# CITY OF WEIPPE

## ENVIRONMENTAL REPORT



April 2016



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## TABLE OF CONTENTS

1	PUR	PURPOSE AND NEED			
	Purpose and Need1				
	1.2	Project Description			
		1.2.1 Phase I (I/I Rehabilitation)			
		1.2.2 Phase II – Treatment			
2	PRO	POSED ALTERNATIVES			
	2.1	Phase I Alternatives			
		2.1.1 No Action			
		2.1.2 I/I Rehabilitation			
	2.2	Phase II Alternatives			
		2.2.1 No Action			
		2.2.2 Scaled Spring Discharge			
		2.2.3 Hybrid Lagoon Treatment with Chemical Phosphorus Removal7			
		2.2.4 Biological Mechanical Treatment with Chemical Nutrient Removal			
3	AFFI	ECTED ENVIRONMENT / ENVIRONMENTAL CONSEQUENCES			
	3.1	Agency Consultation			
	3.2	Cumulative Impacts			
	3.3	Historical, Cultural, and Archaeological Properties10			
		3.3.1 Environmental Consequences and Mitigation11			
	3.4	Wild and Scenic Rivers11			
		3.4.1 Environmental Consequences and Mitigation12			
	3.5	Important Farmland, Prime Forest Land, and Prime Rangeland12			
		3.5.1 Environmental Consequences and Mitigation12			
	3.6	Wetlands13			
		3.6.1 Environmental Consequences and Mitigation14			
	3.7	Floodplains14			
		3.7.1 Environmental Consequences and Mitigation14			
	3.8	Endangered Species and Critical Habitats14			
		3.8.1 Environmental Consequences and Mitigation15			
	3.9	Sole Source Aquifers & Ground Water Quality Standards			
		3.9.1 Environmental Consequences and Wiltigation			
	3.10	Surface Water Quality			
	3.11	Air Quality			
		5.11.1 Environmental consequences and winigation			

	3.12	Formally Classified Lands	16
		3.12.1 Environmental Consequences and Mitigation	16
	3.13	Other Environmental Resources	16
		3.13.1 Environmental Consequences and Mitigation	16
4	SUN	IMARY OF MITIGATION	17
5	COR	RESPONDENCE AND COORDINATION	18
6	BIBL	IOGRAPHY	19

## FIGURES

Figure 1.1 -	– Area of Potential Effect	5

### TABLES

Table 4.1 – Summary of Mitigation	17
Table 5.1 – Correspondance Contact List	18

### **APPENDICES**

Appendix A – Agency Consultation Information Appendix B – Affected Environment Information & Maps

### **1 PURPOSE AND NEED**

The Weippe Environmental Report has been prepared to satisfy Rural Development funding and requirements associated with the Weippe wastewater upgrades project. The report has been prepared in accordance with RUS 1794A-602, Idaho RD instruction 1940-G, and guidance from Rural Development representatives.

#### 1.1 PURPOSE AND NEED

In 2011, the City identified lagoon leakage in excess of 0.125 inches per day, a maximum standard set forth per IDAPA 58.01.16 for facilities near 303(d) listed impaired stream segments. The City is currently pursuing a Groundwater Impact Assessment (GWIA) to assess the impact of leakage on the environment. If deemed compliant with the Ground Water Quality Rule (IDAPA 58.01.11) the lagoons can continue to operate with leakage greater than 0.125 inches per day in accordance with Subsection 493.04.d of IDAPA 58.01.16. If impacts are not compliant with IDAPA 58.01.11, leakage must be reduced to a level less than the state standards. This direction would be especially problematic for the City, as water previously lost to leakage must then be treated to limits set forth in the City's NPDES permit.

In 2014, the EPA issued a new discharge permit to the City. A review of historical effluent BOD and effluent TSS shows that with exception to the 85 percent removal limit, the City should not have difficulty complying with 2014 permit limits. During periods of elevated flow associated I/I, however, the WWTP can receive relatively low strength influent water quality making the percent removal limit difficult to achieve despite meeting permitted effluent concentrations. Based on available data, the system experiences average daily flows approximately 50% higher than typical values, and peak flows during I/I events at 250% of typical values. Reducing I/I will likely strengthen influent flows, improving the City's ability to meet the percent removal requirement. Compliance will ultimately be a function of I/I removal success.

The City's discharge permit requires continuous effluent flow measurement. Although the City has had this capability in the past, the system is currently inoperable. Therefore, the City estimates effluent flows based on a single daily measurement.

Limits contained within a future NPDES permit may further compound the City's ability to achieve compliance. Future compliance at the City's treatment facilities is heavily contingent on results of the GWIA. Although there is a reasonable chance that the study will demonstrate compliance with the

Groundwater Quality Rule and Water Quality Standards, the State has not to date authorized any systems to operate under Subsection 493.04.d of the Wastewater Rules. The following sections summarize future compliance concerns based on a review of the current and potential permit limits.

**Ammonia** – Based on our past experience from similar sized facilities and permit regulations has demonstrated that following a data collection period for ammonia in one NPDES permit cycle (approximately 5 years), a review of ammonia toxicity and mixing zones is typically completed by the EPA. This can result in an expansion of the mixing zone, addition of an ammonia limit, or both. As the current permit implements a quarterly surface water sampling regime for Ammonia, pH, and temperature, it can be reasonably ascertained that toxicity will be reviewed at the end of the current permit. This review may result in an ammonia limit less than the concentration currently discharged. For purposes of alternative analysis, consideration of an ammonia limit is made, requiring some form of effluent ammonia reduction. This assumption should be revisited during planning of the Phase II treatment project once additional data is available and an estimate of ammonia limits can be developed.

**Phosphorous** - If lagoon leakage is found through the GWIA to be non-compliant with the Groundwater Quality Rule, the City would struggle to treat flow previously lost to leakage as fully developed in the Facility Plan. Under this scenario, the City does not have sufficient storage to eliminate discharge during the phosphorus critical period from April 1 through July 31, requiring a significant modification of the treatment system for phosphorus removal and/or storage.

**Temperature** - Although not specifically mentioned in the current permit, the Jim Ford Creek Total Maximum Daily Load (TMDL) discusses a zero waste load allocation to the City from July 1 through August 15. For purposes of compliance it should be assumed that no discharge can take place during this timeframe.

**Dilution Ratio** – The City is currently required to discharge at a maximum ratio of 50:1 based on upstream flows measured in Jim Ford Creek. During low flows in the summer and early fall this requirement limits the amount of effluent the City can discharge.

The purpose of and need for the proposed improvements is to address identified deficiencies and position the City to meet future requirements. Failure to address the identified deficiencies could result in decreased treatment performance and a significant increase in the cost of treatment. The Weippe

Wastewater Treatment Facility has operational and capacity issues as noted in the Weippe Wastewater Treatment Facility Plan Addendum.

#### **1.2 PROJECT DESCRIPTION**

The City of Weippe is located in North-Central Idaho, reference **Figure 1.1**. The City intends to implement a phased approach for wastewater collection and treatment improvements. A review of existing and future compliance issues shows the City is well positioned to consider this approach due to the unknowns associated with the current Groundwater Impact Assessment (GWIA) and unknown limits contained within their next National Pollutant Discharge Elimination System (NPDES) permit. The I/I effort and flow measurement completed as part of the Phase I upgrades will put the City in the best possible position to minimize Phase II treatment upgrades.

#### 1.2.1 PHASE I (I/I REHABILITATION)

Phase I will predominately consist of collection system improvements to upgrade existing pipes within City Right-of-Way. The goal of the effort is to rehabilitate aged and leaking pipes to minimize infiltration and inflow (I/I) entering the system, as well as exfiltration of sewer from the system. In addition, several upgrades at the City's treatment facilities are planned to improve operations. In summary, Phase I upgrades include:

- Pipe Rehabilitation Repair or replace existing pipes in existing, previously disturbed City Rightof-Way defined within the Area of Potential Effect (APE), reference **Figure 1.1**.
- Flow measurement Install flow measurement devices at the existing treatment facilities to monitor plant influent and effluent flows transmitted to and from the facility.
- Disinfection Upgrades Replace existing gas disinfection at the existing treatment facilities with a liquid system.
- System failure notification Install an automatic alarm system at the existing treatment facilities to notify system operators when a critical system component is offline.

#### **1.2.2** PHASE II – TREATMENT

The scope of the Phase II project will be driven by the City's next NPDES permit and results of an ongoing GWIA to quantify the environmental impacts of lagoon leakage. The scope will be refined by a Preliminary Engineering Report (PER), but as detailed in the City's Facility Plan Addendum, is anticipated

to encompass some level of treatment upgrades. A potential site for the upgrades is defined in **Figure 1.1**. In addition, the scope of Phase II may include upgrades to improve freeboard at the lagoons and additional I/I rehabilitation as funding allows.



Proposed alternatives are separated as Phase I and Phase II alternative. Each is fully developed within the Facility Plan Addendum.

#### 2.1 PHASE I ALTERNATIVES

The Phase I alternatives are predominantly structured to position the City for the Phase II project and improve the City's ability to reach compliance with the discharge permit.

#### 2.1.1 NO ACTION

The No Action alternative would result in non-compliance with the City's discharge permit through violation of the following

- Percent removal limits (BOD & TSS)
- Continuous Effluent Flow Measurement
- E. Coli Limits associated with disinfection

The alternative is, therefore, not feasible.

#### 2.1.2 I/I REHABILITATION

I/I rehabilitation via open trench replacement or a trenchless method such as cured in place pipe (CIPP) offer the best method to reduce system flows and strengthen influent wastewater, increasing the City's ability to meet percent removal limits. Miscellaneous system upgrades including effluent flow measurement and a new disinfection system will also satisfy permit requirements. The Facility Plan Addendum recommends review of CCTV inspection in a PER to prioritize and identify what construction technique should be utilized by location.

#### 2.2 PHASE II ALTERNATIVES

Several Phase II alternatives have been identified. Due to the unknowns associated with the GWIA process and limits contained within the next permit, however, the City intends to re-assess alternatives through a PER to determine the best option for compliance once the GWIA process is finalized and the

next permit limits are established. The I/I effort and flow measurement completed as part of the Phase I upgrades will put the City in the best possible position to complete Phase II treatment upgrades.

#### 2.2.1 NO ACTION

The No Action alternative may be valid if the GWIA process demonstrates compliance with the groundwater quality rule and there are no ammonia toxicity issues identified in the 2019 permit cycle. For planning purposes, if leakage must be reduced to a level less than 0.125 inches per day or ammonia toxicity becomes a compliance issue, further treatment improvements may be warranted. The No Action alternative is likely not feasible.

#### 2.2.2 SCALED SPRING DISCHARGE

The Scaled Spring Discharge alternative maximizes discharge in the phosphorous critical period. The alternative is structured based on discharge for a period on the order of several days during each month up to the specified phosphorous load of 30 lbs/month. This alternative would allow the City to discharge up to the seasonal phosphorous load of 30 lbs/month identified in the current Permit. This alternative remains valid pending review of effluent ammonia requirements in the City's next permit, GWIA, and the effectiveness of Phase I I/I rehabilitation.

The Scaled Spring Discharge alternative is based on regulatory compliance through the following:

- Ammonia This alternative would not meet a potential ammonia limit.
- Phosphorus Compliance Maintain discharge less than 30 lbs/month from April 1 June 30 at a typical lagoon treatment effluent discharge concentration of approximately 6 mg/L.
- Temperature No discharge during critical period, July 1 August 15.
- Leakage Line lagoons to reduce seepage rate to less than 0.125 inches per day.
- Storage Build additional storage of 3.4 million gallons.

A complete discussion of this alternative is given in Section 6 of the Facility Plan Addendum and Section 8.3.1 of the Facility Plan.

#### 2.2.3 HYBRID LAGOON TREATMENT WITH CHEMICAL PHOSPHORUS REMOVAL

Although a biological mechanical treatment plant would be utilized to meet a potential ammonia limit, it would not be required under a compliance scenario that does not include an ammonia limit. As an alternate to the phosphorus critical season storage alternative, the existing lagoon treatment system

could be coupled with chemical phosphorus precipitation and removal by filtration. The technology is not typically utilized in this scenario, as flows to a filtration system are usually characterized by higher influent water quality than lagoon treatment provides; therefore, the methodology should be pilot tested. The system would meet regulatory compliance through the following:

- Ammonia This alternative would not meet a potential ammonia limit.
- Phosphorus Compliance Maintain discharge less than 30 lbs/month from April 1 June 30 using chemical phosphorus removal to reduce effluent discharge concentration to approximately 1 mg/l.
- Temperature Utilize storage of 4.6 million gallons to eliminate discharge during critical period, July 1 – August 15.
- Leakage Line lagoons to reduce seepage.

Following development of future permit limits, this alternative may have merit and should be further vetted with a pilot test to determine feasibility and establish design parameters.

#### 2.2.4 BIOLOGICAL MECHANICAL TREATMENT WITH CHEMICAL NUTRIENT REMOVAL

An ammonia limit would likely require the City to implement biological mechanical treatment. In addition, chemical removal technology has recently been developed and shown to reliably achieve effluent phosphorus concentrations allowing discharge during the critical phosphorus period. Under this discharge scenario, the impact of the GWIA is less pronounced as the plant would be sized to treat average peak month influent flows with influent equalization storage. For purposes of obtaining a conservative estimate and cost, it is assumed that the equalization storage would consist of a 600,000 gallon lined lagoon sized at one day of peak day flow. No reduction in I/I is estimated due to the difficulty of accurately estimating the effectiveness of an I/I rehabilitation project. The alternative is based on regulatory compliance through the following:

- Ammonia Compliance Utilize biological mechanical treatment with a 600,000 gallon lined influent equalization pond. The treatment facility is sized at 0.215 mgd to meet projected year 2033 maximum month.
- Temperature Utilize storage of 4.6 million gallons to eliminate discharge during critical period, July 1 – August 15.

- Phosphorus Compliance Utilize chemical precipitation to reduce effluent phosphorus to less than 1 mg/L during the critical phosphorus period and maintain a seasonal effluent phosphorus load less than of 30 lbs/month during the critical phosphorus period.
- Dilution Ratio Although there is a potential that high quality effluent from a mechanical treatment plant could discharge at a lower dilution ration, discharge at 50:1 as identified in Section 3 of the Addendum was assumed as the basis of design. This assumption and associated sizing implications should be revisited in the PER.

A complete discussion of the alternative is given in Section 6 of the Facility Plan Addendum.

## 3 AFFECTED ENVIRONMENT / ENVIRONMENTAL CONSEQUENCES

The Area of Potential Effect is identified in **Figure 1.1**. All proposed improvements will occur within the APE. Environmental Consequences of the proposed action are generally isolated to construction as work from the project predominately consists of rehabilitation of buried pipes.

#### 3.1 AGENCY CONSULTATION

Based on input from Rural Development staff, relevant state and federal agencies were contacted to provide input on potential environmental impacts of the proposed improvements. The list of consulted agencies is included in **Section 5** of this document. Agency consultation requests and responses regarding the proposed improvements are included in **Appendix A**. In addition, research was completed in accordance with Idaho RD Instruction 1940-G to complement the formal contacts made regarding the project.

#### 3.2 CUMULATIVE IMPACTS

Cumulative impacts relate to two or more individual effects that, when considered together, increase other environmental impacts. Project upgrades will be completed beneath existing ground surface or at the City's existing treatment facility. As such, no cumulative impacts are anticipated.

#### 3.3 HISTORICAL, CULTURAL, AND ARCHAEOLOGICAL PROPERTIES

The community of Weippe is located at a historically important resource gathering area for the Nez Perce Tribe. The Tribe has a strong interest that development projects do not adversely impact artifacts and other remains of Nez Perce heritage and occupation.

The National Register of Historic Places in Idaho lists two properties in the APE. Brown's Creek CCC Camp Barracks is located at 105 First Street East. The Register also lists the broad area defined as the Weippe Prairie due to its historical significance to the Lewis and Clark Expedition and the Villages of the Nez Perce Tribe. The National Registry nomination forms for each of these sites are included for reference in **Appendix B**. The State Historic Preservation Office (SHPO) identified one historic property (Site 10CW99F) along Main Street south of the intersection with Fir Street, but did not offer any specifics regarding the property.

#### 3.3.1 ENVIRONMENTAL CONSEQUENCES AND MITIGATION

In response to the consultation request, SHPO requested that ground disturbing activities in the area of site 10CW99F be monitored by a professional archaeologist. In addition, SHPO requested the following:

- Monitoring Plan Including background research, proposed methodology, and discovery notification protocol
- Unanticipated Discovery Plan
- Contractor Training Session

The Tribal Historic Preservation Office (THPO) did not directly respond to the consultation request completed in January, and instead referred to an email issued in October of 2015 requesting an archaeological resource survey in all areas of proposed ground disturbance.

#### 3.4 WILD AND SCENIC RIVERS

The National Wild and Scenic Rivers System was created by Congress in 1968 to preserve certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations. The Wild and Scenic Rivers system has three categories:

- 1. Wild Rivers Rivers that are free of dams, generally inaccessible except by trail, and represent vestiges of primitive America.
- 2. Scenic Rivers Rivers that are free of dams with shorelines or watersheds still largely primitive and shorelines largely undeveloped but accessible in places by roads.
- 3. Recreational Rivers Rivers that are readily accessible by road or railroad, may have some development along their shorelines, and may have been dammed in the past.

According to the Idaho Department of Water Resources, U.S. Department of the Interior Bureau of Land Management, and the Interagency Wild and Scenic Rivers Council, the APE does not contain a Wild and Scenic River. Further, there are no other creeks, streams, rivers, etc. in the vicinity of the APE that have a Wild and Scenic designation. A map and list of designated Wild and Scenic Rivers in Idaho is included in **Appendix B**.

#### 3.4.1 ENVIRONMENTAL CONSEQUENCES AND MITIGATION

No impacts to wild and scenic rivers are anticipated.

#### 3.5 IMPORTANT FARMLAND, PRIME FOREST LAND, AND PRIME RANGELAND

The APE contains a mixture of land uses. Single-family residences comprise a majority of the land use, with small amounts of commercial and industrial uses. An electronic zoning map is not readily available for the City of Weippe, but a hard copy is available for review at City Hall.

Soils in the APE area generally consist of loamy loess and volcanic ash over basalt bedrock, characteristic of the Weippe Prairie. Soils maps for the City of Weippe are included in **Appendix B**. Soils above bedrock are generally classified as well drained and depth to bedrock is relatively shallow on the order of 3 to 5 feet. According to the United States Department of Agriculture (USDA) Natural Resources Conservation Services (NRCS), some of the more prevalent soil classification groups in the APE Effect include:

- Reggeor-Seddow Complex
- Seddow ashy silt loam
- Lewhand-Burnthand Complex

The residential nature within the APE Effect is not generally conducive to farming, and there is no prime farmland as designed by the USDA NRCS in the project vicinity. However, there are areas throughout the APE classified as "prime farmland if drained." A map showing soil classifications for the APE is included in **Appendix B.** 

#### 3.5.1 ENVIRONMENTAL CONSEQUENCES AND MITIGATION

Proposed construction is compatible with local land use plans, and no adverse impacts to land use are expected as a result of the proposed improvements. Direct, short-term impacts on soils will consist of ground disturbance during construction. Best Management Practices (BMPs), will be utilized during construction to minimize the potential for erosion of excavated and stockpiled soils (e.g., silt fence, straw wattles). Native material will be replaced in-situ or, hauled to an appropriate disposal site.

No impacts are expected to important farmland or formally classified lands as a result of the proposed improvements.

#### 3.6 WETLANDS

A wetlands map from the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory for the APE is included in **Appendix B**. According to the map, vicinities along Jim Ford Creek and Grasshopper Creek are identified as potential freshwater Emergent and Freshwater Forested/Shrub wetland areas. The wetlands map is provided for general reference and does not constitute a wetlands determination. Data limitations of this mapping program are noted on the USFWS website (http://www.fws.gov/wetlands/data/limitations.html) and summarized below:

• The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology, and geography. A margin of error is inherent in the use of imagery. Therefore, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

- Metadata should be consulted to determine the date of the source imagery used and any mapping problems.
- Wetlands or other mapped features may have changed since the date of the imagery and/or field work.
- Certain wetland habitats are excluded from the mapping program because of the limitations
  of aerial imagery, including seagrasses or submerged aquatic vegetation that are found in
  the intertidal and subtidal zones of estuaries and nearshore coastal waters.
- Appropriate federal, state, or local agencies should be consulted if modifications are proposed within or adjacent to wetland areas.

#### 3.6.1 ENVIRONMENTAL CONSEQUENCES AND MITIGATION

If open trench construction techniques are scheduled near potential wetland areas during development of the PER, the U.S. Army Corps and/or the Soil Conservation Service will be consulted during design and construction as required. A wetlands delineation will be performed by these agencies or a private consultant, as deemed necessary by the agencies. Any potential impacts to wetlands (e.g., silt fence, straw wattles) will be mitigated via BMPs.

#### 3.7 FLOODPLAINS

Floodplains in the APE are generally located along Jim Ford Creek and Grasshopper Creek. The City does not participate in the National Flood Insurance Program.

The APE includes areas within the 100-year flood zone that are subject to flooding by a 1 percent annual chance (100-year flood) for the base flood elevation determined for the area. Flood maps showing the APE are included in **Appendix B**. Separate maps for the City of Weippe and applicable areas of Clearwater County are provided, as the APE extends beyond city limits.

#### 3.7.1 ENVIRONMENTAL CONSEQUENCES AND MITIGATION

No long term impacts to floodplains are anticipated as final surface repair for the proposed improvements will match existing elevations and will not alter floodplain physiology. Any potential short term impacts identified during final design or construction will be mitigated via BMPs and any necessary permits will be obtained.

#### 3.8 ENDANGERED SPECIES AND CRITICAL HABITATS

According to consultation from the U.S. Fish and Wildlife Service (USFWS), vegetation found within the proposed project area may provide nesting habitat for avian species protected under the Migratory Bird Treaty Act (MBTA) (Kosterman, 2016). Federally listed, proposed, or candidate species that may occur in Clearwater County include Bull Trout, Canada Lynx, Spalding's Catchfly, and Whitebark Pine. The USFWS further indicated that there are no federally listed, proposed or candidate species listed in the site-specific project species list.

#### 3.8.1 ENVIRONMENTAL CONSEQUENCES AND MITIGATION

Due to the potential for nesting habitat for avian species protected under the MBTA, the USFWS recommended projects avoid any activity such as land clearing that involves removal of vegetation that may provide nesting habitat for avian species during the migratory bird nesting season. Avian nesting generally occurs in northern Idaho from April 1st through August 1st each year, although these dates may vary based on species and location.

#### 3.9 SOLE SOURCE AQUIFERS & GROUND WATER QUALITY STANDARDS

A Sole Source Aquifer is an aquifer that has been designated by the EPA as the sole or principle source of drinking water for an area. The project impact area is not located over a sole source aquifer or recharge area of one of the sole source aquifers. See **Appendix B** for map of project impact area in relation to sole source aquifers and recharge areas.

#### 3.9.1 ENVIRONMENTAL CONSEQUENCES AND MITIGATION

The proposed improvements are not located over a sole source aquifer or groundwater source, therefore no negatives impacts to sole source aquifers or groundwater source are expected.

#### **3.10 SURFACE WATER QUALITY**

The Weippe Wastewater Treatment Facility discharges treated effluent to the Jim Fork Creek and Grasshopper Creek and has various operational and capacity issues at today's flows and loads. A TMDL on Jim Ford Creek was completed in 2000, and an update by IDEQ is currently pending. The facility generally meets current NPDES Permit effluent limits. However, permit violations are expected to become more frequent if the GWIA study shows the lagoon leakage must be reduced.

#### 3.10.1 ENVIRONMENTAL CONSEQUENCES AND MITIGATION

The proposed improvements are not expected to have any negative impacts on surface water quality. The Contractor will be required to comply with applicable Construction General Permit requirements.

#### 3.11 AIR QUALITY

Idaho has an approved State Implementation Plan (SIP) that allows the state to issue air quality permits and enforce air quality regulations. No direct air emissions are expected from the proposed improvements that will not meet federal and state emission standards.

#### 3.11.1 ENVIRONMENTAL CONSEQUENCES AND MITIGATION

The proposed improvements are not expected to violate ambient air quality standards or cause odor or noise nuisance problems.

#### 3.12 FORMALLY CLASSIFIED LANDS

The cultural, recreational, natural and aesthetic values of the subject resources shall be protected from adverse impacts including visual, noise, water, and air pollution impacts as identified in Section 3.3. A segment of the Lewis and Clark trail run through the Weippe Prairie, reference Appendix B.

#### 3.12.1 ENVIRONMENTAL CONSEQUENCES AND MITIGATION

The proposed improvements are not expected to have any negative impacts on the Lewis and Clark Trail or any other aesthetic values.

#### **3.13 OTHER ENVIRONMENTAL RESOURCES**

Preparers shall identify all significant potential environmental impacts in consultation with applicants, other agencies, interested organizations and interested citizens.

#### 3.13.1 ENVIRONMENTAL CONSEQUENCES AND MITIGATION

No other significant potential environmental impacts have been identified within the APE.

#### TABLE 4.1 – SUMMARY OF MITIGATION

Environmental Impact	Mitigation Measure(s)		
Historical, Cultural, and Archaeological Properties – Section 3.3	Ground disturbing activities in the area of site 10CW99 will be monitored by a professional archaeologist.		
<ul> <li>Potential impacts to historic property identified by SHPO</li> </ul>			
Important Farmland, Prime Forestland, and Prime Rangeland – Section 3.5	Best Management Practices (BMPs), will be utilized during construction to minimize the potential for erosion of excavated and stockpiled soils (e.g., silt		
<ul> <li>Direct, Short Term Impact – ground disturbance during construction</li> </ul>	fence, straw wattles). Native material will be replaced in-situ or, hauled to an appropriate disposal site.		
<ul><li>Wetlands – Section 3.6</li><li>Potential impacts near Wetlands</li></ul>	A wetlands delineation will be performed if deemed necessary, by regulatory agencies. Any potential impacts to wetlands (e.g., silt fence, straw wattles) will be mitigated via BMPs.		
<ul> <li>Floodplains – Section 3.7</li> <li>The APE includes areas within the 100-year flood zone.</li> </ul>	No impacts are expected to floodplains as a result of the proposed improvements. Any potential impacts identified during final design or construction will be mitigated via BMPs, and any necessary permits will be obtained.		
Endangered Species and Critical Habitat – Section 3.8 • Potential for nesting for avian species protected under MBTA	Activities such as land clearing that involves removal of vegetation that may provide nesting habitat for avian species during the migratory bird nesting season should be avoided from April 1st through August 1st each year.		

**Table 5.1** lists the agencies consulted during the preparation of the ER, including dates consultation was attempted and dates agency responses were received. Copies of agency consultation letters and responses received are included in **Appendix A**.

Agency	Contact(s)	Address	Date Consulted	Date of Response
Idaho Department of Environmental Quality	Nicolas Hiebert	1118 "F" Street Lewiston, Id 83501	January 20, 2016	March 10, 2016
Idaho Department of Water Resources	Keith Franklin	7600 Mineral Drive Suite 100 Coeur d'Alene, ID 83815	February 22, 2016	February 17, 2016 <sup>b</sup>
Idaho Fish & Game	Jerome Hansen	3316 16 <sup>th</sup> Street Lewiston, ID 83501	January 19, 2016	No Response
National Park Service	Craig Dalby	909 First Ave., 5 <sup>th</sup> Floor Seattle, WA 98104	January 19, 2016	No Response
Federal Emergency Management Agency	Mark Eberlein	130-228 <sup>th</sup> St. SW Bothell, WA 98021	January 19, 2016	February 11, 2016
Idaho Historic Society	Ethan Morton	210 Main Street Boise, ID 83702	January 19, 2016	March 3, 2016
U.S. Fish & Wildlife Service	Laura Williams	11103 E. Montgomery Dr. Spokane, WA 99206	January 19, 2016	February 18, 2016
U.S. Army Corps of Engineers	Michael Francis	201 N. 3 <sup>rd</sup> Ave. Walla Walla, WA 99362	January 19, 2016	January 25, 2016
Nez Perce Tribe	Patrick Baird	PO Box 305 Lapwai, ID 83540	January 19, 2016	February 3, 2016
Idaho Department of Commerce	Dennis Porter	700 W State Street PO Box 83720 Boise, ID 83702	January 19, 2016	No Response

#### TABLE 5.1 – CORRESPONDANCE CONTACT LIST

<sup>a</sup> Represents the dated the certified letter reached recipient.

<sup>b</sup> Keith Franklin responded to an email version of the letter.

## 6 BIBLIOGRAPHY

Federal Emergency Management Agency. Map Service Center. City of Weippe, Idaho Clearwater County Flood Insurance Rate Map. Community Panel Number 1600490001B. Effective Date December 4, 1979. <u>http://msc.fema.gov/portal</u>. Retrieved September 30, 2015.

Federal Emergency Management Agency. Map Service Center. Clearwater County Unincorporated Areas Flood Insurance Rate Map. Community Panel Number 1600461030B. Panel 1030 to 1125. Effective Date May 15, 1980. <u>http://msc.fema.gov/portal</u>. Retrieved September 30, 2015.

Idaho Department of Water Resources. Federal Wild and Scenic Rivers. <u>http://www.idwr.idaho.gov/WaterManagement/WaterRights/Wild\_Scenic/WildScenic.htm</u>. Retrieved September 30, 2015.

J-U-B ENGINEERS, Inc. *City of Weippe Wastewater Treatment Facility Plan.* Prepared for the City of Weippe. June 2014.

J-U-B ENGINEERS, Inc. *Draft City of Weippe Wastewater Treatment Facility Plan Addendum*. Prepared for the City of Weippe. December 2015.

National Register of Historic Places in Idaho. Idaho State Preservation Office (SHPO). <u>http://www.history.idaho.gov/sites/default/files/uploads/National\_Register\_Properties\_Idaho.pdf</u>. Retrieved March 29, 2016.

United States Environmental Protection Agency. Designated Sole Source Aquifers in EPA Regain 10 Idaho, Oregon, Washington. <u>https://www3.epa.gov/region10/pdf/water/ssa/maps/ssa\_all\_2013.pdf</u>. Retrieved September 30, 2015.

United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) Web Soil Survey. <u>http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm</u>. Retrieved March 29, 2016

United States Fish and Wildlife Service. IPaC Trust Resource Report. <u>http://ecos.fws.gov/ipac/</u>. Retrieved September 30, 2015.

United States Fish and Wildlife Service. National Wetlands Inventory. Wetlands Mapper. <u>http://www.fws.gov/wetlands/data/mapper.HTML</u>. Retrieved September 30, 2015.

United States Fish and Wildlife Service. National Wild and Scenic Rivers System. <u>http://www.rivers.gov/idaho.php</u>. Retrieved March 29, 2016.

# APPENDIX A

Agency Consultation Information

Example Consultation Letter







February 17, 2016

Idaho Department of Water Resources Mr. Keith Franklin 7600 Mineral Drive, Suite 100 Coeur d'Alene, Idaho 83815

#### RE: City of Weippe Wastewater Facilities Upgrades – Environmental Screening

Dear Mr. Franklin:

We are seeking information from your agency regarding any known environmental issues associated with the proposed project. Your comments are being solicited as part of National Environmental Policy Act (NEPA) compliance, related cross-cutting act compliance and agency regulatory requirements.

The following information is being provided to aid in your evaluation for the proposal:

- 1. Area of Potential Effect: The Area of Potential Effect (APE) for the project is identified on the attached Figure 1, Project Location and Service Area Map.
- 2. Location: The project area is within the Area of Potential Effect as identified in Figure 1. The area is within T35N, R4E, Sections 10, 11, 14 & 15.
- 3. **Agencies Involved**: Project funding from USDA-Rural Development and Idaho Department of Commerce is anticipated.
- 4. **Project Description**: A project description and cost is given in the attached Project Description.
- 5. Environmental Information: The general project vicinity generally consists of previously developed residential and commercial areas located within the identified APE.
- 6. **Attachments**: Reference attached Project Description and Project Location and Service Area Map.

City of Weippe, ID February 17, 2016 Page 2

Please provide your comments on the enclosed comment sheet or by letter within 30-days of the date of this letter to 7830 Meadowlark Way, Suite C3, Coeur d'Alene, ID 83815, attention John Lynn. If you have any questions regarding the proposed project, please contact Amy Uptmor, project engineer, at 208-746-9010.

Sincerely,

J-U-B ENGINEERS, Inc.

5 K ypt

Amy K. Uptmor, PE Project Manager

Enc: Project Description Project Map Comment Sheet

# CITY OF WEIPPE WASTEWATER FACILITIES UPGRADES PROJECT DESCRIPTION

The City of Weippe intends to complete a phased project to upgrade their Wastewater Treatment Facilities. The proposed project and need are detailed in the City of Weippe, Wastewater Treatment Facility Plan Addendum (2015) and is generally described as follows:

#### PHASE I

Phase I will predominately consist of a collections project to upgrade existing pipes and manholes within City Right-of-Way. The goal of the effort is to rehabilitate aged and leaking pipes to minimize infiltration and inflow entering the system, as well as exfiltration of sewer from the system. In addition, several operational upgrades at the City's treatment facilities are scheduled to enhance operations. In summary, Phase I upgrades include:

- Pipe Rehabilitation Repair or replace existing pipes in existing, previously disturbed City Rightof-Way, reference **Figure 1**.
- Flow Measurement Install flow measurement devices at the existing treatment facilities to monitor plant influent and effluent flows. Install flow measurement in the collection system to quantify subdivision flows transmitted to the system.
- Disinfection Upgrades Replace existing gas disinfection at the existing treatment facilities with a liquid system.
- System Failure Notification Install an automatic alarm system at the existing treatment facilities to notify system operators with a critical system component is offline.

#### PHASE II

The scope of the Phase II project will be driven by the City's next discharge permit and results of a Groundwater Impact Assessmetht currently in process to quantify the impacts of lagoon leakage. The scope will be refined by a Preliminary Engineering Report, but at this time is anticipated to encompass some level of treatment upgrades. A potential site for the upgrades is defined in **Figure 1**, Project Map. In addition, the scope of Phase II may include upgrades to improve freeboard at the lagoons and additional I/I rehabilitation as funding allows.

#### COSTS

**Table 1** presents project costs for the Phase I and Phase II projects. As detailed in the Facilities Plan Addendum, it is difficult to pinpoint project costs associated with the Phase II project due to the uncertainties associated with existing and projected design flows. The impact of the Phase I pipe rehabilitation project creates further ambiguity regarding the design criteria for the Phase II project. Additional detail regarding costs presented herein is given in the Facilities Plan Addendum. Phase II project costs specifically represent the best estimate at potential project costs, but should be utilized with caution as the City budgets for the future project.

#### TABLE 1<sup>a</sup>

Description	Phase I Cost (2017 Construction)	Phase II Cost <sup>b</sup> (2024 Construction)
I/I Rehabilitation <sup>e</sup>	\$2,828,250	-
Scaled Spring Discharge Alternative <sup>c</sup>	2	\$10,463,500
Hybrid Lagoon Treatment with Chemical Phosphorus Removal		Not Evaluated <sup>f</sup>
Mechanical Treatment <sup>d</sup>	ũ.	\$15,325,000

<sup>a</sup> Reference WWFP Addendum, Table 5 and Appendix F

<sup>b</sup> Costs presented are heavily contingent on estimated flows. Sizing should be revisited during the PER to refine associated design criteria.

<sup>c</sup> Alternative sizing based on projected 2033 monthly flows presented in WWFP Addendum, Figure 2.

<sup>d</sup> Alternative sizing based on maximum month projected 2033 flow presented in WWFP Addendum, **Table 2**.

<sup>e</sup> Mainline reconstruction and reconnection of laterals. Reference WWFP Addendum, Appendix F for additional detail.

<sup>f</sup> The effectiveness of this technology is unproven, and should be established via a pilot test prior to alternative selection.



Path: //wsfiles/public/projects/UU8/21-12-003 - Weippe WW Facilities Plan/21-12-003-GIS/Master Plan Figures

Print Date: 9/30/2015

# INTERGOVERNMENTAL REVIEW COMMENT SHEET FOR

City of Weippe (APPLICANT NAME)

Wastewater Facilities Upgrades (PROJECT TYPE)

#### **TO AGENCY ADDRESSED:**

If you intend to comment but cannot respond to USDA, Rural Development within 30 calendar days, please notify USDA, Rural Development immediately. If no response is received by the due date, it will be assumed that you have no comment and the file will be closed.

#### 

## TO USDA, RURAL DEVELOPMENT:

We have reviewed the subject preapplication for Federal assistance and have reached the following conclusions on its relationship to our plans and programs:

- [] It has no adverse effect.
- [] We have no comment.
- [] Effects, although measurable, would be acceptable.
- [] It has adverse effects. (Explain in the Remarks Section.)
- [] We are interested but require more information to evaluate the proposal. (Explain in the Remarks Section)
- [] Additional comments for project improvement. (Attach if necessary)

#### **REMARKS:**

AGENCY: \_\_\_\_\_

BY: \_\_\_\_\_ PHONE NUMBER: \_\_\_\_\_

# Idaho Department of Environmental Quality

#### **Amy Uptmor**

From:	Michael.Camin@deq.idaho.gov
Sent:	Thursday, March 10, 2016 8:54 AM
То:	Amy Uptmor
Subject:	<b>RE: Weippe Environmental Review</b>

Amy,

I have nothing specific for comments on this project. Please continue to work with DEQ through the engineering review.

Regards, -Mike

Michael Camin, P.E. Engineering Manager Idaho Department of Environmental Quality

From: Amy Uptmor [mailto:auptmor@jub.com] Sent: Wednesday, March 09, 2016 11:53 AM To: Michael Camin Subject: Weippe Environmental Review

Hi Mike,

We issued a letter to DEQ to initiate an environmental consultation on their sewer project in January. I have checked with RD, and unless we missed it, I don't think we've seen any comments back from you. I wanted to follow-up and make sure you don't have any comment before we move forward and finalize the report. Thanks!

--Amy

Amy K. Uptmor, P.E. Project Engineer

**J-U-B ENGINEERS, Inc.** 1630 23<sup>rd</sup> Ave., Suite 1101-A, Lewiston, Idaho 83501 *e* <u>auptmor@jub.com</u> *w* <u>www.jub.com</u> *p* 208 746 9010 *c* 208 790 1957 *f* 208 746 9926



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# Idaho Department of Water Resources

#### **Amy Uptmor**

From:	Franklin, Keith <keith.franklin@idwr.idaho.gov></keith.franklin@idwr.idaho.gov>
Sent:	Wednesday, February 17, 2016 12:57 PM
То:	Amy Uptmor
Subject:	RE: Weippe - Environmental Screening/Consultation

Amy,

After review, the Idaho Department of Water Resources has no concerns at this time regarding the City of Weippe's project. Thanks for the opportunity to comment. Keith Franklin Program Manager Northern Region 208-762-2800

From: Amy Uptmor [mailto:auptmor@jub.com]
Sent: Wednesday, February 17, 2016 11:45 AM
To: Franklin, Keith
Cc: Julie Erickson
Subject: Weippe - Environmental Screening/Consultation

Hi Keith,

I have attached a copy of an environmental consultation letter that we are sending to your office in hard copy form. We made initial contact with various agencies in mid-January, but unfortunately, we didn't get your address quite right, and consultation with your office is therefore behind. I am hoping this pdf might expedite your review of the project, as yours will be the final comments needed to complete the environmental that is needed to complete a national office request for funding in March. Please feel free to contact me on my cell if you have any questions, 208-790-1957, or here at the office, 208-746-9010. Thanks Keith!

--Amy

Amy K. Uptmor, P.E. Project Engineer

**J-U-B ENGINEERS, Inc.** 1630 23<sup>rd</sup> Ave., Suite 1101-A, Lewiston, Idaho 83501 *e* <u>auptmor@jub.com</u> *w* <u>www.jub.com</u> *p* 208 746 9010 *c* 208 790 1957 *f* 208 746 9926



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State Historic Preservation Office

March 3, 2016



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 Ceax: (208) 882-1763

Mr. John Lynn USDA-RD 7830 Meadowlark Way, Suite C3 Coeur d'Alene, ID 83815

RE: Wastewater Improvements, City of Weippe (Idaho SHPO REV 2016-58)

Dear Mr. Lynn,

As you may know our office has been consulted on by several interested parties regarding the proposed improvements to the City of Weippe's wastewater system. The Clearwater Economic Development Association is searching for funding sources which include federal funding through Community Development Block Grants and USDA Rural Development grants. If funding is obtained from these or any other federal programs there are subject to compliance with Section 106 of the National Historic Preservation Act which requires consultation with our office (36 CFR 800).

We reviewed Phase 1 of the proposed undertaking and believe it has the potential to <u>adversely affect</u> *historic properties* in one location. The line replacement along Main Street south of the intersection with Fir Street is within the documented boundaries of archaeological site 10CW99. We recommend that any ground disturbing activities in this area be <u>monitored</u> by a professional archaeologist.

Prior to implementing the undertaking in this area, the professional archaeologist should submit a monitoring plan to our office which includes background research, proposed methodology, and a notification protocol for discoveries. An unanticipated discovery plan should also be developed for the project as a whole and a training session should be provided to contractors working on the project.

We appreciate your consulting with our office and look forward to further consultation. As this area is significant to the Nez Perce Tribe we encourage you to involve them in these consultations. A list of qualified professionals can be found on Preservation Idaho's website: <u>http://www.preservationidaho.org/resources/cultural-resources-consultants</u>. If you have any questions feel free to contact me at 208-334-3847 x107 or ethan.morton@ishs.idaho.gov.

Sincerely,

the Most

Ethan Morton, Idaho State Historic Preservation Office

ENT S

Historical Society is an Equal Opportunity Employer.
cc: Jamee Fiore, Idaho State Historic Preservation Office Amy Uptmor, J-U-B Engineers Angela Edwards, Clearwater Economic Development Association Michael Stambulis, Idaho Department of Environmental Quality Patrick Baird, Tribal Historic Preservation Officer, Nez Perce Tribe U. S. Fish and Wildlife Service

#### **Amy Uptmor**

From: Sent: To: Subject: Kosterman, Megan <megan\_kosterman@fws.gov> Thursday, February 18, 2016 4:04 PM Amy Uptmor; Steven Schramm City of Weippe Wastewater Facilities Upgrade

Dear John Lynn,

This email responds to your January 13, 2016 letter requesting comments on the City of Weippe Wastewater Facilities Upgrade Project (Project) located in Weippe, Idaho in Clearwater County.

The purpose of this email is to provide you with a refined, site-specific project species list. The federally listed, proposed or candidate species that may occur in Clearwater County include bull trout (*Salvelinus confluentis*), Canada lynx (*Lynx canadensis*), Spalding's Catchfly (*Silene spaldingii*), and Whitebark Pine (*Pinus albicaulis*). Given the project description and location provided in your January 13, 2016 letter, there are no federally listed, proposed or candidate species that occur in the vicinity of your project site. Therefore, there are no federally listed, proposed or candidate species listed on your site-specific project species list (FWS Reference Number 01EIFW00-2016-TA-0335).

The Service is also responsible for implementing the Migratory Bird Treaty Act (MBTA). Vegetation found within the proposed project area may provide nesting habitat for avian species protected under the MBTA. Therefore, we recommend that this project should avoid any activity such as land clearing that involves removal of vegetation that may provide nesting habitat for avian species during the migratory bird nesting season. Avian nesting generally occurs in northern Idaho from April 1<sup>st</sup> through August 1<sup>st</sup> each year, although these dates may vary based on species and location (FSA 2010). This conservation measure would help minimize harm or take of avian species protected under the MBTA.

For future correspondence regarding this project, please refer to this number (FWS Reference Number 01EIFW00-2016-TA-0335). Thank you for your continued interest in the conservation of fish, wildlife, and their habitats. If you have questions concerning this email, please contact me at 509-893-8013 or <u>megan\_kosterman@fws.gov</u>.

Sincerely,

Megan Kosterman

Megan Kosterman Endangered Species Biologist U.S. Fish and Wildlife Service Northern Idaho Field Office 11103 East Montgomery Drive Spokane Valley, WA 99206 <u>megan\_kosterman@fws.gov</u> Office: 509-893-8013

---

U. S. Army Corps of Engineers



J-U-B COMPANIES



#### GATEWAY MAPPINS INC.

## **TELEPHONE MEMORANDUM**

DATE:	1/25/16	TIME:	10:25 a.m.
то:	Amy Uptmor	FROM:	Michael Francis, Chief Environmental Compliance Section
PHONE #:	509-527-7288	PROJECT:	Weippe
SUBJECT:	Weippe Wastewater Facilities Upg	rade – Envir	onmental Screening

The Corp has no comment at this time. If the project becomes a "595", which Mr. Francis said it could, then they would need to comment.

Message Taken By: Julie Erickson, Adm. Asst.

Julie Erickson

Nez Perce Tribe

#### **Amy Uptmor**

From:	Lynn, John - RD, Coeur d' Alene, ID <john.lynn@id.usda.gov></john.lynn@id.usda.gov>
Sent:	Wednesday, February 03, 2016 11:30 AM
То:	Amy Uptmor
Subject:	FW: Weippe ICBG for wasterwater and water infrastructure

Below is Patrick Baird's response to CEDA's envir. Scope letter. Patrick called me and wondered why he had to respond twice to the same project. We can use the response below to satisfy our requirement.

From: Angela Edwards [mailto:aedwards@clearwater-eda.org]
Sent: Wednesday, February 03, 2016 11:21 AM
To: Lynn, John - RD, Coeur d' Alene, ID
Subject: FW: Weippe ICBG for wasterwater and water infrastructure

From: Keith P Baird [mailto:keithb@nezperce.org]
Sent: Thursday, October 22, 2015 11:19 AM
To: aedwards@clearwater-eda.org
Cc: Ethan Morton
Subject: Weippe ICBG for wasterwater and water infrastructure

#### Hi Angela,

Thanks for your letter of October 14<sup>th</sup> about the proposed Weippe wastewater facilities upgrade. As I am sure that you know, the community of Weippe is located at an historically important resource gathering area for the Nez Perce Tribe, and the Tribe has a strong interest in ensuring that development projects do not adversely impact archaeological and other remains of Nez Perce heritage and occupation.

In general, all areas of proposed ground disturbance, staging, access, and other activity areas should be surveyed for archaeological resources. I can make more specific recommendations when the agency provided additional details about how the work will be conducted.

I would like to know where precisely the replacement lines and other related infrastructure will be installed. Are the replacement lines to be adjacent to existing lines, or will the old lines be removed, and replaced in the same trench? What is the expected depth of width of the trenches? What ground disturbing activities are necessary for the other activities listed in the letter?

If you have any questions, please let me know. Thanks, Pat

Patrick Baird Tribal Historic Preservation Officer\ Archaeologist Cultural Resource Program Nez Perce Tribe PO Box 365 Lapwai, ID 83540 208-621-3851 (o) 208-791-8610 (c)

# APPENDIX B

Affected Environment Information & Maps

# Historic, Cultural, and Archaeological Properties

#### **United States Department of the Interior National Park Service**

## **National Register of Historic Places Inventory**—Nomination Form

See instructions in How to Complete National Register Forms Type all entries—complete applicable sections

#### Name 1.

city, town

historic	Brown's Cree	k CCC Camp Barra	icks		
and/or common	Weippe Publi	c Library			
2. Loca	ation				
street & number	. 105 First St	reet East		№_	A_ not for publication
city, town	Weippe	N/A_vici	nity of		
state	Idaho	<b>code</b> 016	county C	learwater	code 0.35
3. Clas	sificatio	n			
Category district building(s) structure site object	Ownership public private both Public Acquisitie U/ in process being conside	Status X_ occupie unoccu work in on Accessible ored // yes: res ered yes: un no	d pied progress itricted restricted	Present Use agriculture commercial educational entertainment government industrial military	museum park private residence religious scientific transportation other: library
4. Own	er of Pro	perty			
name	Clearwater Co	ounty Free Libra:	ry Distri	ct	
street & number	c/o Clearwate	er Memorial Publ:	ic Librar	y, P.O. Box 471	
city, town	Orofino	N/A vici	nity of	state	Idaho
5. Loca	ation of L	egal Desc	riptio	n	
courthouse, regi	stry of deeds, etc.	Clearwater Cou	inty Cour	thouse	
street & number		Michigan Avenu	1e		
city, town		Orofino		state	Idaho
6. Rep	resentati	on in Exis	ting §	Surveys	
title Idaho S	tate Historic	Sites Survey	nas this prop	erty been determined eli	gible? yes $\underline{X}$ no
date <sup>1972</sup>				federal _X stat	e county local
depository for su	irvey records Id	aho State Histor	ical Soci	lety	
-14	Во	ise		-4-4-	Idaho

state

OMB NO. 1024-0018 EXP. 12/31/84

1.1 1984 UL borotne ateb 1984

## 7. Description

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_X_ good	ruins	<u> </u>
fair	unexposed	

Check one original site <u>x</u> moved date <u>ca</u>, <u>1943</u> and <u>1982</u>

#### Describe the present and original (if known) physical appearance

The Brown's Creek CCC Camp Barracks is a one-story frame building with green asbestos shingle siding and a shingled gable roof. The building rests on a concrete foundation. Window frames, exposed rafters, bargeboards, and corner framing are all of plain milled lumber. The barracks has eight bays along the side walls, which measure about 50 feet long. Bays are demarked by six-pane windows hinged at the bottom to swing in. Each end wall, measuring about 20 feet wide, has a centered door and a gabled stoop with wooden steps and railings. Above each door is a small ventilator opening with a hinged cover.

The Brown's Creek CCC Camp Barracks was constructed according to standard Civilian Conservation Corps work center design. The building was altered in about 1947, after it had been moved to the Musselshell Ranger Station, with the addition of green asbestos shingles over the original tongue-and-groove siding, interior wall and ceiling paneling, and insulation between the ceiling and the roof. Originally the interior rafters were exposed. At the Musselshell site the building was supported on log sills placed atop columnar concrete footings. Other alterations predating the building's relocation to Weippe in 1982 include the addition of linoleum flooring and a partition dividing the original one-room plan into one large barracks room and a small office and recreation room, a dual use encouraged by Forest Service building manuals.

At its present location at Weippe, where it was moved to serve as a public library, the building has seen the replacement of asbestos shingle siding where some shingles were missing and the addition of an iron railing at one of the entrances and vents at the base of the building to allow air to circulate within its new foundation.

## 8. Significance

Period prehistoric 1400–1499 1500–1599 1600–1699 1700–1799 1800–1899 X 1900–	Areas of Significance—C archeology-prehistoric archeology-historic agriculture X architecture art commerce communications	heck and justify below community planning conservation economics education engineering exploration/settlement industry invention	Iandscape architectur Iaw Iterature Iterature Itary Itary politics/government	e religion science sculpture social/ humanitarian theater transportation other (specify)
Specific dates	1933-42	Builder/Architect II	nkn own	

#### Statement of Significance (in one paragraph)

Civilian Conservation Corps operations, initiated in 1933 as an emergency employment and public works program, were flexible, mobile, and utilitarian in purpose and administration. Surviving cultural resources associated with that New Deal national employment relief and economic recovery agency include (1) roads, trails, campgrounds, and other forest improvements, and (2) occasional examples of structures that housed program operations. These were intended to occupy a variety of surroundings and not to be identified with any particular location. Camps were designed to be moved about frequently, and any CCC building that occupied only one site and was preserved there would be unrepresentative of that agency's Following termination of CCC activities in 1942, an effort was made to history. utilize camp structures for other public purposes where practical. That required more moving, renovation, and adaption of architectural resources. One Clearwater National Forest barracks building, now used by Weippe's public library, illustrates this entire conservation program admirably. The Brown's Creek CCC Camp Barracks building is of exceptional architectural and historical significance as a rare example of an Idaho CCC work center building. Current inventory of historic properties in Idaho indicates that the barracks is one of only three CCC buildings extant in the Clearwater National Forest. Although altered, the building remains exemplary of the construction and design features of CCC work center buildings. The building is associated with the Civilian Conservation Corps, a federal program of considerable importance in the history of forestry, conservation, and recreation in Idaho.

# 9. Major Bibliographical References

Sée continuation sheet.

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## **United States Department of the Interior** National Park Service

## National Register of Historic Places Inventory—Nomination Form

Brown's Creek CCC Camp Barracks Continuation sheet

Item number 8

Page

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The Brown's Creek CCC Camp Barracks building is a standard-design Civilian Conservation Corps work center building. Such buildings were typically of frame, milled-lumber construction. They were easily assembled and could easily be moved. These structures could also be connected, gable end to gable end, to make larger buildings. The Brown's Creek CCC Camp Barracks is representative of CCC work center buildings in many details. Its long and low massing; frame construction; simple milled-lumber features; green color scheme; gable-end doors, stoops, ventilation openings; shingled gable roof; and fenestration are characteristic of CCC camp architecture erected elsewhere in Idaho during the period 1933 through 1942 and found, with some regional variations, in CCC camps throughout the United States.

Plans for the Brown's Creek CCC Camp Barracks building have not been located in Forest Service Region 1 records. The building's design is nearly identical to plans in the R4 126 series of semi-portable buildings used in neighboring Region 4, southern Idaho, for work center housing. Barracks building 126G, in the 126 series, was first available for use in 1933. Designs for light, portable, easily constructed buildings were adopted by the CCC program to save construction costs.

Architectural surveys have located only two other CCC work center buildings still standing in the Clearwater National Forest, an area of 1.8 million acres. At Powell is a barracks building that has had extensive interior alterations. At Cayuse Landing Field is a small barn. One study lists 85 CCC camps extant in northern Idaho (north of the Salmon River) during the Corps program's existence. In southern Idaho, where even more camps were located, only six work center buildings are extant, all of them in the Boise National Forest. Those buildings include a kitchen, a barracks, and a bathhouse at Garden Valley and three barracks buildings at Idaho City.

Alterations to the Brown's Creek CCC Camp Barracks and its relocation to a new site have not adversely affected the building's architectural significance as an example of CCC camp architecture. The major exterior alteration, residing with asbestos shingles, is a reversible change that has covered rather than replaced the original tongue-and-groove siding. Interior alterations are also reversible, leaving original construction features covered but still intact as documentable examples of CCC construction technology. Most of the alterations to the building were done in about 1947 and are representative of Forest Service remodeling after World War II. The Service had acquired many CCC buildings as Corps camps closed down early in the war.

The Brown's Creek CCC Camp Barracks building's move first to the Musselshell Ranger Station in about 1943 and then to Weippe for use as a library in 1982 is very much in keeping with the original intentions of the CCC in constructing light and easily movable work center buildings. In both cases the move preserved the building from deterioration and destruction, the usual fate of the many CCC work center buildings once extant in Idaho.

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Brown's Creek CCC Camp Barracks Continuation sheet	Item number 8	<sup>3</sup> Page <sup>2</sup>

OMB No. 1024-0018

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The Brown's Creek CCC Camp was one of 20 United States Forest Servicesupervised camps located on Idaho State Forest land. The Musselshell Ranger Station began as a Forest Service Reserve station and also operated as a Forest Service work center. During the CCC program years, the Musselshell station was a CCC work center, probably a satellite camp of the Brown's Creek camp. In Idaho's forests, national and state, the work of the CCC was important in the control of fire and plant disease and in reforestation and development of recreational facilities. With about 65 percent of its land federally owned, the state was second in the nation in number of camps and in per-capita expenditures. Region 1 forester Evan Kelley praised the work of the CCC in his region with an estimate that the Corps accomplished ten years' work in three years.

## National Register of Historic Places Inventory—Nomination Form

Brown's Creek CCC Camp Barracks Continuation sheet

Item number

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Annual Report of the Director of the Civilian Conservation Corps. Washington, D.C.: U.S. Government Printing Office, 1938.

Austin, Judith. "The CCC in Idaho: An Anniversary View." Idaho Yesterdays 27, no. 3 (1983): 13-18.

Cohen, Stan. <u>The Tree Army</u>. Missoula, Montana: Pictorial Histories Publishing Company, 1980.

Conversation with John J. Opresik, retired Forest Service foreman, Weippe Prairie, by Karl Roenke, Clearwater National Forest Archaeologist.

Hanson, James A. "The Civilian Conservation Corps in the Northern Rocky Mountains." Ph.D. dissertation, University of Wyoming, 1973.

- Howell, Glenn. <u>C.C.C. Boys Remember</u>. Medford, Oregon: Klocker Printery, 1976.
- Idaho Historic Sites and Archaeological Survey, Idaho State Historical Society, Boise.
- Keating, Linnea. "Brief History of Public Works Programs on the Clearwater National Forest." Manuscript on file at Superivisor's Office, Clearwater National Forest, Orofino, Idaho.
- Nichols, George L. Building Construction Handbook. Ogden, Utah: U.S. Forest Service Intermountain Region, 1 May 1946.
- Rutledge, R.H. <u>Building Construction Manual</u>. U.S. Forest Service Region 4, 1934, revised 15 February 1935.
- Salmond, John A. <u>The Civilian Conservation Corps, 1933-1942</u>. Durham, North Carolina: Duke University Press, 1967.
- Summary Report of the Director of Emergency Conservation Work on the Operations of Emergency Conservation Work. Washington, D.C.: U.S. Government Printing Office, 1935.
- Walden, Dale, photograph album. Photograph file G-65. Idaho State Historical Society, Boise.

#### **United States Department of the Interior** National Park Service

## National Register of Historic Places Inventory—Nomination Form

Brown's Creek CCC Camp Barracks Continuation sheet

Item number 7

Page 1

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In its new locations, both at Musselshell and at Weippe, this CCC structure remained in settings similar to its original location and fully appropriate for a CCC building. Weippe and Musselshell prairies are adjacent with practically identical geographical and camas-ground characteristics. Weippe is a very small community with adjacent buildings compatible with CCC construction, and relocation of this eligible structure in Weippe was provided for by an Advisory Council-Forest Service-State Preservation Office compliance agreement [ct. 36 CFR 60.11 (b) (5)] and funded through a federal (but not National Park Service) grant.

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## United States Department of the Interior National Park Service

## National Register of Historic Places Inventory—Nomination Form

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Brown's Creek CCC Camp Barracks Continuation sheet

Item number 8

Page 2

The Brown's Creek CCC Camp was one of 20 United States Forest Servicesupervised camps located on Idaho State Forest land. The Musselshell Ranger Station began as a Forest Service Reserve station and also operated as a Forest Service work center. During the CCC program years, the Musselshell station was a CCC work center, probably a satellite camp of the Brown's Creek camp. In Idaho's forests, national and state, the work of the CCC was important in the control of fire and plant disease and in reforestation and development of recreational facilities. With about 65 percent of its land federally owned, the state was second in the nation in number of camps and in per-capita expenditures. Region 1 forester Evan Kelley praised the work of the CCC in his region with an estimate that the Corps accomplished ten years' work in three years.

In its period of significance, which extends past its CCC era to Forest Service preservation as a post-war relocatable building to serve Musselshell Ranger Station and to Forest Service arrangements in 1982 for adaptive use as a Weippe public library building, this structure has represented tha area's sole example of continued arrangement to retain an example of CCC architecture. (A barn and another barracks that happened to survive far away from there are in other localities.) On that account, it was exceptionally significant in 1982 as well as in 1941. ١

#### UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE

## NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

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At the western end of the Lolo Trail across the Bitterroot Mountain Range, Weippe Prairie in Clearwater County, Idaho, elevation 3,000 feet, is still a beautiful upland prairie of about nine by twenty miles of open farmland bordered by pine forests. In 1805 and 1806 the Lewis and Clark expedition spent considerable time camping and visiting with the Nez Perce who frequented the area.

Lewis and Clark called the prairie the "camas flats," "quawmash flats," or "quawmash ground," and were fed cakes made of the camas root, gathered by the Nez Perce on Weippe Prairie, where the plant still grows. The strange meal of camas cakes, dried fish and berries, while very welcomed by the starving explorers, made the entire party very sick.

The prairie is still relatively undisturbed and remotely located, used primarily for wheat farming, except for the small town of Weippe in its center. The paved highway 11 cuts east-west across the center of the prairie and runs through the town of Weippe before turning northeasterly. The area most associated with Lewis and Clark is located south of the highway and town, only a few farmhouses, small roads and fences interrupt the natural character of the countryside there.

As seen on the USGS map, three specific areas have been identified as the probable areas of the Lewis and Clark campsite of 1806 and the two Nez Perce villages visited by them in 1805, within the general area of the southern half of Weippe Prairie which provides the historic setting for the camps and the various activities of the explorers during their two visits to this area. The specific sites are necessarily approximate since descriptions of the areas are not precise and, because of the temporary nature of the campsites, there are no obvious, and probably few archeological remains of the camps.

The approximate areas of the three specific historic sites are identified with circles on the accompanying USGS Weippe South Quadrangle. The eastermost site, in Section 25 (T35N, R4E) is the Lewis and Clark campsite of June 10-24, 1806, their last camp before recrossing the Bitterroot Mountains. It was described by Clark June 12, 1806:

. . . . our camp is agreeably situated in apoint of timbered land on the eastern borders of an extensive leavel and butifull prairie which is intersected by several small branches near the bank of one of which our camp is placed. (De Voto, p. 402)

This natural meadow in the southeasterly section of the prairie, about two miles southeast of the town of Weippe is still divided by the branches of Jim Ford (called Collins by the explorers) Creek.

About one mile west of the expedition's 1806 camp, in Section 26 (T35N, R4E), is the easternmost of the two Nez Perce village sites, where the expedition met with the Nez Perce in September 1805. About two miles northwest of this eastern village site, and about one mile southwest of the town of Weippe, in Sections 15 and 22 (T35N, R4E) is the western site of the Nez Perce villages of 1805. The national historic landmark plaque commemorating Weippe Prairie is mounted north of this third site, on the south curb of Route 11.

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Weippe Prairie)	7		2	
CONTINUATION SHEET	ITEM NUMBER	PAGE		

The Weippe Prairie site is interpreted by the National Park Service at Nez Perce National Historical Park. The 1963 feasibility study for establishment of that park recommended that a National Park Service interpretive marker be placed at the same point on the right-of-way as the DAR marker, and that sufficient scenic easements be established over the farmland to the southeast to keep the view open. No known easements have been accepted to date and the national historic landmark plaque identifies, but does not explain, the importance of the area.



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#### STATEMENT OF SIGNIFICANCE

On the morning of September 20, 1805, William Clark with six men, in advance of the main body of the Lewis and Clark expedition, came out of the Bitterroot Mountains onto the southeastern corner of Weippe Prairie, the western terminus of the Lolo Trail. This elevated and open area of several thousand acres had long been a favorite camas root digging ground of the Nez Perce Indians. The south half of the prairie, which is still open land rimmed with forests, contains three historic campsites associated with the expedition's visits there during both their west and eastbound journeys.

It was on Weippe Prairie that the expedition first met the Nez Perce, who had never before seen white men, but who proved to be the most helpful of the tribes which the explorers encountered in their travels. The Nez Perce gave the explorers food as well as much-needed help and directions during the two and a half week period spent in their territory.

Had the Nez Perce been hostile, it is doubtful if the members of the expedition could have defended themselves effectively in their weakened condition. At Weippe Prairie they rested and recovered from the exhausting westbound crossing of the Lolo Trail which had reduced them to near starvation. In the spring of 1806, the eastbound expedition spent nearly seven weeks in this vicinity, including two weeks on Weippe Prairie itself, waiting for the snow to melt enough to make a re-crossing of the Bitterroots possible.

On September 20, 1805 the Clark party met some friendly Nez Perce, living in two villages, separated by two miles of Weippe Prairie. From the western of these villages, Clark sent back Reuben Field and an Indian with food for the main party. Then later on the twenty-first, Clark set out for a Nez Perce fishing camp on the Clearwater River 20 miles to the northwest, where he met in council late that night with then-ranking Nez Perce Chief Twisted Hair.

On the morning of September 22 the Clark party returned to the Nez Perce villages on Weippe Prairie, where late in the day Lewis and the main body of the expedition staggered into the eastern of the two Indian villages. September 23, at the eastern village, Lewis and Clark held a council with Twisted Hair and other chiefs, using sign language to communicate without translaters. The explorers distributed medals and other gifts, explained their mission and requested help in building canoes. The Nez Perce assured Lewis and Clark that a water route to the Pacific via the Clearwater and its tributaries to the Snake and Columbia was possible, and they provided the explorers with a chart of the river system. On the evening of September 23 the expedition traveled with Twisted Hair to his home in the western village.

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(Significance CONTINUATION SHEET Weippe Prairie) ITEM NUMBER 8 PAGE 2

The next day, September 24, the expedition left Weippe Prairie with Twisted Hair and some Nez Perce and moved north to the Clearwater River. The following day they moved farther downriver to begin building canoes, at a site which came to be known as Canoe Camp (about 5 miles west of present Orofino, Idaho, and now interpreted by the National Park Service as part of Nez Perce National Historical Park). There, with the help of the Indians, they constructed large canoes and, leaving their horses for safekeeping with the tribe, they began their descent of the Clearwater River on October 7, 1805.

On their return trip in 1806, the eastbound explorers were forced by a late spring to spend about seven weeks with the Nez Perce, waiting for the snow to melt in the Bitterroots. On May 4, 1806, on the Snake River, near the Clearwater, the expedition chanced to meet a party of Nez Perce, including Chief Tetoharsky, their downriver guide of the year before. With the Chief again acting as their guide, the group proceeded southeasterly toward the Nez Perce camps. May 8 they met Chief Twisted Hair who had befriended them the autumn before, and a Chief Cutnose who had been away at that time. The horses left by the expedition with Twisted Hair had apparently been a quarrelsome issue between Twisted Hair, Cutnose, and Broken Arm, who was probably the principal chief, but the majority of the horses were finally rounded up and returned to the explorers.

Lewis and Clark met in council with the Chiefs, then May 13 moved north of the Clearwater and set up camp at a wooded site on the river bottom, nearly opposite the present town of Kamiah. Utilizing an old Indian habitation, the explorers erected a shelter where they remained for about a month. Unnamed by the expedition, the site became known as Long Camp, Camp Kamiah, or Camp Chopunnish (their name for the Nez Perce), and the expedition stayed there longer than any place on their journey except Forts Mandan, Fort Clatsop, and Camp Wood. Unfortunately, the integrity of the Camp Chopunnish site has been destroyed by the large sawmill which now covers it and the numerous other buildings in the vicinity.

During their long stay in Nez Perce territory that spring, the expedition joined the tribe in many activities, including dances and races. The explorers developed considerable friendliness and admiration for the Nez Perce, and were particularly impressed with their fine horses, including the Nez Perce-bred Appaloosa. Clark had developed quite a reputation as a medicine man by treating a few Indians the previous year, and he was kept busy ministering to many of the tribe suffering from variety of common ills.

On June 10 the expedition moved their campsite about 10 miles to Weippe Prairie. In his journal entry for that date, Clark related their plans to remove the camp to the "quawmash fields":

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...at which place we intend to delay a fiew days for the laying in some meat by which time we calculate that the snows will have melted more off the mountains and the grass raised to a sufficient height for our horses to live. (De Voto, p. 401)

Their campsite was at a "point of woods" near the more easterly of the two Nez Perce villages they had visited the previous year. This last campsite before recrossing the Bitterroots was located about two miles south of the present town of Weippe, in the meadows surrounding Collins (now Jim Ford) Creek.

At this campsite the expedition collected provisions and prepared themselves for the arduous mountain crossing, as well as planned how to expedite their eastward explorations, having lost a considerable amount of valuable time because of the late spring. Saturday, June 14, 1806, Meriwether Lewis recorded:

from hence to traveller's rest we shall make a forsed march; at that place we shall probably remain one or two days to rest outselves and horses and procure some meat. we have now been detained near five weeks inconsequence of the snows; a serious loss of time at this delightfull season for traveling. (De Voto, p. 402)

On June 15 the expedition made its first attempt to cross the Lolo Trail which had been their greatest ordeal on the trip west. However, the nearly impassible terrain of steep mountains and thick forests, still deep in snow and ice, extreme weather, and lack of food forced them to turn back June 17. Clark wrote, "under these circumstances we conceived it madness in this stage of the expedition to proceed without a guide who could certainly conduct us to the fishwears on the Kooskooske, as our horses could not possible sustain a journey of more than 4 or 5 days without food." (De Voto, pp. 404-405).

They returned, following the route along Hungry Creek and Clark further related the party's discouragement:

the party were a good deel dejected, tho' not as much so as I had apprehended they would have been. this is the first time since we have been on this tour that we have ever been compelled to retreat or make a retragrade march. (De Voto, p. 405).

They arrived back at Weippe Prairie, "the flats," on June 19 and made camp in the same vicinity as their campsite of a few days earlier.

On June 24, 1806, with 65 horses, ample food and about <u>six Nez</u> Perce guides, the expedition again set out across the difficult Lolo Trail, and after a fairly short six day journey, arrived at Travellers Rest on June 30.

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Weippe Prairie CONTINUATION SHEET

ITEM NUMBER 9 PAGE 1

John Bakeless, Lewis and Clark (New York, 1934).

- Elliot Coues, Editor, <u>History of the Expedition under the Command of Lewis</u> and Clark, 4 vols. (New York, 1905-06).
- Robert G. Ferris, Editor, <u>Lewis and Clark; Historic Places Associated with</u> their Transcontinental Exploration (1804-06) (Washington, D.C., National Park Service, 1975).
- Patrick Gass, <u>A Journal of the Voyages and Travels of a Corps of Discovery</u> (Pittsburgh, 1808).
- John Hussey, Erwin N. Thompson, Daniel F. Burroughs and Alfred C. Kuehl, "Feasibility Report: Nez Perce Country National Historic Sites, Idaho" (National Park Service, mimeographed, San Francisco: October, 1963; revised June 1964).
- Milo M. Quaife, editor, <u>The Journals of Captain Mereweither Lewis and</u> Sergeant John Ordway (Madison, 1916).
- Reuben G. Thwaites, editor, Original Journals of the Lewis and Clark Expedition, 1804-1806, 8 vols. (New York, 1905-06).
- Olin D. Wheeler, The Trail of Lewis and Clark, 2 vols. (New York, 1904).

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## NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

(Verbal Boundary Description CONTINUATION SHEET Weippe Prairie) ITEM NUMBER 10 PAGE 2

with the east section line of the same Section 15; thence south along the east section line for about 2000 feet; thence east about two miles along the north lines of section 23 and 24; thence south about two miles along the east lines of Sections 24 and 25; thence west for about two miles along the south lines of Section 25 and 26; thence north for about one and one-half miles along the west lines of Sections 26 and 23; thence west about one mile across the center of section 22; thence north about one mile along the west line of Sections 22 and 15 to the beginning point.

## 9 MAJOR BIBLIOGRAPHICAL REFERENCES

See Continuation Sheet

## **10 GEOGRAPHICAL DATA**

ACREAGE OF NOMINATED PROPERTY <u>approximately 31</u>20 acres UTM REFERENCES

A[1,1] [5] 8, 5] 4, 4, 0	5 1 3 5 3 8 0	в [1,1]	5 8 5 4 9 0	5 1 3 2 1 1 0
ZONE EASTING	NORTHING	ZONE	EASTING	NORTHING
c 1 1 5 8 0 5 7 0	5 1 3 2 0 3 0		5 8 0 5 2 0	5 1 3 6 2 5 0

VERBAL BOUNDARY DESCRIPTION

The national historic landmark boundary has been drawn on USGS Weippe South and Weippe North maps, to enclose 3120 acres of the relatively undisturbed southern section of Weippe Prairie, including three historic campsites within a general setting of open tree-edged prairie. Beginning in the northwest corner of the boundary, where the west section line of Section 15 (the entire area is located within T35N, R4E) intersects with the Weippe town limits (dotted line on map), just south of Route 11, the boundary runs in a southeasterly direction following the town boundary to its intersection UST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

	STATE	CODE	COUNTY	CODE	
	STATE	CODE	COUNTY	CODE	
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	ORGANIZATION Historic Sites Sur	vey, National Park S	Service	9715/76	
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Wild & Scenic Rivers

## WILD AND SCENIC RIVERS



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	Red Canyon St. Joe River Salmon River Salmon River (N	liddle Fork)					
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River Management

Resources

**Designated Rivers** 

National System

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# Important Farmland, Prime Forest Land, and Prime Rangeland



USDA United States Department of Agriculture

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 Clearwater Area**, Idaho

**NRCS Soils Map** 



# 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://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) 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://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/? cid=nrcs142p2\_053951).

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 Web Soil Survey, the site for official soil survey information.

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# Contents

Preface	2
How Soil Surveys Are Made	5
Soil Map	7
Soil Map	8
Legend	9
Map Unit Legend	10
Map Unit Descriptions	10
Clearwater Area, Idaho	12
2—Agatha ashy silt loam, 15 to 40 percent slopes	12
45—Campra-Sly complex, 10 to 35 percent slopes	13
67—Dumps, wood slash	14
87—Gramil-Lewhand complex, 0 to 2 percent slopes	14
88—Gramil-Reggear complex, 2 to 6 percent slopes	16
99—Grasshopper ashy loam, 0 to 3 percent slopes	18
161—Lewhand-Burntcreek complex, 0 to 2 percent slopes	19
183—Pits, quarry	21
192—Reggear-Seddow complex, 5 to 15 percent slopes	21
207—Seddow ashy silt loam, 15 to 25 percent slopes	23
242—Water	24
References	25

## **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

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 soillandscape 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.



MAP LEGEND			1	MAP INFORMATION	
Area of Interest (AOI)		00	Spoil Area	The soil surveys that comprise your AOI were mapped at 1:24,000.	
	Area of Interest (AOI)	۵	Stony Spot	Please rely on the har scale on each man sheet for man	
Soils	Sail Man Linit Dalvaana	00	Very Stony Spot	measurements.	
	Soil Map Unit Polygons	\$	Wet Spot	Source of Man: Natural Becources Concentration Service	
~	Soil Map Unit Lines	$\triangle$	Other	Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov	
Soil Map Unit Points		, • • · ·	Special Line Features	Coordinate System: Web Mercator (EPSG:3857)	
Blowout		Water Features		Maps from the Web Soil Survey are based on the Web Mercator	
x x	Borrow Pit	$\sim$	Streams and Canals	projection, which preserves direction and shape but distorts	
*	Clay Spot	Transport	Pails	Albers equal-area conic projection, should be used if more accurate	
0	Closed Depression		Interstate Highways	calculations of distance or area are required.	
x	Gravel Pit	~		This product is generated from the USDA-NRCS certified data as of	
	Gravelly Spot	~	Major Roads	the version date(s) listed below.	
Ø	Landfill	~	Local Roads	Soil Survey Area: Clearwater Area, Idaho	
Ă.	Lava Flow	Backgrou	nd	Survey Area Data: Version 8, Sep 9, 2015	
عله	Marsh or swamp	Buckgrou	Aerial Photography	Soil map units are labeled (as space allows) for map scales 1:50,000	
~	Mine or Quarry			or larger.	
0	Miscellaneous Water			Date(s) aerial images were photographed: Jul 24, 2011—Jul 30.	
0	Perennial Water			2011	
$\vee$	Rock Outcrop			The orthophoto or other base map on which the soil lines were	
+	Saline Spot			compiled and digitized probably differs from the background	
°.°	Sandy Spot			imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.	
-	Severely Eroded Spot				
0	Sinkhole				
3	Slide or Slip				
ି	Sodic Spot				

Мар	Unit	Legend
	•••••	

Clearwater Area, Idaho (ID612)				
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI	
2	Agatha ashy silt loam, 15 to 40 percent slopes	0.5	0.1%	
45	Campra-Sly complex, 10 to 35 percent slopes	19.9	4.8%	
67	Dumps, wood slash	17.6	4.3%	
87	Gramil-Lewhand complex, 0 to 2 percent slopes	10.9	2.7%	
88	Gramil-Reggear complex, 2 to 6 percent slopes	0.0	0.0%	
99	Grasshopper ashy loam, 0 to 3 percent slopes	23.0	5.6%	
161	Lewhand-Burntcreek complex, 0 to 2 percent slopes	29.2	7.1%	
183	Pits, quarry	3.4	0.8%	
192	Reggear-Seddow complex, 5 to 15 percent slopes	257.6	62.8%	
207	Seddow ashy silt loam, 15 to 25 percent slopes	42.6	10.4%	
242	Water	5.6	1.4%	
Totals for Area of Interest		410.3	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 classes rarely, if ever, can be mapped without including areas of other taxonomic classes 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 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.

## **Clearwater Area, Idaho**

## 2—Agatha ashy silt loam, 15 to 40 percent slopes

#### **Map Unit Setting**

National map unit symbol: tt49 Elevation: 1,200 to 3,000 feet Mean annual precipitation: 27 to 33 inches Mean annual air temperature: 40 to 45 degrees F Frost-free period: 80 to 125 days Farmland classification: Not prime farmland

#### **Map Unit Composition**

Agatha and similar soils: 80 percent Estimates are based on observations, descriptions, and transects of the mapunit.

#### **Description of Agatha**

#### Setting

Landform: Structural benches, canyons Down-slope shape: Convex Across-slope shape: Convex Parent material: Loess over colluvium over bedrock derived from basalt

### **Typical profile**

*Oi - 0 to 1 inches:* slightly decomposed plant material *Oa - 1 to 2 inches:* highly decomposed plant material *A - 2 to 5 inches:* ashy silt loam *AB - 5 to 9 inches:* gravelly ashy silt loam *Bt1 - 9 to 20 inches:* very gravelly silt loam *Bt2 - 20 to 60 inches:* extremely cobbly silty clay loam *R - 60 to 70 inches:* bedrock

#### **Properties and qualities**

Slope: 15 to 40 percent
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 8.3 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 6e Hydrologic Soil Group: B Other vegetative classification: grand fir/ninebark (CN506)

## 45—Campra-Sly complex, 10 to 35 percent slopes

#### Map Unit Setting

National map unit symbol: v24g Elevation: 1,900 to 2,800 feet Mean annual precipitation: 30 to 35 inches Mean annual air temperature: 38 to 44 degrees F Frost-free period: 50 to 110 days Farmland classification: Not prime farmland

#### **Map Unit Composition**

*Campra and similar soils:* 45 percent *Sly and similar soils:* 40 percent *Estimates are based on observations, descriptions, and transects of the mapunit.* 

#### **Description of Campra**

#### Setting

Landform: Canyons, hillslopes Landform position (three-dimensional): Side slope Down-slope shape: Linear Across-slope shape: Linear Parent material: Volcanic ash and loess over colluvium derived from basalt

#### **Typical profile**

*Oi - 0 to 3 inches:* slightly decomposed plant material *A - 3 to 7 inches:* gravelly ashy silt loam *AB - 7 to 14 inches:* very gravelly ashy silt loam *E/B - 14 to 20 inches:* very gravelly silt loam *B/E - 20 to 67 inches:* extremely gravelly silt loam

#### **Properties and qualities**

Slope: 10 to 35 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 7.1 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 6e Hydrologic Soil Group: C Other vegetative classification: grand fir/queencup beadlily (CN520)

#### **Description of Sly**

#### Setting

Landform: Structural benches, hillslopes

*Down-slope shape:* Concave *Across-slope shape:* Linear *Parent material:* Volcanic ash over loess over colluvium derived from basalt

### **Typical profile**

*Oi - 0 to 4 inches:* slightly decomposed plant material *A - 4 to 8 inches:* ashy silt loam *Bw - 8 to 19 inches:* ashy silt loam *Bt1 - 19 to 28 inches:* silty clay loam *Bt2 - 28 to 37 inches:* silty clay loam *C - 37 to 66 inches:* cobbly clay loam

#### **Properties and qualities**

Slope: 10 to 35 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: High (about 11.6 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 4e Hydrologic Soil Group: C Other vegetative classification: grand fir/queencup beadlily (CN520)

## 67—Dumps, wood slash

#### **Map Unit Composition**

*Dumps, wood slash:* 100 percent *Estimates are based on observations, descriptions, and transects of the mapunit.* 

#### **Description of Dumps, Wood Slash**

#### Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 8

## 87—Gramil-Lewhand complex, 0 to 2 percent slopes

#### Map Unit Setting

National map unit symbol: v25q Elevation: 3,000 to 3,200 feet Mean annual precipitation: 30 to 35 inches Mean annual air temperature: 38 to 44 degrees F *Frost-free period:* 50 to 110 days *Farmland classification:* Prime farmland if drained

#### **Map Unit Composition**

*Gramil and similar soils:* 60 percent *Lewhand and similar soils:* 30 percent *Minor components:* 3 percent *Estimates are based on observations, descriptions, and transects of the mapunit.* 

#### **Description of Gramil**

#### Setting

Landform: Lake terraces Down-slope shape: Linear Across-slope shape: Linear Parent material: Alluvium and/or loess over lacustrine deposits

#### **Typical profile**

Ap - 0 to 12 inches: ashy silty clay loam Bw - 12 to 19 inches: ashy silt loam B/E - 19 to 27 inches: clay loam 2Btss - 27 to 39 inches: clay 3Bss - 39 to 70 inches: clay

#### **Properties and qualities**

Slope: 0 to 2 percent
Depth to restrictive feature: 20 to 30 inches to abrupt textural change
Natural drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 5.3 inches)

#### Interpretive groups

Land capability classification (irrigated): 6e Land capability classification (nonirrigated): 6e Hydrologic Soil Group: D Other vegetative classification: grand fir/queencup beadlily (CN520)

#### **Description of Lewhand**

#### Setting

Landform: Mountain slopes Down-slope shape: Linear Across-slope shape: Linear Parent material: Volcanic ash over mixed alluvium

#### **Typical profile**

A - 0 to 8 inches: ashy silty clay loam
BE - 8 to 12 inches: silty clay loam
E - 12 to 18 inches: silt loam
Btx - 18 to 32 inches: silt loam
Bt - 32 to 60 inches: stratified silt loam to sand

#### **Properties and qualities**

Slope: 0 to 2 percent

Depth to restrictive feature: 13 to 19 inches to fragipan Natural drainage class: Poorly drained Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr) Depth to water table: About 0 to 2 inches Frequency of flooding: Occasional Frequency of ponding: None Available water storage in profile: Low (about 3.6 inches)

#### Interpretive groups

Land capability classification (irrigated): 6e Land capability classification (nonirrigated): 6e Hydrologic Soil Group: D Ecological site: MEADOW (R009XY018ID)

#### **Minor Components**

#### Teneb

Percent of map unit: 3 percent Landform: Drainageways Ecological site: MEADOW (R009XY018ID)

#### 88—Gramil-Reggear complex, 2 to 6 percent slopes

#### Map Unit Setting

National map unit symbol: v25g Elevation: 3,000 to 3,200 feet Mean annual precipitation: 30 to 35 inches Mean annual air temperature: 38 to 44 degrees F Frost-free period: 50 to 110 days Farmland classification: Prime farmland if drained

#### Map Unit Composition

*Gramil and similar soils:* 50 percent *Reggear and similar soils:* 40 percent *Estimates are based on observations, descriptions, and transects of the mapunit.* 

#### **Description of Gramil**

#### Setting

Landform: Lake terraces Down-slope shape: Linear Across-slope shape: Linear Parent material: Alluvium and/or loess over lacustrine deposits

#### **Typical profile**

Ap - 0 to 12 inches: ashy silty clay loam Bw - 12 to 19 inches: ashy silt loam B/E - 19 to 27 inches: clay loam 2Btss - 27 to 39 inches: clay

#### 3Bss - 39 to 70 inches: clay

#### **Properties and qualities**

Slope: 2 to 5 percent
Depth to restrictive feature: 20 to 30 inches to abrupt textural change
Natural drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 5.3 inches)

#### Interpretive groups

Land capability classification (irrigated): 6e Land capability classification (nonirrigated): 6e Hydrologic Soil Group: D Other vegetative classification: grand fir/queencup beadlily (CN520)

#### **Description of Reggear**

#### Setting

Landform: Hillslopes Down-slope shape: Linear Across-slope shape: Linear Parent material: Volcanic ash over loess

#### **Typical profile**

*Oi - 0 to 1 inches:* slightly decomposed plant material *A - 1 to 8 inches:* ashy silt loam *Bw - 8 to 13 inches:* ashy silt loam *E - 13 to 22 inches:* silt loam *Bt/E - 22 to 31 inches:* silt loam *Btxb1 - 31 to 60 inches:* silt loam *Btxb2 - 60 to 86 inches:* silt loam

#### **Properties and qualities**

Slope: 2 to 6 percent
Depth to restrictive feature: 20 to 40 inches to fragipan
Natural drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 18 to 34 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 6.5 inches)

#### Interpretive groups

Land capability classification (irrigated): 4e Land capability classification (nonirrigated): 4e Hydrologic Soil Group: C/D Other vegetative classification: grand fir/queencup beadlily (CN520)

## 99—Grasshopper ashy loam, 0 to 3 percent slopes

#### **Map Unit Setting**

National map unit symbol: v25r Elevation: 2,750 to 3,500 feet Mean annual precipitation: 32 to 50 inches Mean annual air temperature: 38 to 44 degrees F Frost-free period: 30 to 110 days Farmland classification: Prime farmland if drained

#### Map Unit Composition

Grasshopper and similar soils: 80 percent Minor components: 15 percent Estimates are based on observations, descriptions, and transects of the mapunit.

#### **Description of Grasshopper**

#### Setting

Landform: Flood plains Down-slope shape: Linear Across-slope shape: Linear Parent material: Mixed alluvium

#### **Typical profile**

A - 0 to 16 inches: ashy loam Btg - 16 to 22 inches: clay loam E - 22 to 40 inches: sandy loam Btgb - 40 to 53 inches: loam Cgb1 - 53 to 58 inches: extremely gravelly sandy clay loam Cgb2 - 58 to 64 inches: loam

#### **Properties and qualities**

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 0 to 24 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Available water storage in profile: High (about 10.6 inches)

#### Interpretive groups

Land capability classification (irrigated): 6e Land capability classification (nonirrigated): 5w Hydrologic Soil Group: C/D Ecological site: MEADOW (R009XY018ID)

#### **Minor Components**

#### Teneb

Percent of map unit: 12 percent Landform: Drainageways Ecological site: MEADOW (R009XY018ID)

#### Grice

Percent of map unit: 3 percent Landform: Streams, hillslopes Ecological site: MEADOW (R009XY018ID)

### 161—Lewhand-Burntcreek complex, 0 to 2 percent slopes

#### Map Unit Setting

National map unit symbol: v2w7 Elevation: 3,000 to 3,350 feet Mean annual precipitation: 30 to 40 inches Mean annual air temperature: 38 to 44 degrees F Frost-free period: 50 to 110 days Farmland classification: Prime farmland if drained

#### Map Unit Composition

Lewhand and similar soils: 65 percent Burntcreek and similar soils: 20 percent Minor components: 12 percent Estimates are based on observations, descriptions, and transects of the mapunit.

#### **Description of Lewhand**

#### Setting

Landform: Flood plains, drainageways Down-slope shape: Linear Across-slope shape: Linear Parent material: Volcanic ash over mixed alluvium

#### **Typical profile**

A - 0 to 8 inches: ashy silty clay loam BE - 8 to 12 inches: silty clay loam E - 12 to 18 inches: silt loam Btx - 18 to 32 inches: silt loam Bt - 32 to 60 inches: stratified silt loam to sand

#### **Properties and qualities**

Slope: 0 to 2 percent
Depth to restrictive feature: 13 to 19 inches to fragipan
Natural drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 0 to 2 inches

*Frequency of flooding:* Occasional *Frequency of ponding:* None *Available water storage in profile:* Low (about 3.6 inches)

#### Interpretive groups

Land capability classification (irrigated): 6e Land capability classification (nonirrigated): 6e Hydrologic Soil Group: D Ecological site: MEADOW (R009XY018ID)

#### **Description of Burntcreek**

#### Setting

Landform: Flood plains, drainageways Down-slope shape: Linear Across-slope shape: Linear Parent material: Mixed alluvium

#### **Typical profile**

Ap1 - 0 to 7 inches: ashy loam Ap2 - 7 to 11 inches: loam Bw1 - 11 to 28 inches: loam Bw2 - 28 to 36 inches: loam C - 36 to 60 inches: stratified silt loam to very gravelly loam

## C - 36 to 60 inches: stratified silt loam to very gravelly loam

#### **Properties and qualities**

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 7 to 19 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Available water storage in profile: Moderate (about 8.3 inches)

#### Interpretive groups

Land capability classification (irrigated): 6e Land capability classification (nonirrigated): 6e Hydrologic Soil Group: B/D Other vegetative classification: grand fir/queencup beadlily (CN520)

#### **Minor Components**

#### Grasshopper

Percent of map unit: 10 percent Landform: Flood plains Ecological site: MEADOW (R009XY018ID)

#### Teneb

Percent of map unit: 2 percent Landform: Drainageways Ecological site: MEADOW (R009XY018ID)

### 183—Pits, quarry

#### **Map Unit Composition**

*Pits, quarry:* 100 percent *Estimates are based on observations, descriptions, and transects of the mapunit.* 

#### **Description of Pits, Quarry**

Typical profile

R - 0 to 60 inches: bedrock

#### **Properties and qualities**

Depth to restrictive feature: 0 inches to lithic bedrock

#### Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 8

#### 192—Reggear-Seddow complex, 5 to 15 percent slopes

#### Map Unit Setting

National map unit symbol: v2x8 Elevation: 1,600 to 3,800 feet Mean annual precipitation: 25 to 30 inches Mean annual air temperature: 38 to 45 degrees F Frost-free period: 50 to 125 days Farmland classification: Farmland of statewide importance, if drained

#### Map Unit Composition

Reggear and similar soils: 50 percent Seddow and similar soils: 30 percent Minor components: 3 percent Estimates are based on observations, descriptions, and transects of the mapunit.

#### **Description of Reggear**

#### Setting

Landform: Structural benches, hillslopes Down-slope shape: Linear Across-slope shape: Linear Parent material: Volcanic ash over loess

#### **Typical profile**

*Oi - 0 to 1 inches:* slightly decomposed plant material *A - 1 to 8 inches:* ashy silt loam *Bw - 8 to 13 inches:* ashy silt loam

E - 13 to 22 inches: silt loam Bt/E - 22 to 31 inches: silt loam Btxb1 - 31 to 60 inches: silt loam Btxb2 - 60 to 86 inches: silt loam

#### **Properties and qualities**

Slope: 5 to 15 percent
Depth to restrictive feature: 20 to 40 inches to fragipan
Natural drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 18 to 34 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 6.5 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 4e Hydrologic Soil Group: C/D Other vegetative classification: grand fir/queencup beadlily (CN520)

#### **Description of Seddow**

#### Setting

Landform: Structural benches, hillslopes Down-slope shape: Linear Across-slope shape: Linear Parent material: Volcanic ash and loess and/or colluvium over bedrock derived from basalt

#### **Typical profile**

*Oi - 0 to 1 inches:* slightly decomposed plant material *A - 1 to 3 inches:* ashy silt loam *Bw - 3 to 5 inches:* ashy silt loam *2Bt1 - 5 to 13 inches:* ashy silt loam *2Bt2 - 13 to 35 inches:* silt loam *3Bt3 - 35 to 44 inches:* very gravelly silt loam *3R - 44 to 54 inches:* bedrock

#### **Properties and qualities**

Slope: 5 to 15 percent
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 7.4 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 3e Hydrologic Soil Group: B Other vegetative classification: grand fir/twinflower (CN590)

#### **Minor Components**

Teneb

Percent of map unit: 3 percent Landform: Drainageways Ecological site: MEADOW (R009XY018ID)

### 207—Seddow ashy silt loam, 15 to 25 percent slopes

#### Map Unit Setting

National map unit symbol: v247 Elevation: 2,400 to 3,100 feet Mean annual precipitation: 25 to 30 inches Mean annual air temperature: 40 to 45 degrees F Frost-free period: 80 to 125 days Farmland classification: Not prime farmland

#### **Map Unit Composition**

Seddow and similar soils: 75 percent Estimates are based on observations, descriptions, and transects of the mapunit.

#### **Description of Seddow**

#### Setting

Landform: Structural benches, hillslopes Landform position (two-dimensional): Shoulder Down-slope shape: Linear Across-slope shape: Linear Parent material: Volcanic ash and loess and/or colluvium over bedrock derived from basalt

#### **Typical profile**

*Oi - 0 to 1 inches:* slightly decomposed plant material *A - 1 to 3 inches:* ashy silt loam *Bw - 3 to 5 inches:* ashy silt loam *2Bt1 - 5 to 13 inches:* ashy silt loam *2Bt2 - 13 to 35 inches:* silt loam *3Bt3 - 35 to 44 inches:* very gravelly silt loam *3R - 44 to 54 inches:* bedrock

#### **Properties and qualities**

Slope: 15 to 25 percent
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None

Available water storage in profile: Moderate (about 7.4 inches)

#### Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 4e Hydrologic Soil Group: B Other vegetative classification: grand fir/twinflower (CN590)

## 242—Water

## Map Unit Composition

*Water:* 100 percent *Estimates are based on observations, descriptions, and transects of the mapunit.* 

## 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://www.nrcs.usda.gov/wps/portal/nrcs/ detail/national/soils/?cid=nrcs142p2 054262

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://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2 053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2 053580

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://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/ home/?cid=nrcs142p2 053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/ detail/national/landuse/rangepasture/?cid=stelprdb1043084

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/ nrcs/detail/soils/scientists/?cid=nrcs142p2 054242

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://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/? cid=nrcs142p2\_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE\_DOCUMENTS/nrcs142p2\_052290.pdf

Wetlands



**User Remarks:** 

Floodplains



#### ELEVATION REFERENCE MARKS

REFERENCE MARK	ELEVATION (FT. NGVD)	DESCRIPTION OF LOCATION
RM1	3031.53	In northwest part of Weippe, railroad spike in power pole 100 feet south of Bennet Farm houses, approximately 500 feet north of Johnston Lumber Mill. Established by Study Contractor.
RM2*	3035.43	Railroad spike in power pole on south side of Eighth Avenue, approximately 400 feet west of Main Street. Established by Study Contractor.
RM3	2999.68	Red paint'spot in southeast corner of southeast wingwall on U.S. Highway 11 bridge over Jim Fork Creek. Established by Study Con- tractor.
RM4	3029.21	Railroad spike in power pole on south side of Pierce Street, approxi- mately 300 feet west of Main Street. Established by Study Con- tractor,
RM5*	3000.14	Railroad spike in power pole on east side of Main Street, approxi- mately 1400 feet south of Pierce Street. Established by Study Contractor.

\*OUTSIDE CORPORATE LIMITS

#### CITY OF WEIPPE, IDAHO CLEARWATER COUNTY

#### ONLY PANEL PRINTED

#### COMMUNITY-PANEL NUMBER 160049 0001 B Effective date: December 4, 1979

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT FEDERAL INSURANCE ADMINISTRATION



# Sole Source Aquifers and Ground Water Quality

