

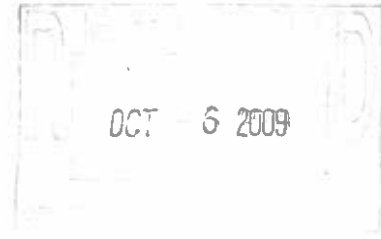


Regional Office  
115 Northstar Avenue  
Twin Falls, ID 83301

208-733-2414  
Fax: 208-733-9455  
www.jub.com

October 1, 2009

Mike Lidgard  
NPDES Permits Unit Manager  
U.S. EPA, Region 10  
1200 Sixth Avenue, Suite 900  
Seattle, WA 98101



RE: Richfield, ID NPDES Permit Renewal Application for ID-002121-1

Dear Mr. Lidgard:

The City of Richfield, Idaho owns and operates a sanitary sewer collection system and wastewater treatment facilities. The treatment facilities consist of an influent lift station, an influent flow monitoring facility, an aerated lagoon, a facultative polishing lagoon, a chlorine gas disinfection system, and an effluent flow monitoring system. The treated effluent is discharged to one of the following locations:

1. Little Wood River during the non-growing season (November through April) under a National Pollutant Discharge Elimination System (NPDES) Permit (ID-002121-1) issued by the U.S. Environmental Protection Agency (EPA), effective April 1, 2005; or
2. A 3.5 acre Reuse Site during the growing season (May through October) under an Idaho Department of Environmental Quality (IDEQ) Reuse Permit (LA-000048-03), effective June 27, 2008.

In accordance with Section IV.B of the current NPDES Permit and 40 CFR 122.21(d), J-U-B ENGINEERS, Inc. is submitting this NPDES permit renewal application on behalf of the City. A surface water monitoring report for the Little Wood River is also enclosed with this application, per section I.C of the current NPDES Permit.

We appreciate your consideration of this NPDES Permit renewal application. If you have any questions regarding the information contained in the renewal application, please contact me at (208) 733-2414.

Sincerely,

Mark Holtzen, P.E.  
J-U-B ENGINEERS, Inc.

cc: Charles Buttane, Mayor  
Jack Riley, Municipal Services Director  
David Anderson, IDEQ

enc. NPDES Permit Application – Form 1 and Form 2A  
Narrative Plant Description  
Figure 1 Topographic Map  
Figure 2 Existing Facilities  
Figure 3 Process Flow Diagram  
Surface Water Monitoring Data

<b>FORM</b> <b>1</b> <b>GENERAL</b>	<b>U.S. ENVIRONMENTAL PROTECTION AGENCY</b> <b>GENERAL INFORMATION</b> <i>Consolidated Permits Program</i> <i>(Read the "General Instructions" before starting.)</i>	<b>I. EPA I.D. NUMBER</b> ID-002121-1
<b>LABEL ITEMS</b> I. EPA I.D. NUMBER III. FACILITY NAME V. FACILITY MAILING ADDRESS VI. FACILITY LOCATION		<b>GENERAL INSTRUCTIONS</b> If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent (the area to the left of the label space lists the information that should appear), please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete items I, III, V, and VI (except VI-B which must be completed regardless). Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.
PLEASE PLACE LABEL IN THIS SPACE		

**II. POLLUTANT CHARACTERISTICS**

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements, see Section C of the instructions. See also, Section D of the instructions for definitions of bold-faced terms.

SPECIFIC QUESTIONS	Mark "X"			SPECIFIC QUESTIONS	Mark "X"		
	YES	NO	FORM ATTACHED		YES	NO	FORM ATTACHED
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)	X		X	B. Does or will this facility (either existing or proposed) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)		X	
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)		X		D. Is this a proposed facility (other than those described in A or B above) which will result in a discharge to waters of the U.S.? (FORM 2D)		X	
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)		X		F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X		H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X		J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	

**III. NAME OF FACILITY**

c	1	SKIP	CITY OF RICHFIELD WASTEWATER TREATMENT FACILITY
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**IV. FACILITY CONTACT**

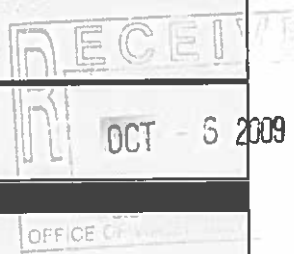
c	2	A. NAME & TITLE (last, first, & title)	B. PHONE (area code & no.)
		RILEY, JACK, MUNICIPAL SERVICES DIRECTOR	(208) 487-2755

**V. FACILITY MAILING ADDRESS**

c	3	A. STREET OR P.O. BOX			
		P.O. BOX 97			
c	4	B. CITY OR TOWN	C. STATE	D. ZIP CODE	
		RICHFIELD	ID	83349	

**VI. FACILITY LOCATION**

c	5	A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER			
		About one quarter mile southwest of City			
c	6	B. COUNTY NAME			
		LINCOLN			
c	6	C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE (if known)
		RICHFIELD	ID	83349	



*Slip 2/14/10*

CONTINUED FROM THE FRONT

VII. SIC CODES (4-digit, in order of priority)				B. SECOND			
A. FIRST		(specify) SEWERAGE SYSTEMS		(specify)			
C	7	4952		C	7		
15	16	17	18	15	16	17	18
C. THIRD				D. FOURTH			
(specify)				(specify)			
C	7			C	7		
15	16	17	18	15	16	17	18

VIII. OPERATOR INFORMATION																			
A. NAME										B. Is the name listed in Item VIII-A also the owner?									
CITY OF RICHFIELD										<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO									
C	8											55	56						
15	16											55	56						
C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box: if "Other," specify)										D. PHONE (area code & no.)									
F = FEDERAL S = STATE P = PRIVATE M = PUBLIC (other than federal or state) O = OTHER (specify)										A									
M										(208) 487-2755									
										15	16	17	18	19	20	21	22	23	24

E. STREET OR P.O. BOX											
P.O. BOX 97											

F. CITY OR TOWN										G. STATE	H. ZIP CODE	IX. INDIAN LAND					
RICHFIELD										ID	83349	Is the facility located on Indian lands?					
												<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO					
C	B											40	41	42	43	51	52
15	16											40	41	42	43	51	52

X. EXISTING ENVIRONMENTAL PERMITS											
A. NPDES (Discharges to Surface Water)						D. PSD (Air Emissions from Proposed Sources)					
ID-002121-1						9 P					
C	T	I				C	T	I			
9	N					9	P				
15	16	17	18	19	20	15	16	17	18	19	20
B. UIC (Underground Injection of Fluids)						E. OTHER (specify)					
LA-000048-03						(specify) IDEQ REUSE PERMIT					
C	T	I				C	T	I			
9	U					9					
15	16	17	18	19	20	15	16	17	18	19	20
C. RCRA (Hazardous Wastes)						E. OTHER (specify)					
						(specify)					
C	T	I				C	T	I			
9	R					9					
15	16	17	18	19	20	15	16	17	18	19	20

XI. MAP  
 Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers, and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS (provide a brief description)  
 MUNICIPAL WASTEWATER TREATMENT FACILITY

XIII. CERTIFICATION (see instructions)											
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.											
A. NAME & OFFICIAL TITLE (type or print) CHARLES BUTTCANE, MAYOR						B. SIGNATURE <i>Charles G. Buttane</i>			C. DATE SIGNED 10-1-09		

COMMENTS FOR OFFICIAL USE ONLY											
C											
15	16										

FACILITY NAME AND PERMIT NUMBER:  
CITY OF RICHFIELD WASTEWATER TREATMENT FACILITY

Form Approved 1/14/99  
OMB Number 2040-0086

FORM  
2A  
NPDES

## NPDES FORM 2A APPLICATION OVERVIEW

### APPLICATION OVERVIEW

Form 2A has been developed in a modular format and consists of a "Basic Application Information" packet and a "Supplemental Application Information" packet. The Basic Application Information packet is divided into two parts. All applicants must complete Parts A and C. Applicants with a design flow greater than or equal to 0.1 mgd must also complete Part B. Some applicants must also complete the Supplemental Application Information packet. The following items explain which parts of Form 2A you must complete.

#### BASIC APPLICATION INFORMATION:

- A. **Basic Application Information for all Applicants.** All applicants must complete questions A.1 through A.8. A treatment works that discharges effluent to surface waters of the United States must also answer questions A.9 through A.12.
- B. **Additional Application Information for Applicants with a Design Flow  $\geq$  0.1 mgd.** All treatment works that have design flows greater than or equal to 0.1 million gallons per day must complete questions B.1 through B.6.
- C. **Certification.** All applicants must complete Part C (Certification).

#### SUPPLEMENTAL APPLICATION INFORMATION:

- D. **Expanded Effluent Testing Data.** A treatment works that discharges effluent to surface waters of the United States and meets one or more of the following criteria must complete Part D (Expanded Effluent Testing Data):
  - 1. Has a design flow rate greater than or equal to 1 mgd,
  - 2. Is required to have a pretreatment program (or has one in place), or
  - 3. Is otherwise required by the permitting authority to provide the information.
- E. **Toxicity Testing Data.** A treatment works that meets one or more of the following criteria must complete Part E (Toxicity Testing Data):
  - 1. Has a design flow rate greater than or equal to 1 mgd,
  - 2. Is required to have a pretreatment program (or has one in place), or
  - 3. Is otherwise required by the permitting authority to submit results of toxicity testing.
- F. **Industrial User Discharges and RCRA/CERCLA Wastes.** A treatment works that accepts process wastewater from any significant industrial users (SIUs) or receives RCRA or CERCLA wastes must complete Part F (Industrial User Discharges and RCRA/CERCLA Wastes). SIUs are defined as:
  - 1. All industrial users subject to Categorical Pretreatment Standards under 40 Code of Federal Regulations (CFR) 403.6 and 40 CFR Chapter I, Subchapter N (see instructions); and
  - 2. Any other industrial user that:
    - a. Discharges an average of 25,000 gallons per day or more of process wastewater to the treatment works (with certain exclusions); or
    - b. Contributes a process wastestream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the treatment plant; or
    - c. Is designated as an SIU by the control authority.
- G. **Combined Sewer Systems.** A treatment works that has a combined sewer system must complete Part G (Combined Sewer Systems).

**ALL APPLICANTS MUST COMPLETE PART C (CERTIFICATION)**

SEP 21 11/10

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### BASIC APPLICATION INFORMATION

#### PART A. BASIC APPLICATION INFORMATION FOR ALL APPLICANTS:

All treatment works must complete questions A.1 through A.8 of this Basic Application Information packet.

##### A.1. Facility Information.

Facility name CITY OF RICHFIELD WASTEWATER TREATMENT FACILITY

Mailing Address P.O. BOX 97  
RICHFIELD, ID 83349

Contact person JACK RILEY

Title MUNICIPAL SERVICES DIRECTOR

Telephone number (208) 487-2755

Facility Address About one quarter mile Southwest of City  
(not P.O. Box)

##### A.2. Applicant Information. If the applicant is different from the above, provide the following:

Applicant name CITY OF RICHFIELD

Mailing Address P.O. BOX 97  
RICHFIELD, ID 83349

Contact person CHARLES BUTTCANE

Title MAYOR

Telephone number (208) 487-2755

Is the applicant the owner or operator (or both) of the treatment works?

owner  operator

Indicate whether correspondence regarding this permit should be directed to the facility or the applicant.

facility  applicant

##### A.3. Existing Environmental Permits. Provide the permit number of any existing environmental permits that have been issued to the treatment works (include state-issued permits).

NPDES ID-002121-1 PSD \_\_\_\_\_

UIC \_\_\_\_\_ Other LA-000048-03 (IDEQ REUSE PERMIT)

RCRA \_\_\_\_\_ Other \_\_\_\_\_

##### A.4. Collection System Information. Provide information on municipalities and areas served by the facility. Provide the name and population of each entity and, if known, provide information on the type of collection system (combined vs. separate) and its ownership (municipal, private, etc.).

Name	Population Served	Type of Collection System	Ownership
<u>CITY OF RICHFIELD</u>	<u>414</u>	<u>SANITARY SEWER</u>	<u>CITY OF RICHFIELD</u>
_____	_____	_____	_____
_____	_____	_____	_____
Total population served <u>414</u>			

**A.5. Indian Country.**

- a. Is the treatment works located in Indian Country?  
 Yes  No
- b. Does the treatment works discharge to a receiving water that is either in Indian Country or that is upstream from (and eventually flows through) Indian Country?  
 Yes  No

**A.6. Flow.** Indicate the design flow rate of the treatment plant (i.e., the wastewater flow rate that the plant was built to handle). Also provide the average daily flow rate and maximum daily flow rate for each of the last three years. Each year's data must be based on a 12-month time period with the 12th month of "this year" occurring no more than three months prior to this application submittal.

- a. Design flow rate 0.06 mgd
- |                                   | <u>Two Years Ago</u> | <u>Last Year</u> | <u>This Year</u> |
|-----------------------------------|----------------------|------------------|------------------|
| b. Annual average daily flow rate | <u>0.04</u>          | <u>0.03</u>      | <u>0.03</u> mgd  |
| c. Maximum daily flow rate        | <u>0.15</u>          | <u>0.11</u>      | <u>0.11</u> mgd  |

**A.7. Collection System.** Indicate the type(s) of collection system(s) used by the treatment plant. Check all that apply. Also estimate the percent contribution (by miles) of each.

- Separate sanitary sewer 100.00 %  
 Combined storm and sanitary sewer \_\_\_\_\_ %

**A.8. Discharges and Other Disposal Methods.**

- a. Does the treatment works discharge effluent to waters of the U.S.?  Yes  No  
 If yes, list how many of each of the following types of discharge points the treatment works uses:
- |  |          |
|--|----------|
| i. Discharges of treated effluent                            | <u>1</u> |
| ii. Discharges of untreated or partially treated effluent    | <u>0</u> |
| iii. Combined sewer overflow points                          | <u>0</u> |
| iv. Constructed emergency overflows (prior to the headworks) | <u>0</u> |
| v. Other _____   | _____    |
- b. Does the treatment works discharge effluent to basins, ponds, or other surface impoundments that do not have outlets for discharge to waters of the U.S.?  Yes  No  
 If yes, provide the following for each surface impoundment:  
 Location: \_\_\_\_\_  
 Annual average daily volume discharged to surface impoundment(s) \_\_\_\_\_ mgd  
 Is discharge \_\_\_\_\_ continuous or \_\_\_\_\_ intermittent?
- c. Does the treatment works land-apply treated wastewater?  Yes  No  
 If yes, provide the following for each land application site:  
 Location: 3.5 acres southwest of lagoons, and 4.0 acres southeast of lagoons; (T 4S, R 19E, S 26)  
 Number of acres: 7.50  
 Annual average daily volume applied to site: 0.03 Mgd (MAY THROUGH OCTOBER EACH YEAR)  
 Is land application \_\_\_\_\_ continuous or  intermittent?
- d. Does the treatment works discharge or transport treated or untreated wastewater to another treatment works?  Yes  No

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If yes, describe the mean(s) by which the wastewater from the treatment works is discharged or transported to the other treatment works (e.g., tank truck, pipe).

If transport is by a party other than the applicant, provide:

Transporter name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Contact person: \_\_\_\_\_

Title: \_\_\_\_\_

Telephone number: \_\_\_\_\_

For each treatment works that receives this discharge, provide the following:

Name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Contact person: \_\_\_\_\_

Title: \_\_\_\_\_

Telephone number: \_\_\_\_\_

If known, provide the NPDES permit number of the treatment works that receives this discharge. \_\_\_\_\_

Provide the average daily flow rate from the treatment works into the receiving facility. \_\_\_\_\_ mgd

e. Does the treatment works discharge or dispose of its wastewater in a manner not included in A.8.a through A.8.d above (e.g., underground percolation, well injection)? \_\_\_\_\_ Yes  No

If yes, provide the following for each disposal method:

Description of method (including location and size of site(s) if applicable):

Annual daily volume disposed of by this method: \_\_\_\_\_

Is disposal through this method \_\_\_\_\_ continuous or \_\_\_\_\_ intermittent?

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**WASTEWATER DISCHARGES:**

If you answered "yes" to question A.8.a, complete questions A.9 through A.12 once for each outfall (including bypass points) through which effluent is discharged. Do not include information on combined sewer overflows in this section. If you answered "no" to question A.8.a, go to Part B, "Additional Application Information for Applicants with a Design Flow Greater than or Equal to 0.1 mgd."

**A.9. Description of Outfall.**

- a. Outfall number 001
- b. Location RICHFIELD 83349  
(City or town, if applicable) (Zip Code)  
LINCOLN ID  
(County) (State)  
43° 02' 38" N 114° 09' 45" W  
(Latitude) (Longitude)
- c. Distance from shore (if applicable) N/A ft.
- d. Depth below surface (if applicable) N/A ft.
- e. Average daily flow rate 0.04 mgd (3-YEAR AVERAGE OF NOVEMBER THROUGH APRIL DATA)
- f. Does this outfall have either an intermittent or a periodic discharge?  
 Yes  No (go to A.9.g.)
- If yes, provide the following information:
- Number of times per year discharge occurs: 1
- Average duration of each discharge: 6 MONTHS
- Average flow per discharge: 0.04 mgd
- Months in which discharge occurs: NOVEMBER-APRIL
- g. Is outfall equipped with a diffuser?  Yes  No

**A.10. Description of Receiving Waters.**

- a. Name of receiving water LITTLE WOOD RIVER
- b. Name of watershed (if known) LITTLE WOOD
- United States Soil Conservation Service 14-digit watershed code (if known): \_\_\_\_\_
- c. Name of State Management/River Basin (if known): LITTLE WOOD
- United States Geological Survey 8-digit hydrologic cataloging unit code (if known): 17040221
- d. Critical low flow of receiving stream (if applicable):  
acute 0.80 cfs chronic 0.80 cfs (1Q10 AND 7Q10 From 2005 NPDES PERMIT FACT SHEET)
- e. Total hardness of receiving stream at critical low flow (if applicable): \_\_\_\_\_ mg/l of CaCO<sub>3</sub>

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**A.11. Description of Treatment.**

a. What levels of treatment are provided? Check all that apply.

Primary       Secondary  
 Advanced       Other. Describe: \_\_\_\_\_

b. Indicate the following removal rates (as applicable):

Design BOD <sub>5</sub> removal or Design CBOD <sub>5</sub> removal	65.00	%
Design SS removal	65.00	%
Design P removal	25.00	%
Design N removal	25.00	%
Other	_____	%

c. What type of disinfection is used for the effluent from this outfall? If disinfection varies by season, please describe.

CHLORINE GAS DISINFECTION

If disinfection is by chlorination, is dechlorination used for this outfall?       Yes       No

d. Does the treatment plant have post aeration?       Yes       No

**A.12. Effluent Testing Information.** All Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three samples and must be no more than four and one-half years apart.

Outfall number: 001

PARAMETER	MAXIMUM DAILY VALUE		AVERAGE DAILY VALUE		
	Value	Units	Value	Units	Number of Samples
pH (Minimum)	6.90	s.u.			
pH (Maximum)	9.00	s.u.			
Flow Rate	0.15	MGD	0.04	MGD	664.00
Temperature (Winter)	57.00	°F	41.00	°F	106.00
Temperature (Summer)	78.00	°F	62.00	°F	106.00

\* For pH please report a minimum and a maximum daily value

POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML / MDL
	Conc.	Units	Conc.	Units	Number of Samples		

**CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS. (3-YEAR AVG OF NOV. THROUGH APR. DATA)**

BIOCHEMICAL OXYGEN DEMAND (Report one)	BOD-5	39.00	mg/L	18.18	mg/L	22.00	SM5210B	-
	CBOD-5							
FECAL COLIFORM		2.00	CFU/100mL	1.00	CFU/100mL	14.00	-	-
TOTAL SUSPENDED SOLIDS (TSS)		86.00	mg/L	41.27	mg/L	22.00	SM2540D	-

**END OF PART A.  
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE**

FACILITY NAME AND PERMIT NUMBER:

CITY OF RICHFIELD WASTEWATER TREATMENT FACILITY

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## BASIC APPLICATION INFORMATION

### PART B. ADDITIONAL APPLICATION INFORMATION FOR APPLICANTS WITH A DESIGN FLOW GREATER THAN OR EQUAL TO 0.1 MGD (100,000 gallons per day).

All applicants with a design flow rate  $\geq 0.1$  mgd must answer questions B.1 through B.6. All others go to Part C (Certification).

**B.1. Inflow and Infiltration.** Estimate the average number of gallons per day that flow into the treatment works from inflow and/or infiltration.

N/A gpd (NO ANALYSIS PERFORMED)

Briefly explain any steps underway or planned to minimize inflow and infiltration.

\_\_\_\_\_

\_\_\_\_\_

**B.2. Topographic Map.** Attach to this application a topographic map of the area extending at least one mile beyond facility property boundaries. This map must show the outline of the facility and the following information. (You may submit more than one map if one map does not show the entire area.)

- The area surrounding the treatment plant, including all unit processes.
- The major pipes or other structures through which wastewater enters the treatment works and the pipes or other structures through which treated wastewater is discharged from the treatment plant. Include outfalls from bypass piping, if applicable.
- Each well where wastewater from the treatment plant is injected underground.
- Wells, springs, other surface water bodies, and drinking water wells that are: 1) within 1/4 mile of the property boundaries of the treatment works, and 2) listed in public record or otherwise known to the applicant.
- Any areas where the sewage sludge produced by the treatment works is stored, treated, or disposed.
- If the treatment works receives waste that is classified as hazardous under the Resource Conservation and Recovery Act (RCRA) by truck, rail, or special pipe, show on the map where that hazardous waste enters the treatment works and where it is treated, stored, and/or disposed.

**B.3. Process Flow Diagram or Schematic.** Provide a diagram showing the processes of the treatment plant, including all bypass piping and all backup power sources or redundancy in the system. Also provide a water balance showing all treatment units, including disinfection (e.g., chlorination and dechlorination). The water balance must show daily average flow rates at influent and discharge points and approximate daily flow rates between treatment units. Include a brief narrative description of the diagram.

#### B.4. Operation/Maintenance Performed by Contractor(s).

Are any operational or maintenance aspects (related to wastewater treatment and effluent quality) of the treatment works the responsibility of a contractor?  Yes  No

If yes, list the name, address, telephone number, and status of each contractor and describe the contractor's responsibilities (attach additional pages if necessary).

Name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Responsibilities of Contractor: \_\_\_\_\_

**B.5. Scheduled Improvements and Schedules of Implementation.** Provide information on any uncompleted implementation schedule or uncompleted plans for improvements that will affect the wastewater treatment, effluent quality, or design capacity of the treatment works. If the treatment works has several different implementation schedules or is planning several improvements, submit separate responses to question B.5 for each. (If none, go to question B.6.)

- List the outfall number (assigned in question A.9) for each outfall that is covered by this implementation schedule.

\_\_\_\_\_

- Indicate whether the planned improvements or implementation schedule are required by local, State, or Federal agencies.

Yes  No

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c If the answer to B.5.b is "Yes," briefly describe, including new maximum daily inflow rate (if applicable).

\_\_\_\_\_

d. Provide dates imposed by any compliance schedule or any actual dates of completion for the implementation steps listed below, as applicable. For improvements planned independently of local, State, or Federal agencies, indicate planned or actual completion dates, as applicable. Indicate dates as accurately as possible.

Implementation Stage	Schedule	Actual Completion
	MM / DD / YYYY	MM / DD / YYYY
- Begin construction	__ / __ / __	__ / __ / __
- End construction	__ / __ / __	__ / __ / __
- Begin discharge	__ / __ / __	__ / __ / __
- Attain operational level	__ / __ / __	__ / __ / __

e. Have appropriate permits/clearances concerning other Federal/State requirements been obtained?  Yes  No

Describe briefly: \_\_\_\_\_  
 \_\_\_\_\_

**B.6. EFFLUENT TESTING DATA (GREATER THAN 0.1 MGD ONLY).**

Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old.

Outfall Number: 001 (N/A, AVG. DAY FLOW < 0.1 MGD)

POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML / MDL
	Conc.	Units	Conc.	Units	Number of Samples		
<b>CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS.</b>							
AMMONIA (as N)							
CHLORINE (TOTAL RESIDUAL, TRC)							
DISSOLVED OXYGEN							
TOTAL KJELDAHL NITROGEN (TKN)							
NITRATE PLUS NITRITE NITROGEN							
OIL and GREASE							
PHOSPHORUS (Total)							
TOTAL DISSOLVED SOLIDS (TDS)							
OTHER							

**END OF PART B.**  
**REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE**

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### BASIC APPLICATION INFORMATION

#### PART C. CERTIFICATION

All applicants must complete the Certification Section. Refer to instructions to determine who is an officer for the purposes of this certification. All applicants must complete all applicable sections of Form 2A, as explained in the Application Overview. Indicate below which parts of Form 2A you have completed and are submitting. By signing this certification statement, applicants confirm that they have reviewed Form 2A and have completed all sections that apply to the facility for which this application is submitted.

Indicate which parts of Form 2A you have completed and are submitting:

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Basic Application Information packet | Supplemental Application Information packet:  |
|  | <input type="checkbox"/> Part D (Expanded Effluent Testing Data)                    |
|  | <input type="checkbox"/> Part E (Toxicity Testing: Biomonitoring Data)              |
|  | <input type="checkbox"/> Part F (Industrial User Discharges and RCRA/CERCLA Wastes) |
|  | <input type="checkbox"/> Part G (Combined Sewer Systems)                            |

#### ALL APPLICANTS MUST COMPLETE THE FOLLOWING CERTIFICATION.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and official title CHARLES BUTTCANE, MAYOR

Signature *Charles J. Buttane*

Telephone number (208) 487-2755

Date signed 10-1-09

Upon request of the permitting authority, you must submit any other information necessary to assess wastewater treatment practices at the treatment works or identify appropriate permitting requirements.

SEND COMPLETED FORMS TO:

FACILITY NAME AND PERMIT NUMBER:  
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**SUPPLEMENTAL APPLICATION INFORMATION**

**PART D. EXPANDED EFFLUENT TESTING DATA**

Refer to the directions on the cover page to determine whether this section applies to the treatment works.

**Effluent Testing: 1.0 mgd and Pretreatment Treatment Works.** If the treatment works has a design flow greater than or equal to 1.0 mgd or it has (or is required to have) a pretreatment program, or is otherwise required by the permitting authority to provide the data, then provide effluent testing data for the following pollutants. Provide the indicated effluent testing information and any other information required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analyses conducted using 40 CFR Part 136 methods. In addition, these data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. Indicate in the blank rows provided below any data you may have on pollutants not specifically listed in this form. At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old.

Outfall number: \_\_\_\_\_ (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		

**METALS (TOTAL RECOVERABLE), CYANIDE, PHENOLS, AND HARDNESS.**

ANTIMONY												
ARSENIC												
BERYLLIUM												
CADMIUM												
CHROMIUM												
COPPER												
LEAD												
MERCURY												
NICKEL												
SELENIUM												
SILVER												
THALLIUM												
ZINC												
CYANIDE												
TOTAL PHENOLIC COMPOUNDS												
HARDNESS (AS CaCO <sub>3</sub> )												

Use this space (or a separate sheet) to provide information on other metals requested by the permit writer.


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Outfall number: \_\_\_\_\_ (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
<b>VOLATILE ORGANIC COMPOUNDS.</b>											
ACROLEIN											
ACRYLONITRILE											
BENZENE											
BROMOFORM											
CARBON TETRACHLORIDE											
CLOROBENZENE											
CHLORODIBROMO-METHANE											
CHLOROETHANE											
2-CHLORO-ETHYLVINYL ETHER											
CHLOROFORM											
DICHLOROBROMO-METHANE											
1,1-DICHLOROETHANE											
1,2-DICHLOROETHANE											
TRANS-1,2-DICHLORO-ETHYLENE											
1,1-DICHLOROETHYLENE											
1,2-DICHLOROPROPANE											
1,3-DICHLORO-PROPYLENE											
ETHYLBENZENE											
METHYL BROMIDE											
METHYL CHLORIDE											
METHYLENE CHLORIDE											
1,1,2,2-TETRACHLORO-ETHANE											
TETRACHLORO-ETHYLENE											
TOLUENE											

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Outfall number: \_\_\_\_\_ (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL	
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples			
1,1,1-TRICHLOROETHANE												
1,1,2-TRICHLOROETHANE												
TRICHLOROETHYLENE												
VINYL CHLORIDE												

Use this space (or a separate sheet) to provide information on other volatile organic compounds requested by the permit writer.

--	--	--	--	--	--	--	--	--	--	--	--	--

**ACID-EXTRACTABLE COMPOUNDS**

P-CHLORO-M-CRESOL												
2-CHLOROPHENOL												
2,4-DICHLOROPHENOL												
2,4-DIMETHYLPHENOL												
4,6-DINITRO-O-CRESOL												
2,4-DINITROPHENOL												
2-NITROPHENOL												
4-NITROPHENOL												
PENTACHLOROPHENOL												
PHENOL												
2,4,6-TRICHLOROPHENOL												

Use this space (or a separate sheet) to provide information on other acid-extractable compounds requested by the permit writer.

--	--	--	--	--	--	--	--	--	--	--	--	--

**BASE-NEUTRAL COMPOUNDS.**

ACENAPHTHENE												
ACENAPHTHYLENE												
ANTHRACENE												
BENZIDINE												
BENZO(A)ANTHRACENE												
BENZO(A)PYRENE												

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Outfall number: \_\_\_\_\_ (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL	
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples			
3,4 BENZO-FLUORANTHENE												
BENZO(GH)PERYLENE												
BENZO(K)FLUORANTHENE												
BIS (2-CHLOROETHOXY) METHANE												
BIS (2-CHLOROETHYL)-ETHER												
BIS (2-CHLOROISO-PROPYL) ETHER												
BIS (2-ETHYLHEXYL) PHTHALATE												
4-BROMOPHENYL PHENYL ETHER												
BUTYL BENZYL PHTHALATE												
2-CHLORONAPHTHALENE												
4-CHLORPHENYL PHENYL ETHER												
CHRYSENE												
DI-N-BUTYL PHTHALATE												
DI-N-OCTYL PHTHALATE												
DIBENZO(A,H) ANTHRACENE												
1,2-DICHLOROBENZENE												
1,3-DICHLOROBENZENE												
1,4-DICHLOROBENZENE												
3,3-DICHLOROBENZIDINE												
DIETHYL PHTHALATE												
DIMETHYL PHTHALATE												
2,4-DINITROTOLUENE												
2,6-DINITROTOLUENE												
1,2-DIPHENYLHYDRAZINE												

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Outfall number: \_\_\_\_\_ (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
FLUORANTHENE											
FLUORENE											
HEXACHLOROBENZENE											
HEXACHLOROBUTADIENE											
HEXACHLOROCYCLO-PENTADIENE											
HEXACHLOROETHANE											
INDENO(1,2,3-CD)PYRENE											
ISOPHORONE											
NAPHTHALENE											
NITROBENZENE											
N-NITROSODI-N-PROPYLAMINE											
N-NITROSODI- METHYLAMINE											
N-NITROSODI-PHENYLAMINE											
PHENANTHRENE											
PYRENE											
1,2,4-TRICHLOROBENZENE											

Use this space (or a separate sheet) to provide information on other base-neutral compounds requested by the permit writer.

--	--	--	--	--	--	--	--	--	--	--	--

Use this space (or a separate sheet) to provide information on other pollutants (e.g., pesticides) requested by the permit writer.

--	--	--	--	--	--	--	--	--	--	--	--

**END OF PART D.**  
**REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE**

CITY OF RICHFIELD WASTEWATER TREATMENT FACILITY

**SUPPLEMENTAL APPLICATION INFORMATION**

**PART E. TOXICITY TESTING DATA**

POTWs meeting one or more of the following criteria must provide the results of whole effluent toxicity tests for acute or chronic toxicity for each of the facility's discharge points: 1) POTWs with a design flow rate greater than or equal to 1.0 mgd; 2) POTWs with a pretreatment program (or those that are required to have one under 40 CFR Part 403); or 3) POTWs required by the permitting authority to submit data for these parameters.

- At a minimum, these results must include quarterly testing for a 12-month period within the past 1 year using multiple species (minimum of two species), or the results from four tests performed at least annually in the four and one-half years prior to the application, provided the results show no appreciable toxicity, and testing for acute and/or chronic toxicity, depending on the range of receiving water dilution. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136.
- In addition, submit the results of any other whole effluent toxicity tests from the past four and one-half years. If a whole effluent toxicity test conducted during the past four and one-half years revealed toxicity, provide any information on the cause of the toxicity or any results of a toxicity reduction evaluation, if one was conducted.
- If you have already submitted any of the information requested in Part E, you need not submit it again. Rather, provide the information requested in question E.4 for previously submitted information. If EPA methods were not used, report the reasons for using alternate methods. If test summaries are available that contain all of the information requested below, they may be submitted in place of Part E.

If no biomonitoring data is required, do not complete Part E. Refer to the Application Overview for directions on which other sections of the form to complete.

**E.1. Required Tests.**

Indicate the number of whole effluent toxicity tests conducted in the past four and one-half years.

\_\_\_\_ chronic      \_\_\_\_ acute

**E.2. Individual Test Data.** Complete the following chart for each whole effluent toxicity test conducted in the last four and one-half years. Allow one column per test (where each species constitutes a test). Copy this page if more than three tests are being reported.

Test number: \_\_\_\_\_ Test number: \_\_\_\_\_ Test number: \_\_\_\_\_

**a. Test information.**

Test species & test method number			
Age at initiation of test			
Outfall number			
Dates sample collected			
Date test started			
Duration			

**b. Give toxicity test methods followed.**

Manual title			
Edition number and year of publication			
Page number(s)			

**c. Give the sample collection method(s) used. For multiple grab samples, indicate the number of grab samples used.**

24-Hour composite			
Grab			

**d. Indicate where the sample was taken in relation to disinfection. (Check all that apply for each)**

Before disinfection			
After disinfection			
After dechlorination			

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Test number: \_\_\_\_\_ Test number: \_\_\_\_\_ Test number: \_\_\_\_\_

e. Describe the point in the treatment process at which the sample was collected.

Sample was collected:

f. For each test, include whether the test was intended to assess chronic toxicity, acute toxicity, or both.

Chronic toxicity

Acute toxicity

g. Provide the type of test performed.

Static

Static-renewal

Flow-through

h. Source of dilution water. If laboratory water, specify type; if receiving water, specify source.

Laboratory water

Receiving water

i. Type of dilution water. If salt water, specify "natural" or type of artificial sea salts or brine used.

Fresh water

Salt water

j. Give the percentage effluent used for all concentrations in the test series.

k. Parameters measured during the test. (State whether parameter meets test method specifications)

pH

Salinity

Temperature

Ammonia

Dissolved oxygen

l. Test Results.

Acute:

Percent survival in 100% effluent	%	%	%
LC <sub>50</sub>			
95% C.I.	%	%	%
Control percent survival	%	%	%
Other (describe)			

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Chronic:

NOEC	%	%	%
IC <sub>25</sub>	%	%	%
Control percent survival	%	%	%
Other (describe)			

m. Quality Control/Quality Assurance.

Is reference toxicant data available?			
Was reference toxicant test within acceptable bounds?			
What date was reference toxicant test run (MM/DD/YYYY)?			
Other (describe)			

**E.3. Toxicity Reduction Evaluation.** Is the treatment works involved in a Toxicity Reduction Evaluation?

\_\_\_ Yes \_\_\_ No      If yes, describe: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**E.4. Summary of Submitted Biomonitoring Test Information.** If you have submitted biomonitoring test information, or information regarding the cause of toxicity, within the past four and one-half years, provide the dates the information was submitted to the permitting authority and a summary of the results.

Date submitted: \_\_\_\_\_ (MM/DD/YYYY)

Summary of results: (see instructions)

\_\_\_\_\_

\_\_\_\_\_

**END OF PART E.**  
**REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE.**

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**SUPPLEMENTAL APPLICATION INFORMATION**

**PART F. INDUSTRIAL USER DISCHARGES AND RCRA/CERCLA WASTES**

All treatment works receiving discharges from significant industrial users or which receive RCRA, CERCLA, or other remedial wastes must complete Part F.

**GENERAL INFORMATION:**

F.1. Pretreatment Program. Does the treatment works have, or is it subject to, an approved pretreatment program?

\_\_\_ Yes \_\_\_ No

F.2. Number of Significant Industrial Users (SIUs) and Categorical Industrial Users (CIUs). Provide the number of each of the following types of industrial users that discharge to the treatment works.

a. Number of non-categorical SIUs. \_\_\_\_\_

b. Number of CIUs. \_\_\_\_\_

**SIGNIFICANT INDUSTRIAL USER INFORMATION:**

Supply the following information for each SIU. If more than one SIU discharges to the treatment works, copy questions F.3 through F.8 and provide the information requested for each SIU.

F.3. Significant Industrial User Information. Provide the name and address of each SIU discharging to the treatment works. Submit additional pages as necessary.

Name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_  
\_\_\_\_\_

F.4. Industrial Processes. Describe all of the industrial processes that affect or contribute to the SIU's discharge.

\_\_\_\_\_

F.5. Principal Product(s) and Raw Material(s). Describe all of the principal processes and raw materials that affect or contribute to the SIU's discharge.

Principal product(s): \_\_\_\_\_

Raw material(s): \_\_\_\_\_

F.6. Flow Rate.

a. Process wastewater flow rate. Indicate the average daily volume of process wastewater discharged into the collection system in gallons per day (gpd) and whether the discharge is continuous or intermittent.

\_\_\_\_\_ gpd ( \_\_\_ continuous or \_\_\_ intermittent)

b. Non-process wastewater flow rate. Indicate the average daily volume of non-process wastewater flow discharged into the collection system in gallons per day (gpd) and whether the discharge is continuous or intermittent.

\_\_\_\_\_ gpd ( \_\_\_ continuous or \_\_\_ intermittent)

F.7. Pretreatment Standards. Indicate whether the SIU is subject to the following:

a. Local limits \_\_\_ Yes \_\_\_ No

b. Categorical pretreatment standards \_\_\_ Yes \_\_\_ No

If subject to categorical pretreatment standards, which category and subcategory?

\_\_\_\_\_

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F.8. Problems at the Treatment Works Attributed to Waste Discharged by the SIU. Has the SIU caused or contributed to any problems (e.g., upsets, interference) at the treatment works in the past three years?

Yes  No If yes, describe each episode.

\_\_\_\_\_  
\_\_\_\_\_

**RCRA HAZARDOUS WASTE RECEIVED BY TRUCK, RAIL, OR DEDICATED PIPELINE:**

F.9. RCRA Waste. Does the treatment works receive or has it in the past three years received RCRA hazardous waste by truck, rail, or dedicated pipe?  Yes  No (go to F.12.)

F.10. Waste Transport. Method by which RCRA waste is received (check all that apply):

Truck  Rail  Dedicated Pipe

F.11. Waste Description. Give EPA hazardous waste number and amount (volume or mass, specify units).

<u>EPA Hazardous Waste Number</u>	<u>Amount</u>	<u>Units</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

**CERCLA (SUPERFUND) WASTEWATER, RCRA REMEDIATION/CORRECTIVE ACTION WASTEWATER, AND OTHER REMEDIAL ACTIVITY WASTEWATER:**

F.12. Remediation Waste. Does the treatment works currently (or has it been notified that it will) receive waste from remedial activities?

Yes (complete F.13 through F.15.)  No

Provide a list of sites and the requested information (F.13 - F.15.) for each current and future site.

F.13. Waste Origin. Describe the site and type of facility at which the CERCLA/RCRA/or other remedial waste originates (or is expected to originate in the next five years).

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

F.14. Pollutants. List the hazardous constituents that are received (or are expected to be received). Include data on volume and concentration, if known. (Attach additional sheets if necessary).

\_\_\_\_\_  
\_\_\_\_\_

F.15. Waste Treatment.

a. Is this waste treated (or will it be treated) prior to entering the treatment works?

Yes  No

If yes, describe the treatment (provide information about the removal efficiency):

\_\_\_\_\_  
\_\_\_\_\_

b. Is the discharge (or will the discharge be) continuous or intermittent?

Continuous  Intermittent If intermittent, describe discharge schedule.

\_\_\_\_\_

**END OF PART F.  
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM  
2A YOU MUST COMPLETE**

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## SUPPLEMENTAL APPLICATION INFORMATION

### PART G. COMBINED SEWER SYSTEMS

If the treatment works has a combined sewer system, complete Part G.

G.1. System Map. Provide a map indicating the following: (may be included with Basic Application Information)

- All CSO discharge points.
- Sensitive use areas potentially affected by CSOs (e.g., beaches, drinking water supplies, shellfish beds, sensitive aquatic ecosystems, and outstanding natural resource waters).
- Waters that support threatened and endangered species potentially affected by CSOs.

G.2. System Diagram. Provide a diagram, either in the map provided in G.1. or on a separate drawing, of the combined sewer collection system that includes the following information:

- Locations of major sewer trunk lines, both combined and separate sanitary.
- Locations of points where separate sanitary sewers feed into the combined sewer system.
- Locations of in-line and off-line storage structures.
- Locations of flow-regulating devices.
- Locations of pump stations.

### CSO OUTFALLS:

Complete questions G.3 through G.6 once for each CSO discharge point.

G.3. Description of Outfall.

- Outfall number \_\_\_\_\_
- Location \_\_\_\_\_  
(City or town, if applicable) (Zip Code)  
\_\_\_\_\_  
(County) (State)  
\_\_\_\_\_  
(Latitude) (Longitude)
- Distance from shore (if applicable) \_\_\_\_\_ ft.
- Depth below surface (if applicable) \_\_\_\_\_ ft.
- Which of the following were monitored during the last year for this CSO?  
 Rainfall       CSO pollutant concentrations       CSO frequency  
 CSO flow volume       Receiving water quality
- How many storm events were monitored during the last year? \_\_\_\_\_

G.4. CSO Events.

- Give the number of CSO events in the last year.  
\_\_\_\_\_ events (\_\_\_ actual or \_\_\_ approx.)
- Give the average duration per CSO event.  
\_\_\_\_\_ hours (\_\_\_ actual or \_\_\_ approx.)

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c. Give the average volume per CSO event.

\_\_\_\_\_ million gallons (\_\_\_\_\_ actual or \_\_\_\_\_ approx.)

d. Give the minimum rainfall that caused a CSO event in the last year.

\_\_\_\_\_ inches of rainfall

**G.5. Description of Receiving Waters.**

a. Name of receiving water: \_\_\_\_\_

b. Name of watershed/river/stream system: \_\_\_\_\_

United States Soil Conservation Service 14-digit watershed code (if known): \_\_\_\_\_

c. Name of State Management/River Basin: \_\_\_\_\_

United States Geological Survey 8-digit hydrologic cataloging unit code (if known): \_\_\_\_\_

**G.6. CSO Operations.**

Describe any known water quality impacts on the receiving water caused by this CSO (e.g., permanent or intermittent beach closings, permanent or intermittent shell fish bed closings, fish kills, fish advisories, other recreational loss, or violation of any applicable State water quality standard).

\_\_\_\_\_  
\_\_\_\_\_

**END OF PART G.**

**REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE.**

**CITY OF RICHFIELD, IDAHO  
NARRATIVE DESCRIPTION OF WASTEWATER  
TREATMENT FACILITIES**

The City of Richfield, ID owns and operates a sanitary sewer collection system and wastewater treatment facilities. The treatment facilities consist of an influent lift station, an influent flow monitoring facility, an aerated lagoon, a facultative polishing lagoon, a chlorine gas disinfection system, an effluent flow monitoring system, and either discharge to the Little Wood River or a wastewater reuse system. A pump and pipeline for supplementary irrigation water for the wastewater reuse site was recently installed. Figure 1 (See attached) shows a topographic vicinity view of Richfield and its wastewater treatment facilities, Figure 2 (See attached) a detailed plan view of the treatment facilities, and Figure 3 (See attached) a flow diagram and hydraulic profile for the treatment facilities. The Richfield wastewater treatment facilities were built in 1974 and the criteria used in the design are summarized in Table 1 (See pg. 3).

**Influent Lift Station**

Raw wastewater from the collection system flows by gravity to a submersible-pump lift station. Influent is discharged into a 4 foot diameter concrete wet-well that is approximately 12 feet deep. The wet-well houses two submersible 2 horsepower (hp) pumps. Operation of the pumps is controlled by float switches in the wet-well. Under normal conditions, operation of the pumps is alternated at the end of each pump cycle. The pumps may also operate in parallel if the wastewater level in the wet-well exceeds the high water level.

**Influent Flow Monitoring**

Wastewater from the influent lift station is pumped through a 4 inch asbestos cement pressure main to a 3 inch Parshall flume. The Parshall flume provides a means of measuring the influent flow during periods when the lift station is discharging flow.

**Treatment Lagoons**

After passing through the Parshall flume, the influent flows by gravity to a 1.0 million gallon bentonite lined aeration lagoon (Lagoon No. 1) that was originally constructed in 1974. The aeration lagoon provides a treatment regime in which a consortium comprised of aerobic and facultative microorganisms biologically treat the raw wastewater. Mechanical aeration is employed to oxygenate the wastewater and provide mixing of the microorganisms and wastewater. Aeration also reduces the potential for the generation and release of offensive odors.

Aeration is supplied to the lagoon through six (6) submerged Helixor aerators and two 5 hp mechanical surface aerators. Air is supplied to the Helixor aerators by one of two rotary blowers with 10 hp motors. The Helixor aerators were installed in 1974 and the surface aerators in 1988.

Following the aerated lagoon, the wastewater flows by gravity to a 0.9 million gallon bentonite lined facultative polishing lagoon (Lagoon No. 2) for additional treatment.

In addition, settleable solids in the wastewater will be removed from suspension within a few hours of entering Lagoon No. 1. Additional solids will be formed by biological reactions in the lagoon and from algae growth. Most of these solids will settle to the bottom of the lagoons and be removed and disposed of, as necessary.

#### **Chlorine Gas Disinfection**

Treated wastewater from the facultative lagoon is disinfected prior to discharge to the reuse site or the Little Wood River. The wastewater flows by gravity to a 6,750 gallon concrete chlorine contact basin where it is dosed with a chlorine gas solution. The wastewater flows through a series of baffles to provide mixing and contact time.

#### **Effluent Flow Monitoring**

A V-notch weir located at the exit of the chlorine contact basin is used to measure the effluent discharge flow rate. The level of water passing over the weir is measured by a submerged level sensor located in the chlorine contact basin. This level is then transmitted to the control building for calculating and recording the flow volume and to control the gas chlorination system.

#### **Dechlorination**

Directly after the V-notch weir, the effluent is dechlorinated using a sodium sulfite tablet system.

#### **Discharge to Little Wood River or Reuse**

Treated effluent from the chlorine contact basin flows by gravity to one of the following locations for final disposal:

- The Little Wood River during the non-growing season (November through April),
- The wastewater reuse site during the growing season (May through October).

#### **Supplementary Irrigation System**

A new supplementary irrigation system was recently installed. The system consists of a 5 hp pump, an impeller type flow meter, and piping from the pump to the wastewater reuse site. Several large rocks downstream of the pump act as a weir to impound the water and maintain sufficient water depth to allow for pumping. Supplementary canal water is pumped from the ditch that runs along the east side of the treatment facilities to the irrigation structure on the north side of the wastewater reuse site. The canal water system will be used as needed to meet the irrigation needs of the crops.

#### **Wastewater Reuse Site**

The existing wastewater reuse site consists of a 3.5 acre piece of land located southwest of the treatment lagoons and a newly added 4.0 acre site to the southeast of the lagoons. Wastewater is applied via a gravity flow gated PVC pipe system.

#### **Discharge to Little Wood River**

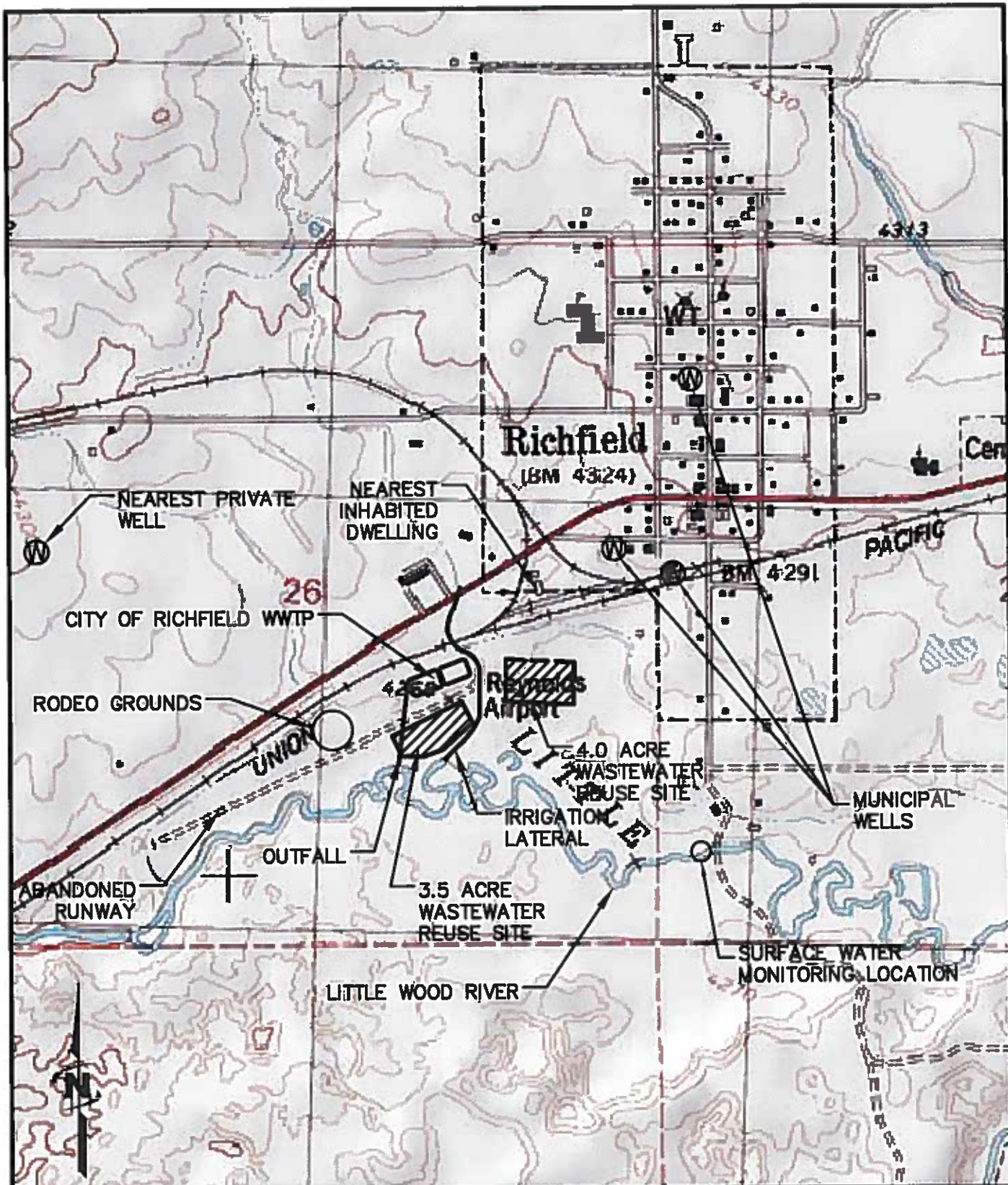
During the non-growing season, wastewater flows by gravity through an 8 in. pipeline to a drop manhole and through a small stubbed pipe into the Little Wood River for final disposal. The main channel of the river is located approximately 100 ft south of the 3.5 acre Reuse Site.

**Table 1. Wastewater Treatment Facility Design Criteria**

Design Parameter	Unit	Value
<b>Flow</b>		
Average Day	Gallons per Day	60,000
Maximum Day	Gallons per Day	177,000
Minimum Day	Gallons per Day	33,500
<b>Average Loadings</b>		
BOD	lbs/d	75
BOD	mg/L	150
BOD	lbs/capita-d	0.15
TSS	mg/L	200
TSS	lbs/d	98
<b>Lagoon Volume</b>		
Lagoon No. 1	Million Gallons	1.0
Lagoon No. 2	Million Gallons	0.9
<b>Lagoon Detention Time<sup>1</sup></b>		
Lagoon No. 1	Days	17
Lagoon No. 2	Days	15
<b>Lagoon Surface Area</b>		
Lagoon No. 1	Acres	0.55
Lagoon No. 2	Acres	0.68
<b>Chlorine Contact Chamber</b>		
Volume	Gallons	6,750
Average Contact Time <sup>1</sup>	Minutes	165
Minimum Contact Time <sup>2</sup>	Minutes	55
<b>Land Application System</b>		
Permitted Acreage	Acres	3.5
Irrigation Method	-	Gravity Flow via Gated PVC Pipe

1 - At average day flow.

2 - At maximum day flow.



**FIGURE 1**  
**CITY OF RICHFIELD**  
**WWTP & REUSE**  
**SITE VICINITY MAP**



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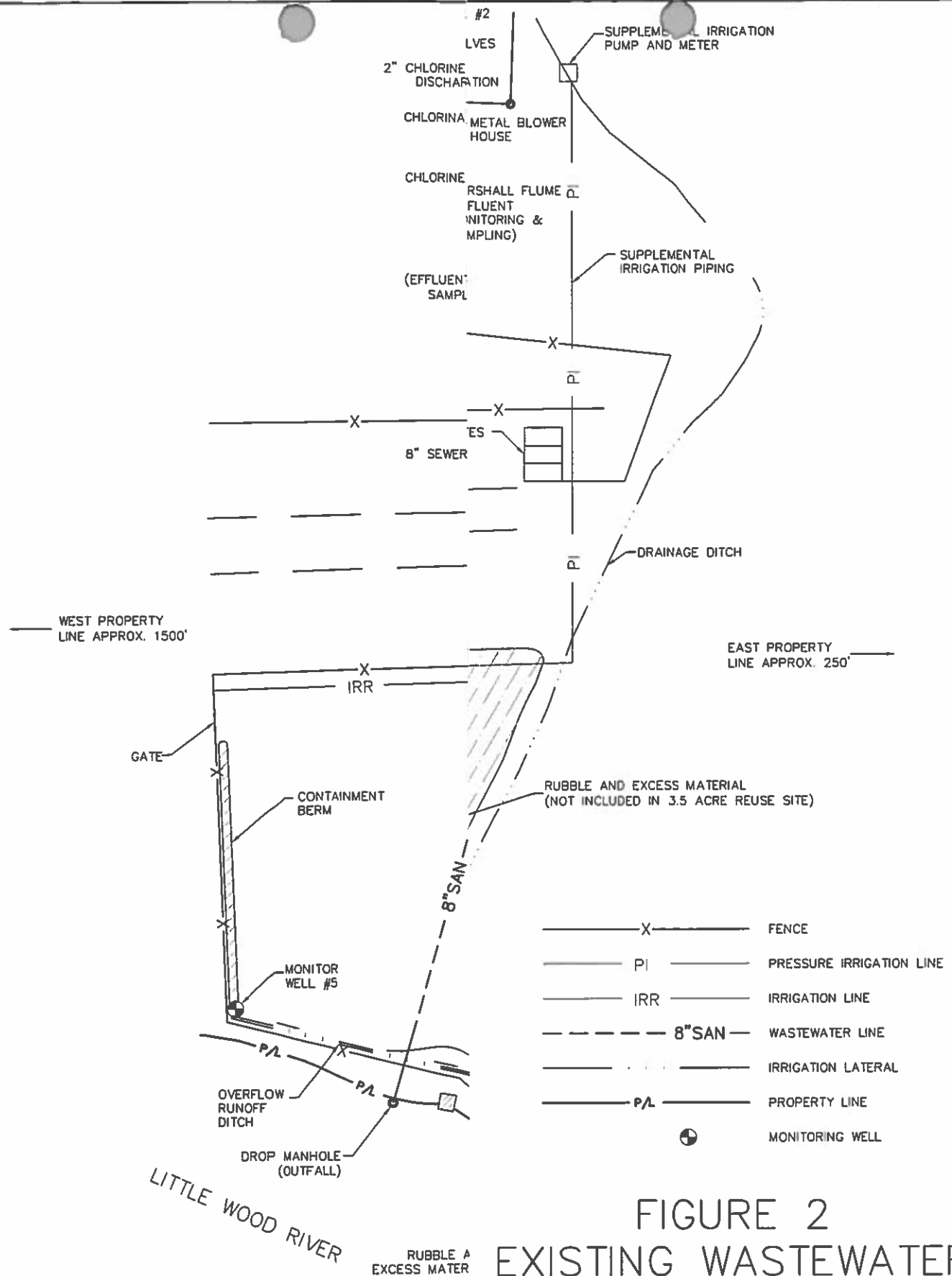
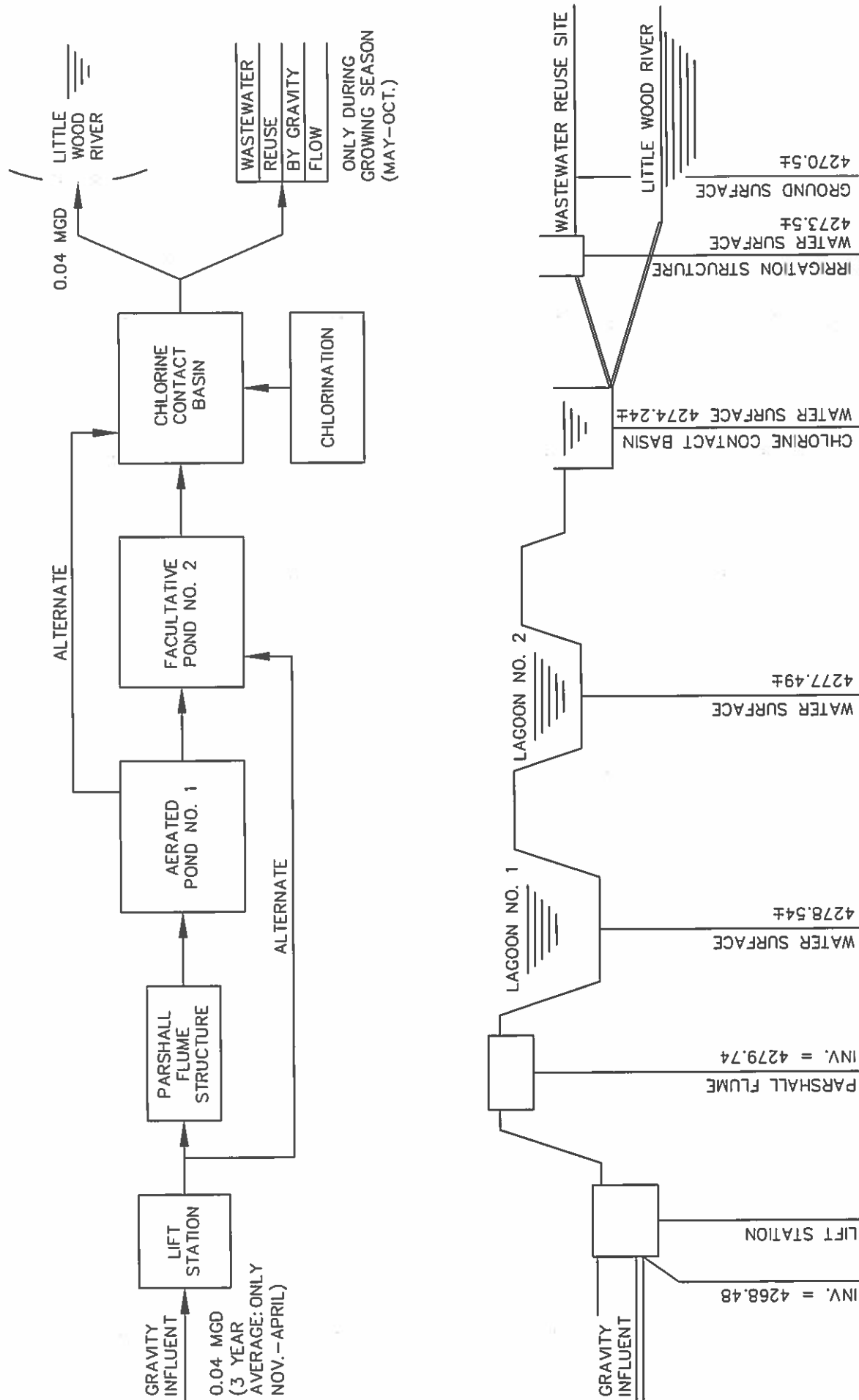


FIGURE 2  
EXISTING WASTEWATER  
TREATMENT FACILITIES





NOTE: ELEVATIONS HAVE BEEN REVISED FROM ORIGINAL DATUM TO NAVD 88



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FIGURE 3  
PROCESS FLOW DIAGRAM

**CITY OF RICHFIELD  
2009 NPDES PERMIT RENEWAL APPLICATION**

**SURFACE WATER MONITORING DATA FOR LITTLE WOOD RIVER**

Year	Period	Date	Temp (°C)	pH	Total Ammonia (mg/L as N)
2005	Nov-Dec <sup>2</sup>				
2006	Jan-Feb <sup>2</sup>				
2006	Mar-Apr <sup>2</sup>				
2006	Nov-Dec	11/8/2006	10	7.4	<0.05
2007	Jan-Feb	-	2	8.1	0.06
2007	Mar-Apr	-	11	8.4	<0.05
2007	Nov-Dec	12/3/2007	3	8.1	<0.05
2008	Jan-Feb	2/19/2008	2	8.0	<0.05
2008	Mar-Apr	4/22/2008	9	8.1	-
2008	Nov-Dec	-	4	7.9	<0.05
2009	Jan-Feb	-	3	8.3	0.29
2009	Mar-Apr	-	7	7.8	0.18
2009	Nov-Dec	-	-	-	-

1. All Samples were taken on the west side of the S. Main St. Bridge, from the north bank
2. No samples were taken before November 2006
3. Dates shown were the only dates recorded by the City