

CITY OF ALBION

Wastewater System
Environmental Information Document

July 2016

IDEQ Planning Grant Number
WWG-344-2011-10



J-U-B ENGINEERS, Inc.

115 Northstar Avenue
Twin Falls, ID 83301
(208) 733-2414
Project Number: 60-11-041

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CITY OF ALBION
WASTEWATER SYSTEM
ENVIRONMENTAL INFORMATION DOCUMENT
J-U-B PROJECT NO. 60-11-041-002
JUNE 2016

IDEQ FACILITY PLANNING GRANT
PROJECT NUMBER – WWG-344-2011-10

Project Applicant: City of Albion, Idaho
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Project Abstract:

The City of Albion owns and operates a municipal wastewater collection and treatment system that serves the area in and around the community. They have concerns regarding the age, condition, and capacity of their wastewater collection system infrastructure, including leaking and deteriorated piping, infiltration and inflow (I&I), undersized lift station pumps that have occasionally resulted in sanitary sewer overflows of the wet-well in the past, and a pressure sewer main that has not been cleaned in approximately 40 years. The wastewater treatment lagoons and reuse system are generally in satisfactory condition and have sufficient capacity for the planning period. Additionally, the treatment system appears to generally comply with the City's Reuse Permit. However, there are several minor improvements needed to optimize the facility performance (e.g., inlet and outlet valve replacement, influent solids screening, etc.).

The City authorized J-U-B ENGINEERS, Inc. (J-U-B) to prepare a Wastewater Facilities Plan to analyze the existing wastewater system and to investigate potential improvement alternatives to address their current and future community needs and regulatory requirements. Several alternatives were evaluated to address the needs of the wastewater system and increase the overall system reliability and sustainability for the future. A phased approach for implementing the recommended wastewater system improvements was selected by the City, including:

Phase 1 Improvements (Highest Priority – already constructed by City)

1. The Phase 1 Improvements included replacing the existing lift station with a duplex submersible lift station, including the associated piping and fittings, a valve vault, a flow meter and vault, electrical panels and controls, and back-up generator. ***The Phase 1 Improvements were***

constructed subsequent to completing the Facilities Plan and were paid for out of City cash reserves. As a result, the Phase 1 Improvements are not considered any further in this report.

Phase 2 Improvements

1. Clean and video inspect the entire gravity sewer collection system to identify the condition of the pipes, prioritize the lines that need replaced and/or rehabilitated, and identify the appropriate method for replacement and/or rehabilitation. Once the video inspection and analysis is complete, an opinion of probable capital costs for implementing specific gravity collection system improvements can be prepared, as needed.
2. Since specific collection system improvements cannot be identified with the available information, it was assumed that approximately 25 percent of the existing gravity sewer mains will be replaced via open trenching.
3. Clean the existing 6-inch pressure main and locate and replace the air-vacuum valves.

Phase 3 Improvements

1. Construct improvements to the existing treatment lagoons to optimize their performance, including:
 - a. Reconstruct the 6-inch force mains and valves at the lagoons.
 - b. Construct a coarse screening structure and new 8-inch gravity mains to the lagoon inlets.
 - c. Replace the 8-inch valves on the lagoon outlet lines.

After consulting with environmental agencies and reviewing the potential environmental impacts and necessary mitigation measures (see **Sections 4 and 5** of this document), it is not anticipated that negative long-term environmental impacts will occur as a result of the proposed Phase 2 and Phase 3 Improvements. The improvements are expected to have positive long-term environmental impacts as a result of the improved groundwater quality and additional capacity for community growth.

Estimated Costs and Monthly User Rates:

An opinion of the overall probable capital costs in 2012 dollars for the recommended Phase 2 and 3 improvements is summarized in **ES Table 1**. It is anticipated that no additional annual O&M costs will result from these improvements.

Since the Phase 1 Improvements have already been constructed, changes to the monthly user rates were estimated for the Phase 2 and 3 Improvements. Since the funding for the projects is unknown, two financing scenarios were considered for comparison of the proposed improvements. The two scenarios were based on the source and amount of funding procured for the project:

1. Scenario 1 – No grant funding would be obtained and the project would be funded entirely through low-interest loans.
2. Scenario 2 – Twenty-five (25) percent of the project will be funded through City reserve funds or grants and the remaining portion would be funded through low interest loans.

There may be other project financing combinations that can be explored by the City. These two scenarios are simply used to illustrate possible changes to the monthly user rates for the Phase 2 and 3 Improvements. **ES Table 2** summarizes the results of the user charge rate analysis.

ES Table 1 — Opinion of Probable Costs for Recommended Improvements

Item	Capital Costs
Phase 2 Improvements	
Clean and Video Inspect Gravity Collection System	\$22,700
Replace Approximately 25% of Gravity Sewer Mains	\$749,700
Clean 6" Pressure Main and Replace Air-Vacuum Valves	<u>\$101,700</u>
Sub-Total Phase 2 Improvements	\$874,100
Phase 3 Improvements	
Construct Lagoon Optimization Improvements	<u>\$190,800</u>
Sub-Total Phase 3 Improvements	\$190,800
Total Project Costs	<u>\$1,513,400</u>

ES Table 2 – Monthly User Rate Analysis for Phase 2 and 3 Improvements

Parameter	Phase 2 Improvements		Phase 3 Improvements	
	Financing Scenario 1	Financing Scenario 2	Financing Scenario 1	Financing Scenario 2
Capital Costs				
Total Capital Costs	\$874,100	\$874,100	\$190,800	\$190,800
Grant/City Cash Amount	\$0	\$218,500	\$0	\$47,700
Loan Amount	\$874,100	\$655,600	\$190,800	\$143,100
Annual Costs				
Existing Annual Sewer Bond Repayment	\$8,050	\$8,050	\$8,050	\$8,050
New Annual Loan Repayment ^A	\$61,503	\$46,129	\$13,425	\$10,069
New Annual O&M Costs	\$0	\$0	\$0	\$0
Loan Reserve ^B	\$6,150	\$4,610	\$1,340	\$1,010
Monthly User Rate				
Total Annual Costs	\$75,703	\$58,789	\$22,815	\$19,129
ERUs	138	138	138	138
Additional Monthly User Rate ^C	\$45.71	\$35.50	\$13.78	\$11.55
Existing Monthly User Rate ^C	\$30.00			
Total New Monthly User Rate ^C	<i>\$65.50 to \$75.71</i>		<i>\$77.05 to \$89.49</i>	

A. Based on a 20 year loan at 3.5%.

B. Based on a reserve of 10% of the annual loan repayment over 10 years.

C. Monthly cost per ERU.

1.0 INTRODUCTION

1.1 PURPOSE AND NEED OF PROJECT

The City of Albion owns and operates a municipal wastewater collection and treatment system that serves the area in and around the community. They have concerns regarding the age, condition, and capacity of their wastewater infrastructure, including:

- The collection system is comprised primarily of aging, asbestos cement pipe installed in 1975. Leaky and/or cracked service connections, pipes, and manholes have resulted in infiltration and inflow (I&I) into the system. As a result, influent flows to the treatment facilities are approximately twice as much as expected for a city the size of Albion. Additionally, leaky pipes may result in the exfiltration of raw wastewater into the surrounding soils and groundwater. This presents a potential public health and safety issue and is non-compliant with regulatory requirements under IDAPA 58.01.11 Groundwater Quality Rule and IDAPA 58.01.16 Wastewater Rules.
- The old pumps in the sewer lift station were undersized for pumping the influent flow to the treatment lagoons, particularly during high I&I flow periods. As a result, the wet-well overflowed on several occasions in the past. Additionally, there was no back-up power or flow monitoring and the lift station is over 35 years old, resulting in many components that are corroded and in need of replacement. The lift station pumps also had occasional problems with ragging and clogging. However, the lift station was recently replaced with a new wet-well, properly sized non-clog pumps, and a back-up generator subsequent to completion of the Facilities Plan. As a result, the lift station is no longer an issue.
- Since the old lift station pumps were undersized to accommodate the influent flows, wastewater would occasionally surcharge up the 8-inch gravity collection system line to the north when water levels rose in the wet-well. As a result, wastewater would occasionally back up into a nearby residence. However, the lift station was recently replaced subsequent to completion of the Facilities Plan with a properly sized wet-well and pumps. As a result, surcharging of this collection system line is no longer an issue.
- The existing pressure main from the lift station to the lagoons has not been cleaned since its construction in 1975. Furthermore, the condition of the air-vacuum valves on the pressure main is unknown. This may result in plugging or restricted flow capacity of the pressure main from solids, debris, and/or air pockets. In turn, this reduces the pumping capacity of the lift station and could potentially result in overflows, creating a public health and safety issues.

The wastewater treatment lagoons and reuse system are generally in satisfactory condition and have sufficient capacity for the planning period. Additionally, the treatment system appears to generally comply with the City's Reuse Permit. However, there are several minor improvements needed to optimize the facility performance (e.g., inlet and outlet valve replacement, influent solids screening, etc.).

The City authorized J-U-B to prepare a Wastewater Facilities Plan to analyze the existing wastewater system and to investigate potential improvement alternatives to address their current and future community needs and regulatory requirements. Several alternatives were developed to address the

needs of the wastewater system and increase the overall system reliability and sustainability for the future. The Facilities Plan summarizes the results of the planning efforts, including the recommended improvements.

This EID includes a summary of the findings from the Facilities Plan and provides additional information relative to how the recommended improvements may affect the environment and identifies potential mitigation measures.

1.2 EXISTING WASTEWATER FACILITIES

1.2.1 Collection System

The City’s collection system was originally constructed in 1975 and consists primarily of 8 inch asbestos cement gravity sewer mains (see **Figure 1-1**). Some of these original mains have been repaired or replaced over time with PVC as they have deteriorated. Additionally, several new PVC sewer mains have been installed to service new customers. Since high groundwater conditions may be prevalent within the City, there are very few basements that need to be serviced by the collection system. As a result, most sewer mains are generally between 4 and 8 feet deep. There are approximately 45 manholes and 6 clean-outs in the existing system. **Table 1-1** provides a summary of the collection system pipe sizes, types and lengths.

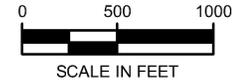
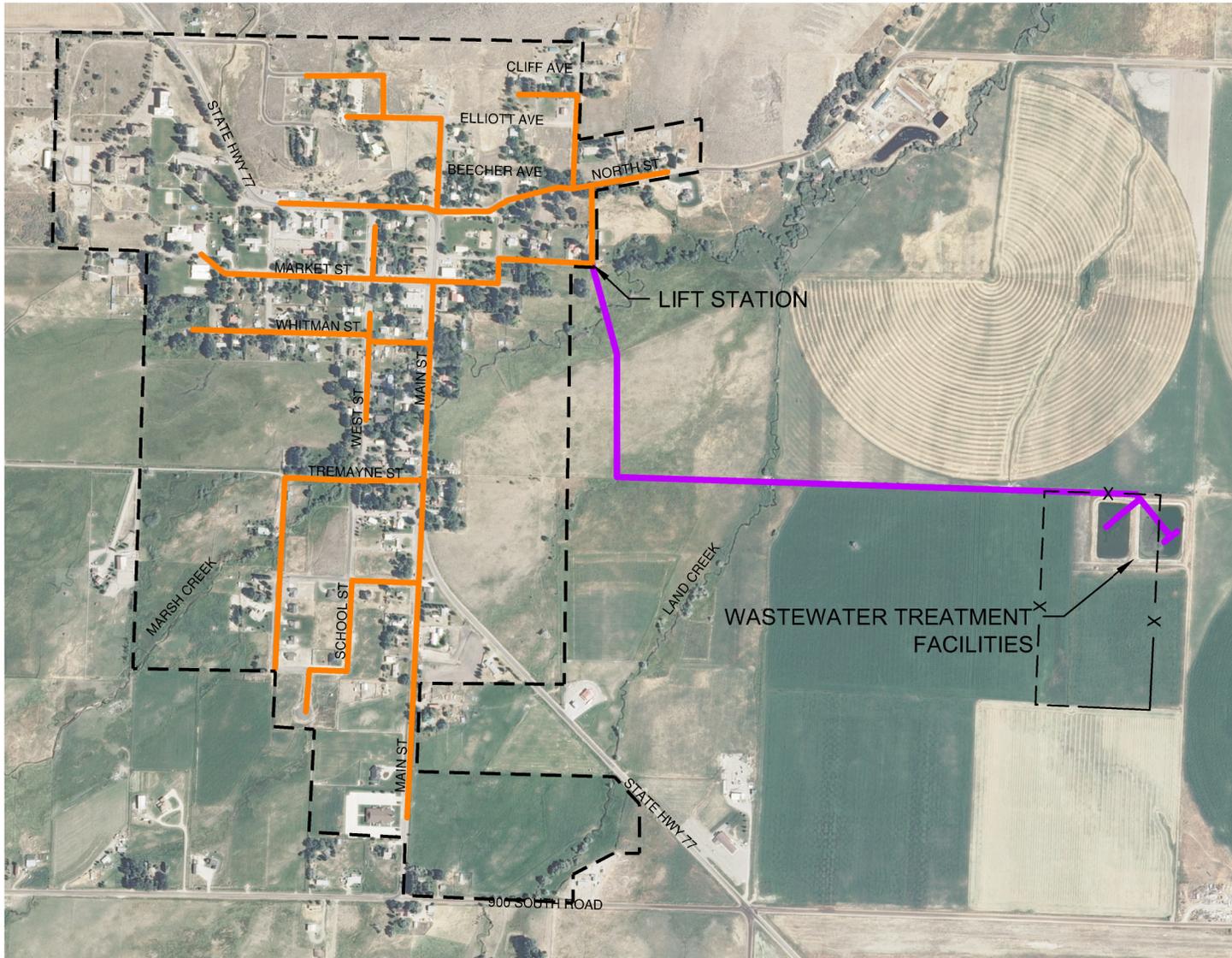
Table 1-1 – Existing Collection System Summary

Pipe Diameter	Pipe Type		Total Length	
	PVC (LF)	Asbestos Cement (LF)	(LF)	(Miles)
8" Gravity Lines	4,300	13,200	17,500	3.3
6" Pressure Mains	4,600	0	4,600	0.87

1.2.2 Lift Station

All of the wastewater from the City is collected and transported to a duplex submersible lift station. The original lift station was constructed in 1975 and was equipped with two 2-horsepower (hp) submersible pumps that were installed in 2001. Each pump had a design capacity of 180 gallons per minute (gpm) at a total dynamic head (TDH) of 20 feet. However, a flow monitoring during July 2011 indicated they were only pumping an average of 67 gpm. This was due to the system having a higher TDH than included in the design. As a result, the lift station wet-well overflowed on several occasions in the past because the pumps were improperly sized to accommodate the incoming flow.

To address this issue, the City recently constructed a new lift station, including a wet-well, duplex submersible non-clog pumps, valve vault, flow meter vault, and back-up generator. Pump cycling is controlled by an ultrasonic transducer in the wet-well, with back-up floats for high and low water alarms. 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. The lift station is connected to the City’s SCADA system for monitoring, alarms, and controls. Information for the new lift station is provided in **Table 1-2**.



LEGEND

- 8" GRAVITY SEWER MAIN
- 6" PRESSURE SEWER
- - - - CITY LIMITS

NOTE:
SEWER MAINS SHOWN IN APPROXIMATE LOCATION

**FIGURE 1-1
EXISTING WASTEWATER
SYSTEM**



J-U-B ENGINEERS, INC.

Table 1-2 – New Lift Station Summary

Item	Value
Pump Manufacturer	Sulzer - ABS
Number of Pumps	2
Pump Type	Submersible, Non-Clog
Pump Horsepower	7.5 hp / each
RPM	1760 rpm
Design Flow and Head per Pump	200 gpm at 46 ft TDH / each
Wet-Well Size	6 ft Diameter and 16 ft Deep
Level Sensor	Ultrasonic Transducer / Back-Up Floats
Flow Meter	Magnetic Flow Meter
Power	3 Phase, 460 Volts, 60 Hz
Lead/Lag Pump	Alternating
Back-Up Power	Permanent Generator (30 KW)
Alarms	Low Water, High Water, Pump Failure, Seal Failure

Wastewater from the lift station is pumped through a 6-inch PVC pressure main for approximately 4,600 feet to the treatment lagoons. The pressure main was installed at a depth of approximately 3 to 5 feet below the ground surface. Air-vacuum valves were installed at high points in the pressure main to vent any air trapped in the line and to provide a vacuum break. However, it is unknown if these valves are still functional.

1.2.3 Wastewater Treatment Lagoons

Raw wastewater from the collection system is pumped to two facultative lagoons that were originally constructed in 1975 (see **Figure 1-2**). The lagoons consist of medium-depth cells (approximately 4 to 6 feet of active depth) operated in series, with Cell #1 being the first in the series under normal conditions. Each of the lagoons is lined with a bentonite clay liner along the bottom and side embankments to minimize seepage. The sides are also lined with 6-inch minimum diameter rip-rap to help control erosion. In addition to providing treatment, the lagoons also serve as storage reservoirs during the non-growing season when effluent cannot be discharged to the reuse site. **Table 1-3** summarizes general information regarding the design parameters of the treatment lagoons.

There is an 8-inch pipe and transfer structure connecting the two lagoons. This allows partially treated wastewater from one lagoon to gravity flow to the other. The transfer structure consists of a 48-inch diameter concrete manhole with a weir gate and valve to regulate effluent flows and control the water level in the lagoons.

1.2.4 Disinfection System

Figure 1-3 shows a layout of the existing disinfection system. Treated effluent from the lagoons flows by gravity to a 5,000-gallon chlorine contact basin for disinfection. The outlet from each lagoon consists of an 8-inch gravity main with a gate valve. The City reports the gate valves are damaged and cannot be closed. As a result, the chlorine contact chamber cannot be isolated. The contact basin is located south of the lagoons and consists of a concrete vault with two redwood baffles. The contact basin provides mixing and disinfection contact time following chlorine injection.

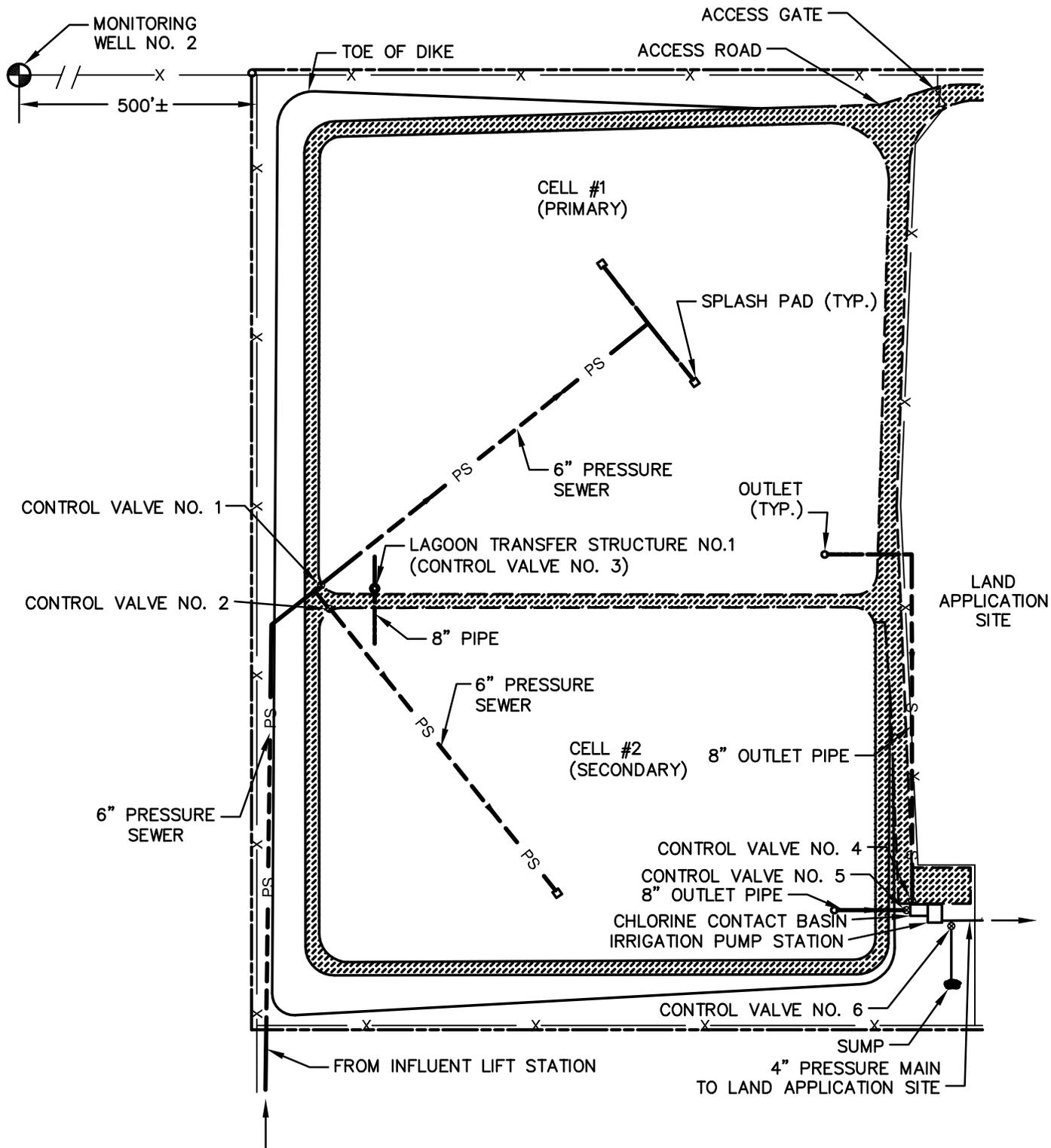


FIGURE 1-2
EXISTING TREATMENT
LAGOONS

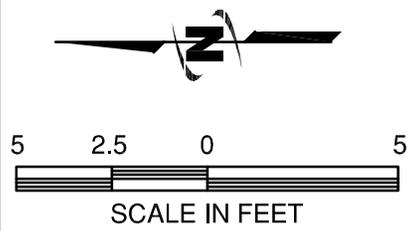
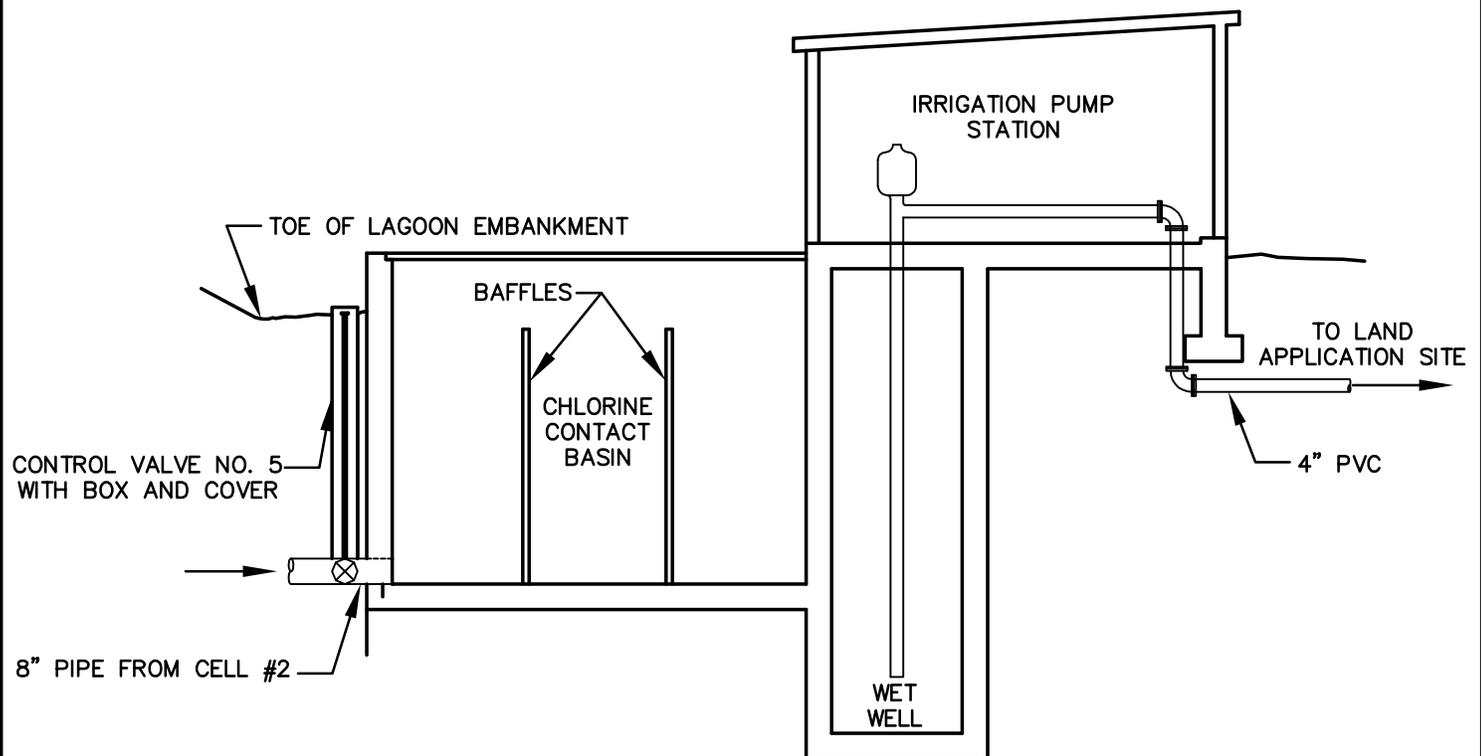
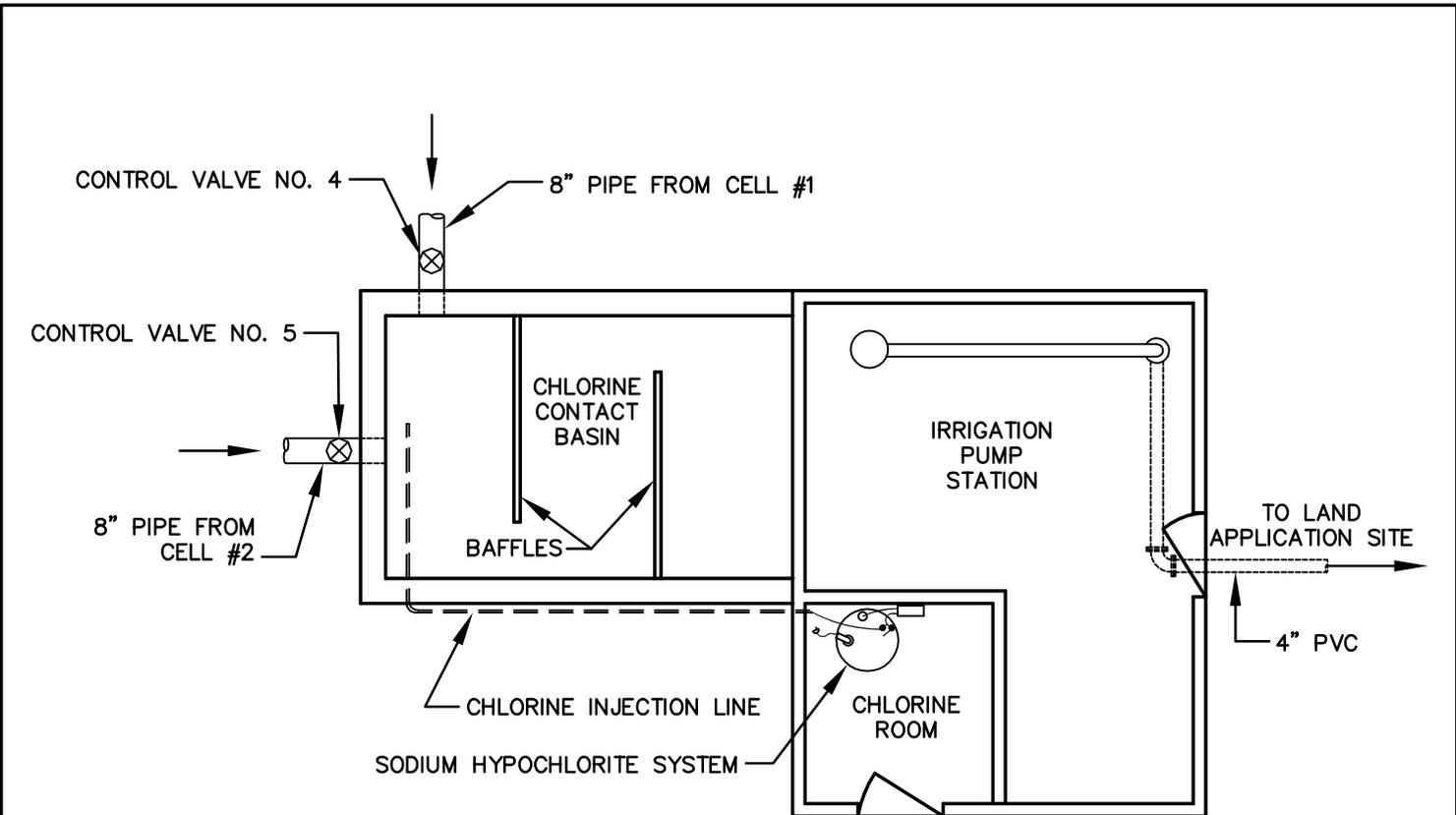


FIGURE 1-3
EXISTING DISINFECTION SYSTEM
AND IRRIGATION PUMP STATION

Table 1-3 – Existing Wastewater Treatment Facilities Design Parameters

Design Parameter	Units	Value ^A
Population Equivalent	People	385
Loadings		
Hydraulic - Average Day	GPD	38,850
BOD ₅	lbs/d	65
Primary Lagoon #1		
BOD ₅ Loading Rate	lbs/acre-d	24
Maximum Surface Area	Acres	2.63
Maximum Volume	Million Gallons	5.1
Active Volume ^B	Million Gallons	3.2
Hydraulic Retention Time ^C	Days	131
Top of Dike Elevation	Feet	4,716
Maximum Water Surface Elevation	Feet	4,714
Average Bottom Elevation	Feet	4,708
Secondary Lagoon #2		
Maximum Surface Area	Acres	2.00
Maximum Volume	Million Gallons	3.9
Active Volume ^B	Million Gallons	2.4
Hydraulic Retention Time ^C	Days	100
Top of Dike Elevation	Feet	4,715
Maximum Water Surface Elevation	Feet	4,713
Average Bottom Elevation	Feet	4,707
Land Application Site		
Permitted Acreage	Acres	13
Irrigation Method	-	Hand Lines

A. Design parameters from 1974 Plans for the Sewerage Project, City of Albion (J-U-B ENGINEERS, Inc.).

B. Assumes that the water level in the lagoon does not drop below 2 feet in depth.

C. Calculated using the maximum volume and design flow rate.

In 2004, an existing chlorine gas system was decommissioned and a new liquid sodium hypochlorite disinfection system was installed. The hypochlorite system is located in a separate, ventilated room in the pump house. Sodium hypochlorite (10 to 12.5 percent) is injected into the effluent at the head of the chlorine contact basin. All effluent is disinfected prior to discharge at the reuse site. **Table 1-4** summarizes general information about the existing sodium hypochlorite disinfection system.

Table 1-4 – Existing Sodium Hypochlorite Disinfection System

Parameter	Value
Disinfection Chemical	10 – 12.5% sodium hypochlorite
Metering Pump Size	1.0 gph at up to 110 psi
Metering Pump Control	Manual
Contact Tank Volume at Max. Water Surface Elevation	5,710 gallons
Contact Tank Volume at Min. Water Surface Elevation ^A	2,640 gallons

A. The City lowers the water level in the lagoons (to approximately 2 feet) in the fall of each year to provide for storage during the non-growing season.

1.2.5 Irrigation Pump Station

Following disinfection, effluent is pumped to the reuse site using a 10-hp vertical turbine pump that was installed in 1975. The City reports that the pump was rebuilt in 2011. The pump and associated equipment are housed within the ventilated, wood-framed pump house (see **Figure 1-3**). The pump was designed to pump 140 gpm at 175 feet of TDH. Effluent is discharged through a 4-inch main to the reuse site. Effluent flow is measured using a propeller meter on the 4-inch discharge main

1.2.6 Wastewater Reuse Site

The City is currently permitted to irrigate the treated effluent on a 13-acre slow-rate land application site (see **Figure 1-4**) under an IDEQ Wastewater Reuse Permit (LA-000077-03) (see **Appendix A**). The site is located immediately south of the existing lagoons. The City currently contracts with a local farmer for irrigation and harvesting of the crop, which is typically alfalfa hay. Effluent is applied to the site using handlines during the irrigation season (e.g., April 1 through October 31). No effluent is irrigated during the non-growing season (e.g., November 1 through March 31) and during harvesting of the crops. Wastewater is stored in the lagoons during the non-growing season. Typically, effluent is pumped continuously for a few weeks and then the pump is turned off for a period of time depending on crop demand. Operation of the pump is controlled manually by the farmer contracted to farm the site.

1.3 FLOWS AND LOADS

1.3.1 Existing Influent Flows

All of the wastewater generated in the City is pumped from the lift station to the lagoons. However, the City currently does not have a method to measure and record flows discharged from the lift station. As a result, influent flows were estimated based on temporary flow monitoring of the lift station in July 2011, typical per-capita wastewater flow rates in the literatures, and typical regional peaking factors observed in similar communities in southern Idaho. **Table 1-5** summarizes the existing influent flow rates. The existing average day per-capita flow rate of 241 gallons per person per day is significantly higher than expected as a result of I&I into the collection system.

Table 1-5 – Existing Influent Flows

Parameter	Unit	Domestic	I&I	Total
Average Day Flow	gpd	26,700 ^A	37,700	64,400 ^B
Maximum Month ^C	gpd	33,900	49,000	82,900
Minimum Month ^C	gpd	20,000	30,000	50,000
Peak Day ^C	gpd	53,400	67,700 ^D	121,100
Peak Hour ^C	gpd	85,700	79,000 ^E	164,700
Average Day Per Capita ^F	gpcd	100	141	241
Total Annual Volume	MGal	-	-	23.5

A. Based on 100 gpcd (typical design value) and 267 residents (2010 US Census).

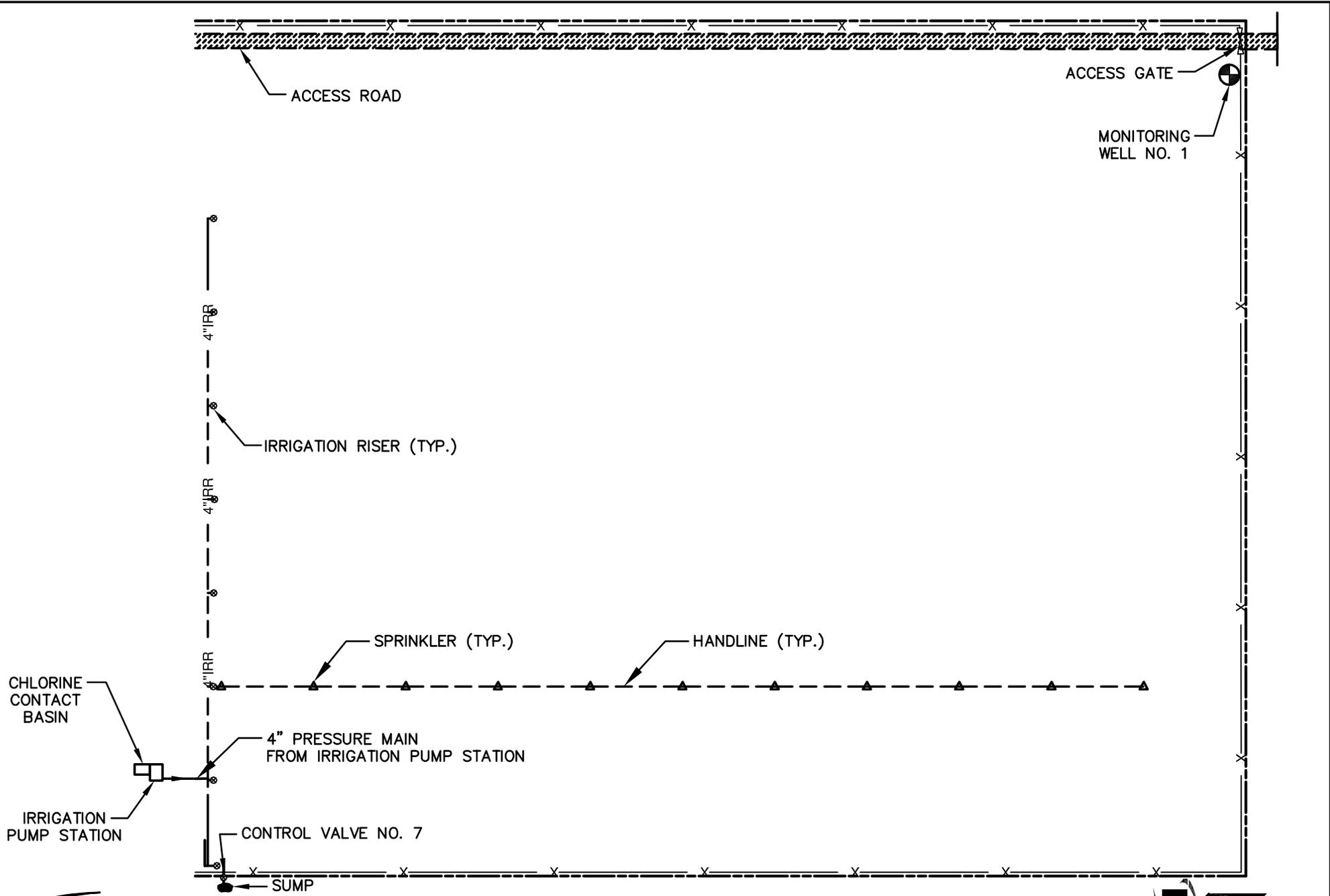
B. Based on the July 2011 flow monitoring data.

C. Based on the typical peaking factors observed for similar communities in southern Idaho and/or literature values.

D. Average day I&I plus 250 gal/acre over 120 acres of inflow (typical design value).

E. Maximum month I&I plus 250 gal/acre over 120 acres of inflow (typical design value).

F. Based on average day flow rate and a population of 267 in 2010 (US Census Data).



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FIGURE 1-4
EXISTING LAND APPLICATION SITE



1.3.2 Existing Influent loads

The City has not historically sampled the influent wastewater to the lagoons. Three samples of the influent were collected at the lift station in October 2011. **Table 1-6** summarizes the results of these three samples and compares them to typical domestic wastewater and I&I observed in southern Idaho.

Table 1-6 – Existing Influent Sampling Data

Date	BOD (mg/L)	TSS (mg/L)	TKN (mg/L)	Nitrate-Nitrogen (mg/L)	Total Phosphorus (mg/L)
10/13/2011	104	111	14.1	<0.3	3.71
10/19/2011	275	601	24.6	<0.3	5.07
10/26/2011	151	136	20.4	<0.3	6.44
Average	177	283	19.7	<0.3	5.07
<i>Typical Domestic Wastewater Strength</i>	<i>150 – 450 (300 avg)</i>	<i>150 – 450 (300 avg)</i>	<i>20 – 60 (50 avg)</i>	<i><0.3</i>	<i>4 – 12 (8 avg)</i>
<i>Typical I&I Wastewater Strength</i>	<i>5</i>	<i>5</i>	<i>1</i>	<i>1.3^A</i>	<i>0.5</i>

A. Nitrate concentration as reported in the Albion potable water system.

Since the historical influent sampling data is limited (e.g., three data points taken within 2 weeks), average constituent concentrations typically observed in domestic wastewater and I&I were assumed for planning purposes. Domestic influent load peaking factors were estimated based on peaking factors observed in similar communities in southern Idaho and literature values. **Table 1-7** summarizes the existing influent loads.

1.3.3 Population Projections

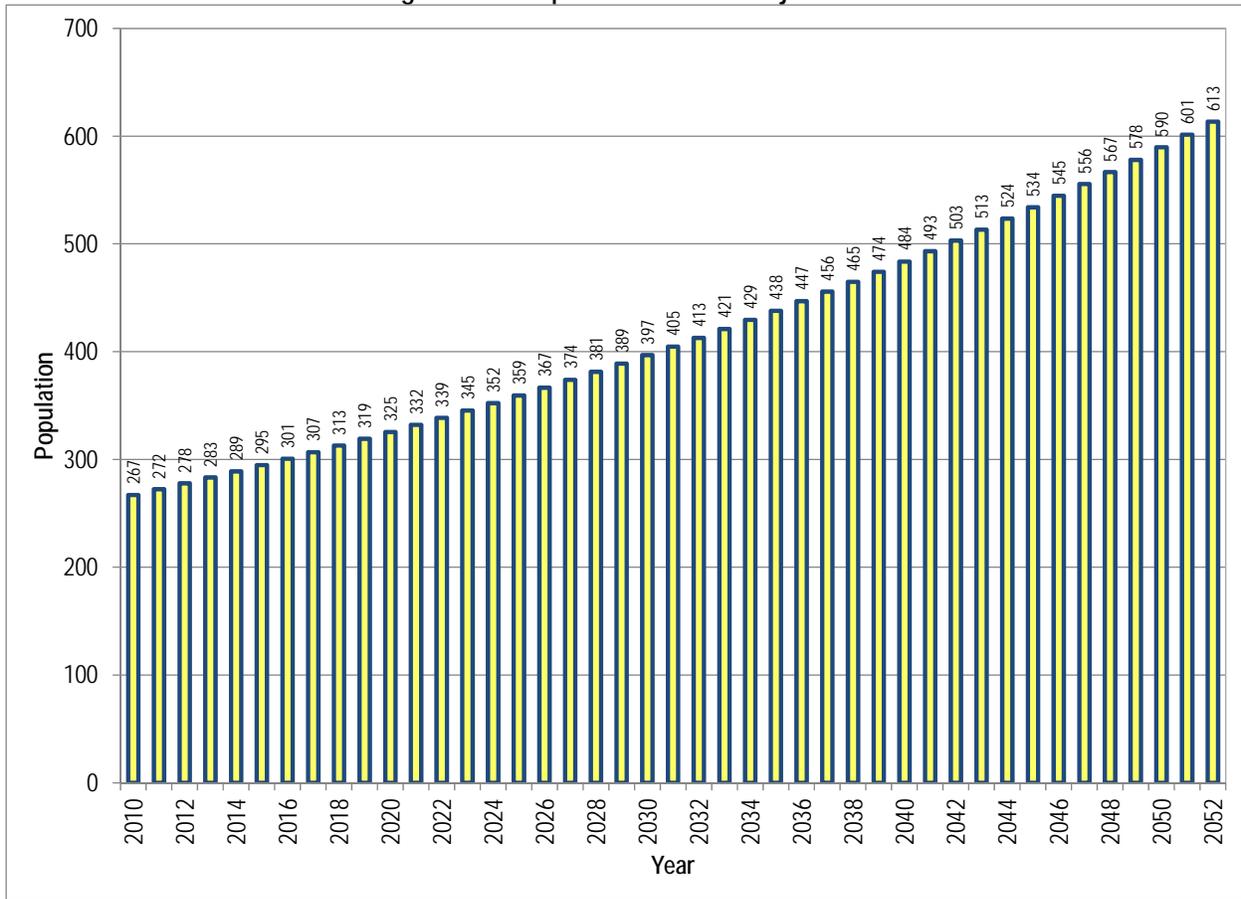
Population projections were developed for the 20-year and 40-year planning periods to provide the basis for forecasting wastewater flows and loads and for evaluating the need for future wastewater system facilities. Historical data from the U.S. Census Bureau indicates that the City’s population has fluctuated over the past 50 years, with an average annual decrease of approximately 0.9 percent from 1990 to 2010. Based on discussions with the City regarding recent land use and development patterns in the area, they selected an annual average population growth rate of 2 percent for planning purposes. **Figure 1-5** summarizes the estimated population growth for the 20-year and 40-year planning periods.

Table 1-7 – Existing Influent Loads

Parameter		Units	Domestic	I&I	Total
BOD ₅	Average Day	mg/L	300	5	<i>127</i>
		ppd	67	2	<i>69</i>
		ppcd ^A	0.25	0.01	<i>0.26</i>
	Maximum Month	ppd	95	2	<i>97</i>
	Peak Day	ppd	178	3	<i>181</i>
	TSS	Average Day	mg/L	300	5
ppd			67	2	<i>69</i>
ppcd ^A			0.25	0.01	<i>0.26</i>
Maximum Month		ppd	97	2	<i>99</i>
Peak Day		ppd	205	3	<i>208</i>
TKN		Average Day	mg/L	50	1
	ppd		11.1	0.3	<i>11.4</i>
	ppcd ^A		0.042	0.001	<i>0.043</i>
	Maximum Month	ppd	15.0	0.4	<i>15.4</i>
	Peak Day	ppd	24.2	0.6	<i>24.8</i>
	Nitrate-N	Average Day	mg/L	0.5	1.3
ppd			0.1	0.4	<i>0.5</i>
ppcd ^A			0.0004	0.0015	<i>0.0019</i>
Maximum Month		ppd	0.1	0.5	<i>0.6</i>
Peak Day		ppd	0.2	0.8	<i>1.0</i>
Total Phosphorus		Average Day	mg/L	8.0	0.5
	ppd		1.8	0.2	<i>2.0</i>
	ppcd ^A		0.0067	0.0007	<i>0.0074</i>
	Maximum Month	ppd	2.4	0.2	<i>2.6</i>
	Peak Day	ppd	3.2	0.3	<i>3.5</i>

A. Based on a population of 267 in 2010 (U.S. Census data).

Figure 1-5 – Population Growth Projections



1.3.4 Projected Influent Flows

Influent flows to the City’s wastewater treatment facilities were projected over the 20-year and 40-year planning periods based on the following assumptions:

- Average day domestic flows were forecast by multiplying the projected population by 100 gpcd.
- Infiltration and inflow values were assumed to remain the same throughout the planning period.
- No new “wet” commercial or industrial dischargers with significant wastewater discharges are anticipated in the planning period.
- Domestic wastewater peaking factors will remain the same.

Table 1-8 summarizes the 20-year and 40-year projected influent flows.

Table 1-8 – Projected Future Influent Flows

Parameter	Unit	20-Year Projections			40-Year Projections		
		Domestic	I&I	Total	Domestic	I&I	Total
Average Day	gpd	41,300	37,700	79,000	61,300	37,700	99,000
Maximum Month	gpd	52,500	49,000	101,500	77,900	49,000	126,900
Minimum Month	gpd	31,000	30,000	61,000	46,000	30,000	76,000
Peak Day	gpd	82,600	67,700 ^A	150,300	122,600	67,700 ^A	190,300
Peak Hour	gpd	132,600	79,000 ^B	211,600	196,800	79,000 ^B	275,800
Average Day Per Capita	gpcd	100 ^C	91 ^C	191 ^C	100 ^D	61 ^D	161 ^D
Total Annual Volume	MGal	-	-	28.8	-	-	36.1

A. Average day I&I plus 250 gal/acre over 120 acres of inflow (typical design value).
 B. Maximum month I&I plus 250 gal/acre over 120 acres of inflow (typical design value).
 C. Based on average day flow rate and a population of 413 in 2032.
 D. Based on average day flow rate and a population of 613 in 2052.

1.3.5 Projected Influent Loads

Influent loads to the City’s wastewater treatment facilities were projected over the 20-year planning period based on the following assumptions:

- Flow-weighted annual average day waste loads were calculated using the existing domestic and I&I concentrations and the projected domestic and I&I average day flows.
- No new “wet” commercial or industrial dischargers with significant wastewater discharges are anticipated in the planning period.
- The domestic wastewater peaking factors would remain the same.
- Infiltration and inflow loads were assumed to remain the same throughout the planning period.

Table 1-9 summarizes the 20-year projected influent loads.

Table 1-9 – Projected Future Influent Loads

Parameter		Units	Domestic	I&I	Total
BOD ₅	Average Day	mg/L	300	5	<i>159</i>
		ppd	103	2	<i>105</i>
		ppcd ^A	0.25	0.01	<i>0.26</i>
	Maximum Month	ppd	145	2	<i>147</i>
	Peak Day	ppd	274	3	<i>277</i>
	TSS	Average Day	mg/L	300	5
ppd			103	2	<i>105</i>
ppcd ^A			0.25	0.01	<i>0.26</i>
Maximum Month		ppd	150	2	<i>152</i>
Peak Day		ppd	316	3	<i>319</i>
TKN		Average Day	mg/L	50	1
	ppd		17.2	0.3	<i>17.5</i>
	ppcd ^A		0.042	0.001	<i>0.043</i>
	Maximum Month	ppd	23.3	0.4	<i>23.7</i>
	Peak Day	ppd	37.5	0.6	<i>38.1</i>
	Nitrate-N	Average Day	mg/L	0.5	1.3
ppd			0.2	0.4	<i>0.6</i>
ppcd ^A			0.0005	0.0010	<i>0.0015</i>
Maximum Month		ppd	0.3	0.5	<i>0.8</i>
Peak Day		ppd	0.4	0.8	<i>1.2</i>
Total Phosphorus		Average Day	mg/L	8.0	0.5
	ppd		2.8	0.2	<i>3.0</i>
	ppcd ^A		0.0068	0.0005	<i>0.0073</i>
	Maximum Month	ppd	3.7	0.2	<i>3.9</i>
	Peak Day	ppd	4.9	0.3	<i>5.2</i>

A. Based on a population of 413 in 2032.

2.0 IMPROVEMENT ALTERNATIVES

2.1 WASTEWATER COLLECTION SYSTEM

2.1.1 Do-Nothing" Option

Under this alternative, no action would be taken to replace and/or rehabilitate the existing gravity or pressure sewer collection mains. The pipes would be left in place and continue to operate under the existing and projected flow conditions. This option is likely acceptable for pipes, manholes, valves, and other appurtenances that are in good condition and are not broken or deteriorated. However, it does not address the issues outlined in Chapter 1.0 for excessive I&I, contamination of groundwater through sewer exfiltration, leaky and/or cracked joints and service lateral connections, potentially deteriorated mains, potentially faulty air-vacuum valves on the pressure sewer, reduced capacity due to I&I in the gravity mains, and solids deposition in the pressure mains. This alternative also does not correct for pipes with potential grade, depth, or alignment problems.

2.1.2 Gravity Sewer Mains

Excessive I&I is the primary concern with the gravity collection system. A reduction in I&I will extend the useful life of the treatment lagoons and reuse site, increase the available hydraulic capacity in the collection system, and reduce operation and maintenance requirements. However, the City has only cleaned and video inspected a small portion of the gravity sewer mains. As a result, there is generally insufficient information available to identify specific improvements to reduce I&I, correct deteriorated piping, and/or remedy grade, depth or alignment issues. As such, it is recommended the City clean and video inspect the entire gravity collection system, allowing them to:

- Identify the condition of the gravity sewer mains and areas of high I&I.
- Prioritize the mains that need replaced and/or rehabilitated so that the most problematic areas (i.e., "highest priority") can be addressed as funding becomes available.
- Identify the appropriate method for replacing and/or rehabilitating the mains (e.g., open trench, cured-in-place-pipe [CIPP], pipe bursting, etc.).
- Provide a systematic approach to replacing and/or rehabilitating the gravity sewer mains.

An opinion of the probable cost in 2012 dollars to clean and video inspect the entire gravity collection system is shown in **Table 2-1**. Costs are included for engineering support to review and prioritize the lines for repair and to identify the recommended method for replacement and/or rehabilitation. The analysis should also compare (1) reducing I&I through collection system improvements to (2) increasing the capacity of the lift station and wastewater treatment facilities to handle I&I. At some point, the reduction in I&I may not justify the costs for collection system repairs; funding may be better spent on increasing the capacity of the lift station and treatment facilities to accommodate some I&I.

Table 2-1 – Opinion of Probable Costs to Clean and Video Inspect Gravity Sewer Mains

Item	Capital Costs
Clean and Video Inspect Gravity Collection System (17,500 LF)	\$14,000
Sub-Total Video Inspection	\$14,000
Contractor Mob/Demob, Bonding, Insurance, Admin (10%)	\$1,400
Contingencies (25%)	\$3,500
Total Video Inspection	\$18,900
Engineering & Construction Management (20%)	\$3,800
Total Project Capital Costs	\$22,700

Since specific gravity collection system improvements cannot be identified with the available information, it was assumed that approximately 25 percent of the existing gravity sewer mains would need to be replaced via open trench. This is simply an assumption that may allow the City to address some of the “Highest Priority” improvements to reduce I&I. Once the video inspection and analysis is complete, a more detailed list of improvements and an opinion of probable capital costs for implementing specific gravity collection system improvements can be prepared. An opinion of the probable cost in 2012 dollars to replace approximately 25 percent of the existing gravity collection system mains is shown in **Table 2-2**.

Table 2-2 – Opinion of Probable Costs to Replace Approximately 25% of Gravity Sewer Mains

Item	Capital Costs
Open Trench Replacement of Approximately 25% of Gravity Sewer Mains (4,400 LF)	\$388,700
Sub-Total Construction Costs	\$388,700
Contractor Mob/Demob, Bonding, Insurance, Admin (10%)	\$38,900
Dewatering (10%)	\$38,900
Contingencies (25%)	\$97,200
Total Construction Costs	\$563,700
Engineering & Construction Management (20%)	\$112,700
Administration & Funding (5%)	\$28,200
Inflation (4% for 2 Years)	\$45,100
Total Project Capital Costs	\$749,700

As previously discussed, since the old lift station pumps were undersized to accommodate the influent flows, wastewater would occasionally surge up the 8-inch gravity collection system line to the north when water levels rose in the wet-well. Wastewater would occasionally back up into a nearby residence. However, the lift station was replaced subsequent to completion of the Facilities Plan with a properly sized wet-well and pumps. As a result, surcharging of this collection system line is no longer an issue.

Annual operation and maintenance (O&M) costs associated with the gravity sewer lines are not expected to change considerably. It is recommended that the City consider adding annual budget items for capital improvements (\$10,000 to \$20,000) and routine cleaning and video inspection of sewer lines (\$2,000 to \$3,000). The City should also continue to raise manholes and use solid lids in locations where inflow is a concern.

2.1.3 Pressure Sewer Mains

It is recommended that the City clean the existing 6-inch pressure main and locate, inspect, exercise, and replace, if necessary, the air-vacuum valves. Cleaning can be achieved using a pipe “pig” and/or by

installing pressure cleanouts on the line for hydraulic jetting. A wye connection may need to be installed downstream of the lift station to facilitate cleaning of the force main. For planning purposes, it is assumed that all three of the air-vacuum valves will need to be replaced. An opinion of the probable capital costs in 2012 dollars to clean the pressure sewer main and replace the air-vacuum valves is shown in **Table 2-3**.

Table 2-3 – Opinion of Probable Costs to Clean Pressure Main and Replace Air Valves

Item	Capital Costs
Clean Pressure Sewer Main (4,600 LF)	\$12,200
Replace Air-Vacuum Valves/Vaults (3 EA)	\$33,000
Bypass Pumping	\$2,500
Sub-Total Construction Costs	\$47,700
Contractor Mob/Demob, Bonding, Insurance, Admin (10%)	\$5,300
Dewatering (10%)	\$5,300
Contingencies (25%)	<u>\$13,200</u>
Total Construction Costs	\$71,500
Engineering & Construction Management (20%)	\$15,300
Administration & Funding (5%)	\$3,800
Inflation (4% for 2 Years)	<u>\$6,100</u>
Total Project Capital Costs	\$96,700

2.2 LIFT STATION

2.2.1 “Do-Nothing” Option

This option consists of the City taking no action to improve the lift station. Since the City recently installed a new lift station that provides capacity for their 20-year planning horizon and that meets current regulations, it is anticipated that no improvements are necessary for the lift station.

2.3 WASTEWATER TREATMENT FACILITIES

2.3.1 “Do Nothing” Option

In general, it appears the existing wastewater treatment lagoons and land application site are adequate for the 20-year planning period and generally comply with the existing Reuse Permit. There are some relatively minor improvements that could be constructed at the City’s discretion to optimize performance of the system (refer to the following section). Additionally, continued reduction in I&I to the collection system will provide additional hydraulic capacity for population growth and extend the useful life of the treatment facilities.

2.3.2 Optimize Existing Treatment Facilities

Under this option, the City would upgrade the existing treatment lagoons and land application site and continue to use them for wastewater treatment and effluent disposal. As previously noted, the existing treatment facilities appear to be in relatively good condition and have sufficient capacity for the planning period. However, there are a few improvements the City would like to consider under this alternative to optimize the performance of the treatment facilities. The recommended upgrades have been split into “near-term” and “long-term” improvements:

“Near-Term” Improvements

- The gate valves on the 6-inch pressure main delivering the influent to the lagoons are buried approximately 8- to 10-feet below the ground surface within the lagoon embankments. Because of their bury depth, the City reports it is difficult to operate the valves and to know which position they are in. The City would like to reconstruct the pressure mains and isolation valves so they are closer to the surface of the lagoon embankments.
- In conjunction with reconstructing the influent pressure mains, the City would like to consider a headworks structure to provide coarse screening of the influent. Screening will minimize the amount of debris and solids entering and filling the lagoons, extending the time before biosolids removal is required. The screening structure would likely consist of an open concrete box with two channels: a primary channel with a manually cleaned coarse bar rack and a bypass channel (see **Figure 2-1**). Influent would normally pass through the coarse bar rack prior to gravity flowing to the lagoons. Additional gravity piping from the screening structure to the lagoon inlets will also need to be constructed. Slide gates would control the direction of flow to the lagoons. If the bar rack happens to clog, an overflow weir would direct influent to the bypass channel. Influent samples could also be collected at the screening structure rather than at the lift station.

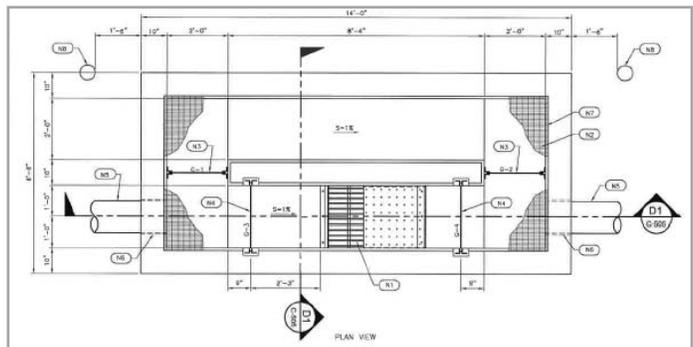


Figure 2-1 – Example Coarse Screening Structure

- The City reports the 8-inch gate valves on the lagoon outlet lines are damaged and cannot be closed. It is recommended these valves be replaced.

“Long-Term” Improvements

- As discussed in the Facilities Plan, it appears the projected organic loading rate to the lagoons may exceed the recommended design value during the planning period. It is recommended the City continue to monitor the treatment performance of the lagoons

and for obnoxious odors. If reduced treatment performance or odors become a problem in the future, the City may need to consider installing two 5-horsepower mechanical surface aerators in Cell #1 (see **Figure 2-2**). This analysis is based on limited influent flow and sampling data. A more accurate determination of when to install aerators can be made if influent flow monitoring and sampling is implemented.



Figure 2-2 – Example Lagoon Aerators

An opinion of the probable capital costs in 2012 dollars for the “Near-Term” improvements is shown in **Table 2-4**. Costs for the “Long-Term” improvements were not developed as part of the Facilities Plan since it is uncertain when or if they will need to be constructed.

Operation and maintenance costs associated with the treatment facilities are anticipated to remain the same as existing values for the “Near-Term” improvements. If surface aerators are installed in the lagoons at some point in the future, additional power costs will be incurred.

Table 2-4 – Opinion of Probable Costs to Optimize Existing Treatment Facilities

Item	Capital Costs
Reconstruct 6" Inlet Force Mains and Valves	\$16,400
Coarse Screening Structure and 8" Gravity Inlets to Lagoons	\$84,500
Replace 8" Outlet Valves	\$5,300
Sub-Total Construction Costs	\$106,200
Contractor Mob/Demob, Bonding, Insurance, Admin (10%)	\$10,600
Contingencies (25%)	<u>\$26,600</u>
Total Construction Costs	\$143,400
Engineering & Construction Management (20%)	\$28,700
Administration & Funding (5%)	\$7,200
Inflation (4% for 2 Years)	<u>\$11,500</u>
Total Project Capital Costs	<u>\$190,800</u>

2.3.3 Mechanical Treatment Facility

Under this option, wastewater from the City would be treated with a mechanical treatment plant, such as conventional activated sludge, oxidation ditch, or membrane bioreactor. A mechanical plant will provide a higher degree of wastewater treatment than a lagoon system. Treated effluent from the plant could continue to be discharged to the land application site or through an alternative disposal method, such as surface water discharge or other reuse systems (e.g., rapid infiltration basins). Continued discharge to the land application site or other reuse systems would require winter storage in the existing or new lagoons. Discharge to the land application site or other reuse system would continue to require a Reuse Permit from IDEQ, while discharge to surface water would require a National Pollutant Discharge Elimination System (NPDES) Permit from EPA.

The capital costs to construct a mechanical treatment plant and to potentially reconfigure the existing lagoons for winter storage would be significantly higher than optimizing the existing lagoons and land

application site. The O&M requirements and costs would also be significantly greater and more complex for a mechanical plant than for a lagoon treatment system. Additionally, the permitting requirements would likely be more challenging for a mechanical treatment plant, particularly for surface water discharge under a NPDES Permit. As such, it appears that a mechanical treatment plant is not a reasonable and economical approach for meeting the wastewater needs of the community. Therefore, it was not considered any further in the Facilities Plan.

2.3.4 Regional Treatment Facility

Wastewater from the City of Albion could potentially be combined with wastewater from one or more surrounding communities at a centralized location for regional treatment. Communities located near Albion that may potentially be involved in regional treatment include the City of Declo (8 miles to the north) and City of Malta (17 miles to the southeast). Each of these communities has existing wastewater treatment facilities.

Wastewater from one or more of the communities could be pumped to one of the existing treatment plants or to a new regional treatment plant. This would require pump stations and transmission mains from the participating communities to the regional treatment plant, resulting in extensive capital costs and increased O&M requirements.

The existing treatment facilities within these communities are generally adequate to handle their own loads, but would likely require extensive upgrades to accommodate flows and loads from other communities. It is more economical for the City of Albion to continue upgrading and operating their own treatment facilities rather than to construct transmission infrastructure and upgrades at a neighboring treatment plant or to construct a new regional treatment plant.

There may also be administrative difficulties associated with a regional plant, such as retention of ownership in the effluent, equitable sharing of costs, and the desired quality of the effluent. Due to concerns regarding participation by neighboring communities and cost-effectiveness, this alternative was not considered any further in the Facilities Plan.

3.0 SELECTED ALTERNATIVE

3.1 SELECTED WASTEWATER SYSTEM IMPROVEMENTS

Based on information from the IDEQ approved Facilities Plan, the City selected a phased approach for implementation of the wastewater system improvements. Highest priority was given to those upgrades necessary to meet regulatory requirements and to protect the health, safety, and welfare of the public and environment. The selected improvements will also provide the greatest benefit to the City in a cost-effective manner based on the needs of the community. A phased approach will likely minimize the initial capital costs and distribute the costs reasonably over time. Phasing of the improvements will also allow the City to implement them on an “as-needed” basis to meet future growth or as driven by regulatory requirements. Following is the phasing plan for the wastewater system improvements identified in this report:

Phase 1 Improvements (Highest Priority – already constructed by City)

1. The Phase 1 Improvements included replacing the existing lift station with a duplex submersible lift station, including the associated piping and fittings, a valve vault, a flow meter and vault, electrical panels and controls, and back-up generator. ***The Phase 1 Improvements were constructed subsequent to completing the Facilities Plan and were paid for out of City cash reserves. As a result, the Phase 1 Improvement are not considered any further in this report.***

Phase 2 Improvements

1. Clean and video inspect the entire gravity sewer collection system to identify the condition of the pipes, prioritize the lines that need replaced and/or rehabilitated, and identify the appropriate method for replacement and/or rehabilitation. Once the video inspection and analysis is complete, an opinion of probable capital costs for implementing specific gravity collection system improvements can be prepared, as needed.
2. Since specific collection system improvements cannot be identified with the available information, it was assumed that approximately 25 percent of the existing gravity sewer mains will be replaced via open trenching.
3. Clean the existing 6-inch pressure main and locate and replace the air-vacuum valves.

Phase 3 Improvements

1. Construct the “near-term” improvements to the existing treatment lagoons to optimize their performance, including:
 - a. Reconstruct the 6-inch force mains and valves at the lagoons.
 - b. Construct a coarse screening structure and new 8-inch gravity mains to the lagoon inlets.
 - c. Replace the 8-inch valves on the lagoon outlet lines.

3.2 COSTS AND USER RATES

An opinion of the overall probable capital costs in 2012 dollars for the recommended Phase 2 and 3 improvements is summarized in **Table 3-1**. It is anticipated that no additional annual O&M costs will result from these improvements.

Table 3-1 – Opinion of Probable Costs for Recommended Improvements

Item	Capital Costs
<i>Phase 2 Improvements</i>	
Clean and Video Inspect Gravity Collection System	\$22,700
Replace Approximately 25% of Gravity Sewer Mains	\$749,700
Clean 6" Pressure Main and Replace Air-Vacuum Valves	\$101,700
Sub-Total Phase 2 Improvements	\$874,100
<i>Phase 3 Improvements</i>	
Construct Lagoon Optimization Improvements	\$190,800
Sub-Total Phase 3 Improvements	\$190,800
Total Project Costs	\$1,064,900

Since the Phase 1 Improvements have already been constructed, changes to the monthly user rates were estimated for the Phase 2 and 3 Improvements. Since the funding for the projects is unknown, two financing scenarios were considered for comparison of the proposed improvements. The two scenarios were based on the source and amount of funding procured for the project:

1. Scenario 1 – No grant funding would be obtained and the project would be funded entirely through low-interest loans.
2. Scenario 2 – Twenty-five (25) percent of the project will be funded through City reserve funds or grants and the remaining portion would be funded through low interest loans.

There may be other project financing combinations that can be explored by the City. These two scenarios are simply used to illustrate possible changes to the monthly user rates for the Phase 2 and 3 Improvements. **Table 3-2** summarizes the results of the user charge rate analysis for the two financing alternatives.

Table 3-2 – Monthly User Rate Analysis for Phase 2 and 3 Improvements

Parameter	Phase 2 Improvements		Phase 3 Improvements	
	Financing Scenario 1	Financing Scenario 2	Financing Scenario 1	Financing Scenario 2
Capital Costs				
Total Capital Costs	\$874,100	\$874,100	\$190,800	\$190,800
Grant/City Cash Amount	\$0	\$218,500	\$0	\$47,700
Loan Amount	\$874,100	\$655,600	\$190,800	\$143,100
Annual Costs				
Existing Annual Sewer Bond Repayment	\$8,050	\$8,050	\$8,050	\$8,050
New Annual Loan Repayment ^A	\$61,503	\$46,129	\$13,425	\$10,069
New Annual O&M Costs	\$0	\$0	\$0	\$0
Loan Reserve ^B	\$6,150	\$4,610	\$1,340	\$1,010
Monthly User Rate				
Total Annual Costs	\$75,703	\$58,789	\$22,815	\$19,129
ERUs	138	138	138	138
Additional Monthly User Rate ^C	\$45.71	\$35.50	\$13.78	\$11.55
Existing Monthly User Rate ^C	\$30.00			
Total New Monthly User Rate ^C	\$65.50 to \$75.71		\$77.05 to \$89.49	

A. Based on a 20 year loan at 3.5%.

B. Based on a reserve of 10% of the annual loan repayment over 10 years.

C. Monthly cost per ERU.

4.0 AFFECTED ENVIRONMENT AND ANTICIPATED IMPACTS

4.1 PLANNING AREA

4.1.1 Proposed Project Planning Area and Area of Potential Effect

The City of Albion is located in south central Idaho in the north central section of Cassia County. The City falls within Section 6 of Township 12 South, Range 25 East, B.M. It is situated approximately 8 miles southeast of the City of Declo and approximately 17 miles northwest of the City of Malta. The City is located along State Highway 77 in a predominantly agricultural region.

Figure 4-1 shows the proposed project planning area (PPPA) and area of potential effect (APE). The Phase 2 Improvements will primarily take place within existing street right-of-ways and roadways, while the Phase 3 Improvements will take place at the existing wastewater treatment lagoons. These areas will be the focus of the “Affected Environment” and “Environmental Impacts and Mitigation” discussions in subsequent sections.

4.1.2 Major Features of the Proposed Project

Environmental impacts from the Phase 2 and Phase 3 Improvements are being reviewed as part of this EID. Refer to **Section 3.1** for additional details on the proposed improvements.

4.1.3 Flow Projections

A discussion of the flow sources and projections for the existing, 20-year, and 40-year planning scenarios is presented in **Sections 1.3.1 and 1.3.4**.

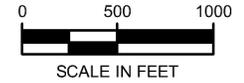
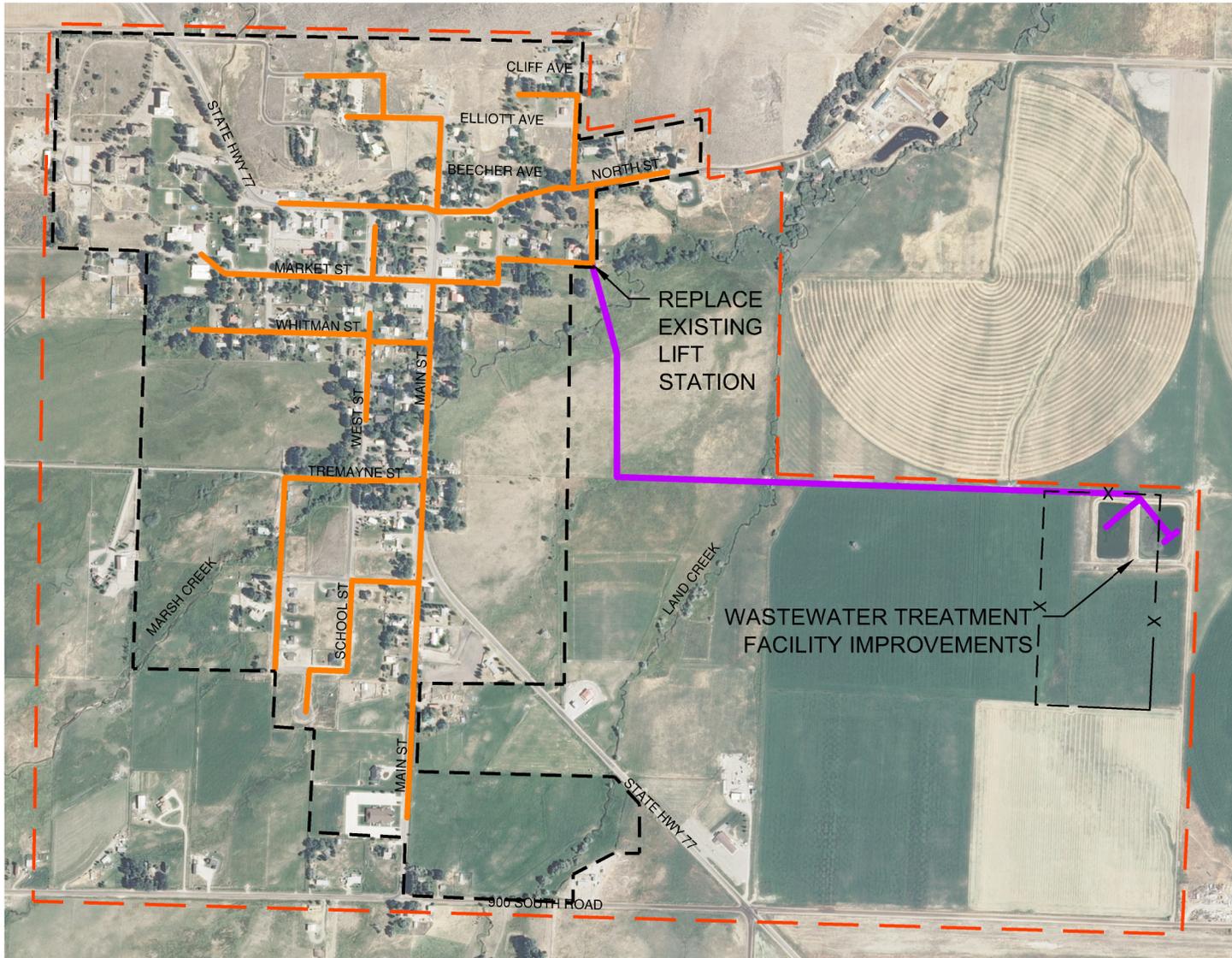
4.1.4 Agency Consultation

Relevant state and federal agencies and environmental groups were contacted to provide input on potential environmental impacts and mitigation of the proposed improvements. The list of consulted agencies is included in **Section 7** of this document. Agency consultation requests and responses regarding the proposed improvements are included in **Appendix B**.

4.2 PHYSICAL ASPECTS: TOPOGRAPHY, GEOLOGY, AND SOILS

4.2.1 Affected Environment

The topography of the Albion planning area is depicted on the U.S. Geological Survey (USGS) topographic map shown in **Figure 4-2**. As shown on the map, the general configuration of the regional topography is that of a large bowl with an outlet at the north end. The ground surface elevation across the planning area ranges from a low of approximately 4,690 to 4,800 feet above mean sea level. There is a small hill which bounds the north side of the City with a peak elevation of approximately 4,990 feet above mean sea level. The area specific to the treatment lagoons and land application site consists of relatively flat land with a gradual slope to the north.



LEGEND

- 8" GRAVITY SEWER MAIN
- 6" PRESSURE SEWER
- CITY LIMITS
- PROPOSED PROJECT PLANNING AREA AND AREA OF POTENTIAL EFFECT

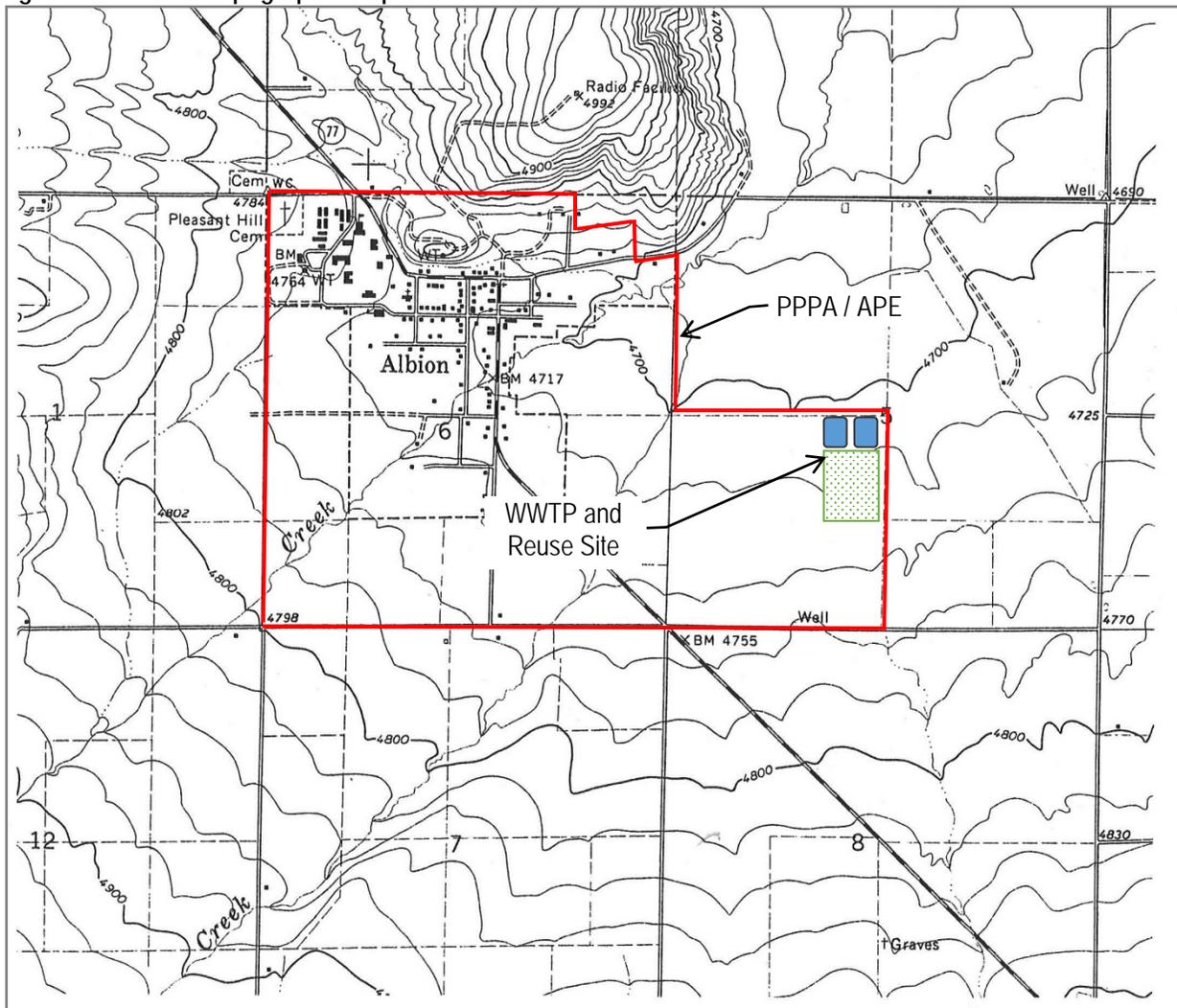
NOTE:
SEWER MAINS SHOWN IN APPROXIMATE LOCATION

**FIGURE 4-1
PROPOSED PROJECT
PLANNING AREA
AND AREA OF POTENTIAL
EFFECT**



J-U-B ENGINEERS, INC.

Figure 4-2 – USGS Topographic Map



The regional geology in the vicinity of Albion is characterized by steeply sloping mountain ranges and intervening wide, open valleys. The mountain ranges in the area are primarily composed of rhyolite, mica, schist, quartzite and granodiorite (*Soil Survey of Cassia County, Idaho, Eastern Part, NRCS, 1987*). The intervening valleys include alluvium deposits derived from the surrounding mountains, with later additions of loess and silty alluvium (*Soil Survey of Cassia County, Idaho, Eastern Part, NRCS, 1987*). The City's wastewater facilities are located within one of the intervening valley areas.

A USDA Natural Resource Conservation Service (NRCS) soil survey map of the planning area is shown in **Figure 4-3**. **Table 4-1** summarizes various characteristics of the predominant soil types in the area. These soil types are generally very deep, well drained, and primarily suitable for non-irrigated or irrigated cropland, hayland, and pasture.

Figure 4-3 – NRCS Soil Survey Map

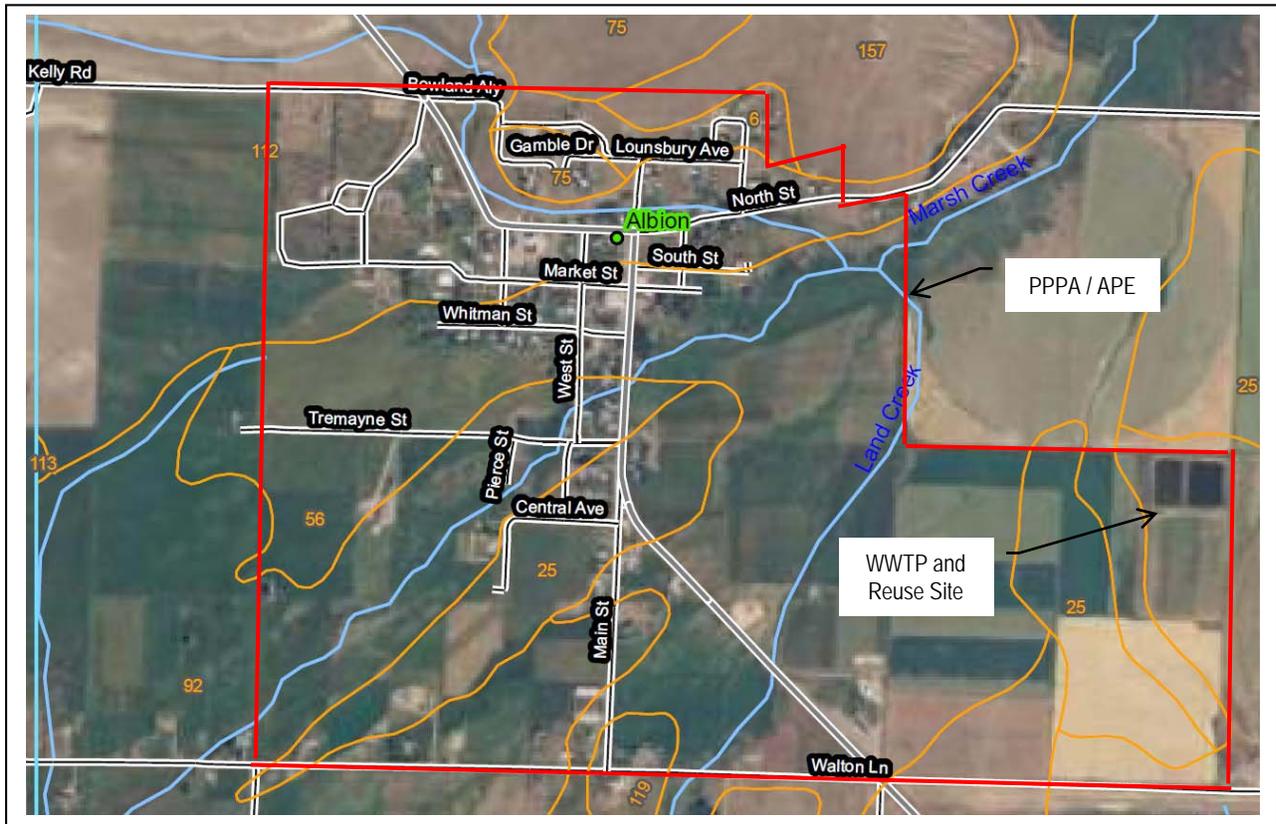


Table 4-1 – NRCS Soil Characteristics

Soil Map Unit	Description	Slope	Depth Class	Drainage Class	Permeability	Available Water Capacity	Potential Rooting Depth	Runoff
3	Acord Silt Loam	2-4%	Very Deep	Well Drained	Slow	7-8 in.	20-25 in.	Slow
25	Chatburn Silt Loam	1-4%	Very Deep	Well Drained	Moderately Slow	8-10 in.	15-20 in.	Slow
56	Downata Silt Loam	0-2%	Very Deep	Very Poor	Moderately Slow	10-12 in.	10-45 in.	Very Slow
75	Hutchley Very Gravelly Silt Loam	10-35%	Shallow	Well Drained	Moderately Slow	1-2 in.	10-20 in.	Moderate to Very Rapid
92	Kovich Silt Loam	0-3%	Very Deep	Poorly Drained	Moderate	7-8 in.	12-55 in.	Slow
112	Rexburg Silt Loam	1-3%	Very Deep	Well Drained	Moderate	11-13 in.	>60 in.	Slow
113	Rexburg Silt Loam	3-12%	Very Deep	Well Drained	Moderate	11-13 in.	>60 in.	Medium or Rapid
119	Ririe Silt Loam	1-3%	Very Deep	Well Drained	Moderate	11-13 in.	>60 in.	Slow

4.2.2 Environmental Impacts and Mitigation

There are no known physical topographic, geological, or soil conditions that might be affected by or that might impact construction of the Phase 2 and 3 Improvements. There are no known physical conditions that might make development unsuitable. There are no known hazardous physical areas (e.g., slides, faults, etc.) that might affect construction or development.

Direct, short-term impacts on soils will consist of ground disturbance during construction. NRCS encouraged the City “...to incorporate provisions for erosion, sediment, dust control, and runoff during project construction into the project design to protect soil, water, and air resources” (refer to **Appendix B**). The project design and construction will incorporate provisions and Best Management Practices (BMPs) for erosion, sediment, runoff, and dust control. Disturbed areas outside the improvement footprint will be returned approximately to their pre-construction condition upon project completion.

4.3 CLIMATE

4.3.1 Affected Environment

Albion has a semi-arid climate typical of southern Idaho; although, due to its higher elevation it tends to receive more precipitation than surrounding areas. **Table 4-2** summarizes historical temperature, precipitation and evaporation data for the Planning Area. Winter is characterized by alternating high and low pressure systems that bring associated inclement or clear conditions. January is historically the coldest month with an average temperature of approximately 27.7°F. Most of the annual precipitation in the area falls as rain and snow during the winter and spring. Summer weather is normally dry with warm to hot temperatures. July is historically the warmest month with an average temperature of 69.2°F. The warm summer temperatures combined with low relative humidity produce an annual evaporation rate of approximately 40.0 inches. The prevailing wind direction in the region is from the west to southwest with an average wind speed of approximately 5 to 10 mph. Tornadoes and funnel clouds are rare, as are destructive force winds.

Table 4-2 – Monthly Climatic Data

Month	Mean Temperature ^A (°F)	Mean Precipitation ^A (in)	Average Snowfall ^A (in)	Average Evaporation ^B (in)
January	27.7	0.92	7.1	0.2
February	32.0	0.73	4.3	0.6
March	39.1	0.90	3.4	1.6
April	46.4	1.18	1.5	3.2
May	53.7	1.54	0.3	5.6
June	61.1	1.12	0.0	6.0
July	69.2	0.72	0.0	6.8
August	68.2	0.68	0.0	6.4
September	58.9	0.77	0.0	4.0
October	48.7	0.89	0.4	2.4
November	37.2	0.89	3.1	2.0
December	29.0	0.84	5.2	1.2
Annual	47.6	11.2	25.3	40.0

A. Values in the table are an average from four independent weather monitoring stations near the planning area: Albion College of Education (1899-1953), Malta 2E (1963-2002), Malta Aviation (1984-2010), and Oakley (1893-2012). The data was obtained from the Western Regional Climatic Center (www.wrcc.dri.edu/summary/climsmid.html).

B. Calculated based on “Monthly Shallow Pond Evaporation in Idaho”, 1992, Lolnau, Kporde and Craine, ASAE Paper PNW 92-111 (Region 3, snow.cals.uidaho.edu/publications/Pond_evap/evap_fws.gif).

According to IDEQ’s Guidance for Reclamation and Reuse of Municipal and Industrial Wastewater, Albion appears to be located within Irrigation Climatic Area II. As a result, the number of frost free days for the growing season ranges from approximately 100 to 120 days.

4.3.2 Environmental Impacts and Mitigation

Climate is not expected to be impacted as a result of the proposed improvements. There are no identified unusual or special meteorological constraints that would result in air quality problems or affect the feasibility of the proposed improvements. Therefore, no mitigation measures are anticipated for climate.

4.4 POPULATION, ECONOMIC, AND SOCIAL PROFILE

4.4.1 Affected Environment

A summary of the current and projected population for Albion is presented in **Section 1.3.3**.

The area's economy is based primarily on the agricultural and service industries. Many residents commute to larger cities, such as Burley and Twin Falls, for work. Tourism and recreation are significant contributors to the area's economy. In addition to Pomerelle Ski Resort, Albion is the gateway to the City of Rocks National Reserve, an area known for its unique rock formations. City of Rocks is popular for hiking and rock climbing and is located approximately 30 miles from town. Other recreation activities available within the Albion area include hunting, camping and hiking.

Information from the 2010 U.S. Census and the Idaho Department of Commerce was used to compile social profiles for Albion. A summary of the information from the U.S. 2010 census is shown in **Table 4-3**.

According to the 2009-2013 American Community Survey 5-Year Estimates for the U.S. Census Bureau, the median household income was estimated to be \$56,250 in 2013. It also estimated that 10.7 percent of all families and 21.1 percent of families with related children under 18 years of age were at or below the U.S. Health and Human Services poverty level in 2013. Poverty level for a family of four was estimated as \$23,550 for 2013.

4.4.2 Environmental Impacts and Mitigation

Positive impacts (short- and long-term) are that residents in the Albion service area will benefit from the proposed improvements by receiving service from a reliable wastewater collection and treatment system. The improvements also allow for potential growth in the community.

The projected residential growth is reasonable for this area. The population growth rates are not excessive for State Environmental Review Process (SERP) purposes, because the estimated residential growth is less than 500 units over 20 years (IHS Global Insight 2012).

A negative impact from the proposed improvements is increased user costs, which will be applied equally and fairly to system users. Although increased costs are usually not desirable, the additional fees should be affordable for all users.

The proposed improvements are not expected to affect land values, and no benefits are expected for certain landowners, as the City will likely own the land or have easements for the sewer collection system and lagoon optimization improvements. No low income, minority, or disadvantaged groups are expected to be adversely affected by the proposed improvements. It not anticipated that any benefits from the project are going to accrue in a non-discriminatory manner.

No mitigation measures are anticipated for population, economic, or social purposes.

Table 4-3 – Social Profile

Parameter	Value
Sex	
Male	136
Female	131
Total Population	267
Age	
Under 10 Years	39
10 to 19 Years	36
20 to 29 Years	31
30 to 39 Years	24
40 to 49 Years	27
50 to 59 Years	48
60 to 69 Years	29
70 to 79 Years	26
80 and Older	7
Median Age	42.8
Race	
Caucasian	257
African-American	0
Asian	0
American Indian / Alaska Native	0
Native Hawaiian / Other Pacific Islander	0
Other	10
Housing	
Total Housing Units	138
Occupied Housing Units	113
Vacant Housing Units	25
Seasonal, Recreational or Occasional Use	5
Home Owner Vacancy Rate (%)	4.7
Rental Vacancy Rate (%)	14.3
Owner Occupied Housing Units	81
Renter Occupied Housing Units	32

1. Data from 2010 U.S. Census

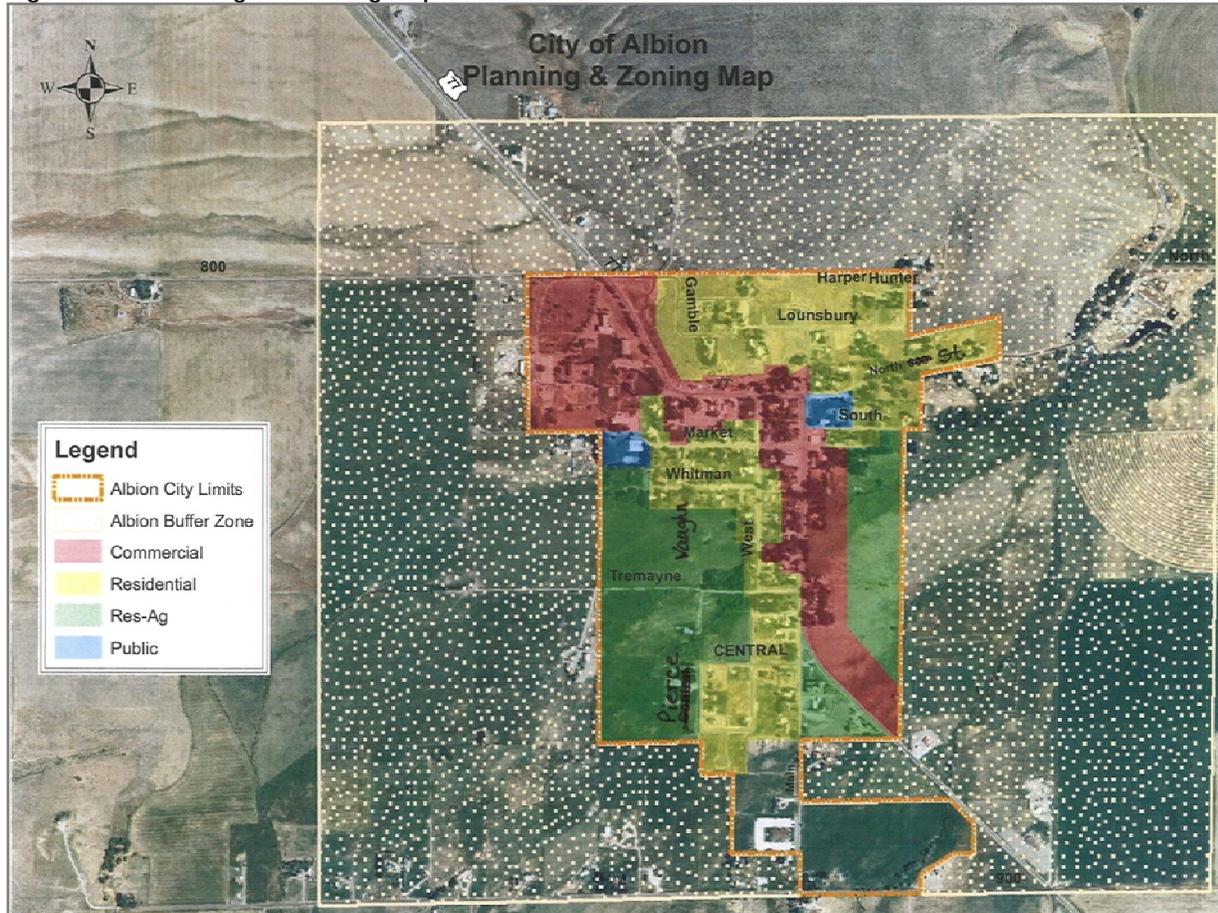
4.5 LAND USE

4.5.1 Affected Environment

The planning and zoning map shown in **Figure 4-4** depicts the generalized land use within the Albion area of impact. As shown in the figure, land use within the area is predominantly residential and residential-agricultural, with smaller areas of light commercial development. Residential areas are located throughout the community. Commercially zoned areas are primarily located along Highway 77 through town, Market Street, and the old college campus, which has been turned into a hotel and retreat center. A year-round resort and ski area is located approximately 12 miles south of Albion. There are no commercial/industrial developments or industrial zoning in the City. Areas zoned for public use are the

elementary school and City Park. There is an uninhabited airport hangar located approximately one-quarter of a mile southeast of the treatment facilities. The area surrounding the City and planning area is predominantly used for agricultural purposes.

Figure 4-4 – Planning and Zoning Map



The proposed Phased 2 collection system improvements are anticipated to take place within existing street right-of-ways, easements, and gravel or paved roadways owned by the City, County, and State. The proposed Phase 3 Improvements will be constructed at the existing treatment facility on land owned by the City and used for the purpose of treating wastewater.

4.5.2 Environmental Impacts and Mitigation

The land use is not anticipated to change with the proposed Phase 2 and Phase 3 Improvements. The improvements are consistent with the City’s current land use and will take place within areas that have already been disturbed from previous activities (e.g., gravel/paved roadways, lagoon embankments, etc.).

Inhabited areas will not be adversely impacted by the project site, other than minor short-term potential disruptions to traffic patterns and ground disturbance during construction. IDEQ noted that “...the project area may initially experience minor short term adverse conditions, which may include residential and commercial service impacts in the area on and adjacent to the site” (refer to **Appendix B**).

The improvements are not expected to contribute to changes in land use associated with recreation, mining, or large industrial or energy developments. The proposed improvements increase capacity for existing and future flows from reasonable growth/ development and reduce risk of permit violations. Even as the community grows, it is not likely that there will be an overall impact on land use in the area.

4.6 FLOODPLAINS

4.6.1 Affected Environment

The Idaho Department of Water Resources (IDWR) noted that the *“City of Albion is a participating member to the National Flood Insurance Program. The community does have an identified flood zone hazard area “Zone A” designation. Any development within the boundaries of the flood zone requires compliance with local standards and a floodplain development permit from the community must be obtained”* (refer to **Appendix B**). A Flood Insurance Rate Map (FIRM) for the City and surrounding area is included in **Appendix C**. The PPPA/APE and treatment facilities have been superimposed on the FIRM for reference.

4.6.2 Environmental Impacts and Mitigation

The zones shown on the FIRM in **Appendix C** and the associated impacts from the proposed improvements are summarized as follows:

- **Zone A** (areas of 100-year flood; base flood elevations and flood hazard factors not determined) – This zone primarily exists along Marsh Creek, Land Creek, and College Creek, as well as some central areas of the City. Although the exact location of the proposed Phase 2 collection system improvements is unknown, it appears that a portion of the improvements may occur within Zone A. The improvements are anticipated to take place within existing graveled or paved roadways, with the ground surface restored to its pre-construction condition.
- **Zone B** (areas between limits of the 100-year flood and 500 year flood; or certain areas subject to 100-year flooding with average depths less than one foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood) – This zone primarily exists along Marsh Creek and Land Creek. Although the exact location of the proposed Phase 2 collection system improvements is unknown, it appears that a portion of the improvements may occur within Zone B. The improvements are anticipated to take place within existing graveled or paved roadways, with the ground surface restored to its pre-construction condition.
- **Zone C** (areas of minimal flooding) – This zone makes up the majority of the area and construction within this zone is not anticipated to be a concern. The proposed Phase 3 Improvements at the wastewater treatment lagoons fall within Zone C.

IDWR noted that *“Any development within the boundaries of the flood zone requires compliance with local standards and a floodplain development permit from the community must be obtained”* (refer to **Appendix B**). If necessary for the Phase 2 collection system improvements, the City will comply with local standards and obtain any floodplain development permits.

IDWR noted that the Code of Federal Regulations § 60.3(a) requires with flood prone area (refer to **Appendix B**):

- *“New and replacement sanitary sewage systems to be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters and*
- *On-site waste disposal systems to be located to avoid impairment to them or contamination from them during flooding.”*

IDWR noted that *“manholes should be raised above the 100-year flood level or equipped with seals to prevent leakage”* (refer to **Appendix B**).

Any Phase 2 collection system improvements located within a floodplain area will be designed to minimize infiltration and exfiltration of wastewater (e.g., new PVC pipe with watertight gasketed connections, sealed manhole lids, etc.). No on-site waste disposal systems are proposed. It appears that the construction activities will not result in changes to any designated floodplains.

4.7 WETLANDS

4.7.1 Affected Environment

A U.S. Fish and Wildlife Service National Wetlands Inventory (NWI) map is provided in **Appendix C**. As shown on the map, there are no reported wetlands within the PPPA/APE for the project. The U.S. Fish and Wildlife Service website (<https://www.fws.gov/wetlands/Data/Limitations.html>) notes several limitation, exclusions, and precautions regarding the NWI mapping, including:

- The objective of the mapping is to produce reconnaissance level information from the analysis of high altitude imager. Detailed on-the-ground inspection of a particular site may result in a revision of the wetland boundaries or classification established through the image analysis.
- Wetlands or other mapped features may have changed since the date of the imagery and/or field work.
- Certain wetland habitats are excluded because of the limitations of aerial imagery.
- Federal, state, and local regulatory agencies may define and describe wetlands in a different manner than the NWI mapping inventory.

4.7.2 Environmental Impacts and Mitigation

NRCS noted that *“some soils in the project area exhibit wetness features, hydric soils, and may support wetlands. NRCS encourages you to avoid impacts to wetlands from the project”* (refer to **Appendix B**).

The Army Corps of Engineers noted that *“...it appears replacement of the 8” gravity line would cross Marsh Creek at three locations and replacement of the 6” pressure line from the lift station to the treatment lagoons would cross Land Creek and Marsh Creek. If the crossings of Marsh and Land Creeks are typical open trench crossings then a DA permit would be required for this work. If the new sewer lines are bored under the creeks then a DA permit likely would not be required as that work does not include a discharge of fill or dredged material below the high water mark and the creeks adjacent wetlands”* (refer to **Appendix B**).

If construction of the 8-inch gravity collection system improvements under Phase 2 employs open trench techniques and fill or dredge material is to be discharged to Marsh Creek and/or Land Creek, a Department of Army (DA) permit as described in Section 404 of the Clean Water Act will be required. As an alternative, boring or in-situ replacement (i.e., pipe bursting, cured-in-place pipe, etc.) of the pipeline beneath Marsh Creek and/or Land Creek will be considered during design. The Phase 2 and 3 Improvements do not

include replacement of the 6-inch pressure line from the lift station to the treatment lagoons. Detailed drawings of the proposed improvements and potential impacts on Marsh and/or Land Creeks and wetlands will be submitted to the Army Corps of Engineers with the Section 404 permit application for review prior to construction.

The proposed Phase 3 treatment plant improvements will be constructed at the existing treatment facility. There are no known wetlands within this area.

4.8 WILD AND SCENIC RIVERS

4.8.1 Affected Environment

The Wild and Scenic Rivers Act, as promulgated by Congress on October 2, 1968, states that “...certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geological, fish and wildlife, historical, cultural, or other similar values, shall be protected for the benefit and enjoyment of present and future generations.” As shown by the map in **Appendix C**, there are no designated Wild and Scenic Rivers near the proposed improvements.

4.8.2 Environmental Impacts and Mitigation

Since there are no designated Wild and Scenic Rivers in the Albion area, there will be no impacts from the proposed improvements and no mitigation is necessary.

4.9 CULTURAL RESOURCES

4.9.1 Affected Environment

The State Historical Preservation Office (SHPO) of the Idaho State Historical Society was consulted regarding cultural resources in Albion. SHPO noted that there are “*no historic properties present/affected*” (refer to **Appendix B**). The following buildings are listed on the SHPO’s National Register of Historic Places in Idaho for the City: Albion Methodist Church, Albion Normal School Campus, and Swanger Hall.

IDEQ consulted with the Shoshone-Bannock and Shoshone-Paiute Tribes regarding the proposed wastewater system improvements (refer to **Appendix B**). The Shoshone-Bannock Tribe did not provide any comments (refer to **Appendix B**).

4.9.2 Environmental Impacts and Mitigation

SHPO noted that there are “*no historic properties present/affected*” and that since the proposed improvements “*...will take place within a disturbed area, there are no historic properties which could be adversely effected by the undertaking*” (refer to **Appendix B**).

The Shoshone-Paiute Tribe requested a monitor on site during excavation and noted that “*if there are any artifacts or human remains discovered stop all work immediately and call the appropriate people*” (refer to **Appendix B**). In the event that archeological artifacts (such as beads, arrowheads, pottery, fabric, glass, metal fragments, or other human-made objects that appear to predate 1960) or human remains (such as bones, bone fragments, or teeth) are inadvertently discovered during construction, work will cease and SHPO, the Shoshone-Bannock Tribe, and the Shoshone-Paiute Tribe will be notified. Mitigation measures will be implemented as SHPO and the tribe(s) direct. Work will not resume at the discovery site without consent of SHPO and the tribe(s).

4.10 FLORA AND FAUNA

4.10.1 Affected Environment

Due to the mountainous topography of the area, there is wide range of plants and animals. Vegetative habitats common to the area include pinyon-juniper woodlands, aspen-riparian communities, sagebrush steppe, mountain mahogany woodlands, and high elevation meadows.

Migratory wildlife, many of which are avian species, seasonally pass through the area. Common upland game birds in the area include pheasants, partridge, quail and sage grouse. Raptors such as hawks, eagles and owls are also found in the area. Animals commonly found in the area include mountain lions, bobcat, coyote, squirrels, mule deer, rabbits, marmot, chipmunk, fox, skunks and coyote. The surrounding area is popular during hunting season for deer, elk, and other game. Fish common to the area include trout.

According to the U.S. Fish and Wildlife Service Information for Planning and Conservation (IPaC) report in **Appendix B** (as provided by IDEQ), the Canada Lynx (*Lynx canadensis*) is the only threatened species under the Endangered Species Act in the PPPA/APE. The IPaC report shows no endangered or proposed species in the PPPA/APE.

Idaho Fish and Game noted that *“we are currently not aware of any threatened, endangered, or candidate invertebrates, fish, wildlife, or plants inhabiting the project area. Further, we are unaware of any critical habitat for threatened, endangered, or candidate invertebrates, fish, wildlife, or plants inhabiting the project area”* (refer to **Appendix B**).

4.10.2 Environmental Impacts and Mitigation

Direct, short-term impacts will consist of ground disturbance during construction and elevated noise levels. However, no long-term impacts to biological resources are expected due to the proposed improvements. Temporary impacts associated with site disturbance will be mitigated through the development and implementation of BMPs. If necessary, disturbances to vegetation will be mitigated by re-vegetating affected areas. Efforts will be undertaken to reconstruct, replant, and landscape disturbed areas to their former condition.

IDEQ consulted with the Idaho Fish and Game regarding the presence of Canada Lynx in the PPPA/APE. Based on discussions between the two agencies, the *“trees located on highlands southwest of the project site are largely juniper, and that adequate prey for the Canada Lynx are not available. The proposed project will have NO EFFECT on the Canada Lynx”* (refer to **Appendix B**).

Idaho Fish and Game noted that Marsh Creek and Land Creek *“...are within the historic range of Yellowstone cutthroat trout, a species of greatest conservation need in Idaho (IDFG 2005). While we are currently unaware that this species inhabits either stream within the project area, we have documented cutthroat trout in the headwaters of Marsh Creek. We recognize the current stream habitat conditions within the project area may be limited but request an opportunity to review any specific project-related work that may involve the stream channel”* (refer to **Appendix B**). If necessary, the City will pursue, where appropriate, in-situ construction techniques for the collection system piping improvements that cross these creek to eliminate or minimize impacts (e.g., pipe bursting, cured-in-place pipe, borings, etc.). Design documents related to the proposed improvements will be made available to Idaho Fish and Game for review prior to construction.

As shown in the figure in **Appendix C**, the proposed improvements will have no effect on the Essential Fish Habitat (EFH) for salmon.

4.11 RECREATION AND OPEN SPACES

4.11.1 Affected Environment

There are no State or Federal recreational areas, open spaces, parks, or areas of recognized scenic or recreational value within the area of the proposed improvements. The City owns several parks and recreation areas in or near the city.

4.11.2 Environmental Impacts and Mitigation

The Phase 2 collection system improvements will be constructed within existing street right-of-ways and/or easements, while the Phase 3 treatment plant improvements will be constructed at the existing lagoon site. The proposed improvements will not eliminate, modify, or impact recreational or open spaces. It is not feasible to combine the improvements with recreational uses.

There are no known recreational areas, open spaces, parks, or areas of recognized scenic or recreational value within any of these areas. Therefore, the selected improvements will not have any impacts and no mitigation measures are planned.

4.12 AGRICULTURAL LANDS

4.12.1 Affected Environment

As defined by the 1978 EPA Policy to Protect Environmentally Significant Agricultural Lands, prime farmland has the “best combination of physical and chemical characteristics for producing food, feed, forage, fiber and oilseed crops and is available for these uses”. NRCS noted that the following soil types are classified as prime or important farmland, if irrigated (refer to **Appendix B** and **Figure 4-3**):

- Arbone loam (soil map unit 6)
- Chatburn silt loam (soil map unit 25)
- Downata silt loam (soil map unit 56)
- Kovich silt loam (soil map unit 92)
- Rexburg silt loam (soil map unit 112)
- Ririe silt loam (soil map unit 119)

4.12.2 Environmental Impacts and Mitigation

The soils within the area impacted by construction of the proposed improvements are not irrigated (i.e., the ground is used for roadways, lagoons, etc.). Construction activities will be limited to existing right-of-ways, easements, and City-owned property where the soils have previously been disturbed. The areas are also currently being used for purposes other than farmland (e.g., streets, treatment plant, etc.) and will not be used for farming in the future. As a result, the proposed improvements are not anticipated to have any impacts on or conversions of prime or important farmland and mitigation is not required.

NRCS noted that the Farmland Protection Policy Act (FPPA) “...would apply to the expansion of the wastewater treatment facility (since as proposed, farmland would be converted) but not the pipeline improvements (since as proposed, no farmland would be converted)” (refer to **Appendix B**). However, no expansion of the wastewater treatment facility or conversion of farmland is proposed with the Phase 2 or

3 Improvements. As a result, the FPPA does not apply to the proposed improvements and an AD-1006 Form is not required.

The Idaho State Department of Agriculture noted that “*we do not have comments or questions related to this project*” (refer to **Appendix B**).

4.13 AIR QUALITY

4.13.1 Affected Environment

Residents in Albion generally feel that air quality is excellent and cite this amenity as one of the area’s quality of life factors. Albion is well removed from any major urbanized areas and there are very few sources of pollution in the immediate vicinity. Local automobile emissions and agricultural activities are the primary contributors to air quality degradation. High levels of particulate matter may be experienced during certain weather events or during certain times of the agricultural season due to farming practices.

EPA has developed standards for monitoring and protecting air quality. IDEQ is responsible for implementing, monitoring and enforcing the air quality standards within Idaho. An area that exceeds the air quality standards is considered to be a “non-attainment area” (NAA) for a particular component, or total air quality. As shown by the map in **Appendix C**, the proposed improvements for Albion are not located within an NAA.

4.13.2 Environmental Impacts and Mitigation

Air quality may be temporarily impacted by the improvements due to dust and exhaust emissions from construction equipment, which may produce some minor air pollution. Dust emissions will be minimized, when possible, by dampening roads with water or by other methods. The impacts of construction dust will be mitigated by ceasing activity during exceptionally windy conditions and by using watering equipment. Debris created by construction should not be burned, but transported to a solid waste disposal area to avoid further air pollution.

The project should not create exceedances of any federal or state emission standards in the area and should not cause a violation of National Ambient Air Quality Standards (NAAQS). Albion is within an air quality attainment area and would not fall under the requirements of a State Implementation Plan (SIP).

The proposed improvements will not cause odor nuisance problems.

4.14 WATER QUALITY, QUANTITY, AND SOLE SOURCE AQUIFERS

4.14.1 Affected Environment

The primary surface water sources within the planning area are Land Creek, Marsh Creek, and minor irrigation laterals (see **Figure 1-1**). The two creeks originate in the Albion Range and flow separately through the southern portion of the planning area before joining together east of the City. Surface water generally flows to the northeast through the area.

Most irrigation and drinking water in the planning area comes from wells. The City reports that there are no springs or drinking water wells located within one-quarter mile of the treatment lagoons and land application site. There is an irrigation well situated approximately one-quarter to one-half of a mile south (upgradient) of the land application site. Albion’s three existing municipal drinking water wells are located within the City limits near residential areas.

The source of groundwater in the Albion area is the Albion Basin aquifer. An unconfined, shallow aquifer is contained within the upper alluvium deposits beneath the valley floor. Deeper confined artesian aquifers are also located within the basin. This basin is generally enclosed on the east by the Cotterell (Malta) Range, on the south and west by the Albion Range, and on the northwest by the East Hills. The primary source of groundwater is from precipitation that falls on the Albion Range to the south. Groundwater is also recharged to a lesser extent by infiltration from natural streams and irrigation practices in the area. The groundwater generally travels northward and discharges through springs in Howell Creek and Marsh Creek and as underflow beneath the valley.

Groundwater levels in the area generally fluctuate seasonally from near the surface to approximately 5 to 45 feet below the ground surface. This information is based on historical monitoring data from a USGS monitoring well (USGS 422405113343801 12S 25E 06DCC1) located adjacent to the City in Section 6, Township 12 South, Range 25 East, B.M., and on data from the City's 1975 treatment plant Operation and Maintenance Manual. Regional groundwater flow direction is generally north to northwest.

The Sole Source Aquifer program was established under Section 1424(e) of the Safe Drinking Water Act of 1974. The program allows individuals and organizations to petition the EPA to designate aquifers as the "sole or principal" source of drinking water for an area. To meet the sole source criteria, an aquifer must supply at least 50 percent of the drinking water consumed in the area overlying the aquifer. The EPA guidelines also stipulate that these areas can have no alternative drinking water source(s) that could physically, legally and economically supply all those who depend upon the aquifer for drinking water. At this time, the Albion Basin aquifer is not considered to be a sole source aquifer (refer to the figure in **Appendix C**). The nearest sole source aquifer to Albion is the Eastern Snake River Plain Aquifer.

The City of Albion does not currently have a National Pollutant Discharge Elimination System (NPDES) permit for their wastewater system and do not discharge treated effluent to a surface water.

The proposed improvements are not located within a groundwater nitrate priority area, as designated by IDEQ in their 2014 Nitrate Delineation and Ranking Process report (refer to **Appendix C**).

4.14.2 Environmental Impacts and Mitigation

IDEQ noted that *"the proposed wastewater improvement project may benefit the environment by decreasing the potential leakage of raw wastewater due to deteriorated sewer lines and aging lift station. The elimination of leakage also reduces the risk of ground water contamination"* (refer to **Appendix B**). The proposed improvements should improve groundwater quality, which is the primary drinking water source for the area.

IDEQ noted that *"...federal storm water offsite discharge approvals may also be required for this project"* (refer to **Appendix B**). The construction contract documents will require that the contractor to develop and implement best management practices and a Storm Water Pollution Prevention Plan or a Low Erosivity Waiver if their proposed construction activities (e.g. excavation, temporary storage, materials staging, etc.) are anticipated to disturb greater than one acre, in accordance with EPA requirements. This will minimize impacts to surface water quality during construction.

Regarding Sole Source Aquifers, EPA noted that *"we have reviewed the information provided and find that the project will not have a significant adverse impact on the Eastern Snake River Plain Sole Source Aquifer and therefore the funding may proceed"* and that they are *"...approving the City of Albion WWTP"*

*improvement project...given the likely improvement the project will bring to the area and potentially the aquifer” (refer to **Appendix B**).*

The City does not have a NPDES permit and the proposed improvements do not include a surface water discharge. The proposed improvements will not result in non-point source water quality impacts or adversely affect water rights.

The contractor will be required to obtain and implement the necessary permits for any groundwater dewatering and disposal activities during construction.

4.15 PUBLIC HEALTH

4.15.1 Affected Environment

In general, there are minimal public health issues related to the wastewater system in the planning area. However, since the aquifer in the area is relatively small and shallow, there is some concern that leaks from deteriorated sewer lines could potentially contaminate the drinking water supply for the City and other users in the valley.

Noise in the Albion area is generally limited to normal traffic, commercial activities, and agricultural practices.

4.15.2 Environmental Impacts and Mitigation

Open trenches, electrical utilities, and heavy equipment may present health and safety hazards during construction. These hazards may be mitigated by requiring the contractor to implement a safety program for the construction site.

IDEQ noted that *“the proposed wastewater improvement project may benefit the environment by decreasing the potential leakage of raw wastewater due to deteriorated sewer lines and aging lift station. The elimination of leakage also reduces the risk of ground water contamination”* (refer to **Appendix B**). The proposed improvements should improve groundwater quality, which is the primary drinking water source for the area.

Construction of the improvements will likely result in temporary increases in noise levels due to heavy equipment and machinery. Construction activity will be limited to normal working hours to reduce the noise impacts on residential areas. In addition, construction noise should be temporary and can be minimized by the use of well-maintained equipment and mufflers.

The proposed project is not anticipated to generate issues with vectors.

4.16 SOLID WASTE / SLUDGE MANAGEMENT

4.16.1 Affected Environment

The Albion wastewater treatment plant does not have biosolids or sludge management facilities, and the addition of these facilities is not proposed as part of the current project. As sludge settles in the lagoons, anaerobic bacteria break down the biological solids, reducing its volume. As the cells are used for treatment and effluent storage, a water cap is maintained on the biosolids which helps control odors and vector attraction. At some point, removal of the accumulated biosolids will be necessary to maintain the

active volume of the lagoons; however, the performance of the lagoons and reports of the operators indicate that this is not yet a concern.

4.16.2 Environmental Impacts and Mitigation

The proposed improvements do not include biosolids or sludge management facilities. Therefore, no environmental impacts or mitigation measures are anticipated.

4.17 ENERGY

4.17.1 Affected Environment

There are no known energy producing facilities within the proposed project area. There are no cost-effective measures to reduce energy consumption or increase energy recovery as part of the proposed Phase 2 and Phase 3 Improvements.

4.17.2 Environmental Impacts and Mitigation

The proposed Phase 2 and Phase 3 Improvements do not include any components that consume or use energy. Therefore, no environmental impacts or mitigation measures are anticipated.

4.18 REUSE / LAND APPLICATION

4.18.1 Affected Environment

The City is currently permitted to irrigate treated effluent on a 13-acre slow-rate land application under an IDEQ Wastewater Reuse Permit issued by IDEQ (see **Appendix a**). The site is located immediately south of the existing lagoons. Alfalfa hay is typically grown on the land application site. Effluent is applied to the site using handlines during the irrigation season (e.g., April 1 through October 31 of each year). No effluent is irrigated during the non-growing season (e.g., November 1 through March 31 each year) and during harvesting of the crops. Wastewater is stored in the lagoons during the non-growing season.

4.18.2 Environmental Impacts and Mitigation

The proposed Phase 2 and Phase 3 Improvements do not include any modifications or expansions of the existing reuse site. Therefore, no environmental impacts or mitigation measures are anticipated.

4.19 REGIONALIZATION

4.19.1 Affected Environment

There are no known jurisdictional agreements, inter-municipal agreements, disputes, or controversies regarding the project or within the PPPA.

4.19.2 Environmental Impacts and Mitigation

The improvements should not impact regional agreements or create jurisdictional disputes. As a result, no mitigation measures are planned.

5.0 SUMMARY OF MITIGATION

5.1 SUMMARY OF MITIGATION

Table 5-1 summarizes the environmental impact mitigation measures identified in **Section 4**.

Table 5-1 – Summary of Mitigation Measures

Affected Environment	Agency Consulted	Mitigation Measures
Physical Aspects: Topography, Geology, and Soils	USGS, USDA NRCS	<ul style="list-style-type: none"> Implement BMPs and stormwater management for erosion, sediment, dust, and runoff control. Return disturbed areas outside footprint of improvements to original condition.
Climate	Western Regional Climatic Center	<ul style="list-style-type: none"> None required since there are no anticipated impacts.
Population, Economic, and Social Profile	U.S. Census, Idaho Department of Commerce	<ul style="list-style-type: none"> None required since there are no anticipated impacts.
Land Use	IDEOQ	<ul style="list-style-type: none"> None required since there are no anticipated impacts.
Floodplains	IDWR	<ul style="list-style-type: none"> New or replacement sewer collection systems to be designed to minimize or eliminate infiltration of flood waters and discharges from system to flood waters. On-site disposal systems to be located to avoid impairment or contamination during flooding. Comply with local standards and obtain floodplain development permits.
Wetlands	US Fish and Wildlife Service, Army Corps of Engineers	<ul style="list-style-type: none"> If construction includes open trench replacement of a sewer line across Marsh Creek and/or Land Creek, conduct a field wetland delineation assessment. If jurisdictional water will be impacted, apply for a DA Section 404 Permit for construction. Consider in-situ construction techniques (i.e., pipe bursting, cured-in-place pipe, borings) to minimize disturbance to Marsh Creek and Land Creek.
Wild and Scenic Rivers	IDWR	<ul style="list-style-type: none"> None required since there are no anticipated impacts.
Cultural Resources	SHPO, Shoshone-Bannock Tribe, Shoshone-Paiute Tribe	<ul style="list-style-type: none"> Include a stop work order and notify SHPO and Tribes for inadvertent discoveries of historic or cultural resources. Allow a monitor on site during excavation.
Flora and Fauna	US Fish and Wildlife Service, Idaho Fish and Game	<ul style="list-style-type: none"> Implement BMPs to minimize site disturbance and revegetate disturbed areas, as necessary. Consider in-situ construction techniques (i.e., pipe bursting, cured-in-place pipe, borings) to minimize disturbance to Marsh Creek and Land Creek and potential impacts on Yellowstone cutthroat trout. Make design documents available to Idaho Fish and Game for review prior to construction.
Recreation and Open Space	N/A	<ul style="list-style-type: none"> None required since there are no anticipated impacts.
Agricultural Lands	USDA NRCS, Idaho State Department of Agriculture	<ul style="list-style-type: none"> None required since there are no anticipated impacts.
Air Quality	IDEOQ	<ul style="list-style-type: none"> Cease construction during exceptionally windy conditions. Use watering equipment to reduce fugitive dust. Debris will not be burned on-site, but will be hauled off-site to a disposal facility.
Water Quality, Quantity, and Sole Source Aquifer	IDWR, IDEOQ, EPA, US Fish and Wildlife Service, Army Corps of Engineers	<ul style="list-style-type: none"> Require contractor to implement a Storm Water Pollution Plan or obtain a Low Erosivity Waiver if construction activities disturb greater than one acre.

Affected Environment	Agency Consulted	Mitigation Measures
		<ul style="list-style-type: none"> Require contractor to obtain and implement the necessary permits for groundwater dewatering and disposal.
Public Health	IDEQ	<ul style="list-style-type: none"> Require contractor to implement a safety program at the construction site. To minimize noise, limit work to normal working hours and require well-maintained equipment with mufflers.
Solids Waste	IDEQ	<ul style="list-style-type: none"> None required since there are no anticipated impacts.
Energy	N/A	<ul style="list-style-type: none"> None required since there are no anticipated impacts.
Reuse / Land Application	IDEQ	<ul style="list-style-type: none"> None required since there are no anticipated impacts.
Regionalization	N/A	<ul style="list-style-type: none"> None required since there are no anticipated impacts.

6.0 PUBLIC PARTICIPATION

6.1 PUBLIC PARTICIPATION

A public hearing was held September 24, 2013 at the Albion Civic Center to discuss the project needs and improvement alternatives considered in the Facilities Plan and EID. Hardcopies of the Facilities Plan were made available for review and comment by the public at the Albion City Hall prior to the public hearing. At the hearing, J-U-B ENGINEERS, Inc. presented a brief summary of the Facilities Plan and outlined the alternatives and recommended improvements under consideration. Comments and questions from the public were addressed and incorporated, as necessary, into the final Facilities Plan.

A copy of the Facilities Plan presentation and minutes from the meeting, including public comments and the City Council's motion to accept the Facilities Plan, as written, are included in **Appendix D**. A subsequent email from the Mayor indicating that it was the intention of the City Council to accept the recommended Phase 1, 2, and 3 Improvements, as outlined in the Facilities Plan, is included in **Appendix D**. No written comments were submitted from the public regarding the Facilities Plan. A copy of the newspaper advertisement for the public hearing is also included in **Appendix D**.

7.0 AGENCY CONSULTATION

7.1 AGENCY CONSULTATION

Several public agencies were sent letters and/or emails requesting that they review the proposed project and provide a response regarding potential environmental impacts. The letters included a project description and drawings of the proposed improvements. Copies of the letters sent to the agencies and their responses can be found in **Appendix B. Table 7-1** summarizes the list of agencies consulted.

Table 7-1 – Agency Consultation Summary

Agency / Contact	Dates of Consultation	Response Received
Army Corps of Engineers James Joyner 900 N. Skyline Dr., Ste. A Idaho Falls, ID 83402-1718	Letter dated October 22, 2013	Letter dated January 9, 2014
EPA Region 10, Idaho Operations Office James Wernitz 950 W. Bannock Street, Ste. 900 Boise, ID 83702	Letter dated October 22, 2013	No response received
EPA Region 10, Office of Environmental Assessment Susan Eastman 1200 6 th Avenue, OWW 136 Seattle, WA 98101	Letter dated October 22, 2013	Email dated December 23, 2013
Idaho Department of Environmental Quality Brian Reed / Joe Otero 1363 Fillmore Twin Falls, ID 83301	Letter dated October 22, 2013	Letter dated December 2, 2013
Idaho Department of Environmental Quality Mike May 1410 North Hilton Boise, ID 83706	N/A	Email dated July 7, 2016
Idaho Department of Fish and Game Mike McDonald 319 South 417 East Jerome, ID 83338	Letter dated October 22, 2013 Email dated December 23, 2013	Email dated December 23, 2013
Idaho Department of Water Resources Patrick Kelly P.O. Box 83720 Boise, ID 83720-0098	Letter dated October 22, 2013	Letter received December 2013
Idaho State Historical Society Ethan Morton 210 Main Street Boise, ID 83702	Letter dated October 22, 2013	Letter dated December 4, 2013
USDA-NRCS, Soil Conservation District Hal Swenson 9173 West Barnes Dr., Ste. C Boise, ID 83709	Letter dated October 22, 2013	Letter dated December 4, 2013
Idaho Department of Agriculture Gary Bahr P.O. Box 790 Boise, ID 83701	Letter dated October 22, 2013	Letter dated December 23, 2013

Agency / Contact	Dates of Consultation	Response Received
South Central Health District Merl Egbert 1020 Washington Street North Twin Falls, ID 823301	Letter dated October 22, 2013	No response received
Shoshone-Paiute Tribe Ted Howard P.O. Box 219 Owyhee, NV 89832	Letter dated November 22, 2013	Email dated December 20, 2013
Shoshone-Bannock Tribe Carolyn Boyer Smith P.O. Box 306 Fort Hall, Idaho 83203	Letter dated November 22, 2013	No response per IDEQ email on December 27, 2013

8.0 MAILING LIST

8.1 MAILING LIST

The mailing list for this project includes the agencies listed in **Section 7** as well as those who provided comments during the public comment period. **Table 8-1** lists contact information for these individuals.

Table 8-1 – Mailing List

Name	Address
Heather Mortensen	214 Water Tower Circle
Troy Mortensen	214 Water Tower Circle
Teri Williams	236 West Market Street
Alan Lloyd	201 West Market Street

9.0 REFERENCES CONSULTED

9.1 LIST OF REFERENCES

American Fact Finder: U.S. Department of Commerce, United States Census Bureau.

http://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml

Federal Emergency Management Agency (FEMA), Map Service Center.

<http://msc.fema.gov/portal>

Idaho Department of Environmental Quality. *2014 Nitrate Priority Area Delineation and Ranking Process.*

<http://www.deq.idaho.gov/media/1117845/nitrate-priority-area-delineation-ranking-2014.pdf>

Idaho Department of Environmental Quality, Sole Source Aquifer Map.

https://www.deq.idaho.gov/media/462639-sole_source_aquifers_west_map.pdf

Idaho Department of Environmental Quality, Non-Attainment Area Map.

https://www.deq.idaho.gov/media/662796-nonattainment_map.pdf

Idaho Department of Environmental Quality, Outline and Checklist for Environmental Information Documents (Form 5-B), IDEQ, undated.

Idaho Department of Labor, Labor Market Information System.

<https://www.lmi.idaho.gov/LMIHome/tabid/729/Default.aspx>

Idaho State Historical Society, National Register of Historic Places.

<http://history.idaho.gov/national-register-historic-places>

J-U-B ENGINEERS, Inc. *City of Albion Wastewater Facilities Plan.* March 2013.

USDA Natural Resources Conservation Service, Web Soil Survey.

<http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>

U.S. Department of Health & Human Services.

<http://aspe.hhs.gov/poverty/13poverty.cfm>

U.S. Fish and Wildlife Service, Endangered Species Act.

<https://ecos.fws.gov/ipac/>

U.S. Fish and Wildlife Service, National Wetlands Inventory Mapper.

<https://www.fws.gov/wetlands/Data/Mapper.html>

Western Regional Climatic Center.

<https://www.wrcc.dri.edu/summary/climsmid.html>

Wild and Scenic Rivers.

<https://rivers.gov/>

APPENDIX A IDEQ REUSE PERMIT

A. Permit Certificate

**MUNICIPAL
WASTEWATER-LAND APPLICATION PERMIT
LA-000077-03**

The City of Albion LOCATED AT P.O. Box 147, Albion, ID 83311
AND IN Cassia County, Township 12 South, Range 25 East, Section 5
IS HEREBY AUTHORIZED TO CONSTRUCT, INSTALL, AND
OPERATE A WASTEWATER REUSE SYSTEM IN ACCORDANCE
WITH THE WASTEWATER REUSE RULES (IDAPA 58.01.17) AND
WASTEWATER RULES (IDAPA 58.01.16), THE GROUND WATER
QUALITY RULE (IDAPA 58.01.11), AND ACCOMPANYING PERMIT,
APPENDICES, AND REFERENCE DOCUMENTS. THIS PERMIT IS
EFFECTIVE FROM THE DATE OF SIGNATURE AND EXPIRES ON
February 26, 2015



Bill Allred, Regional Administrator
Twin Falls Regional Office
Idaho Department of Environmental Quality

2-26-10
Date:

DEPARTMENT OF ENVIRONMENTAL QUALITY
1363 Fillmore St.
Twin Falls, ID 83301
208-736-2190

POSTING ON SITE RECOMMENDED

B. Permit Contents, Appendices, and Reference Documents

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Appendices

1. Environmental Monitoring Serial Numbers
2. Site Maps

References

1. Plan of Operation (Operation and Maintenance Manual)

The Sections, Appendices, and Reference Documents listed on this page are all elements of Wastewater Reuse Permit LA-000077-03 and are enforceable as such. This permit does not relieve City of Albion, hereafter referred to as the permittee, from responsibility for compliance with other applicable federal, state or local laws, rules, standards or ordinances.

C. Abbreviations, Definitions

Ac-in	Acre-inch. The volume of water or wastewater to cover 1 acre of land to a depth of 1 inch. Equal to 27,154 gallons.
BMP or BMPs	Best Management Practices
COD	Chemical Oxygen Demand
DEQ or the Department	Idaho Department of Environmental Quality
Director	Director of the Idaho Department of Environmental Quality, or the Directors Designee, i.e. Regional Administrator
ET	Evapotranspiration – Loss of water from the soil and vegetation by evaporation and by plant uptake (transpiration)
GS	Growing Season – Typically April 01 through October 31 (214 days)
GW	Ground Water
GWQR	IDAPA 58.01.11 “Ground Water Quality Rule”
Guidance	Guidance for Land Application of Municipal and Industrial Wastewater http://www.deq.idaho.gov/water/permits_forms/permitting/guidance.cfm
HLRgs	Growing Season Hydraulic Loading Rate. Includes any combination of wastewater and supplemental irrigation water applied to land application hydraulic management units during the growing season. The HLRgs limit is specified in Section F. Permit Limits and Conditions.
HLRngs	Non-Growing Season Hydraulic Loading Rate. Includes any combination of wastewater and supplemental irrigation water applied to each hydraulic management unit during the non-growing season. The HLRngs limit is specified in Section F. Permit Limits and Conditions.
HMU	Hydraulic Management Unit (Serial Number designation is MU)
IWR	Irrigation Water Requirement – Any combination of wastewater and supplemental irrigation water applied at rates commensurate to the moisture requirements of the crop: $IWR = IR / E_i = (CU - P_e) / E_i$ Where: IR = net irrigation requirement = $CU - P_e$ CU = consumptive use (<u>crop evapotranspiration</u>) for a given crop in a given climatic area P_e = effective precipitation. E_i = irrigation system efficiency.
IDAPA	Idaho Administrative Procedures Act.
LG	Lagoon
lb/ac-day	Pounds (of constituent) per acre per day
MG	Million Gallons (1 MG = 36.827 acre-inches)
MGA	Million Gallons Annually (per WLAP Reporting Year)
NGS	Non-Growing Season – Typically November 01 through March 31 (151 days)
NVDS	Non-Volatile Dissolved Solids (= Total Dissolved Solids less Volatile Dissolved Solids)
O&M manual	Operation and Maintenance Manual, also referred to as the Plan of Operation
SAR	Sodium Adsorption Ratio

C. Abbreviations, Definitions

SI	Supplemental Irrigation water applied to the land application treatment site.
Soil AWC	Soil Available Water Holding Capacity - the water storage capability of a soil to a depth at which plant roots will utilize (typically 60 inches or root limiting layer)
SMU	Soil Monitoring Unit (Serial Number designation is SU)
SW	Surface Water
TDS	Total Dissolved Solids or Total Filterable Residue
TDIS	Total Dissolved Inorganic Solids – The summation of chemical concentration results in mg/L for the following common ions: calcium, magnesium, potassium, sodium, chloride, sulfate, and 0.6 times alkalinity (alkalinity expressed as calcium carbonate). Nitrate, Silica and fluoride shall be included if present in significant quantities (i.e. > 5 mg/L each).
TMDL	Total Maximum Daily Load – The sum of the individual waste-load allocations (WLA's) for point sources, Load Allocations (LA's) for non-point sources, and natural background. Such load shall be established at a level necessary to implement the applicable water quality standards with seasonal variations and a margin of safety that takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality. IDAPA 58.01.02 <i>Water Quality Standards and Wastewater Treatment Requirements</i>
Typical Crop Uptake	Typical Crop Uptake is defined as the median constituent crop uptake from the three (3) most recent years the crop has been grown. Typical Crop Uptake is determined for each hydraulic management unit. For new crops having less than three years of on-site crop uptake data, regional crop yield data and typical nutrient content values, or other values approved by DEQ may be used.
USGS	United States Geological Survey
WWRU	Wastewater Reuse
WW	Wastewater

D. Facility Information

Legal Name of Permittee	City of Albion
Type of Wastewater	Class D Municipal Wastewater
Method of Treatment	Slow Rate Land Treatment
Type of Facility	Public
Facility Location	1 mile east of Albion, Idaho
Legal Location	Township 12S Range 25E Section 5
County	Cassia
USGS Quad	Albion
Soils on Site	Ririe Silt Loam, Downata Silt Loam
Depth to Ground Water	10 - 30 feet
Beneficial Uses of Ground Water	Agricultural, Domestic
Nearest Surface Water	Land Creek
Beneficial Uses of Surface Water	Agriculture, Aquatic Life
Responsible Official	Don Bowden, Mayor
Mailing Address	P.O. Box 147 Albion, ID 83311
Phone / Fax	208-673-5352 / 208-673-6745

E. Compliance Schedule for Required Activities

The Activities in the following table shall be completed on or before the Completion Date unless modified by the Department in writing.

Compliance Activity Number Completion Date	Compliance Activity Description
CA-077-01 Twelve (12) Months after Permit Issuance	<p>An updated Plan of Operation (Operation and Maintenance Manual or O&M Manual) for the wastewater land application facility, incorporating the requirements of this permit, shall be submitted to DEQ for review and approval. The Plan of Operation shall be designed for use as an operator guide for actual day-to-day operations to meet permit requirements and shall include sampling and monitoring requirements to assess the adequacy of wastewater treatment facility operation. The Plan of Operation shall contain at a minimum all of the information in the latest revision of the Plan of Operation Checklist found in the guidance.</p>
CA-077-02 Twelve (12) Months after Permit Issuance	<p>A Quality Assurance Project Plan (QAPP) for monitoring required in this permit, shall be submitted to DEQ for review and approval. The plan shall cover field activities; monitoring locations; laboratory analytical methods and other activities; data verification and validation; data storage, retrieval and assessment and monitoring program evaluation and improvement. Once completed the Quality Assurance Project Plan shall be included in the updated Plan of Operation.</p>
CA-077-03 Plan due prior to conducting seepage test Test results due prior to November 2011	<p>Submit a seepage testing plan to DEQ for review and approval that describes the procedures to be used to conduct seepage testing of Secondary Lagoon number two (LG-007702).</p> <p>Upon approval of the plan, conduct the seepage testing of Secondary Lagoon number two (LG-007702) in accordance with the approved plan and submit test results to DEQ. The seepage performance standard is 0.25 inches per day. If a properly tested lagoon leaks more than 0.25 inches per day, the permittee shall either:</p> <ol style="list-style-type: none"> 1) Submit, for DEQ approval, a plan and schedule to either retest, repair, replace, or decommission structures not meeting this standard, or 2) Develop an assessment based on ground water sampling and analyses and/or modeling to determine the effect of the lagoon leakage on the local ground water. If actual or predicted impacts do not comply with IDAPA 58.01.11 as determined by DEQ, the permittee shall comply with 1) above.

E. Compliance Schedule for Required Activities

Compliance Activity Number Completion Date	Compliance Activity Description
<p style="text-align: center;">CA-077-04 Plan due prior to conducting seepage test</p> <p style="text-align: center;">Test results due prior to November 2012</p>	<p>Submit a seepage testing plan to DEQ for review and approval that describes the procedures to be used to conduct seepage testing of Primary Lagoon number one (LG-007701).</p> <p>Upon approval of the plan, conduct the seepage testing of Primary Lagoon number one (LG-007701) in accordance with the approved plan and submit test results to DEQ. The seepage performance standard is 0.25 inches per day. If a properly tested lagoon leaks more than 0.25 inches per day, the permittee shall either:</p> <ol style="list-style-type: none"> 1) Submit, for DEQ approval, a plan and schedule to either retest, repair, replace, or decommission structures not meeting this standard, or 2) Develop an assessment based on ground water sampling and analyses and/or modeling to determine the effect of the lagoon leakage on the local ground water. If actual or predicted impacts do not comply with IDAPA 58.01.11 as determined by DEQ, the permittee shall comply with 1) above.
<p style="text-align: center;">CA-077-05 One (1) Month after Permit Issuance</p>	<p>Submit for DEQ review and approval a Crop Management Plan that describes the best management practices for increasing crop yield and nutrient uptake. In addition the crop management plan shall include a description of how crop yields are estimated.</p>
<p style="text-align: center;">CA-077-06 Prior to wastewater irrigation</p>	<p>Upgrade the current disinfection system to a system capable of meeting Class D wastewater disinfection requirements as specified in IDAPA 58.01.17.600.07.d. No wastewater shall be applied prior to completion of the disinfection system upgrades. Submit plans and specification for DEQ review and approval prior to disinfection system improvements.</p>
<p style="text-align: center;">CA-077-07 Prior to wastewater irrigation</p>	<p>Submit for DEQ review and approval, a Buffer Zone Plan that contains all the components described for Buffer Zone Plans in the latest revision of the Plan of Operation checklist found in the guidance. In addition describe the control measures used to prevent public access to within 300 feet of the application site. The plan shall describe the steps taken to mitigate effluent exposure for personnel planting, maintaining or harvesting adjacent fields. The plan shall also describe the measures taken to minimize wastewater irrigation drift to adjacent fields. Once completed the Buffer Zone Plan shall be included in the updated Plan of Operation.</p>

F. Permit Limits and Conditions

The Permittee is allowed to apply wastewater and treat it on a land application site as prescribed in the table below and in accordance with all other applicable permit conditions and schedules.

Category	Permit Limits and Conditions
Type of Wastewater	Municipal, Class D
Application Site Area	13 acres
Application Season	Growing Season, April 1 - October 31 (214 days)
Reporting Year for Annual Loading Rates	November 1 - October 31
Growing Season Hydraulic Loading Rate, each HMU (Applies to wastewater and supplemental irrigation water)	Growing Season Hydraulic Loading Rate shall be substantially equal to the Irrigation Water Requirement (IWR) throughout the growing season.
Livestock Grazing	No grazing is allowed and animals shall not be fed harvested vegetation within two weeks of wastewater application.
Ground Water Quality	Wastewater land application activities shall not cause a violation of the <i>Ground Water Quality Rule (GWQR)</i> , IDAPA 58.01.11.
Maximum Nitrogen Loading Rate, pounds/acre-year	150% of typical crop uptake (see Section C definitions) or loading rates specified in the University of Idaho Fertility Guides.
Maximum Phosphorus Loading Rate, pounds/acre-year	150% of typical crop uptake (see Section C definitions) or loading rates specified in the University of Idaho Fertility Guides.
Total Coliform Disinfection Level	The median value of the last three (3) results must not exceed 230 total coliform organisms/100ml and no confirmed sample shall exceed 2300 total coliform organisms/100ml.

F. Permit Limits and Conditions

Category	Permit Limits and Conditions
Buffer Zones From Reuse Site	<p>All buffer zones must comply with, at a minimum, local zoning ordinances. Other minimum buffer zones are as follows:</p> <ul style="list-style-type: none"> • 500 feet to inhabited dwellings • 300 feet to areas accessible by the public • 100 feet to permanent and intermittent surface water • 50 feet to irrigation ditches and canals • 500 feet to private water supply wells • 1000 feet to public water supply wells
Fencing and Posting	<p>The application site shall be enclosed with a woven pasture fence or equivalent approved by DEQ. Signs should read 'Irrigated with Reclaimed Wastewater - Stay Back 300 Feet - Do Not Drink' or equivalent to be posted every 500 feet and at each corner of the application site. An additional sign shall be posted directly adjacent to the lagoon access road at the outer perimeter of the 300 foot public access buffer zone.</p>
Allowable Crops	<p>Crops grown for direct human consumption (those crops that are not processed prior to consumption) are not allowed.</p>
Supplemental Irrigation Water Protection	<p>For systems with wastewater and fresh irrigation water interconnections, DEQ-approved backflow prevention devices are required.</p>
Odor Management	<p>The land application facilities and other operations associated with the facility shall not create a public health hazard or nuisance conditions including odors. These facilities shall be managed in accordance with a DEQ approved Odor Management Plan as required by section E, CA-077-01. In the event that nuisance odors, verified by DEQ, occur, the Plan shall be revised as necessary to eliminate or minimize the reoccurrence of nuisance odors.</p>
Runoff Control	<p>No runoff is allowed.</p>

G. Monitoring Requirements

- 1) Appropriate analytical methods, as given in the *Idaho Guidance for Reclamation and Reuse of Municipal and Industrial Wastewater*, or as approved by the Idaho Department of Environmental Quality (hereinafter referred to as DEQ), shall be employed. A description of approved sample collection methods, appropriate analytical methods and companion QA/QC protocol shall be included in the facility's Quality Assurance Project Plan (QAPP), which shall be part of the Operation and Maintenance Manual.
- 2) The permittee shall monitor and measure parameters as stated in the Facility Monitoring Table in this section.
- 3) Samples shall be collected at times and locations that represent typical environmental and process parameters being monitored.
- 4) Unless otherwise agreed to in writing by DEQ, data collected and submitted shall include, but not be limited to, the parameters and frequencies in the Facility Monitoring Table on the following pages. Wastewater monitoring is required at the frequency show in the table below if wastewater is applied anytime during the time period shown.
- 5) Five (5) soil sample locations shall be selected for each SMU. Three (3) soil samples shall be collected at each sample location, one at 0-12 inches, one at 12-24 inches, and one at 24-36 inches, or refusal. The soil samples collected at each depth shall be composited to yield three (3) samples for analysis from each SMU.
- 6) Annual reporting of monitoring requirements is described in Section H, Standard Reporting Requirements.
- 7) Monitoring locations are defined in Appendix 1, "Environmental Monitoring Serial Numbers".

Facility Monitoring Table

Frequency	Monitoring Point	Description/Type of Monitoring	Parameters
Daily	Hydraulic management unit	Estimated volume of supplemental irrigation water applied	Volume (million gallons) record daily, compile monthly
Daily	Flow meter	Flow of wastewater into lagoons	Volume (million gallons) record daily, compile monthly
Daily	Flow meter	Flow of wastewater into land application system	Volume (million gallons and acre-inches) to each hydraulic management unit (HMU), record daily, compile monthly
Monthly	Effluent to land application	Grab sample	total coliform bacteria (CFU/100 ml)

G. Monitoring Requirements

Frequency	Monitoring Point	Description/Type of Monitoring	Parameters
Monthly	Effluent to land application	Grab sample	pH, nitrate and nitrite nitrogen, total Kjeldahl nitrogen, total phosphorus, electrical conductivity
Annually	Hydraulic management unit	Acres used for land application	Acres
Annually	Hydraulic Management Unit	Calculate wastewater nitrogen and phosphorus loading rates	Pounds/acre-year
Annually	Hydraulic management unit	Report nitrogen and phosphorus fertilizer application rates	Type and Pounds/acre-year
Annually	Hydraulic management unit	Crop type and yield	Pounds/acre-year (specify moisture basis)
Annually	Hydraulic management unit	Crop Nutrient Uptake from Crop Tissue Analysis or from standard tables for Crop Type and yield	Nitrogen and phosphorus uptake in lbs/ac-year
Annually	Hydraulic management unit	Calculate Month-Specific Irrigation Water Requirement for comparison with GS hydraulic loading	Inches/acre-month for each crop type
Annually	All supplemental irrigation pumps directly connected to the wastewater distribution system	Backflow testing	Document the testing of all backflow prevention devices. Report the testing date(s) and results of the test (pass or fail). If any test failed, report the date of repair or replacement of backflow prevention device, and if the repaired/replaced device is operating correctly
Annually	All flow measurement locations.	Flow measurement calibration of all flows to land application.	Document the flow measurement calibration of all flow meters and pumps used directly or indirectly to measure all wastewater, tail water, flushing water, and supplemental irrigation water flows applied.

G. Monitoring Requirements

Frequency	Monitoring Point	Description/Type of Monitoring	Parameters
May 2014	Soil Monitoring Unit	Soil monitoring (see note 5 above)	Nitrate and nitrite nitrogen, electrical conductivity, ammonia nitrogen, plant available phosphorus

H. Standard Reporting Requirements

- 1.) The Permittee shall submit an Annual Wastewater Reuse Site Performance Report ("Annual Report") prepared by a competent environmental professional no later than January 31 of each year, which shall cover the previous reporting year. The Annual Report shall include an interpretive discussion of monitoring data (ground water, soils, hydraulic loading, wastewater etc.) with particular respect to environmental impacts by the facility.
- 2.) The annual report shall contain the results of the required monitoring as described in *Section G. Monitoring Requirements*. If the permittee monitors any parameter more frequently than required by this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the annual report.
- 3.) The annual report shall be submitted to the DEQ Engineering Manager in the Twin Falls Regional Office.

Twin Falls Regional Office
1363 Fillmore St.
Twin Falls, ID 83301
208-736-2190

A copy of the annual report shall also be mailed to:

Richard Huddleston, P.E.
Wastewater Program Manager
1410 N. Hilton
Boise, ID 83706
208-373-0561

- 4.) Notice of completion of any work described in *Section E. Compliance Schedule for Required Activities* shall be submitted to the Department within 30 days of activity completion. The status of all other work described in Section E shall be submitted with the Annual Report.
- 5.) All laboratory reports containing the sample results for monitoring required by *Section G. Monitoring Requirements* of this permit shall be submitted with the Annual Report.

I. Standard Permit Conditions: Procedures and Reporting

1. The permittee shall at all times properly maintain and operate all structures, systems, and equipment for treatment, operational controls and monitoring, which are installed or used by the permittee to comply with all conditions of the permit or the Wastewater Reuse Permit Regulations, in conformance with a DEQ approved, current Plan of Operations (Operations and Maintenance Manual) which describes in detail the operation, maintenance, and management of the wastewater treatment system. This Plan of Operations shall be updated as necessary to reflect current operations.
2. Wastewater(s) or recharge waters applied to the land surface must be restricted to the premises of the application site. Wastewater discharges to surface water that require a permit under the Clean Water Act must be authorized by the U.S. Environmental Protection Agency.
3. Wastewater must not create a public health hazard or nuisance condition as stated in IDAPA 58.01.16.600.03. In order to prevent public health hazards and nuisance conditions the permittee shall:
 - a. Apply wastewater as evenly as practicable to the treatment area;
 - b. Prevent organic solids (contained in the wastewater) from accumulating on the ground surface to the point where the solids putrefy or support vectors or insects; and
 - c. Prevent wastewater from ponding in the fields to the point where the ponded wastewater putrefies or supports vectors or insects.
4. The permittee shall:
 - a. Manage the wastewater reuse treatment site as an agronomic operation where vegetative cover is grown and harvested or grazed to utilize the nutrients and minerals in the wastewater, and,
 - b. Not hydraulically overload any particular areas of the wastewater reuse treatment site.
5. All waste solids, including dredgings and sludges, shall be utilized or disposed in a manner which will prevent their entry, or the entry of contaminated drainage or leachate therefrom, into the waters of the state such that health hazards and nuisance conditions are not created; and to prevent impacts on designated beneficial uses of the ground water and surface water. The permittee's management of waste solids shall be governed by the terms of the DEQ approved Waste Solids Management Plan, which upon approval shall be an enforceable portion of this permit.
6. If the permittee intends to continue operation of the permitted facility after the expiration of an existing permit, the permittee shall apply for a new permit at least six months prior to the expiration date of the existing permit in accordance with the Wastewater Reuse Permit Regulations and include seepage tests on all lagoons per latest DEQ procedures.
7. The permittee shall allow the Director of the Idaho Department of Environmental Quality or the Director' designee (hereinafter referred to as Director), consistent with Title 39, Chapter 1, Idaho Code, to:
 - a. Enter the permitted facility,
 - b. Inspect any records that must be kept under the conditions of the permit.
 - c. Inspect any facility, equipment, practice, or operation permitted or required by the permit.
 - d. Sample or monitor for the purpose of assuring permit compliance, any substance or any parameter at the facility.
8. The permittee shall report to the Director under the circumstances and in the manner specified in this section:
 - a. In writing thirty (30) days before any planned physical alteration or addition to the permitted facility or activity if that alteration or addition would result in any significant change in information that was submitted during the permit application process.

I. Standard Permit Conditions: Procedures and Reporting

- b. In writing thirty (30) days before any anticipated change which would result in non-compliance with any permit condition or these regulations.
- c. Orally within twenty-four (24) hours from the time the permittee became aware of any non-compliance which may endanger the public health or the environment at telephone numbers provided in the permit by the Director (see below)

DEQ Regional Office: see Permit Certificate Page
Emergency 24 Hour Number: 1-800-632-8000

- d. In writing as soon as possible but within five (5) days of the date the permittee knows or should know of any non-compliance unless extended by the DEQ. This report shall contain:
 - i. A description of the non-compliance and its cause;
 - ii. The period of non-compliance including to the extent possible, times and dates and, if the non-compliance has not been corrected, the anticipated time it is expected to continue; and
 - iii. Steps taken or planned to reduce or eliminate reoccurrence of the non-compliance.
 - e. In writing as soon as possible after the permittee becomes aware of relevant facts not submitted or incorrect information submitted, in a permit application or any report to the Director. Those facts or the correct information shall be included as a part of this report.
9. The permittee shall take all necessary actions to prevent or eliminate any adverse impact on the public health or the environment resulting from permit noncompliance.
10. The permittee shall determine (on an on-going basis) if any noxious weed problems relate to the permitted sites. If problems are present, coordinate with the Idaho Department of Agriculture or the local County authority regarding their requirements for noxious weed control. Also address these control operations in an update to the Operations and Maintenance Manual.

J. Standard Permit Conditions: Modifications, Violation, and Revocation

1. The permittee shall furnish to the Director within reasonable time, any information including copies of records, which may be requested by the Director to determine whether cause exists for modifying, revoking, re-issuing, or terminating the permit, or to determine compliance with the permit or these regulations.
2. Both minor and major modifications may be made to this permit as stated in IDAPA 58.01.17.700.01 and 02 with respect to any conditions stated in this permit upon review and approval of the DEQ.
3. Whenever a facility expansion, production increase or process modification is anticipated which will result in a change in the character of pollutants to be discharged or which will result in a new or increased discharge that will exceed the conditions of this permit, or if it is determined by the DEQ that the terms or conditions of the permit must be modified in order to adequately protect the public health or environment, a request for either major or minor modifications must be submitted together with the reports as described in Section I. *Standard Reporting Requirements*, and plans and specifications for the proposed changes. No such facility expansion, production increase or process modification shall be made until plans have been reviewed and approved by the DEQ and a new permit or permit modification has been issued.
4. Permits shall be transferable to a new owner or operator provided that the permittee notifies the Director by requesting a minor modification of the permit before the date of transfer.
5. Any person violating any provision of the Wastewater Reuse Permit Regulations, or any permit or order issued thereunder shall be liable for a civil penalty not to exceed ten thousand dollars (\$10,000) or one thousand dollars (\$1,000) for each day of a continuing violation, whichever is greater. In addition, pursuant to Title 39, Chapter 1, Idaho Code, any willful or negligent violation may constitute a misdemeanor.
6. The Director may revoke a permit if the permittee violates any permit condition or the Wastewater Reuse Permit Regulations.
7. Except in cases of emergency, the Director shall issue a written notice of intent to revoke to the permittee prior to final revocation. Revocation shall become final within thirty-five (35) days of receipt of the notice by the permittee, unless within that time the permittee request an administrative hearing in writing to the Board of Environmental Quality pursuant to the Rules of Administrative Procedures contained in IDAPA 58.01.23.
8. If, pursuant to Idaho Code 67-5247, the Director finds the public health, safety or welfare requires emergency action, the Director shall incorporate findings in support of such action in a written notice of emergency revocation issued to the permittee. Emergency revocation shall be effective upon receipt by the permittee. Thereafter, if requested by the permittee in writing, a revocation hearing before the Board of Environmental Quality shall be provided. Such hearings shall be conducted in accordance with the Rules of Administrative Procedures contained in IDAPA 58.01.23.
9. The provisions of this permit are severable and if a provision or its application is declared invalid or unenforceable for any reason, that declaration will not affect the validity or enforceability of the remaining provisions.
10. The permittee shall notify the DEQ at least six (6) months prior to permanently removing any permitted reuse facility from service, including any treatment, storage, or other facilities or equipment associated with the reuse site. Prior to commencing closure activities, the permittee shall: a) participate in a pre-site closure meeting with the DEQ; b) develop a site closure plan that identifies specific closure, site characterization, or cleanup tasks with scheduled task completion dates in accordance with agreements made at the pre-site closure meeting; and c) submit the completed site

J. Standard Permit Conditions: Modifications, Violation, and Revocation

closure plan to the DEQ for review and approval within forty-five (45) days of the pre-site closure meeting. The permittee must complete the DEQ approved site closure plan.

Appendix 1
Environmental Monitoring Serial Numbers

HYDRAULIC MANAGEMENT UNITS

Serial Number	Description	Acres
MU-007701	City of Albion land application site	13

WASTEWATER SAMPLING POINTS

Serial Number	Description
WW-007701	Effluent to land application system

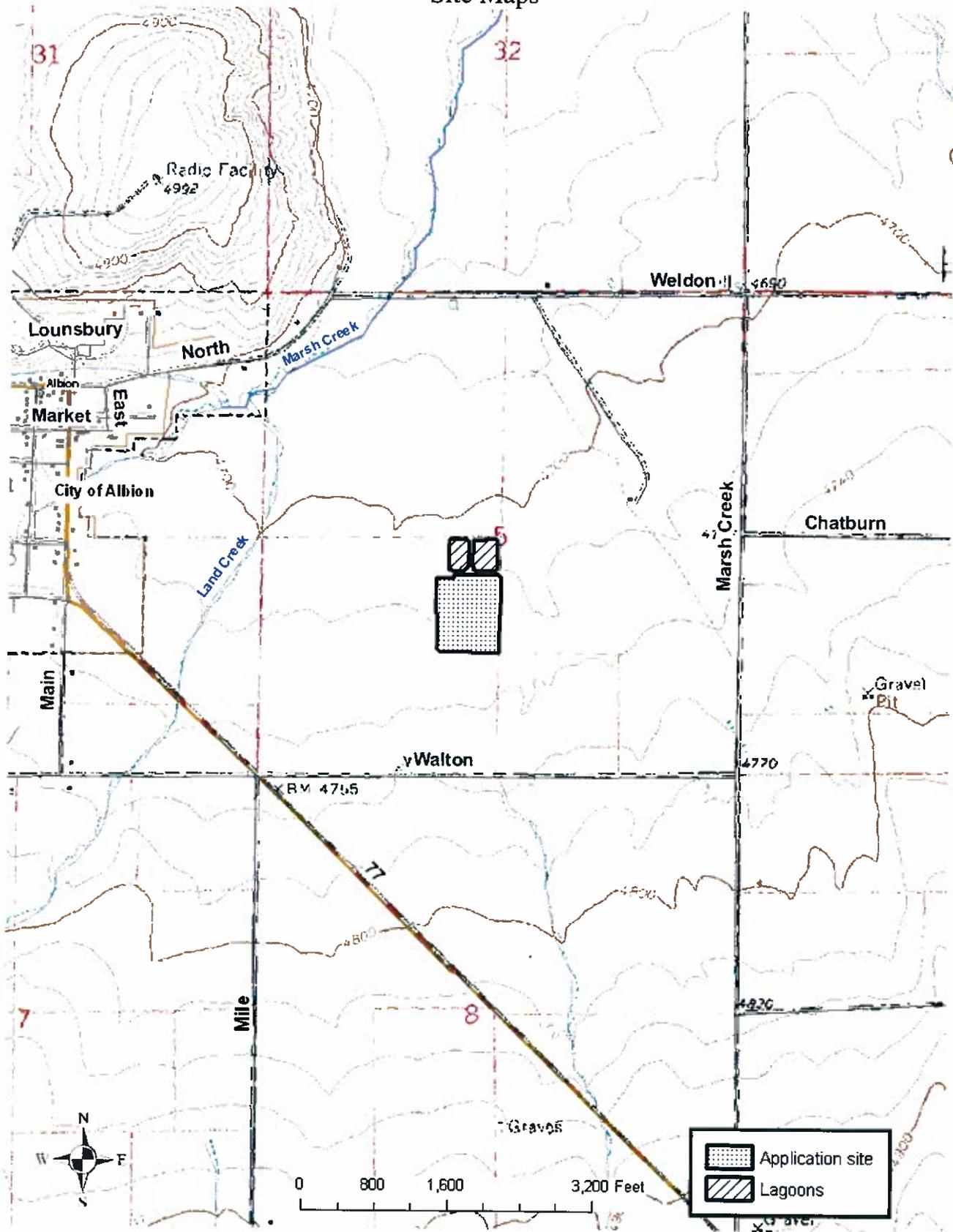
SOIL MONITORING UNITS

Serial Number	Description	Associated MU
SU-007701	Land Application acreage	MU-007701

LAGOONS

Serial Number	Description	Capacity (million gallons)
LG-007701	Primary lagoon one (east)	5.1
LG-007702	Secondary lagoon two (west)	3.9

Appendix 2 Site Maps



APPENDIX B AGENCY COORDINATION



J-U-B ENGINEERS, INC.

J-U-B COMPANIES



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LANGDON
GROUP



GATEWAY
MAPPING
INC.

October 22, 2013

Brian Reed
Department of Environmental Quality
1363 Fillmore
Twin Falls ID 83301

RE: City of Albion Environmental Information Document (EID) Improvement Project – Request for Comments for Preparation of an Environmental Information Document

Dear Brian:

The City of Albion is preparing a facility planning document to identify and make necessary improvements to their wastewater system that are cost effective and environmentally sound. The facility plan for this project is being funded 50% by a Department of Environmental Quality (DEQ) planning grant which requires compliance with the Rules for Wastewater Treatment Facility Grants, IDAPA 58.01.04. The purpose of this letter is to request your review and response regarding any environmental impacts that your agency may identify for this proposed project pursuant to the Idaho Department of Environmental Quality's State Environmental Review Process, which mirrors the National Environmental Policy Act.

The proposed project consists of addressing concerns the City has regarding the condition and capacity of the existing wastewater infrastructure, including:

- The sewer collection system is comprised primarily of aging asbestos cement pipe installed in 1975. Leaky and/or cracked service connections, pipe, and manholes has resulted in infiltration and inflow (I&I) flows that are approximately twice as much as would be expected for a city the size of Albion.
- The pumps within the existing sewer lift station are undersized for pumping the influent flow to the treatment lagoons, particularly during high I&I flow periods. As a result, the wet-well has overflowed on several occasions in the past. Additionally, there is no back-up power or flow monitoring and the lift station is over 35 years old, resulting in many components that are corroded and in need of replacement. The lift station pumps also have occasional problems with ragging and clogging.
- The existing 6-inch pressure main from the lift station to the lagoons has not been cleaned since its construction and the condition of the air-vacuum valves are unknown.
- The wastewater treatment lagoons and land application system are generally in adequate condition and have sufficient capacity. However, there are several minor improvements needed to optimize their performance (e.g., inlet and outlet valve replacement, influent screening, etc.).

The project is being proposed to address the City's concerns regarding the wastewater collection and treatment system with highest priority given to upgrades necessary to meet regulatory requirements and to protect the health, safety, and welfare of the public and environment. The selected improvements will also provide the greatest benefit to the City in a cost-effective manner based on the needs of the community. A phased approach is used to minimize the initial capital costs and distribute the costs reasonably over time. Phasing of the improvements will also allow the City to implement them on an "as-needed" basis to meet

future growth or as driven by regulatory requirements. Following is the phasing plan for the wastewater system improvements identified in the draft Wastewater Facilities Plan:

Phase 1 Improvements (Highest Priority)

3. Replace the existing lift station with a duplex submersible lift station, including the associated piping and fittings, a valve vault, a flow meter and vault, electrical panels and controls, back-up generator, diesel fuel storage tank, building, and jib crane for pump removal. The City is contemplating purchasing the land adjacent to the existing lift station for these improvements.
4. Reconstruct the existing 8-inch gravity trunk line that enters the lift station wet-well from the north.

Phase 2 Improvements

4. Clean and video inspect the entire gravity sewer collection system.
5. It is estimated that approximately 25 percent of the gravity sewer mains will need to be replaced to address I & I issues and structural defects.
6. Clean the existing 6-inch pressure main and locate and replace the air-vacuum valves.

Phase 3 Improvements

2. Construct improvements to the existing treatment lagoons to optimize their performance, including:
 - a. Reconstruct the 6-inch force mains and valves at the lagoons.
 - b. Construct a coarse screening structure and new 8-inch gravity mains to the lagoon inlets.
 - c. Replace the 8-inch valves on the lagoon outlet lines.

Enclosed are maps of the proposed project planning area that depict the proposed project improvements and area of potential effect for all construction activities.

We request that you advise us of any comments that you may have regarding this project within 30 days, so the City of Albion can proceed with the completion of the Environmental Information Document.

If you have any questions concerning this proposed project or if you need any further information, please feel free to contact me at 208-733-2414.

Sincerely,



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

Encl: Maps



SCALE IN FEET

LEGEND

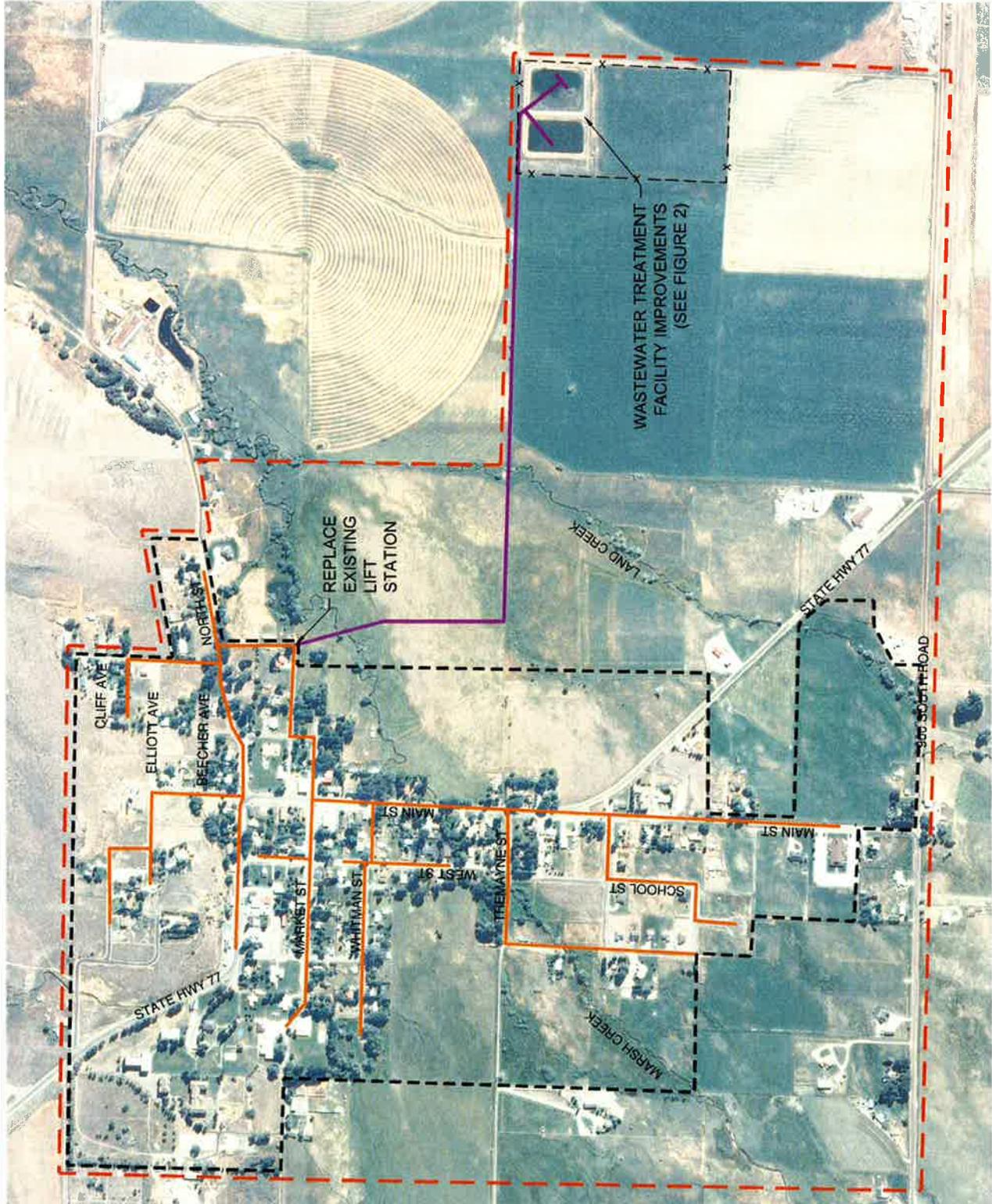
- 8" GRAVITY SEWER MAIN
- 6" PRESSURE SEWER
- - - CITY LIMITS
- - - PROPOSED PROJECT PLANNING AREA AND AREA OF POTENTIAL EFFECT

NOTE: SEWER MAINS SHOWN IN APPROXIMATE LOCATION

**FIGURE 1
PROPOSED WASTEWATER
COLLECTION SYSTEM
IMPROVEMENTS**



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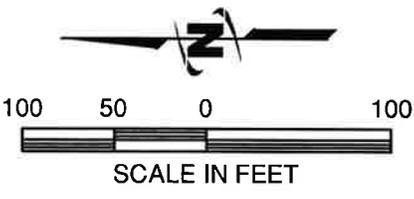
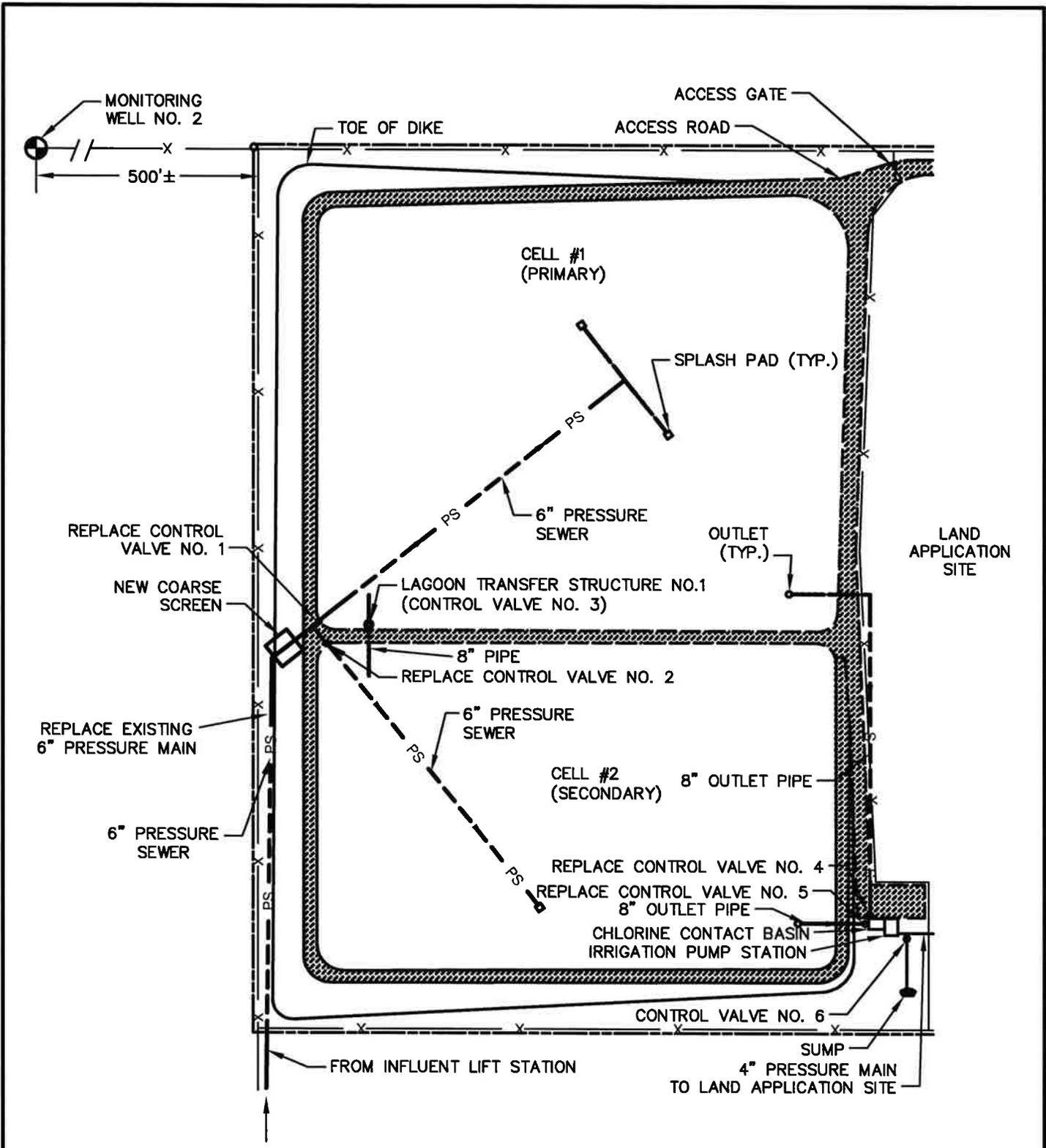


FIGURE 2
PROPOSED TREATMENT
FACILITY IMPROVEMENTS



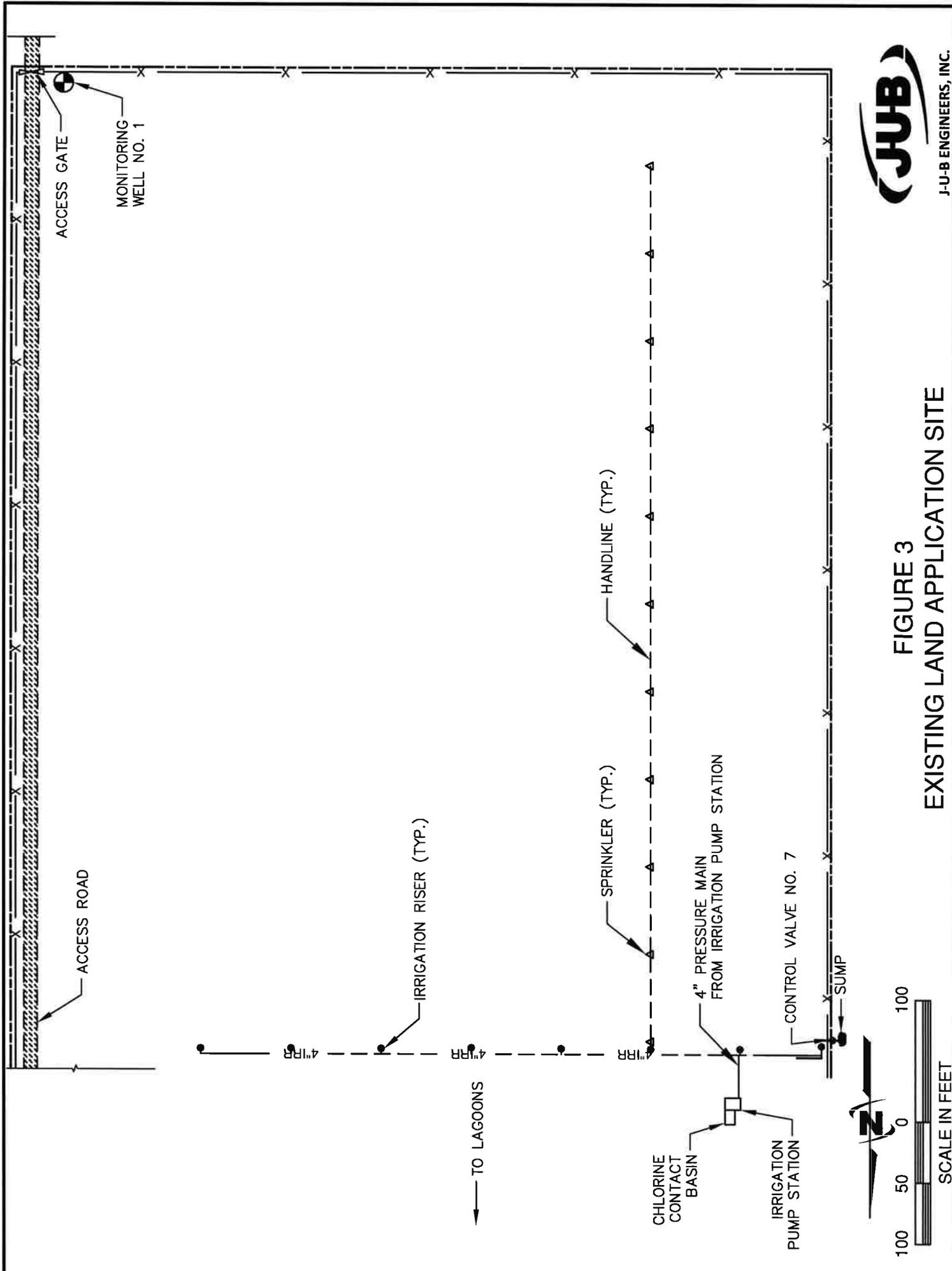


FIGURE 3
EXISTING LAND APPLICATION SITE





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October 22, 2013

Ethan Morton
Idaho State Historical Society
210 Main Street
Boise ID 83702

RE: City of Albion Environmental Information Document (EID) Improvement Project – Request for Comments for Preparation of an Environmental Information Document

Dear Ethan:

The City of Albion is preparing a facility planning document to identify and make necessary improvements to their wastewater system that are cost effective and environmentally sound. The facility plan for this project is being funded 50% by a Department of Environmental Quality (DEQ) planning grant which requires compliance with the Rules for Wastewater Treatment Facility Grants, IDAPA 58.01.04. The purpose of this letter is to request your review and response regarding any environmental impacts that your agency may identify for this proposed project pursuant to the Idaho Department of Environmental Quality's State Environmental Review Process, which mirrors the National Environmental Policy Act.

The proposed project consists of addressing concerns the City has regarding the condition and capacity of the existing wastewater infrastructure, including:

- The sewer collection system is comprised primarily of aging asbestos cement pipe installed in 1975. Leaky and/or cracked service connections, pipe, and manholes has resulted in infiltration and inflow (I&I) flows that are approximately twice as much as would be expected for a city the size of Albion.
- The pumps within the existing sewer lift station are undersized for pumping the influent flow to the treatment lagoons, particularly during high I&I flow periods. As a result, the wet-well has overflowed on several occasions in the past. Additionally, there is no back-up power or flow monitoring and the lift station is over 35 years old, resulting in many components that are corroded and in need of replacement. The lift station pumps also have occasional problems with ragging and clogging.
- The existing 6-inch pressure main from the lift station to the lagoons has not been cleaned since its construction and the condition of the air-vacuum valves are unknown.
- The wastewater treatment lagoons and land application system are generally in adequate condition and have sufficient capacity. However, there are several minor improvements needed to optimize their performance (e.g., inlet and outlet valve replacement, influent screening, etc.).

The project is being proposed to address the City's concerns regarding the wastewater collection and treatment system with highest priority given to upgrades necessary to meet regulatory requirements and to protect the health, safety, and welfare of the public and environment. The selected improvements will also provide the greatest benefit to the City in a cost-effective manner based on the needs of the community. A phased approach is used to minimize the initial capital costs and distribute the costs reasonably over time. Phasing of the improvements will also allow the City to implement them on an "as-needed" basis to meet

future growth or as driven by regulatory requirements. Following is the phasing plan for the wastewater system improvements identified in the draft Wastewater Facilities Plan:

Phase 1 Improvements (Highest Priority)

11. Replace the existing lift station with a duplex submersible lift station, including the associated piping and fittings, a valve vault, a flow meter and vault, electrical panels and controls, back-up generator, diesel fuel storage tank, building, and jib crane for pump removal. The City is contemplating purchasing the land adjacent to the existing lift station for these improvements.
12. Reconstruct the existing 8-inch gravity trunk line that enters the lift station wet-well from the north.

Phase 2 Improvements

16. Clean and video inspect the entire gravity sewer collection system.
17. It is estimated that approximately 25 percent of the gravity sewer mains will need to be replaced to address I & I issues and structural defects.
18. Clean the existing 6-inch pressure main and locate and replace the air-vacuum valves.

Phase 3 Improvements

6. Construct improvements to the existing treatment lagoons to optimize their performance, including:
 - a. Reconstruct the 6-inch force mains and valves at the lagoons.
 - b. Construct a coarse screening structure and new 8-inch gravity mains to the lagoon inlets.
 - c. Replace the 8-inch valves on the lagoon outlet lines.

Enclosed are maps of the proposed project planning area that depict the proposed project improvements and area of potential effect for all construction activities.

We request that you advise us of any comments that you may have regarding this project within 30 days, so the City of Albion can proceed with the completion of the Environmental Information Document.

If you have any questions concerning this proposed project or if you need any further information, please feel free to contact me at 208-733-2414.

Sincerely,



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

Encl: Maps



J-U-B ENGINEERS, INC.

J-U-B COMPANIES



THE
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GATEWAY
MAPPING
INC.

October 22, 2013

Gary Bahr
Idaho Department of Agriculture
P.O. Box 790
Boise ID 83701

RE: City of Albion Environmental Information Document (EID) Improvement Project – Request for Comments for Preparation of an Environmental Information Document

Dear Gary:

The City of Albion is preparing a facility planning document to identify and make necessary improvements to their wastewater system that are cost effective and environmentally sound. The facility plan for this project is being funded 50% by a Department of Environmental Quality (DEQ) planning grant which requires compliance with the Rules for Wastewater Treatment Facility Grants, IDAPA 58.01.04. The purpose of this letter is to request your review and response regarding any environmental impacts that your agency may identify for this proposed project pursuant to the Idaho Department of Environmental Quality's State Environmental Review Process, which mirrors the National Environmental Policy Act.

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- The existing 6-inch pressure main from the lift station to the lagoons has not been cleaned since its construction and the condition of the air-vacuum valves are unknown.
- The wastewater treatment lagoons and land application system are generally in adequate condition and have sufficient capacity. However, there are several minor improvements needed to optimize their performance (e.g., inlet and outlet valve replacement, influent screening, etc.).

The project is being proposed to address the City's concerns regarding the wastewater collection and treatment system with highest priority given to upgrades necessary to meet regulatory requirements and to protect the health, safety, and welfare of the public and environment. The selected improvements will also provide the greatest benefit to the City in a cost-effective manner based on the needs of the community. A phased approach is used to minimize the initial capital costs and distribute the costs reasonably over time. Phasing of the improvements will also allow the City to implement them on an "as-needed" basis to meet

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Phase 1 Improvements (Highest Priority)

15. Replace the existing lift station with a duplex submersible lift station, including the associated piping and fittings, a valve vault, a flow meter and vault, electrical panels and controls, back-up generator, diesel fuel storage tank, building, and jib crane for pump removal. The City is contemplating purchasing the land adjacent to the existing lift station for these improvements.
16. Reconstruct the existing 8-inch gravity trunk line that enters the lift station wet-well from the north.

Phase 2 Improvements

22. Clean and video inspect the entire gravity sewer collection system.
23. It is estimated that approximately 25 percent of the gravity sewer mains will need to be replaced to address I & I issues and structural defects.
24. Clean the existing 6-inch pressure main and locate and replace the air-vacuum valves.

Phase 3 Improvements

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If you have any questions concerning this proposed project or if you need any further information, please feel free to contact me at 208-733-2414.

Sincerely,



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

Encl: Maps



J-U-B ENGINEERS, INC.

J-U-B COMPANIES



THE
LANGDON
GROUP



GATEWAY
MAPPING
INC.

October 22, 2013

James Joyner
Army Corps of Engineers
900 N. Skyline Dr., Suite A
Idaho Falls, ID 83402-1718

RE: City of Albion Environmental Information Document (EID) Improvement Project – Request for Comments for Preparation of an Environmental Information Document

Dear James:

The City of Albion is preparing a facility planning document to identify and make necessary improvements to their wastewater system that are cost effective and environmentally sound. The facility plan for this project is being funded 50% by a Department of Environmental Quality (DEQ) planning grant which requires compliance with the Rules for Wastewater Treatment Facility Grants, IDAPA 58.01.04. The purpose of this letter is to request your review and response regarding any environmental impacts that your agency may identify for this proposed project pursuant to the Idaho Department of Environmental Quality's State Environmental Review Process, which mirrors the National Environmental Policy Act.

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- The sewer collection system is comprised primarily of aging asbestos cement pipe installed in 1975. Leaky and/or cracked service connections, pipe, and manholes has resulted in infiltration and inflow (I&I) flows that are approximately twice as much as would be expected for a city the size of Albion.
- The pumps within the existing sewer lift station are undersized for pumping the influent flow to the treatment lagoons, particularly during high I&I flow periods. As a result, the wet-well has overflowed on several occasions in the past. Additionally, there is no back-up power or flow monitoring and the lift station is over 35 years old, resulting in many components that are corroded and in need of replacement. The lift station pumps also have occasional problems with ragging and clogging.
- The existing 6-inch pressure main from the lift station to the lagoons has not been cleaned since its construction and the condition of the air-vacuum valves are unknown.
- The wastewater treatment lagoons and land application system are generally in adequate condition and have sufficient capacity. However, there are several minor improvements needed to optimize their performance (e.g., inlet and outlet valve replacement, influent screening, etc.).

The project is being proposed to address the City's concerns regarding the wastewater collection and treatment system with highest priority given to upgrades necessary to meet regulatory requirements and to protect the health, safety, and welfare of the public and environment. The selected improvements will also provide the greatest benefit to the City in a cost-effective manner based on the needs of the community. A phased approach is used to minimize the initial capital costs and distribute the costs reasonably over time. Phasing of the improvements will also allow the City to implement them on an "as-needed" basis to meet

future growth or as driven by regulatory requirements. Following is the phasing plan for the wastewater system improvements identified in the draft Wastewater Facilities Plan:

Phase 1 Improvements (Highest Priority)

1. Replace the existing lift station with a duplex submersible lift station, including the associated piping and fittings, a valve vault, a flow meter and vault, electrical panels and controls, back-up generator, diesel fuel storage tank, building, and jib crane for pump removal. The City is contemplating purchasing the land adjacent to the existing lift station for these improvements.
2. Reconstruct the existing 8-inch gravity trunk line that enters the lift station wet-well from the north.

Phase 2 Improvements

1. Clean and video inspect the entire gravity sewer collection system.
2. It is estimated that approximately 25 percent of the gravity sewer mains will need to be replaced to address I & I issues and structural defects.
3. Clean the existing 6-inch pressure main and locate and replace the air-vacuum valves.

Phase 3 Improvements

1. Construct improvements to the existing treatment lagoons to optimize their performance, including:
 - a. Reconstruct the 6-inch force mains and valves at the lagoons.
 - b. Construct a coarse screening structure and new 8-inch gravity mains to the lagoon inlets.
 - c. Replace the 8-inch valves on the lagoon outlet lines.

Enclosed are maps of the proposed project planning area that depict the proposed project improvements and area of potential effect for all construction activities.

We request that you advise us of any comments that you may have regarding this project within 30 days, so the City of Albion can proceed with the completion of the Environmental Information Document.

If you have any questions concerning this proposed project or if you need any further information, please feel free to contact me at 208-733-2414.

Sincerely,



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

Encl: Maps



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October 22, 2013

James Werntz
U.S. EPA, Idaho Operations Office
950 W. Bannock Street, Ste. 900
Boise ID 83702

RE: City of Albion Environmental Information Document (EID) Improvement Project – Request for Comments for Preparation of an Environmental Information Document

Dear James:

The City of Albion is preparing a facility planning document to identify and make necessary improvements to their wastewater system that are cost effective and environmentally sound. The facility plan for this project is being funded 50% by a Department of Environmental Quality (DEQ) planning grant which requires compliance with the Rules for Wastewater Treatment Facility Grants, IDAPA 58.01.04. The purpose of this letter is to request your review and response regarding any environmental impacts that your agency may identify for this proposed project pursuant to the Idaho Department of Environmental Quality's State Environmental Review Process, which mirrors the National Environmental Policy Act.

The proposed project consists of addressing concerns the City has regarding the condition and capacity of the existing wastewater infrastructure, including:

- The sewer collection system is comprised primarily of aging asbestos cement pipe installed in 1975. Leaky and/or cracked service connections, pipe, and manholes has resulted in infiltration and inflow (I&I) flows that are approximately twice as much as would be expected for a city the size of Albion.
- The pumps within the existing sewer lift station are undersized for pumping the influent flow to the treatment lagoons, particularly during high I&I flow periods. As a result, the wet-well has overflowed on several occasions in the past. Additionally, there is no back-up power or flow monitoring and the lift station is over 35 years old, resulting in many components that are corroded and in need of replacement. The lift station pumps also have occasional problems with ragging and clogging.
- The existing 6-inch pressure main from the lift station to the lagoons has not been cleaned since its construction and the condition of the air-vacuum valves are unknown.
- The wastewater treatment lagoons and land application system are generally in adequate condition and have sufficient capacity. However, there are several minor improvements needed to optimize their performance (e.g., inlet and outlet valve replacement, influent screening, etc.).

The project is being proposed to address the City's concerns regarding the wastewater collection and treatment system with highest priority given to upgrades necessary to meet regulatory requirements and to protect the health, safety, and welfare of the public and environment. The selected improvements will also provide the greatest benefit to the City in a cost-effective manner based on the needs of the community. A phased approach is used to minimize the initial capital costs and distribute the costs reasonably over time. Phasing of the improvements will also allow the City to implement them on an "as-needed" basis to meet

future growth or as driven by regulatory requirements. Following is the phasing plan for the wastewater system improvements identified in the draft Wastewater Facilities Plan:

Phase 1 Improvements (Highest Priority)

5. Replace the existing lift station with a duplex submersible lift station, including the associated piping and fittings, a valve vault, a flow meter and vault, electrical panels and controls, back-up generator, diesel fuel storage tank, building, and jib crane for pump removal. The City is contemplating purchasing the land adjacent to the existing lift station for these improvements.
6. Reconstruct the existing 8-inch gravity trunk line that enters the lift station wet-well from the north.

Phase 2 Improvements

7. Clean and video inspect the entire gravity sewer collection system.
8. It is estimated that approximately 25 percent of the gravity sewer mains will need to be replaced to address I & I issues and structural defects.
9. Clean the existing 6-inch pressure main and locate and replace the air-vacuum valves.

Phase 3 Improvements

3. Construct improvements to the existing treatment lagoons to optimize their performance, including:
 - a. Reconstruct the 6-inch force mains and valves at the lagoons.
 - b. Construct a coarse screening structure and new 8-inch gravity mains to the lagoon inlets.
 - c. Replace the 8-inch valves on the lagoon outlet lines.

Enclosed are maps of the proposed project planning area that depict the proposed project improvements and area of potential effect for all construction activities.

We request that you advise us of any comments that you may have regarding this project within 30 days, so the City of Albion can proceed with the completion of the Environmental Information Document.

If you have any questions concerning this proposed project or if you need any further information, please feel free to contact me at 208-733-2414.

Sincerely,



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

Encl: Maps



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October 22, 2013

Mike McDonald
Idaho Department of Fish and Game
319 South 417 East
Jerome ID 83338

RE: City of Albion Environmental Information Document (EID) Improvement Project – Request for Comments for Preparation of an Environmental Information Document

Dear Mike:

The City of Albion is preparing a facility planning document to identify and make necessary improvements to their wastewater system that are cost effective and environmentally sound. The facility plan for this project is being funded 50% by a Department of Environmental Quality (DEQ) planning grant which requires compliance with the Rules for Wastewater Treatment Facility Grants, IDAPA 58.01.04. The purpose of this letter is to request your review and response regarding any environmental impacts that your agency may identify for this proposed project pursuant to the Idaho Department of Environmental Quality's State Environmental Review Process, which mirrors the National Environmental Policy Act.

The proposed project consists of addressing concerns the City has regarding the condition and capacity of the existing wastewater infrastructure, including:

- The sewer collection system is comprised primarily of aging asbestos cement pipe installed in 1975. Leaky and/or cracked service connections, pipe, and manholes has resulted in infiltration and inflow (I&I) flows that are approximately twice as much as would be expected for a city the size of Albion.
- The pumps within the existing sewer lift station are undersized for pumping the influent flow to the treatment lagoons, particularly during high I&I flow periods. As a result, the wet-well has overflowed on several occasions in the past. Additionally, there is no back-up power or flow monitoring and the lift station is over 35 years old, resulting in many components that are corroded and in need of replacement. The lift station pumps also have occasional problems with ragging and clogging.
- The existing 6-inch pressure main from the lift station to the lagoons has not been cleaned since its construction and the condition of the air-vacuum valves are unknown.
- The wastewater treatment lagoons and land application system are generally in adequate condition and have sufficient capacity. However, there are several minor improvements needed to optimize their performance (e.g., inlet and outlet valve replacement, influent screening, etc.).

The project is being proposed to address the City's concerns regarding the wastewater collection and treatment system with highest priority given to upgrades necessary to meet regulatory requirements and to protect the health, safety, and welfare of the public and environment. The selected improvements will also provide the greatest benefit to the City in a cost-effective manner based on the needs of the community. A phased approach is used to minimize the initial capital costs and distribute the costs reasonably over time. Phasing of the improvements will also allow the City to implement them on an "as-needed" basis to meet

future growth or as driven by regulatory requirements. Following is the phasing plan for the wastewater system improvements identified in the draft Wastewater Facilities Plan:

Phase 1 Improvements (Highest Priority)

13. Replace the existing lift station with a duplex submersible lift station, including the associated piping and fittings, a valve vault, a flow meter and vault, electrical panels and controls, back-up generator, diesel fuel storage tank, building, and jib crane for pump removal. The City is contemplating purchasing the land adjacent to the existing lift station for these improvements.
14. Reconstruct the existing 8-inch gravity trunk line that enters the lift station wet-well from the north.

Phase 2 Improvements

19. Clean and video inspect the entire gravity sewer collection system.
20. It is estimated that approximately 25 percent of the gravity sewer mains will need to be replaced to address I & I issues and structural defects.
21. Clean the existing 6-inch pressure main and locate and replace the air-vacuum valves.

Phase 3 Improvements

7. Construct improvements to the existing treatment lagoons to optimize their performance, including:
 - a. Reconstruct the 6-inch force mains and valves at the lagoons.
 - b. Construct a coarse screening structure and new 8-inch gravity mains to the lagoon inlets.
 - c. Replace the 8-inch valves on the lagoon outlet lines.

Enclosed are maps of the proposed project planning area that depict the proposed project improvements and area of potential effect for all construction activities.

We request that you advise us of any comments that you may have regarding this project within 30 days, so the City of Albion can proceed with the completion of the Environmental Information Document.

If you have any questions concerning this proposed project or if you need any further information, please feel free to contact me at 208-733-2414.

Sincerely,



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

Encl: Maps



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MAPPING
INC.

October 22, 2013

Patrick Kelly
Idaho Department of Water Resources
P.O. Box 83720
Boise ID 83720-0098

RE: City of Albion Environmental Information Document (EID) Improvement Project – Request for Comments for Preparation of an Environmental Information Document

Dear Patrick:

The City of Albion is preparing a facility planning document to identify and make necessary improvements to their wastewater system that are cost effective and environmentally sound. The facility plan for this project is being funded 50% by a Department of Environmental Quality (DEQ) planning grant which requires compliance with the Rules for Wastewater Treatment Facility Grants, IDAPA 58.01.04. The purpose of this letter is to request your review and response regarding any environmental impacts that your agency may identify for this proposed project pursuant to the Idaho Department of Environmental Quality's State Environmental Review Process, which mirrors the National Environmental Policy Act.

The proposed project consists of addressing concerns the City has regarding the condition and capacity of the existing wastewater infrastructure, including:

- The sewer collection system is comprised primarily of aging asbestos cement pipe installed in 1975. Leaky and/or cracked service connections, pipe, and manholes has resulted in infiltration and inflow (I&I) flows that are approximately twice as much as would be expected for a city the size of Albion.
- The pumps within the existing sewer lift station are undersized for pumping the influent flow to the treatment lagoons, particularly during high I&I flow periods. As a result, the wet-well has overflowed on several occasions in the past. Additionally, there is no back-up power or flow monitoring and the lift station is over 35 years old, resulting in many components that are corroded and in need of replacement. The lift station pumps also have occasional problems with ragging and clogging.
- The existing 6-inch pressure main from the lift station to the lagoons has not been cleaned since its construction and the condition of the air-vacuum valves are unknown.
- The wastewater treatment lagoons and land application system are generally in adequate condition and have sufficient capacity. However, there are several minor improvements needed to optimize their performance (e.g., inlet and outlet valve replacement, influent screening, etc.).

The project is being proposed to address the City's concerns regarding the wastewater collection and treatment system with highest priority given to upgrades necessary to meet regulatory requirements and to protect the health, safety, and welfare of the public and environment. The selected improvements will also provide the greatest benefit to the City in a cost-effective manner based on the needs of the community. A phased approach is used to minimize the initial capital costs and distribute the costs reasonably over time. Phasing of the improvements will also allow the City to implement them on an "as-needed" basis to meet

future growth or as driven by regulatory requirements. Following is the phasing plan for the wastewater system improvements identified in the draft Wastewater Facilities Plan:

Phase 1 Improvements (Highest Priority)

9. Replace the existing lift station with a duplex submersible lift station, including the associated piping and fittings, a valve vault, a flow meter and vault, electrical panels and controls, back-up generator, diesel fuel storage tank, building, and jib crane for pump removal. The City is contemplating purchasing the land adjacent to the existing lift station for these improvements.
10. Reconstruct the existing 8-inch gravity trunk line that enters the lift station wet-well from the north.

Phase 2 Improvements

13. Clean and video inspect the entire gravity sewer collection system.
14. It is estimated that approximately 25 percent of the gravity sewer mains will need to be replaced to address I & I issues and structural defects.
15. Clean the existing 6-inch pressure main and locate and replace the air-vacuum valves.

Phase 3 Improvements

5. Construct improvements to the existing treatment lagoons to optimize their performance, including:
 - a. Reconstruct the 6-inch force mains and valves at the lagoons.
 - b. Construct a coarse screening structure and new 8-inch gravity mains to the lagoon inlets.
 - c. Replace the 8-inch valves on the lagoon outlet lines.

Enclosed are maps of the proposed project planning area that depict the proposed project improvements and area of potential effect for all construction activities.

We request that you advise us of any comments that you may have regarding this project within 30 days, so the City of Albion can proceed with the completion of the Environmental Information Document.

If you have any questions concerning this proposed project or if you need any further information, please feel free to contact me at 208-733-2414.

Sincerely,



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

Encl: Maps



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GATEWAY
MAPPING
INC.

October 22, 2013

Susan Eastman
EPA Region 10, Office of Environmental Assessment
1200 6th Avenue, OWW 136
Seattle WA 98101

RE: City of Albion Environmental Information Document (EID) Improvement Project – Request for Comments for Preparation of an Environmental Information Document

Dear Susan:

The City of Albion is preparing a facility planning document to identify and make necessary improvements to their wastewater system that are cost effective and environmentally sound. The facility plan for this project is being funded 50% by a Department of Environmental Quality (DEQ) planning grant which requires compliance with the Rules for Wastewater Treatment Facility Grants, IDAPA 58.01.04. The purpose of this letter is to request your review and response regarding any environmental impacts that your agency may identify for this proposed project pursuant to the Idaho Department of Environmental Quality's State Environmental Review Process, which mirrors the National Environmental Policy Act.

The proposed project consists of addressing concerns the City has regarding the condition and capacity of the existing wastewater infrastructure, including:

- The sewer collection system is comprised primarily of aging asbestos cement pipe installed in 1975. Leaky and/or cracked service connections, pipe, and manholes has resulted in infiltration and inflow (I&I) flows that are approximately twice as much as would be expected for a city the size of Albion.
- The pumps within the existing sewer lift station are undersized for pumping the influent flow to the treatment lagoons, particularly during high I&I flow periods. As a result, the wet-well has overflowed on several occasions in the past. Additionally, there is no back-up power or flow monitoring and the lift station is over 35 years old, resulting in many components that are corroded and in need of replacement. The lift station pumps also have occasional problems with ragging and clogging.
- The existing 6-inch pressure main from the lift station to the lagoons has not been cleaned since its construction and the condition of the air-vacuum valves are unknown.
- The wastewater treatment lagoons and land application system are generally in adequate condition and have sufficient capacity. However, there are several minor improvements needed to optimize their performance (e.g., inlet and outlet valve replacement, influent screening, etc.).

The project is being proposed to address the City's concerns regarding the wastewater collection and treatment system with highest priority given to upgrades necessary to meet regulatory requirements and to protect the health, safety, and welfare of the public and environment. The selected improvements will also provide the greatest benefit to the City in a cost-effective manner based on the needs of the community. A phased approach is used to minimize the initial capital costs and distribute the costs reasonably over time. Phasing of the improvements will also allow the City to implement them on an "as-needed" basis to meet

future growth or as driven by regulatory requirements. Following is the phasing plan for the wastewater system improvements identified in the draft Wastewater Facilities Plan:

Phase 1 Improvements (Highest Priority)

7. Replace the existing lift station with a duplex submersible lift station, including the associated piping and fittings, a valve vault, a flow meter and vault, electrical panels and controls, back-up generator, diesel fuel storage tank, building, and jib crane for pump removal. The City is contemplating purchasing the land adjacent to the existing lift station for these improvements.
8. Reconstruct the existing 8-inch gravity trunk line that enters the lift station wet-well from the north.

Phase 2 Improvements

10. Clean and video inspect the entire gravity sewer collection system.
11. It is estimated that approximately 25 percent of the gravity sewer mains will need to be replaced to address I & I issues and structural defects.
12. Clean the existing 6-inch pressure main and locate and replace the air-vacuum valves.

Phase 3 Improvements

4. Construct improvements to the existing treatment lagoons to optimize their performance, including:
 - a. Reconstruct the 6-inch force mains and valves at the lagoons.
 - b. Construct a coarse screening structure and new 8-inch gravity mains to the lagoon inlets.
 - c. Replace the 8-inch valves on the lagoon outlet lines.

Enclosed are maps of the proposed project planning area that depict the proposed project improvements and area of potential effect for all construction activities.

We request that you advise us of any comments that you may have regarding this project within 30 days, so the City of Albion can proceed with the completion of the Environmental Information Document.

If you have any questions concerning this proposed project or if you need any further information, please feel free to contact me at 208-733-2414.

Sincerely,



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

Encl: Maps



J-U-B ENGINEERS, INC.

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MAPPING
INC.

October 22, 2013

Hal Swenson
USDA-NRCS, Soil Conservation District
9173 West Barnes Dr., Ste C
Boise ID 83709

RE: City of Albion Environmental Information Document (EID) Improvement Project – Request for Comments for Preparation of an Environmental Information Document

Dear Hal:

The City of Albion is preparing a facility planning document to identify and make necessary improvements to their wastewater system that are cost effective and environmentally sound. The facility plan for this project is being funded 50% by a Department of Environmental Quality (DEQ) planning grant which requires compliance with the Rules for Wastewater Treatment Facility Grants, IDAPA 58.01.04. The purpose of this letter is to request your review and response regarding any environmental impacts that your agency may identify for this proposed project pursuant to the Idaho Department of Environmental Quality's State Environmental Review Process, which mirrors the National Environmental Policy Act.

The proposed project consists of addressing concerns the City has regarding the condition and capacity of the existing wastewater infrastructure, including:

- The sewer collection system is comprised primarily of aging asbestos cement pipe installed in 1975. Leaky and/or cracked service connections, pipe, and manholes has resulted in infiltration and inflow (I&I) flows that are approximately twice as much as would be expected for a city the size of Albion.
- The pumps within the existing sewer lift station are undersized for pumping the influent flow to the treatment lagoons, particularly during high I&I flow periods. As a result, the wet-well has overflowed on several occasions in the past. Additionally, there is no back-up power or flow monitoring and the lift station is over 35 years old, resulting in many components that are corroded and in need of replacement. The lift station pumps also have occasional problems with ragging and clogging.
- The existing 6-inch pressure main from the lift station to the lagoons has not been cleaned since its construction and the condition of the air-vacuum valves are unknown.
- The wastewater treatment lagoons and land application system are generally in adequate condition and have sufficient capacity. However, there are several minor improvements needed to optimize their performance (e.g., inlet and outlet valve replacement, influent screening, etc.).

The project is being proposed to address the City's concerns regarding the wastewater collection and treatment system with highest priority given to upgrades necessary to meet regulatory requirements and to protect the health, safety, and welfare of the public and environment. The selected improvements will also provide the greatest benefit to the City in a cost-effective manner based on the needs of the community. A phased approach is used to minimize the initial capital costs and distribute the costs reasonably over time. Phasing of the improvements will also allow the City to implement them on an "as-needed" basis to meet

future growth or as driven by regulatory requirements. Following is the phasing plan for the wastewater system improvements identified in the draft Wastewater Facilities Plan:

Phase 1 Improvements (Highest Priority)

19. Replace the existing lift station with a duplex submersible lift station, including the associated piping and fittings, a valve vault, a flow meter and vault, electrical panels and controls, back-up generator, diesel fuel storage tank, building, and jib crane for pump removal. The City is contemplating purchasing the land adjacent to the existing lift station for these improvements.
20. Reconstruct the existing 8-inch gravity trunk line that enters the lift station wet-well from the north.

Phase 2 Improvements

28. Clean and video inspect the entire gravity sewer collection system.
29. It is estimated that approximately 25 percent of the gravity sewer mains will need to be replaced to address I & I issues and structural defects.
30. Clean the existing 6-inch pressure main and locate and replace the air-vacuum valves.

Phase 3 Improvements

10. Construct improvements to the existing treatment lagoons to optimize their performance, including:
 - a. Reconstruct the 6-inch force mains and valves at the lagoons.
 - b. Construct a coarse screening structure and new 8-inch gravity mains to the lagoon inlets.
 - c. Replace the 8-inch valves on the lagoon outlet lines.

Enclosed are maps of the proposed project planning area that depict the proposed project improvements and area of potential effect for all construction activities.

We request that you advise us of any comments that you may have regarding this project within 30 days, so the City of Albion can proceed with the completion of the Environmental Information Document.

If you have any questions concerning this proposed project or if you need any further information, please feel free to contact me at 208-733-2414.

Sincerely,



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

Encl: Maps



J-U-B ENGINEERS, INC.

J-U-B COMPANIES



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GATEWAY MAPPING INC.

October 22, 2013

Merl Egbert
South Central District Health Department
1020 Washington Street North
Twin Falls ID 83301

RE: City of Albion Environmental Information Document (EID) Improvement Project – Request for Comments for Preparation of an Environmental Information Document

Dear Merl:

The City of Albion is preparing a facility planning document to identify and make necessary improvements to their wastewater system that are cost effective and environmentally sound. The facility plan for this project is being funded 50% by a Department of Environmental Quality (DEQ) planning grant which requires compliance with the Rules for Wastewater Treatment Facility Grants, IDAPA 58.01.04. The purpose of this letter is to request your review and response regarding any environmental impacts that your agency may identify for this proposed project pursuant to the Idaho Department of Environmental Quality's State Environmental Review Process, which mirrors the National Environmental Policy Act.

The proposed project consists of addressing concerns the City has regarding the condition and capacity of the existing wastewater infrastructure, including:

- The sewer collection system is comprised primarily of aging asbestos cement pipe installed in 1975. Leaky and/or cracked service connections, pipe, and manholes has resulted in infiltration and inflow (I&I) flows that are approximately twice as much as would be expected for a city the size of Albion.
- The pumps within the existing sewer lift station are undersized for pumping the influent flow to the treatment lagoons, particularly during high I&I flow periods. As a result, the wet-well has overflowed on several occasions in the past. Additionally, there is no back-up power or flow monitoring and the lift station is over 35 years old, resulting in many components that are corroded and in need of replacement. The lift station pumps also have occasional problems with ragging and clogging.
- The existing 6-inch pressure main from the lift station to the lagoons has not been cleaned since its construction and the condition of the air-vacuum valves are unknown.
- The wastewater treatment lagoons and land application system are generally in adequate condition and have sufficient capacity. However, there are several minor improvements needed to optimize their performance (e.g., inlet and outlet valve replacement, influent screening, etc.).

The project is being proposed to address the City's concerns regarding the wastewater collection and treatment system with highest priority given to upgrades necessary to meet regulatory requirements and to protect the health, safety, and welfare of the public and environment. The selected improvements will also provide the greatest benefit to the City in a cost-effective manner based on the needs of the community. A phased approach is used to minimize the initial capital costs and distribute the costs reasonably over time. Phasing of the improvements will also allow the City to implement them on an "as-needed" basis to meet

future growth or as driven by regulatory requirements. Following is the phasing plan for the wastewater system improvements identified in the draft Wastewater Facilities Plan:

Phase 1 Improvements (Highest Priority)

17. Replace the existing lift station with a duplex submersible lift station, including the associated piping and fittings, a valve vault, a flow meter and vault, electrical panels and controls, back-up generator, diesel fuel storage tank, building, and jib crane for pump removal. The City is contemplating purchasing the land adjacent to the existing lift station for these improvements.
18. Reconstruct the existing 8-inch gravity trunk line that enters the lift station wet-well from the north.

Phase 2 Improvements

25. Clean and video inspect the entire gravity sewer collection system.
26. It is estimated that approximately 25 percent of the gravity sewer mains will need to be replaced to address I & I issues and structural defects.
27. Clean the existing 6-inch pressure main and locate and replace the air-vacuum valves.

Phase 3 Improvements

9. Construct improvements to the existing treatment lagoons to optimize their performance, including:
 - a. Reconstruct the 6-inch force mains and valves at the lagoons.
 - b. Construct a coarse screening structure and new 8-inch gravity mains to the lagoon inlets.
 - c. Replace the 8-inch valves on the lagoon outlet lines.

Enclosed are maps of the proposed project planning area that depict the proposed project improvements and area of potential effect for all construction activities.

We request that you advise us of any comments that you may have regarding this project within 30 days, so the City of Albion can proceed with the completion of the Environmental Information Document.

If you have any questions concerning this proposed project or if you need any further information, please feel free to contact me at 208-733-2414.

Sincerely,



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

Encl: Maps



STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, Idaho 83706 • (208) 373-0502

C.L. "Butch" Otter, Governor
Curt Fransen, Director

November 22, 2013

Certified Mail No.: 7000 0520 0016 4834 0129

Carolyn Boyer Smith
Cultural Resources Program
Shoshone-Bannock Tribes
P.O. Box 306
Fort Hall, Idaho 83203

RE: City of Albion Wastewater Improvement Project – Request for Comments for
Preparation of an Environmental Information Document

Dear Mrs. Boyer Smith:

The City of Albion is preparing a facility planning document to identify and make necessary improvements to their wastewater system that are cost effective and environmentally sound. The facility plan for this project is being funded 50% by a Department of Environmental Quality (DEQ) planning grant which requires compliance with the Rules for Wastewater Treatment Facility Grants, (IDAPA 58.01.04). The purpose of this letter is to request your review and response regarding any historic and cultural resource impacts that the Shoshone-Bannock Tribes may identify for this proposed project pursuant to the Idaho Department of Environmental Quality's State Environmental Review Process, which mirrors the National Environmental Policy Act.

The proposed project consists of the following phased improvements.

Phase 1 improvements

1. Replacement of the existing lift station with duplex submersible lift station; associated piping and fittings; a valve vault; a flow meter and vault; electrical panels and controls; back-up generator; diesel fuel storage; building and jib crane for pump removal.
2. The city is also considering purchasing the land adjacent to the existing lift station for the lift station improvements.
3. Reconstruction of the existing 8-inch gravity trunk line that enters the lift station wet-well from the north.

Phase 2 improvements

1. Cleaning and video inspect of the gravity sewer collection system.
2. An estimated 25% of the gravity sewer mains will need to be replaced to address inflow and infiltration issues and structural defects.
3. Cleaning the existing 6-inch pressure main and locate and replace the air-vacuum valves.

Carolyn Boyer Smith
Shoshone-Bannock Tribes
City of Albion
November 22, 2013
Page 2

Phase 3 Improvements – Lagoon improvements

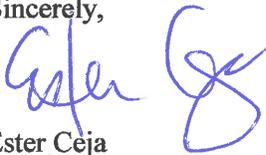
1. Reconstruction of the 6-inch force mains and valves at the lagoons.
2. Construction of a coarse screening structure and new 8-inch gravity main to the lagoon inlets
3. Replacement of the 8-inch valves on the lagoon outlet lines.

The project is being proposed to address concerns regarding the aging collection system and the undersized lift station. Enclosed is a map of the proposed project planning area that depicts the proposed project improvements and area of potential effect for all construction activities.

We request that you advise us of any comments that you may have regarding this project within 30 days, so the City of Albion can proceed with the completion of the Environmental Information Document.

If you have any questions concerning this proposed project or if you need any further information, please feel free to contact Ester Ceja at Ester.Ceja@deq.idaho.gov or 208-373-058 at your convenience.

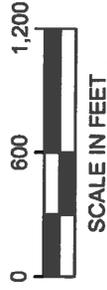
Sincerely,



Ester Ceja
Sr. Water Quality Analyst

EC:dls

Encl: map and photos



LEGEND

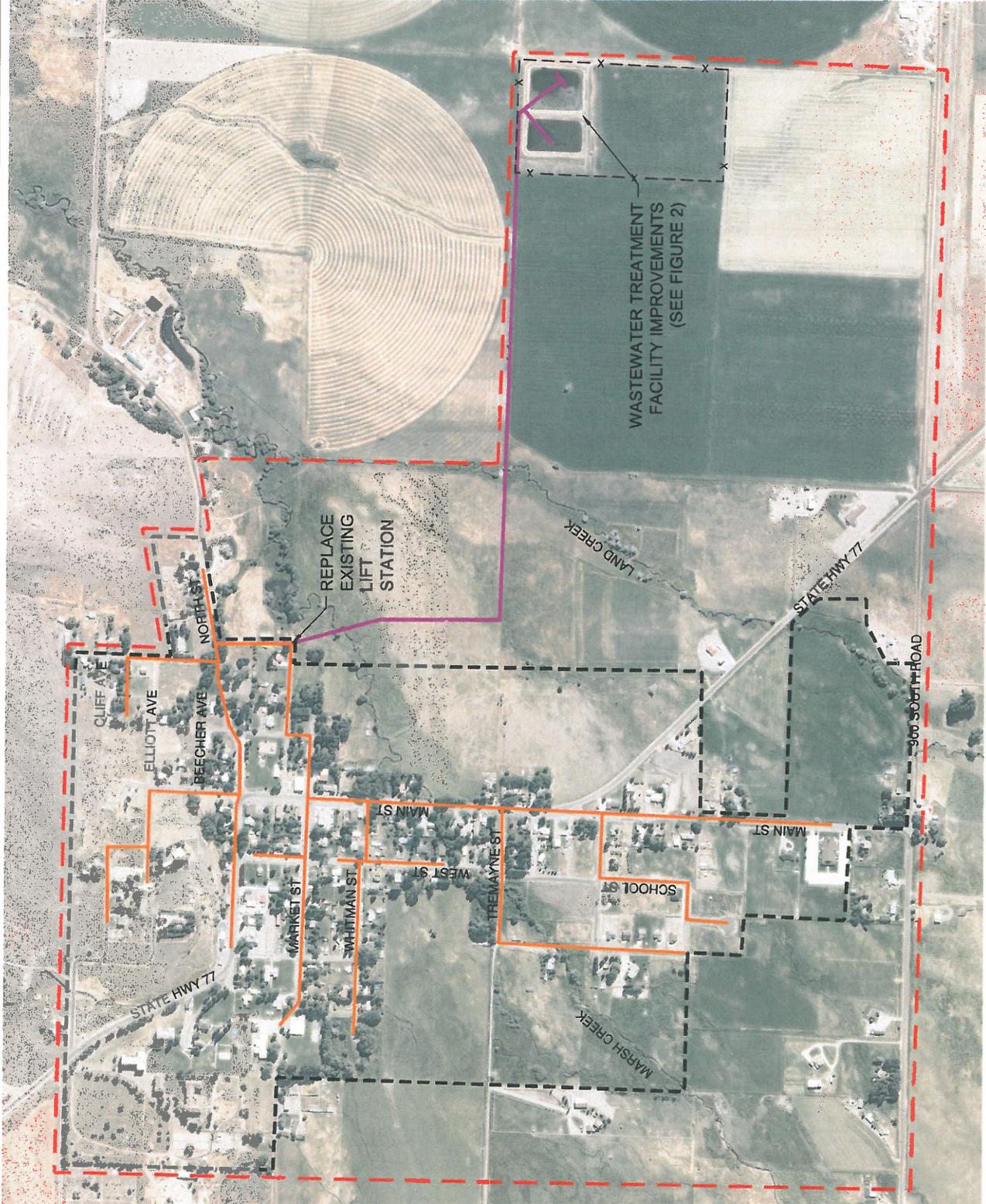
- 8" GRAVITY SEWER MAIN
- 6" PRESSURE SEWER
- - - CITY LIMITS
- - - PROPOSED PROJECT PLANNING AREA AND AREA OF POTENTIAL EFFECT

NOTE:
SEWER MAINS SHOWN IN
APPROXIMATE LOCATION

FIGURE 1
PROPOSED WASTEWATER
COLLECTION SYSTEM
IMPROVEMENTS



J-U-B ENGINEERS, INC.



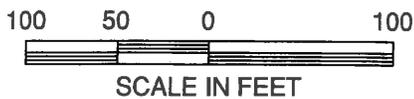
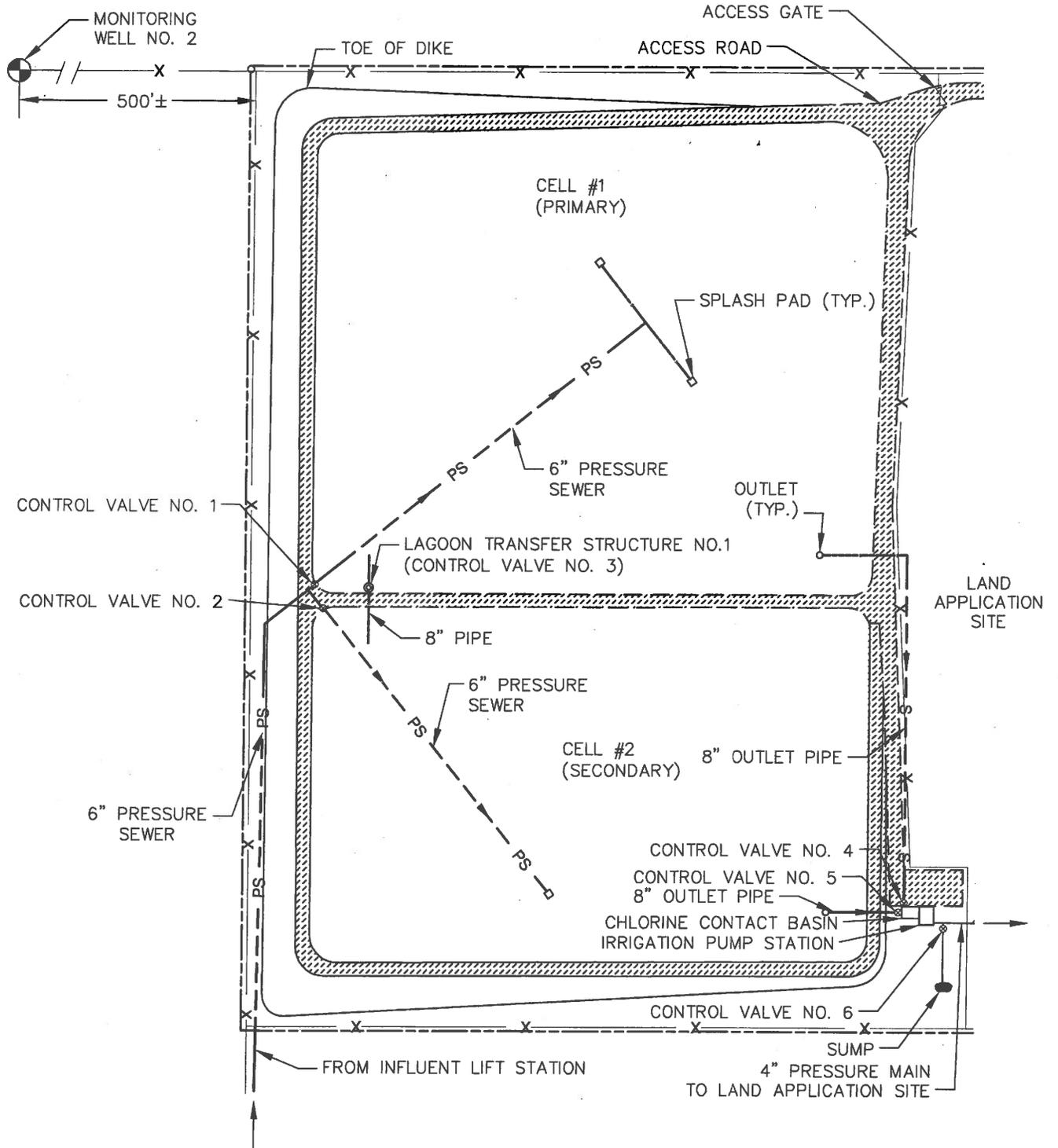
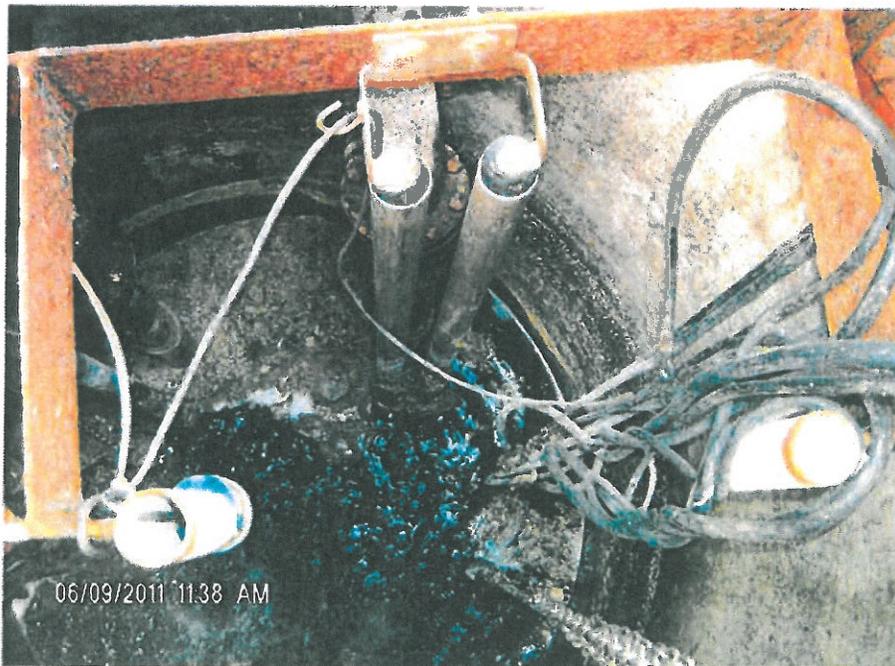


FIGURE 10
EXISTING TREATMENT
LAGOONS

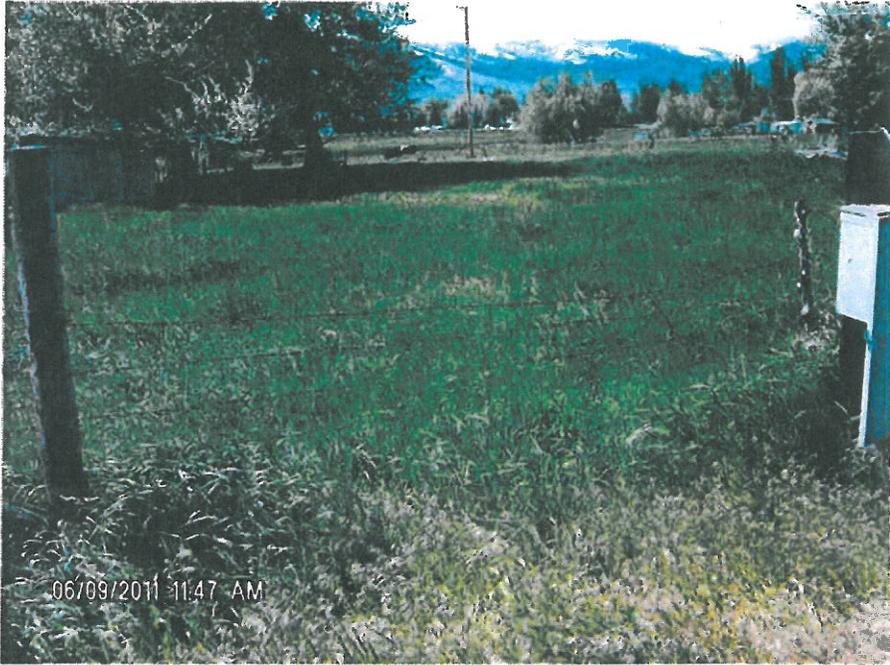
PHOTOGRAPHS OF WASTEWATER SYSTEM



Photograph 1 – Existing Lift Station



Photograph 2 – Existing Lift Station



Photograph 3 – Area Next to Existing Lift Station Where New Lift Station May be Constructed



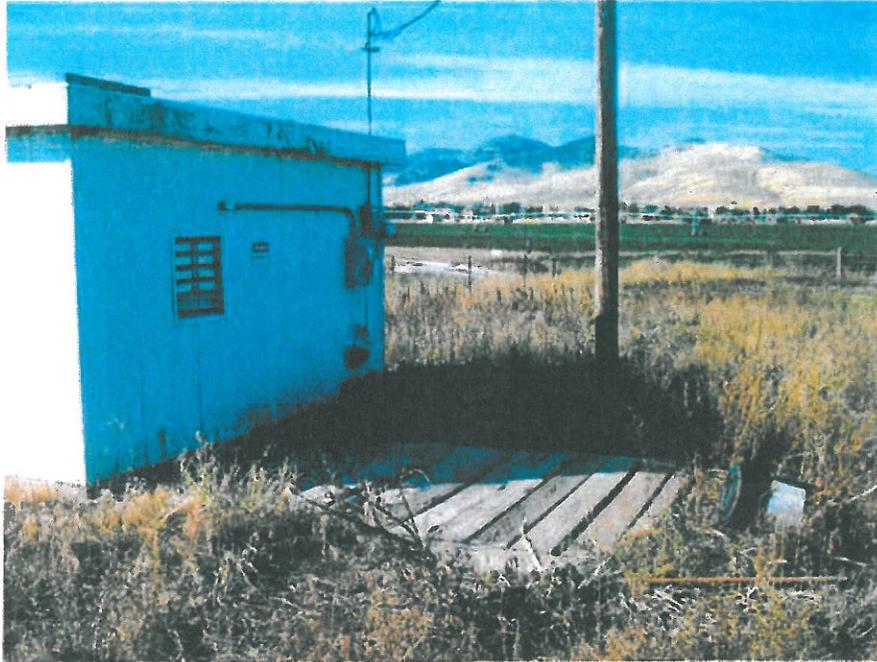
Photograph 4 – Existing Lagoons



Photograph 5 – Existing Lagoons



Photograph 6 – Existing Land Application Site



Photograph 7 – Existing Chlorine Contact Basin



Photograph 8 – Existing Irrigation Pump



STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, Idaho 83706 • (208) 373-0502

C.L. "Butch" Otter, Governor
Curt Fransen, Director

November 22, 2013

Certified Mail No.: 7000 0520 0016 4834 0136

Ted Howard, Director
Cultural Resources Program
Shoshone-Paiute Tribe
P.O. Box 219
Owyhee, Nevada 89832

RE: City of Albion Wastewater Improvement Project – Request for Comments for
Preparation of an Environmental Information Document

Dear Mr. Howard:

The City of Albion is preparing a facility planning document to identify and make necessary improvements to their wastewater system that are cost effective and environmentally sound. The facility plan for this project is being funded 50% by a Department of Environmental Quality (DEQ) planning grant which requires compliance with the Rules for Wastewater Treatment Facility Grants, (IDAPA 58.01.04). The purpose of this letter is to request your review and response regarding any historic and cultural resource impacts that the Shoshone-Paiute Tribe may identify for this proposed project pursuant to the Idaho Department of Environmental Quality's State Environmental Review Process, which mirrors the National Environmental Policy Act.

The proposed project consists of the following phased improvements.

Phase 1 improvements

1. Replacement of the existing lift station with duplex submersible lift station; associated piping and fittings; a valve vault; a flow meter and vault; electrical panels and controls; back-up generator; diesel fuel storage; building and jib crane for pump removal.
2. The city is also considering purchasing the land adjacent to the existing lift station for the lift station improvements.
3. Reconstruction of the existing 8-inch gravity trunk line that enters the lift station wet-well from the north.

Phase 2 improvements

1. Cleaning and video inspect of the gravity sewer collection system.
2. An estimated 25% of the gravity sewer mains will need to be replaced to address inflow and infiltration issues and structural defects.
3. Cleaning the existing 6-inch pressure main and locate and replace the air-vacuum valves.

Phase 3 Improvements – Lagoon improvements

1. Reconstruction of the 6-inch force mains and valves at the lagoons.
2. Construction of a coarse screening structure and new 8-inch gravity main to the lagoon inlets
3. Replacement of the 8-inch valves on the lagoon outlet lines.

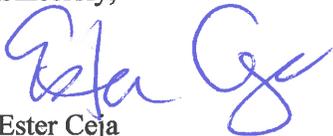
Ted Howard, Director
Shoshone-Paiute Tribe
City of Albion
November 22, 2013
Page 2

The project is being proposed to address concerns regarding the aging collection system and the undersized lift station. Enclosed is a map of the proposed project planning area that depicts the proposed project improvements and area of potential effect for all construction activities.

We request that you advise us of any comments that you may have regarding this project within 30 days, so the City of Albion can proceed with the completion of the Environmental Information Document.

If you have any questions concerning this proposed project or if you need any further information, please feel free to contact Ester Ceja at Ester.Ceja@deq.idaho.gov or 208-373-058 at your convenience.

Sincerely,



Ester Ceja
Sr. Water Quality Analyst

EC:dls

Encl: map and photos



STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

650 Addison Avenue West, Suite 110 • Twin Falls, Idaho 83301 • (208) 736-2190
www.deq.idaho.gov

C.L. "Butch" Otter, Governor
Curt Fransen, Director

December 2, 2013

Mark Holtzen, P.E.
J-U-B Engineers, Inc.
115 Northstar Avenue
Twin Falls, Idaho 83301

Re: Request for DEQ Comments, **City of Albion Wastewater Improvements**, Cassia County.

Dear Mr. Holtzen:

This office has received your letter relative to the City of Albion's potential wastewater improvement project. This letter is meant to address any potential environmental impacts due to the proposed project.

The proposed wastewater improvement project may benefit the environment by decreasing the potential leakage of raw wastewater due to deteriorated sewer lines and aging lift station. The elimination of leakage also reduces the risk of ground water contamination. It is our opinion that the project area may initially experience minor short term adverse conditions, which may include residential and commercial service impacts in the area on and adjacent to the site.

Please understand that our evaluation of environmental concerns associated with this project is limited to our review of the information provided by you and our experience with similar projects.

Furthermore, be aware that federal storm water offsite discharge approvals may also be required for this project and we recommend the city contact Maria Lopez, with the Boise EPA satellite office or visit the federal U.S. EPA website for additional information.

We respectfully request at this time that the following DEQ administrative rule citation references and regional program contacts be contacted as needed during planning, design and construction activities.

1. Air Quality

- *IDAPA Section 58.01.01 is the rule section which relates to Air Quality, especially those regarding fugitive dust (58.01.01.651), trade waste burning (58.01.01.600-617), permits to construct (58.01.01.201), and odor control plans (58.01.01.776).*

Regional Contact, Bobby Dye, Regional Manager - Air and Remediation, at 736-2190.

2. Wastewater and Reuse

- *IDAPA 58.01.18 and IDAPA 58.01.17 are the rule sections which relate to wastewater and wastewater reuse (recycled water). Please review these rules to determine whether this or future projects will require DEQ approval. All projects require preconstruction approval by DEQ including facilities planning, preliminary engineering reports, plans and specification and other documents unless they meet the provisions of Idaho Code §39-118.2.d. Also note that at the discretion of any city, county, quasi-municipal corporation or regulated public utility, projects that fall within this provision may be referred to DEQ for approval. Wastewater reuse projects require separate permits for operation as well.*

Regional Contact, David Anderson, Regional Manager - Engineering, at 736-2190.

3. Drinking Water

- *IDAPA 58.01.08 is the rule section which relates to drinking water. Please review these rules to determine whether this or future projects will require DEQ approval including facilities planning, preliminary engineering reports, plans and specification and other documents. All projects require preconstruction approval by DEQ unless they meet the provisions of Idaho Code §39-118.2.d. Also note that at the discretion of any city, county, quasi-municipal corporation or regulated public utility, projects that fall within this provision may be referred to DEQ for approval.*

Regional Contact, Brian Reed, PE, Technical Engineer I, at 736-2190.

4. Surface Water

- *If the project will involve de-watering of ground water during excavation and discharge back into surface water a short term activity exemption (from this office) will be needed which describes treatment of the water from this process to prevent excessive sediment and turbidity from entering surface water.*
- *The Idaho Stream Channel Protection Act requires a permit for most stream channel alterations. Please contact the Idaho Department of Water Resources for more information.*

Regional Contact, Balthasar (Sonny) Buhidar, Regional Manager - Water Quality Protection, at 736-2190

5. Solid and Hazardous Waste

- **Hazardous Waste.** *The types and number of requirements that must be complied with under the federal Resource Conservation and Recovery Act (RCRA) and the Idaho Rules and Standards for Hazardous Waste (IDAPA 58.01.05) are based on the quantity and type of waste generated. Every business in Idaho is required to track the volume of wastes generated, determine whether or not each type of waste is hazardous, and ensure*

that all wastes are properly disposed of according to federal, state, and local requirements.

Regional Contact, Albert Crawshaw, Hazardous Waste Science Officer, at 736-2190.

- **Solid Waste.** *No trash or other solid waste should be buried, burned or otherwise disposed at the site. These disposal methods are regulated by various state regulations including Idaho's Solid Waste Management Regulations and Standards, Rules and Regulations for Hazardous Waste, and Rules and Regulations for the Prevention of Air Pollution.*

Regional Contact, Joseph Otero, PE, Staff Engineer, at 736-2190.

- **Water Quality Standards.** *Site activities must comply with the Idaho Water Quality Standards (IDAPA 58.01.02) regarding hazardous and deleterious materials storage, disposal, or accumulation adjacent to or in the immediate vicinity of state waters, and the clean-up and reporting of oil filled electrical equipment, hazardous materials, used oil and petroleum releases.*

Regional Contact, Balthasar (Sonny) Buhidar, Regional Manager – Water Quality Protection, at 736-2190

- **Ground Water Contamination.** *DEQ requests that this project comply with Idaho's Ground Water Quality Rules (IDAPA 58.01.11) which states that "No person shall cause or allow the release, spilling, leaking, emission, discharge, escape, leaching or disposal of a contaminant into the environment in a manner that causes a ground water quality standard to be exceeded, injures a beneficial use of ground water, or is not in accordance with a permit, consent order or applicable best management practice, best available method or best practical method."*

Regional Contact, David Anderson, Regional Manager - Engineering, at 736-2190.

6. Under Ground Storage Tank (UST) / Leaking Underground Storage Tank (LUST) Program

- *If an underground storage tank is identified at the site, the site should be evaluated for underground tanks and potential contamination.*

Regional Contact, Mike Summers, UST/LUST Program Coordinator, at 736-2190.

If you have any questions, please do not hesitate to contact this office at 736-2190.

Sincerely,



Joseph R. Otero, P.E.
Staff Engineer

Andrew Hobson

From: McDonald, Mike <mike.mcdonald@idfg.idaho.gov>
Sent: Monday, December 23, 2013 3:45 PM
To: Andrew Hobson
Cc: Megargle, Doug
Subject: RE: Albion Environmental Information Document: Request for comments

Andrew:

Sorry for the lateness of our response. We have reviewed the description of the City of Albion's proposal to improve their wastewater collection and treatment system. It is our understanding the proposed project includes replacing the existing lift station, cleaning and inspecting the entire gravity sewer system, replacing approximately 25% of the existing gravity sewer mains, and constructing improvements to the existing sewage treatment lagoons. It appears all of the proposed work, with the possible exception of the sewage lagoon work, will occur within the City limits.

We are currently not aware of any threatened, endangered, or candidate invertebrates, fish, wildlife, or plants inhabiting the project area. Further, we are unaware of any critical habitat for threatened, endangered, or candidate invertebrates, fish, wildlife, or plants within the project area. Regardless, we recommend the applicants consult with the United States Fish and Wildlife Service (Snake River Fish and Wildlife Office, Boise, Idaho: 208-378-5243) to determine if there are any special considerations for listed species that apply in the proposed project area. If this project will be required to meet EPA requirements under the Clean Water Act, please contact Bob Kibler at the same office (208-378-5255).

It appears from the map accompanying the project description that the sewer main crosses two perennial streams (Marsh Creek and Lake Creek) at a minimum of 6 locations. Both streams are within the historic range of Yellowstone cutthroat trout, a species of greatest conservation need in Idaho (IDFG 2005). While we are currently unaware that this species inhabits either stream within the project area, we have documented cutthroat trout in the headwaters of Marsh Creek. We recognize that current stream habitat conditions within the project area may be limited but request an opportunity to review any specific project-related work that may involve the stream channels.

Thank you for the opportunity to review the project description. Please contact me if you have questions or need more information.

Literature Cited:

Idaho Department of Fish and Game. 2005. Idaho Comprehensive Wildlife Conservation Strategy. Idaho Conservation Data Center, Idaho Department of Fish and Game, Boise, ID. Available at:
<http://fishandgame.idaho.gov/ifwis/cwcs/pdf/Yellowstone%20Cutthroat%20Trout.pdf>.

Mike McDonald
Environmental Staff Biologist
Idaho Department of Fish and Game
324 South 417 East, Suite 1
Jerome, ID 83338
(208) 324-4359
(208) 324-1160 fax
mike.mcdonald@idfg.idaho.gov

From: Andrew Hobson [<mailto:ahobson@jub.com>]
Sent: Monday, December 23, 2013 10:44 AM
To: McDonald, Mike
Cc: Mark Holtzen
Subject: Albion Environmental Information Document: Request for comments

Mike,

As requested from our phone call this morning, I am sending you a copy of the original letter requesting comments for the preparation of an Environmental Information Document for the City of Albion. Upon review, please respond with your comments.

Thank you for your response,

Andrew

Andrew Hobson, EIT
Assistant Engineer

J-U-B ENGINEERS, Inc.
115 Northstar Avenue, Twin Falls, ID 83301
p | 208 733 2414 f | 208 733 9455 e | ahobson@jub.com

THE J-U-B FAMILY OF COMPANIES:
www.jub.com | www.gatewaymapping.com | www.langdongroupinc.com

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State of Idaho

DEPARTMENT OF WATER RESOURCES

322 East Front Street • P.O. Box 83720 • Boise, Idaho 83720-0098

Phone: (208) 287-4800 • Fax: (208) 287-6700 • Web Site: www.idwr.idaho.gov

GARY SPACKMAN
Director

C.L. "BUTCH" OTTER
Governor

Mark Holtzen, P.E.
J-U-B Engineers, Inc.
115 Northstar Ave.
Twin Falls, ID 83301

Re: City of Albion Environmental Information Document (EID) Improvement Project – Request for Comments for Preparation of an Environmental Information Document

Dear Mr. Holtzen:

This is a letter in response to the development review that was received by IDWR on November 25th, 2013. The City of Albion is a participating member to the National Flood Insurance Program. The community does have an identified flood zone hazard area "Zone A" designation. Any development within the boundaries of the flood zone requires compliance with local standards and a floodplain development permit from the community must be obtained. "Development" is defined as:

Any manmade change to improved or unimproved real estate, including, but not limited to, the construction of buildings, structures or accessory structures, or the construction of additions or substantial improvements to buildings, structures or accessory structures; the placement of mobile homes; mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials, and the deposition or extraction of materials.

Code of Federal Regulations § 60.3(a):

- (5) Require within flood-prone areas new and replacement water supply systems to be designed to minimize or eliminate infiltration of flood waters into the systems; and
- (6) Require within flood-prone areas (i) new and replacement sanitary sewage systems to be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters and (ii) onsite waste disposal systems to be located to avoid impairment to them or contamination from them during flooding.

The objective of these requirements is to ensure that a building that is protected from flood damage can still be used after the flood recedes. In most instances, these criteria can be met through careful system design. Manholes should be raised above the 100-year flood level or equipped with seals to prevent leakage. Pumping stations should have electrical panels elevated above the BFE.

On-site waste disposal systems should be located to ensure they will not release contamination in a flood and can be used after flood waters recede. The first objective should be to locate the system outside the flood hazard area, if that is feasible. At a minimum, an automatic backflow valve should be installed to prevent sewage from backing up into the building during flooding.

Attached is a FIRMette for the City of Albion. It does not include the entire community and a Flood Insurance Rate Map should be referenced by the developer. The Albion floodplain



State of Idaho

DEPARTMENT OF WATER RESOURCES

322 East Front Street • P.O. Box 83720 • Boise, Idaho 83720-0098

Phone: (208) 287-4800 • Fax: (208) 287-6700 • Web Site: www.idwr.idaho.gov

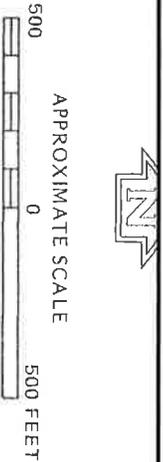
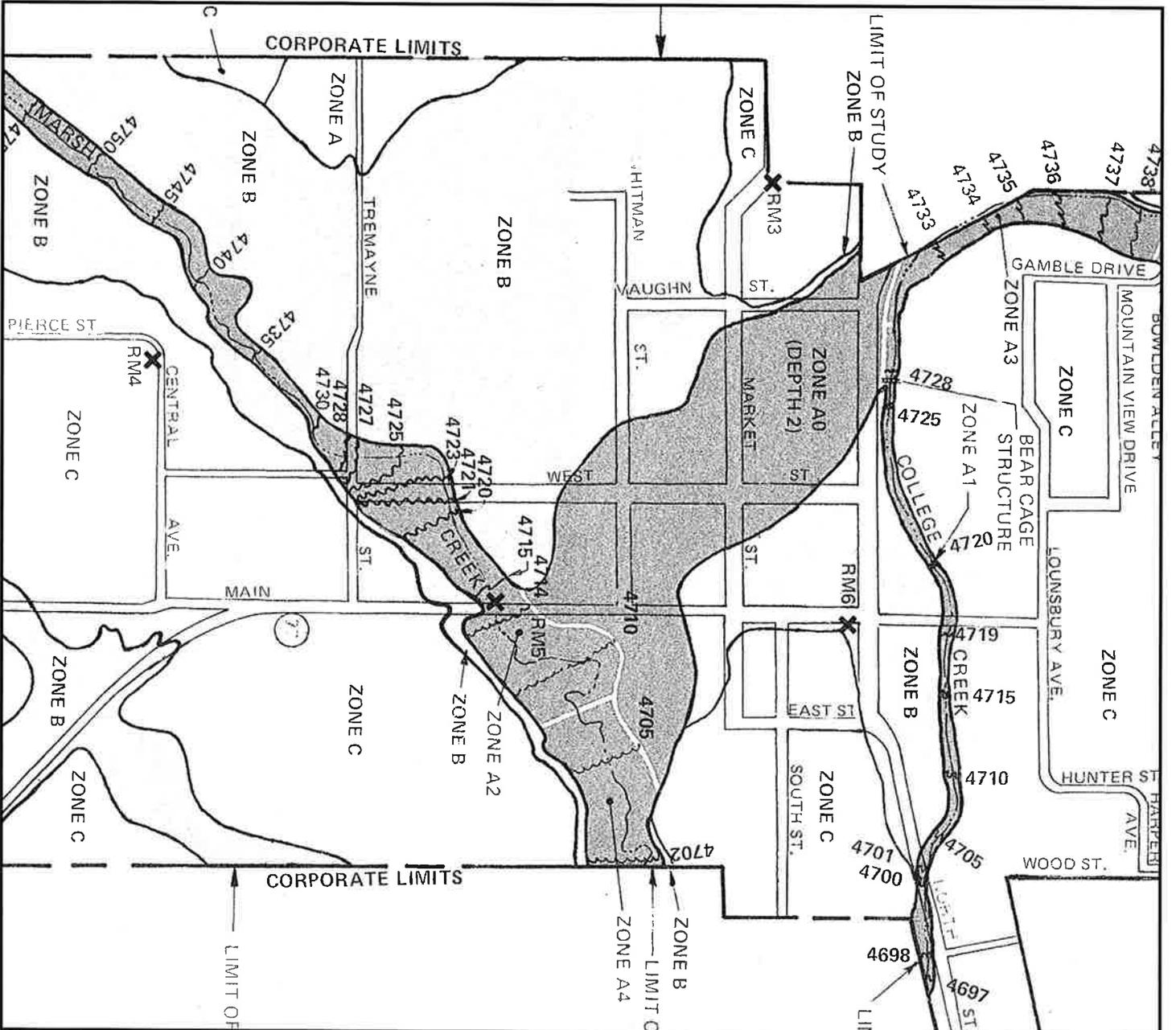
GARY SPACKMAN
Director

C.L. "BUTCH" OTTER
Governor

administrator is Mary Yeaman (e: albioncty@atcnet.net p: (208)673-5352) and may further assist the developer with questions and information. Thank you for the opportunity to comment and giving notice of the proposed development.

Regards,

Patrick Kelly
Idaho Department of Water Resources
322 E. Front St.
Boise, ID 83720
208.287.4933



NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

CITY OF
ALBION, IDAHO
CASSIA COUNTY

ONLY PANEL PRINTED

COMMUNITY-PANEL NUMBER
160042 0001 A
EFFECTIVE DATE:
AUGUST 15, 1983



Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



STATE OF IDAHO



C. L. "BUTCH" OTTER
GOVERNOR
CELIA R. GOULD
DIRECTOR

December 23, 2013

Dear Andrew Hobson:

Thank you for inquiring with the Idaho State Department of Agriculture (ISDA) with regards to your work with the Albion Waste Water Improvement Project. The public works project being proposed will be an important project for the citizens of that area.

At this time we do not have comments or questions related to this project.

Thank you for contacting our agency. Feel free to contact us in the future (main number - 208-332-8500, my number - 208-332-8597).

Sincerely,

A handwritten signature in cursive script that reads "Gary Bahr".

Gary Bahr

Water Quality Programs

PC: Water Program File

United States Department of Agriculture

J.U.B. ENGINEERS
RECEIVED

DEC 09 2013



Natural Resources Conservation Service
Area Office
1551 Baldy Avenue, Suite 2
Pocatello, Idaho 83201

TWIN FALLS, IDAHO

Mark Holtzen, P.E.
J-U-B Engineers, Inc.
115 Northstar Avenue
Twin Falls, ID 83301

December 4, 2013

RE: City of Albion Environmental Information Document (EID) Improvement Project – Request for Comments for Preparation of an Environmental Information Document

Dear Mr. Holtzen,

The request for comments for an environmental information document for the City of Albion improvement project was received by the NRCS on November 25, 2013. This letter and the enclosed Soil Survey Report has been prepared in response to your letter requesting NRCS assistance in identifying issues related to this project for the preparation of an Environmental Information Document.

The Farmland Protection Policy Act, Public Law 97-98, 7 U.S.C. 4201, applies to Federally assisted actions that would convert important farmland to nonagricultural practices. If there is Federal technical or financial assistance, the FPPA would apply to the expansion of the wastewater treatment facility (since as proposed, farmland would be converted) but not the pipeline improvements (since as proposed, no farmland would be converted). It is the responsibility of the assisting Federal agencies and entities receiving Federal funds to lessen the effects of conversion activities on farmlands. If FPPA applies, an AD-1006 form will need to be completed to assess the site selected and alternatives.

The Soil Survey for Cassia County, Idaho, Eastern Part (ID708) was used for soils information. The enclosed soil survey report was generated using web soil survey (<http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>) and a re-creation of the boundary of the proposed project planning area. A soil survey legend, map unit descriptions, land classifications (hydric soils and prime farmland), and a few interpretations (sewage lagoons, shallow excavations, etc.) are included in the soil survey report. The interpretations in the enclosed soil survey report detail some soil limitations that may affect project design, construction, and/or materials used. A complete list of soil interpretation may be found on the Web Soil Survey website.

Some soils in the project area exhibit wetness features, hydric soils, and may support wetlands. NRCS encourages you to avoid impacts to wetlands from the project. If you have not already done so, you should contact the U.S. Army Corps of Engineers, Idaho Falls Field Office to determine the extent of wetlands in the project area under the jurisdiction of the Clean Water Act.

Helping People Help the Land

An Equal Opportunity Provider and Employer

NRCS further encourages you to incorporate provisions for erosion, sediment, dust control, and runoff during project construction into the project design to protect soil, water, and air resources.

Thank you for the opportunity to review this project. If you have questions or need further assistance, please contact me at 208-237-1643 ext. 119.

Respectfully,



Francine Lheritier
Resource Soil Scientist

Cc: Hal Swenson, NRCS State Soil Scientist, Boise, ID
Elliot Traher, District Conservationist, Burley, ID



United States
Department of
Agriculture



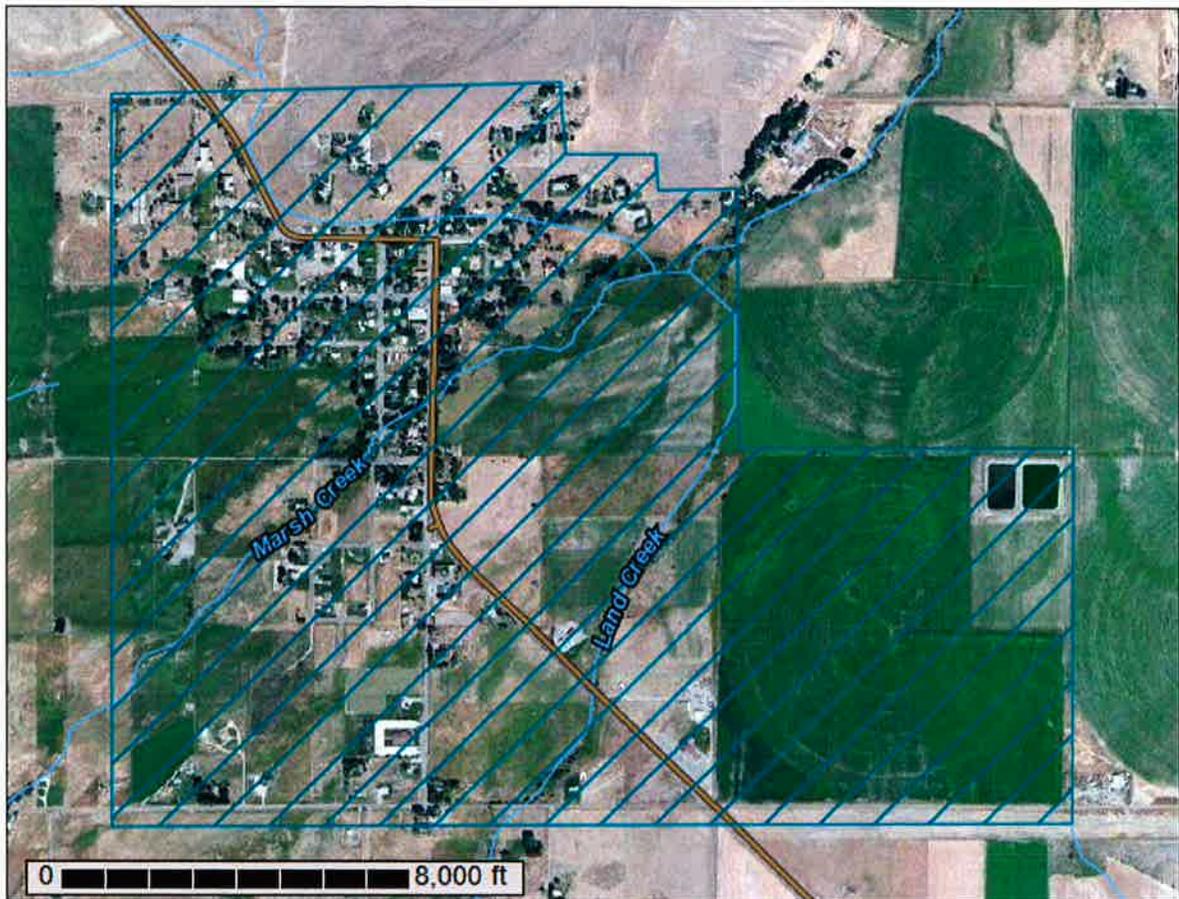
NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for Cassia County, Idaho, Eastern Part

City of Abion- Request for Comment



December 3, 2013

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://soils.usda.gov/sqi/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<http://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://soils.usda.gov/contact/state_offices/).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Soil Data Mart Web site or the NRCS Web Soil Survey. The Soil Data Mart is the data storage site for the official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means

for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the

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individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

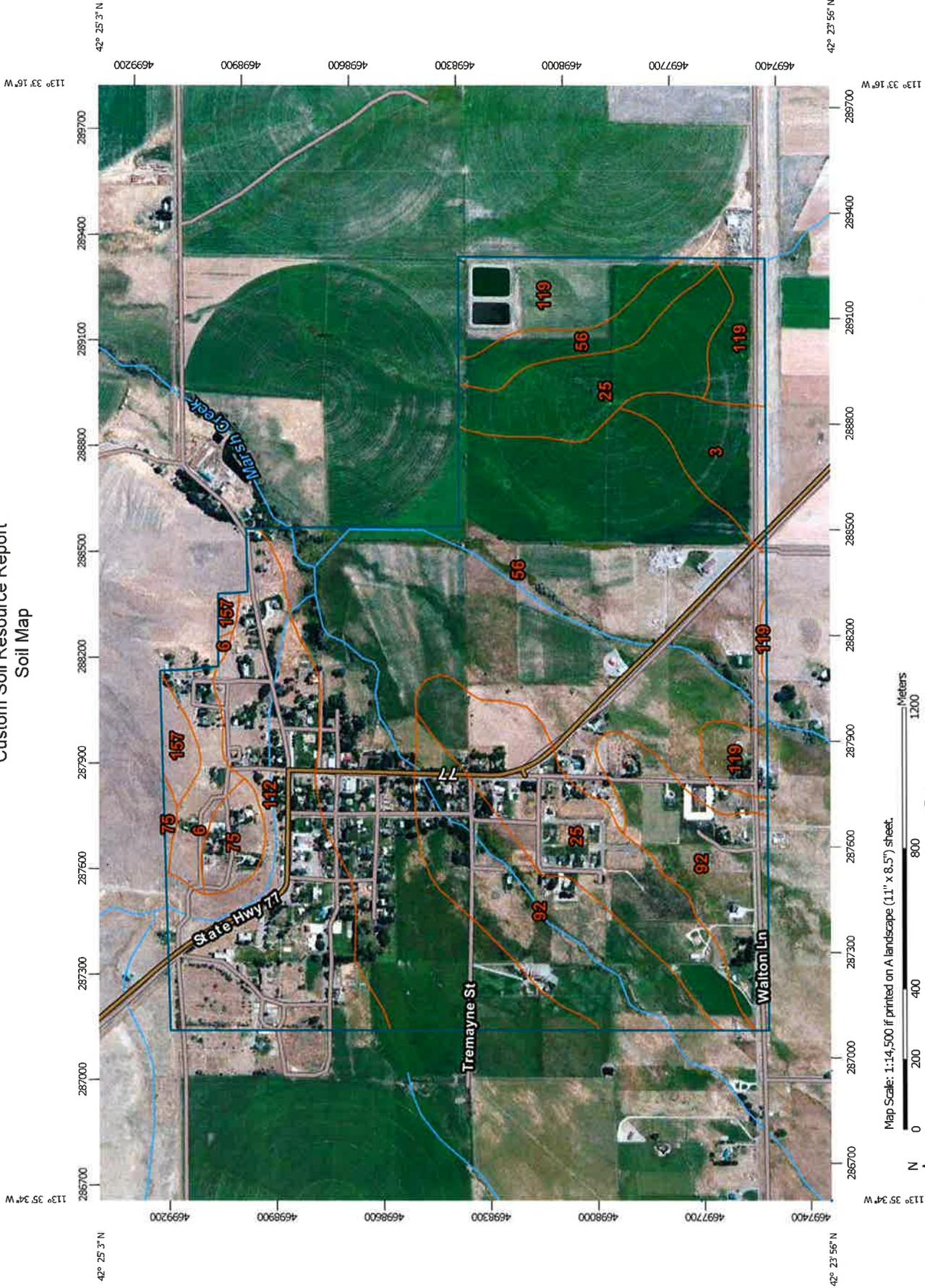
Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Map Scale: 1:14,500 if printed on A landscape (11" x 8.5") sheet.

Meters 0 200 400 800 1200

Feet 0 500 1000 2000 3000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 12N WGS84

MAP LEGEND

 Area of Interest (AOI)	 Spoil Area
 Soils	 Stony Spot
 Soil Map Unit Polygons	 Very Stony Spot
 Soil Map Unit Lines	 Wet Spot
 Soil Map Unit Points	 Other
 Special Point Features	 Special Line Features
 Blowout	 Water Features
 Borrow Pit	 Streams and Canals
 Clay Spot	 Transportation
 Closed Depression	 Rails
 Gravel Pit	 Interstate Highways
 Gravelly Spot	 US Routes
 Landfill	 Major Roads
 Lava Flow	 Local Roads
 Marsh or swamp	 Background
 Mine or Quarry	 Aerial Photography
 Miscellaneous Water	
 Perennial Water	
 Rock Outcrop	
 Saline Spot	
 Sandy Spot	
 Severely Eroded Spot	
 Sinkhole	
 Slide or Slip	
 Sodic Spot	

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cassia County, Idaho, Eastern Part
 Survey Area Data: Version 8, Aug 14, 2012

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 16, 2010—Sep 24, 2010

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Cassia County, Idaho, Eastern Part (ID708)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
3	Acord silt loam, 2 to 4 percent slopes, very stony	22.2	3.0%
6	Arbone loam, 4 to 12 percent slopes	15.9	2.1%
25	Chatburn silt loam, 1 to 4 percent slopes	99.1	13.3%
56	Downata silt loam, 0 to 2 percent slopes	325.9	43.7%
75	Hutchley very gravelly silt loam, 10 to 35 percent slopes	11.7	1.6%
92	Kovich silt loam, 0 to 3 percent slopes	106.4	14.3%
112	Rexburg silt loam, 1 to 3 percent slopes	105.5	14.1%
119	Ririe silt loam, 1 to 3 percent slopes	51.1	6.9%
157	Watercanyon-Vitale-Rexburg association, 30 to 50 percent slopes	7.6	1.0%
Totals for Area of Interest		745.4	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different

Custom Soil Resource Report

management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Cassia County, Idaho, Eastern Part

3—Acord silt loam, 2 to 4 percent slopes, very stony

Map Unit Setting

Elevation: 5,000 to 6,500 feet

Mean annual precipitation: 14 to 20 inches

Mean annual air temperature: 37 to 45 degrees F

Frost-free period: 70 to 85 days

Map Unit Composition

Acord, very stony surface, and similar soils: 90 percent

Description of Acord, Very Stony Surface

Setting

Landform: Fan remnants, drainageways

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Loess and alluvium derived from mica schist and/or quartzite

Properties and qualities

Slope: 2 to 4 percent

Surface area covered with cobbles, stones or boulders: 2.0 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 25 percent

Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)

Available water capacity: Low (about 5.6 inches)

Typical profile

0 to 4 inches: Silt loam

4 to 30 inches: Very stony loam

30 to 41 inches: Cobbly clay

41 to 60 inches: Very cobbly sandy clay loam

6—Arbone loam, 4 to 12 percent slopes

Map Unit Setting

Elevation: 5,790 to 6,330 feet

Mean annual precipitation: 14 to 18 inches

Mean annual air temperature: 39 to 45 degrees F

Frost-free period: 65 to 95 days

Map Unit Composition

Arbone and similar soils: 85 percent

Custom Soil Resource Report

Description of Arbone

Setting

Landform: Fan remnants
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Mixed alluvium with some loess influence

Properties and qualities

Slope: 4 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.60 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)
Available water capacity: Moderate (about 8.7 inches)

Interpretive groups

Farmland classification: Farmland of statewide importance, if irrigated
Land capability (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: LOAMY 12-16 ARTRV/PSSPS-FEID (R013XY001ID)

Typical profile

0 to 10 inches: Loam
10 to 35 inches: Loam
35 to 60 inches: Loam

25—Chatburn silt loam, 1 to 4 percent slopes

Map Unit Setting

Elevation: 4,600 to 4,900 feet
Mean annual precipitation: 12 to 16 inches
Mean annual air temperature: 43 to 45 degrees F
Frost-free period: 85 to 100 days

Map Unit Composition

Chatburn and similar soils: 90 percent

Description of Chatburn

Setting

Landform: Fan remnants, valley floors
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Silty alluvium and/or loess

Custom Soil Resource Report

Properties and qualities

Slope: 1 to 4 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 35 percent

Maximum salinity: Slightly saline to moderately saline (8.0 to 16.0 mmhos/cm)

Sodium adsorption ratio, maximum: 25.0

Available water capacity: Moderate (about 8.5 inches)

Interpretive groups

Farmland classification: Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium

Land capability classification (irrigated): 3e

Land capability (nonirrigated): 4e

Hydrologic Soil Group: C

Typical profile

0 to 11 inches: Silt loam

11 to 14 inches: Silty clay loam

14 to 60 inches: Silt loam

56—Downata silt loam, 0 to 2 percent slopes

Map Unit Setting

Elevation: 4,400 to 5,100 feet

Mean annual precipitation: 12 to 16 inches

Mean annual air temperature: 45 to 46 degrees F

Frost-free period: 85 to 100 days

Map Unit Composition

Downata and similar soils: 95 percent

Minor components: 4 percent

Description of Downata

Setting

Landform: Flood plains, stream terraces

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Loess and/or mixed alluvium

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Very poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)

Custom Soil Resource Report

Depth to water table: About 0 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 45 percent
Maximum salinity: Nonsaline to very slightly saline (2.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 5.0
Available water capacity: High (about 11.2 inches)

Interpretive groups

Farmland classification: Prime farmland if irrigated and drained
Land capability classification (irrigated): 5w
Land capability (nonirrigated): 5w
Hydrologic Soil Group: C/D

Typical profile

0 to 10 inches: Silt loam
10 to 32 inches: Silty clay loam
32 to 60 inches: Silty clay loam

Minor Components

Aquolls, stratified

Percent of map unit: 4 percent
Landform: Depressions

75—Hutchley very gravelly silt loam, 10 to 35 percent slopes

Map Unit Setting

Elevation: 5,200 to 7,000 feet
Mean annual precipitation: 12 to 16 inches
Mean annual air temperature: 39 to 45 degrees F
Frost-free period: 55 to 85 days

Map Unit Composition

Hutchley and similar soils: 75 percent

Description of Hutchley

Setting

Landform: Mountain slopes
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Loess and/or alluvium and/or colluvium over bedrock derived from igneous rock and/or latite and/or andesite and/or quartz-monzonite

Properties and qualities

Slope: 10 to 35 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)

Custom Soil Resource Report

Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Very low (about 1.5 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 6e
Hydrologic Soil Group: D
Ecological site: SHALLOW STONY 12-20 ARAR8/PSSPS (R013XY014ID)

Typical profile

0 to 7 inches: Very gravelly silt loam
7 to 14 inches: Very cobbly clay loam
14 to 24 inches: Bedrock

92—Kovich silt loam, 0 to 3 percent slopes

Map Unit Setting

Elevation: 4,400 to 5,700 feet
Mean annual precipitation: 12 to 16 inches
Mean annual air temperature: 43 to 46 degrees F
Frost-free period: 80 to 100 days

Map Unit Composition

Kovich and similar soils: 85 percent
Minor components: 10 percent

Description of Kovich

Setting

Landform: Fan remnants, flood plains, stream terraces
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Mixed alluvium

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 20 to 40 inches to strongly contrasting textural stratification
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 2.00 in/hr)
Depth to water table: About 12 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Moderate (about 6.2 inches)

Interpretive groups

Farmland classification: Prime farmland if irrigated and drained
Land capability classification (irrigated): 3w
Land capability (nonirrigated): 3w
Hydrologic Soil Group: C

Custom Soil Resource Report

Typical profile

0 to 13 inches: Silt loam
13 to 27 inches: Gravelly clay loam
27 to 35 inches: Gravelly loam
35 to 38 inches: Very gravelly sandy loam
38 to 60 inches: Stratified very gravelly loamy sand to extremely cobbly sand

Minor Components

Aquolls, very gravelly throughout

Percent of map unit: 5 percent
Landform: Flood plains

Downata

Percent of map unit: 5 percent
Landform: Flood plains

112—Rexburg silt loam, 1 to 3 percent slopes

Map Unit Setting

Elevation: 4,800 to 6,200 feet
Mean annual precipitation: 12 to 16 inches
Mean annual air temperature: 39 to 46 degrees F
Frost-free period: 75 to 110 days

Map Unit Composition

Rexburg and similar soils: 90 percent

Description of Rexburg

Setting

Landform: Fan remnants
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Mixed alluvium and/or loess

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)
Available water capacity: High (about 12.0 inches)

Interpretive groups

Farmland classification: Prime farmland if irrigated

Custom Soil Resource Report

Land capability classification (irrigated): 3e
Land capability (nonirrigated): 3c
Hydrologic Soil Group: B

Typical profile

0 to 15 inches: Silt loam
15 to 21 inches: Silt loam
21 to 60 inches: Silt loam

119—Ririe silt loam, 1 to 3 percent slopes

Map Unit Setting

Elevation: 4,600 to 7,000 feet
Mean annual precipitation: 12 to 18 inches
Mean annual air temperature: 39 to 46 degrees F
Frost-free period: 70 to 100 days

Map Unit Composition

Ririe and similar soils: 85 percent

Description of Ririe

Setting

Landform: Fan remnants
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Silty alluvium and/or loess

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 15.0
Available water capacity: High (about 12.0 inches)

Interpretive groups

Farmland classification: Prime farmland if irrigated
Land capability classification (irrigated): 3e
Land capability (nonirrigated): 3c
Hydrologic Soil Group: B

Typical profile

0 to 12 inches: Silt loam
12 to 45 inches: Silt loam
45 to 60 inches: Silt loam

157—Watercanyon-Vitale-Rexburg association, 30 to 50 percent slopes

Map Unit Setting

Elevation: 4,500 to 7,500 feet
Mean annual precipitation: 12 to 20 inches
Mean annual air temperature: 39 to 46 degrees F
Frost-free period: 60 to 115 days

Map Unit Composition

Watercanyon and similar soils: 35 percent
Vitale, extremely stony surface, and similar soils: 25 percent
Rexburg and similar soils: 20 percent
Minor components: 2 percent

Description of Watercanyon

Setting

Landform: Hillslopes, mountain slopes
Landform position (two-dimensional): Toeslope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Volcanic ash and/or silty alluvium and/or loess

Properties and qualities

Slope: 30 to 50 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Maximum salinity: Nonsaline to very slightly saline (2.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 10.0
Available water capacity: High (about 9.9 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: STEEP SOUTH SLOPES 12-16 ARTRV/PSSPS (R013XY008ID)

Typical profile

0 to 2 inches: Silt loam
2 to 16 inches: Silt loam
16 to 60 inches: Very fine sandy loam

Description of Vitale, Extremely Stony Surface

Setting

Landform: Mountain slopes

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Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Tephra and/or alluvium and/or colluvium over bedrock derived from welded tuff and/or rhyolite and/or quartz monzonite and/or sandstone and/or conglomerate and/or siltstone

Properties and qualities

Slope: 30 to 50 percent

Surface area covered with cobbles, stones or boulders: 10.0 percent

Depth to restrictive feature: 20 to 40 inches to lithic bedrock

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water capacity: Very low (about 2.4 inches)

Interpretive groups

Farmland classification: Not prime farmland

Land capability (nonirrigated): 7e

Hydrologic Soil Group: C

Ecological site: STEEP SOUTH SLOPES 12-16 ARTRV/PSSPS (R013XY008ID)

Typical profile

0 to 10 inches: Stony loam

10 to 30 inches: Very cobbly clay loam

30 to 40 inches: Bedrock

Description of Rexburg

Setting

Landform: Mountain slopes

Down-slope shape: Concave

Across-slope shape: Concave

Parent material: Mixed alluvium and/or loess

Properties and qualities

Slope: 30 to 50 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 30 percent

Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)

Available water capacity: High (about 12.0 inches)

Interpretive groups

Farmland classification: Not prime farmland

Land capability (nonirrigated): 7e

Hydrologic Soil Group: B

Ecological site: STEEP SOUTH SLOPES 12-16 ARTRV/PSSPS (R013XY008ID)

Typical profile

0 to 12 inches: Silt loam

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12 to 18 inches: Silt loam
18 to 60 inches: Silt loam

Minor Components

Aquolls, seeps and springs

Percent of map unit: 2 percent
Landform: Depressions

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

Land Classifications

Land Classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Hydric Rating by Map Unit

This rating indicates the proportion of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is designated as "hydric," "predominantly hydric," "partially hydric," "predominantly nonhydric," or "nonhydric" depending on the rating of its respective components and the percentage of each component within the map unit.

"Hydric" means that all components listed for a given map unit are rated as being hydric. "Predominantly hydric" means components that comprise 66 to 99 percent of the map unit are rated as hydric. "Partially hydric" means components that comprise 33 to 66 percent of the map unit are rated as hydric. "Predominantly nonhydric" means components that comprise up to 33 percent of the map unit are rated as hydric. "Nonhydric" means that none of the components are rated as hydric. The assumption here is that all components of the map unit are rated as hydric or nonhydric in the

Custom Soil Resource Report

underlying database. A "Not rated or not available" map unit rating is displayed when none of the components within a map unit have been rated.

In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as being hydric is displayed.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

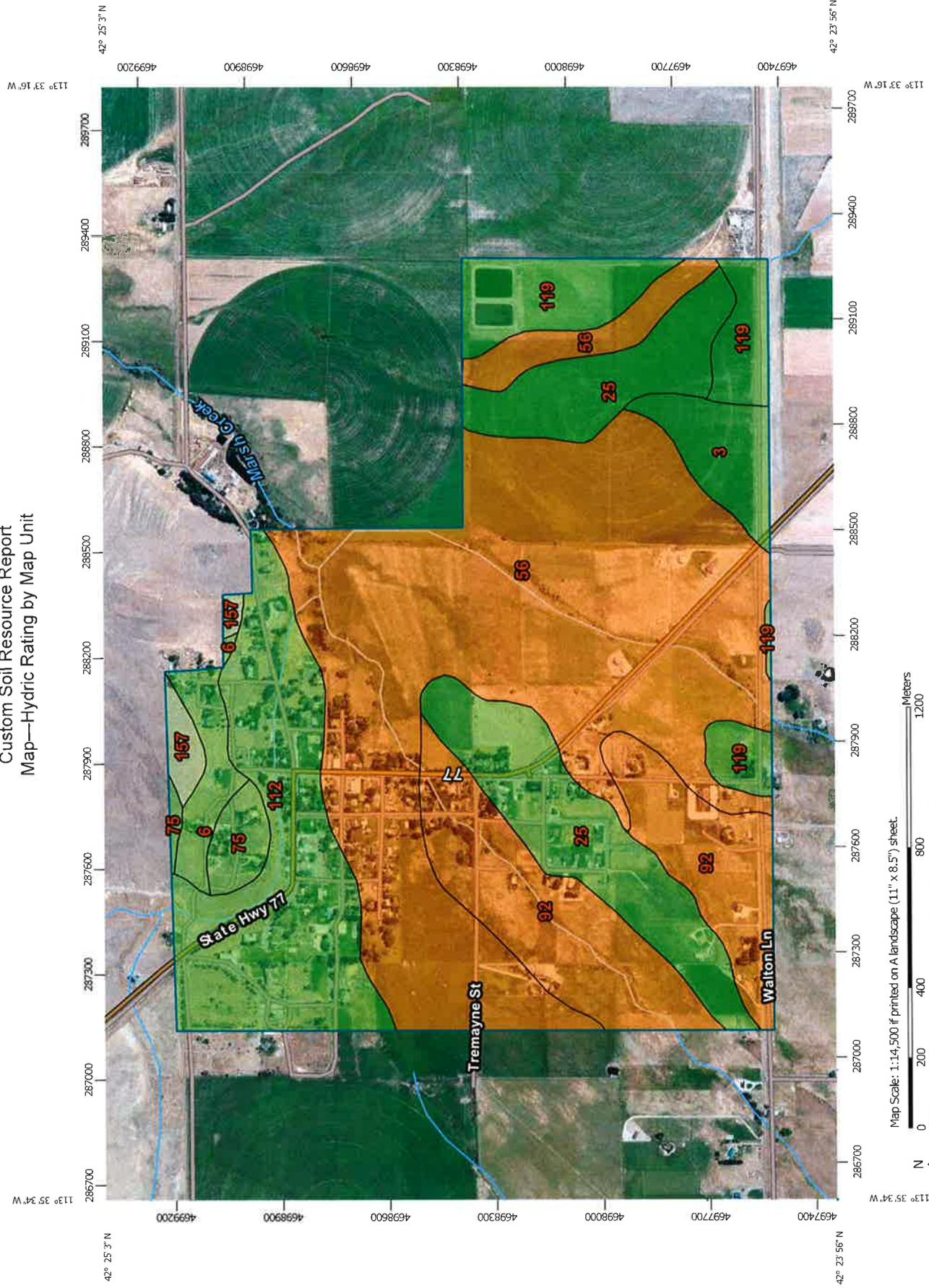
Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

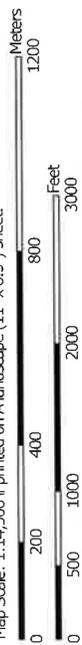
Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Custom Soil Resource Report
Map—Hydric Rating by Map Unit



Map Scale: 1:14,500 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tps: UTM Zone 12N WGS84

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cassia County, Idaho, Eastern Part
 Survey Area Data: Version 8, Aug 14, 2012

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 16, 2010—Sep 24, 2010

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

MAP LEGEND

 Area of Interest (AOI)	 Predominantly Hydric (66 to 99%)
 Soils	 Partially hydric (33 to 65%)
 Soil Rating Polygons	 Predominantly nonhydric (1 to 32%)
 Hydric (100%)	 Nonhydric (0%)
 Predominantly Hydric (66 to 99%)	 Not rated or not available
 Partially hydric (33 to 65%)	Water Features
 Predominantly nonhydric (1 to 32%)	 Streams and Canals
 Nonhydric (0%)	Transportation
 Not rated or not available	 Rails
Soil Rating Lines	 Interstate Highways
 Hydric (100%)	 US Routes
 Predominantly Hydric (66 to 99%)	 Major Roads
 Partially hydric (33 to 65%)	 Local Roads
 Predominantly nonhydric (1 to 32%)	Background
 Nonhydric (0%)	 Aerial Photography
 Not rated or not available	
Soil Rating Points	
 Hydric (100%)	

Custom Soil Resource Report

Table—Hydric Rating by Map Unit

Hydric Rating by Map Unit— Summary by Map Unit — Cassia County, Idaho, Eastern Part (ID708)				
Map unit symbol	Map unit name	Rating	Acres In AOI	Percent of AOI
3	Acord silt loam, 2 to 4 percent slopes, very stony	0	22.2	3.0%
6	Arbone loam, 4 to 12 percent slopes	0	15.9	2.1%
25	Chatburn silt loam, 1 to 4 percent slopes	0	99.1	13.3%
56	Downata silt loam, 0 to 2 percent slopes	99	325.9	43.7%
75	Hutchley very gravelly silt loam, 10 to 35 percent slopes	0	11.7	1.6%
92	Kovich silt loam, 0 to 3 percent slopes	95	106.4	14.3%
112	Rexburg silt loam, 1 to 3 percent slopes	0	105.5	14.1%
119	Ririe silt loam, 1 to 3 percent slopes	0	51.1	6.9%
157	Watercanyon-Vitale-Rexburg association, 30 to 50 percent slopes	2	7.6	1.0%
Totals for Area of Interest			745.4	100.0%

Rating Options—Hydric Rating by Map Unit

Aggregation Method: Percent Present

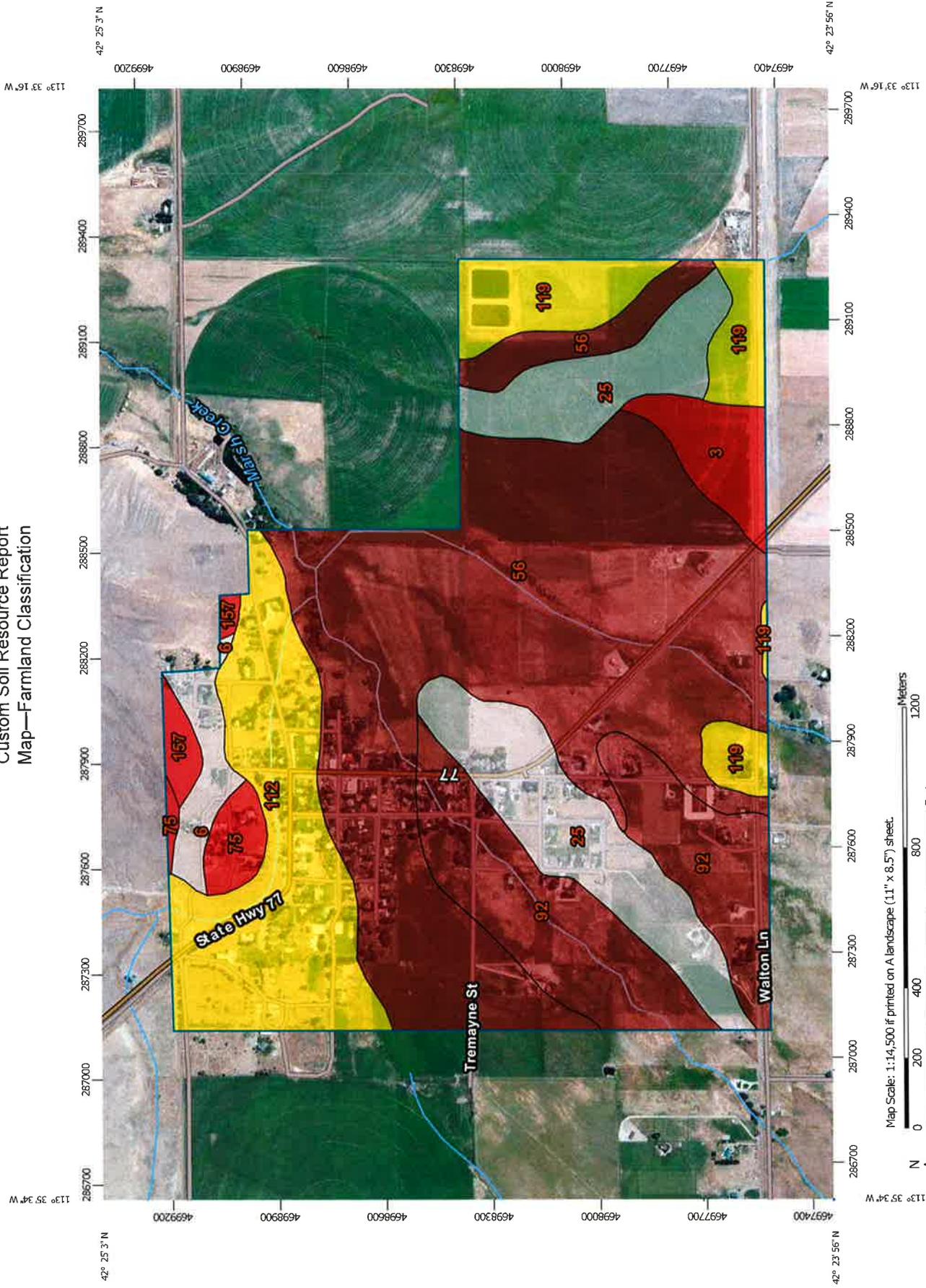
Component Percent Cutoff: None Specified

Tie-break Rule: Lower

Farmland Classification

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

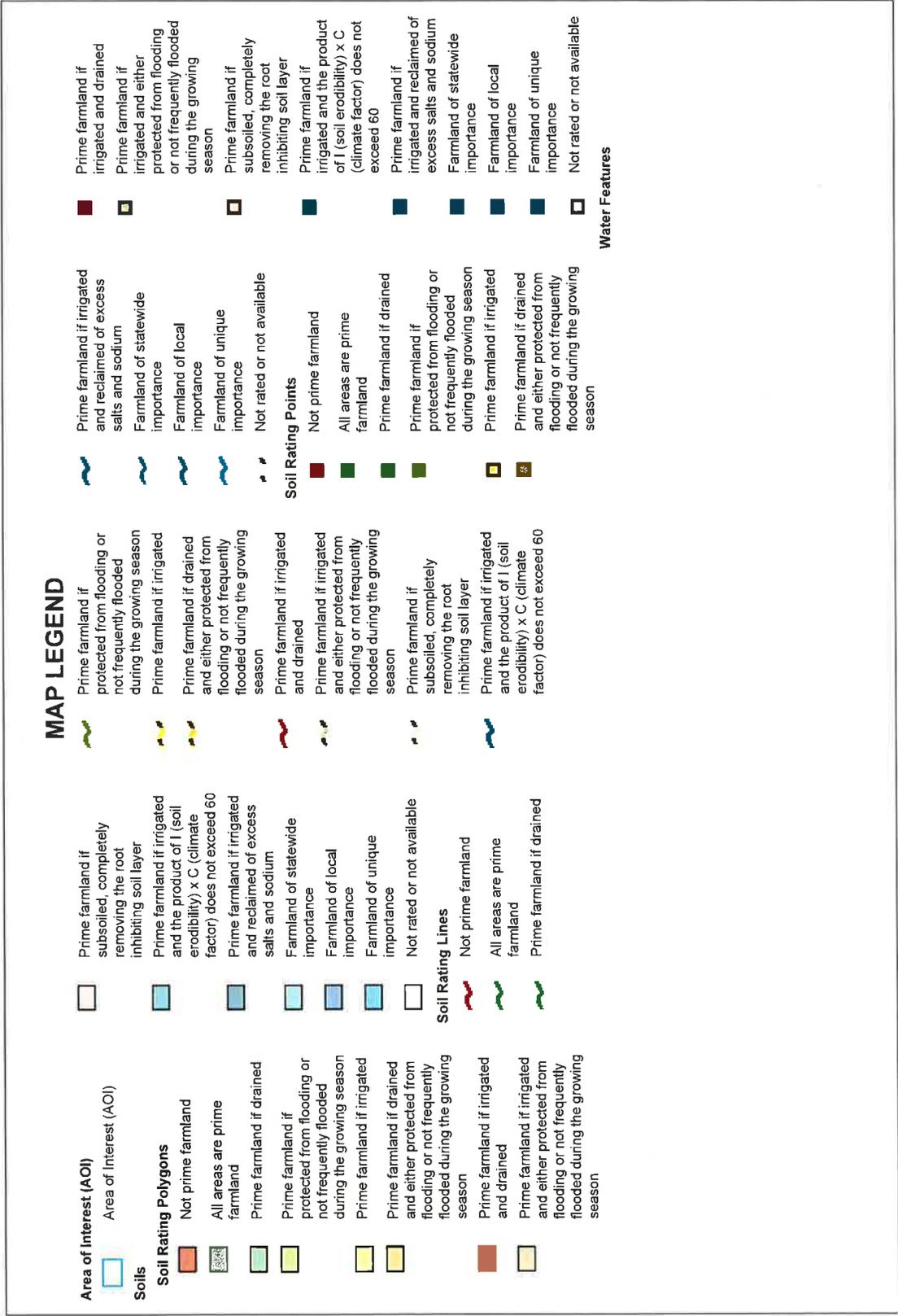
Custom Soil Resource Report
Map—Farmland Classification



Map Scale: 1:14,500 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 12N WGS84



MAP INFORMATION

-  Streams and Canals
- Transportation**
-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads
- Background**
-  Aerial Photography

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cassia County, Idaho, Eastern Part
Survey Area Data: Version 8, Aug 14, 2012

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 16, 2010—Sep 24, 2010

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Custom Soil Resource Report

Table—Farmland Classification

Farmland Classification— Summary by Map Unit — Cassia County, Idaho, Eastern Part (ID708)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
3	Acord silt loam, 2 to 4 percent slopes, very stony	Not prime farmland	22.2	3.0%
6	Arbone loam, 4 to 12 percent slopes	Farmland of statewide importance, if irrigated	15.9	2.1%
25	Chatburn silt loam, 1 to 4 percent slopes	Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium	99.1	13.3%
56	Downata silt loam, 0 to 2 percent slopes	Prime farmland if irrigated and drained	325.9	43.7%
75	Hutchley very gravelly silt loam, 10 to 35 percent slopes	Not prime farmland	11.7	1.6%
92	Kovich silt loam, 0 to 3 percent slopes	Prime farmland if irrigated and drained	106.4	14.3%
112	Rexburg silt loam, 1 to 3 percent slopes	Prime farmland if irrigated	105.5	14.1%
119	Ririe silt loam, 1 to 3 percent slopes	Prime farmland if irrigated	51.1	6.9%
157	Watercanyon-Vitale-Rexburg association, 30 to 50 percent slopes	Not prime farmland	7.6	1.0%
Totals for Area of Interest			745.4	100.0%

Rating Options—Farmland Classification

Aggregation Method: No Aggregation Necessary

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

Custom Soil Resource Report

The majority of soil attributes are associated with a component of a map unit, and such an attribute has to be aggregated to the map unit level before a thematic map can be rendered. Map units, however, also have their own attributes. An attribute of a map unit does not have to be aggregated in order to render a corresponding thematic map. Therefore, the "aggregation method" for any attribute of a map unit is referred to as "No Aggregation Necessary".

Tie-break Rule: Lower

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

Water Management

Water Management interpretations are tools for evaluating the potential of the soil in the application of various water management practices. Example interpretations include pond reservoir area, embankments, dikes, levees, and excavated ponds.

Pond Reservoir Areas

Pond reservoir areas hold water behind a dam or embankment. Soils best suited to this use have low seepage potential in the upper 60 inches. The seepage potential is determined by the saturated hydraulic conductivity (Ksat) of the soil and the depth to fractured bedrock or other permeable material. Excessive slope can affect the storage capacity of the reservoir area.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

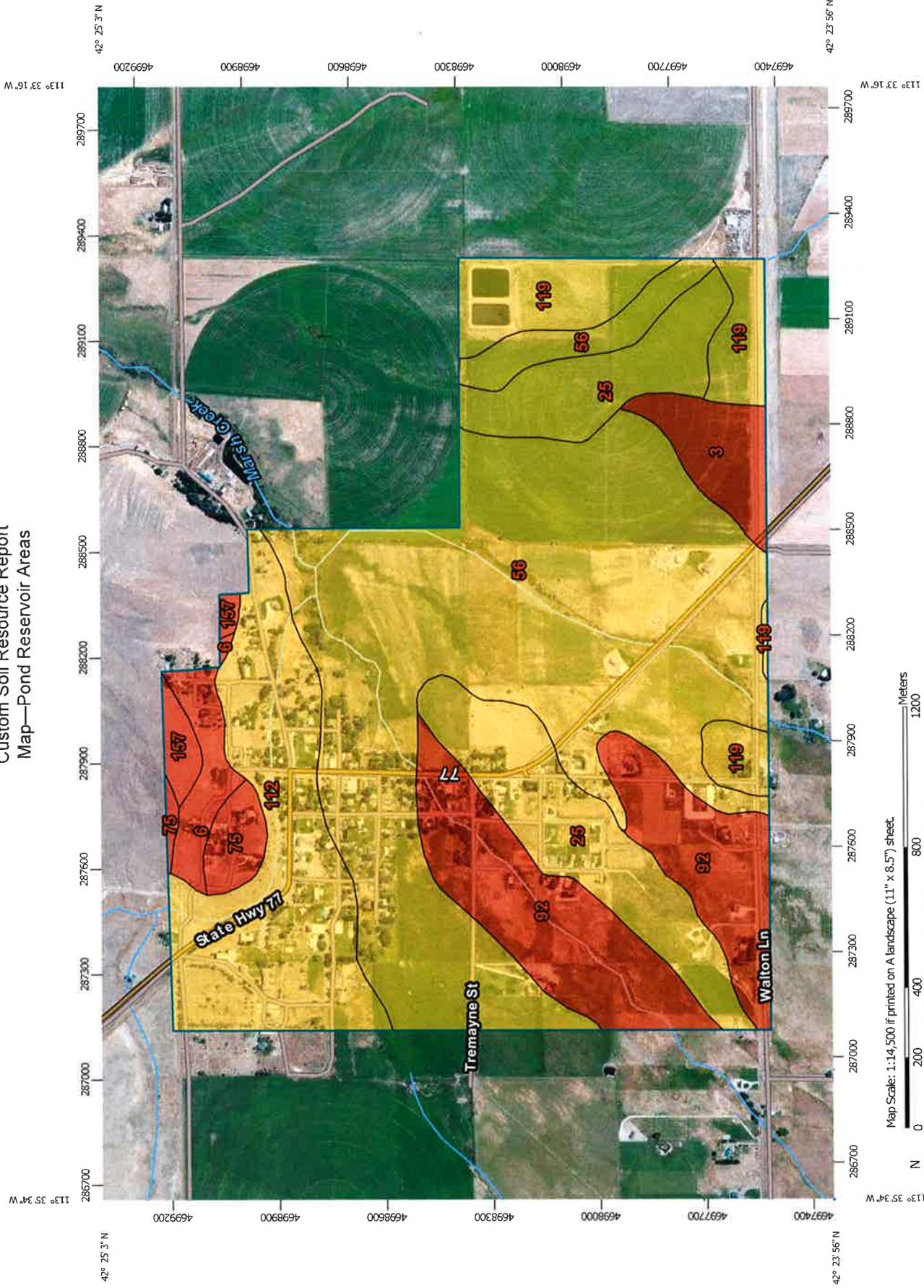
The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each

Custom Soil Resource Report

component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Custom Soil Resource Report
 Map—Pond Reservoir Areas



MAP LEGEND

-  Area of Interest (AOI)
-  Background
-  Aerial Photography
- Soils**
- Soil Rating Polygons**
-  Very limited
-  Somewhat limited
-  Not limited
-  Not rated or not available
- Soil Rating Lines**
-  Very limited
-  Somewhat limited
-  Not limited
-  Not rated or not available
- Soil Rating Points**
-  Very limited
-  Somewhat limited
-  Not limited
-  Not rated or not available
- Water Features**
-  Streams and Canals
- Transportation**
-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cassia County, Idaho, Eastern Part
 Survey Area Data: Version 8, Aug 14, 2012

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 16, 2010—Sep 24, 2010

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Custom Soil Resource Report

Tables—Pond Reservoir Areas

Pond Reservoir Areas— Summary by Map Unit — Cassia County, Idaho, Eastern Part (ID708)						
Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
3	Acord silt loam, 2 to 4 percent slopes, very stony	Very limited	Acord, very stony surface (90%)	Seepage (1.00)	22.2	3.0%
6	Arbone loam, 4 to 12 percent slopes	Very limited	Arbone (85%)	Slope (1.00)	15.9	2.1%
				Seepage (0.72)		
25	Chatburn silt loam, 1 to 4 percent slopes	Somewhat limited	Chatburn (90%)	Seepage (0.04)	99.1	13.3%
56	Downata silt loam, 0 to 2 percent slopes	Somewhat limited	Downata (95%)	Seepage (0.54)	325.9	43.7%
75	Hutchley very gravelly silt loam, 10 to 35 percent slopes	Very limited	Hutchley (75%)	Slope (1.00)	11.7	1.6%
				Depth to bedrock (1.00)		
92	Kovich silt loam, 0 to 3 percent slopes	Very limited	Kovich (85%)	Seepage (1.00)	106.4	14.3%
112	Rexburg silt loam, 1 to 3 percent slopes	Somewhat limited	Rexburg (90%)	Seepage (0.70)	105.5	14.1%
119	Ririe silt loam, 1 to 3 percent slopes	Somewhat limited	Ririe (85%)	Seepage (0.70)	51.1	6.9%
157	Watercanyon-Vitale-Rexburg association, 30 to 50 percent slopes	Very limited	Watercanyon (35%)	Slope (1.00)	7.6	1.0%
				Seepage (0.70)		
			Vitale, extremely stony surface (25%)	Slope (1.00)		
				Depth to bedrock (0.86)		
				Seepage (0.04)		
			Rexburg (20%)	Slope (1.00)		
Seepage (0.70)						
Totals for Area of Interest					745.4	100.0%

Pond Reservoir Areas— Summary by Rating Value		
Rating	Acres in AOI	Percent of AOI
Somewhat limited	581.6	78.0%
Very limited	163.8	22.0%
Totals for Area of Interest	745.4	100.0%

Rating Options—Pond Reservoir Areas

Aggregation Method: Dominant Condition

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The aggregation method "Dominant Condition" first groups like attribute values for the components in a map unit. For each group, percent composition is set to the sum of the percent composition of all components participating in that group. These groups now represent "conditions" rather than components. The attribute value associated with the group with the highest cumulative percent composition is returned. If more than one group shares the highest cumulative percent composition, the corresponding "tie-break" rule determines which value should be returned. The "tie-break" rule indicates whether the lower or higher group value should be returned in the case of a percent composition tie. The result returned by this aggregation method represents the dominant condition throughout the map unit only when no tie has occurred.

Component Percent Cutoff: None Specified

Components whose percent composition is below the cutoff value will not be considered. If no cutoff value is specified, all components in the database will be considered. The data for some contrasting soils of minor extent may not be in the database, and therefore are not considered.

Tie-break Rule: Higher

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Physical Properties

Soil Physical Properties are measured or inferred from direct observations in the field or laboratory. Examples of soil physical properties include percent clay, organic matter, saturated hydraulic conductivity, available water capacity, and bulk density.

Saturated Hydraulic Conductivity (Ksat), Standard Classes

Saturated hydraulic conductivity (Ksat) refers to the ease with which pores in a saturated soil transmit water. The estimates are expressed in terms of micrometers per second. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Saturated hydraulic conductivity is considered in the design of soil drainage systems and septic tank absorption fields.

For each soil layer, this attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

The numeric Ksat values have been grouped according to standard Ksat class limits. The classes are:

Very low: 0.00 to 0.01

Low: 0.01 to 0.1

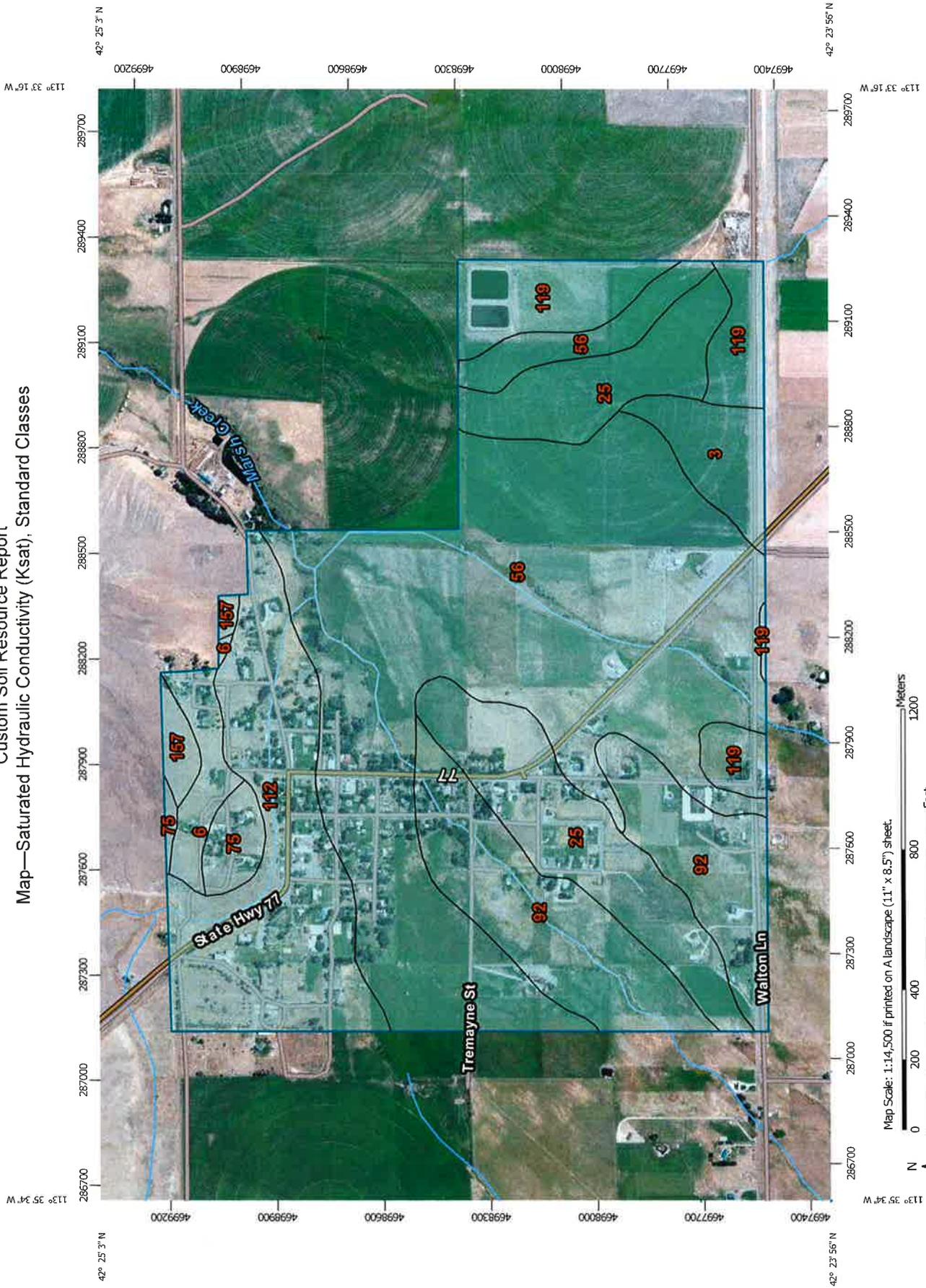
Moderately low: 0.1 to 1.0

Moderately high: 1 to 10

High: 10 to 100

Very high: 100 to 705

Custom Soil Resource Report
 Map—Saturated Hydraulic Conductivity (Ksat), Standard Classes



Map Scale: 1:14,500 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 12N WGS84

MAP LEGEND

Not rated or not available

Area of Interest (AOI)

Area of Interest (AOI)

Water Features

Streams and Canals

Soils

Soil Rating Polygons

	Very Low (0.0 - 0.01)
	Low (0.01 - 0.1)
	Moderately Low (0.1 - 1)
	Moderately High (1 - 10)
	High (10 - 100)
	Very High (100 - 705)
	Not rated or not available

Transportation

	Rails
	Interstate Highways
	US Routes
	Major Roads
	Local Roads

Background

	Aerial Photography
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Soil Rating Lines

	Very Low (0.0 - 0.01)
	Low (0.01 - 0.1)
	Moderately Low (0.1 - 1)
	Moderately High (1 - 10)
	High (10 - 100)
	Very High (100 - 705)
	Not rated or not available

Soil Rating Points

	Very Low (0.0 - 0.01)
	Low (0.01 - 0.1)
	Moderately Low (0.1 - 1)
	Moderately High (1 - 10)
	High (10 - 100)
	Very High (100 - 705)

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cassia County, Idaho, Eastern Part
 Survey Area Data: Version 8, Aug 14, 2012

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 16, 2010—Sep 24, 2010

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Custom Soil Resource Report

Table—Saturated Hydraulic Conductivity (Ksat), Standard Classes

Saturated Hydraulic Conductivity (Ksat), Standard Classes— Summary by Map Unit — Cassia County, Idaho, Eastern Part (ID708)				
Map unit symbol	Map unit name	Rating (micrometers per second)	Acres in AOI	Percent of AOI
3	Acord silt loam, 2 to 4 percent slopes, very stony	9.0000	22.2	3.0%
6	Arbone loam, 4 to 12 percent slopes	9.1000	15.9	2.1%
25	Chatburn silt loam, 1 to 4 percent slopes	6.3627	99.1	13.3%
56	Downata silt loam, 0 to 2 percent slopes	5.3950	325.9	43.7%
75	Hutchley very gravelly silt loam, 10 to 35 percent slopes	5.9100	11.7	1.6%
92	Kovich silt loam, 0 to 3 percent slopes	9.0000	106.4	14.3%
112	Rexburg silt loam, 1 to 3 percent slopes	9.0000	105.5	14.1%
119	Ririe silt loam, 1 to 3 percent slopes	9.0000	51.1	6.9%
157	Watercanyon-Vitale-Rexburg association, 30 to 50 percent slopes	9.0000	7.6	1.0%
Totals for Area of Interest			745.4	100.0%

Rating Options—Saturated Hydraulic Conductivity (Ksat), Standard Classes

Units of Measure: micrometers per second

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Fastest

Interpret Nulls as Zero: No

Layer Options (Horizon Aggregation Method): Depth Range (Weighted Average)

Top Depth: 0

Bottom Depth: 60

Units of Measure: Centimeters

Soil Reports

The Soil Reports section includes various formatted tabular and narrative reports (tables) containing data for each selected soil map unit and each component of each unit. No aggregation of data has occurred as is done in reports in the Soil Properties and Qualities and Suitabilities and Limitations sections.

The reports contain soil interpretive information as well as basic soil properties and qualities. A description of each report (table) is included.

AOI Inventory

This folder contains a collection of tabular reports that present a variety of soil information. Included are various map unit description reports, special soil interpretation reports, and data summary reports.

Selected Soil Interpretations

This report allows the customer to produce a report showing the results of the soil interpretation(s) of his or her choice. It is useful when a standard report that displays the results of the selected interpretation(s) is not available.

When customers select this report, they are presented with a list of interpretations with results for the selected map units. The customer may select up to three interpretations to be presented in table format.

For a description of the particular interpretations and their criteria, use the "Selected Survey Area Interpretation Descriptions" report.

Report—Selected Soil Interpretations

Selected Soil Interpretations—Cassia County, Idaho, Eastern Part							
Map symbol and soil name	Pct. of map unit	Eng - sewage lagoons		Eng - shallow excavations		For - road suitability (natural surface) (ld)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3—Acord silt loam, 2 to 4 percent slopes, very stony							
Acord, very stony surface	90	Very limited		Somewhat limited		Well suited	
		Seepage	1.00	Large stones	0.45		
		Large stones	1.00	Unstable excavation walls	0.10		
		Slope	0.08	Too clayey	0.01		

Custom Soil Resource Report

Selected Soil Interpretations—Cassia County, Idaho, Eastern Part							
Map symbol and soil name	Pct. of map unit	Eng - sewage lagoons		Eng - shallow excavations		For - road suitability (natural surface) (ld)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
6—Arbone loam, 4 to 12 percent slopes							
Arbone	85	Very limited		Somewhat limited		Moderately suited	
		Slope	1.00	Unstable excavation walls	0.10	Low strength	0.50
		Seepage	0.52			Slope	0.50
25—Chatburn silt loam, 1 to 4 percent slopes							
Chatburn	90	Somewhat limited		Somewhat limited		Moderately suited	
		Seepage	0.28	Unstable excavation walls	0.10	Low strength	0.50
		Slope	0.08				
56—Downata silt loam, 0 to 2 percent slopes							
Downata	95	Very limited		Very limited		Moderately suited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Wetness	0.50
		Seepage	0.28	Unstable excavation walls	0.10	Low strength	0.50
75—Hutchley very gravelly silt loam, 10 to 35 percent slopes							
Hutchley	75	Very limited		Very limited		Moderately suited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	0.50
		Slope	1.00	Slope	1.00		
		Large stones	0.02	Unstable excavation walls	0.10		
92—Kovich silt loam, 0 to 3 percent slopes							
Kovich	85	Very limited		Very limited		Moderately suited	
		Seepage	1.00	Depth to saturated zone	1.00	Low strength	0.50
		Depth to saturated zone	1.00	Unstable excavation walls	1.00		
112—Rexburg silt loam, 1 to 3 percent slopes							
Rexburg	90	Somewhat limited		Somewhat limited		Moderately suited	
		Seepage	0.50	Unstable excavation walls	0.10	Low strength	0.50
119—Ririe silt loam, 1 to 3 percent slopes							
Ririe	85	Somewhat limited		Somewhat limited		Moderately suited	
		Seepage	0.50	Unstable excavation walls	0.10	Low strength	0.50

Custom Soil Resource Report

Selected Soil Interpretations—Cassia County, Idaho, Eastern Part							
Map symbol and soil name	Pct. of map unit	Eng - sewage lagoons		Eng - shallow excavations		For - road suitability (natural surface) (ld)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
157—Watercanyon-Vitale-Rexburg association, 30 to 50 percent slopes							
Watercanyon	35	Very limited		Very limited		Poorly suited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	0.50	Unstable excavation walls	0.10	Low strength	0.50
Vitale, extremely stony surface	25	Very limited		Very limited		Poorly suited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Rock fragments	0.50
				Unstable excavation walls	0.10		
Rexburg	20	Very limited		Very limited		Poorly suited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	0.50	Unstable excavation walls	0.10	Low strength	0.50

Land Classifications

This folder contains a collection of tabular reports that present a variety of soil groupings. The reports (tables) include all selected map units and components for each map unit. Land classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Hydric Soils

This table lists the map unit components that are rated as hydric soils in the survey area. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 2002).

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for all of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological

Custom Soil Resource Report

wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils, under natural conditions, are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

Map units that are dominantly made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units dominantly made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

The criteria for hydric soils are represented by codes in the table (for example, 2). Definitions for the codes are as follows:

1. All Histels except for Folistels, and Histosols except for Folist.
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that:
 - A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
 - B. Show evidence that the soil meets the definition of a hydric soil;
3. Soils that are frequently ponded for long or very long duration during the growing season.
 - A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
 - B. Show evidence that the soil meets the definition of a hydric soil;

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4. Map unit components that are frequently flooded for long duration or very long duration during the growing season that:
 - A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
 - B. Show evidence that the soil meets the definition of a hydric soil;

Hydric Condition: Food Security Act information regarding the ability to grow a commodity crop without removing woody vegetation or manipulating hydrology.

References:

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. September 18, 2002. Hydric soils of the United States.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

Report—Hydric Soils

Hydric Soils—Cassia County, Idaho, Eastern Part				
Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric criteria
56—Downata silt loam, 0 to 2 percent slopes				
	Downata	95	Flood plains, stream terraces	2
	Aquolls, stratified	4	Depressions	2
92—Kovich silt loam, 0 to 3 percent slopes				
	Kovich	85	Fan remnants, flood plains, stream terraces	2
	Aquolls, very gravelly throughout	5	Flood plains	2
	Downata	5	Flood plains	2
157—Watercanyon-Vitale-Rexburg association, 30 to 50 percent slopes				
	Aquolls, seeps and springs	2	Depressions	2

Prime and other Important Farmlands

This table lists the map units in the survey area that are considered important farmlands. Important farmlands consist of prime farmland, unique farmland, and farmland of statewide or local importance. This list does not constitute a recommendation for a particular land use.

In an effort to identify the extent and location of important farmlands, the Natural Resources Conservation Service, in cooperation with other interested Federal, State, and local government organizations, has inventoried land that can be used for the production of the Nation's food supply.

Prime farmland is of major importance in meeting the Nation's short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil quality, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. The water supply is dependable and of adequate quality. Prime farmland is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

For some of the soils identified in the table as prime farmland, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures.

A recent trend in land use in some areas has been the loss of some prime farmland to industrial and urban uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

Unique farmland is land other than prime farmland that is used for the production of specific high-value food and fiber crops, such as citrus, tree nuts, olives, cranberries, and other fruits and vegetables. It has the special combination of soil quality, growing season, moisture supply, temperature, humidity, air drainage, elevation, and aspect needed for the soil to economically produce sustainable high yields of these crops when properly managed. The water supply is dependable and of adequate quality. Nearness to markets is an additional consideration. Unique farmland is not based on national criteria. It commonly is in areas where there is a special microclimate, such as the wine country in California.

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In some areas, land that does not meet the criteria for prime or unique farmland is considered to be *farmland of statewide importance* for the production of food, feed, fiber, forage, and oilseed crops. The criteria for defining and delineating farmland of statewide importance are determined by the appropriate State agencies. Generally, this land includes areas of soils that nearly meet the requirements for prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. Some areas may produce as high a yield as prime farmland if conditions are favorable. Farmland of statewide importance may include tracts of land that have been designated for agriculture by State law.

In some areas that are not identified as having national or statewide importance, land is considered to be *farmland of local importance* for the production of food, feed, fiber, forage, and oilseed crops. This farmland is identified by the appropriate local agencies. Farmland of local importance may include tracts of land that have been designated for agriculture by local ordinance.

Report—Prime and other Important Farmlands

Prime and other Important Farmlands—Cassia County, Idaho, Eastern Part		
Map Symbol	Map Unit Name	Farmland Classification
3	Acord silt loam, 2 to 4 percent slopes, very stony	Not prime farmland
6	Arbone loam, 4 to 12 percent slopes	Farmland of statewide importance, if irrigated
25	Chatburn silt loam, 1 to 4 percent slopes	Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
56	Downata silt loam, 0 to 2 percent slopes	Prime farmland if irrigated and drained
75	Hutchley very gravelly silt loam, 10 to 35 percent slopes	Not prime farmland
92	Kovich silt loam, 0 to 3 percent slopes	Prime farmland if irrigated and drained
112	Rexburg silt loam, 1 to 3 percent slopes	Prime farmland if irrigated
119	Ririe silt loam, 1 to 3 percent slopes	Prime farmland if irrigated
157	Watercanyon-Vitale-Rexburg association, 30 to 50 percent slopes	Not prime farmland

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. <http://soils.usda.gov/>

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. <http://soils.usda.gov/>

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. <http://soils.usda.gov/>

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. <http://soils.usda.gov/>

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.glti.nrcs.usda.gov/>

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. <http://soils.usda.gov/>

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. <http://soils.usda.gov/>

Custom Soil Resource Report

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210.

Andrew Hobson

From: Eastman, Susan <Eastman.Susan@epa.gov>
Sent: Monday, December 23, 2013 12:43 PM
To: Mark Holtzen
Cc: Andrew Hobson
Subject: Sole Source Aquifer (SSA) approval and check list attached to be used for all future approval requests.
Attachments: R10 Sole Source Aquifer Checklist.doc

FYI... all federally funded projects submit a checklist to me for approval of federal funding if the project is located within a federally designated Sole Source Aquifer review area such as the Eastern Snake River Plain SSA in this case. The review area consists of the aquifer boundary AND the source area as delineated on the web site maps. I am including a link to the EPA Region 10 SSA web site and a copy of the check list for future reference and submittals. I am approving the City Albion WWTP improvement project in this email and I am not requiring you to resubmit a check list for this particular project given the likely improvement the project will bring to the area and potentially the aquifer. Please include a checklist via email (hard copy is not necessary) in all future correspondence requesting comments and/or approval. If your project is NOT getting federal funding OR is not located in the review area of a SSA do not send me requests for comments.

You can find maps on the site:

<http://yosemite.epa.gov/r10/water.nsf/Sole+Source+Aquifers/SSA>

Below is your approval:

Thank you for submitting your project for review. We have reviewed the information provided and find that the project will not have a significant adverse impact on the Eastern Snake River Plain Sole Source Aquifer and therefore the funding may proceed.

EPA reviews federally financially assisted projects that are proposed in federally designated Sole Source Aquifer review areas to determine if the projects have a potential to contaminate the aquifer through a recharge zone so as to create a significant hazard to public health. Such projects are submitted to EPA by federal, state, and local governments, and by the public.

This correspondence only addresses the Sole Source Aquifer Program, any other federal environmental requirements are your responsibility to ensure compliance. Please retain this email for your records.

Susan Eastman
1200 Sixth Ave Suite 900
OWW 136
Seattle, WA 98101-3140
CWA ISA and SDWA TSA, Sole Source Aquifer Program,
Source Water Protection and Idaho GW 106
206 553 6249
Eastman.Susan@epa.gov



C.L. "Butch" Otter
Governor of Idaho

Janet Gallimore
Executive Director

Administration
2205 Old Penitentiary Road
Boise, Idaho 83712-8250
Office: (208) 334-2682
Fax: (208) 334-2774

Membership and Fund
Development
2205 Old Penitentiary Road
Boise, Idaho 83712-8250
Office: (208) 514-2310
Fax: (208) 334-2774

Historical Museum and
Education Programs
610 North Julia Davis Drive
Boise, Idaho 83702-7695
Office: (208) 334-2120
Fax: (208) 334-4059

State Historic Preservation
Office and Historic Sites
Archeological Survey of Idaho
210 Main Street
Boise, Idaho 83702-7264
Office: (208) 334-3861
Fax: (208) 334-2775

Statewide Sites:
• Franklin Historic Site
• Pierce Courthouse
• Rock Creek Station and
• Stricker Homesite

Old Penitentiary
2445 Old Penitentiary Road
Boise, Idaho 83712-8254
Office: (208) 334-2844
Fax: (208) 334-3225

Idaho State Archives
2205 Old Penitentiary Road
Boise, Idaho 83712-8250
Office: (208) 334-2620
Fax: (208) 334-2626

North Idaho Office
112 West 4th Street, Suite #7
Moscow, Idaho 83843
Office: (208) 882-1540
Fax: (208) 882-1763



Historical Society is an
Equal Opportunity Employer.

TO: Mark Holtzen, P.E., J-U-B Engineers, Inc.

DATE: 12/4/2013

IDAHO SHPO REV#: 2014-145

FEDERAL AGENCY: EPA (Idaho Department of Environmental Quality)

PROJECT NAME: City of Albion Environmental Information Document (EID),
Wastewater System

PROJECT NUMBER: NA

PROJECT LOCATION: Sections 5 and 6, Township 12S, Range 25 E, Boise Meridian,
Cassia County, Idaho

Step 1: Initiate the Section 106 Process (36 CFR 800.3)

<input checked="" type="checkbox"/>	Establish Undertaking
<input checked="" type="checkbox"/>	Notify Idaho SHPO (30 days to respond)
<input checked="" type="checkbox"/>	Identify tribes and other consulting parties Include certified local governments if appropriate:
<input checked="" type="checkbox"/>	Involve the Public
<input type="checkbox"/>	No undertaking/potential to cause effects. (Section 106 concluded).
	Justification:
<input checked="" type="checkbox"/>	Undertaking may affect <i>historic properties</i> (proceed to Step 2)
<input checked="" type="checkbox"/>	Idaho SHPO internal review
<input type="checkbox"/>	Recommend independent study by a qualified consultant: http://www.preservationidaho.org/resources/cultural-resources-consultants

Step 2: Identify Historic Properties (36 CFR 800.4)

<input checked="" type="checkbox"/>	Determine Areas of Potential Effect (direct, indirect, and cumulative)
<input checked="" type="checkbox"/>	Identify <i>historic properties</i> (archival research, reconnaissance, inventory)
<input type="checkbox"/>	Present
<input checked="" type="checkbox"/>	Consult with Idaho SHPO
<input checked="" type="checkbox"/>	No <i>historic properties</i> present/affected (Section 106 concluded).
	Justification: undertaking will take place within a disturbed area, there are no historic properties which could be adversely effected by the undertaking
<input type="checkbox"/>	Potential Adverse Effects to <i>historic properties</i> (proceed to Step 3)

Step 3: Assess Adverse Effects (36 CFR 800.5)

<input type="checkbox"/>	Apply Criteria of Adverse Effect (effects to historic properties)
<input type="checkbox"/>	Consult with Idaho SHPO
<input type="checkbox"/>	No <i>historic properties</i> adversely affected (Section 106 concluded)
	Justification: nature of repairs will not affect integrity of the historic district
<input type="checkbox"/>	Adverse Effects to <i>historic properties</i> (proceed to Step 4)

Step 4: Resolve Adverse Effects (36 CFR 800.6)

<input type="checkbox"/>	Notify Advisory Council on Historic Preservation
<input type="checkbox"/>	Avoid, minimize, or mitigate adverse effects
<input type="checkbox"/>	Consult with Idaho SHPO
<input type="checkbox"/>	Final Memorandum of Agreement or Programmatic Agreement (Section 106 concluded)

Additional information on the Section 106 process can be found here: <http://www.achp.gov/flowexplain.html>

Thank You,

Ethan Morton, Archaeologist, Idaho State Historic Preservation Office



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
WALLA WALLA DISTRICT, CORPS OF ENGINEERS
BOISE REGULATORY OFFICE
10095 WEST EMERALD STREET
BOISE, IDAHO 83704-9754

January 9, 2014

Regulatory Division

SUBJECT: NWW-2013-00659, City of Albion, Waste Water Treatment Improvement Project

Mark Holtzen, P.E.
J-U-B Engineers, Inc.
115 Northstar Avenue
Twin Falls, ID 83301

Dear Mr. Holtzen:

This is in response to your October 22, 2013 letter requesting scoping comments on the proposed City of Albion, Waste Water Treatment Improvement Project. Thank you for providing the Corps of Engineers (Corps) the opportunity to provide comments. According to information provided, the proposed project is a multi-phase project to replace lift station with submersible lift station, including associated piping, reconstruction of the 6" pressure sewer line from the lift station to the treatment lagoons, approx. replacement of 25% of the existing 8" gravity sewer mains, minimal improvements to the existing treatment lagoons and associated work to accomplish the needed improvements.

The site is located within Section 5 of Township 12 South, Range 25 East, near latitude 42.4082° N and longitude -113.5702° W, in Cassia County, in the City of Albion, Idaho. The project has been assigned Department of Army (DA) File # NWW-2013-00659, which should be referred to in all future correspondence.

AUTHORITY

The DA exerts regulatory jurisdiction over waters of the United States (U.S.), including wetlands, pursuant to Section 404 of the Clean Water Act (33 U.S.C. 1344) and Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403). Section 404 of the Clean Water Act requires a DA permit be obtained prior to discharging dredged or fill material into Waters of the U.S., which includes most perennial and intermittent rivers and streams, natural and man-made lakes and ponds, irrigation and drainage canals and ditches that are tributaries to other waters, and wetlands.

Based on our review of the information you furnished and available to our office, it appears replacement of the 8" gravity line would cross Marsh Creek at three locations and replacement of the 6" pressure sewer line from the lift station to the treatment lagoons would cross Land Creek and Marsh Creek. If the crossings on Marsh and Land Creeks are typical open trench crossings

then a DA permit would be required for this work. If the new sewer lines are bored under the creeks then a DA permit likely would not be required as that work does not include a discharge of fill or dredged material below the high water mark and the creeks adjacent wetlands. Therefore, a DA permit may be required for the discharge of dredged and/or fill material in Marsh Creek and/or Land Creek.

Finally, the importance of clear drawings and plans to be provided with the permit application cannot be overemphasized. For assistance in this area we have included our permit application booklet with checklists and examples of reference graphics. We encourage you to work with our office to ensure that your plans are of acceptable quality for a Pre-Construction Notification or Public Notice.

Please contact me by telephone at (208) 322-3410, by mail at the address in the letterhead, or via email at casey.a.forest@usace.army.mil if you have any questions or need additional information. For informational purposes, a copy of this letter is being sent to: Mr. Aaron Golart with the Idaho Department of Water Resources.

Sincerely,



Casey Forest
Project Manager
Regulatory Division

Enclosures

Application and Instruction Guide
Sample Drawings

Mark Holtzen

From: Michael.May@deq.idaho.gov
Sent: Thursday, July 7, 2016 7:45 AM
To: Mark Holtzen
Subject: ESA/EFH memo update - Albion WWG - 7 July 2016
Attachments: Official Species List - Albion WWG - 27 Jun 2016.PDF; ESA and EFH Memo from DEQ to Mark Holtzen, Albion WW EID Developer_12.27.13.PDF; Telephone Conversation Records IF&G regarding Canada Lynx - Albion WWG - 05 July 2016.PDF

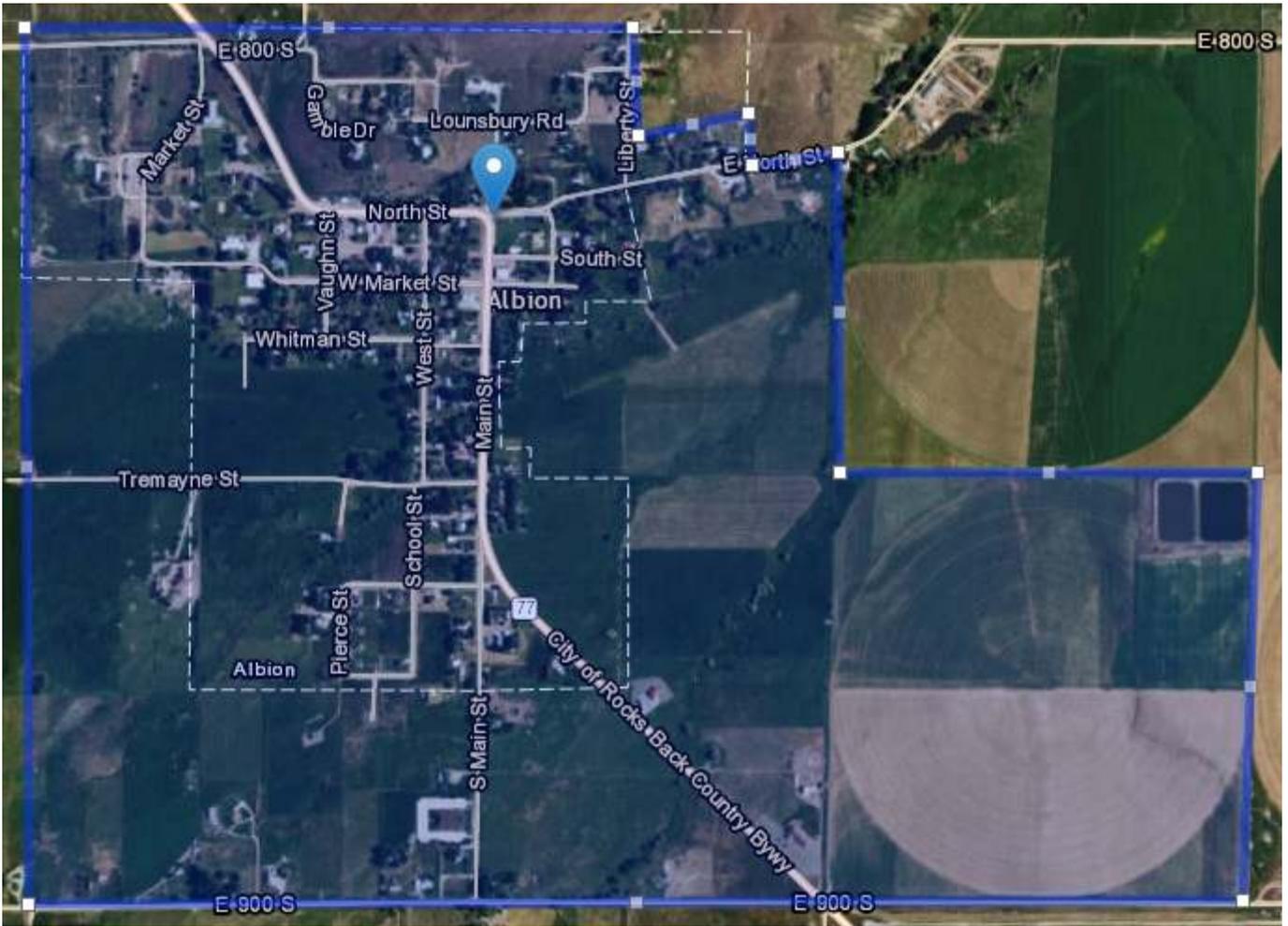
-----< Attachments >-----

Title : Official Species List - Albion WWG - 27 Jun 2016
Title : ESA and EFH Memo from DEQ to Mark Holtzen, Albion WW EID Developer_12.27.13
Title : Telephone Conversation Records: IF&G regarding Canada Lynx - Albion WWG - 05 July 2016

Mark,

The endangered species list expired during the past two years while the facility plan was being revised. This email provides a formal update to our December 27, 2013 *Threatened/Endangered Species and Essential Fish Habitat* determination memo, a copy of which is attached.

US Fish & Wildlife Service also revised the process for obtaining official species lists. Rather than providing a county-wide list, they have established an *Information for Planning and Conservation (IPaC)* web site, which generates project-specific lists. We most recently obtained a species list from IPaC on June 27, 2016 (attached), for the Area of Potential Effects (APE) shown below.



Project Scope:

Based on our telephone conversation last week, I have removed Phase 1 items #1 and #2 from the proposed scope, since they pertain to lift station improvements that the City has already completed, using its own funds. Otherwise, the project scope is presumed to be unchanged from our 2013 memo.

The June 27, 2016 Section 7 species list identifies the following species as threatened (and none as endangered or proposed):

1. **Canada Lynx** (*Lynx canadensis*) – The Canada Lynx reside in boreal forest landscapes and provide one or more of the following beneficial habitat elements including snowshoe hares for prey, abundant, large, woody debris piles that are used as dens, and winter snow conditions that are generally deep and fluffy for extended periods of time.^[1] The proposed project is located in an environment not typical of boreal forests and having shallow winter snow depths.

The Western Regional Climate Center does not have data for Albion, which is at an elevation of 4,724 ft (Wikipedia). Nearby stations are shown in the table below (www.wrcc.dri.edu/summary/Climsmsid.html). Maximum snow depths appear to be insufficient to support the Canada Lynx and its preferred prey, the Snowshoe Hare.

Station	Elevation	Air Distance from Albion	Max. Snow Depth (Month)	Period of Record
Albion	4,724'	00.00 mi	unknown	none

Burley	4,180'	14.03 mi	2" (Jan)	1917-1967
Malta Aviation	4,540'	12.77 mi	1" (Jan)	1984-2016
Oakley	4,600'	19.24 mi	1" (Jan)	1893-2016

Idaho Fish and Game Department staff indicated during July 2016 telephone conversations that the trees located on highlands southwest of the project site are largely juniper, and that adequate prey for the Canada Lynx are not available. **The proposed project will have NO EFFECT on the Canada Lynx.**

Please revise the EID accordingly and resubmit it for review. Include this update and its associated species list with the previous memo in an appendix. If you have any questions, please contact me.

Mike May
 Sr. Water Quality Specialist
 Idaho Department of Environmental Quality
 1410 North Hilton
 Boise, Idaho 83706
 (208) 373-0406

^[1] USF&WS Species Profile: Canada Lynx (*Lynx canadensis*), ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=A073

^[1] McGrath, *et al.*, 2002, *Ecoregions of Idaho*, EPA Western Ecology Division, Corvallis, Oregon, www.epa.gov/wed/pages/ecoregions/id_eco.htm.

Wikipedia, *Albion, Idaho*, en.wikipedia.org/wiki/Albion,_Idaho

MEMO

TO: MARK HOLTZEN, J-U-B ENGINEERS
FROM: ESTER CEJA, DEQ
SUBJECT: CITY OF ALBION WASTEWATER PROJECT
THREATENED/ENDANGERED SPECIES AND ESSENTIAL FISH
HABITAT
DATE: DECEMBER 27, 2013

The proposed project is located in Cassia County and consists of the following improvements:

Phase 1 improvements

1. Replacement of the existing lift station with duplex submersible lift station; associated piping and fittings; a valve vault; a flow meter and vault; electrical panels and controls; back-up generator; diesel fuel storage; building and jib crane for pump removal.
2. The city is also considering purchasing the land adjacent to the existing lift station for the lift station improvements.
3. Reconstruction of the existing 8-inch gravity trunk line that enters the lift station wet-well from the north.

Phase 2 improvements

1. Cleaning and video inspect of the gravity sewer collection system.
2. An estimated 25% of the gravity sewer mains will need to be replaced to address inflow and infiltration issues and structural defects.
3. Cleaning the existing 6-inch pressure main and locate and replace the air-vacuum valves.

Phase 3 Improvements – Lagoon improvements

1. Reconstruction of the 6-inch force mains and valves at the lagoons.
2. Construction of a coarse screening structure and new 8-inch gravity main to the lagoon inlets
3. Replacement of the 8-inch valves on the lagoon outlet lines.

The U.S. Fish and Wildlife threatened and endangered species list dated 10/23/2013 was used for determining endangered and threatened species within Cassia County. The U.S. Fish and Wildlife Service (USFWS) were consulted to determine any impacts to listed species resulting from the proposed project. No comments were received during the 30 day comment period. However, it has been determined by DEQ staff that due to the nature of the project and it's site location, there will be NO EFFECT to species.

1. **Greater Sage-Grouse** (candidate) - Grouse reside in Sagebrush Steppe environments. The proposed project will have "NO EFFECT" on sage grouse as the improvements entail collection line replacement within the roadways and the lift station and valve improvements will be occurring adjacent and/or at the existing site so no further disturbance will occur.
2. **Goose Creek Milkvetch** (candidate) – Goose Creek milkvetch is a mat-forming perennial forb rising from a narrow taproot. Known populations in Idaho occur in the Goose Creek drainage in Cassia County. The plant occurs between 4,920 to 5,870 feet elevation in

sagebrush steppe plant communities. Elevation in the City of Albion ranges from 4,700 to 4,800 feet. The proposed improvements will have "NO EFFECT" on the listed species.

3. **Snake River Physa** (endangered) – The Snake River Physa snail is a freshwater mollusk found in the middle Snake River. The snail resides in area of swift current on sand to boulder-sized substrate. The proposed project improvements will have "NO EFFECT" on the species.
4. **Yellow-Billed Cuckoo** – Western cuckoos breed in large blocks of riparian habitats, particularly woodlands with cottonwoods and willows. Generally local and uncommon in scattered drainages of the arid and semiarid portions of western Colorado, western Wyoming, Idaho, Nevada, and Utah. The proposed project will have "NO EFFECT" on the yellow-billed cuckoo as the project improvements are located away from riparian woodland areas. The improvements will occur within the city limits.

Essential Fish Habitat

The City of Albion's proposed wastewater improvements are not located within Essential Fish Habitat (EFH) for Salmon as identified in the attached EFH map and will have "NO EFFECT."

This information is for general reference only. Visit <http://ecos.fws.gov/ipac/> to obtain an official list for purposes of Endangered Species Act Section 7 Consultation. Revised 10/23/2013.

U.S. Fish and Wildlife Service • Idaho Fish and Wildlife Office

LISTED, CANDIDATE, AND PROPOSED SPECIES & DESIGNATED AND PROPOSED CRITICAL HABITAT IN IDAHO

Common Name	Scientific Name	Herps		Birds		Mammals				Fish		Mollusks			Plants					
	<i>Rana luteiventris</i>																			
	<i>Centrocercus urophasianus</i>																			
	<i>Coccyzus americanus</i>																			
	<i>Lynx canadensis</i>																			
	<i>Ursus arctos horribilis</i>																			
	<i>Spermophilus brunneus brunneus</i>																			
	<i>Rangifer tarandus caribou</i>																			
	<i>Spermophilus brunneus endemicus</i>																			
	<i>Gulo gulo luscus</i>																			
	<i>Salvelinus confluentus</i>																			
	<i>Acipenser transmontanus</i>																			
	<i>Lanx sp.</i>																			
	<i>Taylorconcha serpenticola</i>																			
	<i>Pyrgulopsis bruneauensis</i>																			
	<i>Haitia (Physa) natricina</i>																			
	<i>Astragalus anserinus</i>																			
	<i>Mirabilis macfarlanei</i>																			
	<i>Astragalus cusickii var. parkardiae</i>																			
	<i>Lepidium papilliferum</i>																			
	<i>Silene spaldingii</i>																			
	<i>Spiranthes diluvialis</i>																			
	<i>Howellia aquatilis</i>																			
	<i>Pinus albicaulis</i>																			

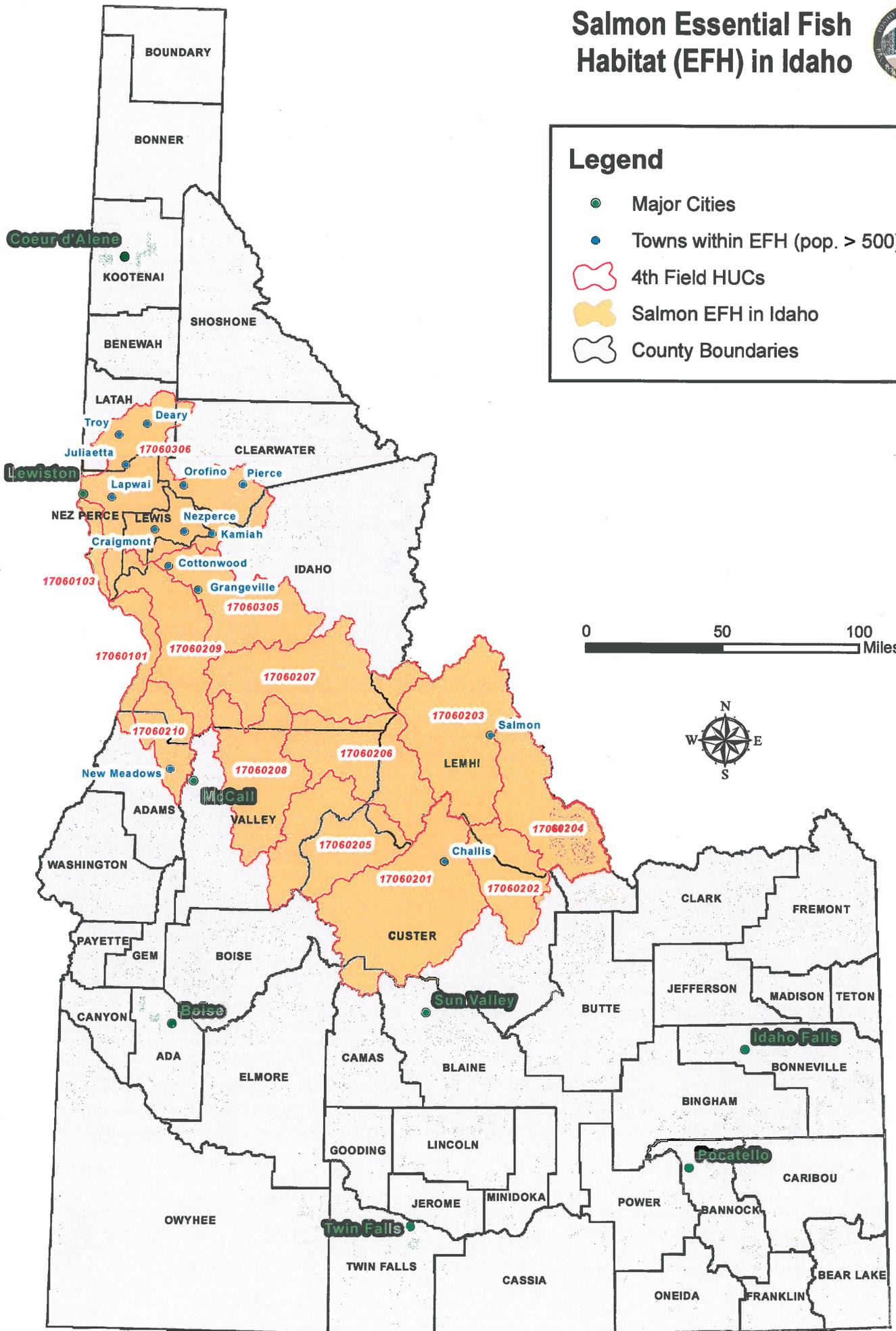
Table Key: C = Candidate Species P = Proposed Species T = Threatened Species E = Endangered Species PCH = Proposed Critical Habitat DCH = Designated Critical Habitat

Salmon Essential Fish Habitat (EFH) in Idaho



Legend

- Major Cities
- Towns within EFH (pop. > 500)
- 4th Field HUCs
- Salmon EFH in Idaho
- County Boundaries





United States Department of the Interior



FISH AND WILDLIFE SERVICE
Idaho Fish and Wildlife Office
1387 SOUTH VINNELL WAY, SUITE 368
BOISE, ID 83709
PHONE: (208)378-5243 FAX: (208)378-5262

Consultation Code: 01EIFW00-2016-SLI-0805

June 27, 2016

Event Code: 01EIFW00-2016-E-00844

Project Name: City of Albion Wastewater Improvements

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having

similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

Please note: The IPaC module for producing a list of proposed and designated critical habitat is currently incomplete. At this time, we ask that you use the information given below to determine whether your action area falls within a county containing proposed/designated critical habitat for a specific species. If you find that your action falls within a listed county, use the associated links for that species to determine if your action area actually overlaps with the proposed or designated critical habitat.

Canada Lynx (*Lynx canadensis*) - Designated February 24, 2009.
Counties: Boundary County.

Federal Register Notice:

<http://www.gpo.gov/fdsys/pkg/FR-2009-02-25/pdf/E9-3512.pdf#page=1>

Printable Maps:

http://www.fws.gov/mountain-prairie/species/mammals/lynx/criticalhabitat_files/20081222_fedre

GIS Data: http://criticalhabitat.fws.gov/docs/crithab/zip/lynx_ch.zip

KML for Google Earth: (None Currently Available)

Selkirk Mountains Woodland Caribou (*Rangifer tarandus Caribou*) - Proposed November 30, 2011.

Counties: Bonner and Boundary Counties.

Federal Register Notice: <http://www.fws.gov/idaho/home/2011-30451FINALR.pdf>

Printable Maps: http://www.fws.gov/idaho/home/Map1_sub1_150.pdf

GIS Data: (None Currently Available)

KML for Google Earth: (None Currently Available)

Bull Trout (*Salvelinus confluentus*) - Designated September 30, 2010.

Counties: Adams, Benewah, Blaine, Boise, Bonner, Boundary, Butte, Camas, Clearwater, Custer, Elmore, Gem, Idaho, Kootenai, Lemhi, Lewis, Nez Perce, Owyhee, Shoshone, Valley, and Washington Counties.

Federal Register Notice:

<http://www.gpo.gov/fdsys/pkg/FR-2010-10-18/pdf/2010-25028.pdf#page=2>

Printable Maps: http://www.fws.gov/pacific/bulltrout/CH2010_Maps.cfm#CHMaps

GIS Data: <http://criticalhabitat.fws.gov/docs/crithab/zip/bulltrout.zip>

KML for Google Earth:

http://www.fws.gov/pacific/bulltrout/finalcrithab/BT_FCH_2010_KML.zip

Kootenai River White Sturgeon (*Acipenser transmontanus*) - Designated July 9, 2008.

Counties: Boundary County.

Federal Register Notice:

<http://www.gpo.gov/fdsys/pkg/FR-2008-07-09/pdf/E8-15134.pdf#page=1>

Printable Maps: (None Currently Available)

GIS Data: http://criticalhabitat.fws.gov/docs/crithab/zip/fch_73fr39506_acit_2009.zip

KML for Google Earth: (None Currently Available)

Slickspot Peppergrass (*Lepidium papilliferum*) - Proposed May 10, 2011. Counties: Ada, Canyon, Elmore, Gem, Owyhee, and Payette Counties.

Federal Register Notice: <http://www.gpo.gov/fdsys/pkg/FR-2011-10-26/pdf/2011-27727.pdf>

Printable Maps: <http://www.fws.gov/idaho/Lepidium.html>

GIS Data: (None Currently Available)

KML for Google Earth: (None Currently Available)

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment



United States Department of Interior
Fish and Wildlife Service

Project name: City of Albion Wastewater Improvments

Official Species List

Provided by:

Idaho Fish and Wildlife Office
1387 SOUTH VINNELL WAY, SUITE 368
BOISE, ID 83709
(208) 378-5243

Consultation Code: 01EIFW00-2016-SLI-0805

Event Code: 01EIFW00-2016-E-00844

Project Type: WASTEWATER FACILITY

Project Name: City of Albion Wastewater Improvments

Project Description: * Reconstruct existing 8-inch gravity main entering lift station from north

* Replace ~25% of gravity mains, based on video inspections

* Clean existing 6" pressure main and replace air-vacuum valves

* Reconstruct 6" force mains and valves at lagoons

* Construct coarse screening structure & new 8" gravity main to lagoon inlets

Replace 8" valves on lagoon outlet lines

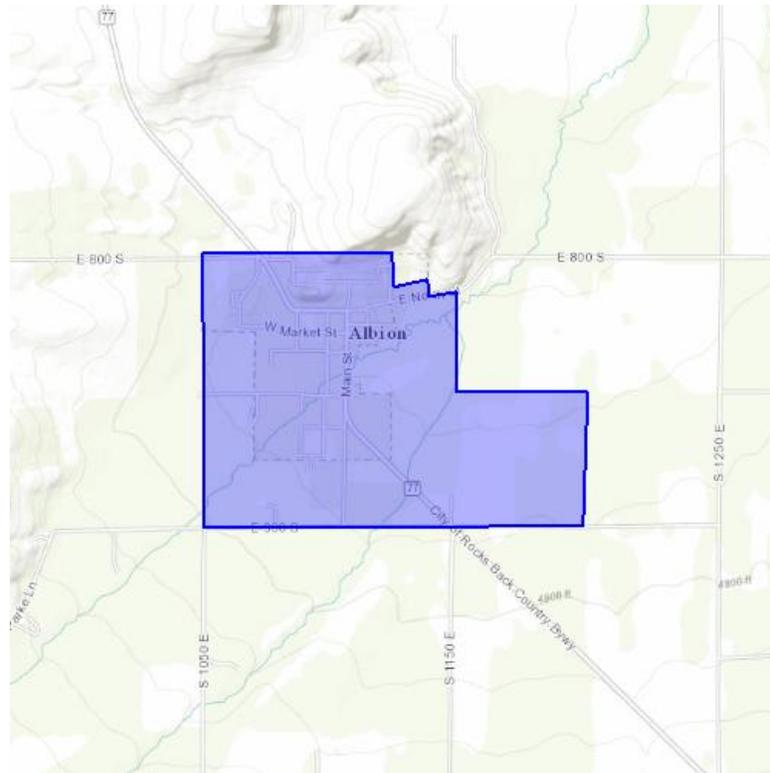
Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.



United States Department of Interior
Fish and Wildlife Service

Project name: City of Albion Wastewater Improvments

Project Location Map:



Project Coordinates: MULTIPOLYGON (((-113.57485771179198 42.41591641129943, -113.57472896575928 42.41407876891736, -113.5721969604492 42.41445897520735, -113.57211112976074 42.41357182361187, -113.57013702392578 42.413793612687215, -113.57009410858154 42.40834371113098, -113.56048107147217 42.40834371113098, -113.56082439422607 42.40105531209993, -113.5887622833252 42.40099193100363, -113.58884811401367 42.41591641129943, -113.57485771179198 42.41591641129943)))

Project Counties: Cassia, ID



United States Department of Interior
Fish and Wildlife Service

Project name: City of Albion Wastewater Improvments

Endangered Species Act Species List

There are a total of 1 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Mammals	Status	Has Critical Habitat	Condition(s)
Canada Lynx (<i>Lynx canadensis</i>) Population: Contiguous U.S. DPS	Threatened	Final designated	



United States Department of Interior
Fish and Wildlife Service

Project name: City of Albion Wastewater Improvements

Critical habitats that lie within your project area

There are no critical habitats within your project area.

Telephone Conversation Record

To: Ross Whitten, Non-game biologist, IF&E Magic Valley

Tel: (208) 324-4359

From: Mike May

Date: July 1, 2016 1605

Subject: Albion Wetlands - Canada Lynx

mm: DEQ is funding WWT improvement project in Albion. We obtained IPAC report from USFWS, it surprisingly shows Canada Lynx. Project is entirely within city and adjacent lagoons & land adjacent. This seems surprising - isn't this sagebrush valley w/ irrigated ag.

RW: IPAC is based on county lines and habitat modeling. ~~More~~ like some juniper forest, esp. at higher elevations. Wetland within city should not be problem for C.L. Better contact for NEPA-like reviews is Mike McDonald. Call him via receptionist, same number.

To: Mike McDonald, IF&E Magic Valley

Date: July 5 2016 10:48

MM

~~MM~~: Canada Lynx should not be concern. No known individuals in area.

MLM: In sufficient forest?

mm: Also absence of prey.

Michael Lee May 7/5/2016

Mark Holtzen

From: Ester.Ceja@deq.idaho.gov
Sent: Friday, December 27, 2013 8:58 AM
To: Mark Holtzen
Subject: Comments from the Shoshone Paiute Tribe

Mark,

The Shoshone Bannock Tribes did not provide any comments, however, the Shoshone Paiute Tribe has provided comment on the Albion project. Please see their response below. Please incorporate the Shoshone Paiute tribe's response in the body of the EID.

Ted's specific response:

The Shoshone-Paiute Tribes request that you have a monitor on site during excavations. If there are any artifacts or human remains discovered stop all work immediately and call the appropriate people. We ask that you include my office along with the others that your protocol directs you to contact if there is a discovery.

Let me know if you have any questions.

Thank you,
Ester Ceja

From: Ted Howard [mailto:howard.ted@shopai.org]
Sent: Friday, December 20, 2013 2:28 PM
To: Ester Ceja
Subject: Comments to two projects

Ester,

I am providing comments to two project that you sent information on.

1. City of Albion Waste Water Improvement Project
2. City of Horseshoe Bend Drinking Water Project

Neither of the letters you sent said anything about any previous cultural surveys at either of these projects. My comments will be the same for both of these projects.

All of southern Idaho is the homelands of the Shoshone, Bannock and Paiute people. Our people have inhabited these areas for thousands of years and it is impossible to know where things may be discovered. Anytime there is a proposal that includes ground disturbance, it is a concern to our people. The Shoshone-Paiute Tribes request that you have a monitor on site during excavations. If there are any artifacts or human remains discovered stop all work immediately and call the appropriate people. We ask that you include my office along with the others that your protocol directs you to contact if there is a discovery.

Sincerely,

Ted Howard

Shoshone-Paiute Tribes

Cultural Resources Director

P.O. Box 219

Owyhee, Nevada 89832

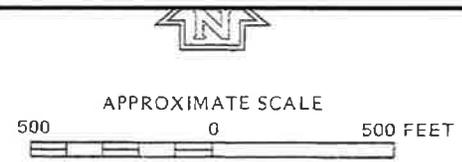
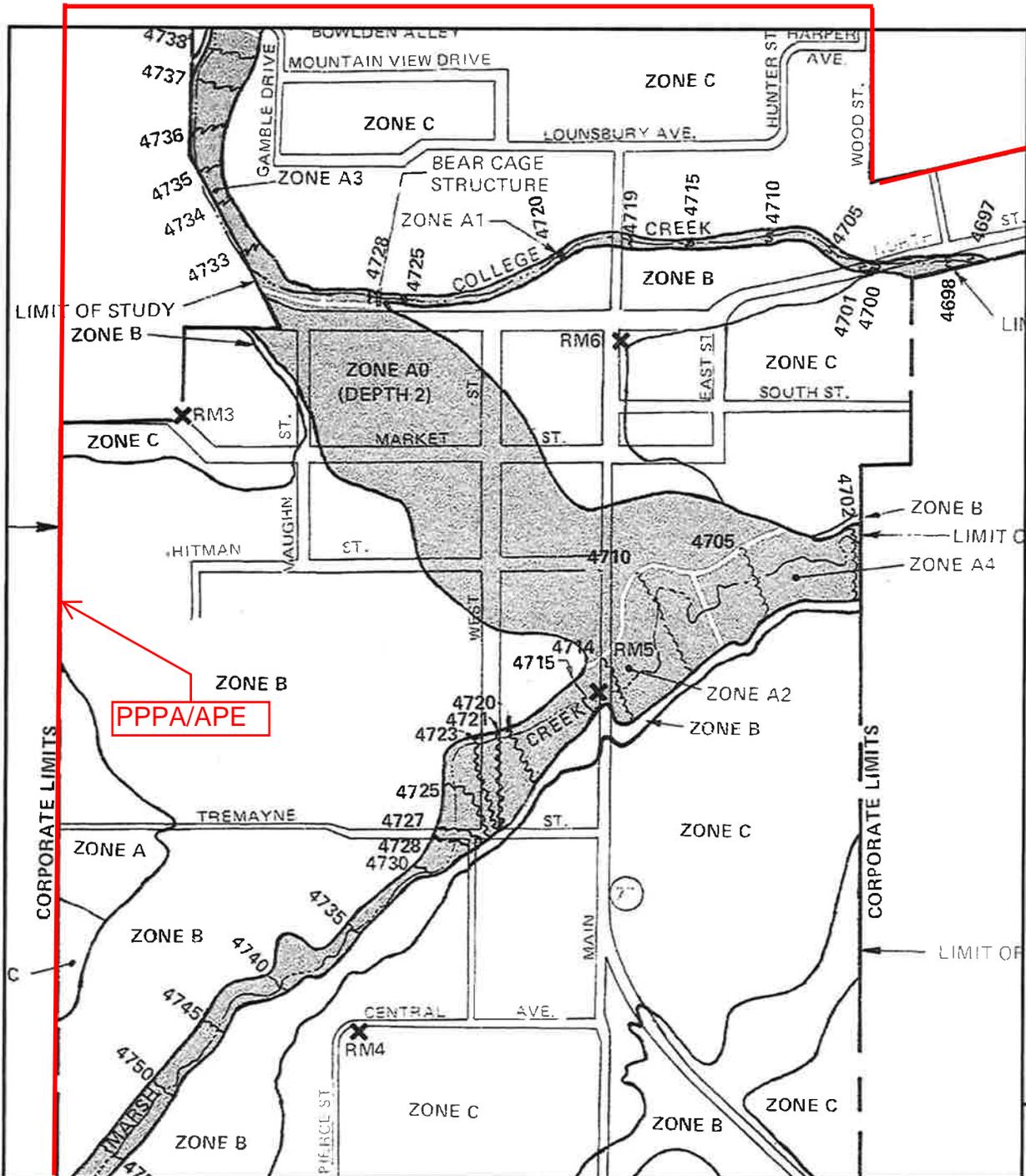
Wk (208) 759-3100 ext. 243

Fx (208) 759-3202

Cell (208) 871-7064

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APPENDIX C ENVIRONMENTAL RESOURCE MAPS



NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

CITY OF
ALBION, IDAHO
CASSIA COUNTY

ONLY PANEL PRINTED

COMMUNITY-PANEL NUMBER
160042 0001 A

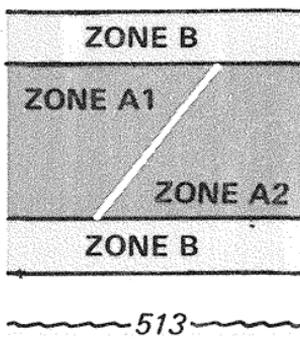
EFFECTIVE DATE:
AUGUST 15, 1983



Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

KEY TO MAP

500-Year Flood Boundary —————→ 100-Year Flood Boundary —————→ Zone Designations* 100-Year Flood Boundary —————→ 500-Year Flood Boundary —————→ Base Flood Elevation Line With Elevation In Feet**	 (EL 987) RM7 _X •M1.5
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**Referenced to the National Geodetic Vertical Datum of 1929

*EXPLANATION OF ZONE DESIGNATIONS

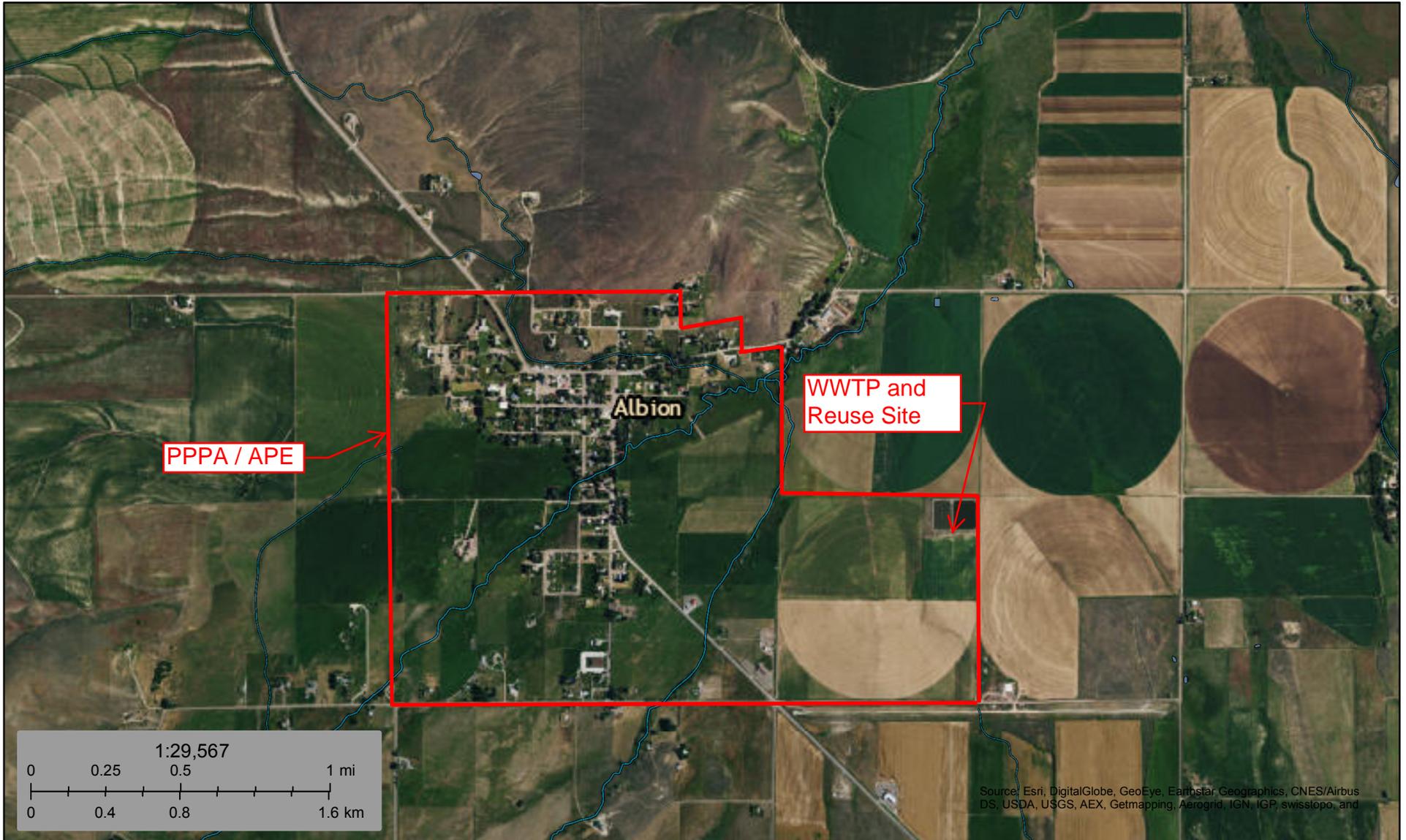
ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
A0	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

This map is for flood insurance purposes only; it does not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.

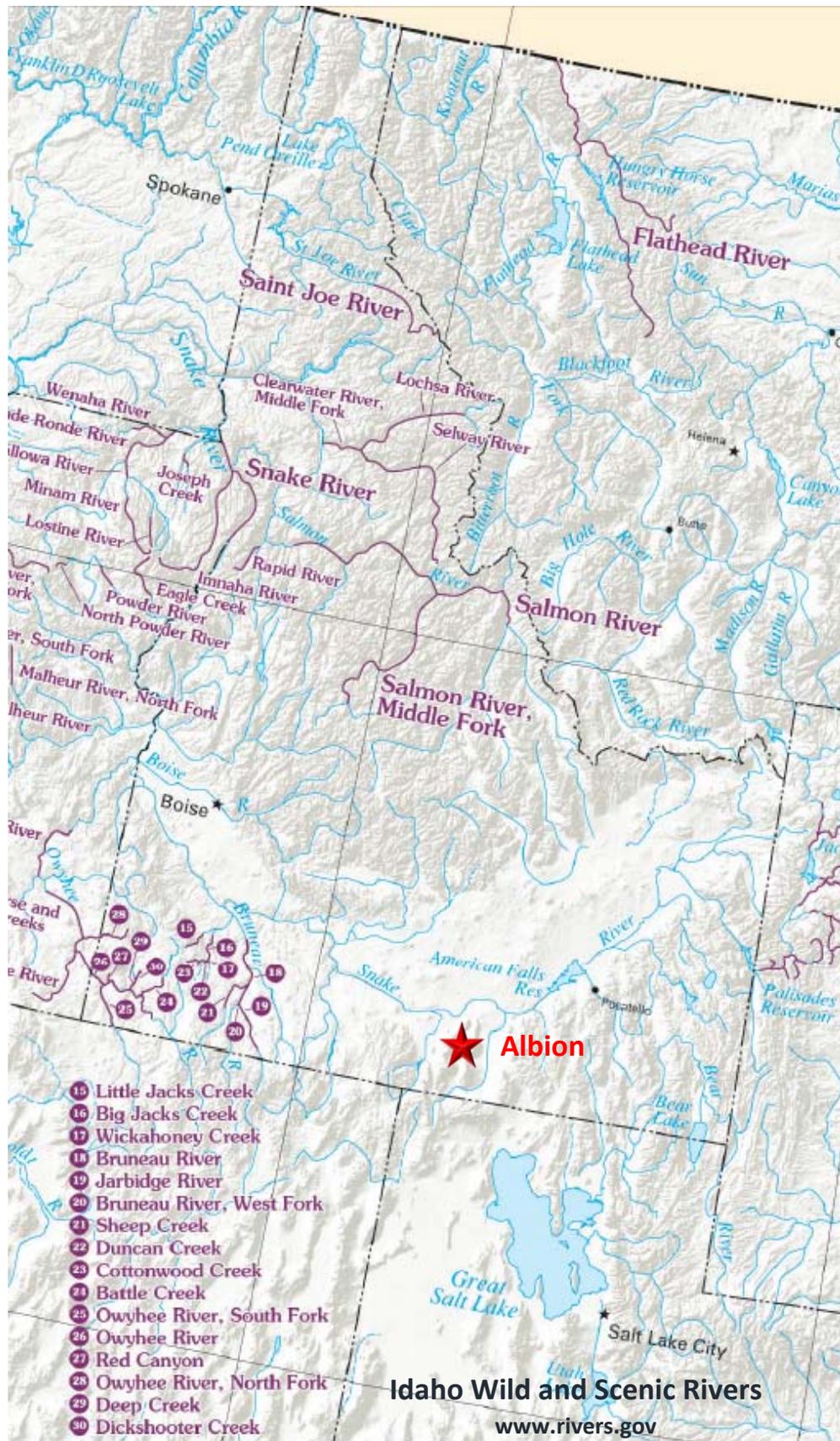
For adjoining map panels, see separately printed Index To Map Panels.



July 5, 2016

- | | | |
|--------------------------------|-----------------------------------|----------|
| Estuarine and Marine Deepwater | Freshwater Forested/Shrub Wetland | Other |
| Estuarine and Marine Wetland | Freshwater Pond | Riverine |
| Freshwater Emergent Wetland | Lake | |

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



Salmon Essential Fish Habitat (EFH) in Idaho

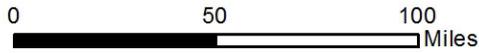
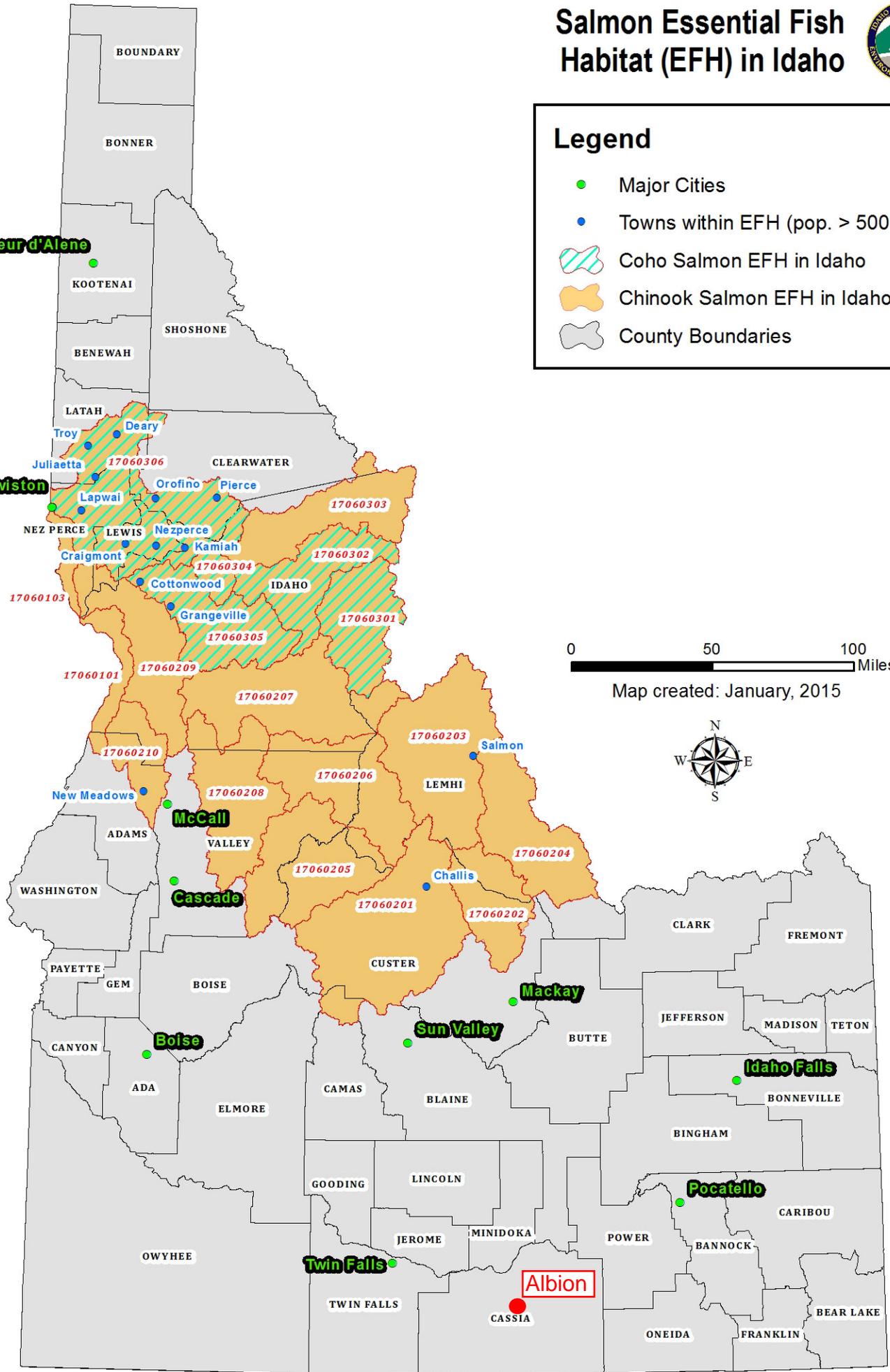


Legend

- Major Cities
- Towns within EFH (pop. > 500)
- ▨ Coho Salmon EFH in Idaho
- ▨ Chinook Salmon EFH in Idaho
- ▭ County Boundaries

Coeur d'Alene

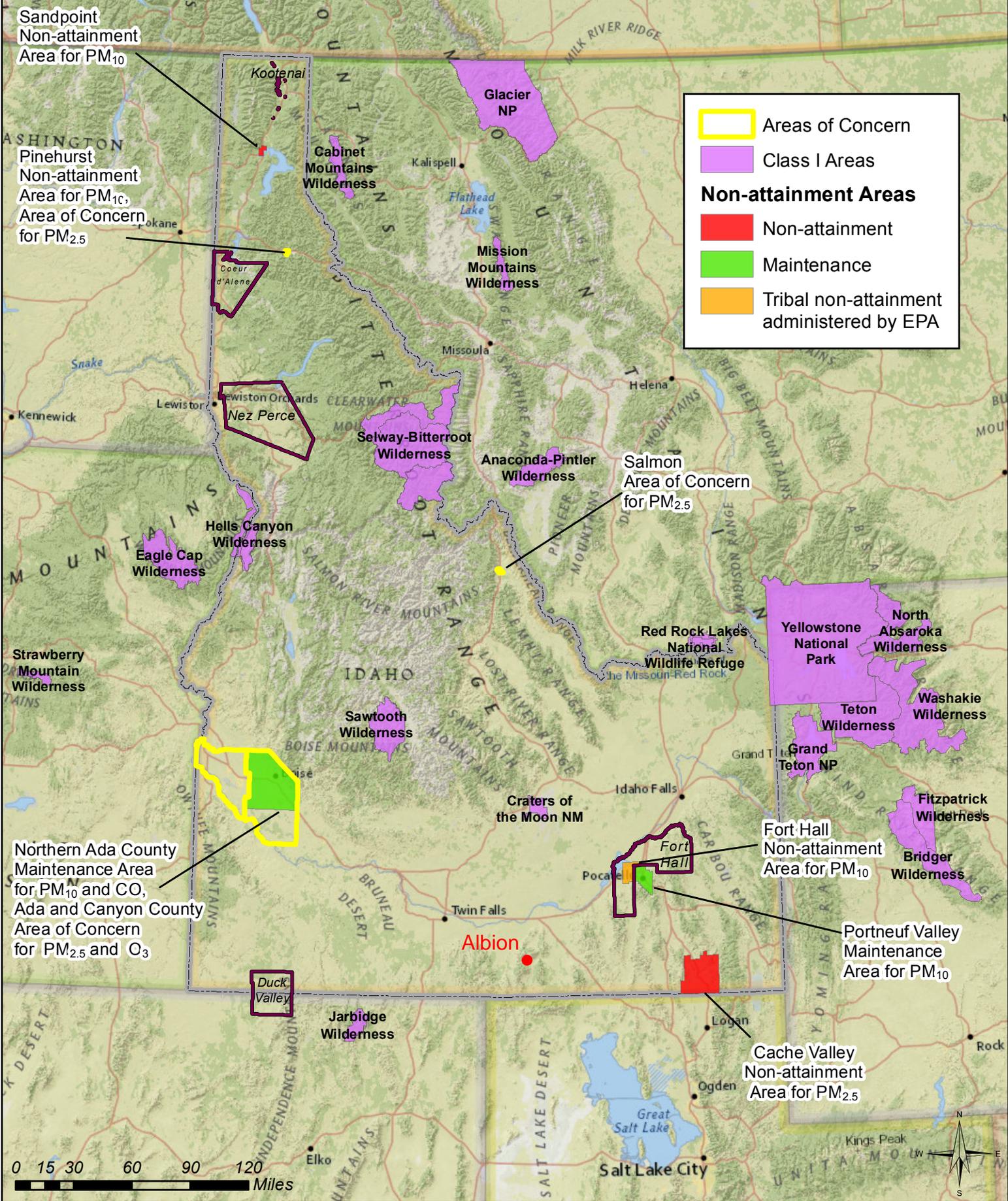
Lewiston

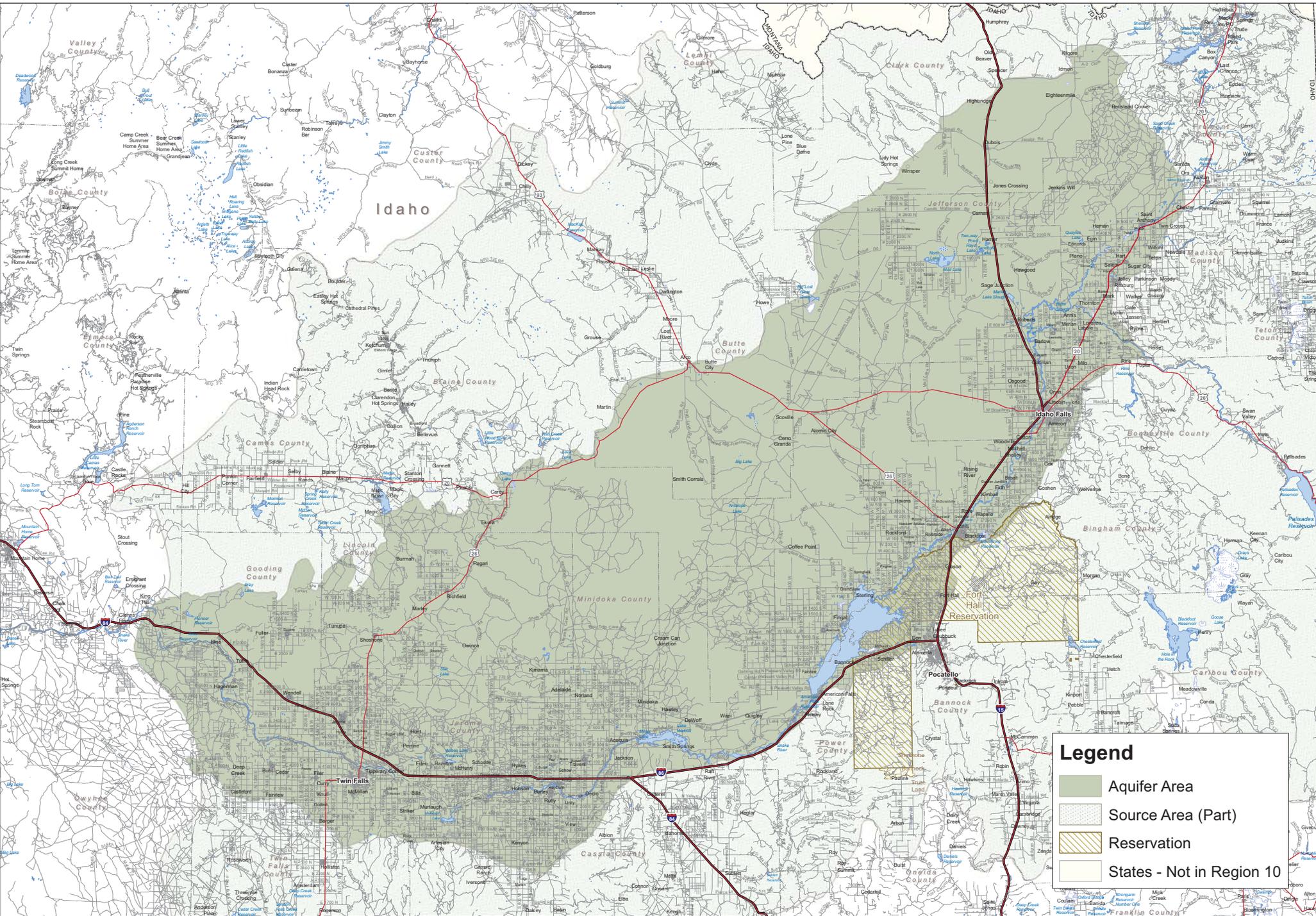


Map created: January, 2015



Administrative Boundaries for Areas with Sensitive Air Quality





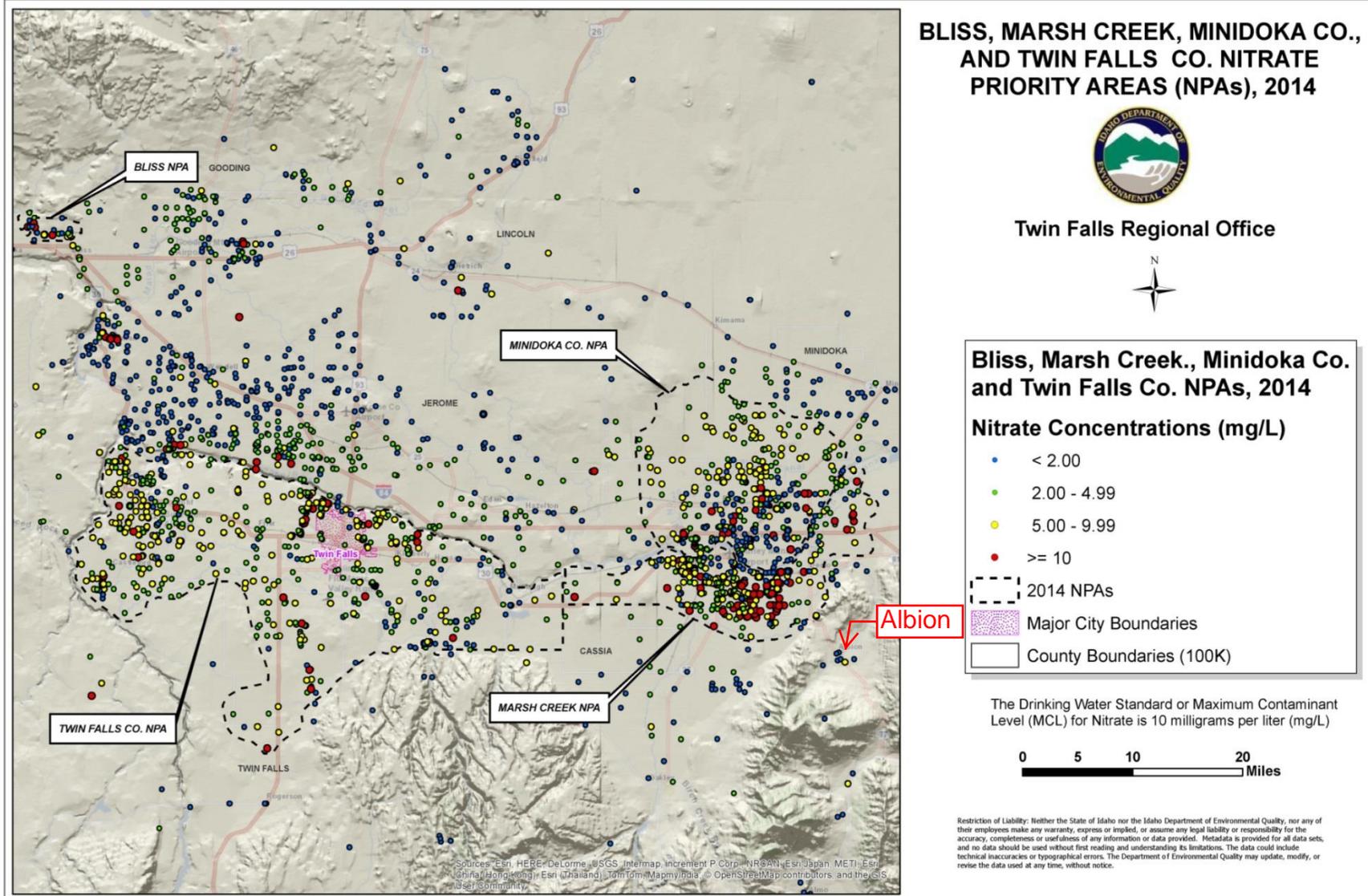
Legend

- Aquifer Area
- Source Area (Part)
- Reservation
- States - Not in Region 10

Eastern Snake River Plain Sole Source Aquifer Aquifer Area and Part of Source Area



The U.S. Environmental Protection Agency (EPA) has compiled this computer representation from data or information sources that may not have been verified by the EPA. This data is offered here as a general representation only, and is not to be re-used without verification by an independent professional qualified to verify such data or information. The EPA does not guarantee the accuracy, completeness, or timeliness of the information shown, and shall not be liable for any loss or injury resulting from reliance upon the information shown.



APPENDIX D PUBLIC PARTICIPATION

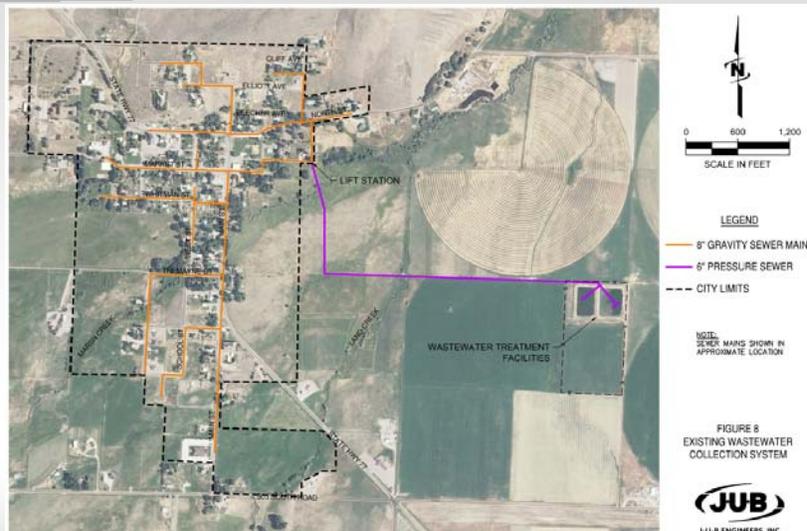
CITY OF ALBION Wastewater Facilities Plan

Public Hearing: September 24, 2013



OTHER J-U-B COMPANIES

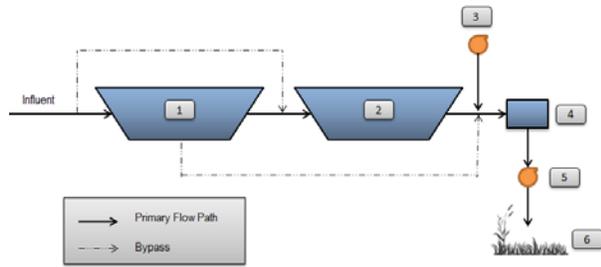
Existing Collection System



Existing Treatment Facilities

Existing Wastewater Treatment Facilities

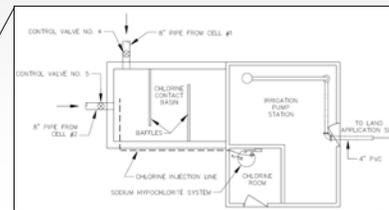
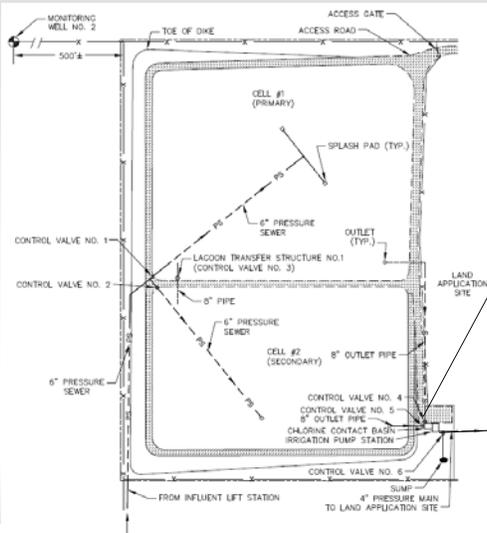
Item Description



- 1 Cell #1 (facultative)
- 2 Cell #2 (facultative)
- 3 Chlorine Injection Pump
- 4 Chlorine Contact Chamber
- 5 Irrigation Pump
- 6 Land Application Site

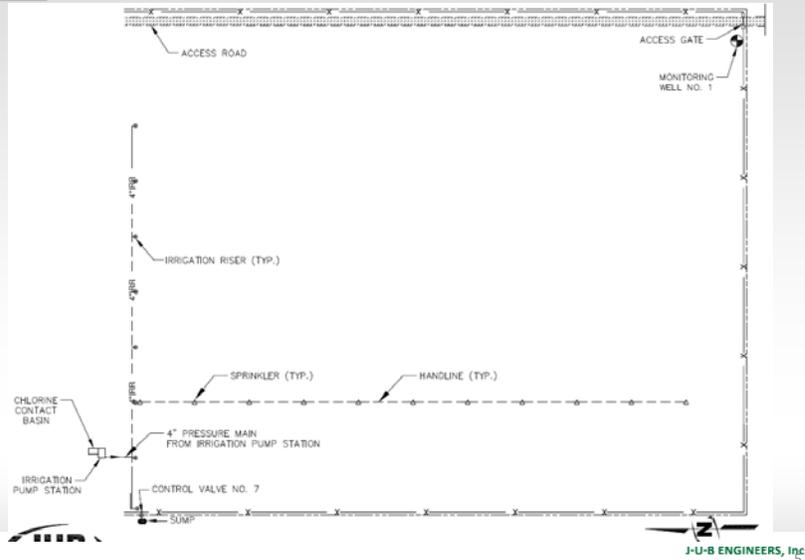
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Existing Treatment Facilities



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Existing Land Application Site



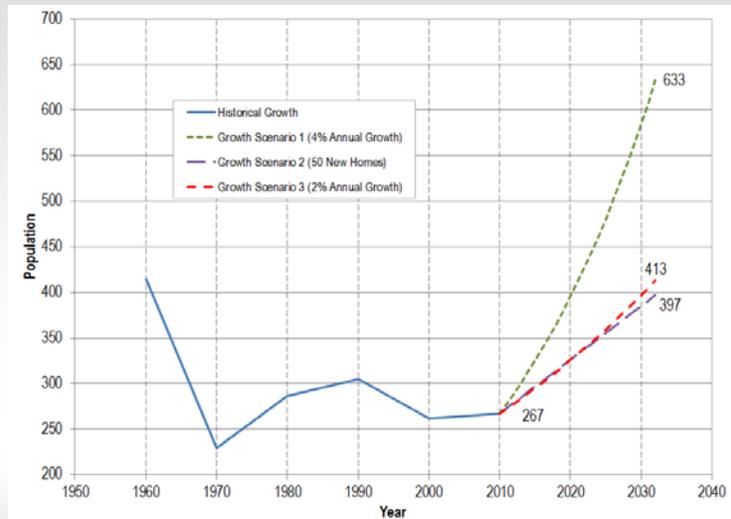
Effluent Discharge – Reuse Permit

Parameter	Reuse Permit Limits
	Class D
Treatment Process	Oxidized and disinfected
Discharge Limits	
Total-Coliform	<230/100 mL (3-d median) 2,300/100 mL (max)
Total-Nitrogen	150% of Crop Uptake
Total-Phosphorus	150% of Crop Uptake
Growing Season	April 1 – October 31 (214 days)
Buffer Zones ^B	Inhabited Dwelling – 500 ft Public Access – 300 ft Public Water Supply – 1,000 ft Private Water Supply – 500 ft Surface Water – 50-100 ft
Fencing ^B	Woven Pasture Fence
Signs	*Warning: Recycled Water – Do Not Enter every 500 ft
Grazing	Not Allowed

Planning Area

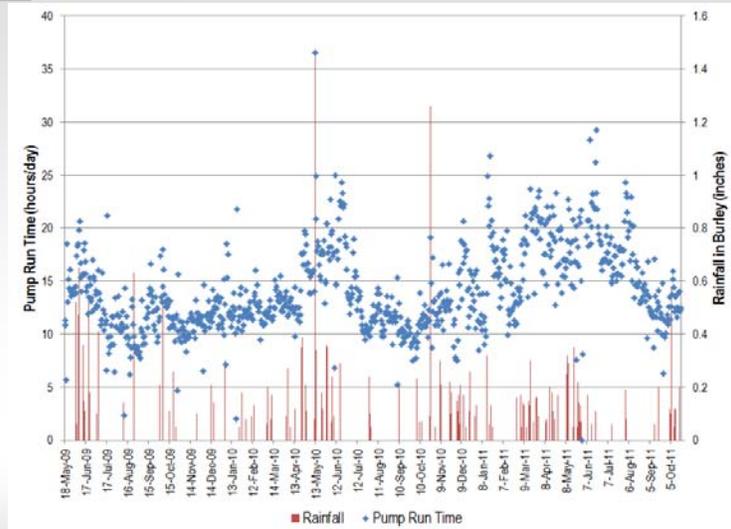


Population Growth



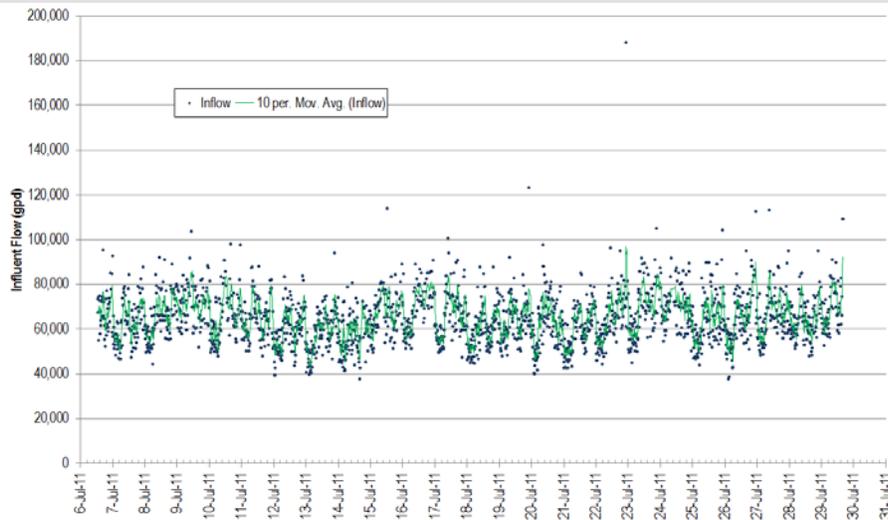
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Lift Station Pump Run-Times



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Influent Flows



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Influent Flows

Parameter	Unit	Domestic	I&I	Total
Existing (2013)				
Average Day	gpd	26,700	37,700	64,400
Max Month	gpd	33,900	49,000	82,900
Peak Day	gpd	53,400	67,700	121,100
Peak Hour	gpd	85,700	79,000	164,700
Average Day Per Capita	gpcd	100	141	241
Future (2033)				
Average Day	gpd	41,300	37,700	79,000
Max Month	gpd	52,500	49,000	101,500
Peak Day	gpd	82,600	67,700	150,300
Peak Hour	gpd	132,600	79,000	211,600
Average Day Per Capita	gpcd	100	91	191

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Influent Waste Loads

Parameter	Unit	BOD ₅	TSS	TKN	Nitrate-N	Total-Phosphorus
Existing (2013)						
Average Day (conc)	mg/L	127	127	21	1.0	3.6
Average Day (mass)	lbs/d	69	69	11.4	0.5	2.0
Max Month	lbs/d	97	99	15.4	0.6	2.6
Peak Day	lbs/d	181	208	24.8	1.0	3.5
Average Day Per Capita	ppcd	0.26	0.26	0.043	0.0019	0.0074
Future (2033)						
Average Day (conc)	mg/L	159	159	27	0.9	4.4
Average Day (mass)	lbs/d	105	105	17.5	0.6	3.0
Max Month	lbs/d	147	152	23.7	0.8	3.9
Peak Day	lbs/d	277	319	38.1	1.2	5.2
Average Day Per Capita	ppcd	0.26	0.26	0.013	0.0015	0.0073

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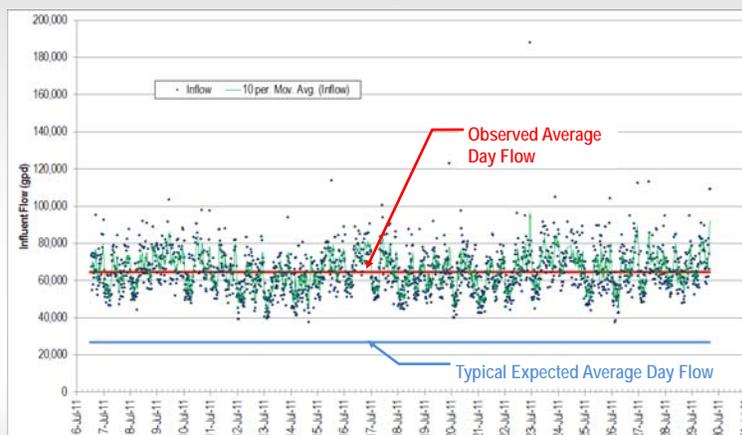
Collection System Evaluation

- Structural Condition of Gravity Sewer Pipe Generally Unknown
 - 1,600 LF Video Inspected in 2010
 - No Significant Issues Observed
- Hydraulic Capacity of Gravity Sewer Lines Appears to be Adequate
- Grease Build-Up on North Street
- Gravity Line North of Lift Station Enters Wet-Well Below Water Surface → Surcharging up Line
- 6" Pressure Main to Lagoons
 - Inadequate Cleansing Velocities (0.7 – 1.0 fps)
 - Condition of Air-Vacuum Valves Unknown

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Collection System Evaluation

- Infiltration/Inflow is Significant



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Lift Station Evaluation

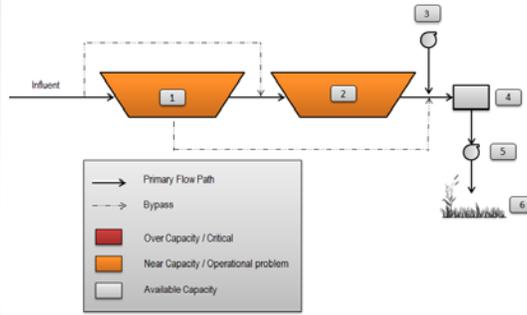
Condition	Capacity/Redundancy			Adequate Flow Measurement Device?	Adequate Back-Up Power?
	Capacity of Each Pump (gpm/ea)	Peak Hour Flow (gpm)	Does Each Pump Have Adequate Capacity?		
Deteriorated; approaching useful service life; pumps operating at lower efficiency; ragging/clogging of pumps	60 – 90	114 (existing) 147 (projected)	✗	✗	?

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Treatment Facility Evaluation

Existing Wastewater Treatment Facilities

Item	Description	Observed Deficiencies
1	Cell #1 (facultative)	<ul style="list-style-type: none"> No coarse screening of rags/debris Organic loadings exceed typical design values under projected maximum month flows Valves on influent pressure main need replaced
2	Cell #2 (facultative)	<ul style="list-style-type: none"> Valves on effluent lines to contact basin need replaced May need additional winter storage in 15-20 years
3	Chlorine Injection Pump	<ul style="list-style-type: none"> None
4	Chlorine Contact Chamber	<ul style="list-style-type: none"> None
5	Irrigation Pump	<ul style="list-style-type: none"> None
6	Land Application Site	<ul style="list-style-type: none"> None



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Collection System Improvements

- “Do-Nothing” Option
- Clean and Video Inspect Collection System (17,500 LF)
- Specific Collection System Improvements Cannot be Identified Without Video Inspection
 - Assumed 25% of System to be Replaced (4,400 LF)
- Replace 8” Gravity Sewer Line North of Lift Station (480 LF)
- 6” Pressure Main
 - Clean
 - Replace Air-Vacuum Valves

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Collection System Cost Summary (2013 Dollars)

Item	Clean and Video Inspect Gravity Lines	Replace 25% of Gravity Sewer Lines	Replace Gravity Line North of Lift Station	Clean Pressure Main and Replace Air-Vac Valves
Construction Cost	\$18,900	\$563,700	\$65,100	\$76,500
Engineering/ Construction Admin	\$3,800	\$112,700	\$13,000	\$15,300
Administration/ Funding	-	\$28,200	\$3,300	\$3,800
Inflation	-	<u>\$45,100</u>	<u>\$5,200</u>	<u>\$6,100</u>
Total Project Costs	\$22,700	\$749,700	\$86,600	\$101,700

Costs include estimates for contractor mobilization/demobilization, bonding, insurance, and administration; dewatering; and contingencies. Davis-Bacon prevailing wages have not been included.

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Lift Station Configuration Comparison

Parameter	Duplex Submersible	Triplex Submersible	Duplex Wet/Dry Well
Configuration	<ul style="list-style-type: none"> Influent wastewater discharges to wet-well Pumps, motors, rails, piping, and level controls located in the wet-well and submerged Manifold piping, gate and check valves located in a separate vault Flow meter located in a separate vault Electrical/control panels located above grade near the vaults Jib crane or overhead crane for pump removal 	<ul style="list-style-type: none"> Influent wastewater discharges to wet-well Pumps, motors, rails, piping and level controls located in the wet-well and submerged Manifold piping, gate and check valves located in a separate vault Flow meter located in a separate vault Electrical/control panels located above grade near the vaults Jib crane or overhead crane used for pump removal 	<ul style="list-style-type: none"> Influent wastewater discharges to wet-well Suction piping and level controls located in wet-well Pumps, motors, rails, piping, and valves located in a separate dry-well (no wastewater enters the dry-well) Flow meter located either in dry-well or in a separate vault Electrical/control panels located either in dry-well or above grade near the vaults Jib crane or overhead crane used for pump removal
Pump Type and Operation	<ul style="list-style-type: none"> Non-clog submersible Chopper/grinder submersible Vortex, recessed impeller submersible 1 duty, 1 standby Lead/lag operation 	<ul style="list-style-type: none"> Non-clog submersible Chopper/grinder submersible Vortex, recessed impeller submersible 1 duty, 2 standby Lead/lag operation 	<ul style="list-style-type: none"> Non-clog centrifugal Chopper/grinder Vortex, recessed impeller 1 duty, 1 standby Lead/lag operation
Pump Size	<ul style="list-style-type: none"> 180 gpm each at 42 ft TDH Approximately 5 horsepower 	<ul style="list-style-type: none"> 180 gpm each at 42 ft TDH Approximately 5 horsepower 	<ul style="list-style-type: none"> 180 gpm each at 42 ft TDH Approximately 5 horsepower
Vault Sizes and Types	<ul style="list-style-type: none"> Wet-well – 6 to 8 ft diameter Valve vault – 6 to 8 ft diameter Flow meter vault – 4 ft diameter Vaults can be site-built reinforced concrete or prefabricated reinforced concrete or fiberglass 	<ul style="list-style-type: none"> Wet-well – 10 to 12 ft diameter Valve vault – 8 to 10 ft diameter Flow meter vault – 4 ft diameter Vaults can be site-built reinforced concrete or prefabricated reinforced concrete or fiberglass 	<ul style="list-style-type: none"> Wet-well – 6 to 8 ft diameter Dry-well – 8 to 12 ft diameter Flow meter vault – 4 ft diameter Vaults can be site-built reinforced concrete or prefabricated reinforced concrete or fiberglass
Footprint	<ul style="list-style-type: none"> Smaller 	<ul style="list-style-type: none"> Larger 	<ul style="list-style-type: none"> Larger
Efficiency	<ul style="list-style-type: none"> Lowest 	<ul style="list-style-type: none"> Lowest 	<ul style="list-style-type: none"> Highest
Advantages	<ul style="list-style-type: none"> Most common configuration for this size of lift station Similar to existing lift station Flooding of lift station less of a concern Less ancillary piping and equipment 	<ul style="list-style-type: none"> High level of redundancy Flooding of lift station less of a concern 	<ul style="list-style-type: none"> Pumps and motors easier to access, inspect, and maintain Common configuration
Disadvantages	<ul style="list-style-type: none"> Pumps and motors less easily accessed, inspected, and maintained 	<ul style="list-style-type: none"> Pumps and motors less easily accessed, inspected and maintained Uncommon configuration for this size of lift station Redundancy of third pump increases costs More ancillary piping and equipment 	<ul style="list-style-type: none"> Flooding of dry-well is a concern More ancillary piping and equipment Confined space requirements for dry-well

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Lift Station Cost Summary (2013 Dollars)

Item	Duplex Submersible Lift Station	Triplex Submersible Lift Station	Duplex Wet/Dry Well Lift Station
Construction Cost	\$272,100	\$330,700	\$314,800
Engineering/ Construction Admin	\$54,400	\$66,100	\$63,000
Administration/ Funding	\$13,600	\$16,500	\$15,700
Inflation	\$21,800	\$26,500	\$25,200
Total Project Costs	\$361,900	\$439,800	\$418,700

Costs include estimates for contractor mobilization/demobilization, bonding, insurance, and administration; dewatering; and contingencies. Davis-Bacon prevailing wages have not been included.

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Treatment Facility Improvement Alternatives

Alternative	Description
1	Optimize Treatment Lagoons, Winter Storage, and Land Application
2	Mechanical Treatment
3	"Do-Nothing"
4	Regional Treatment

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Alternative 1 – Optimize Existing Facilities

- "Near-Term" Improvements
 - Replace 6" Gate Valves on Influent Pressure Main
 - Install Coarse Screening Structure
 - Replace 8" Gate Valves on Effluent Lines
- "Long-Term" Improvements
 - Add Mechanical Surface Aerators to Cell #1 (Two 5-hp Units)

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Alternative 1 - Optimize Existing Facilities “Near-Term” Cost Summary (2013 Dollars)

Item	“Near-Term” Improvements
Construction Cost	\$143,400
Engineering/ Construction Admin	\$28,700
Administration/ Funding	\$7,200
Inflation	\$11,500
Total Project Costs	\$190,800

Costs include estimates for contractor mobilization/demobilization, bonding, insurance, and administration; dewatering; and contingencies. Davis-Bacon prevailing wages have not been included.

Phased Implementation Plan

Phase 1 Improvements (Highest Priority)

1. Replace lift station with duplex submersible lift station
2. Replace 8” gravity sewer main north of lift station

Phase 2 Improvements

1. Clean and video inspect entire collection system
2. Replace necessary portions of collection system piping (~25%)
3. Clean 6” pressure main and replace air-vac valves

Phase 3 Improvements

1. Construct improvements to lagoons to optimize their performance

Time →

Phased Implementation Plan

Item	Capital Costs
Phase 1 Improvements (Highest Priority)	
Replace Lift Station with Duplex Submersible Lift Station	\$361,900
Reconstruct 8" Gravity Trunk Line North of Lift Station	<u>\$86,600</u>
Sub-Total Phase 1 Improvements	\$448,500
Phase 2 Improvements	
Clean and Video Inspect Gravity Collection System	\$22,700
Replace Approximately 25% of Gravity Sewer Mains	\$749,700
Clean 6" Pressure Main and Replace Air-Vacuum Valves	<u>\$101,700</u>
Sub-Total Phase 2 Improvements	\$874,100
Phase 3 Improvements	
Construct Lagoon Optimization Improvements	<u>\$190,800</u>
Sub-Total Phase 3 Improvements	\$190,800
Total Project Costs	\$1,513,400

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Monthly User Rate Analysis

Parameter	Financing Scenario 1	Financing Scenario 2
Capital Costs		
Total Capital Costs	\$448,500	\$448,500
Grant/City Cash Amount	\$0	\$200,000
Loan Amount	\$448,500	\$248,500
Annual Costs		
Existing Annual Sewer Bond Repayment	\$8,050	\$8,050
New Annual Loan Repayment ^A	\$31,557	\$17,485
New Annual O&M Costs	\$0	\$0
Loan Reserve ^B	\$3,160	\$1,750
Monthly User Rate		
Total Annual Costs	\$42,767	\$27,285
ERUs	138	138
Additional Monthly User Rate ^C	\$25.83	\$16.48
Existing Monthly User Rate ^C	\$30.00	\$30.00
Total New Monthly User Rate ^C	\$55.83	\$46.48

A - Based on a 20 year loan at 3.5%.
 B - Based on a reserve of 10% of the annual loan repayment over 10 years.
 C - Monthly cost per ERU.

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What's Next?

- Council to Adopt Results and Recommendations in Facilities Plan
- Complete Draft Environmental Information Document (EID)
- Public Comment Period and Hearing
- Complete Final Facilities Plan and EID Reports

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QUESTIONS?

Mark Holtzen, P.E.

J-U-B Engineers, Inc.

208-733-2414

[mholzen@jub.com](mailto:mholtzen@jub.com)



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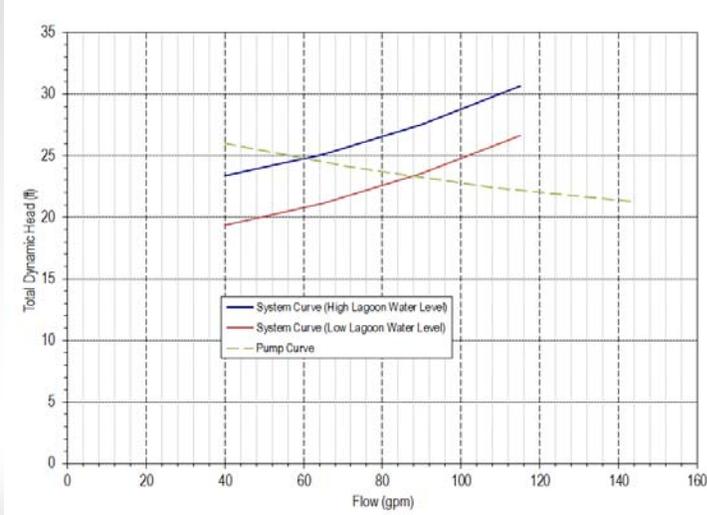


GATEWAY
MAPPING
INC.

OTHER J-U-B COMPANIES

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Lift Station System Curve



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**ALBION CITY COUNCIL MEETING
MINUTES SEPTEMBER 24, 2013.**

CALL TO ORDER – The meeting came out of recess and was called to order at 7:03 p.m. in the Albion Civic Center by Mayor Don H. Bowden.

OPENING CEREMONIES – Pledge of Allegiance led by Mayor Bowden.

ROLL CALL – Present: Mayor Don H. Bowden, Council President Lynda Anderson, Councilpersons Sharon Hardy-Mills, Chad Manderscheid, and Darren Smyer, City Clerk-Treasurer Mary Yeaman, City Attorney Kerry D. McMurray, and Maintenance Department Shawn Burton.

OTHERS IN ATTENDANCE – Mark Holtzen, from J-U-B Engineers, Deputy Clerk Sharity Parish, Marcella Mahoney, Elaine Asher, John Davis, John and Jody Burrows, Teri Williams, Kris Wenslawski, Connie Redman, Wylee Douglas, Adelmo Maestas, Roger Jenkins, Leeana Hauser, Darrin Radeke, Mike and Tressa Toner, Zack Alexander, Kent Mortensen, Mike Gailey, Curtis Richins, JC Johnson, Alan Lloyd, Becky Cook, Rick Mahoney, Pat Asher, Dave Eckblad, Troy Mortensen, Randy Brackenbury, Brian Brackenbury, Nate and Kathy Warren, and Heather Mortensen.

APPROVAL OF ADDITIONAL BILLS – Upon motion made by Anderson, seconded by Manderscheid, and unanimously carried, with the following roll call vote: Anderson-aye, Hardy-Mills-aye, Manderscheid-aye, and Smyer-aye, the Council moved to approve payment of the additional Bills as presented.

AGENDA BUSINESS ITEMS

AMENDED AGENDA

Mayor Bowden reported to the Council the City received a “Notice of Intent of Participation and Adoption” Letter from Cassia County regarding the comprehensive revision of the AHMP, All Hazard Mitigation Plan, for the County, which needs to be signed and returned by tomorrow Wednesday, September 25, 2013. The Letter was not received in time to add to tonight’s Agenda. The Mayor asked the Council to amend the Agenda to include the AHMP “Notice of Intent of Participation and Adoption” Letter. Upon motion made by Smyer, seconded by Anderson, and unanimously carried, with the following roll call vote: Anderson-aye, Hardy-Mills-aye, Manderscheid-aye, and Smyer-aye, the Council moved to approve amending tonight’s Agenda to include the AHMP “Notice of Intent of Participation and Adoption” Letter, that was not received in time to be included on tonight’s Agenda. The AHMP “Notice of Intent of Participation and Adoption” Letter will be Business Item number four (4) on the Agenda.

PUBLIC HEARING FOR BPA RATE INCREASE

Mayor Bowden opened the Public Hearing for the Bonneville Power Administration (BPA) Rate Increase at 7:20 p.m. in the Civic Center. The Mayor reported BPA notified the City a nine percent (9%) rate increase will be passed on to the City starting October 1, 2013. The Mayor reported the last time the City received a rate increase, about two (2) years ago, the Council chose to pass on a portion of the total increase the City received. The Mayor reported according to the Profit and Loss Statement (P&L) provided for review at tonight's meeting, it appears the City has a surplus in the Electric Fund, but the opposite is true. The Mayor pointed out the P&L shows Electric Revenues at two hundred seventy thousand, one hundred forty three dollars and forty-three cents (\$270,143.43) and Electric Power Purchases at one hundred thirty-seven thousand, five hundred ninety-eight (\$137,598) dollars. The Mayor pointed out some of the other line items on the P&L are paid for by the Electric Fund, such as seventy-six percent (76%) of Salaries, one (1) Councilperson's Salary, twenty-five percent (25%) of the Administrative Expenses, about thirty percent (30%) of Supplies, Maintenance, and Repairs, and one hundred percent (100%) of Raft River Electric Operations and Maintenance. After all Electric expenses are figured in, the Electric Fund is currently running one and one half percent (-1 1/2%) in the red. The Mayor reported just to break even the City would have to pass on a six percent (6%) rate increase. The Mayor is recommending a three percent (3%) cushion increase that would result in a nine percent (9%) increase in power rates. The rate would be increased from .0772 to .0841. Mayor Bowden asked those wanting to speak to state their name and address, before proceeding with their comments, as the Public Hearing is being recorded. The Mayor opened the floor for comments against the rate increase.

Alan Lloyd, 201 W. Market St., just has a question; according to the P&L the City has a net profit of one hundred twenty-five thousand, six hundred fifty-five dollars and forty-seven cents (\$125,655.47). Lloyd said this is not a clear picture, and he is not sure how he feels about the rate increase, not sure whether to be for it or against it. Lloyd said he wants to make sure the money is used wisely.

John Davis, 324 E. Harper St., asked did the letter the City received say nine percent (9%)?

Mayor Bowden reported the letter he received from a BPA Representative said nine point eight six percent (9.86%) increase.

City Attorney Kerry McMurray reported the letter he has from Craig Hardin, from BPA, said a nine point three percent (9.3%) increase.

Kent Mortensen, 401 E. North St., asked if the power increase has occurred.

Mayor Bowden reported the nine percent (9%) increase takes place for the City on October 1, 2013. The City has not passed on an increase to the Albion residents.

Jody Burrows, 514 Pierce St., need to breakout costs on the P&L report. This would make it easier to understand. The residents would be more willing to accept it, if all costs in the Electric Fund could be seen. I think everyone here wants to support Albion.

Mike Gailey, 315 Hunter St., my family budget will have to change if we get a rate increase, have you looked at your budget? Can we not pay this through other Funds, do we really need this increase.

Mayor Bowden responded by saying the City needs a six percent (6%) increase to break even in the Electric Fund, yes I feel the increase is necessary. Yes, we have looked at our budget, and yes we could pay the increase through other Funds, but then you take the chance of the other Funds running in the red.

Troy Mortensen, 214 Water Tower Circle, asked why are we not looking at October, the City has not provided correct information. How much net profit will there be next year, need to consider this before you vote.

Curtis Richins, 284 W. Market St., why is there a negative amount in the Grant Fund, was the Grant not received.

The Mayor said the Grant was not received, but the amount shown is what the City could have received during the P&L date span. The Mayor also said the date span on the P&L was done to show a full year. October through October would not have been a clear picture, as we are still in September.

Roger Jenkins, 345 E. North St., not understanding the Salary costs, with four (4) employees, why is it so high? Jenkins wants this broken down further. Mayor Bowden reported this can be done.

Tressa Toner, 210 W. Market St., you said seventy-six percent (76%) of salaries goes towards the Electric Fund, why?

Mayor Bowden reported this is the way the Auditor set up payroll to cover the expenses in the Enterprise Funds.

Zack Alexander, 559 Pierce St., seventy-six percent (76%) employee raises, how many raises last year, two (2) or three (3)? Cut expenses, no employee raises.

Mayor Bowden reported no employee received a seventy-six percent (76%) raise.

Mike Gailey, 315 Hunter St., have you looked at other Cities, is there a different way to do things that would be better for the citizen's?

Councilperson Chad Manderscheid reported not all Cities do things the same way. What works for one (1) may not work for another.

Becky Cook, 237 W. Market St., numbers are not my strong point, but who is writing Grants? Need to find creative ways to solve problems, need to do things different. Declo has a part-time Clerk and much better roads.

Nate Warren, 225 W Market St., people living here are on fixed incomes, strapped already. Need to get it cost effective, need to lean it down.

Marcella Mahoney, 501 S. Main St., do you want the sewer and water rates to double? Most of the people here never come to any meetings, but they sure have shown up tonight to complain about a power rate increase.

Troy Mortensen, 214 Water Tower Circle, the P&L I have shows one hundred fifty thousand (\$150,000) dollars net income, the City is making money. What about the fifty thousand (\$50,000) dollars of unpaid bills?

Wylie Douglas, 186 West St., why is there fifty thousand (\$50,000) dollars of unpaid bills? Why are we not shutting them off, where I work, they either pay their bill or the power is shut off.

Roger Jenkins, 345 E. North St., need to get tenants to pay their bills, need to get a Driver's License number, so you can go after them. Need to get the bills paid.

Kent Mortensen, 401 W. North St., I am against a nine percent (9%) rate increase.

Roger Jenkins, 345 E. North St., I am against salary costs.

Darrin Radeke, 558 School St., it was mentioned to pause two (2) weeks before passing on the increase, when would it take effect?

Mayor Bowden responded by saying the City Bills are from the fifteenth (15th) to the fifteenth (15th), so the rate increase would go into effect on October 15, 2013. The City needs to cover costs.

Alan Lloyd, 201 W. Market St., how are other costs expensed to the other funds? Don't use power as a pack mule for the City.

Nate Warren, 225 W. Market St., wants to hear from BPA, wants them to explain rates and why the increase.

Curtis Richins, 284 W. Market St., has the City shopped around for a better power cost?

Rick Mahoney, 336 West St., maybe the City should sell the System. Need to stop belly aching, the cost would go up substantially if power was received from another supplier. Raft River Electric does not want the City System.

Mayor Bowden reported the City's cost for power could go up fifty thousand (\$50,000) dollars if we have to start paying our own wheeling costs. The City has a good working relationship with BPA.

Mayor Bowden closed the Public comment portion of the Hearing, and asked the Council for their opinion on the rate increase.

Councilperson Sharon Hardy-Mills reported she feels a breakdown of expenses is a good idea, and she would like the City to go with a four and one half percent (4.5%) increase for six (6) months. We are an older community, and everyone is hard pressed.

Councilperson Darren Smyer reported he has not had a lot of time to look at this issue closely, but from what the Mayor is saying about the Electric Fund, he feels the nine percent (9%) increase is justifiable.

Council President Lynda Anderson reported she is on a fixed income, as many in Albion are, and she does not want a nine percent (9%) rate increase, but feels if the rates are not raised nine percent (9%) some other Funds will have to pick up the losses in the Electric Fund.

Councilperson Chad Manderscheid reported he agrees with Hardy-Mills, we need to take a closer look at the expenses, and pass on a partial rate increase of four and one half percent (4.5%).

Mayor Bowden thanked everyone for attending the meeting and for the comments made. The Mayor reported he is only telling the facts when he says the City needs a six percent (6%) rate increase to break even in the Electric Fund. The Mayor asked the Council for a decision on the proposed Electric Rate Increase.

Motion was made by Hardy-Mills, to raise the Electric Rate four and one half percent (4.5%) for six (6) months effective October 15, 2013, the motion was seconded by Manderscheid, with the following roll call vote: Anderson-nay, Hardy-Mills-aye, Manderscheid-aye, and Smyer-nay. The motion carried, with the Mayor's aye vote, breaking the Council's tie vote.

Mayor Bowden closed the Public Hearing for the Power Rate Increase at 8:45 p.m. in the Albion Civic Center.

Mayor Bowden announced a short break will be taken before opening the Public Hearing on the Wastewater System Survey.

Mayor Bowden called the Meeting to order at 9:00 p.m. in the Albion Civic Center.

PUBLIC HEARING FOR WASTEWATER SYSTEM SURVEY

Mayor Bowden reported the City hired J-U-B Engineers to conduct the Wastewater System Survey, in order to know exactly what condition the City's Sewer System is in, as the current System was built in 1976. The Wastewater System Survey will provide needed information for the City to use in future planning for operation and maintenance of the Sewer System. The Mayor asked those wishing to make comments, to state their name and address before speaking, as the Public Hearing is being recorded. Mayor Bowden turned the time over to Mark Holtzen, from J-U-B Engineers, to report on the information contained in the Wastewater System Survey.

Mark Holtzen thanked the Mayor and Council for the opportunity to attend tonight's Council meeting to discuss the information contained in the Wastewater System Survey. Holtzen passed out copies of a power point to the Mayor, Council, and those in the audience, as a reference to the information he will be presenting. Holtzen explained the City's Wastewater System collection point is the Lift Station which then pumps the waste to the lagoons. The first lagoon pumps into the second lagoon, and from there it is applied to the acreage by the lagoons. The City currently holds a Class D Land Application License, which is normal for a City. The Department of Environmental Quality (DEQ) requires a twenty (20) year window, in planning, which is what was used in preparing the Wastewater System Survey. The current US Census was used to predict growth, for twenty (20) years, which shows a two percent (2%) population growth. Holtzen reported the wastewater loads are high because of high ground water in the late spring and summer months, that flow into the collection system. The lines are able to carry what the pumps are pumping, but the current pumps in the lift station are too small. The lift station is approaching its life span capacity and the pumps are running slow, they are unable to keep up with the flow. If the power goes off, a portable generator is taken to the lift station to keep it on line, but it is normal to see a permanent generator located at the lift station, that will automatically start when the power is out. Some valves on the six inch (6") lines to the lagoons need to be replaced, and in order for the System to be tighter, newer pipes should be installed. A camera needs to be sent down all the lines, to check the current condition of the lines. Holtzen reported the life span of a lift station is fifteen (15) to twenty (20) years. The current lift station has surpassed its life span and the condition of the lift station is bad, the concrete is breaking up, corrosion exists on the piping, and the pumps have been rebuilt several times, but are still not able to keep up with the flows. This causes unsafe conditions for repairing the lift station. To replace the lift station, there are two (2) options, 1) a duplex or triplex submersible system, with the duplex system being the most cost effective, or 2) a duplex or triplex wet pit/dry pit system. Holtzen reported the repair/replacement could be done in phases, with phase 1 being replacing the lift station and eight inch (8") line to the north of the current lift station, phases 2 inspecting the current lines and cleaning out the six inch (6") lines to the lagoons, and phase 3 small repairs at the lagoons. Holtzen reported the estimated cost to replace the lift station is over four hundred thousand (\$400,000) dollars, with grants and loans offering a fifty percent (50%) match. Holtzen reported the City received a fifty percent (50%) grant from DEQ to conduct the Wastewater System Survey. The City would need to seek grants, get a loan, pass a bond, or use some of the money they have set aside for Capital Improvements in order to do phase 1. Holtzen reported the soonest the City could go for a bond election would be May 2014. If the City decides to go forward, an Engineers Estimate would be prepared with firm numbers on the cost, it would take two (2) to three (3) months to develop a design, and two (2) to three (3) month for construction. The City needs to first obtain property in order to build the new lift station, place a permanent generator, and fuel storage. Holtzen reported before anything else can be done, the Council needs to approve the Wastewater System Survey prepared by J-U-B Engineering, without that approval the City cannot go forward. The lift station is in dire need of upgrading, as it is thirty-nine (39) years old, and the City does not want to find itself in non-compliance.

Heather Mortensen, 214 Water Tower Circle, I hear the Mayor saying he is not interested in getting grant funding, he only wants to spend the cash in the Campus Fund. Are the DEQ fines real or made up?

Mark Holtzen reported the DEQ fines for non-compliance are real, and can be assessed at thirty thousand (\$30,000) dollars per day for each day you are out of compliance. The fines require an outline of steps to be taken to correct the non-compliance issue.

Troy Mortensen, 214 Water Tower Circle, the Mayor can decide to use the Campus money for funding the lift station if he wants to.

Mayor Bowden reported the City will seek funding first, but if there is no funding available, the City may spend the Campus money, which has been approved to use for Capital Improvements in the 2013-2014 Budget that was unanimously passed by the Council. The Mayor reported he does not make decisions, the Council does, and they (the Council) decide how and where they want to use City funds.

Teri Williams, 236 W. Market St, reported the Economic Development Association (EDA) would be your best source for funding.

Alan Lloyd, 201 W. Market St., it might be a good idea not to spend the three hundred thousand (\$300,000) dollars immediately, in case the City should find itself in non-compliance.

Mark Holtzen reported there are only fifty percent (50%) grants currently, as one hundred percent (100%) funding is no longer available.

Mayor Bowden asked for a motion to accept the Wastewater System Survey as presented.

Upon motion made by Smyer, seconded by Manderscheid, and unanimously carried, with the following roll call vote: Anderson-aye, Hardy-Mills-aye, Manderscheid-aye, and Smyer-aye, the Council moved to accept the Wastewater System Survey as presented by Mark Holtzen, from J-U-B Engineering.

Mayor Bowden closed the Public Hearing for the Wastewater System Survey at 10:20 p.m.

WASTEWATER SYSTEM SURVEY GRANT EXTENSION

Mayor Bowden reported to the Council the City received a Letter from the Idaho Department of Environmental Quality (DEQ) giving the City an extension for requesting the Grant Funds for the Wastewater System Survey. The Grant Funds will reimburse the City for half (1/2) the cost of the Wastewater System Survey, being conducted by J-U-B Engineering. The Mayor asked for Council approval to sign the DEQ Grant Extension Letter, for the Wastewater System Survey, to be returned to DEQ.

Upon motion made by Manderscheid, seconded by Anderson, and unanimously carried, with the following roll call vote: Anderson-aye, Hardy-Mills-aye, Manderscheid-aye, and Smyer-aye, the Council moved to approve the Mayor signing the DEQ Grant Extension Letter, for the Wastewater System Survey, to be returned to DEQ.

AHMP NOTICE OF INTENT OF PARTICIPATION AND ADOPTION

Mayor Bowden reported to the Council the City is already a participating party in Cassia County's AHMP, All Hazard Mitigation Plan. The Letter is asking the City to participate in the planning process for the comprehensive revision of the AHMP for Cassia County. The Letter allows the City to declare its intent to eventually adopt the AHMP once it has received pre-adoption approval from both the Idaho Bureau of Homeland Security and FEMA. The Mayor asked for Council approval for the City Clerk to sign the Notice of Intent of Participation and Adoption Letter, to be returned to the Cassia County Sheriff's Office.

Upon motion made by Anderson, seconded by Hardy-Mills, and unanimously carried, with the following roll call vote: Anderson-aye, Hardy-Mills-aye, Manderscheid-aye, and Smyer-aye, the Council moved to approve the City Clerk signing the AHMP Notice of Intent of Participation and Adoption Letter, to be returned to the Cassia County Sheriff's Office.

Mayor Bowden thanked those in attendance at tonight's Council meeting, and announced the Council will now go into an Executive Session. A short break was taken before entering into a closed session.

COUNCIL ENTERS INTO AN EXECUTIVE SESSION

At 11:05 p.m., motion was made by Hardy-Mills, to enter into an Executive Session pursuant to Idaho Code 67-2345(1)(b) regarding personnel issues. The motion was seconded by Manderscheid, and carried with the following roll call vote: Anderson-aye, Hardy-Mills-aye, Manderscheid-aye, and Smyer-aye. The general tenor of the Executive Session was to discuss personnel issues.

COUNCIL RETURNS TO A REGULAR MEETING

The Executive Session was concluded at 11:12 p.m. The matter is being taken under advisement.

COUNCIL ADJOURNS

There being no further business brought before the Council, motion to adjourn was made by Hardy-Mills, seconded by Anderson, and unanimously carried, with the following roll call vote: Anderson-aye, Hardy-Mills-aye, Manderscheid-aye, and Smyer-aye. Adjournment was at 11:15 p.m.

Don H. Bowden, Mayor

Mary Yeaman, City Clerk-Treasurer

Mark Holtzen

From: Sharon Hardy-Mills <sharoncitybiz@gmail.com>
Sent: Thursday, June 30, 2016 8:48 AM
To: Mark Holtzen
Cc: Mary Yeaman
Subject: regarding info for IDEQ

*To whom it may concern,
I, Mayor Sharon Hardy-Mills, (was council person at the time of the 2013 meeting) Do state that the intent was indeed to accept the various Phases of the Wastewater System Survey, as mentioned below.*

At the September 24, 2013 meeting, the City Council moved to accept the Wastewater System Survey as presented. The intent of this motion was to accept the proposed Phase 1, Phase 2, and Phase 3 Improvements as summarized in Section 6.1 of the report.

Thank you.
Mayor Sharon Hardy-Mills
30 June 2016

NOTICE OF HEARING PROPOSED CITY OF ALBION WASTEWATER FACILITIES PLAN

Posted: Thursday, September 12, 2013 1:24 pm

NOTICE OF HEARING

PROPOSED CITY OF ALBION WASTEWATER FACILITIES PLAN

March, 2013

BEFORE THE CITY COUNCIL

FOR THE CITY OF ALBION, IDAHO

BE IT KNOWN that on Tuesday, the 24th day of September, 2013 at 7:00 p.m., the Mayor and City Council of the City of Albion, Idaho shall hold a public hearing to consider the proposals and recommendations, and to adopt the City of Albion Wastewater Facilities Plan, March 2013.

This hearing will be held at the Albion Civic Center, 124 South Main Street, Albion, Idaho. Written testimony or submissions concerning the proposed plan may be filed at the City Office, 225 South Main Street, Albion, Idaho by Monday, September 23, 2013 at 4:30 p.m.

A summary of the proposed Wastewater Facilities Plan, March 2013 is as set forth:

**SUMMARY OF PROPOSED CITY OF ALBION WASTEWATER FACILITIES PLAN,
MARCH 2013.**

The City of Albion, Idaho Wastewater Facilities Plan, March 2013 is an engineered study to analyze the existing wastewater system and to investigate potential improvement alternatives to address current and future community needs and regulatory requirements. The report is to provide the City with the necessary information to make decisions in the future regarding wastewater collection and treatment systems. The Facilities Plan is prepared in accordance with Idaho Department of Environmental Quality Water Pollution Control State Revolving Loan Fund program requirements and with State Regulations (IDAPA 58.01.16.410).

The Plan consists of six (6) chapters as hereafter stated with brief outline of contents:

Chapter 1: Introduction. Sets forth purpose and need of plan; report organization; opinions of probable costs; and environmental review.

Chapter 2: Existing Conditions. Reviews the planning area; existing planning area conditions; existing wastewater collection system; existing wastewater treatment facilities; reuse permit; and existing flows and wasteloads.

Chapter 3: Future Conditions. Projects the future land use and development; 20-year population projections; and future flows and wasteloads.

Chapter 4: Evaluation of Existing Facilities. This chapter evaluates wastewater collection system; wastewater treatment lagoons; and wastewater land application (reuse) system.

Chapter 5: Development and Screening of Improvement Alternatives. This chapter discusses wastewater collection system; lift station; and wastewater treatment facilities.

Chapter 6: Implementation of Wastewater System Improvement. Provides information on recommended wastewater facility improvements; cost estimates; monthly user charge rate analysis; project financing; environmental consideration; implementation issues; and public participation.

This public hearing is open to all interested parties and will discuss the plan and the alternative courses of action for the City. Public comment is welcome and will be considered, addressed and incorporated into the plan as is deemed appropriate, necessary, and advisable.

A full text of the Proposed City of Albion Wastewater Facilities Plan, March 2013 is available at the City Office, 225 South Main Street, Albion, Idaho, and may be reviewed at the City Offices during normal work hours.

DATED this 10th day of September, 2013.

City Clerk for Albion, Idaho

/s/ Mary Yeaman

Mary Yeaman

#260 Published in the Weekly News Journal September 12th and 19th, 2013