

Source Water Assessment Report



Public Water Supply: BAXTER SPRINGS, CITY OF

**Assessment Areas Include:
118, 119**



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Reports were generated with the Automated Source Water Assessment Tool (ASWAT). Assessments were completed online using ASWAT by hundreds of state employees, public water supply staff, and technical assistant providers throughout the State of Kansas.

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Report Description

Detailed Explanation of Entire Report:

The 1996 amendments to the Safe Drinking Water Act require each state to develop a Source Water Assessment Program (SWAP) and a Source Water Assessment (SWA) for each Public Water Supply (PWS) that treats and distributes raw source water. In Kansas there are 761 public water supplies that require SWAs. A SWA includes a delineation of the source water assessment area, an inventory of potential contaminant sources, and a susceptibility analysis.

A PWS can consist of one or more individual assessment areas that require different assessments. In general, an assessment area is delineated at a two-mile fixed radius for a groundwater well. A surface water intake assessment area is the upstream-drainage area (watershed), inside the state border. Additionally, an assessment area can consist of an individual well, group of wells, an individual surface water intake, or multiple surface water intakes.

After each assessment is completed a report is automatically generated using an Internet-based application called the Automated Source Water Assessment Tool (ASWAT). The individual assessment reports combine to form the entire SWA report for a PWS.

A map of each Assessment Area was also generated with ASWAT. However, for security reasons the maps are not included in this report. To obtain a copy of the map(s), please contact your local PWS.

All PWS reports will be available for viewing and downloading on KDHE's Watershed Management Section website(<http://www.kdhe.state.ks.us/nps>) in 2004.

BAXTER SPRINGS, CITY OF Summary:

AA	Type	Diversion Id
118	Ground water multiple wells	005, 006
119	Surface water single intake	999

Public Water Supply: **BAXTER SPRINGS, CITY OF**
Assessment Area: **118**
Diversion Id's: **005, 006**
Status: **Accepted**
Submit Date: **2003-01-31 15:52:10**

Executive Summary:

The Executive Summary gives the assessment area's Susceptibility Likelihood Score (SLS) for each contaminant of concern category.

SLS indicates which contaminant category is most likely to impact a given public water supply. Contaminants of concern for groundwater include microbiological, inorganic compounds, nitrates, synthetic organic compounds, pesticides, and volatile organic compounds. Contaminants of concern for surface water include microbiological, inorganic compounds, eutrophication – phosphorus, sedimentation, synthetic organic compounds, pesticides, and volatile organic compounds.

To determine the assessment area's susceptibility to contamination, a qualitative (semi-quantitative) screening level susceptibility analysis was designed that utilizes general assumptions and best professional judgement. It is a systematic procedure comprised of simple yes/no questions. Each question in the susceptibility analysis focuses on the presence or absence of potential pollution sources in the assessment area. SLS is most useful in helping the Public Water Supply (PWS) focus on water quality protection actions towards a contaminant category of concern. For example, if the SLS for microbiological contamination is high, relative to volatile organic compounds (VOC), water supply protection planners would conclude that the attention should be directed towards microbiological contaminant sources rather than VOC sources.

Executive Summary

Public Water Supply: **BAXTER SPRINGS, CITY OF**
Assessment Area: **118**

Susceptibility Likelihood Scores for Assessment Area

Contaminant Category	A	B	B*	C	C*	D
Susceptibility Likelihood Score – SLS	47	42	45	48	45	51
SLS Range	Low	Low	Low	Low	Low	Low

A – Microbiological

B* – Nitrates

C* – Pesticides

B – Inorganic Compounds

C – Synthetic Organic Compounds

D – Volatile Organic Compounds

Susceptibility Likelihood Range

SLS Range	
0–50	Low Susceptibility
51–80	Moderate Susceptibility
81–100	High Susceptibility

Public Water Supply: **BAXTER SPRINGS, CITY OF**
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Potential Sources:

The Potential Sources section lists all the sites that have been identified as potential sources of contamination.

Potential sources of contamination may include land uses, industry, or businesses that could generate or store chemicals/substances that could potentially contaminate the water supply only if released into the environment. Both unregulated sites from business location databases and regulated sites from various KDHE databases were compiled. Additional sites could have been added by an evaluator through the assessment process to supplement the original data.

The 1987 Standard Industrial Classifications (SIC) were used to identify potential contaminate sites. The SIC system classifies establishments into industries on the basis of the primary activities of the establishment.

Each assessment area is delineated with 3 assessment zones. These zones can be used to get a general understanding of the potential influence sites have based on proximity to the water supply. Zone A is a 100-foot radius around a groundwater well and a 1000-foot radius around a surface water intake. Zone B is a 2000-foot radius around wells and a hydrological delineated buffer around the surface water sources. Zone C is a 2-mile radius around wells and the balance of the watershed for intakes. The potential sources listed in this section are sorted to show all the potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business is identified in the study as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

The data for the potential sources of contamination was compiled from May through August in 2002. Some of the databases used were incomplete datasets that are continually being updated. Due to the incompleteness, inaccuracies, and new development, it is possible that sources of potential contamination that are in the assessment area are not included in the report. Inaccurate locations could also cause sources to show up in the assessment area that are not actually in the assessment. Additionally, duplication between the datasets could cause sites to show up multiple times in the assessment area.

Potential Sources

Public Water Supply: **BAXTER SPRINGS, CITY OF**
Assessment Area: **118**

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
152624	General Farm, Primarily Crop	191	C
152489	Veterinary Services, Specialties	742	C
152565	Veterinary Services, Specialties	742	C
152450	Single-family Housing Construction	1521	C
152517	Single-family Housing Construction	1521	C
152380	Highway and Street Construction	1611	C
152424	Prepared Feeds For Animals and Fowls	2048	C
152420	Furniture and Fixtures Manufacturing	2599	C
152465	Newspapers Publishing and Printing	2711	C
152589	Commercial Printing-Lithographic	2752	C
152445	Commercial Printing NEC	2759	C
152491	Concrete Products Manufacturing	3272	C
152488	Pumps and Pumping Equipment Manufacturing	3561	C
152448	Machinery, Except Electrical Manufacturing	3599	C
152545	Travel trailers and Campers Manufacturing	3792	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
152620	Local Trucking, without Storage	4212	C
152451	Recreational vehicle sales and repair	5561	C
152490	Recreational vehicle sales and repair	5561	C
152412	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
152452	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
152404	Auto Truck Repair Service	7538	C
152446	Auto Truck Repair Service	7538	C
152501	Auto Truck Repair Service	7538	C
152502	Car Wash	7542	C
152508	Car Wash	7542	C
152411	Repair Services, Nec	7699	C
152480	Repair Services, Nec	7699	C
152567	Repair Services, Nec	7699	C

Regulated Confined Animal Feeding Operations Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
2002023	Case Roundup Farms	A-NECK-F010	C

Regulated Hazardous Waste Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Leaking Storage Tank Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
3000995	Coble Oil Co	12904	C

Regulated Identified Contaminated Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
7000407	BAXTER SPRINGS SUBSITE	C301170910	C
7000408	BAXTER SPRINGS SUBSITE	C301170910	C

Regulated Solid Waste Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Waste Water Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
6000266	CHEROKEE COUNTY SEWER DISTRICT NO. 1	M-NE73-IO01	C
6001586	BAXTER SPRINGS MWTP	M-NE06-OO01	C
6001670	CHEROKEE CO. S.D. #1	M-NE73-OO02	C

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Added Sources:

The Added Sources section lists all the sites that have been added as potential sources of contamination by an evaluator through the assessment process to supplement the original data.

The potential sources listed in this section are sorted to show the added potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business was added as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

Added Sources

Public Water Supply: **BAXTER SPRINGS, CITY OF**
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Added Potential Site Sources

Source No.	Source Name	SIC ID	Zone
9001287	grove of trees	0	B
9001185		7532	C

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Potential Contaminants Summary:

The Contaminants Summary shows the number of identified unregulated sources in the assessment area for each contaminant of concern category.

In order to obtain the number of sources for each category, a relationship was correlated between each Standard Industrial Classification (SIC) and the contaminant of concern categories. Each SIC was assessed and associated with contaminant categories. For example, if not managed properly, a car wash (SIC 7542) could potentially contaminate an intake because of inorganic compounds (IOC) and volatile organic compounds (VOC); thus, a car wash is associated with IOCs and VOCs.

A chart displays a count for each contaminant category. The sum for each category represents the total number of identified sources that have been associated with that particular contaminant category. However, the total number of identified sources does not include contaminants from the Added Sources. In our example, a car wash would be considered 2 sources of contamination. It would be a potential source of contamination for IOCs and for VOCs; thus, 1 would be added to the total number of sources in the VOC category and 1 would be added to the IOC category.

Potential Contaminants Summary

Public Water Supply: **BAXTER SPRINGS, CITY OF**
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Number of Unregulated Site Sources Identified for each Contaminant Category

MicroBiological	Pesticides	IOC's	SOC's	VOC's	Nitrates
5	2	24	5	15	4

A – Microbiological

B* – Nitrates

C* – Pesticides

B – Inorganic Compounds

C – Synthetic Organic Compounds

D – Volatile Organic Compounds

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Potential Contaminants Listing:

The Potential Contaminants section lists the contaminant of concern category associated with each Standard Industrial Classification (SIC) found in an assessment area. A complete list of contaminant category codes are located at the bottom of this page.

The relationships defined between the Standard Industrial Classifications (SIC) and the contaminant of concern categories are displayed in a table format. Using our car wash example, the relationships can be better illustrated. A car wash could release IOC and VOC chemical substances. The connection is shown by indicating the SIC, 7542, and the associated contaminant categories, IOC (Category B) and VOC (Category D). However, the contaminants listed are not associated with any Added Sources.

The list is sorted by the SIC source description and it only shows unique SIC sources. For example, an assessment area can have 20 car washes in an assessment area, but the list is only going to show contaminant categories associated with car washes onetime. This is because all car washes have the same SIC and every car wash poses the same potential threat to water intakes.

A – Microbiological **B** – Inorganic Compounds **B1** – Eutrophication – Phosphorous
B2 – Sedimentation **B*** – Nitrates **C** – Synthetic Organic Compounds
C* – Pesticides **D** – Volatile Organic Compounds

Potential Contaminants Listing

Public Water Supply: **BAXTER SPRINGS, CITY OF**
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Unregulated Identified Site Sources and associated Potential Contaminant Category

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
7538	Auto Truck Repair Service	Inorganics, VOCs	B
"	"	"	D
7542	Car Wash	Inorganics, VOCs	B
"	"	"	B1
"	"	"	B2
"	"	"	D
3272	Concrete Products Manufacturing	Minerals and TSS	B
2599	Furniture and Fixtures Manufacturing	TSS, VOCs	B
"	"	"	D
1611	Highway and Street Construction	Sedimentation	B2
4212	Local Trucking, without Storage	VOCs	D
3599	Machinery, Except Electrical Manufacturing	inorganics, VOCs	B
"	"	"	D
3561	Pumps and Pumping Equipment Manufacturing	inorganics, VOCs	B
"	"	"	D
1521	Single-family Housing Construction	Oil, Paint, Pesticides, Fertilizers	A
"	"	"	B1

Unregulated Identified Site Sources and associated Potential Contaminant Category.

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
1521	Single-family Housing Construction	Oil, Paint, Pesticides, Fertilizers	B2
"	"	"	B*
"	"	"	C
7532	Top, Body, and Upholstery Repair Shops and Paint Shops	Inorganics, VOCs	B
"	"	"	D
3792	Travel trailers and Campers Manufacturing	inorganics, VOCs	B
"	"	"	D
742	Veterinary Services, Specialties	Sanitary, Inorganics TSS	A
"	"	"	B
2759	Commercial Printing NEC	Inorganics, VOCs, Semi volatiles	B
"	"	"	C
"	"	"	D
2752	Commercial Printing-Lithographic	Inorganics, VOCs, Semi volatiles	B
"	"	"	C
"	"	"	D
191	General Farm, Primarily Crop	fertilizers, Pesticides	B
"	"	"	B1
"	"	"	B2
"	"	"	B*

Unregulated Identified Site Sources and associated Potential Contaminant Category.

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
191	General Farm, Primarily Crop	fertilizers, Pesticides	C*
2711	Newspapers Publishing and Printing	Inorganics, VOCs, Semi volatiles	B
"	"	"	C
"	"	"	D
2048	Prepared Feeds For Animals and Fowls	Sanitary, Nitrates, phosphorous and pesticides	A
"	"	"	B
"	"	"	B1
"	"	"	B2
"	"	"	B*
"	"	"	C*
5561	Recreational vehicle sales and repair	Inorganics	B
7699	Repair Services, Nec	inorganics	B

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Protection Measures:

The Protection Measures section shows water quality protection measures for the Standard Industrial Classifications (SIC) identified in the assessment area.

Previous sections of this report are designed to show areas that Public Water Supplies (PWS) can focus on to improve the susceptibility of an assessment area. This section helps identify water quality protection measures that a PWS can use as guidance for implementing action for a potential contaminant site in the assessment area. It focuses on protection measures that can reduce the risk of contamination to the water supply.

This portion of the report only displays water quality protection measures for each type of SIC found in the assessment area. It does not display protection measures for each site in the assessment area because every SIC should have the same or similar water quality protection management practices. However, the protection measures listed are not associated with any Added Sources.

Protection Measures

Public Water Supply: **BAXTER SPRINGS, CITY OF**
 Assessment Area: **118**

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
7538	Auto Truck Repair Service	Inorganics, VOCs	Discharge to POTW. Manage oil products and used oil so that it is not in contact with water	40 CFR 442 and
7542	Car Wash	Inorganics, VOCs	Install and maintain sediment and grease traps where appropriate	40 CFR 442
3272	Concrete Products Manufacturing	Minerals and TSS	Minimize outdoor storage and control storm water runoff.	State or federal Storm water pollution prevention regulations
2599	Furniture and Fixtures Manufacturing	TSS, VOCs	Discharge of process waters to POTW.	State or federal Storm water pollution prevention regulations
1611	Highway and Street Construction	Sedimentation	Erosion and Sediment Control	KAR 28-16, KDHE
4212	Local Trucking, without Storage	VOCs	Discharge to a POTW	State or federal Storm water pollution prevention regulations

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
3599	Machinery, Except Electrical Manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	State or federal Storm water pollution prevention regulations
3561	Pumps and Pumping Equipment Manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	State or federal Storm water pollution prevention regulations
1521	Single-family Housing Construction	Oil, Paint, Pesticides, Fertilizers	Proper cleaning and disposal of household hazardous waste. Proper storage, application, and clean up of pesticides and fertilizers	KAR 28-48, KDHE, KDEM
7532	Top, Body, and Upholstery Repair Shops and Paint Shops	Inorganics, VOCs	Discharge to POTW. Recycle where appropriate. Properly maintain oil product and waste. Manage paint and solvent wastes properly	NA
3792	Travel trailers and Campers Manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	State or federal Storm water pollution prevention regulations
742	Veterinary Services, Specialties	Sanitary, Inorganics TSS	Discharge to POT	NA

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
2759	Commercial Printing NEC	Inorganics, VOCs, Semi volatiles	Recycle chemicals where possible. Discharge to POTW	40 CFR 459 and State or federal Storm water pollution prevention regulations
2752	Commercial Printing–Lithographic	Inorganics, VOCs, Semi volatiles	Recycle chemicals where possible. Discharge to POTW	40 CFR 459 and State or federal Storm water pollution prevention regulations
191	General Farm, Primarily Crop	fertilizers, Pesticides	Maintain good erosion control practices and minimize the use of chemicals	NA
2711	Newspapers Publishing and Printing	Inorganics, VOCs, Semi volatiles	Recycle chemicals where possible. Discharge to POTW	40 CFR 459 and State or federal Storm water pollution prevention regulations
2048	Prepared Feeds For Animals and Fowls	Sanitary, Nitrates, phosphorous and pesticides	Maintain animal feeding areas and feed storage areas to minimize contact with storm water. Collect and treat process wastes.	40 CFR 412 and State or federal Storm water pollution prevention regulations
5561	Recreational vehicle sales and repair	Inorganics	Discharge to a POTW. Store oils and lubricants properly	Discharge to a POTW. Store oils and lubricants properly

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
7699	Repair Services, Nec	inorganics	Discharge to POTW	NA

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Assessment Analysis:

The Assessment Analysis section displays the numbers assigned to each contaminant of concern category for each question in the susceptibility analysis.

This analysis is based on a decision tree framework consisting of a series of yes/no questions. These questions consider the proximity of contaminant sources to the water supply intake, the type of contaminant, and the application of pollution prevention or water quality protection practices to sources of contamination. As the evaluator moves through the analytical framework, susceptibility points are accumulated based on the presence of contaminant sources in the assessment area.

After all the questions have been answered, the SLS is calculated for each contaminant of concern category. The SLS is determined by counting the number of contamination risk factors found to occur in the delineated assessment area and applying a multiplier to this number. Because the number of contaminant category risk factors is not equal, the multiplier is used to establish a common scale for the SLS of each contaminant category.

Assessment Analysis

Public Water Supply: **BAXTER SPRINGS, CITY OF**
 Assessment Area: **118**

Ground Water Multiple Wells Analysis

A – Microbiological **B** – Inorganic Compounds
B* – Nitrates **C** – Synthetic Organic Compounds
C* – Pesticides **D** – Volatile Organic Compounds

No.	Question	Response	A	B	B*	C	C*	D
1	Is any well under the influence of surface water?	No	0	0	0	0	0	0
2	Do all PWS wells meet KS PWS water well construction standards?	Yes	0	0	0	0	0	0
3	Is any well less than 30 feet deep?	Yes	1	1	1	1	1	1
4	Is gravel pack within 20 feet of any well surface?	No	0	0	0	0	0	0
5	Does a PWS own or control all the areas around the wells?	No	1	1	1	1	1	1
6	Does Zone B consist entirely of native grass?	No	2	2	2	2	2	2
7	Is there a contaminated well in Zone B?	No	0	0	0	0	0	0
8	Is a class V UIC well present?	No	0	0	0	0	0	0
9	Are any commercial, industrial, or urban areas present in Zone B?	Yes	1	1	1	1	1	1
10	Does each industrial/commercial site and urban area have a water quality protection plan in place?	No	1	1	1	1	1	1
11	Are any non-farm home sites present in Zone B?	Yes	1	0	1	0	1	0
12	Do all the non-farm home sites have a water quality protection plan?	No	1	0	1	0	1	0
13	Are any farmsteads present in Zone B?	No	0	0	0	0	0	0
14	Do all farmsteads have a water quality protection plan?	Yes	0	0	0	0	0	0
15	Is there grazing livestock in Zone B?	Yes	1	0	1	0	0	0
16	Have all livestock producers implemented water quality protection measures?	No	1	0	1	0	0	0
17	Is there livestock confinement in Zone B?	No	0	0	0	0	0	0

No.	Question	Response	A	B	B*	C	C*	D
18	Is each confined animal feeding operation registered with KDHE?	Yes	0	0	0	0	0	0
19	Is there corn or grain sorghum production in Zone B?	No	0	0	0	0	0	0
20	Are corn/grain sorghum nutrient and pesticide management plans in use for each site?	Yes	0	0	0	0	0	0
21	Are any orchards present in Zone B?	No	0	0	0	0	0	0
22	Are orchard nutrient and pesticide management plans in use for each site?	Yes	0	0	0	0	0	0
23	Are there unsewered developments (concentrations of lagoons or septic systems) present in Zone B?	No	0	0	0	0	0	0
24	Is there a railroad or major highway in Zone B or C?	Yes	0	1	1	1	1	1
25	Is there oil production in Zone B or C?	No	0	0	0	0	0	0
26	Do coarse textured soils predominate Zones A, B and C?	No	0	0	0	0	0	0
27	Is an irrigation well located in Zone B or C?	No	0	0	0	0	0	0
28	Is a wastewater treatment facility in Zone B or C?	Yes	1	1	1	1	1	1
29	Is a solid waste landfill in Zone B or C?	No	0	0	0	0	0	0
30	Are there unplugged, abandoned water wells present in Zone C?	No	0	0	0	0	0	0
31	Are any commercial, industrial, or urban area present in Zone C?	Yes	1	1	1	1	1	1
32	Does each industrial/commercial site and urban area have a water quality protection plan in place?	No	1	1	1	1	1	1
33	Is there livestock confinement in Zone C?	No	0	0	0	0	0	0
34	Is each confined livestock facility registered with KDHE?	Yes	0	0	0	0	0	0
35	Do all the livestock producers have water quality protection measures in place?	Yes	0	0	0	0	0	0
36	Are cropland nutrient management plans in place?	No	0	0	1	0	0	0
37	Are cropland pesticide management plans in place?	No	0	0	0	0	1	0
38	Does a perennial stream flow into Zone C?	Yes	1	1	1	1	1	1
39	Are watershed water quality protection plans in place?	No	1	1	1	1	1	1

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Site Comments:

The Site Comments section lists all the comments that were added for the potential sources of contamination found in the assessment area.

Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding detail to the sites that can be referenced for more information.

This local information may include comments on potential contamination threats (or lack there of), local water quality protection initiatives, etc. Adding comments are optional and are mainly focused on sources in areas that could have the greatest impact on water supply if a spill or release occurred in the environment. It is left to the discretion of the PWS and/or source water assessment committee to add comments.

Site Comments

Public Water Supply: **BAXTER SPRINGS, CITY OF**
Assessment Area: **118**

Comments for Unregulated Sites

Potential Contaminant Site No.	Site Comments	Author
152501	Shop is no longer in service.	Bob Kerby
152508	No car wash exists at this site. Was formerly a car wash three to four blocks further south but it has demolished.	Bob Kerby

Comments for Regulated Confined Animal Feeding Operations Sites

Did Not Receive Any Comments

Comments for Regulated Hazardous Waste Sites

Did Not Receive Any Comments

Comments for Regulated Leaking Storage Tank Sites

Did Not Receive Any Comments

Comments for Regulated Identified Contaminated Sites

Did Not Receive Any Comments

Comments for Regulated Solid Waste Sites

Did Not Receive Any Comments

Comments for Regulated Waste Water Sites

Did Not Receive Any Comments

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Status: **Accepted**
Submit Date: **2003-01-31 15:52:10**

Added Site Comments:

The Added Site Comments section lists the comments for why sites were added as a potential source of contamination found to the assessment area.

Added Site Comments

Public Water Supply: **BAXTER SPRINGS, CITY OF**
Assessment Area: **118**

Comments for Added Contaminant Sites

Added Contaminant Site Name	Site No.	Site Comments	Author
grove of trees	9001287	This is an important buffer to prevent contamination into the public water supply.	Nicole Fisher
Unknown	9001185	New auto body shop in industrial park area. Previous listings for similar types of businesses already listed.	Bob Kerby

Public Water Supply: **BAXTER SPRINGS, CITY OF**
Assessment Area: **118**
Diversion Id's: **005, 006**
Status: **Accepted**
Submit Date: **2003-01-31 15:52:10**

Analysis Question Comments:

The Analysis Question Comments section lists all the comments that were added during analysis portion of the assessment, in which a series of yes/no questions were asked.

Evaluators have the option to add comments to questions to clarify why a response was given or to give more details to a question. Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding clarification and details that could not be identified with a simple yes or no response.

Analysis Question Comments

Public Water Supply: **BAXTER SPRINGS, CITY OF**
Assessment Area: **118**

Comments for Analysis Questions

Analysis Question	Question Comments	Author
Did Not Receive Any Comments		

Public Water Supply: **BAXTER SPRINGS, CITY OF**
Assessment Area: **119**
Diversion Id's: **999**
Status: **Accepted**
Submit Date: **2003-01-31 15:55:20**

Executive Summary:

The Executive Summary gives the assessment area's Susceptibility Likelihood Score (SLS) for each contaminant of concern category.

SLS indicates which contaminant category is most likely to impact a given public water supply. Contaminants of concern for groundwater include microbiological, inorganic compounds, nitrates, synthetic organic compounds, pesticides, and volatile organic compounds. Contaminants of concern for surface water include microbiological, inorganic compounds, eutrophication – phosphorus, sedimentation, synthetic organic compounds, pesticides, and volatile organic compounds.

To determine the assessment area's susceptibility to contamination, a qualitative (semi-quantitative) screening level susceptibility analysis was designed that utilizes general assumptions and best professional judgement. It is a systematic procedure comprised of simple yes/no questions. Each question in the susceptibility analysis focuses on the presence or absence of potential pollution sources in the assessment area. SLS is most useful in helping the Public Water Supply (PWS) focus on water quality protection actions towards a contaminant category of concern. For example, if the SLS for microbiological contamination is high, relative to volatile organic compounds (VOC), water supply protection planners would conclude that the attention should be directed towards microbiological contaminant sources rather than VOC sources.

Executive Summary

Public Water Supply: **BAXTER SPRINGS, CITY OF**
 Assessment Area: **119**

Susceptibility Likelihood Scores for Assessment Area

	A	B	B1	B2	C	C*	D
Susceptibility Likelihood Score – SLS	58	66	67	77	68	53	66
SLS Range	Mid						

- A – Microbiological
- B2 – Sedimentation
- C* – Pesticides
- B – Inorganic Compounds
- C – Synthetic Organic Compounds
- D – Volatile Organic Compounds
- B1 – Eutrophication – Phosphorous

Susceptibility Likelihood Range

SLS Range	
0–50	Low Susceptibility
51–80	Moderate Susceptibility
81–100	High Susceptibility

Public Water Supply: **BAXTER SPRINGS, CITY OF**
Assessment Area: **119**
Diversion Id's: **999**
Status: **Accepted**
Submit Date: **2003-01-31 15:55:20**

Potential Sources:

The Potential Sources section lists all the sites that have been identified as potential sources of contamination.

Potential sources of contamination may include land uses, industry, or businesses that could generate or store chemicals/substances that could potentially contaminate the water supply only if released into the environment. Both unregulated sites from business location databases and regulated sites from various KDHE databases were compiled. Additional sites could have been added by an evaluator through the assessment process to supplement the original data.

The 1987 Standard Industrial Classifications (SIC) were used to identify potential contaminate sites. The SIC system classifies establishments into industries on the basis of the primary activities of the establishment.

Each assessment area is delineated with 3 assessment zones. These zones can be used to get a general understanding of the potential influence sites have based on proximity to the water supply. Zone A is a 100-foot radius around a groundwater well and a 1000-foot radius around a surface water intake. Zone B is a 2000-foot radius around wells and a hydrological delineated buffer around the surface water sources. Zone C is a 2-mile radius around wells and the balance of the watershed for intakes. The potential sources listed in this section are sorted to show all the potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business is identified in the study as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

The data for the potential sources of contamination was compiled from May through August in 2002. Some of the databases used were incomplete datasets that are continually being updated. Due to the incompleteness, inaccuracies, and new development, it is possible that sources of potential contamination that are in the assessment area are not included in the report. Inaccurate locations could also cause sources to show up in the assessment area that are not actually in the assessment. Additionally, duplication between the datasets could cause sites to show up multiple times in the assessment area.

Potential Sources

Public Water Supply: **BAXTER SPRINGS, CITY OF**
 Assessment Area: **119**

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
153674	General Farm, Primarily Crop	191	C
153546	Veterinary Services, Specialties	742	C
153586	Veterinary Services, Specialties	742	C
153587	Veterinary Services, Specialties	742	C
152609	Animal Specialty Services	752	C
153364	Single-family Housing Construction	1521	C
153365	Single-family Housing Construction	1521	C
153366	Single-family Housing Construction	1521	C
153585	Single-family Housing Construction	1521	C
153625	Single-family Housing Construction	1521	C
153632	Single-family Housing Construction	1521	C
153637	Single-family Housing Construction	1521	C
153638	Single-family Housing Construction	1521	C
153415	Nonresidential Construction	1542	C
153569	Meat Packing Plant Manufacturing	2011	C
100006	Dog, Cat, and Other Pet Food Manufacturing	2047	C
154136	Household Furniture Manufacturing	2519	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
154137	Furniture and Fixtures Manufacturing	2599	C
153536	Newspapers Publishing and Printing	2711	C
154227	Newspapers Publishing and Printing	2711	C
153368	Commercial Printing–Lithographic	2752	C
153401	Commercial Printing–Lithographic	2752	C
153416	Commercial Printing–Lithographic	2752	C
153452	Commercial Printing–Lithographic	2752	C
153478	Commercial Printing–Lithographic	2752	C
153552	Commercial Printing–Lithographic	2752	C
153616	Commercial Printing–Lithographic	2752	C
153617	Commercial Printing–Lithographic	2752	C
153463	Commercial Printing NEC	2759	C
154209	Commercial Printing NEC	2759	C
156938	Commercial Printing NEC	2759	C
154138	Industrial Gases Manufacturing	2813	C
154139	Industrial Organic Chemicals Manufacturing	2869	C
153682	Explosives Manufacturing	2892	C
154140	Chemical Preparations Manufacturing	2899	C
154283	Chemical Preparations Manufacturing	2899	C
153641	Asphalt Felts and Coatings Manufacturing	2952	C
156911	Farm Machinery and Equipment	3523	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
154141	Construction Machinery Manufacturing	3531	C
154143	Machinery, Except Electrical Manufacturing	3599	C
154174	Machinery, Except Electrical Manufacturing	3599	C
154218	Machinery, Except Electrical Manufacturing	3599	C
154226	Machinery, Except Electrical Manufacturing	3599	C
154296	Machinery, Except Electrical Manufacturing	3599	C
154299	Machinery, Except Electrical Manufacturing	3599	C
154269	Engine Electrical Equipment Manufacturing	3694	C
153362	Motor vehicle Parts and Accessories Manufacturing	3714	C
152545	Travel trailers and Campers Manufacturing	3792	C
154276	Manufacturing Industries, nec	3999	C
154289	Local Trucking, without Storage	4212	C
153432	Farm Product Warehousing and Storage	4221	C
153640	Farm Product Warehousing and Storage	4221	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
156913	Sewerage Systems	4952	C
153679	Refuse Systems	4953	C
154281	Refuse Systems	4953	C
154282	Refuse Systems	4953	C
153447	Farm and Garden Machinery	5083	C
154146	Scrap and Waste Materials	5093	C
153454	Recreational vehicle sales and repair	5561	C
153417	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
153462	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
153601	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
153665	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
154175	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
154183	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
154223	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
154254	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C

Unregulated Potential Site Sources

Source No.	SIC Description	SIC ID	Zone
154295	Top, Body, and Upholstery Repair Shops and Paint Shops	7532	C
153438	Auto Truck Repair Service	7538	C
153459	Auto Truck Repair Service	7538	C
153591	Auto Truck Repair Service	7538	C
153594	Auto Truck Repair Service	7538	C
153596	Auto Truck Repair Service	7538	C
154155	Auto Truck Repair Service	7538	C
154246	Auto Truck Repair Service	7538	C
153377	Car Wash	7542	C
154198	Car Wash	7542	C
152411	Repair Services, Nec	7699	C
153541	Repair Services, Nec	7699	C
153542	Repair Services, Nec	7699	C

Regulated Confined Animal Feeding Operations Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
2002018	Eckhardt Turkey Farm	A-NECK-FA02	C
2002022	Circle K Farms	A-NECK-F005	C
2002419	Scott Farms	A-NECK-F017	C
2002420	Hefley Farms	A-NECK-F004	C

Regulated Confined Animal Feeding Operations Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
2002421	Capron Farms	A-NECK-F015	C
2002424	Abram Farms	A-NECK-P020	C

Regulated Hazardous Waste Potential Site Sources

Did Not Contain Any Of These Potential Site Sources

Regulated Leaking Storage Tank Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
3001217	One Stop, The	20718	C

Regulated Identified Contaminated Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
7000387	AMPHETAMINE MFG SITE	C301100120	C
7000388	THERMEX ENERGY CORP, JAYHAWK PLANT	C301100339	C
7000389	RICKLE GRAIN	C301100343	C
7000390	JAYHAWK ORDNANCE WORKS (FORMER)	C301100346	C
7000392	JAYHAWK BURIED DRUM (CHEVRON)	C301170127	C

Regulated Identified Contaminated Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
7000402	BADGER SUBSITE	C301170908	C
7000403	BADGER SUBSITE	C301170908	C
7000404	BADGER SUBSITE	C301170908	C
7000405	BADGER SUBSITE	C301170908	C
7000406	GALENA SUBSITE – OU 1 – DRINKING WATER	C301170909	C
7000409	BAXTER SPRINGS POW CAMP	C301170916	C
7000410	GALENA SUBSITE – OU 5 – SURFACE WATER/GROUNDWATER	C301170917	C
7000411	GALENA SUBSITE OU 7 – RESIDENTIAL SOIL	C301170918	C
7000412	BAXTER SPRINGS CHAT PILE	C301171098	C

Regulated Solid Waste Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
5000028	Cherokee C.L.A.W. Inc.	–S	C
5000421	City of Galena	0412–S	C
5000478	City of Galena	0462–S	C
5000542	City of Galena	0528–S	C
5000569	CInc.	0557–S	C
5000581	Tri–state Recycle Transfer Station	0569–S	C
5000586	City of Galena	0574–S	C
5000642	City of Galena	0631–S	C

Regulated Solid Waste Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
5000667	City of Galena	0655-S	C
5000673	City of Galena	0661-S	C
5000730	American Disposal Services of MO, Inc.	0710-S	C
5000760	City of Galena	0738-S	C
5000812	Empire District Electric Company	0784-S	C
5000825	Chevron USA Inc.	0796-S	C
5000898	Stretch Manufacturing, Inc.	2060-T	C

Regulated Waste Water Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
6001670	CHEROKEE CO. S.D. #1	M-NE73-OO02	B
6000193	ALLCO CHEMICAL CORPORATION (GALENA)	I-NE28-PO03	C
6000194	INSPEC USA (ALLCO CHEMICAL)	I-NE28-PO04	C
6000266	CHEROKEE COUNTY SEWER DISTRICT NO. 1	M-NE73-IO01	C
6000309	JAYHAWK SITE GROUP	I-NE28-PO06	C
6000845	JAYHAWK FINE CHEMICAL CORP.	I-NE28-PO07	C
6000876	EMPIRE DISTRICT ELECTRIC	I-NE73-BO01	C
6000877	EMPIRE DISTRICT ELECTRIC	I-NE73-BO01	C
6000878	EMPIRE DISTRICT ELECTRIC	I-NE73-BO01	C
6000879	EMPIRE DISTRICT ELECTRIC	I-NE73-BO01	C
6001598	COLUMBUS MWTF	M-NE15-OO01	C

Regulated Waste Water Potential Site Sources

Source No.	Source Name	ID/Permit No.	Zone
6001612	GALENA MWTF	M-NE28-OO01	C

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Added Sources:

The Added Sources section lists all the sites that have been added as potential sources of contamination by an evaluator through the assessment process to supplement the original data.

The potential sources listed in this section are sorted to show the added potential sources in Zone A first, Zone B second, and Zone C third.

Although a facility or business was added as a potential concern, it does not necessarily mean a release or spill has occurred. Contamination could only occur if certain chemical substances are released into the environment and filter into the water supply source.

Added Sources

Public Water Supply: **BAXTER SPRINGS, CITY OF**
Assessment Area: **119**

Added Potential Site Sources

Source No.	Source Name	SIC ID	Zone
9001287	grove of trees	0	B
9001329	school	0	B
9001328	irrigation well for football field	10012	B
9000858	Fuel, Grain, Fertilizer storage	10038	B
9000859	wheat fields	111	B
9000915	cropland	111	B
9000109	pastureland with cattle and horses	10080	C
9000860	pastureland	10087	C
9000051	old mine shafts	1400	C
9001185		7532	C

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Potential Contaminants Summary:

The Contaminants Summary shows the number of identified unregulated sources in the assessment area for each contaminant of concern category.

In order to obtain the number of sources for each category, a relationship was correlated between each Standard Industrial Classification (SIC) and the contaminant of concern categories. Each SIC was assessed and associated with contaminant categories. For example, if not managed properly, a car wash (SIC 7542) could potentially contaminate an intake because of inorganic compounds (IOC) and volatile organic compounds (VOC); thus, a car wash is associated with IOCs and VOCs.

A chart displays a count for each contaminant category. The sum for each category represents the total number of identified sources that have been associated with that particular contaminant category. However, the total number of identified sources does not include contaminants from the Added Sources. In our example, a car wash would be considered 2 sources of contamination. It would be a potential source of contamination for IOCs and for VOCs; thus, 1 would be added to the total number of sources in the VOC category and 1 would be added to the IOC category.

Potential Contaminants Summary

Public Water Supply: **BAXTER SPRINGS, CITY OF**
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Number of Unregulated Site Sources Identified for each Contaminant Category

MicroBiological	Sedimentation	Pesticides	IOC's	SOC's	VOC's	E – P
17	16	4	66	24	57	17

- A – Microbiological
- B2** – Sedimentation
- C* – Pesticides
- B – Inorganic Compounds
- C – Synthetic Organic Compounds
- D – Volatile Organic Compounds
- B1** – Eutrophication – Phosphorous

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Potential Contaminants Listing:

The Potential Contaminants section lists the contaminant of concern category associated with each Standard Industrial Classification (SIC) found in an assessment area. A complete list of contaminant category codes are located at the bottom of this page.

The relationships defined between the Standard Industrial Classifications (SIC) and the contaminant of concern categories are displayed in a table format. Using our car wash example, the relationships can be better illustrated. A car wash could release IOC and VOC chemical substances. The connection is shown by indicating the SIC, 7542, and the associated contaminant categories, IOC (Category B) and VOC (Category D). However, the contaminants listed are not associated with any Added Sources.

The list is sorted by the SIC source description and it only shows unique SIC sources. For example, an assessment area can have 20 car washes in an assessment area, but the list is only going to show contaminant categories associated with car washes onetime. This is because all car washes have the same SIC and every car wash poses the same potential threat to water intakes.

A – Microbiological **B** – Inorganic Compounds **B1** – Eutrophication – Phosphorous
B2 – Sedimentation **B*** – Nitrates **C** – Synthetic Organic Compounds
C* – Pesticides **D** – Volatile Organic Compounds

Potential Contaminants Listing

Public Water Supply: **BAXTER SPRINGS, CITY OF**
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Unregulated Identified Site Sources and associated Potential Contaminant Category

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
2952	Asphalt Felts and Coatings Manufacturing	inorganics, VOCs	B
"	"	"	D
7538	Auto Truck Repair Service	Inorganics, VOCs	B
"	"	"	D
7542	Car Wash	Inorganics, VOCs	B
"	"	"	B1
"	"	"	B2
"	"	"	D
2899	Chemical Preparations Manufacturing	VOCs, inorganics	D
3531	Construction Machinery Manufacturing	inorganics, VOCs	B
"	"	"	D
2047	Dog, Cat, and Other Pet Food Manufacturing	BOD, oil and grease, TSS	A
"	"	"	B
3694	Engine Electrical Equipment Manufacturing	inorganics, VOCs	B
"	"	"	D
2892	Explosives Manufacturing	VOCs, Nitrates, phosphorous, inorganics	B
"	"	"	B1

Unregulated Identified Site Sources and associated Potential Contaminant Category.

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
2892	Explosives Manufacturing	VOCs, Nitrates, phosphorous, inorganics	B*
"	"	"	D
2599	Furniture and Fixtures Manufacturing	TSS, VOCs	B
"	"	"	D
2519	Household Furniture Manufacturing	TSS, VOCs	B
"	"	"	D
2813	Industrial Gases Manufacturing	NA	D
2869	Industrial Organic Chemicals Manufacturing	Metals and other inorganics	B
4212	Local Trucking, without Storage	VOCs	D
3599	Machinery, Except Electrical Manufacturing	inorganics, VOCs	B
"	"	"	D
3999	Manufacturing Industries, nec	inorganics, VOCs	B
"	"	"	D
2011	Meat Packing Plant Manufacturing	BOD, pathogens, Oil and grease	A
"	"	"	B*
3714	Motor vehicle Parts and Accessories Manufacturing	inorganics, VOCs	B
"	"	"	D
1542	Nonresidential Construction	Sedimentation	B2
5093	Scrap and Waste Materials	Metals, TSS	B

Unregulated Identified Site Sources and associated Potential Contaminant Category.

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
4952	Sewerage Systems	Inorganics, VOCs	B
"	"	"	B1
"	"	"	B*
"	"	"	D
1521	Single-family Housing Construction	Oil, Paint, Pesticides, Fertilizers	A
"	"	"	B1
"	"	"	B2
"	"	"	B*
"	"	"	C
7532	Top, Body, and Upholstery Repair Shops and Paint Shops	Inorganics, VOCs	B
"	"	"	D
3792	Travel trailers and Campers Manufacturing	inorganics, VOCs	B
"	"	"	D
742	Veterinary Services, Specialties	Sanitary, Inorganics TSS	A
"	"	"	B
752	Animal Specialty Services	Sanitary, fertilizers	A
"	"	"	B
"	"	"	B1
"	"	"	B2

Unregulated Identified Site Sources and associated Potential Contaminant Category.

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
752	Animal Specialty Services	Sanitary, fertilizers	B*
2759	Commercial Printing NEC	Inorganics, VOCs, Semi volatiles	B
"	"	"	C
"	"	"	D
2752	Commercial Printing–Lithographic	Inorganics, VOCs, Semi volatiles	B
"	"	"	C
"	"	"	D
3523	Farm Machinery and Equipment	inorganics	B
"	"	"	D
4221	Farm Product Warehousing and Storage	TSS, VOCs	B
"	"	"	D
5083	Farm and Garden Machinery	inorganics	B
191	General Farm, Primarily Crop	fertilizers, Pesticides	B
"	"	"	B1
"	"	"	B2
"	"	"	B*
"	"	"	C*
2711	Newspapers Publishing and Printing	Inorganics, VOCs, Semi volatiles	B
"	"	"	C

Unregulated Identified Site Sources and associated Potential Contaminant Category.

SIC ID	SIC Source	Potential Contaminant	Contaminant Category
2711	Newspapers Publishing and Printing	Inorganics, VOCs, Semi volatiles	D
5561	Recreational vehicle sales and repair	Inorganics	B
4953	Refuse Systems	ALL	A
"	"	"	B
"	"	"	B1
"	"	"	B2
"	"	"	B*
"	"	"	C
"	"	"	C*
"	"	"	D
7699	Repair Services, Nec	inorganics	B

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Protection Measures:

The Protection Measures section shows water quality protection measures for the Standard Industrial Classifications (SIC) identified in the assessment area.

Previous sections of this report are designed to show areas that Public Water Supplies (PWS) can focus on to improve the susceptibility of an assessment area. This section helps identify water quality protection measures that a PWS can use as guidance for implementing action for a potential contaminant site in the assessment area. It focuses on protection measures that can reduce the risk of contamination to the water supply.

This portion of the report only displays water quality protection measures for each type of SIC found in the assessment area. It does not display protection measures for each site in the assessment area because every SIC should have the same or similar water quality protection management practices. However, the protection measures listed are not associated with any Added Sources.

Protection Measures

Public Water Supply: **BAXTER SPRINGS, CITY OF**
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Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
2952	Asphalt Felts and Coatings Manufacturing	inorganics, VOCs	Control storm water runoff to minimize contact with product or wastes. Pre-treat wastewater prior to discharge (direct or POTW)	40 CFR 443 and State or federal Storm water pollution prevention regulations
7538	Auto Truck Repair Service	Inorganics, VOCs	Discharge to POTW. Manage oil products and used oil so that it is not in contact with water	40 CFR 442 and
7542	Car Wash	Inorganics, VOCs	Install and maintain sediment and grease traps where appropriate	40 CFR 442
2899	Chemical Preparations Manufacturing	VOCs, inorganics	Collect and pre-treat prior to discharge to a POTW	40 CFR 415 or 414 and State or federal Storm water pollution prevention regulations
3531	Construction Machinery Manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	State or federal Storm water pollution prevention regulations
2047	Dog, Cat, and Other Pet Food Manufacturing	BOD, oil and grease, TSS	Wastewater pretreatment and/or discharge to a POTW	40 CFR 122 and State or federal Storm water pollution prevention regulations

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
3694	Engine Electrical Equipment Manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	40 CFR 469 and State or federal Storm water pollution prevention regulations
2892	Explosives Manufacturing	VOCs, Nitrates, phosphorous, inorganics	Contain and treat all process water in impervious treatment vessels.	40 CFR 457 and State or federal Storm water pollution prevention regulations
2599	Furniture and Fixtures Manufacturing	TSS, VOCs	Discharge of process waters to POTW.	State or federal Storm water pollution prevention regulations
2519	Household Furniture Manufacturing	TSS, VOCs	Discharge of process waters to POTW.	State or federal Storm water pollution prevention regulations
2813	Industrial Gases Manufacturing	NA	NA	NA
2869	Industrial Organic Chemicals Manufacturing	Metals and other inorganics	Discharge process water to POTW	40 CFR 415 and State or federal Storm water pollution prevention regulations

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
4212	Local Trucking, without Storage	VOCs	Discharge to a POTW	State or federal Storm water pollution prevention regulations
3599	Machinery, Except Electrical Manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	State or federal Storm water pollution prevention regulations
3999	Manufacturing Industries, nec	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	State or federal Storm water pollution prevention regulations
2011	Meat Packing Plant Manufacturing	BOD, pathogens, Oil and grease	Wastewater pretreatment and/or discharge to a POTW	40CFR 432 and State or federal Storm water pollution prevention regulations
3714	Motor vehicle Parts and Accessories Manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	40 CFR 464 and State or federal Storm water pollution prevention regulations
1542	Nonresidential Construction	Sedimentation	Erosion and Sediment Control	KAR 28-16, KDHE

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
5093	Scrap and Waste Materials	Metals, TSS	Minimize contact with storm water	State or federal Storm water pollution prevention regulations
4952	Sewerage Systems	Inorganics, VOCs	Manage sludge properly. Minimize storm water contact with chemicals	KAR 28–16 and State or federal Storm water pollution prevention regulations
1521	Single–family Housing Construction	Oil, Paint, Pesticides, Fertilizers	Proper cleaning and disposal of household hazardous waste. Proper storage, application, and clean up of pesticides and fertilizers	KAR 28–48, KDHE, KDEM
7532	Top, Body, and Upholstery Repair Shops and Paint Shops	Inorganics, VOCs	Discharge to POTW. Recycle where appropriate. Properly maintain oil product and waste. Manage paint and solvent wastes properly	NA
3792	Travel trailers and Campers Manufacturing	inorganics, VOCs	Manage wastes properly and treat process wastewater prior to discharge to a POTW or direct	State or federal Storm water pollution prevention regulations
742	Veterinary Services, Specialties	Sanitary, Inorganics TSS	Discharge to POT	NA

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
752	Animal Specialty Services	Sanitary, fertilizers	Collect and treat wastes.	NA
2759	Commercial Printing NEC	Inorganics, VOCs, Semi volatiles	Recycle chemicals where possible. Discharge to POTW	40 CFR 459 and State or federal Storm water pollution prevention regulations
2752	Commercial Printing–Lithographic	Inorganics, VOCs, Semi volatiles	Recycle chemicals where possible. Discharge to POTW	40 CFR 459 and State or federal Storm water pollution prevention regulations
3523	Farm Machinery and Equipment	inorganics	Discharge to POTW	State or federal Storm water pollution prevention regulations
4221	Farm Product Warehousing and Storage	TSS, VOCs	Keep the area clean of grain. Use grease traps.	State or federal Storm water pollution prevention regulations
5083	Farm and Garden Machinery	inorganics	Discharge to POTW	NA

Recommended Water Quality Protection Measures

SIC	SIC Source	Contaminant Source	Water Quality Protection Measure	Regulatory Authority
191	General Farm, Primarily Crop	fertilizers, Pesticides	Maintain good erosion control practices and minimize the use of chemicals	NA
2711	Newspapers Publishing and Printing	Inorganics, VOCs, Semi volatiles	Recycle chemicals where possible. Discharge to POTW	40 CFR 459 and State or federal Storm water pollution prevention regulations
5561	Recreational vehicle sales and repair	Inorganics	Discharge to a POTW. Store oils and lubricants properly	Discharge to a POTW. Store oils and lubricants properly
4953	Refuse Systems	ALL	Store wastes properly in order to minimize contact with storm water.	Maintain the lagoon or storage vessel properly. Control storm water run on and runoff to minimize contamination of storm water
7699	Repair Services, Nec	inorganics	Discharge to POTW	NA

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Assessment Analysis:

The Assessment Analysis section displays the numbers assigned to each contaminant of concern category for each question in the susceptibility analysis.

This analysis is based on a decision tree framework consisting of a series of yes/no questions. These questions consider the proximity of contaminant sources to the water supply intake, the type of contaminant, and the application of pollution prevention or water quality protection practices to sources of contamination. As the evaluator moves through the analytical framework, susceptibility points are accumulated based on the presence of contaminant sources in the assessment area.

After all the questions have been answered, the SLS is calculated for each contaminant of concern category. The SLS is determined by counting the number of contamination risk factors found to occur in the delineated assessment area and applying a multiplier to this number. Because the number of contaminant category risk factors is not equal, the multiplier is used to establish a common scale for the SLS of each contaminant category.

Assessment Analysis

Public Water Supply: **BAXTER SPRINGS, CITY OF**
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Surface Water Single Well Analysis

A – Microbiological **B** – Inorganic Compounds

B1 – Eutrophication – Phosphorous

B2 – Sedimentation **C** – Synthetic Organic Compounds

C* – Pesticides **D** – Volatile Organic Compounds

No.	Question	Response	A	B	B1	B2	C	C*	D
1	Is the intake located at a treatment plant?	No	1	1	0	0	1	1	1
2	Is there an open channel conveyance from the intake to the treatment plant?	No	0	0	0	0	0	0	0
3	Does a PWS own or control the conveyance right-of-way?	No	1	1	0	0	1	1	1
4	Does a PWS own or control the area within 1/4 mile of intake?	No	1	1	0	0	1	1	1
5	Is the area within 1/4 mile of the intake entirely native grass?	No	1	1	0	0	1	1	1
6	Is transportation infrastructure in close proximity to the intake?	Yes	0	1	0	0	1	1	1
7	Are there water quality protection plans for the transportation infrastructure?	No	0	1	0	0	1	1	1
8	Are any commercial, industrial, or urban areas present?	No	0	0	0	0	0	0	0
9	Does each industrial/commercial site and urban area have a water quality protection plan in place?	Yes	0	0	0	0	0	0	0
10	Is riparian area vegetated?	Yes	0	0	0	0	0	0	0
11	Has riparian area been farmed up to the stream/riverbank?	No	0	0	0	0	0	0	0
12	Is there a lack of native grass or trees?	No	0	0	0	0	0	1	0
13	Is livestock use present in riparian area?	Yes	1	0	0	0	0	1	0
14	Are any confined livestock production sites in riparian area?	No	0	0	0	0	0	0	0
15	Is each confinement area registered with KDHE?	Yes	0	0	0	0	0	0	0
16	Are any row crops (corn, milo, soybean) present?	No	0	0	0	0	0	0	0
17	Are water quality protection plans in use for each cropland?	Yes	0	0	0	0	0	0	0

No.	Question	Response	A	B	B1	B2	C	C*	D
18	Are any orchards present?	No	0	0	0	0	0	0	0
19	Are water quality protection plans in use for each orchard?	Yes	0	0	0	0	0	0	0
20	Is the intake a river intake?	Yes	1	1	0	1	1	1	1
21	Is the intake at a city-owned lake?	No	1	1	1	1	1	1	1
22	Is there water quality monitoring conducted at the river or lake?	Yes	0	0	0	0	0	0	0
23	Is TMDL needed for any of the rivers or lakes?	Yes	1	1	1	1	1	1	1
24	Are TMDL pollutants of concern reported by monitoring?	Yes	0	0	0	0	0	0	0
25	Are any point source discharges within 16 miles upstream of intake?	Yes	1	1	1	1	1	0	1
26	Is pretreatment required at any of the point sources?	Yes	1	1	1	1	1	0	1
27	Are all riparian buffers vegetated?	No	1	1	1	1	0	1	0
28	Are vegetated riparian buffer and a water quality protection plans in place?	Yes	0	0	0	0	0	0	0
29	Is there urbanized land within riparian buffer?	Yes	1	1	1	1	1	1	1
30	Is a NPDES stormwater permit required for the urbanized areas?	No	1	1	1	1	1	1	1
31	Are voluntary water quality protection plans in place for each urbanized area?	No	1	1	1	1	1	1	1
32	Is there industrial land use within riparian buffer?	No	0	0	0	0	0	0	0
33	Is NPDES stormwater permit required for industrial areas?	No	1	1	1	1	1	1	1
34	Are voluntary water quality protection plans in place for each industrial area?	Yes	0	0	0	0	0	0	0
35	Are there livestock present?	Yes	1	0	1	0	0	1	0
36	Is there livestock confinement present?	No	0	0	0	0	0	0	0
37	Is each confined livestock facility registered with KDHE?	Yes	0	0	0	0	0	0	0
38	Are any row crops (corn, milo, soybeans) present?	Yes	0	0	1	1	0	1	0
39	Are water quality protection plans in use for each row crop production?	No	0	0	1	1	0	1	0
40	Are any orchards present?	No	0	0	0	0	0	0	0
41	Are water quality protection plans in use for each orchard?	Yes	0	0	0	0	0	0	0
42	Is there any small grain (wheat, oats, barley) production?	Yes	0	0	1	1	0	1	0
43	Are water quality protection plans in use for each small grain production?	No	0	0	1	1	0	1	0
44	Are there unsewered developments (concentrations of lagoons or septic systems) present in Zone B?	Yes	1	1	0	0	0	0	0
45	Is a general watershed water quality protection plan in use?	No	1	1	1	1	1	1	1
46	Are any point source discharges within 16 miles upstream of intake?	Yes	0	0	0	0	0	0	0
47	Is pretreatment required at any of the point sources?	Yes	1	1	1	1	1	0	1

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Site Comments:

The Site Comments section lists all the comments that were added for the potential sources of contamination found in the assessment area.

Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding detail to the sites that can be referenced for more information.

This local information may include comments on potential contamination threats (or lack there of), local water quality protection initiatives, etc. Adding comments are optional and are mainly focused on sources in areas that could have the greatest impact on water supply if a spill or release occurred in the environment. It is left to the discretion of the PWS and/or source water assessment committee to add comments.

Site Comments

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Comments for Unregulated Sites

Did Not Receive Any Comments

Comments for Regulated Confined Animal Feeding Operations Sites

Did Not Receive Any Comments

Comments for Regulated Hazardous Waste Sites

Did Not Receive Any Comments

Comments for Regulated Leaking Storage Tank Sites

Did Not Receive Any Comments

Comments for Regulated Identified Contaminated Sites

Potential Contaminant Site Name	Site No.	Site Comments	Author
GALENA SUBSITE – OU 1 – DRINKING WATER	7000406	The site is a historic lead and zinc mining district. The main contaminants of concern in shallow groundwater, surface water and soils are lead, zinc, and cadmium.	Nicole Fisher

Comments for Regulated Identified Contaminated Sites

Potential Contaminant Site Name	Site No.	Site Comments	Author
GALENA SUBSITE – OU 5 – SURFACE WATER/GROUNDWATER	7000410	The site is a historic lead and zinc mining district. The main contaminants of concern in shallow groundwater, surface water and soils are lead, zinc, and cadmium.	Nicole Fisher
GALENA SUBSITE OU 7 – RESIDENTIAL SOIL	7000411	The site is a historic lead and zinc mining district. The main contaminants of concern in shallow groundwater, surface water and soils are lead, zinc, and cadmium.	Nicole Fisher
JAYHAWK BURIED DRUM (CHEVRON)	7000392	Buried drums were located at this site in 1994 during a DOD buried drum investigation. The contaminated soil was removed and properly disposed. For more information please contact Dave Walsh 785–296–1676	Nicole Fisher

Comments for Regulated Solid Waste Sites

Potential Contaminant Site Name	Site No.	Site Comments	Author
Chevron USA Inc.	5000825	This solid waste facility is privately owned and is used for construction/demolition.	Nicole Fisher
City of Galena	5000478	This construction/demolition facility has been closed	Nicole Fisher
City of Galena	5000667	This construction/demolition facility has been closed	Nicole Fisher
Empire District Electric Company	5000812	In 1999 a Sampling analysis plan was written but to KDHE knowledge no samples have been collected. For more information please contact Betty Gamber at (785) 296–6537.	Nicole Fisher
Stretch Manufacturing, Inc.	5000898	Tire processing facility closed 5/1/2002	Nicole Fisher

Comments for Regulated Waste Water Sites

Did Not Receive Any Comments

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Added Site Comments:

The Added Site Comments section lists the comments for why sites were added as a potential source of contamination found to the assessment area.

Added Site Comments

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Comments for Added Contaminant Sites

Added Contaminant Site Name	Site No.	Site Comments	Author
Fuel, Grain, Fertilizer storage	9000858	This site could possibly contaminate the public water supply.	Nicole Fisher
cropland	9000915	This site is a potential source of contamination into the public water supply.	Nicole Fisher
grove of trees	9001287	This is an important buffer to prevent contamination into the public water supply.	Nicole Fisher
irrigation well for football field	9001328	This site could contaminate the public water supply.	Nicole Fisher
old mine shafts	9000051	This site was identified on the Wellhead Protection Plan. The EPA has been through the area in an effort to reclaim the land.	Nicole Fisher
pastureland	9000860	This site could possibly contaminate the public water supply.	Nicole Fisher
pastureland with cattle and horses	9000109	This information was obtained from the Wellhead Protection Plan.	Nicole Fisher
school	9001329	This site could contaminate the public water supply.	Nicole Fisher
wheat fields	9000859	This site could possibly contaminate the public water supply.	Nicole Fisher
Unknown	9001185	New auto body shop in industrial park area. Previous listings for similar types of businesses already listed.	Bob Kerby

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Analysis Question Comments:

The Analysis Question Comments section lists all the comments that were added during analysis portion of the assessment, in which a series of yes/no questions were asked.

Evaluators have the option to add comments to questions to clarify why a response was given or to give more details to a question. Local comments and feedback from people that are familiar with the assessment area is an important aspect of the assessment. The comments greatly improve the assessment by adding clarification and details that could not be identified with a simple yes or no response.

Analysis Question Comments

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Comments for Analysis Questions

Analysis Question	Question Comments	Author
Is there industrial land use within riparian buffer?	By veiwing the map I do not believe there are industrial industrial land uses within the riparian buffer. If it is seen otherwise will resubmit answer on questionnaire.	Bob Kerby
Does a PWS own or control the conveyance right-of-way?	PWS has a utility easement for the distance of the line from the river intake to the plant. There is a cattle grazing operation in use in that area.	Bob Kerby
Is riparian area vegetated?	Riparian area in zone A vegetated for the most part, there is evidence of erosion on the banks of the river itself.	Bob Kerby
Is TMDL needed for any of the rivers or lakes?	TMDL technically not in place yet for Spring River. Will be written within the next year as per Chris Gnau of KDHE.	Bob Kerby
Is TMDL needed for any of the rivers or lakes?	Addition to previous comment, TMDL is required for Spring River primarily due to metals pollutants, not bacteriological or nutrient contamination.	Bob Kerby