heavy equipment rental/storage	C18	C18-01	В	Medium	2	All Seasons Svc - 18809 Whirlaway Rd
Heavy equipment rental/storage	C18	C18-02	В	Medium	2	D L Enterprises - 12420 Spring Brook Drive, Eagle River, AK 99577-7548
Heavy equipment rental/storage	C18	C18-03	В	Medium	2	M & J Svc Inc - 11441 Celestial St

Contaminant Source Inventory and Risk Ranking for SAINT ANDREW PARISH

Sources of Other Organic Chemicals

Contaminant Source Type	Contaminant Source ID	CS ID tag	Zone	Risk Ranking for Analysis	Map Number	Comments
Motor vehicle dealerships - cars, trucks, motor cycles, ATV's, snow machines, boats (without service department)	C26	C26-01	В	Low	2	Talon Industries - 11406 Echo St
Motor /motor vehicle repair shops	C31	C31-01	В	Medium	2	A Plus Towing - Mile 24 Glenn Highway
Motor /motor vehicle repair shops	C31	C31-02	В	Medium	2	Alaska Mobile ATV Repair - 4640 Birdsong Drive, Eagle River, AK
Welding shops	C43	C43-01	В	Low	2	Alaska Welding Specialists - 11341 Echo St
Domestic wastewater collection systems (sewer lines or lift stations)	D01	D01-55-278	В	Low	2	Identified 224 sewerlines - mains in Zone B
Cement manufacturing	I08	I08-01	В	Very High	2	Borealis Construction Co 10825 Neacola Cir
Explosives and ammunitions manufacturing	I15	I15-01	В	High	2	Arctic Ammunition Co - 11141 Katlian Dr
Machine and metal work shops	123	I23-01	В	High	2	Custom Services - 11316 Lower Sunny Cir
Meat processing	N05	N05-01	В	Low	2	Game Meat Processing - 11437 Echo St
Residential Areas	R01	R01-02	В	Low	2	Identified approximately 496 Acres of Residential Area in Zone B
Septic systems (serves one single-family home)	R02	R02-06-80	В	Low	2	75 Inferred Residential Septics identified in Zone B
Highways and roads, paved (cement or asphalt)	X20	X20-39-156	В	Low	2	118 Anchorage roads identified in Zone B.
Motor vehicle/general storage yards/facilities	X27	X27-01	В	Low	2	American Moving Systems, Inc 19231 Adak Cir
Motor vehicle/general storage yards/facilities	X27	X27-02	В	Low	2	Gantner Transport Inc 11416 Fireball St

APPENDIX C

Saint Andrew Parish Well #1
Drinking Water Protection Area
and Potential and Existing Contaminant Sources
(Map 2)

