

Attachment A: Environmental Information Document, 2020 Wastewater System
Improvements, City of Genesee Idaho



Mountain
WATERWORKS

Environmental Information Document

2020 Wastewater System Improvements

City of Genesee, Idaho

Abstract: *The City of Genesee received an Idaho Department of Environmental Quality (IDEQ) Wastewater Planning Grant (#WWG-398-2019-1) to conduct a wastewater planning study in accordance with IDAPA 58.01.04, "Rules for Administration of Wastewater Treatment Facility Grants". During the planning study, the City formally selected collection and treatment alternatives which include rehabilitation of priority pipeline and manholes, and relocation of the Water Resource Recovery Facility (WRRF). This Environmental Information Document (EID) presents the City's formally selected project alternative, evaluates potential environmental impacts, and where applicable, proposes mitigating measures.*

Project Cost: \$85,000
Project Funding: \$42,500

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Section 1 **PURPOSE AND NEED OF THE PROPOSED PROJECT**

1.1 Project Description

The City of Genesee's (City) Water Resource Reclamation Facility (WRRF) has a history of discharge permit exceedances, primarily of total suspended solids (TSS), E. coli, and 5-day biological oxygen demand (BOD₅). A compliance order between the City and the Environmental Protection Agency (EPA) requires completion of a wastewater facility plan and implementation of collection and treatment system upgrades. In July of 2018 the City received an Idaho Department of Environmental Quality (IDEQ) Wastewater Planning Grant (#WWG-398-2019-1) to conduct the wastewater planning study in accordance with IDAPA 58.01.04, "Rules for Administration of Wastewater Treatment Facility Grants". The City contracted Mountain Waterworks, Inc. to analyze the existing public wastewater system, identify deficiencies, and provide recommendations to meet current and future water supply and facility needs.

This Environmental Information Document presents the City's formally selected project alternative (proposed action) to address exceedances and other deficiencies, evaluates potential environmental impacts and, where applicable, proposes mitigating measures. The planning area for the wastewater improvements is shown in **Figure 1-1**. The City's proposed action can be broken into two parts as outlined below and is described in more detail in the 2019 Wastewater Facility Plan.

1. Collection System Improvements (see Figure 1-2)

- **Priority 1 Improvements:** Replacement or repair of approximately 3,775 feet of existing pipe and 25 existing manholes identified in the Facility Plan as being of the highest priority.
- **Chestnut Street Pipe Bursting Project:** Replacement of 3,200 feet of existing piping via pipe bursting, and replacement of 11 existing manholes.

2. Wastewater Treatment System Improvements (see Figure 1-3)

The WRRF will be relocated to a new site. Project components include:

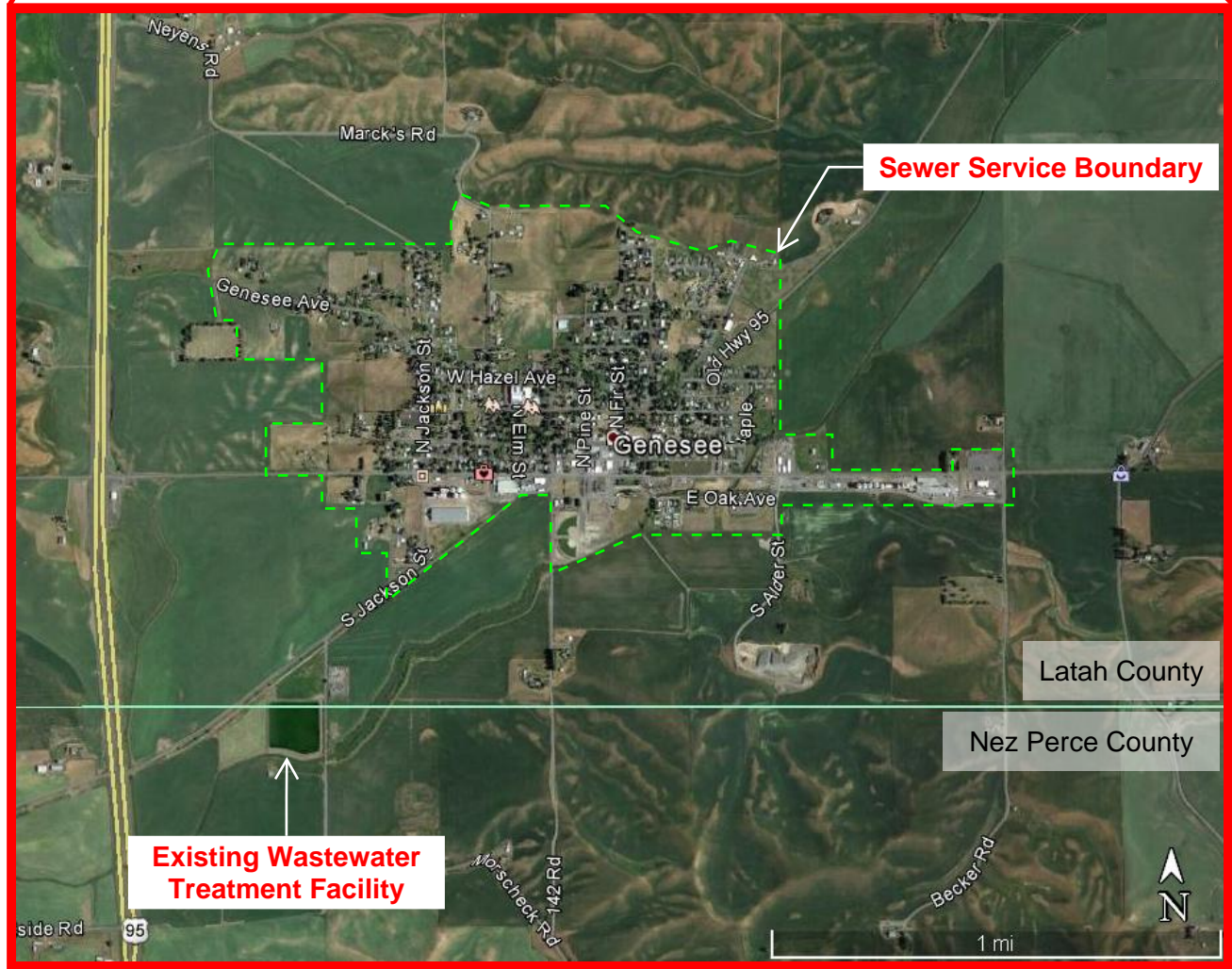
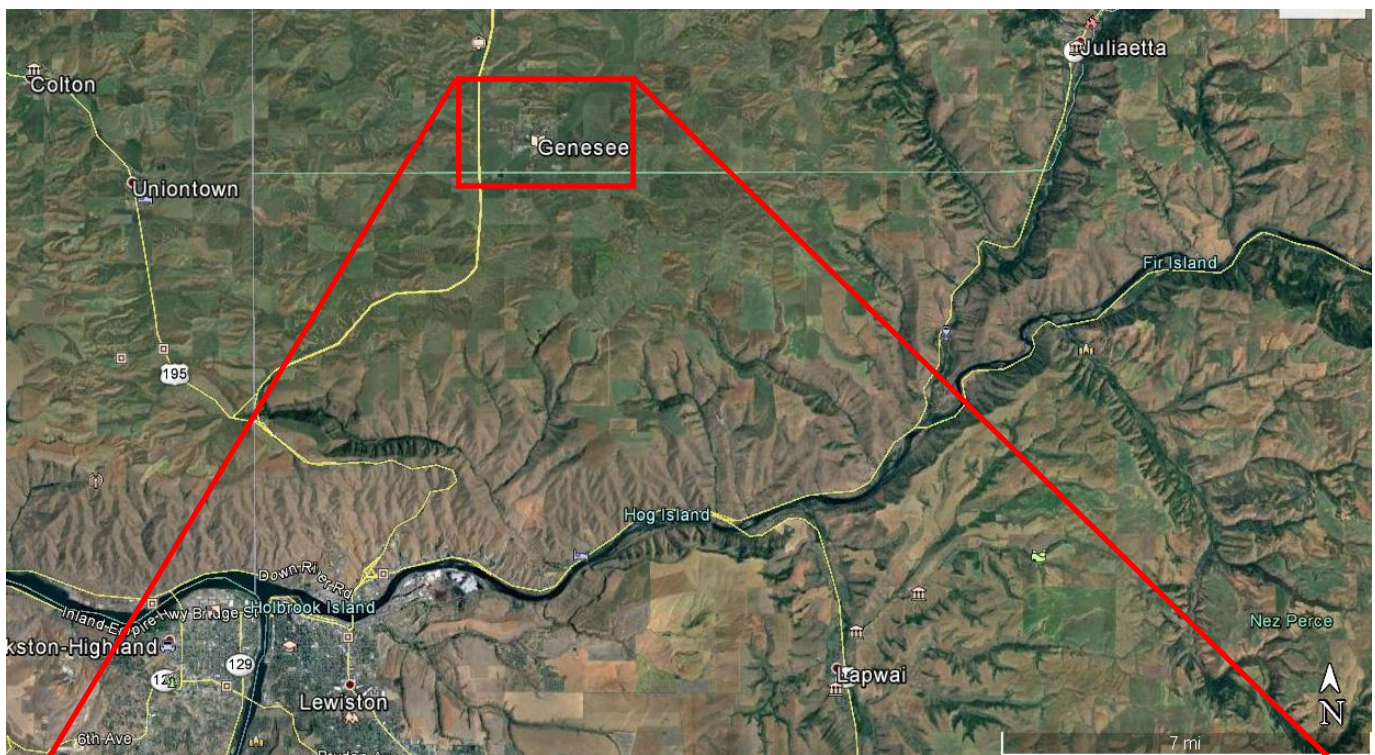
- Dredging and abandonment of existing lagoons
- New three-cell lagoon system on a new site (WRRF relocation)
- New land application area
- New headworks facility
- New tertiary treatment for ammonia removal
- New disinfection facilities
- New centralized lift station with flow measurement

1.1.1 Planning Area and Description of Existing Environment

The City of Genesee is located in Latah County, Idaho, at the intersection of US Highway 95 and Genesee-Juliaetta Road (**Figure 1-1**). The nearest communities include Uniontown, WA, located 8 miles west; Colton, WA, located 10 miles west; Julietta, ID, located 11 miles east; and Lewiston, ID, located 11 miles south. The City is within Section 14 Township 37N Range 5W on the Boise Meridian. It should be noted the existing WRRF lies entirely within Nez Perce County, Idaho, south of and adjacent to the county line.

1.2 Purpose and Need of the Proposal

The proposed action encompasses critical improvements to the City's collection and treatment systems and implements requirements from the EPA's compliance order. Repairs to the aging facilities are needed in order to comply with the City's discharge permit, mitigate equipment failure, and improve ease of operation. Were the City not to implement improvements, (the "No-Action" alternative), its facilities would continue to violate the City's discharge permit, violate the City's compliance order with the EPA, and the system would run until failure.



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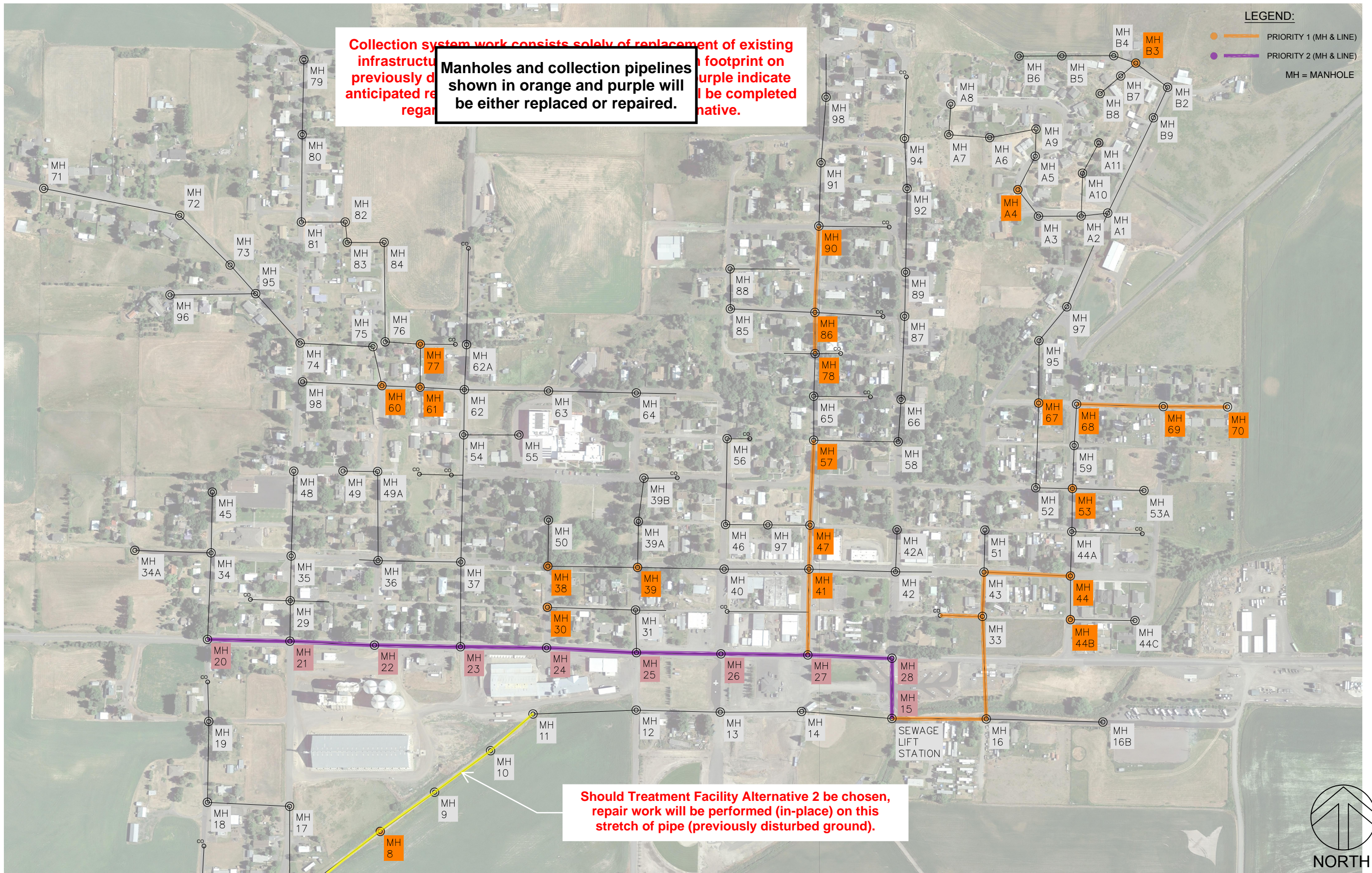
CITY OF GENESEE

WASTEWATER PLANNING AREA

PROJECT NO.:
198.0040

SHEET NO.
FIGURE 1-1

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PROJECT 198.0040.01
DATE 4/02/2019
FIGURE NO.

FIGURE 1-2

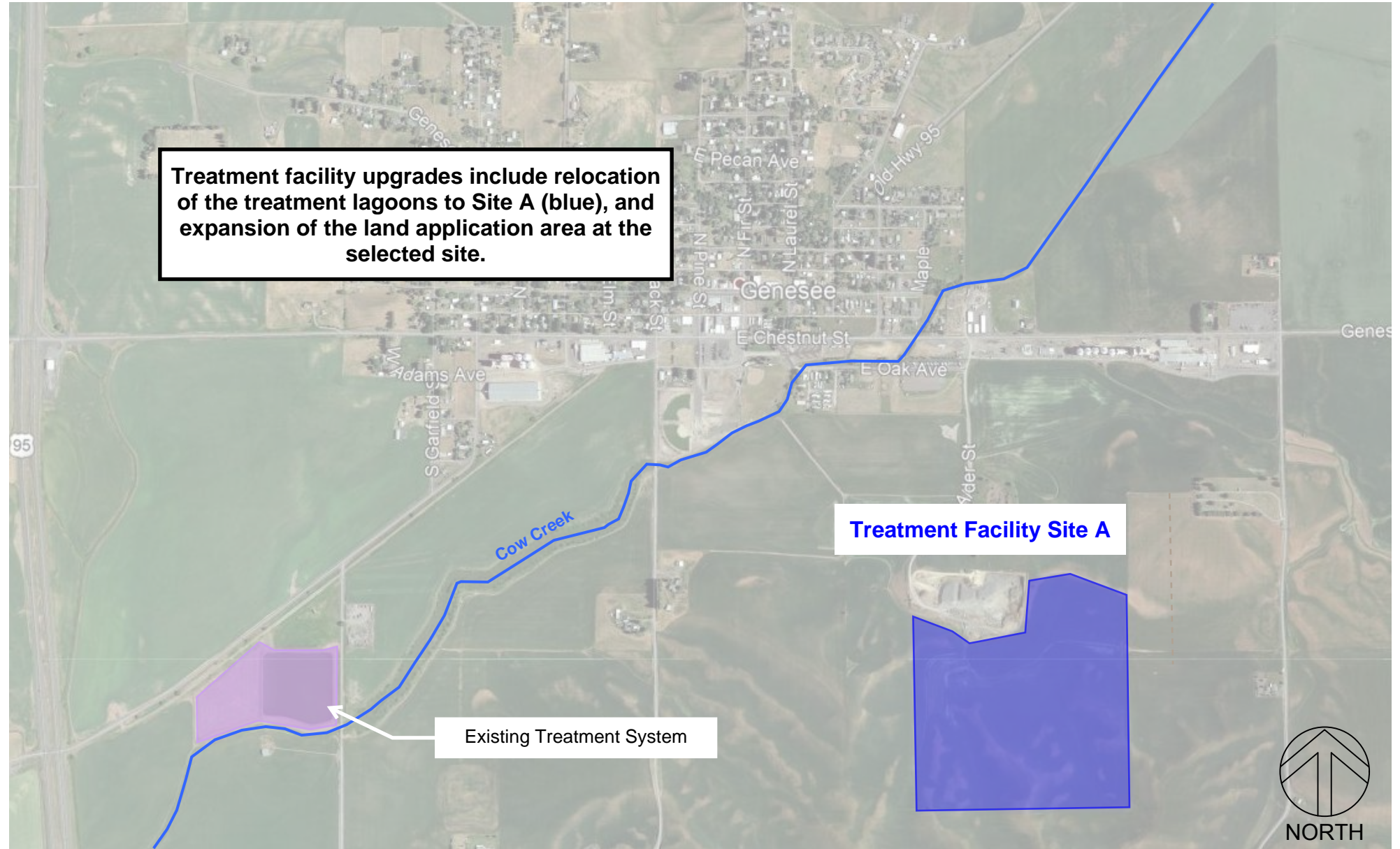


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GENESEE, IDAHO

COLLECTION SYSTEM IMPROVEMENTS



Section 2 **ALTERNATIVES TO THE PROPOSED ACTION**

Over the course of the wastewater facility planning study, Mountain Waterworks presented several alternatives for addressing the City's wastewater system deficiencies. Alternatives were divided into collection system improvements and treatment facility improvements.

2.1 Collection System Alternatives

The City was presented with four collection system alternatives: No-Action, and three priority levels of repairs and replacements of pipelines and manholes. The priority levels were based on infrastructure age, material, location, and overall condition. The alternative formally selected by the City is comprised of Priority 1 and Priority 2 pipeline and manhole replacement or repairs and includes portions of the system required by EPA's compliance order to be replaced (see **Figure 1-2**).

While No-Action would be less costly in the short-term, inflow/infiltration (I/I) into the system would worsen and require the treatment facility to unnecessarily process extra flow. The No-Action alternative would most likely result in the City incurring fines and being placed under additional compliance orders. Were the City to run the system to failure, limited funding opportunities would be available to address the associated emergency situations.

2.2 Treatment Facility Alternatives

Six treatment facility alternatives were evaluated based on operations, capital costs and funding availability, and community fit. All alternatives, besides No-Action, focused on bringing the system into compliance with its discharge permit. Because cost was a major project driver for this portion of the work, the engineer's opinion of probable cost from the Facility Plan is provided with each corresponding alternative.

- **Alternative TF-1, No-Action (no immediate cost):** Under the No-Action alternative the City would violate the City's compliance order with the EPA, the City would continue to violate its discharge permit, and already aged facilities would run until failure.
- **Alternative TF-2, Lagoon-Based Treatment at Existing Location with Winter Ammonia Removal and Summer Land Application (\$7.54M):** This alternative includes upgrades to the existing lagoon and construction of two additional cells on City-owned land at the existing WRRF location, with no changes to land application.
- **Alternative TF-3, Lagoon-Based Treatment at a New Location with Winter Ammonia Removal and Summer Land Application (\$6.14M):** This alternative includes relocation of the treatment facilities, the addition of two cells to the system process, and land application at a larger site than the City currently utilizes.
- **Alternative TF-4, Lagoon-Based Treatment at a New Location with Winter Storage and Summer Land Application (\$7.72M):** This alternative would relocate the treatment facility to a new site and develop a three-cell lagoon system with the capacity to store 100 percent of the wastewater generated by the City during the winter non-growing season.

- **Alternative TF 5, Mechanical Treatment with Phosphorus Removal and Effluent Cooling (\$12.11M):** This alternative proposes abandonment of existing lagoons and upgrading to a mechanical treatment plant at a new location.
- **Alternative TF-6, New Lagoon-Based Treatment with Ammonia and Phosphorus Removal and Effluent Cooling (\$9.52M):** This alternative would incorporate additional treatment technologies into a new three-cell lagoon system on a new site.

Other than the No-Action alternative, which was determined to be infeasible, any of these alternatives would enable the City to comply with its discharge permit. It was determined that Alternative TF-3, “Lagoon-Based Treatment at a New Location with Winter Ammonia Removal”, would best meet the needs of the community.

Section 3 **AFFECTED ENVIRONMENT**

3.1 Land Use, Important Farmland, and Formally Classified Lands

3.1.1 Affected Environment

The City of Genesee is located in Latah County, Idaho within the Palouse region, known for its fertile farmland. The wastewater planning area includes the collection system in town (see **Figure 1-1**) and the treatment facility located approximately ½-mile southwest of the city limits. Soils within the planning area consist primarily of Westlake, Latahco, and Palouse silt loams. The soils are generally deep and range from somewhat poorly-drained to well-drained, with the silt loam top soils being underlain by additional silt loams and silty clay loams. Hydraulic transmissivity of the soils generally ranges from moderately high to high and available water capacity is high.

The proposed treatment facility site has portions identified by the USDA's Natural Resources Conservation Service (NRCS) custom soil resources report as prime farmland and farmland of statewide importance (**Appendix A**). The proposed site is located southeast of the City, and a large portion of the site is made up of soils that are considered either farmland of statewide importance or prime farmland. The land this site is on is currently being used for agriculture.

3.1.2 Environmental Impacts

As all collection work will be repairing or replacing existing infrastructure in the wastewater system's footprint, there is no anticipated impact or change to land use, important farmland, or formally classified lands. The treatment system improvements include excavation of approximately 10 acres for the new three-cell lagoon system and will support farming within the land application area. The approximately 24 acres used for land application will continue to be farmed.

3.1.3 Mitigation

No mitigation is anticipated.

3.2 Floodplains

3.2.1 Affected Environment

The existing treatment facility, located in the Cow Creek floodplain, will be decommissioned as part of this project and the new treatment facility and land application site is located outside of the floodplain. A map of floodplains within the planning area is provided in **Appendix B**.

3.2.2 Environmental Impacts

The proposed action removes a significant amount of the system from the floodplain. Impacts from flooding are not anticipated.

3.2.3 Mitigation

No mitigation is anticipated.

3.3 Wetlands

3.3.1 Affected Environment

The US Fish and Wildlife Services (USFWS) Wetlands Mapper was used to determine whether wetlands are located within the project planning area (**Appendix C**). According to the wetlands mapper, a single wetland is identified within the proposed land application site. The area identified as the wetland corresponds to a small drainage ditch used to convey agricultural run-off. If this site is selected, this drainage ditch is anticipated to continue being used to transmit run-off from the land application (agricultural) site.

3.3.2 Environmental Impacts

The only wetland identified by the wetlands mapper is a small drainage ditch located within the proposed land application site. As the ditch will continue to transmit agricultural runoff, the project is not anticipated to adversely impact wetlands.

3.3.3 Mitigation

No mitigation is anticipated.

3.4 Historic Preservation

3.4.1 Affected Environment

There are four registered historical sites within or near the City of Genesee, none of which are located within the area of potential effect:

- **Genesee Exchange Bank:** In the heart of town on the Northwest corner of the E Walnut street and N Fir Street intersection.
- **Nordby Farmstead:** North east of the city off of the Old Highway 95.
- **Vollmer Building:** In the heart of town on the Northeast corner of the E Walnut Street and N Fir Street intersection.
- **White Spring Ranch:** Northwest of the City, off of Highway 95.

3.4.2 Environmental Impacts

As part of the intergovernmental agency review process, the Idaho State Historic Preservation Office (SHPO) and the Nez Perce Tribe's Tribal Historic Preservation Officer (THPO) were contacted to solicit comments on the project's potential impact to historic properties (**Appendix D**). Both entities requested an archaeological survey be performed on the new treatment, land application, and lift station sites and proposed collection pipeline alignments (**Appendix E, Appendix F**). On November 5, 2019, anthropologist Robert Lee Sappington, Ph.D. and John C. Bergner, IV conducted intensive archaeological transects across the proposed sites and did not encounter any cultural resources (**Appendix G**). Upon receipt of the survey, SHPO determined the proposed action will result in no properties affected (**Appendix E**), and THPO did not make further comments.

3.4.3 Mitigation

As no historic properties were determined in the cultural resources survey to be affected by the project, no mitigation was recommended. Should historical artifacts be encountered during construction, work will stop and the THPO and SHPO will be contacted immediately.

3.5 Flora and Fauna

3.5.1 Affected Environment

Species potentially affected by this project are the Spalding's catchfly and the Water Howellia. The Spalding's catchfly's primary habitat is in pristine prairie grassland, of which there is none in the proposed project site. There is potential for Water Howellia to be present at the proposed treatment sites, as this protected plant favors habitats including floodplains or other periodically inundated locations.

3.5.2 Environmental Impacts

IDEQ generated a memorandum containing an official list of threatened/endangered species and essential fish habitats in accordance with the Endangered Species Act (ESA). IDEQ determined the proposed project will have no effect on federally listed, proposed, or candidate species or critical habitat, nor will the proposed project have an effect on any essential fish habitats. This memorandum is provided in **Appendix H**.

3.5.3 Mitigation

No mitigation is anticipated.

3.6 Surface Water Quality and Quantity

3.6.1 Affected Environment

The Genesee WRRF currently discharges into Cow Creek. The EPA reports that Cow Creek has been assessed as impaired for temperature, and IDEQ reports that Cow Creek is impaired for nutrients. The proposed upgrades to the WRRF are intended to provide stable operating conditions and improve effluent quality of the treatment facility. Thus, the proposed action will promote water quality in Cow Creek by maintaining compliance with the City's discharge permit.

3.6.2 Environmental Impacts

No adverse environmental impact to surface water quality is anticipated.

3.6.3 Mitigation

No mitigation is anticipated.

3.7 Coastal Resources

3.7.1 Affected Environment

The proposed action is not located within coastal areas.

3.7.2 Environmental Impacts

No environmental impact to coastal resources is anticipated.

3.7.3 Mitigation

No mitigation is anticipated.

3.8 Socio-Economic and Environmental Justice

3.8.1 Affected Environment

The City of Genesee is a bedroom community for the nearby University of Idaho. The 2010 Demographic Profile of the City indicates a median age of 37.5 years with a 96% white population, with the remainder of the population being American Indian and Alaska native, Asian, or Hispanic Latino. Industries that employ the majority of the population are educational services, manufacturing, retail trade, public administration, arts, entertainment and recreation, and recreation. The population of the City has been increasing since the 2000 census, most likely due to the growth of the University of Idaho. The average household income is approximately \$70,100, with a median income of approximately \$54,200.

3.8.2 Environmental Impacts

This project will likely lead to a rate increase but funding assistance will lower the cost to customers. The proposed improvements are not anticipated to adversely or disproportionately impact economics in the area.

3.8.3 Mitigation

No mitigation is anticipated.

3.9 Air Quality

3.9.1 Affected Environment

According to the EPA's air quality reports, air quality is not a concern for the planning area.

3.9.2 Environmental Impacts

Short-term dust and soil disturbance may occur during construction; however, no long-term impacts are anticipated.

3.9.3 Mitigation

Best management practices for dust control will be implemented during construction activities. All construction equipment utilized during the proposed project will be required to meet all applicable emission standards.

3.10 Transportation

3.10.1 Affected Environment

The affected environment includes city roadways beneath which collection system infrastructure already exists.

3.10.2 Environmental Impacts

Short-term traffic will increase within the City, as collection system construction will occur in roadways. No long-term impacts to traffic are anticipated.

3.10.3 Mitigation

Temporary construction may limit access or close various streets within the planning area during construction. During construction, clearly-marked detours will be provided by the contractor, and best management practices for traffic mitigation will be employed.

3.11 Noise

3.11.1 Affected Environment

The collection system improvements, which will take place in town within existing roadways, may result in short-term construction noise. Treatment system improvements may result in short-term construction noise at the selected project site.

3.11.2 Environmental Impacts

Noise during construction activities may be slightly higher than that of current street traffic; however, construction activities are anticipated to occur during defined daylight working hours (8 AM to 6 PM). Once construction is complete, noise is expected to return to existing levels.

3.11.3 Mitigation

Best management practices will be employed to minimize noise. Contractors will be required to comply with City noise ordinances.

3.12 Sole Source Aquifer

3.12.1 Affected Environment

Although the City of Genesee and its wastewater planning area is not within a Sole Source Aquifer, the Lewiston Basin Aquifer Source Area is within two miles of both potential treatment sites.

3.12.2 Environmental Impacts

No adverse environmental impacts to the Lewiston Basin Aquifer Source Area are anticipated, as the new treatment facility is expected improve the quality of effluent discharged to Cow Creek, and reuse water is expected to meet standards appropriate for land application.

3.12.3 Mitigation

No mitigation is anticipated.

3.13 Environmental Impacts Summary

The environmental consequences are summarized in **Table 3-1** for treatment and collection improvements. Short-term effects are related to project construction. Long-term effects are those that remain after project completion.

Table 3-1: Summary of Mitigation Measures

Environmental Features	Potential Project Effects and Mitigation Measures			
	CS-2,3		TF-3	
	Collection System		Site A	
	Effects	Mitigation	Effects	Mitigation
Prime Farmlands	No anticipated impact	N/A	No anticipated impact	N/A
Wetlands	No anticipated impact	N/A	No anticipated impact	N/A
Floodplain Development	No anticipated impact	N/A	No anticipated impact	N/A
Cultural Resources	No anticipated impact	N/A	No anticipated impact	N/A
Wild and Scenic Rivers	No anticipated impact	N/A	No anticipated impact	N/A
Flora and Fauna	No anticipated impact	N/A	No anticipated impact	N/A
Air Quality	Short-term	BMPs, dust control, emission standards	Short-term	BMPs, dust control, emission standards
SDWA (Sole Source Aquifer)	No anticipated impact	N/A	No anticipated impact	N/A
Water Quality	No anticipated impact	N/A	No anticipated impact	N/A
Ground Water Quality Problems	No anticipated impact	N/A	No anticipated impact	N/A

No anticipated effects to environmental features

Mitigation anticipated

Section 4 POTENTIALLY AFFECTED AGENCIES

During the Environmental Scoping Meeting held between IDEQ and Mountain Waterworks on July 25, 2019, IDEQ required that the Idaho State Historical Preservation Office (SHPO), the Nez Perce Tribal Historic Preservation Officer (THPO), and the United States Army Corps of Engineers (USACE) be invited to comment on the environmental impact of the proposed action. On August 8, 2019, Mountain Waterworks submitted an agency consultation letter apprising SHPO and USACE of the project, and included relevant maps and figures to define the project area. On August 12, 2019, IDEQ submitted a consultation packet to THPO. These letters and exhibits are attached in **Appendix D**.

On August 21, 2019, the THPO responded recommending an archaeological survey be conducted of the project footprint, including the proposed treatment facility, land application, and lift station sites and areas where new pipelines are proposed to be constructed (**Appendix F**). On September 5, 2019, SHPO also recommended a cultural resources survey be conducted (**Appendix E**). USACE did not respond to the solicitation with any formal comments or requests for additional information.

In response to the THPO and SHPO's recommendations, Mountain Waterworks coordinated with anthropologist Robert Lee Sappington, Ph.D. and John C. Bergner, IV, who performed pre-field research on the area and met our staff on-site to walk the area of potential effect, conduct transects, and visually examine and photograph the proposed project sites. The surveyors ultimately determined the project will result in no historic properties affected, and thus did not recommend avoidance, minimization, or mitigation options.

The cultural resources survey report prepared by Dr. Sappington and Mr. Bergner was submitted to the THPO on January 9, 2020 and to SHPO on January 15, 2020. On January 21, 2020, SHPO concluded in a letter submitted to Mountain Waterworks that the proposed project actions will result in no historic properties affected (**Appendix E**). The THPO had no further comments or requests after receiving the survey report.

Section 5 PUBLIC PARTICIPATION

The City of Genesee offered wastewater system customers multiple opportunities to learn about the proposed wastewater system alternatives. Public notices of the draft facility plan 30-day comment period, signed City council meeting minutes, and educational materials produced and distributed to residents are included in **Appendix I** and summarized below.

- **Preliminary Alternative Presentation, November 20, 2018:** Mountain Waterworks Project Manager Ryan Rehder, P.E. presented preliminary alternatives for WRRF improvements to City Council.
- **Community Day, June 7-8, 2019:** Mountain Waterworks Project Engineer Terrence Stevenson, E.I.T. and Administrative Specialist Danielle Zenner hosted a booth at Genesee's Community Day, where they discussed project needs and informally answered questions from attendees. The posters and brochure created for this event are included in **Appendix I**.
- **Wastewater Facility Plan Public Meeting, June 18, 2019:** Project Manager Ryan Rehder, P.E. presented all the alternatives proposed in the facility plan to City Council at a public meeting. The slideshow he presented is included in **Appendix I**.
- **Formal City Council Selection Meeting, July 2, 2019:** City Council formally selected alternatives CS-1,2 and TF-3. Signed meeting minutes are attached in **Appendix I**.
- **Bond Brochure:** In July the City of Genesee distributed an educational tri-fold brochure regarding the upcoming November 2019 bond election, during which residents will have the opportunity to vote in support of or against a sewer revenue bond in order to accept available funding. This brochure is provided in **Appendix I**.
- **Informational Open House, October 29, 2019:** The week before the November 2019 bond election, the City held an open house where Project Manager Ryan Rehder, P.E. again presented the details of the formally-selected alternative.

Based on the sheer size and cost of the project, it was initially met with some general resistance. However, due to the City's concentrated effort on providing a variety of opportunities for the public to engage with the project and learn about the project need, residents came to understand the necessary nature of the proposed action.

The City of Genesee received one formal comment during the 30-day public comment period, which was supportive in nature, reiterated the need to control costs, suggested attempting to continue to use the existing land application site, and stated a preference for a potential WRRF site due to proximity to the existing treatment facilities. This comment, which was submitted via email, is included in **Appendix I**.

Section 6 **REFERENCES**

Federal Emergency Management Agency. Flood Insurance Rate Map, City of Genesee, Panel No. 160087-0001-A.

Federal Emergency Management Agency. Flood Insurance Rate Map, Latah County Unincorporated Areas, Panel No. 160086-0445-B.

Federal Emergency Management Agency. Flood Insurance Rate Map, Nez Perce County Unincorporated Areas, Panel No. 160101-0050-B.

Idaho Department of Environmental Quality, Office of Administrative Rules. IDAPA 58.01.04. Web. <https://adminrules.idaho.gov/rules/current/58/index.html>.

Mountain Waterworks, Inc. "City of Genesee Wastewater Facility Plan."

United States Department of Agriculture. Web Soil Survey. Natural Resource Conservation Service. <http://websoilsurvey.nrcs.usda.gov/app/websoilsurvey.aspx>.

United States Fish and Wildlife Service. Wetlands Online Mapper. Web. <http://www.fws.gov/wetlands>.

Appendix A

USDA NRCS Custom Soil Resource Report



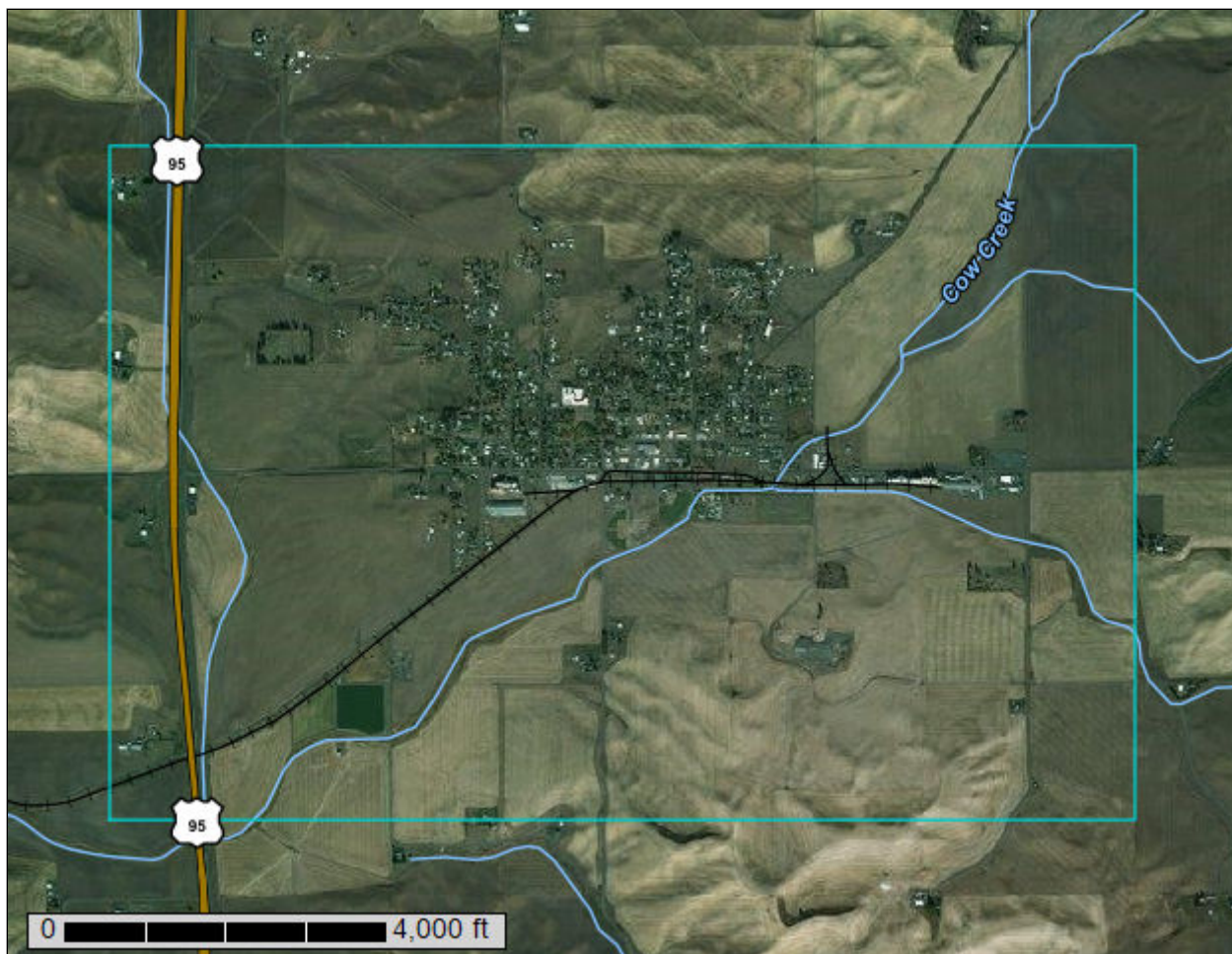
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NRCS

Natural
Resources
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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 Latah County, Idaho, and Lewis and Nez Perce Counties, Idaho



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 (<https://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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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 soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

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

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

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

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

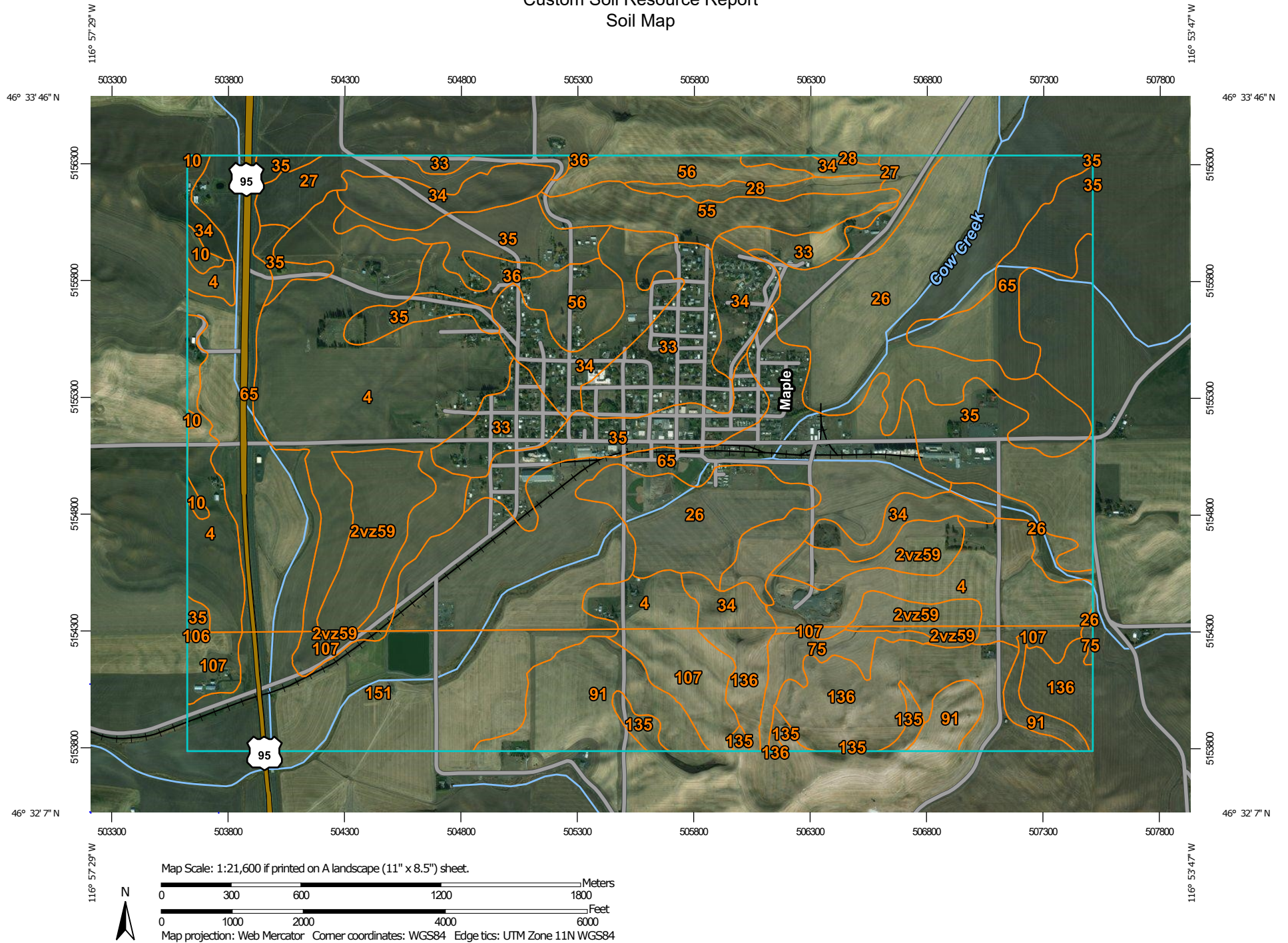
Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

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

Custom Soil Resource Report Soil Map



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop


 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

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

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

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Latah County, Idaho

Survey Area Data: Version 8, Sep 13, 2018

Soil Survey Area: Lewis and Nez Perce Counties, Idaho

Survey Area Data: Version 18, Sep 13, 2018

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

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

Date(s) aerial images were photographed: Aug 24, 2014—Sep 14, 2016

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
2vz59	Athena silt loam, moist, 0 to 8 percent slopes	94.9	3.9%
4	Athena-Palouse complex, 7 to 25 percent slopes	381.1	15.5%
10	Garfield silt loam, 3 to 30 percent slopes	6.9	0.3%
26	Latahco silt loam, 0 to 3 percent slopes	291.2	11.8%
27	Latahco-Lovell complex, 0 to 3 percent slopes	51.7	2.1%
28	Latahco-Thatuna complex, 0 to 5 percent slopes	18.7	0.8%
33	Naff-Palouse complex, 7 to 25 percent slopes	121.5	4.9%
34	Naff-Thatuna complex, 7 to 25 percent slopes	168.8	6.9%
35	Palouse silt loam, 3 to 7 percent slopes	249.1	10.1%
36	Palouse silt loam, 7 to 25 percent slopes	18.1	0.7%
55	Tilma-Garfield complex, 7 to 25 percent slopes	55.7	2.3%
56	Tilma-Naff complex, 7 to 25 percent slopes	57.8	2.3%
65	Westlake-Latahco complex, 0 to 3 percent slopes	439.9	17.9%
Subtotals for Soil Survey Area		1,955.5	79.5%
Totals for Area of Interest		2,460.7	100.0%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
2vz59	Athena silt loam, moist, 0 to 8 percent slopes	7.0	0.3%
75	Latahco-Thatuna complex, 0 to 3 percent slopes	24.4	1.0%
91	Naff, eroded-Palouse complex, 8 to 20 percent slopes	90.6	3.7%
106	Palouse-Athena complex, 2 to 8 percent slopes	0.6	0.0%
107	Palouse-Athena complex, 8 to 20 percent slopes	71.4	2.9%
135	Thatuna-Naff complex, 25 to 40 percent slopes	16.4	0.7%

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Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
136	Thatuna-Naff-Tilma complex, 10 to 25 percent slopes	129.3	5.3%
151	Westlake-Latahco complex, 0 to 3 percent slopes	165.4	6.7%
Subtotals for Soil Survey Area		505.2	20.5%
Totals for Area of Interest		2,460.7	100.0%

Map Unit Descriptions

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

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

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

Latah County, Idaho

2vz59—Athena silt loam, moist, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2vz59
Elevation: 2,540 to 2,950 feet
Mean annual precipitation: 18 to 23 inches
Mean annual air temperature: 45 to 47 degrees F
Frost-free period: 115 to 130 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Athena, moist, and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Athena, Moist

Setting

Landform: Loess hills
Landform position (two-dimensional): Footslope, summit
Landform position (three-dimensional): Base slope, interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess with an insignificant amount of volcanic ash in the upper part

Typical profile

Ap - 0 to 8 inches: silt loam
A1 - 8 to 15 inches: silt loam
A2 - 15 to 20 inches: silt loam
Bw1 - 20 to 30 inches: silt loam
Bw2 - 30 to 48 inches: silt loam
Bk - 48 to 60 inches: silt loam

Properties and qualities

Slope: 0 to 8 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 to high (0.71 to 3.54 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Available water storage in profile: High (about 10.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: A
Ecological site: COOL LOAMY 16-24 PZ (R009XY103WA)
Hydric soil rating: No

4—Athena-Palouse complex, 7 to 25 percent slopes

Map Unit Setting

National map unit symbol: 2ph5v

Elevation: 2,000 to 2,870 feet

Mean annual precipitation: 19 to 25 inches

Mean annual air temperature: 46 to 50 degrees F

Frost-free period: 120 to 145 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Athena and similar soils: 40 percent

Palouse and similar soils: 30 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Athena

Setting

Landform: Loess hills

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Linear

Across-slope shape: Convex

Parent material: Loess

Typical profile

A - 0 to 17 inches: silt loam

Bw - 17 to 50 inches: silt loam

Bk - 50 to 60 inches: silt loam

Properties and qualities

Slope: 7 to 25 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 to high (0.57 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 5 percent

Available water storage in profile: High (about 12.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: B

Ecological site: LOAMY 16-24 PZ (R009XY102WA)

Hydric soil rating: No

Description of Palouse

Setting

Landform: Loess hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Loess

Typical profile

A - 0 to 25 inches: silt loam
Bt - 25 to 60 inches: silty clay loam

Properties and qualities

Slope: 7 to 25 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 to high (0.57 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: High (about 12.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: LOAMY 16-24 PZ (R009XY102WA)
Hydric soil rating: No

10—Garfield silt loam, 3 to 30 percent slopes

Map Unit Setting

National map unit symbol: 2ph61
Elevation: 2,000 to 3,220 feet
Mean annual precipitation: 23 to 29 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 120 to 145 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Garfield and similar soils: 90 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Garfield

Setting

Landform: Ridges

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Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Loess

Typical profile

Ap - 0 to 8 inches: silt loam
Bt1 - 8 to 22 inches: silty clay loam
Bt2 - 22 to 60 inches: silt loam

Properties and qualities

Slope: 3 to 30 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
Calcium carbonate, maximum in profile: 1 percent
Available water storage in profile: High (about 11.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: LOAMY 16-24 PZ (R009XY102WA)
Hydric soil rating: No

26—Latahco silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2ph6k
Elevation: 2,310 to 2,880 feet
Mean annual precipitation: 23 to 29 inches
Mean annual air temperature: 43 to 46 degrees F
Frost-free period: 95 to 130 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Latahco and similar soils: 80 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Latahco

Setting

Landform: Drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave

Custom Soil Resource Report

Across-slope shape: Linear

Parent material: Loess

Typical profile

A1 - 0 to 14 inches: silt loam

A2 - 14 to 20 inches: silt loam

Ec - 20 to 28 inches: silt loam

Btc - 28 to 60 inches: silty clay loam

Properties and qualities

Slope: 0 to 3 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 (0.20 to 0.60 in/hr)

Depth to water table: About 10 to 16 inches

Frequency of flooding: Occasional

Frequency of ponding: None

Available water storage in profile: High (about 11.1 inches)

Interpretive groups

Land capability classification (irrigated): 4w

Land capability classification (nonirrigated): 4w

Hydrologic Soil Group: C/D

Ecological site: DRY MEADOW (R009XY019ID)

Hydric soil rating: No

Minor Components

Aquolls

Percent of map unit: 5 percent

Landform: Drainageways, flood plains

Down-slope shape: Linear

Across-slope shape: Linear

Ecological site: MEADOW (R009XY018ID)

Hydric soil rating: Yes

27—Latahco-Lovell complex, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2ph6l

Elevation: 2,450 to 3,010 feet

Mean annual precipitation: 23 to 33 inches

Mean annual air temperature: 43 to 46 degrees F

Frost-free period: 95 to 130 days

Farmland classification: Prime farmland if drained

Map Unit Composition

Latahco and similar soils: 55 percent

Lovell and similar soils: 35 percent

Minor components: 5 percent

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Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Latahco

Setting

Landform: Drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess

Typical profile

A1 - 0 to 14 inches: silt loam
A2 - 14 to 20 inches: silt loam
Ec - 20 to 28 inches: silt loam
Btc - 28 to 60 inches: silty clay loam

Properties and qualities

Slope: 0 to 3 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 (0.20 to 0.60 in/hr)
Depth to water table: About 10 to 16 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Available water storage in profile: High (about 11.1 inches)

Interpretive groups

Land capability classification (irrigated): 4w
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C/D
Ecological site: DRY MEADOW (R009XY019ID)
Hydric soil rating: No

Description of Lovell

Setting

Landform: Flood-plain steps, flood plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Mixed volcanic ash and loess over alluvium derived from metasedimentary rock

Typical profile

A - 0 to 7 inches: ashy silt loam
Ec - 7 to 28 inches: silt loam
2Btc - 28 to 60 inches: silty clay 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 low to moderately high (0.06 to 0.20 in/hr)

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Depth to water table: About 8 to 26 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Available water storage in profile: High (about 11.4 inches)

Interpretive groups

Land capability classification (irrigated): 6e
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: C/D
Ecological site: MEADOW (R009XY018ID)
Hydric soil rating: No

Minor Components

Aquolls

Percent of map unit: 5 percent
Landform: Drainageways, flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: MEADOW (R009XY018ID)
Hydric soil rating: Yes

28—Latahco-Thatuna complex, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2ph6m
Elevation: 2,210 to 3,170 feet
Mean annual precipitation: 23 to 29 inches
Mean annual air temperature: 43 to 46 degrees F
Frost-free period: 95 to 130 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Latahco and similar soils: 55 percent
Thatuna and similar soils: 30 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Latahco

Setting

Landform: Hills, drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loess

Typical profile

A1 - 0 to 14 inches: silt loam

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A2 - 14 to 20 inches: silt loam
Ec - 20 to 28 inches: silt loam
Btc - 28 to 60 inches: silty clay loam

Properties and qualities

Slope: 0 to 3 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 (0.20 to 0.60 in/hr)
Depth to water table: About 10 to 16 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Available water storage in profile: High (about 11.1 inches)

Interpretive groups

Land capability classification (irrigated): 4w
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C/D
Ecological site: DRY MEADOW (R009XY019ID)
Hydric soil rating: No

Description of Thatuna

Setting

Landform: Loess hills
Landform position (two-dimensional): Footslope, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Loess

Typical profile

A - 0 to 20 inches: silt loam
B/Ec - 20 to 39 inches: silt loam
Btcb - 39 to 60 inches: silty clay loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately 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: About 24 to 48 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: High (about 12.0 inches)

Interpretive groups

Land capability classification (irrigated): 3w
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C
Ecological site: COOL LOAMY 16-24 PZ (R009XY103WA)
Hydric soil rating: No

Minor Components

Aquolls

Percent of map unit: 5 percent
Landform: Drainageways, flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: MEADOW (R009XY018ID)
Hydric soil rating: Yes

33—Naff-Palouse complex, 7 to 25 percent slopes

Map Unit Setting

National map unit symbol: 2ph6s
Elevation: 2,070 to 3,250 feet
Mean annual precipitation: 23 to 29 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 120 to 145 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Naff and similar soils: 50 percent
Palouse and similar soils: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Naff

Setting

Landform: Loess hills
Landform position (two-dimensional): Backslope, summit
Landform position (three-dimensional): Side slope, interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loess

Typical profile

Ap - 0 to 7 inches: silt loam
Bt - 7 to 60 inches: silty clay loam

Properties and qualities

Slope: 7 to 25 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 0.60 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 10.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: LOAMY 16-24 PZ (R009XY102WA)
Hydric soil rating: No

Description of Palouse

Setting

Landform: Loess hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Loess

Typical profile

A - 0 to 25 inches: silt loam
Bt - 25 to 60 inches: silt loam

Properties and qualities

Slope: 7 to 25 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 to high (0.57 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: High (about 12.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: LOAMY 16-24 PZ (R009XY102WA)
Hydric soil rating: No

34—Naff-Thatuna complex, 7 to 25 percent slopes

Map Unit Setting

National map unit symbol: 2ph6t
Elevation: 2,100 to 3,390 feet
Mean annual precipitation: 23 to 29 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 120 to 145 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Naff and similar soils: 40 percent

Thatuna and similar soils: 30 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Naff

Setting

Landform: Loess hills

Landform position (two-dimensional): Backslope, summit

Landform position (three-dimensional): Side slope, interfluvium

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Loess

Typical profile

Ap - 0 to 7 inches: silt loam

Bt - 7 to 60 inches: silty clay loam

Properties and qualities

Slope: 7 to 25 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 0.60 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 10.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: C

Ecological site: LOAMY 16-24 PZ (R009XY102WA)

Hydric soil rating: No

Description of Thatuna

Setting

Landform: Loess hills

Landform position (two-dimensional): Footslope, backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Concave

Across-slope shape: Linear

Parent material: Loess

Typical profile

A - 0 to 20 inches: silt loam

B/Ec - 20 to 39 inches: silt loam

Btcb - 39 to 60 inches: silty clay loam

Properties and qualities

Slope: 7 to 25 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Moderately well drained

Custom Soil Resource Report

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: About 24 to 48 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: High (about 12.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: C

Ecological site: COOL LOAMY 16-24 PZ (R009XY103WA)

Hydric soil rating: No

35—Palouse silt loam, 3 to 7 percent slopes

Map Unit Setting

National map unit symbol: 2ph6v

Elevation: 2,140 to 3,210 feet

Mean annual precipitation: 21 to 29 inches

Mean annual air temperature: 46 to 50 degrees F

Frost-free period: 120 to 145 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Palouse and similar soils: 90 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Palouse

Setting

Landform: Loess hills

Landform position (two-dimensional): Backslope, toeslope

Landform position (three-dimensional): Side slope

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Loess

Typical profile

A - 0 to 25 inches: silt loam

Bt - 25 to 60 inches: silt loam

Properties and qualities

Slope: 3 to 7 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 to high (0.57 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: High (about 12.0 inches)

Interpretive groups

Land capability classification (irrigated): 3e

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: B

Ecological site: LOAMY 16-24 PZ (R009XY102WA)

Hydric soil rating: No

36—Palouse silt loam, 7 to 25 percent slopes

Map Unit Setting

National map unit symbol: 2ph6w

Elevation: 1,060 to 3,240 feet

Mean annual precipitation: 19 to 29 inches

Mean annual air temperature: 46 to 50 degrees F

Frost-free period: 120 to 145 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Palouse and similar soils: 90 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Palouse

Setting

Landform: Loess hills

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Linear

Across-slope shape: Convex

Parent material: Loess

Typical profile

A - 0 to 25 inches: silt loam

Bt - 25 to 60 inches: silt loam

Properties and qualities

Slope: 7 to 25 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 to high (0.57 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: High (about 12.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: B

Ecological site: LOAMY 16-24 PZ (R009XY102WA)

Hydric soil rating: No

55—Tilma-Garfield complex, 7 to 25 percent slopes

Map Unit Setting

National map unit symbol: 2ph7h

Elevation: 2,300 to 3,120 feet

Mean annual precipitation: 23 to 31 inches

Mean annual air temperature: 46 to 50 degrees F

Frost-free period: 120 to 145 days

Farmland classification: Farmland of statewide importance, if drained

Map Unit Composition

Tilma and similar soils: 55 percent

Garfield and similar soils: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tilma

Setting

Landform: Loess hills

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Loess

Typical profile

A - 0 to 11 inches: silt loam

Bw - 11 to 20 inches: silt loam

E - 20 to 22 inches: silt loam

Btb - 22 to 60 inches: silty clay

Properties and qualities

Slope: 7 to 25 percent

Depth to restrictive feature: 20 to 36 inches to abrupt textural change

Natural drainage class: Moderately 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: About 18 to 30 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4w

Hydrologic Soil Group: C/D

Ecological site: LOAMY 16-24 PZ (R009XY102WA)

Hydric soil rating: No

Description of Garfield

Setting

Landform: Loess hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Loess

Typical profile

Ap - 0 to 8 inches: silt loam
Bt1 - 8 to 22 inches: silty clay loam
Bt2 - 22 to 60 inches: silt loam

Properties and qualities

Slope: 7 to 25 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
Calcium carbonate, maximum in profile: 1 percent
Available water storage in profile: High (about 11.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: LOAMY 16-24 PZ (R009XY102WA)
Hydric soil rating: No

56—Tilma-Naff complex, 7 to 25 percent slopes

Map Unit Setting

National map unit symbol: 2ph7j
Elevation: 2,350 to 3,200 feet
Mean annual precipitation: 23 to 29 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 120 to 145 days
Farmland classification: Farmland of statewide importance, if drained

Map Unit Composition

Tilma and similar soils: 50 percent
Naff and similar soils: 35 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tilma

Setting

Landform: Loess hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess

Typical profile

A - 0 to 11 inches: silt loam
Bw - 11 to 20 inches: silt loam
E - 20 to 22 inches: silt loam
Btb - 22 to 60 inches: silty clay

Properties and qualities

Slope: 7 to 25 percent
Depth to restrictive feature: 20 to 36 inches to abrupt textural change
Natural drainage class: Moderately 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: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C/D
Ecological site: LOAMY 16-24 PZ (R009XY102WA)
Hydric soil rating: No

Description of Naff

Setting

Landform: Loess hills
Landform position (two-dimensional): Backslope, summit
Landform position (three-dimensional): Side slope, interfluvium
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loess

Typical profile

Ap - 0 to 7 inches: silt loam
Bt - 7 to 60 inches: silty clay loam

Properties and qualities

Slope: 7 to 25 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 0.60 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 10.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: C

Ecological site: LOAMY 16-24 PZ (R009XY102WA)

Hydric soil rating: No

65—Westlake-Latahco complex, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2ph7t

Elevation: 2,520 to 2,850 feet

Mean annual precipitation: 23 to 27 inches

Mean annual air temperature: 43 to 46 degrees F

Frost-free period: 95 to 130 days

Farmland classification: Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

Map Unit Composition

Westlake and similar soils: 55 percent

Latahco and similar soils: 35 percent

Minor components: 5 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Westlake

Setting

Landform: Flood plains

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Loess and/or silty alluvium

Typical profile

A - 0 to 33 inches: silt loam

Bg - 33 to 60 inches: silt loam

Properties and qualities

Slope: 0 to 3 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 (0.20 to 0.60 in/hr)

Depth to water table: About 6 to 18 inches

Frequency of flooding: Frequent

Frequency of ponding: None

Available water storage in profile: High (about 12.0 inches)

Interpretive groups

Land capability classification (irrigated): 6e
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: C/D
Ecological site: DRY MEADOW (R009XY019ID)
Hydric soil rating: No

Description of Latahco

Setting

Landform: Drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loess

Typical profile

A1 - 0 to 14 inches: silt loam
A2 - 14 to 20 inches: silt loam
Ec - 20 to 28 inches: silt loam
Btc - 28 to 60 inches: silty clay loam

Properties and qualities

Slope: 0 to 3 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 (0.20 to 0.60 in/hr)
Depth to water table: About 10 to 16 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Available water storage in profile: High (about 11.1 inches)

Interpretive groups

Land capability classification (irrigated): 4w
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C/D
Ecological site: DRY MEADOW (R009XY019ID)
Hydric soil rating: No

Minor Components

Aquolls

Percent of map unit: 5 percent
Landform: Drainageways, flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: MEADOW (R009XY018ID)
Hydric soil rating: Yes

Lewis and Nez Perce Counties, Idaho

2vz59—Athena silt loam, moist, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2vz59

Elevation: 2,540 to 2,950 feet

Mean annual precipitation: 18 to 23 inches

Mean annual air temperature: 45 to 47 degrees F

Frost-free period: 115 to 130 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Athena, moist, and similar soils: 85 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Athena, Moist

Setting

Landform: Loess hills

Landform position (two-dimensional): Footslope, summit

Landform position (three-dimensional): Base slope, interfluvium

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Loess with an insignificant amount of volcanic ash in the upper part

Typical profile

Ap - 0 to 8 inches: silt loam

A1 - 8 to 15 inches: silt loam

A2 - 15 to 20 inches: silt loam

Bw1 - 20 to 30 inches: silt loam

Bw2 - 30 to 48 inches: silt loam

Bk - 48 to 60 inches: silt loam

Properties and qualities

Slope: 0 to 8 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 to high (0.71 to 3.54 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 15 percent

Available water storage in profile: High (about 10.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: A

Ecological site: COOL LOAMY 16-24 PZ (R009XY103WA)

Hydric soil rating: No

75—Latahco-Thatuna complex, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2nxn
Elevation: 2,000 to 5,200 feet
Mean annual precipitation: 18 to 28 inches
Mean annual air temperature: 41 to 48 degrees F
Frost-free period: 60 to 150 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Latahco and similar soils: 55 percent
Thatuna and similar soils: 30 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Latahco

Setting

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

Typical profile

Ap - 0 to 13 inches: silt loam
A - 13 to 22 inches: silt loam
E - 22 to 35 inches: silt loam
Bt - 35 to 60 inches: silty clay 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 (0.20 to 0.60 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Available water storage in profile: High (about 11.1 inches)

Interpretive groups

Land capability classification (irrigated): 4w
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C
Hydric soil rating: No

Description of Thatuna

Setting

Landform: Hillslopes
Landform position (two-dimensional): Toeslope

Custom Soil Resource Report

Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loess

Typical profile

A - 0 to 16 inches: silt loam
Bw - 16 to 31 inches: silt loam
E - 31 to 37 inches: silt loam
Btb - 37 to 61 inches: silty clay loam

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately 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: About 24 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: High (about 10.8 inches)

Interpretive groups

Land capability classification (irrigated): 3w
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Aquolls

Percent of map unit: 5 percent
Landform: Flood plains
Ecological site: RIPARIAN DECA5-CAREX (R009XY032ID)
Hydric soil rating: Yes

91—Naff, eroded-Palouse complex, 8 to 20 percent slopes

Map Unit Setting

National map unit symbol: 2ny7
Elevation: 1,800 to 2,900 feet
Mean annual precipitation: 18 to 22 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 130 to 160 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Naff, eroded, and similar soils: 50 percent
Palouse and similar soils: 40 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Naff, Eroded

Setting

Landform: Hillslopes
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loess

Typical profile

AB - 0 to 12 inches: silt loam
Bt1 - 12 to 20 inches: silty clay loam
Bt2 - 20 to 60 inches: silty clay loam

Properties and qualities

Slope: 8 to 20 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 0.60 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 10.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Hydric soil rating: No

Description of Palouse

Setting

Landform: Hillslopes
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Volcanic ash and/or loess

Typical profile

A - 0 to 15 inches: silt loam
AB - 15 to 27 inches: silt loam
Bt1 - 27 to 50 inches: silt loam
Bt2 - 50 to 63 inches: silty clay loam

Properties and qualities

Slope: 8 to 20 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 to high (0.57 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: High (about 11.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Custom Soil Resource Report

Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Hydric soil rating: No

106—Palouse-Athena complex, 2 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2nss
Elevation: 1,500 to 2,900 feet
Mean annual precipitation: 17 to 22 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 130 to 180 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Palouse and similar soils: 60 percent
Athena and similar soils: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Palouse

Setting

Landform: Hillslopes
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Volcanic ash and/or loess

Typical profile

A - 0 to 15 inches: silt loam
AB - 15 to 27 inches: silt loam
Bt1 - 27 to 50 inches: silt loam
Bt2 - 50 to 63 inches: silty clay loam

Properties and qualities

Slope: 2 to 8 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 to high (0.57 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: High (about 11.5 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Hydric soil rating: No

Description of Athena

Setting

Landform: Ridges, hills
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loess

Typical profile

A - 0 to 14 inches: silt loam
Bw - 14 to 44 inches: silt loam
Bk - 44 to 64 inches: silt loam

Properties and qualities

Slope: 2 to 8 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 to high (0.57 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 20 percent
Available water storage in profile: High (about 11.2 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Hydric soil rating: No

107—Palouse-Athena complex, 8 to 20 percent slopes

Map Unit Setting

National map unit symbol: 2nst
Elevation: 1,500 to 2,900 feet
Mean annual precipitation: 17 to 22 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 130 to 180 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Palouse and similar soils: 60 percent
Athena and similar soils: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Palouse

Setting

Landform: Hillslopes

Custom Soil Resource Report

Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Volcanic ash and/or loess

Typical profile

A - 0 to 15 inches: silt loam
AB - 15 to 27 inches: silt loam
Bt1 - 27 to 50 inches: silt loam
Bt2 - 50 to 63 inches: silty clay loam

Properties and qualities

Slope: 8 to 20 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 to high (0.57 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: High (about 11.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Hydric soil rating: No

Description of Athena

Setting

Landform: Hillslopes
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loess

Typical profile

A - 0 to 14 inches: silt loam
Bw - 14 to 44 inches: silt loam
Bk - 44 to 64 inches: silt loam

Properties and qualities

Slope: 8 to 20 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 to high (0.57 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 20 percent
Available water storage in profile: High (about 11.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Hydric soil rating: No

135—Thatuna-Naff complex, 25 to 40 percent slopes

Map Unit Setting

National map unit symbol: 2ntt
Elevation: 1,800 to 3,200 feet
Mean annual precipitation: 18 to 22 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 110 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Thatuna and similar soils: 60 percent
Naff and similar soils: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Thatuna

Setting

Landform: Hillslopes
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess

Typical profile

A - 0 to 16 inches: silt loam
Bw - 16 to 31 inches: silt loam
E - 31 to 37 inches: silt loam
Btb - 37 to 61 inches: silty clay loam

Properties and qualities

Slope: 25 to 40 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately 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: About 24 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: High (about 10.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: C
Hydric soil rating: No

Description of Naff

Setting

Landform: Hillslopes

Custom Soil Resource Report

Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loess

Typical profile

AB - 0 to 18 inches: silt loam
Bt1 - 18 to 25 inches: silty clay loam
Bt2 - 25 to 60 inches: silty clay loam

Properties and qualities

Slope: 25 to 40 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 0.60 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 10.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Hydric soil rating: No

136—Thatuna-Naff-Tilma complex, 10 to 25 percent slopes

Map Unit Setting

National map unit symbol: 2ntv
Elevation: 1,800 to 3,200 feet
Mean annual precipitation: 18 to 23 inches
Mean annual air temperature: 45 to 54 degrees F
Frost-free period: 110 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Thatuna and similar soils: 45 percent
Naff and similar soils: 25 percent
Tilma and similar soils: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Thatuna

Setting

Landform: Hillslopes
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loess

Custom Soil Resource Report

Typical profile

A - 0 to 16 inches: silt loam
Bw - 16 to 31 inches: silt loam
E - 31 to 37 inches: silt loam
Btb - 37 to 61 inches: silty clay loam

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately 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: About 24 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: High (about 10.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Hydric soil rating: No

Description of Naff

Setting

Landform: Hillslopes
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess

Typical profile

AB - 0 to 18 inches: silt loam
Bt1 - 18 to 25 inches: silty clay loam
Bt2 - 25 to 60 inches: silty clay loam

Properties and qualities

Slope: 10 to 20 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 0.60 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 10.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Hydric soil rating: No

Description of Tilma

Setting

Landform: Knobs

Custom Soil Resource Report

Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess

Typical profile

AB - 0 to 25 inches: silt loam
Btb - 25 to 60 inches: silty clay loam

Properties and qualities

Slope: 10 to 15 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately 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: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: High (about 10.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C
Hydric soil rating: No

151—Westlake-Latahco complex, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2nvd
Elevation: 2,200 to 5,200 feet
Mean annual precipitation: 20 to 28 inches
Mean annual air temperature: 41 to 45 degrees F
Frost-free period: 60 to 135 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Westlake and similar soils: 50 percent
Latahco and similar soils: 40 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Westlake

Setting

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

Custom Soil Resource Report

Typical profile

Ap - 0 to 10 inches: silt loam
A - 10 to 21 inches: silt loam
Cg1 - 21 to 49 inches: silt loam
Cg2 - 49 to 64 inches: silt loam

Properties and qualities

Slope: 0 to 3 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 (0.20 to 0.60 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Available water storage in profile: High (about 11.8 inches)

Interpretive groups

Land capability classification (irrigated): 4w
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C
Ecological site: RIPARIAN DECA5-CAREX (R009XY032ID)
Hydric soil rating: No

Description of Latahco

Setting

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

Typical profile

Ap - 0 to 13 inches: silt loam
A - 13 to 22 inches: silt loam
E - 22 to 35 inches: silt loam
Bt - 35 to 60 inches: silty clay loam

Properties and qualities

Slope: 0 to 3 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 (0.20 to 0.60 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Available water storage in profile: High (about 11.1 inches)

Interpretive groups

Land capability classification (irrigated): 4w
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C
Ecological site: RIPARIAN DECA5-CAREX (R009XY032ID)
Hydric soil rating: No

Minor Components

Aquolls

Percent of map unit: 10 percent

Landform: Flood plains

Ecological site: RIPARIAN DECA5-CAREX (R009XY032ID)

Hydric soil rating: Yes

References

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Custom Soil Resource Report

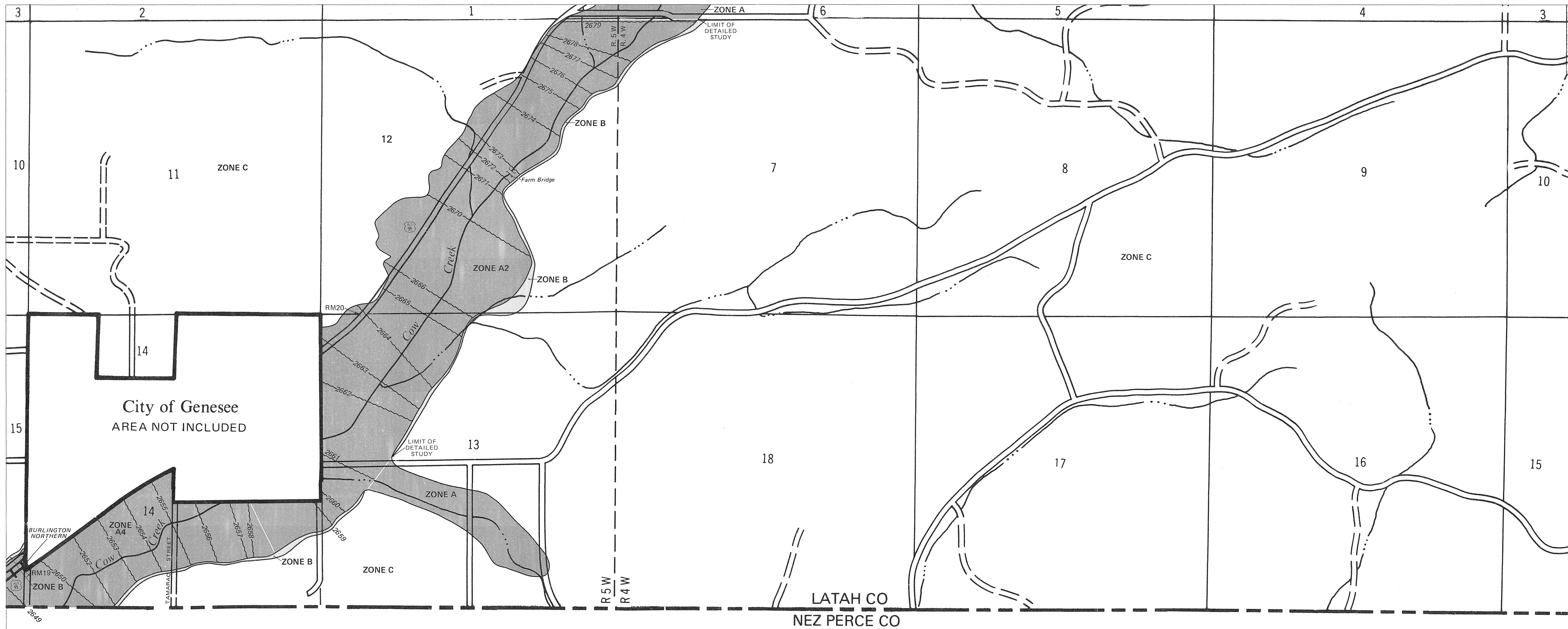
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Appendix B

FEMA Flood Insurance Rate Map



ELEVATION REFERENCE MARKS		
REFERENCE MARK	ELEVATION (FT. NGVD)	DESCRIPTION OF LOCATION
RM16*	2658.5	U.S. Coast and Geodetic Survey bronze disk mark stamped K 346 1952 located approximately 0.1 mile east along the old U.S. Highway 95 from the Burlington Northern Railroad station at Genesee, at a sharp turn in the highway, at the junction of a road leading east to Julietta, in the top of the approximate center of the north concrete headwall of a 36-inch corrugated metal pipe culvert under the road, 70 feet east of the centerline of the highway, 19 feet north of the centerline of the road, and approximately 2 feet lower than the road.
RM17*	2660.9	At Genesee, U.S. Coast and Geodetic Survey mark stamped J 346 1952 set at the junction of Laurel Street and the old U.S. Highway 95, at the city waterworks building, 151.7 feet northwest of and across the highway from the Northern Pacific Railway station, 30.9 feet north of the centerline of the highway, 18.3 feet west of the west curb of Laurel Street, 8.6 feet south of the southeast corner of the east-west concrete sidewalk, 2.0 feet west of the west edge of the north-south concrete sidewalk, and set in the top of a concrete post projecting 0.1 foot above the ground.
RM18*	2674.9	At Genesee, U.S. Geological Survey mark stamped S 2675 and set at the intersection of Walnut and First Streets, set vertically in the west end of the south face of the brick wall of the First Security Bank of Idaho, 3.5 feet southeast of the center of the main entrance, and 0.6 foot higher than the sidewalk.
RM19	2649.5	U.S. Coast and Geodetic Survey mark stamped T 346 1952 and located 1.0 mile southwest along the old U.S. Highway 95 from the Burlington Northern Railroad station at Genesee, at a railroad crossing, at the south end of a sharp turn, 101 feet south of the centerline of the railroad and the top of the southeast rail at the crossing, 64 feet southeast of the southeast rail, 40 feet southeast of the centerline of the highway, 2.5 feet southeast of the north-eastern gate post, 2.4 feet north of a witness post approximately 2.5 feet lower than the highway and set in the top of a concrete post projecting 0.5 foot above the ground.
RM20	2663.9	U.S. Coast and Geodetic Survey mark stamped G 346 1952 and located approximately 0.7 mile northeast along the old U.S. Highway 95 from the Burlington Northern Railroad station at Genesee, at the main entrance to the Jess Johnson Ranch, 34.5 feet west of the centerline of the highway, 21 feet northeast of the centerline of the driveway, 15.5 feet northeast of a fence corner post, 3.5 feet west of a telephone pole, 1.8 feet southeast of a fence, 2.4 feet northeast of a witness post, approximately 3 feet lower than the highway, and set in the top of a concrete post projecting 0.4 foot above the ground.

*LOCATED IN AREA NOT INCLUDED

500-Year Flood Boundary

100-Year Flood Boundary

Zone Designations* With Date of Identification
e.s., 12/2/74

100-Year Flood Boundary

500-Year Flood Boundary

Base Flood Elevation Line
With Elevation In Feet**

Base Flood Elevation In Feet
Where Uniform Within Zone**

Elevation Reference Mark

River Mile

ZONE B

ZONE A1
DATE

ZONE A5
DATE

ZONE B

513

(EL 987)

RM7 X

M1.5

**Referenced to the National Geodetic Vertical Datum of 1929

*EXPLANATION OF ZONE DESIGNATIONS	
ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
A0	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

This map is for flood insurance purposes only; it does not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.

For adjoining map panels, see separately printed Index To Map Panels.

INITIAL IDENTIFICATION:
NOVEMBER 8, 1974

FLOOD HAZARD BOUNDARY MAP REVISIONS:
JUNE 28, 1977

FLOOD INSURANCE RATE MAP EFFECTIVE:
AUGUST 15, 1980

FLOOD INSURANCE RATE MAP REVISIONS:

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE date shown on this map to determine when actuarial rates apply to structures in the zones where elevations or depths have been established.

To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program, at (800) 638-6620, or (800) 424-8872.

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

LATAH COUNTY, IDAHO
(UNINCORPORATED AREAS)

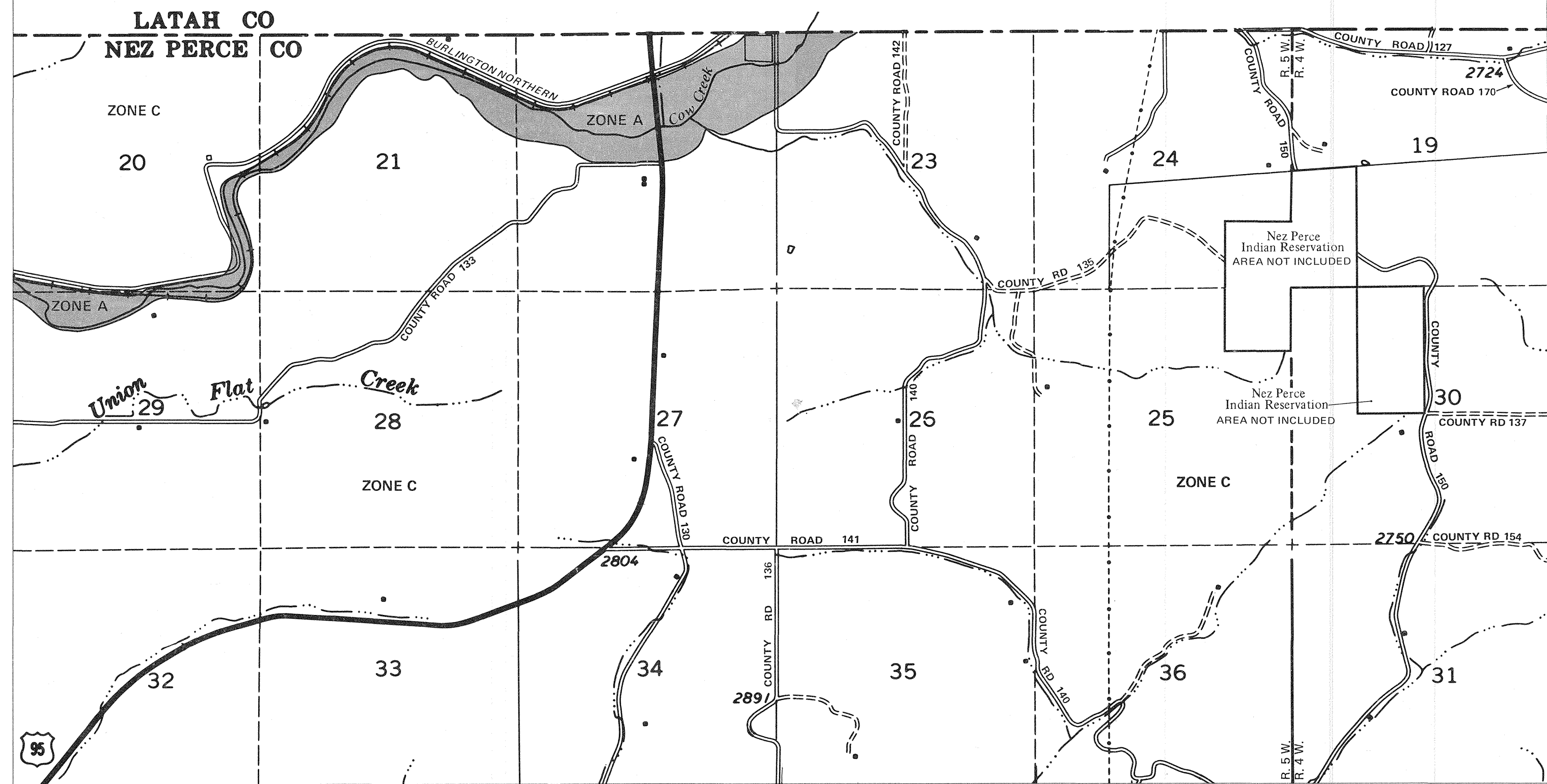
PANEL 445 OF 475
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
160086 0445 B

EFFECTIVE DATE:
AUGUST 15, 1980

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

JOINS PANEL 0025



JOINS PANEL 0200

KEY TO MAP

500-Year Flood Boundary
100-Year Flood Boundary
Zone Designations*

100-Year Flood Boundary
500-Year Flood Boundary

Base Flood Elevation Line
With Elevation In Feet**

Base Flood Elevation In Feet
Where Uniform Within Zone**

Elevation Reference Mark

Zone D Boundary

River Mile

513
(EL 987)

RM7X

M1.5

**Referenced to the National Geodetic Vertical Datum of 1929

***EXPLANATION OF ZONE DESIGNATIONS**

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
A0	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

This map is for flood insurance purposes only; it does not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.

For adjoining map panels, see separately printed Index To Map Panels.

INITIAL IDENTIFICATION:
OCTOBER 25, 1977

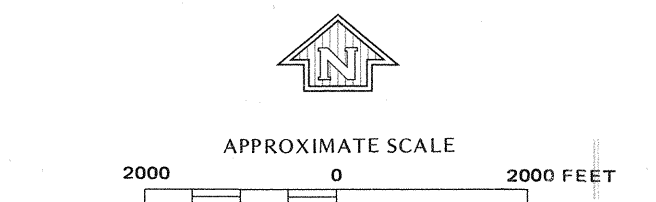
FLOOD HAZARD BOUNDARY MAP REVISIONS:

FLOOD INSURANCE RATE MAP EFFECTIVE:
APRIL 4, 1983

FLOOD INSURANCE RATE MAP REVISIONS:

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE date shown on this map to determine when actuarial rates apply to structures in the zones where elevations or depths have been established.

To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program, at (800) 638-6620.



NATIONAL FLOOD INSURANCE PROGRAM

**FIRM
FLOOD INSURANCE RATE MAP**

**NEZ PERCE COUNTY,
IDAHO
(UNINCORPORATED AREAS)**

PANEL 50 OF 725
(SEE MAP INDEX FOR PANELS NOT PRINTED)

**COMMUNITY-PANEL NUMBER
160101 0050 B**

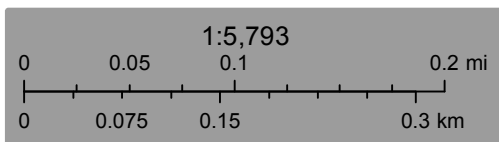
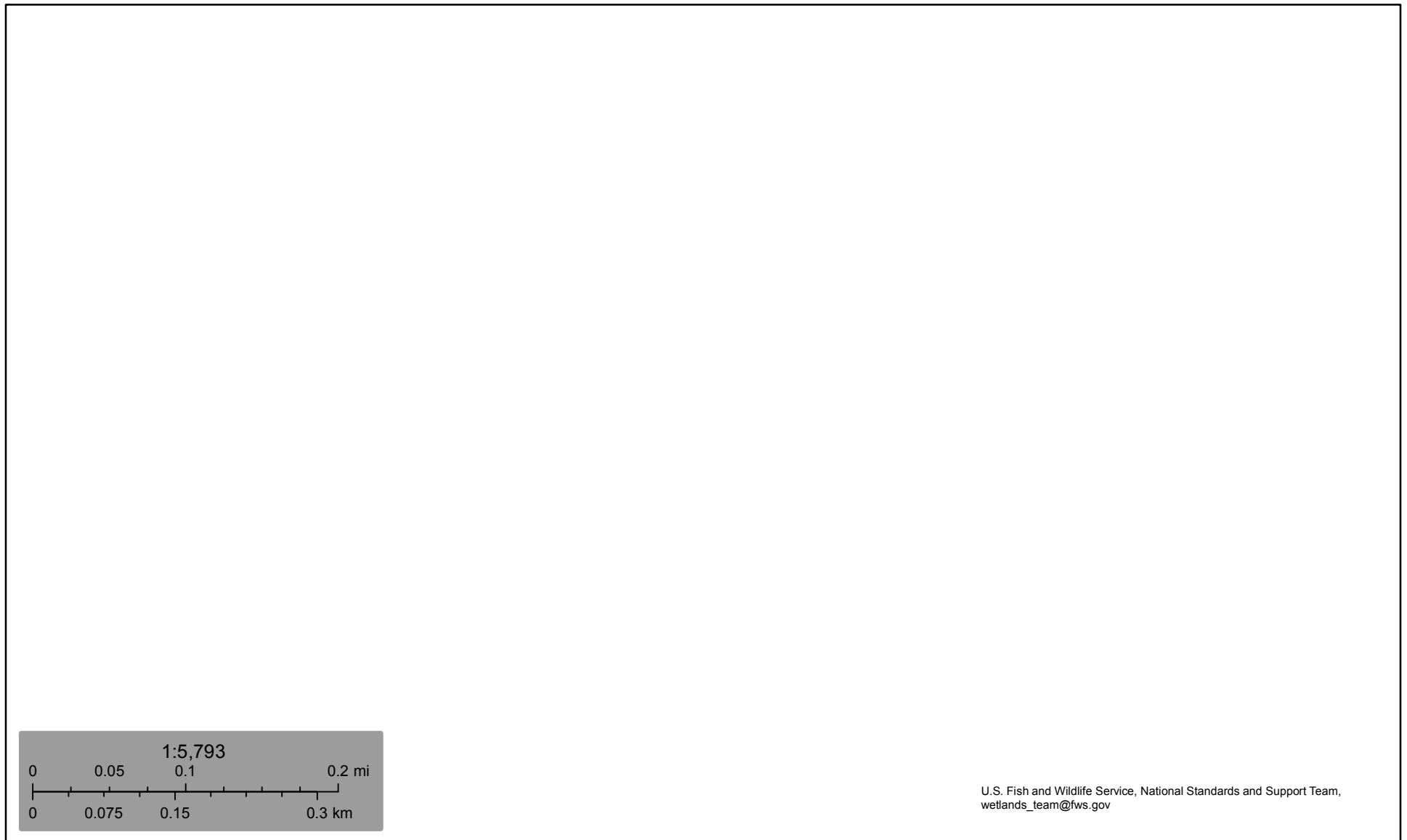
**EFFECTIVE DATE:
APRIL 4, 1983**

Federal Emergency Management Agency

Appendix C

USFWS Wetlands Map

Alternative 1



U.S. Fish and Wildlife Service, National Standards and Support Team,
wetlands_team@fws.gov

July 3, 2019

Wetlands

	Estuarine and Marine Deepwater		Freshwater Emergent Wetland		Lake
	Estuarine and Marine Wetland		Freshwater Forested/Shrub Wetland		Other
			Freshwater Pond		Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Appendix D

Initial Intergovernmental Agency Consultation Correspondence

August 8, 2019

Matt Halitsky, Architectural Historian
State Historic Preservation Office
210 Main St
Boise, ID 83702

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

Dear Matt Halitsky,

The City of Genesee has hired Mountain Waterworks to prepare a facility planning document to identify and make necessary improvements to their wastewater system that are cost-effective and environmentally sound. The facility plan for this project is being funded 50% by an Idaho Department of Environmental Quality (IDEQ) planning grant which requires compliance with the “Rules for Wastewater Treatment Facility Grants”, IDAPA 58.01.04. The purpose of this letter is to request your review and response regarding any environmental impacts that your agency may identify for this proposed project pursuant to the IDEQ’s State Environmental Review Process, which originates from the National Environmental Policy Act.

The purpose of this project is to:

1. Become compliant with the City’s National Discharge Pollutant Elimination System (NPDES) permit. The City is currently under an enforcement action from the Environmental Protection Agency (EPA) to improve their wastewater system.
2. Ensure future health and sustainability of the community and the surrounding environment.

The proposed project consists of:

1. In-place replacement of priority components of the collection system (manholes and sewer pipe). All work will be conducted within the existing footprint in previously disturbed areas.
2. Relocation and upgrade of the wastewater treatment facility. There are currently two possible locations to which the wastewater treatment system may be relocated. Both locations, identified as Alternative 1 and Alternative 2, are shown in the enclosed exhibits. Both alternatives will include excavation for the wastewater lagoons (treatment ponds) and connection to the existing sewer collection system. All areas of proposed land application are currently used for crop production and will remain so upon completion of this project.

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

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

If you have any questions concerning this proposed project or if you need any further information, please contact Emily Nicholas at Mountain Waterworks at 208-780-3990 or via email at enicholas@mountainwtr.com.

Sincerely,

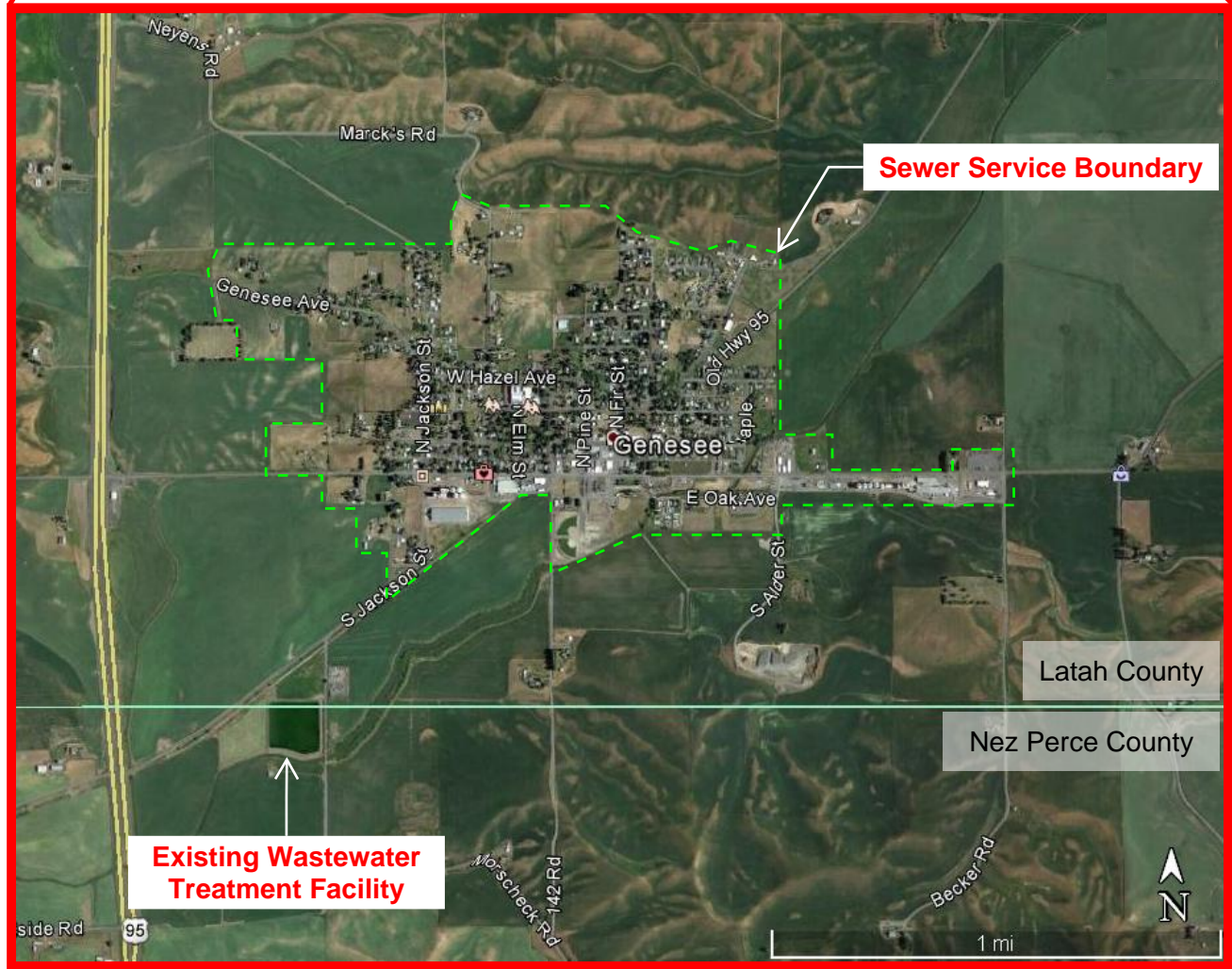
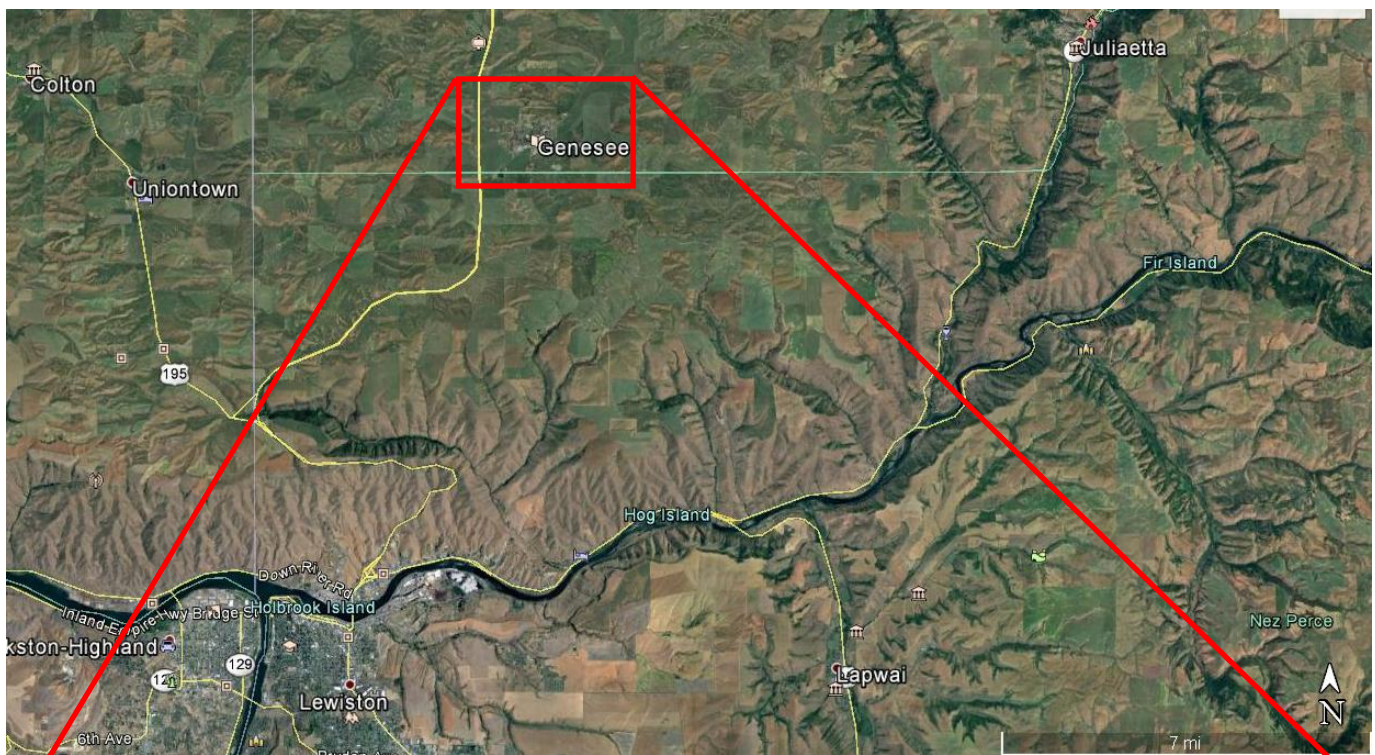
Mountain Waterworks, Project Consulting Engineer



Emily Nicholas, P.E.
Project Consulting Engineer

Attachments:

1. Exhibit 1: Project Location
2. Exhibit 2: Potential Project Sites for New Treatment Facility
3. Exhibit 3: Alternative 1: Wastewater Treatment Facility Relocation
4. Exhibit 4: Drainage Ditch within Potential Land Application Site (Alternative 1)
5. Exhibit 5: Alternative 2: Wastewater Treatment Facility Relocation
6. Exhibit 6: Collection System Improvements



ENGINEERING AND ENVIRONMENTAL SOLUTIONS
1161 W. RIVER ST. SUITE 130
BOISE, IDAHO 83702
208.780.3990

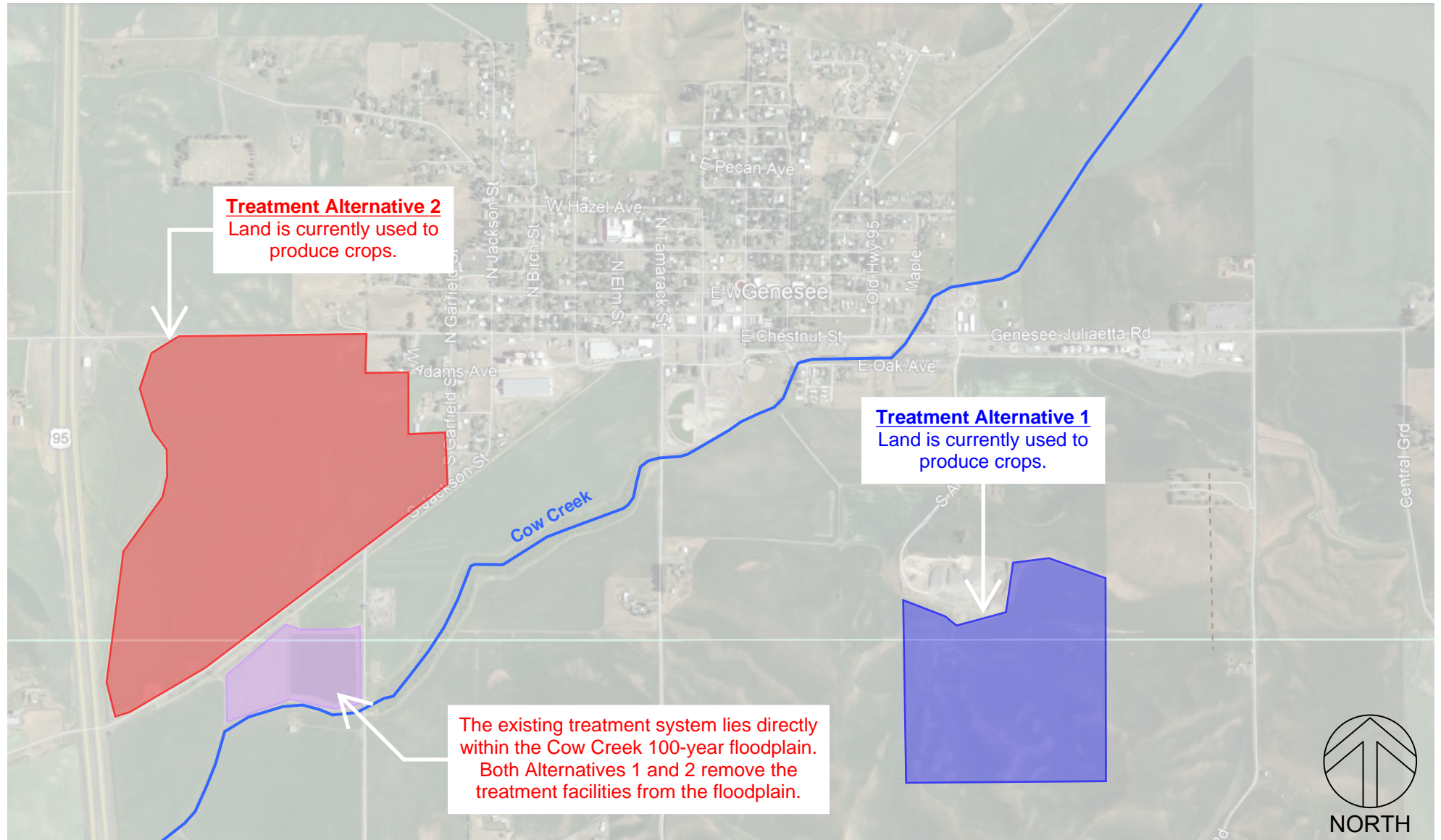
IDAHO OFFICES
BOISE · LEWISTON · COEUR D'ALENE

ENVIRONMENTAL REVIEW
GENESEE, IDAHO

PROJECT LOCATION

PROJECT NO.:
198.0040

SHEET NO.
EXHIBIT 1



ENGINEERING AND ENVIRONMENTAL SOLUTIONS
1161 W. RIVER ST. SUITE 130
BOISE, IDAHO 83702
208.780.3990

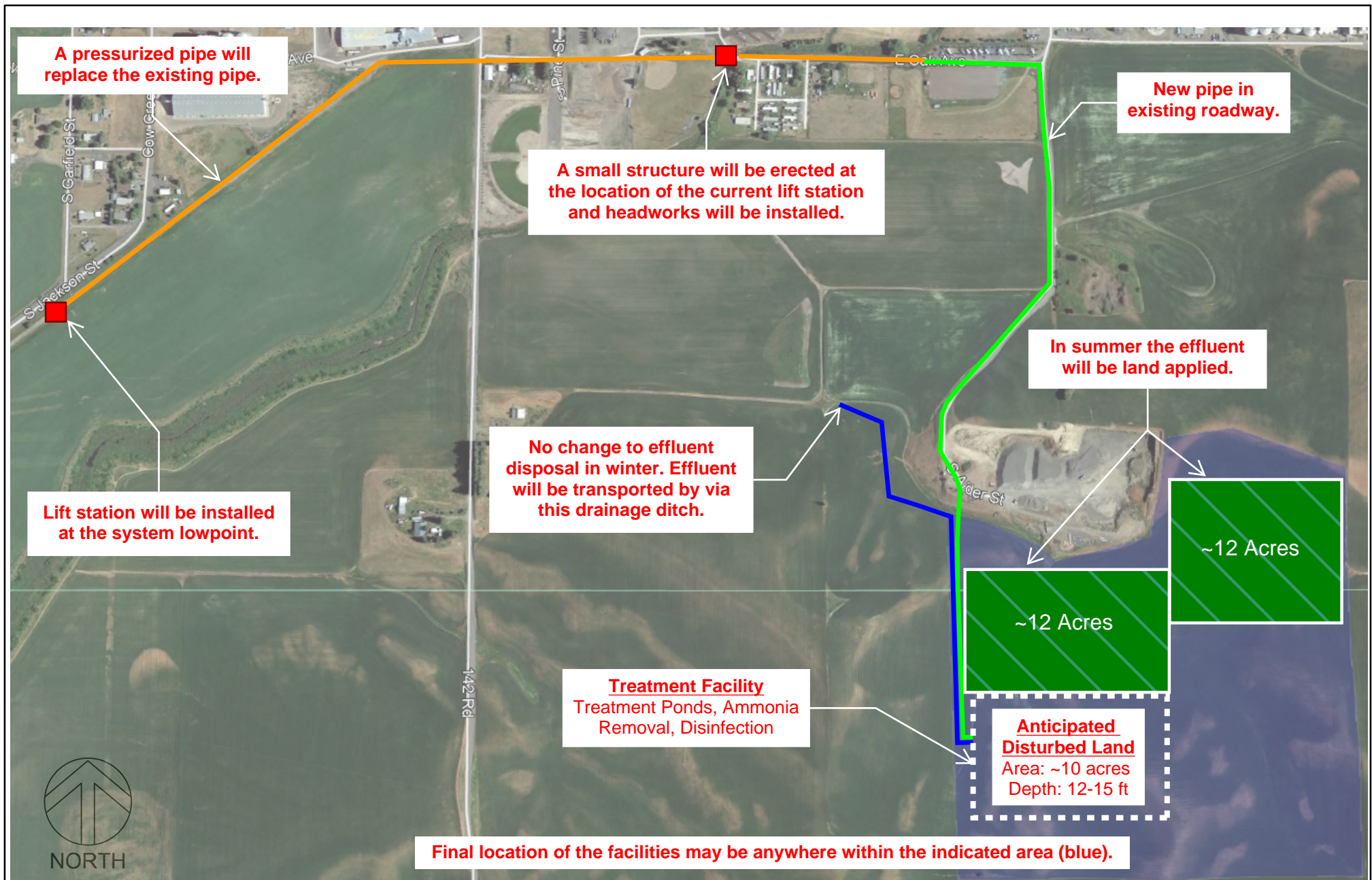
IDAHO OFFICES
BOISE · LEWISTON · COEUR D'ALENE

ENVIRONMENTAL REVIEW
GENESEE, IDAHO

POTENTIAL PROJECT SITES FOR NEW TREATMENT FACILITY

PROJECT NO.:
198.0040

SHEET NO.
EXHIBIT 2



ENGINEERING AND ENVIRONMENTAL SOLUTIONS
1161 W. RIVER ST. SUITE 130
BOISE, IDAHO 83702
208.780.3990

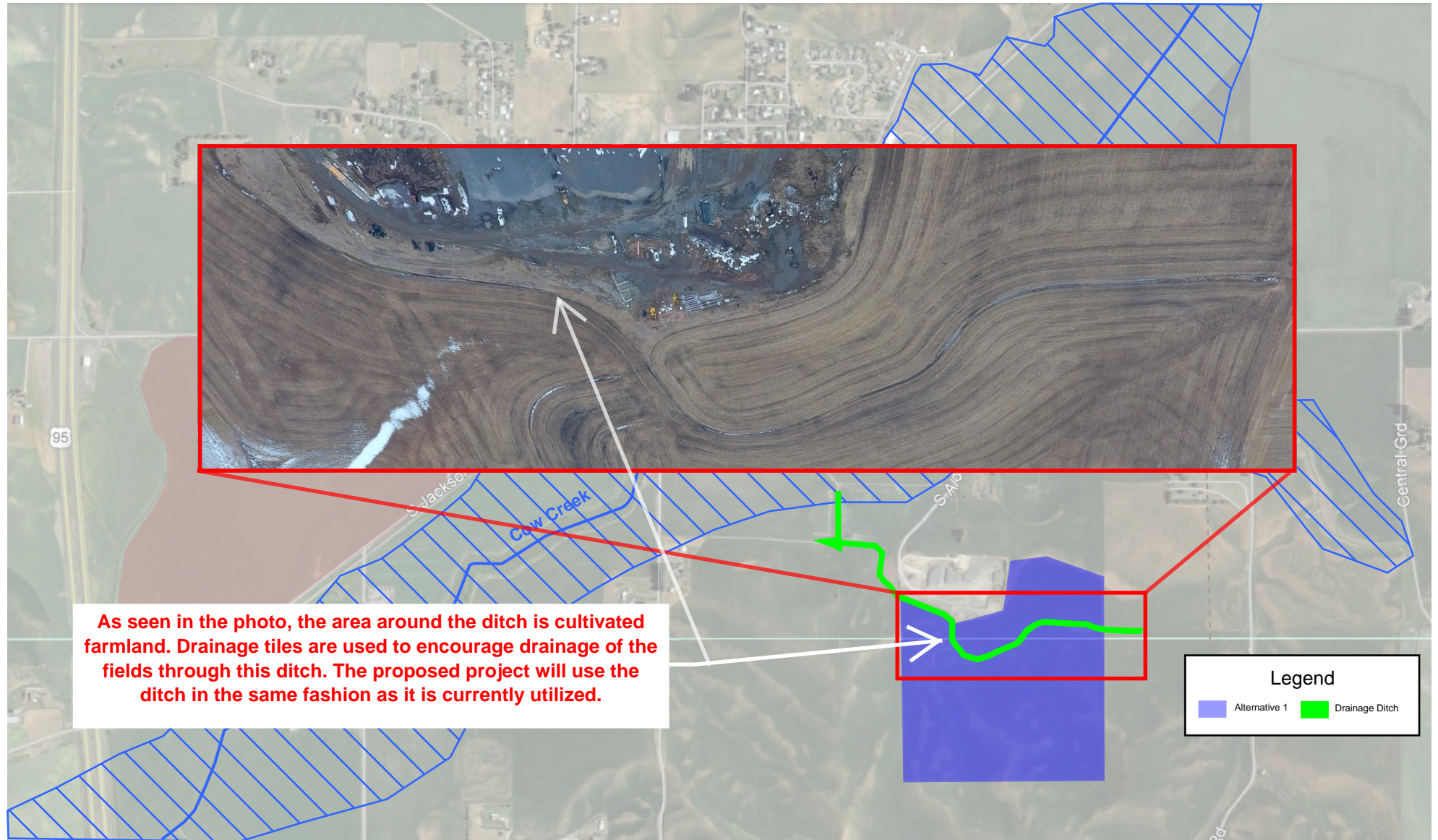
IDAHO OFFICES
BOISE · LEWISTON · COEUR D'ALENE

ENVIRONMENTAL REVIEW
GENESEE, IDAHO

ALTERNATIVE 1: WASTEWATER TREATMENT FACILITY RELOCATION

PROJECT NO.:
198.0040

SHEET NO.
EXHIBIT 3



ENGINEERING AND ENVIRONMENTAL SOLUTIONS
1161 W. RIVER ST. SUITE 130
BOISE, IDAHO 83702
208.780.3990

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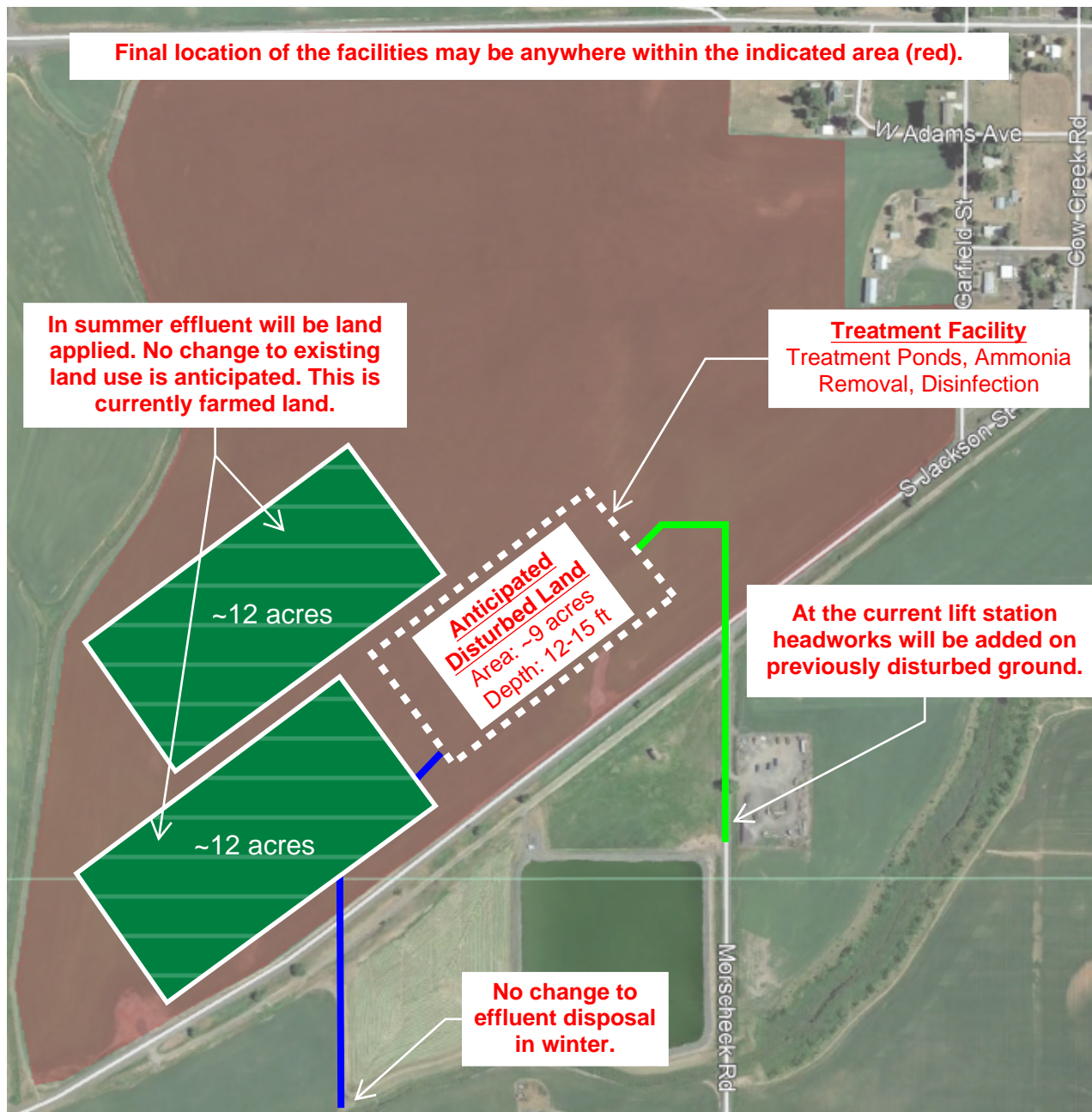
ENVIRONMENTAL REVIEW

GENESEE, IDAHO

DRAINAGE DITCH WITHIN POTENTIAL LAND APPLICATION SITE (ALTERNATIVE 1)

PROJECT NO.:
198.0040

SHEET NO.
EXHIBIT 4



ENGINEERING AND ENVIRONMENTAL SOLUTIONS
1161 W. RIVER ST. SUITE 130
BOISE, IDAHO 83702
208.780.3990

IDAHO OFFICES
BOISE · LEWISTON · COEUR D'ALENE

ENVIRONMENTAL REVIEW
GENESEE, IDAHO

ALTERNATIVE 2: WASTEWATER TREATMENT FACILITY RELOCATION

PROJECT NO.:
198.0040

SHEET NO.
EXHIBIT 5

August 8, 2019

Karen Kelly, Planner/Project Manager
United States Army Corps, Walla Walla District
201 N 3rd Ave
Walla Walla, WA 99362-1876

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

Dear Matt Halitsky,

The City of Genesee has hired Mountain Waterworks to prepare a facility planning document to identify and make necessary improvements to their wastewater system that are cost-effective and environmentally sound. The facility plan for this project is being funded 50% by an Idaho Department of Environmental Quality (IDEQ) planning grant which requires compliance with the “Rules for Wastewater Treatment Facility Grants”, IDAPA 58.01.04. The purpose of this letter is to request your review and response regarding any environmental impacts that your agency may identify for this proposed project pursuant to the IDEQ’s State Environmental Review Process, which originates from the National Environmental Policy Act.

The purpose of this project is to:

1. Become compliant with the City’s National Discharge Pollutant Elimination System (NPDES) permit. The City is currently under an enforcement action from the Environmental Protection Agency (EPA) to improve their wastewater system.
2. Ensure future health and sustainability of the community and the surrounding environment.

The proposed project consists of:

1. In-place replacement of priority components of the collection system (manholes and sewer pipe). All work will be conducted within the existing footprint in previously disturbed areas.
2. Relocation and upgrade of the wastewater treatment facility. There are currently two possible locations to which the wastewater treatment system may be relocated. Both locations, identified as Alternative 1 and Alternative 2, are shown in the enclosed exhibits. Both alternatives will include excavation for the wastewater lagoons (treatment ponds) and connection to the existing sewer collection system. All areas of proposed land application are currently used for crop production and will remain so upon completion of this project.

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

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

If you have any questions concerning this proposed project or if you need any further information, please contact Emily Nicholas at Mountain Waterworks at 208-780-3990 or via email at enicholas@mountainwtr.com.

Sincerely,

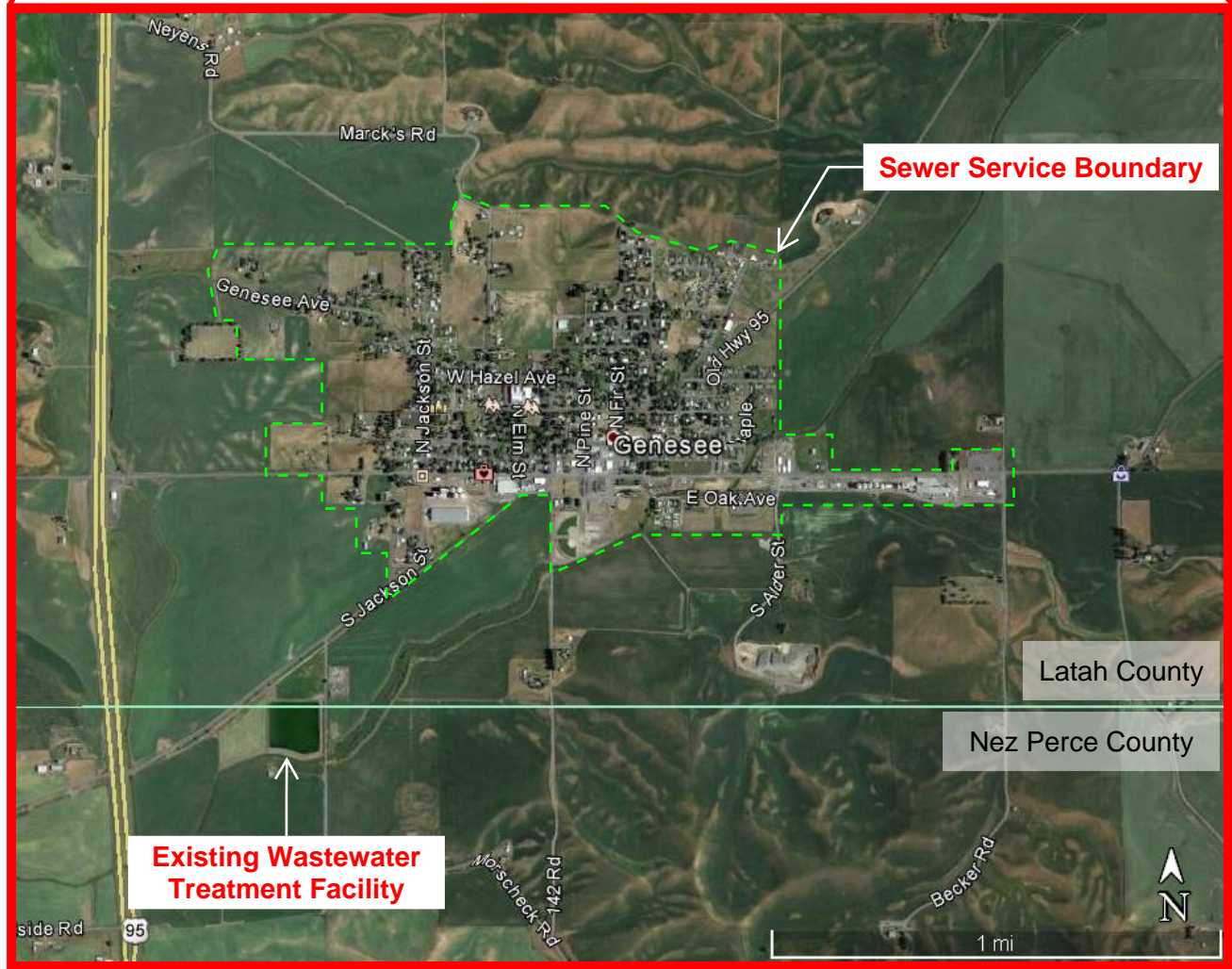
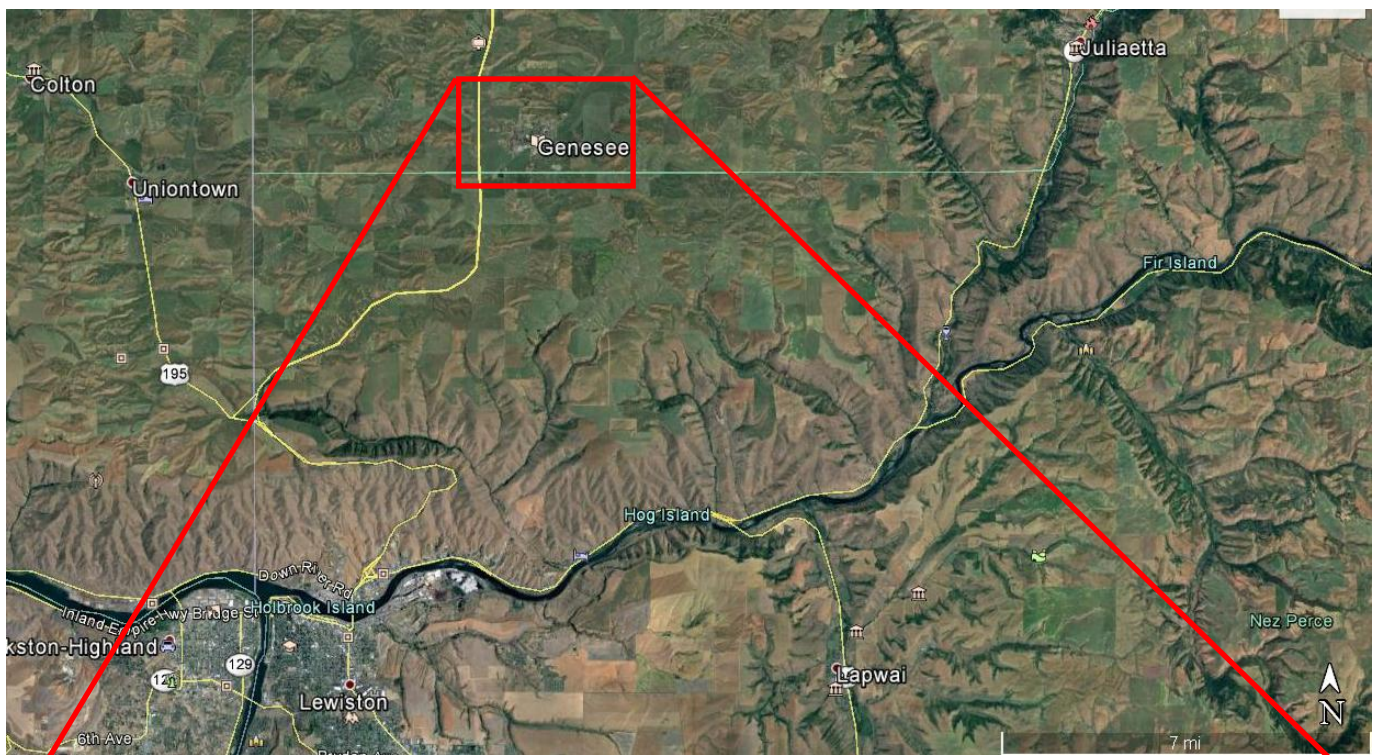
Mountain Waterworks, Project Consulting Engineer



Emily Nicholas, P.E.
Project Consulting Engineer

Attachments:

1. Exhibit 1: Project Location
2. Exhibit 2: Potential Project Sites for New Treatment Facility
3. Exhibit 3: Alternative 1: Wastewater Treatment Facility Relocation
4. Exhibit 4: Drainage Ditch within Potential Land Application Site (Alternative 1)
5. Exhibit 5: Alternative 2: Wastewater Treatment Facility Relocation
6. Exhibit 6: Collection System Improvements



ENGINEERING AND ENVIRONMENTAL SOLUTIONS
1161 W. RIVER ST. SUITE 130
BOISE, IDAHO 83702
208.780.3990

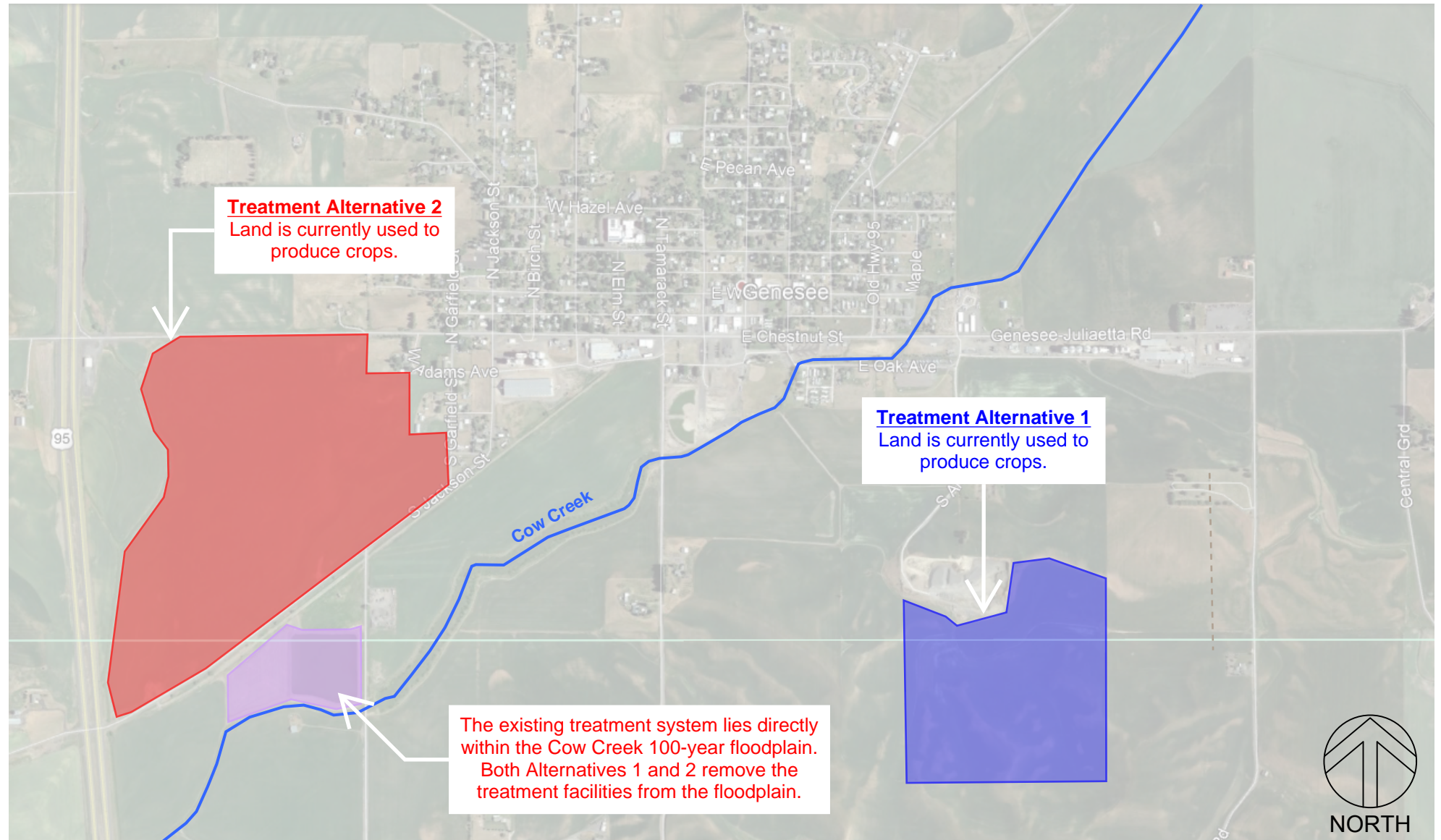
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ENVIRONMENTAL REVIEW
GENESEE, IDAHO

PROJECT LOCATION

PROJECT NO.:
198.0040

SHEET NO.
EXHIBIT 1



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1161 W. RIVER ST. SUITE 130
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208.780.3990

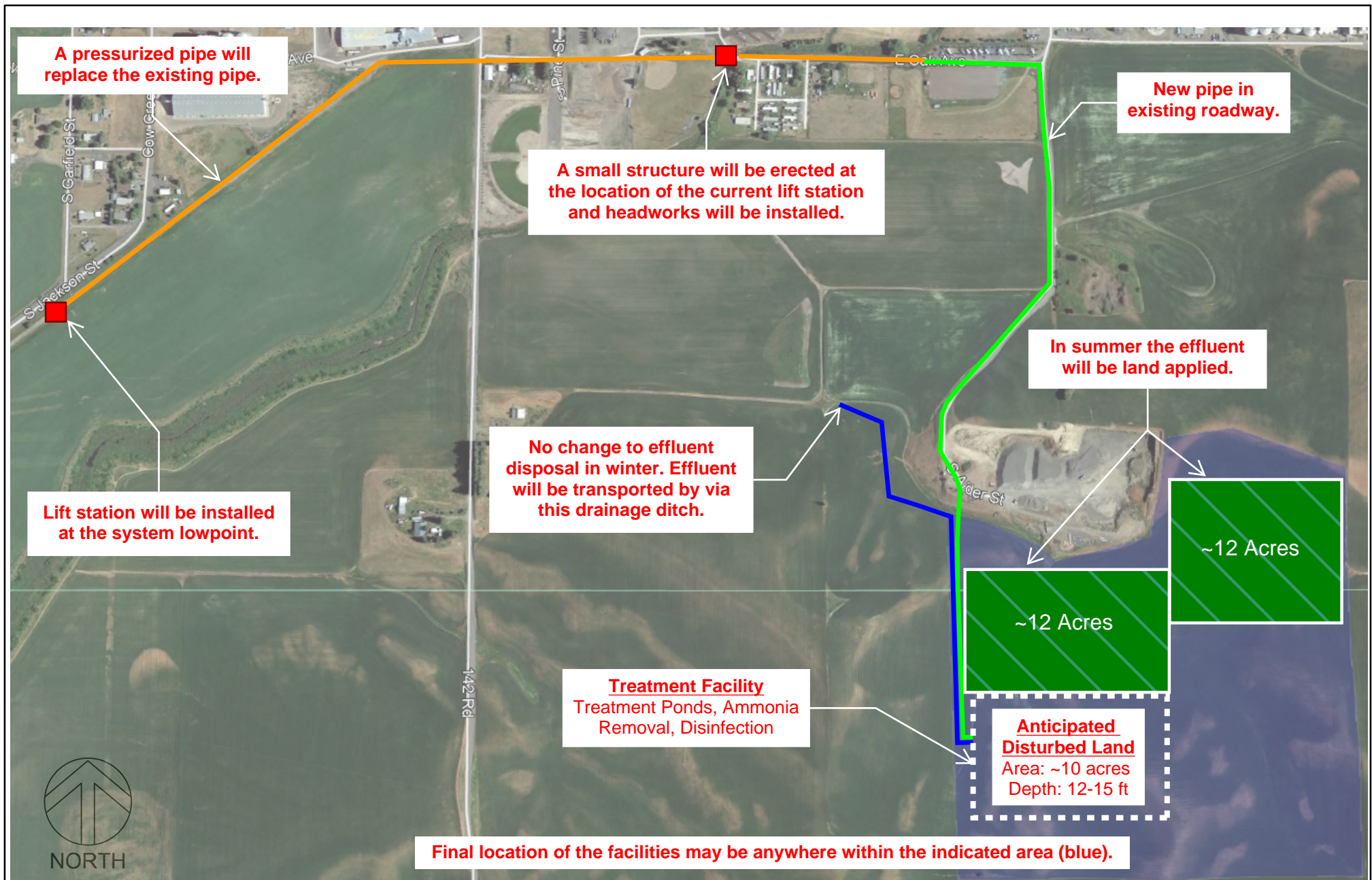
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ENVIRONMENTAL REVIEW
GENESEE, IDAHO

POTENTIAL PROJECT SITES FOR NEW TREATMENT FACILITY

PROJECT NO.:
198.0040

SHEET NO.
EXHIBIT 2



ENGINEERING AND ENVIRONMENTAL SOLUTIONS
1161 W. RIVER ST. SUITE 130
BOISE, IDAHO 83702
208.780.3990

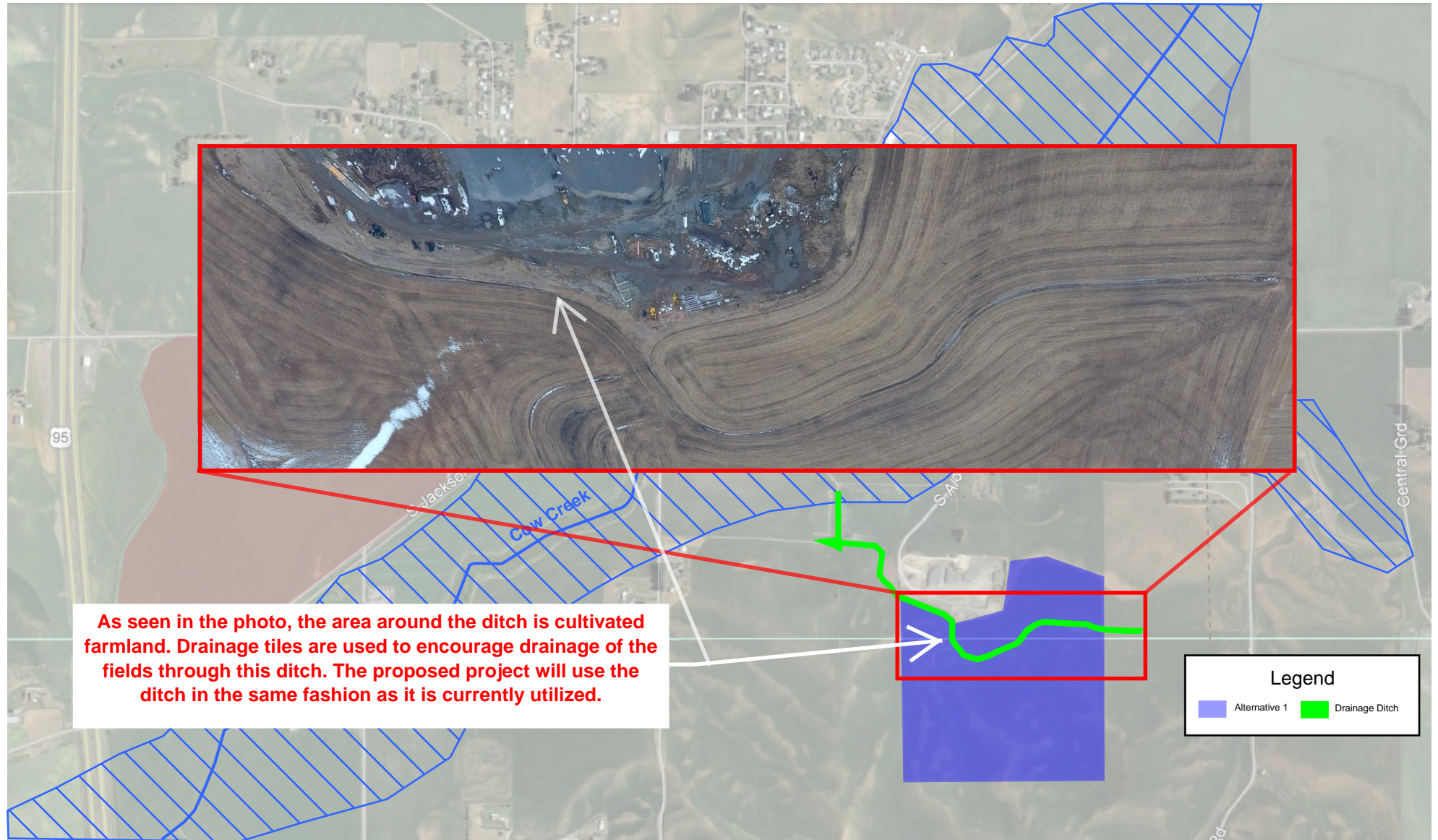
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ENVIRONMENTAL REVIEW
GENESEE, IDAHO

ALTERNATIVE 1: WASTEWATER TREATMENT FACILITY RELOCATION

PROJECT NO.:
198.0040

SHEET NO.
EXHIBIT 3



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BOISE, IDAHO 83702
208.780.3990

IDAHO OFFICES
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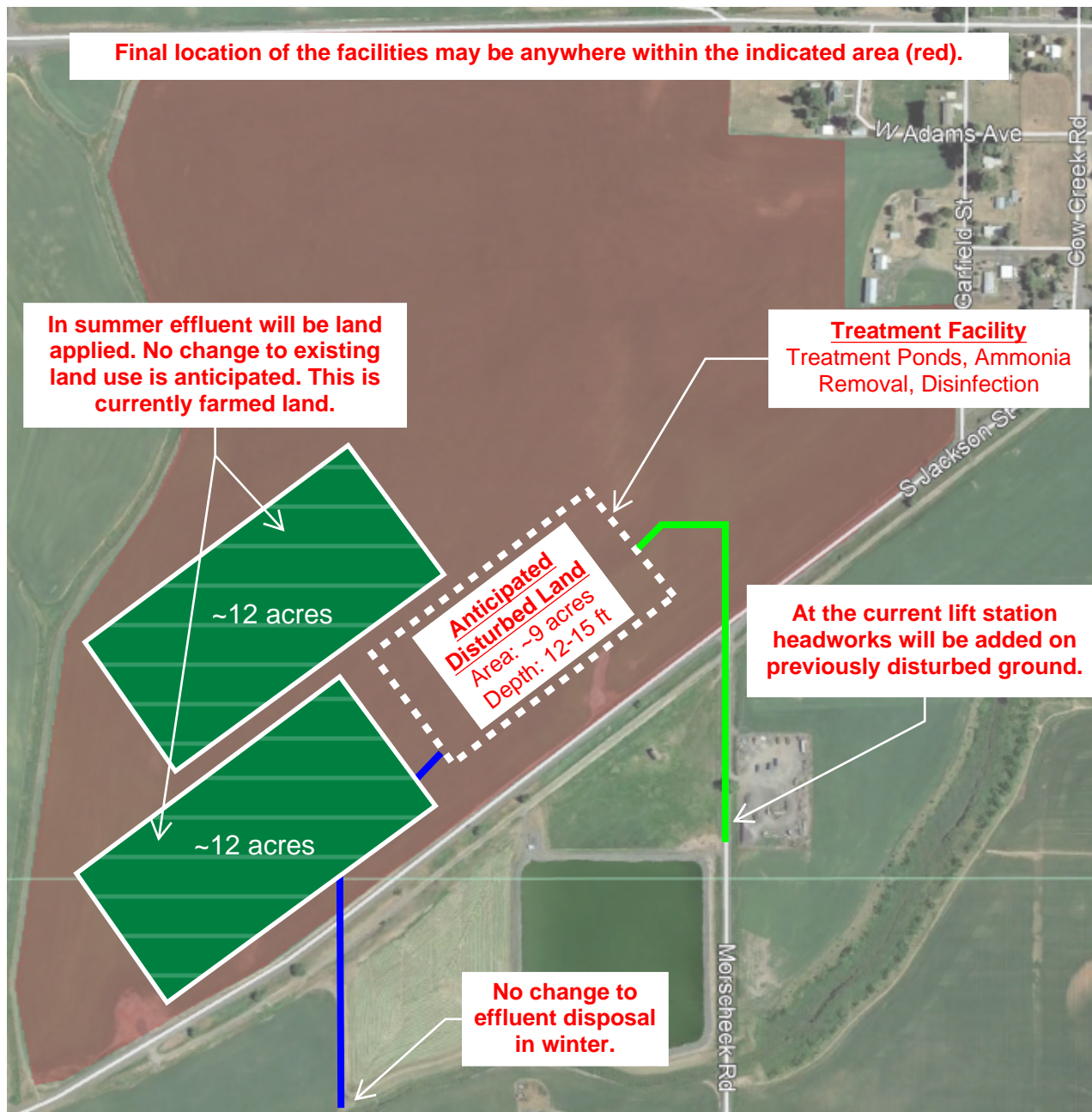
ENVIRONMENTAL REVIEW

GENESEE, IDAHO

DRAINAGE DITCH WITHIN POTENTIAL LAND APPLICATION SITE (ALTERNATIVE 1)

PROJECT NO.:
198.0040

SHEET NO.
EXHIBIT 4



ENGINEERING AND ENVIRONMENTAL SOLUTIONS
1161 W. RIVER ST. SUITE 130
BOISE, IDAHO 83702
208.780.3990

IDAHO OFFICES
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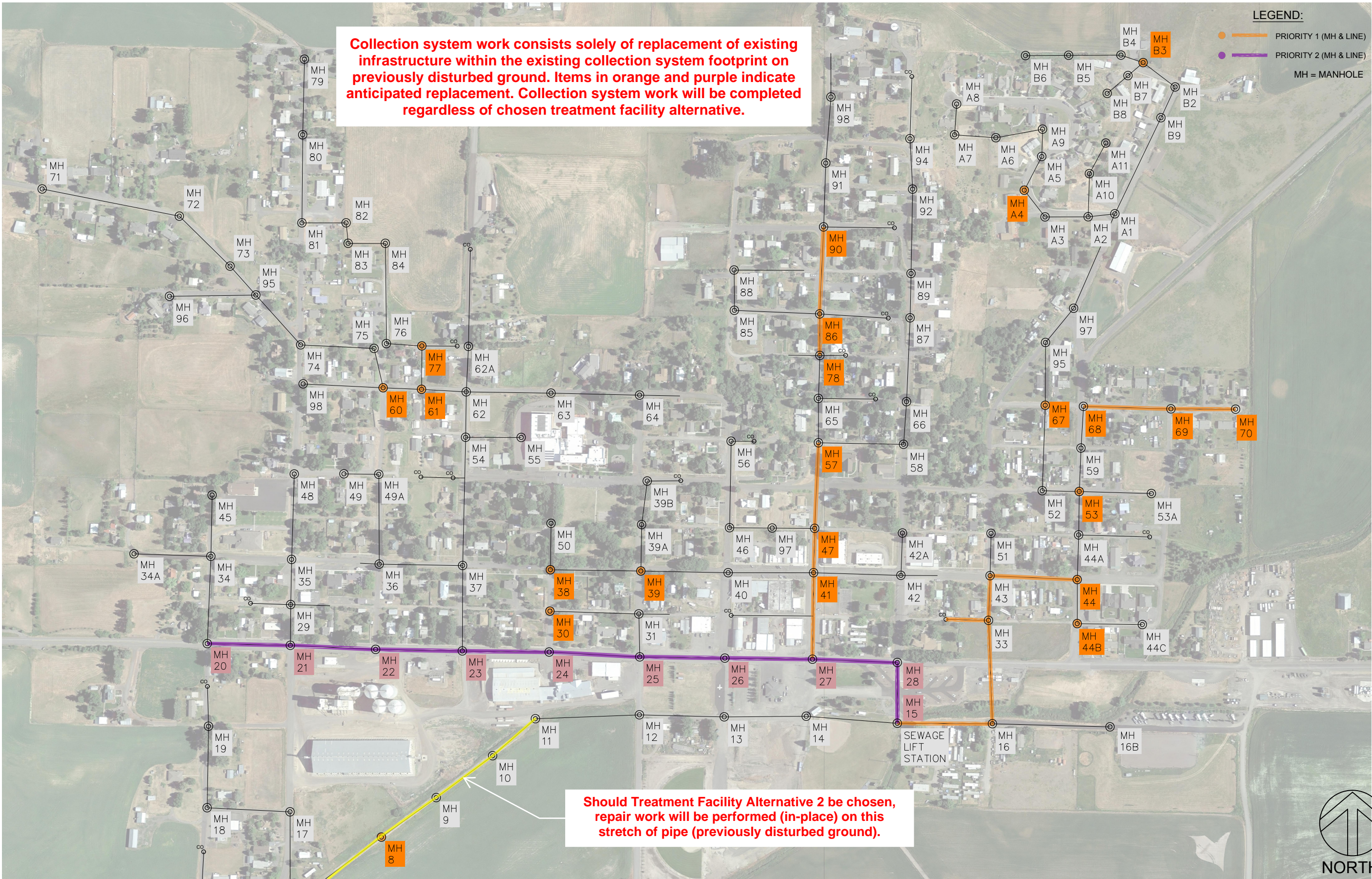
ENVIRONMENTAL REVIEW
GENESEE, IDAHO

ALTERNATIVE 2: WASTEWATER TREATMENT FACILITY RELOCATION

PROJECT NO.:
198.0040

SHEET NO.
EXHIBIT 5

Path: B:\Projects\EE-H\Geneese_198\0040 Facility Plan\CS\SD\Geneese_Priority 02.dwg File Name: Geneese_Priority 02.dwg Plot Date: 7/15/2019 4:34 PM Due



PROJECT 198.0040.01
DATE 4/02/2019
FIGURE NO.

EXHIBIT 6



ENGINEERING AND ENVIRONMENTAL SOLUTIONS
111 MAIN ST. SUITE 175
LEWISTON, IDAHO 83501
208.780.3990

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ENVIRONMENTAL REVIEW
GENESEE, IDAHO

COLLECTION SYSTEM IMPROVEMENTS



STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, Idaho 83706 • (208) 373-0502
www.deq.idaho.gov

Governor Brad Little
Director John H. Tippetts

August 12, 2019

CERTIFIED MAIL NO: 7000 0520 0016 4833 2568
RETURN RECEIPT REQUESTED

Mr. Patrick Baird, THPO/Archaeologist
Nez Perce Tribe
Cultural Resource Program
PO Box 365
Lapwai, ID 83540-0365

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

Dear Mr. Baird:

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

The proposed project consists of:

- In-place replacement of priority components of the collection system (manholes and sewer pipe). All work will be conducted within the existing footprint in previously disturbed areas.
- Relocation and upgrade of the wastewater treatment facility. There are currently two possible locations to which the wastewater treatment system may be relocated. Both locations, identified as Alternative 1 and Alternative 2, are shown in the enclosed exhibits. Both alternatives will include excavation for the wastewater lagoons (treatment ponds) and connection to the existing sewer collection system. All areas of proposed land application are currently used for crop production and will remain so upon completion of this project.

City of Genesee Wastewater System Improvement Project – Request for Comments for Preparation of an
Environmental Information Document
Mr. Patrick Baird, THPO/Archaeologist
Nez Perce Tribe
August 12, 2019
Page 2

The project is being proposed to bring the system into compliance with the City's National Discharge Pollutant Elimination System (NPDES) permit. The City is currently under an enforcement action from the Environmental Protection Agency (EPA) to improve their wastewater system. Enclosed are maps of the proposed project planning area that depict the proposed project improvements and area of potential effect for all construction activities.

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

If you have any questions concerning this proposed project or if you need any further information, please feel free to contact Adam Oliver at (208) 373-0406 or adam.oliver@deq.idaho.gov.

Sincerely,

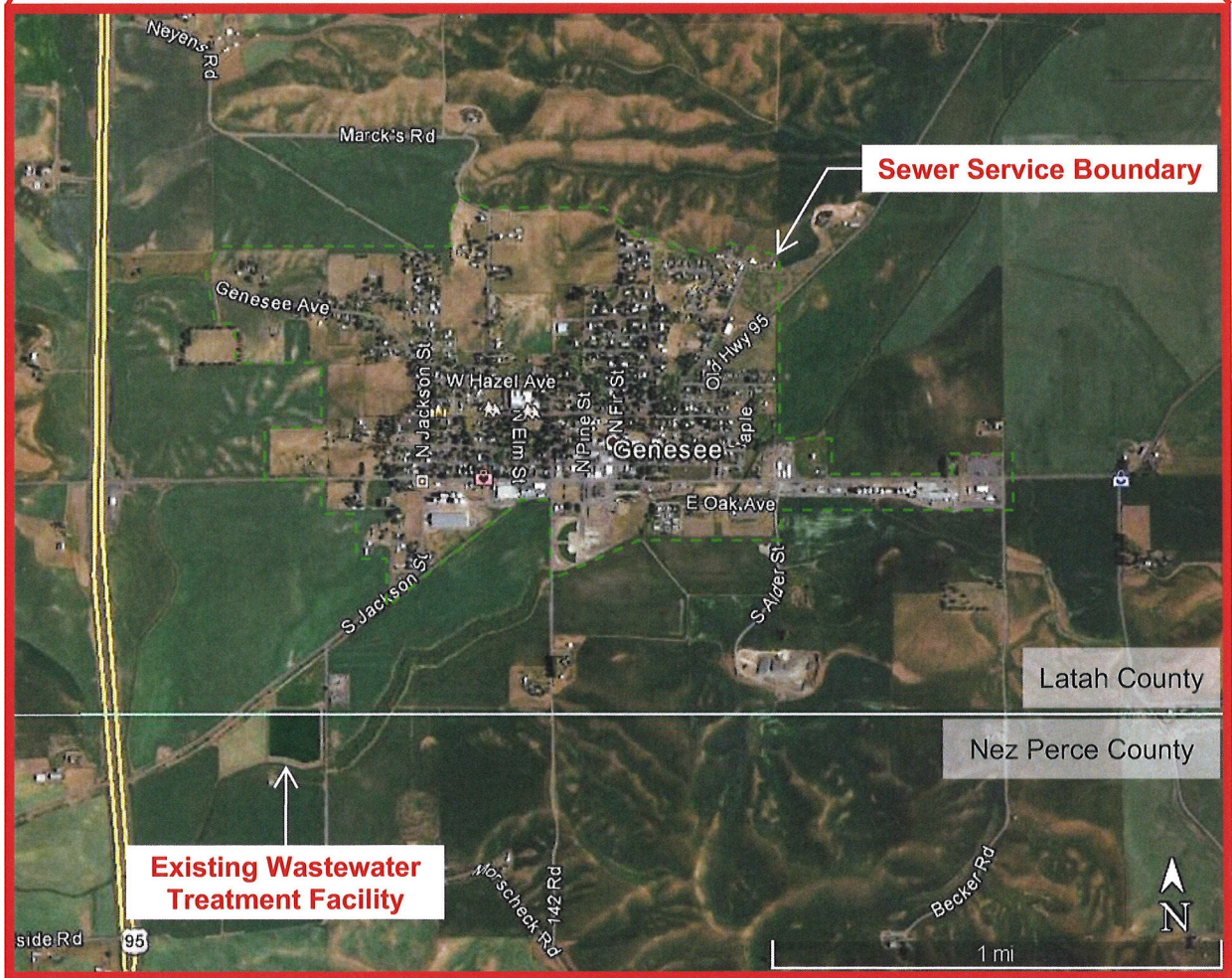
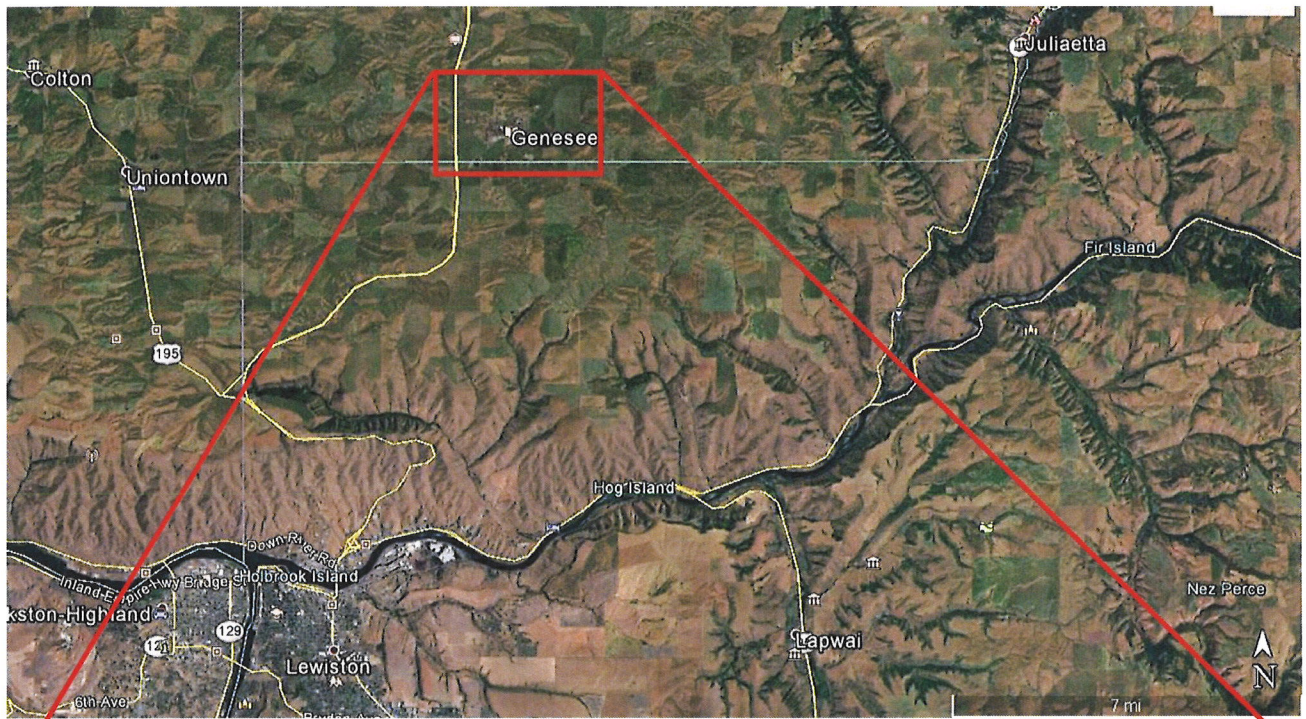
A handwritten signature in black ink, appearing to be 'Adam Oliver', written over a horizontal line.

Adam Oliver
Grants and Loan Analyst

AO:tg

Enclosed: Maps

File: 2019ALP155, 2019ALP156



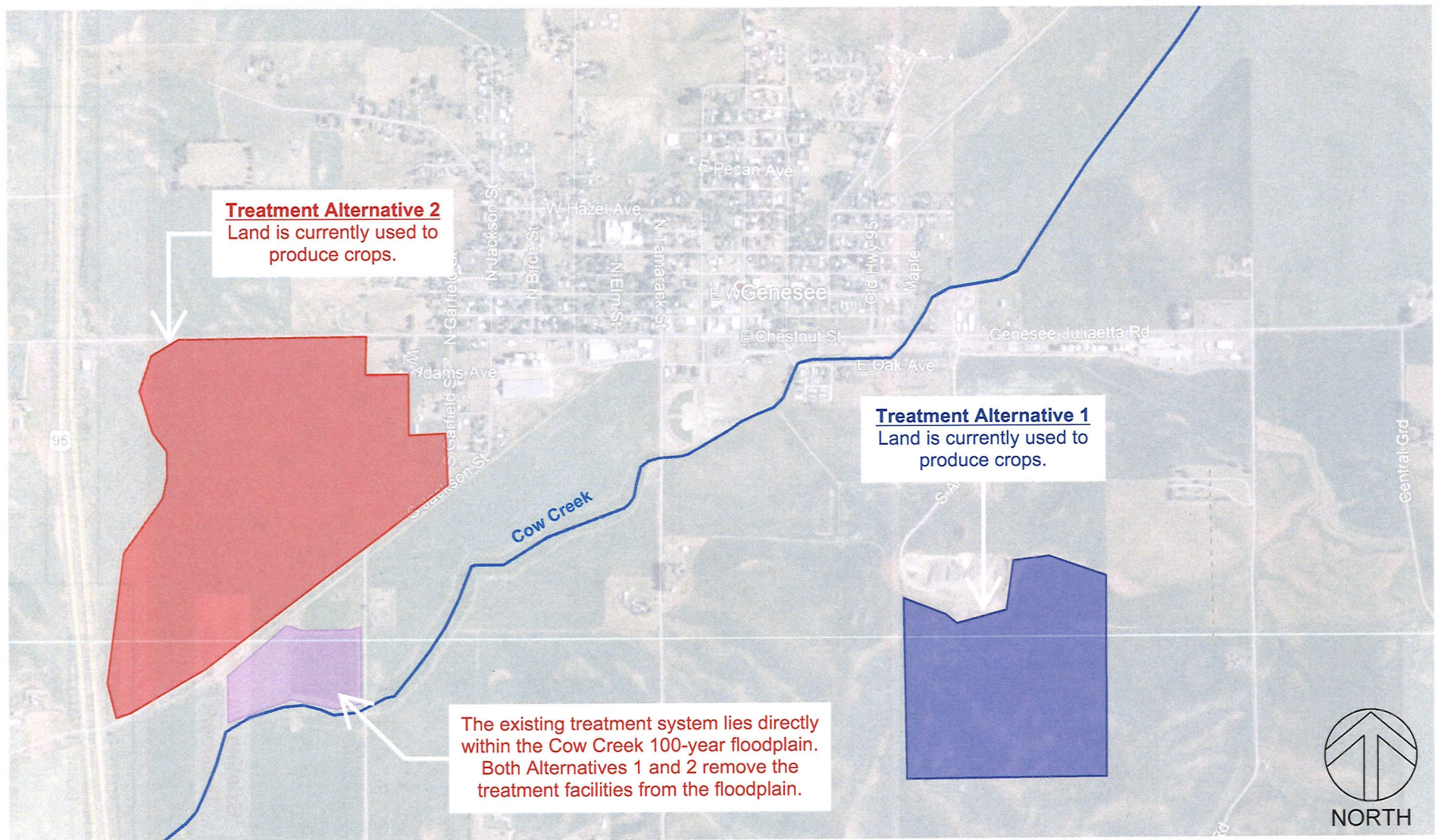
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BOISE, IDAHO 83702
208.780.3990

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ENVIRONMENTAL REVIEW
GENESEE, IDAHO

PROJECT LOCATION

PROJECT NO.:
198.0040
SHEET NO.
EXHIBIT 1



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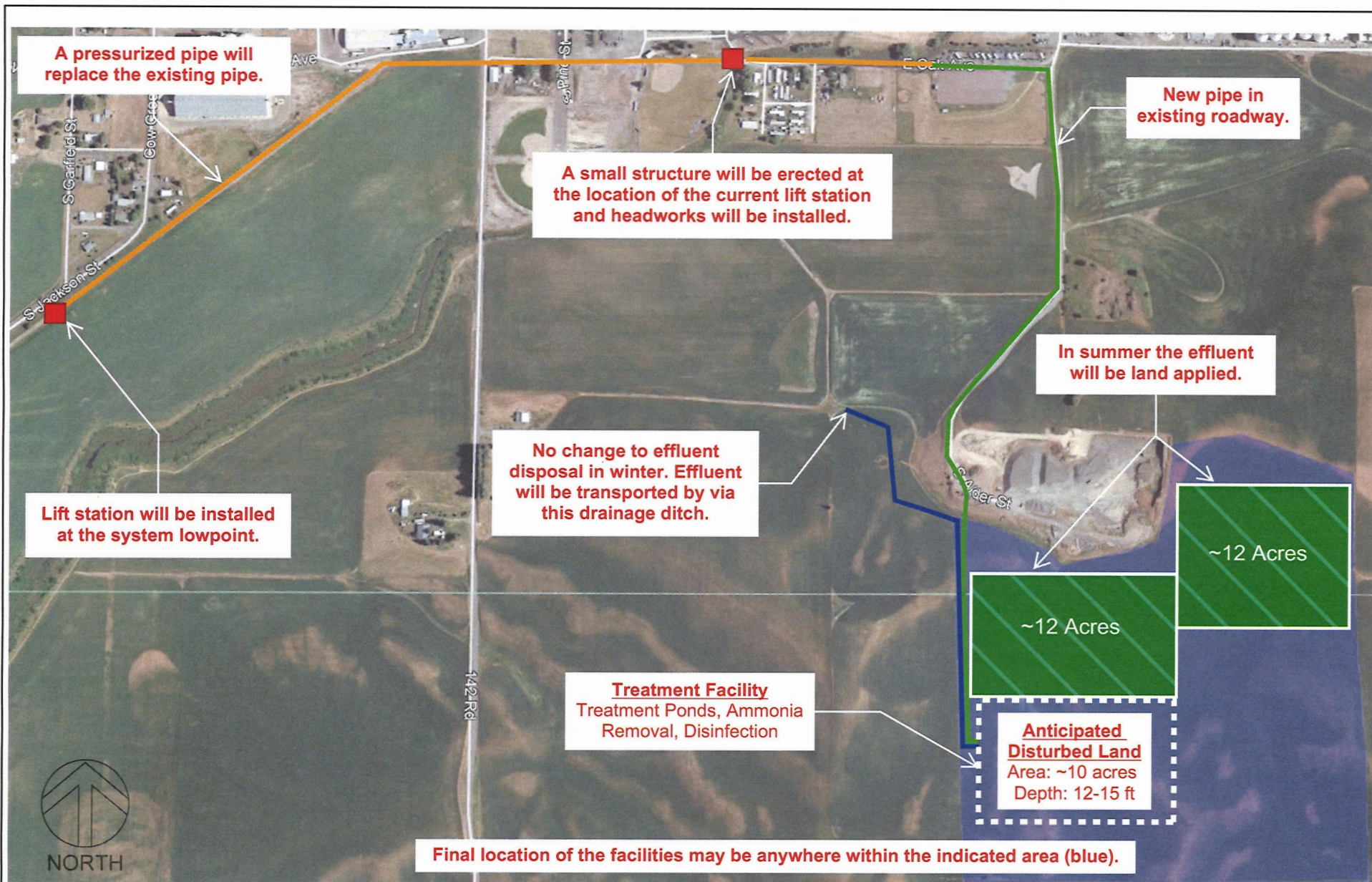
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ENVIRONMENTAL REVIEW GENESEE, IDAHO

POTENTIAL PROJECT SITES FOR NEW TREATMENT FACILITY

PROJECT NO.:
198.0040

SHEET NO.
EXHIBIT 2



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208.780.3990

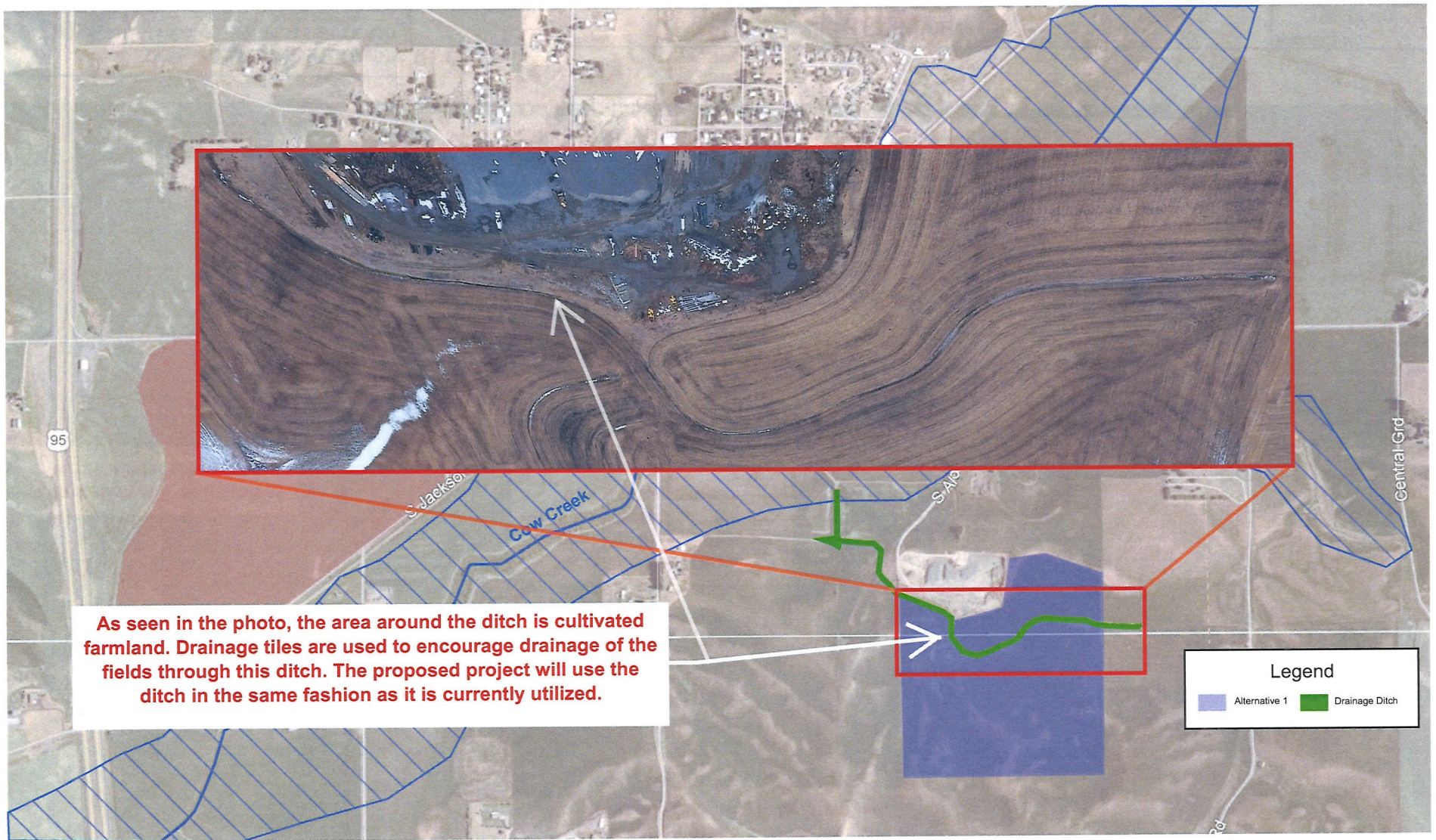
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ENVIRONMENTAL REVIEW
GENESEE, IDAHO

ALTERNATIVE 1: WASTEWATER TREATMENT FACILITY RELOCATION

PROJECT NO.:
198.0040

SHEET NO.
EXHIBIT 3



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208.780.3990

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ENVIRONMENTAL REVIEW

GENESEE, IDAHO

DRAINAGE DITCH WITHIN POTENTIAL LAND APPLICATION SITE (ALTERNATIVE 1)

PROJECT NO.:
198.0040

SHEET NO.
EXHIBIT 4

Final location of the facilities may be anywhere within the indicated area (red).

In summer effluent will be land applied. No change to existing land use is anticipated. This is currently farmed land.

Treatment Facility
Treatment Ponds, Ammonia Removal, Disinfection

Anticipated Disturbed Land
Area: ~9 acres
Depth: 12-15 ft

At the current lift station headworks will be added on previously disturbed ground.

~12 acres

~12 acres

No change to effluent disposal in winter.



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1161 W. RIVER ST. SUITE 130
BOISE, IDAHO 83702
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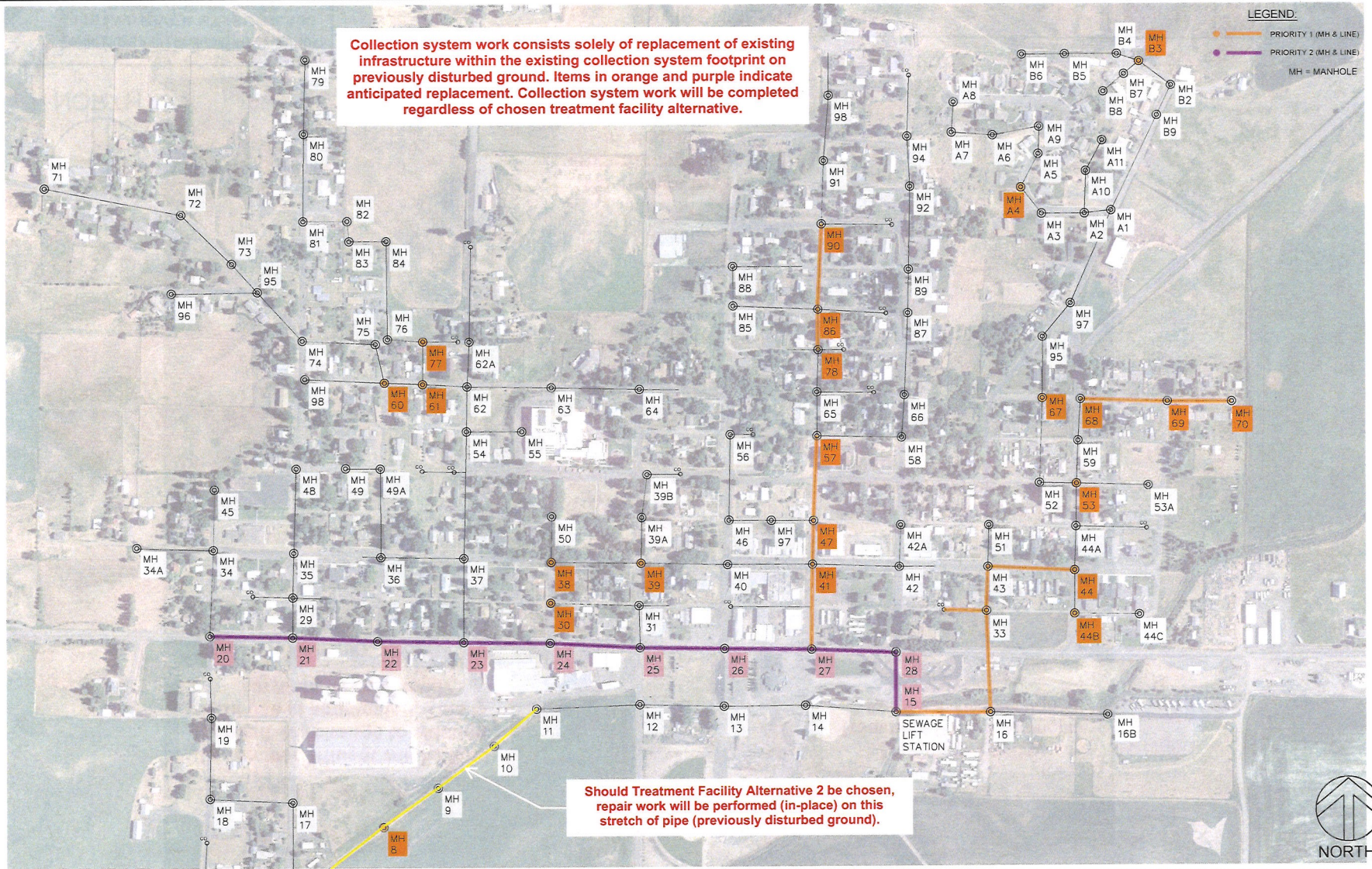
ENVIRONMENTAL REVIEW
GENESEE, IDAHO

ALTERNATIVE 2: WASTEWATER TREATMENT FACILITY RELOCATION

PROJECT NO.:
198.0040

SHEET NO.
EXHIBIT 5

Path: B:\Projects\2019\198-0040-01\198-0040-01_Plan\198-0040-01_Plan_425040-01.dwg Plot Date: 1/15/2019 1:14 PM User: [redacted]



PROJECT 198-0040-01
DATE 4/02/2019
FIGURE NO
EXHIBIT 6

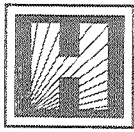


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ENVIRONMENTAL REVIEW
GENESEE, IDAHO
COLLECTION SYSTEM IMPROVEMENTS

Appendix E

Correspondence with SHPO



IDAHO STATE
HISTORICAL
SOCIETY

September 5, 2019



Brad Little
Governor of Idaho

Janet Gallimore
Executive Director
State Historic
Preservation Officer

Administration:
2205 Old Penitentiary Rd.
Boise, Idaho 83712
208.334.2682
Fax: 208.334.2774

Idaho State Museum:
610 Julia Davis Dr.
Boise, Idaho 83702
208.334.2120

**Idaho State Archives
and State Records
Center:**
2205 Old Penitentiary Rd.
Boise, Idaho 83712
208.334.2620

**State Historic
Preservation Office:**
210 Main St.
Boise, Idaho 83702
208.334.3861

**Old Idaho Penitentiary
and Historic Sites:**
2445 Old Penitentiary Rd.
Boise, Idaho 83712
208.334.2844

HISTORY.IDAHO.GOV

Emily Nicholas
Mountain Waterworks
1161 W. River St, Suite 130
Boise, Idaho 83702

**Re: City of Genesee Wastewater Treatment Relocation Project, Idaho /
SHPO Review No.: 2019-919**

Dear Ms. Nicholas

Thank you for consulting with our office on the above referenced project. We understand the scope of the work includes improvements to the City of Genesee wastewater treatment system, located within Latah and Nez Perce Counties, Idaho.

Based on the information received 12 August 2019, our office is concerned the proposed project actions may have the potential to affect historic properties. Additional information is requested in order for our office to complete evaluation and review of the undertaking. We recommend a cultural resources survey be conducted within the proposed project footprint to include either Treatment Alternative 1 or Treatment Alternative 2 depending on whichever is selected. Furthermore, an archaeological survey is recommended for the new pipeline along S. Alder Street and E. Oak Avenue, and at each of the proposed structure or lift stations. Based on the data received by our office, the remaining work to be performed includes the replacement of existing sewer pipe within the established paved road and therefore these areas would not require additional surveys.

We appreciate you consulting with our office and look forward to receiving a report which documents the results of the survey and provides an overall recommendation regarding effect. The report and site forms should be prepared to the standards outlined in the "Consulting with the Idaho SHPO" guidelines, available here: https://history.idaho.gov/wp-content/uploads/2018/07/Consulting_With_Idaho_SHPO.pdf. The fieldwork and reporting needs to be conducted by a qualified professional that meets the Secretary of Interior Standards for archaeology.

A list of qualified professionals can be found on Preservations Idaho's website. You can find a list of qualified professionals on Preservations Idaho's website at <https://history.idaho.gov/section-106/hiring-a-consultant>. This list is provided as a courtesy by Preservation Idaho to those interested in hiring cultural resource.

consultants. Inclusion on this list should not be viewed as an endorsement or recommendation by Preservation Idaho; ultimately it is up to the hirer to confirm that the consultant meets the Secretary of the Interior's Professional Qualification Standards.

If you have any questions, don't hesitate to contact me at chris.shaver@ishs.idaho.gov or (208) 488-7467.

Sincerely,



Christopher L. Shaver
Compliance Archaeologist
Idaho State Historic Preservation Office



IDAHO STATE
HISTORICAL
SOCIETY

January 21, 2020



Brad Little
Governor of Idaho

Janet Gallimore
Executive Director
State Historic
Preservation Officer

Administration:
2205 Old Penitentiary Rd.
Boise, Idaho 83712
208.334.2682
Fax: 208.334.2774

Idaho State Museum:
610 Julia Davis Dr.
Boise, Idaho 83702
208.334.2120
**Idaho State Archives
and State Records
Center:**

2205 Old Penitentiary Rd.
Boise, Idaho 83712
208.334.2620

**State Historic
Preservation Office:**
210 Main St.
Boise, Idaho 83702
208.334.3861

**Old Idaho Penitentiary
and Historic Sites:**
2445 Old Penitentiary Rd.
Boise, Idaho 83712
208.334.2844

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208.334.3730
208.334.3710
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208.334.3710
208.334.3710

Emily Nicholas
Mountain Waterworks
1161 W. River St, Suite 130
Boise, Idaho 83702

**Re: City of Genesee Wastewater Treatment Relocation Project,
Idaho / SHPO Review No.: 2019-919**

Dear Ms. Nicholas,

Thank you for consulting with our office on the above referenced project. We understand the scope of the work includes improvements to the City of Genesee wastewater treatment system, located within Latah and Nez Perce Counties, Idaho.

On 15 January 2020, our office received an inventory report documenting the results of an intensive survey conducted by Robert Lee Sappington and John C. Bergner IV. The report documented no new resources within the proposed 40-acre Area of Potential Effect (APE).

Pursuant to 36 CFR 800.5, we have applied the criteria of effect to the proposed undertaking. Based on the information received 15 January 2020, we find that the proposed project actions will result in **no historic properties affected** (36 CFR 800.4(d)).

In the event that cultural material is inadvertently encountered during the implementation of this project, work shall be halted in the vicinity of the finds until they can be inspected and assessed by the appropriate consulting parties. If you have any questions, or the scope of the work changes, please contact me at chris.shaver@ishs.idaho.gov or (208) 488-7467.

Sincerely,

Christopher L. Shaver
Compliance Archaeologist

Idaho State Historic Preservation Office
208.334.3710
208.334.3710
208.334.3710
208.334.3710

Appendix F

Correspondence with the Nez Perce Tribe THPO

From: [Keith P Baird](#)
To: [Adam Oliver](#)
Cc: [Nakia Williamson](#)
Subject: HPE CM: City of Genesee Wastewater Improvement Project
Date: Wednesday, August 21, 2019 12:33:57 PM

Hi Adam,

Thanks for requesting review by the Nez Perce Tribe of the proposed City of Genesee Wastewater Improvement Project. Genesee is an ancestral Nez Perce site located just outside the current reservation boundary.

I recommend archaeological survey of the project footprint, including the proposed waste treatment facility site, the effluent disposal sites, and the pipelines and drainage ditches.

thanks, Pat

Patrick Baird
Tribal Historic Preservation Officer
Nez Perce Tribe
P.O. Box 365
Lapwai, ID 83540
(208) 621-3851 office
(208) 791-8610 cell

From: [LaDonn Kaylor](#)
To: ["Keith P Baird"](#)
Cc: [Adam Oliver](#)
Subject: Genesee Survey Report
Date: Thursday, January 9, 2020 8:32:00 AM
Attachments: [1 genesee report dec 2019.pdf](#)
[image001.png](#)

Mr. Baird

A cultural survey was completed for the proposed Genesee Wastewater Project. I have attached it to this email for your review. If you wish to comment please respond within the next 30 days via email (ladonn.kaylor@deq.idaho.gov), or give me a call at (208) 373-0556. You may also send comments to Adam Oliver at adam.oliver@deq.idaho.gov or by phone (208) 373-0406.

Thank You,



LaDonn Kaylor | Grants & Loans Analyst
Idaho Department of Environmental Quality
1410 N Hilton, Boise Idaho 83706
Office: (208) 373-0556
<http://www.deq.idaho.gov/>

Appendix G

Cultural Resources Survey Report

CITY OF GENESEE WASTEWATER TREATMENT FACILITIES RELOCATION PROJECT



January 2020

By: Robert Lee Sappington and John C. Bergner IV

Abstract

The City of Genesee is planning to improve its current wastewater facilities by constructing a treatment facility in a new location. The City of Genesee Wastewater Treatment Facilities Relocation Project will involve the construction of an approximately 10-acre treatment facility, the construction of a small structure at the current lift station, the construction of a new sewer line along portions of South Alder Street and East Oak Avenue, the construction of a small structure and installation of headworks at the current lift station, and the installation of a new lift station at the system lowpoint near the intersection of South Garfield Street and Cow Creek Road. In summer the effluent will be land-applied to two locations near the new treatment facility for a total of approximately 24 acres of additional land disturbance. The project will also involve in-place replacement of priority components of the collection system including manholes and sewer pipes but that work will be conducted in previously disturbed areas. The Area of Potential Effect (APE) includes the new treatment facility, the two lift stations, the new sewer line, and the two summer effluent application areas for a total of approximately 40 acres.

This report evaluates whether the proposed City of Genesee Wastewater Treatment Facilities Relocation Project would affect any cultural resources within the project's APE. There are no pre-recorded cultural resources in areas abutting or within the APE. No cultural resources were identified in the APE. Project actions will result in No Historic Properties Affected.

CERTIFICATION OF RESULTS

I certify that this investigation was conducted and documented according to Secretary of Interior's Standards and guidelines and that the report is complete and accurate to the best of my knowledge.



Signature of Principal Investigator

2 January 2020

Date

Key Information

PROJECT NAME

City of Genesee Wastewater Treatment Facilities Relocation Project

PROJECT NUMBER(S)

[Project Number(s)]

LOCATION

Genesee, Latah County

USGS QUADS

Genesee, ID

LEGAL LOCATION OF SURVEY

Township 37 North, Range 5 West, parts of Sections 13, 14, 23, and 24

PROJECT AREA

40 Acres

AREA SURVEYED

40 Acres Intensive Survey

0 Acres Reconnaissance Survey

PROJECT DATA

0 Previously recorded cultural resources

0 New cultural resources located and/or recorded

AUTHORS

Robert Lee Sappington and John C. Bergner IV

FEDERAL AGENCY

REPORT PREPARED FOR

Mountain Waterworks

REPOSITORY

Idaho State Historic Preservation Office, Boise

PRINCIPAL INVESTIGATOR

Robert Lee Sappington

DATE

1/2/2020

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Project Area of Potential Effect (APE)	1
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Cultural Setting	1
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Previous Cultural Resources Studies	4
Expected Cultural Resources	5
Field Methodology	6
Results	7
Management Recommendations	7
Determination of Effects	7
Avoidance, Minimization, or Mitigation Options	7
Conclusions	7
References	8

Project Description

The City of Genesee is planning to improve its current wastewater facilities by constructing a treatment facility in a new location. The City of Genesee Wastewater Treatment Facilities Relocation Project will involve the construction of an approximately 10-acre treatment facility, the construction of a small structure at the current lift station, the construction of a new sewer line along portions of South Alder Street and East Oak Avenue, the construction of a small structure and installation of headworks at the current lift station, and the installation of a new lift station at the system lowpoint near the intersection of South Garfield Street and Cow Creek Road. In summer the effluent will be land-applied to two locations near the new treatment facility for a total of approximately 24 acres of additional land disturbance. The project will also involve in-place replacement of priority components of the collection system including manholes and sewer pipes but that work will be conducted in previously disturbed areas (Maps 1-6).

Project Area of Potential Effect (APE)

The Area of Potential Effect (APE) includes the new treatment facility, the two lift stations, the new sewer line, and the two summer effluent application areas for a total of approximately 40 acres (Maps 1-6).

Environmental Setting

The APE is located adjacent in the Cow Creek drainage at an elevation of approximately 2600 feet above sea level (Maps 1-6). Cow Creek is located within the APE and it is indicated as a permanent stream on the Genesee, ID quadrangle map. The APE is mostly in an agricultural setting that has been completely disturbed by cultivation and the development of a rock pit, with the north end of the APE disturbed by the construction of roads, structures, and utilities. There are no natural areas or areas unaffected by agriculture or development. Most of the APE is in a wheat field with other flora along the fence lines and in town. Observed flora in the APE included ponderosa pine, hawthorn, wild rose, horsetail, and mullein. Observed evidence of fauna was limited to remains of deer and cow, coyote or dog tracks, and birds including mourning dove, sparrows, and a meadow lark.

The current built environment consists of modern structures, roads, and utilities in the northern part of the APE.

Cultural Setting

Archaeological and Pre-Contact Context

A sequence of cultural phases was delineated for the lower Snake River region in 1970 (Leonhardy and Rice 1970) and these phases have been the basis for all archaeologists working across the southern Columbia Plateau since that time. The archaeology of north-central Idaho is well-known due to numerous excavations and cultural resource management (CRM) studies associated with the construction of highways, dams, and other developments. Although the first anthropologist, Alice Cunningham Fletcher, arrived in the Clearwater River region in 1889, professional archaeological investigations were not conducted in the area until the early 1960s. Since that time a series of projects

have demonstrated that humans have lived in north-central Idaho for at least 12,000 years BP (Sappington 1994, 1996; Sobota 2001).

Although excavated and radiocarbon-dated archaeological sites are scarce, the pre-contact history of the region has been documented elsewhere (Sappington 1994, 1996). The oldest known occupations are part of the Windust phase (12,000 to 8000 BP) which is characterized by small bands of highly mobile hunters and gatherers whose camp sites have been identified across the Pacific Northwest and elsewhere. The subsequent Cascade phase (8000 to 5000 BP) shows continuity and during this time there is more evidence of plant processing and fishing. The Hatwai phase (5000 to 3000 BP) represents a change in settlement and the first villages have been identified by the presence of house pits at sites throughout much of the region. The Ahsahka phase (3000 to 500 BP) represents the development of many aspects of traditional Nez Perce culture and pre-contact occupations have been encountered at numerous known historic and ethnographic village sites. The protohistoric Kooskia phase (500 to 200 BP) represents the addition of Euroamerican trade goods with shifts in material culture and settlement due to the adoption of horses and the devastating impacts of introduced diseases.

One radiocarbon dated pre-contact site is located in Latah County and it is situated more than 10 miles northeast east of the APE near Troy. No significant archaeological sites have been investigated in the vicinity of Genesee.

Ethnographic Context

The interior portion of the Pacific Northwest includes northern Idaho and adjacent parts of Montana, Oregon, Washington, and British Columbia and it is part of the Columbia Plateau culture area. North-central Idaho and adjacent areas are within the southern Columbia Plateau sub-area. Genesee is at the northern extent of the traditional territory of the Nez Perce Indians (*Nimiipuu*) but it is north of the Nez Perce Indian Reservation (Walker 1998). The Nez Perce people inhabited approximately 70,200 square kilometers (27,000 square miles) across north-central Idaho, northeastern Oregon, and southeastern Washington and they had population concentrations along all the river corridors. The Nez Perce followed a highly mobile lifestyle focused on hunting and gathering seasonal resources, with semi-permanent villages sites located at lower elevations along the rivers and specialized temporary camps located at resource gathering sites across the region (Slickpoo and others 1972; Sobota 2001; Walker 1998).

The Nez Perce people were the most numerous Tribe in the southern Plateau and they practiced a seasonal subsistence cycle, or seasonal round, that had much in common with other Plateau groups. During the late fall and winter, the Nez Perce congregated in winter villages along major rivers and the villages also served as base camps for fishing and other activities. Temporary upland camps were used during summer and fall for hunting, fishing, plant gathering, and other activities. The first ethnographic study of the Nez Perce was by anthropologist Alice Fletcher. She interviewed Tribal elder Kew-kew'-lu-yah or Billy Williams in 1891 who placed the locations of 78 villages and other sites on a map (Sappington, Carley, Reid, and Gallison 1995). Subsequent studies of Nez Perce settlement have identified more than 300 village and camp sites (Schwede 1966; Paul 1987). Villages were located along major drainages while camps were located across the region in proximity to resource areas. Numerous ethnographic sites and trails are known in the general area and two traditional trails have been reported in the vicinity of the APE (Shawley 1984: Map 57) but no sites have been reported in proximity to, or within, the APE (Schwede 1966; Paul 1987; Sappington and others 1995).

While the APE seems unlikely to have village sites, it is very likely that the Nez Perce people travelled through the APE as they hunted and gathered resources during their annual round of activities.

Historic Context

LATAH COUNTY HISTORY

In 1870, when the first miners and settlers from California and other parts of the country arrived in the area to set up mining operations, the study area was part of Nez Perce County. The newly formed Idaho Territory was seven years old, and known for its abundance in precious metals, timber, and a rich agricultural prairie later known as the Palouse. A supply and trade center was established as early as 1871, in an area first known as Hog Heaven, and later known as Paradise Valley. Paradise Valley was located approximately 30 miles north of Lewiston, the Nez Perce County seat. A mail route was established between Lewiston and Paradise Valley in 1872. In 1885, the Oregon Railway and Navigation Company (OR&NC) laid tracks through Paradise Valley, expediting the growth of the town, and increased interest in creating a separate county from Nez Perce. In 1887, the Paradise Valley community was incorporated as Moscow.

Latah County was established in 1888 and it has the distinction of being the only county in the U.S. created by an Act of Congress. Despite several attempts by Lewiston to quash secession from Nez Perce County, Fred T. Dubois, Idaho's delegate in Congress introduced a bill for the creation of the county, which was passed and then approved by President Grover Cleveland in 1888. Moscow was made the county seat in the same year. Before Idaho gained statehood in 1890, northern Idaho boosters were reluctant to join southern Idaho and Boise in statehood. Lewiston was the original capital of Idaho Territory before it was moved to Boise in southern Idaho, and several northern Idaho stakeholders felt more akin to Washington Territory and favored annexation to their neighbors to the west. However, a deal was struck between delegates in the territorial legislature to approve establishing the University of Idaho in Moscow in exchange for votes to join southern Idaho in statehood. The University of Idaho was approved by territorial Governor Stevenson in January 1889.

GENESEE HISTORY

The original site of Genesee was established in 1871-1872 approximately 1 mile east of the present town (Boone 1983:37; Otness 1983:167). The valley drained by Cow Creek was named Genesee by journalist Alonzo Pond who said that it reminded him of his old home in New York state. When the Spokane and Palouse Railway was entering the area in 1888 the owner of the original town site considered the price for building the line to that setting to be exorbitant and refused; the railroad therefore built its terminus a mile to the west and the present town grew around it. The original store was moved on wheels to the new site of Genesee in 1903 (Otness 1983:167). The new site of Genesee experienced a period of rapid growth and became a regional trade and supply center. By the time that the railroad tracks reached Lewiston in 1898, Genesee had been the end of the line for ten years and it was an important shipping point for cattle and hogs from as far away as Cottonwood and Grangeville. Hay and grain warehouses sprung up along the tracks and business boomed. By 1903 Genesee had two banks, a flour mill, a brewery, three physicians, three hotels, four churches, three hardware stores, four saloons, and eight general stores, in addition to millenary shops, a photographic studio, a confectionary, and a weekly newspaper. The current town of Genesee is half the size of what it was during its heyday but it is still a thriving farming community for wheat and pea production (Boone 1983:37; Otness 1983:167-168).

The General Land Office (GLO) conducted the initial survey of Township 27 North/Range 5 West in September 1870 and the map was approved on January 25, 1871. There is no evidence of settlement within the APE ([https://glorerecords.blm.gov/ ConvertedImages/Plat 39638_1.PDF](https://glorerecords.blm.gov/ConvertedImages/Plat%2039638_1.PDF)).

Pre-Field Research

Previous Cultural Resources Studies

Cultural resource investigations for the City of Genesee project were initiated when the first author contacted SHPO about the APE (Search #20043). Eight archaeological surveys have been conducted within the 1-mile search radius since 2000 (Table 1) with five related to Idaho Transportation Department (ITD) improvements and three for cell towers. Two surveys have been conducted by architectural historians. These studies have resulted in the recordation of 3 archaeological sites, 11 historic sites, 2 historic linear sites, and 1 historic district (Table 2, Map 5). Two of the archaeological sites have multiple site numbers since they are also historic structures. Both historic linear sites, US-95 and the Spokane & Palouse Railroad, also have duplicate site numbers since they have been recorded in multiple counties.

An extensive ITD survey was conducted in 2000 along 21 miles of US-95 between the Lewiston Hill and Moscow prior to major highway improvements (Bennett 2002). Two alternative routes were examined so that a corridor averaging 300 feet in width was surveyed. A total of 18 historic and architectural sites were recorded with another 8 cultural resources noted but not recorded; none of the sites are in the APE.

A survey was conducted prior to the expansion of an existing gravel quarry located approximately 2 miles southwest of the APE; the project area abutted a previously recorded former railroad grade and a fragment of a bottle was noted but no sites were recorded (Ferguson and Root 2005a). Another survey was conducted for five waste sites and a temporary office location, with the nearest waste site located approximately 0.8 miles south of the APE; nothing was found at that waste site but one historic site was recorded beyond the APE (Ferguson and Root 2005b). A survey at another waste site located approximately 1.5 miles southwest of the APE did not encounter any cultural resources (Root 2006). The most recent ITD survey was conducted prior to the installation of two plastic storage tanks within the community of Genesee (Peeso 2008). The project area was located within 0.1 miles of the APE and two sites recorded while six other modern properties were noted but not recorded. Both recorded sites (57-14013 and 57-14014) are in the search radius for the APE (Table 2).

Three surveys have been conducted for cell towers. The first was located 2.3 miles southwest of Genesee; two historic farm complexes were recorded beyond the search radius (Greiser 2001). The other two surveys were conducted at five separate locations between Genesee and Sandpoint; one historic site was recorded near Morton but no cultural resources were found at the Genesee tower site which was located approximately 2.5 miles south of town (Weaver and Liechtling 2001a). The third report appears to be a very slightly revised version of this same report (Weaver and Liechtling 2001b).

Two intuitive architectural surveys were conducted to record agricultural sites across Latah County. The first recorded ten selected agricultural properties, two of which were located northeast of Genesee beyond the search radius (Julin 2004). The second survey recorded 27 historic sites along US-95 including five properties west of Genesee; none are within the search radius (Julin 2006).

Table 1. Summary of all previous cultural resource surveys within the 1-mile search radius for the City of Genesee Wastewater Treatment Facilities Relocation Project.

Report Number	Date	Report Title	Report Author
2002/552	2001	US95 Top of Lewiston Hill to Genesee	Bennett, Lee
2005/365	2005	Archaeological Survey of the Cow Creek Quarry, Nez Perce County, Idaho	Ferguson, Daryl F. and Mathew J. Root
2005/810	2005	Archaeological Survey of Five Fill Areas and One Temporary Office Along U.S. Highway 95, Nez Perce and Latah Counties, Idaho	Ferguson, Daryl F. and Mathew J. Root
2006/610	2006	US-95 Top of Lewiston Hill to Genesee Project	Root, Matthew J,
2009/334	2008	Storage Tanks, Genesee	Peeso, Emily
2001/929	2001	Cultural Resource Background Research and Field Inventory for American Tower's Genesee Communications Site, Nez Perce County, Idaho	Greiser, Weber
2001/1893	2001	Cultural Resources Survey Idaho Cellular Tower Property	Weaver, Robert M. and Jennie Liechtling
2002/192	2001	Cultural Resources Survey Idaho Cellular Tower Property	Weaver, Robert M. and Jennie Liechtling
2019/134	2004	Latah County Agricultural Buildings Reconnaissance Survey Report	Julin, Suzanne
2019/136	2006	Latah County Agricultural Buildings Windshield Survey	Julin, Suzanne

Expected Cultural Resources

Most pre-contact village sites in north-central Idaho are located adjacent to major drainages with camp sites located along smaller streams and elsewhere depending on the availability of resources. There are no known ethnographic sites in the vicinity of Genesee so that a pre-contact or ethnographic site seems unlikely. The northern part of the APE is within the city limits so sites associated with Genesee could be encountered. Most of the APE is in an agricultural setting so historic features associated with farming could be encountered.

There are 14 historic sites and 1 historic district within the search radius but only the Spokane & Palouse Railroad (10LT452) is in proximity to the APE and it has been removed.

Table 2. Summary of all pre-recorded cultural resources within the 1-mile search radius for City of Genesee Wastewater Treatment Facilities Relocation project.

Site Number	Site Name/Type of Site	National Register Eligibility	Location/Comments
10LT50 57-1084	Genesee Exchange Bank	Listed	0.1 mile north of the APE
10LT51 57-1248	Vollmer Building	Listed	0.1 mile north of the APE

10LT283	Historic farm	Not eligible	0.8 miles northwest of the APE
10LT245 10NP451 57-13883 69-18014	US-95/North and South Highway	Eligible	0.5 miles west of the APE
10LT246 10NP452	Spokane & Palouse Railroad	Not eligible	Abuts the north end of the APE
57-2410	Highway 95 barn	Not evaluated	0.3 miles northwest of the APE
57-13855	1651 Uniontown Road farmstead	Not evaluated	0.5 miles west of the APE
57-13884	151 North Garfield Street house	Not eligible	0.2 miles north of the APE
57-13885	754 Chestnut Street house	Not eligible	0.2 miles north of the APE
37-13386	751 Chestnut Street house	Not eligible	0.2 miles north of the APE
57-13387	901 West Chestnut Street house	Not eligible	0.2 miles north of the APE
57-14013	Broemeling Welding	Not eligible	0.1 mile north of the APE
57-14014	Texaco Gas Station	Not eligible	0.1 mile north of the APE
69-1984	Seaman's Barn	Not evaluated	0.2 miles west of the APE
District	Nez Perce National Historical Park	Listed	0.3 miles southeast of the APE

Field Methodology

On 5 November 2019 the authors met with Henry Moen of Mountain Waterworks and Genesee resident Jay Roach at the rock quarry located adjacent to the APE. Mr. Roach is the owner of the quarry and a 62-year resident of the area who is familiar with local history. He knew of historic sites in the general area but did not know of any actual or potential cultural resources within the APE. Mr. Moen then guided the authors throughout all parts of the APE. The surface of the APE was clear of snow and vegetation was low so that visibility was very good. The authors recorded a GPS point (GPS #1) at the ditch at the northwest corner of the property (Map 6, Figure 1). We walked along both sides of the ditch (Figure 2) and then conducted Transect 1 to the south along the west side of the project area. We made three parallel transects at 20-30 m intervals to the southwest corner (Figures 3-4). We followed the same method for all transects within the treatment facility site.

We then walked along the south side of the project area (Figure 5-6) to the southeast corner (Figure 7). At that point we followed the east side of the project area to the northeast corner (Figure 8) and continued to the northeast corner of the rock quarry (Figure 9). We then walked along the edge of the rock quarry (Figure 10) to a point near the beginning of Transect 1. We then made a series of north/south and east/west transects until we had covered the treatment facility site (Map 6; Figures 11-15). The authors walked across the rock quarry and continued north on South Alder Street (Figures 16-17) to East Oak Avenue and then walked west on East Oak Avenue to the existing lift station (Figures 18-19). Mr. Moen then drove the authors back to the starting point at the rock quarry. We followed him to the new lift station near the intersection of South Garfield Street and Cow Creek Road where we examined the area, took additional photographs, and recorded the final GPS point (Map 6; Figure 20) which concluded the fieldwork.

Isolates/Noted But Not Recorded

No Isolates were encountered and there were no structures or features that were Noted But Not Recorded (NBNR).

Results

All 14 pre-recorded sites within the search radius are well outside the APE. Intensive archaeological transects were conducted throughout the APE; several modern items were observed on the surface but no cultural resources were found.

Management Recommendations

No pre-recorded cultural resources are present within the APE for the City of Genesee Wastewater Facilities Relocation Project. An intensive archaeological survey was conducted and no cultural resources were found within the APE. There are no threats to any known or suspected cultural resources within the APE. No further investigations are recommended. However, if any potential cultural resources are inadvertently discovered during the course of the project the construction crew should immediately secure the area and contact the first author and Mountain Waterworks. We will then contact the SHPO and any other concerned parties to develop a cultural resource management plan.

Determination of Effects

The project will result in No Historic Properties Affected.

Avoidance, Minimization, or Mitigation Options

As no historic properties will be affected, no avoidance, minimization, or mitigation options are recommended.

Conclusions

There were no pre-recorded sites abutting, or within, the City of Genesee Wastewater Treatment Facilities Relocation Project area. An intensive survey was conducted across the entire APE and no cultural resources were encountered. There are no historic properties within the APE. Overall project actions will result in No Historic Properties Affected. The project should proceed as planned.

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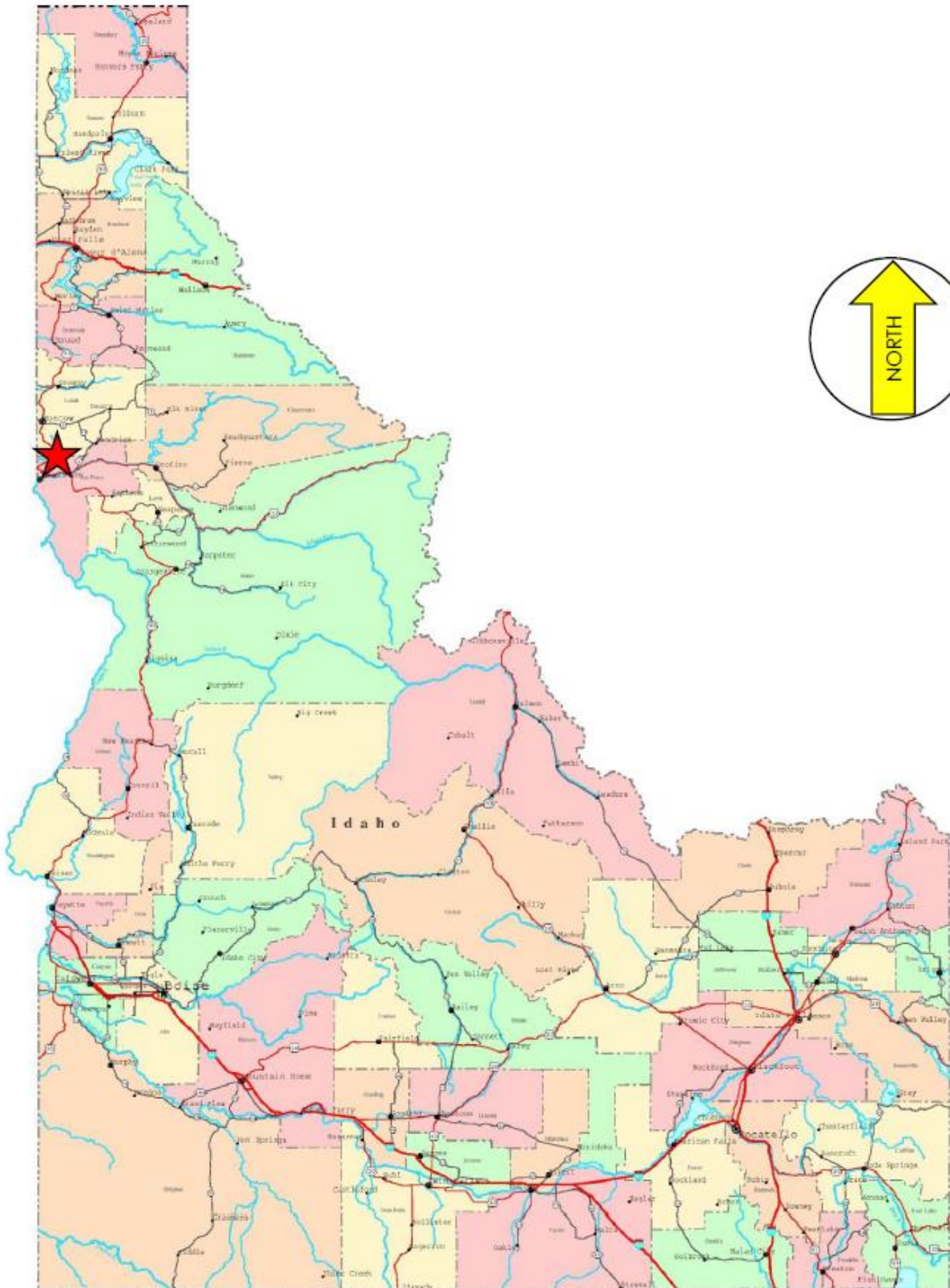
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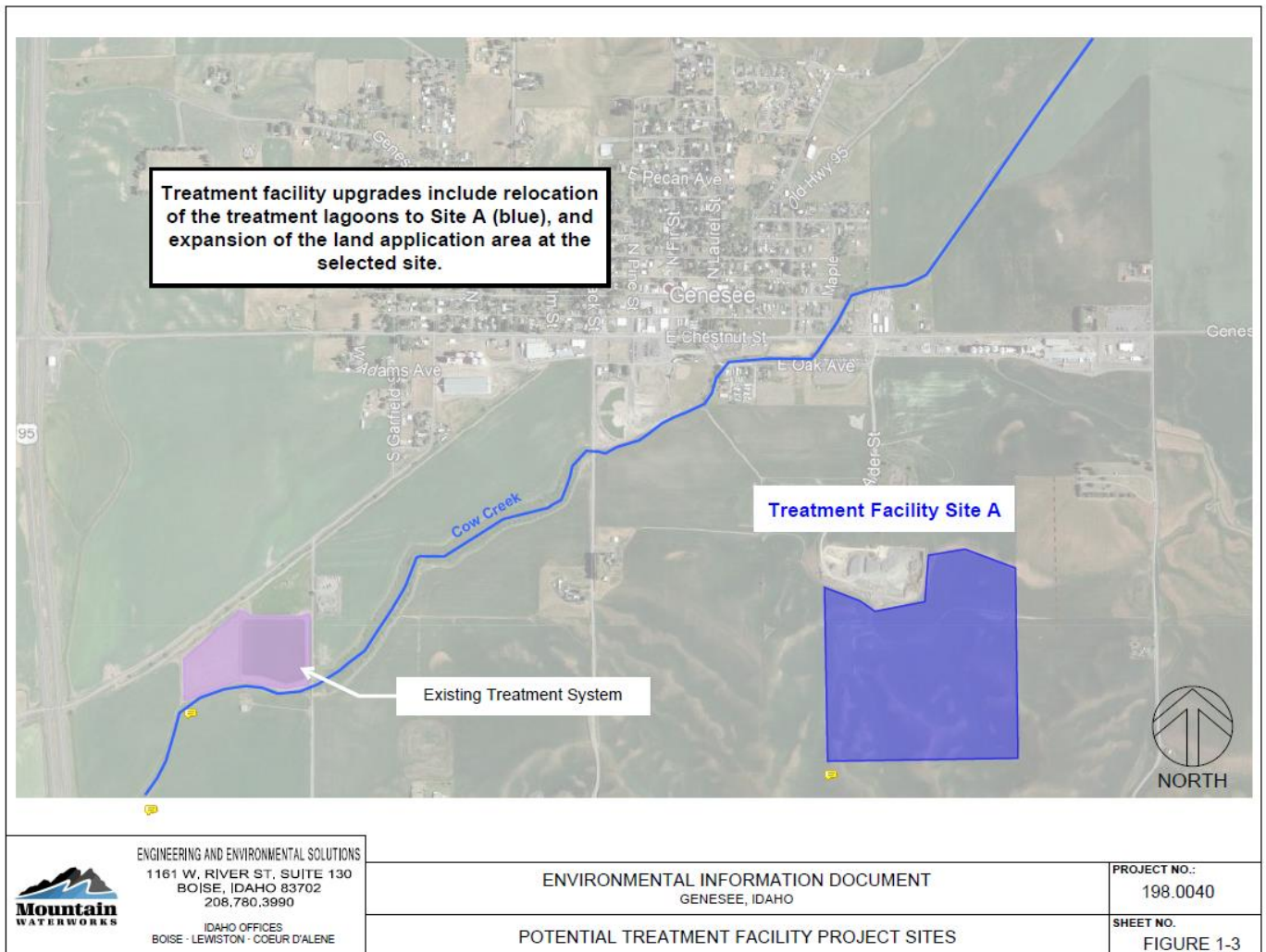
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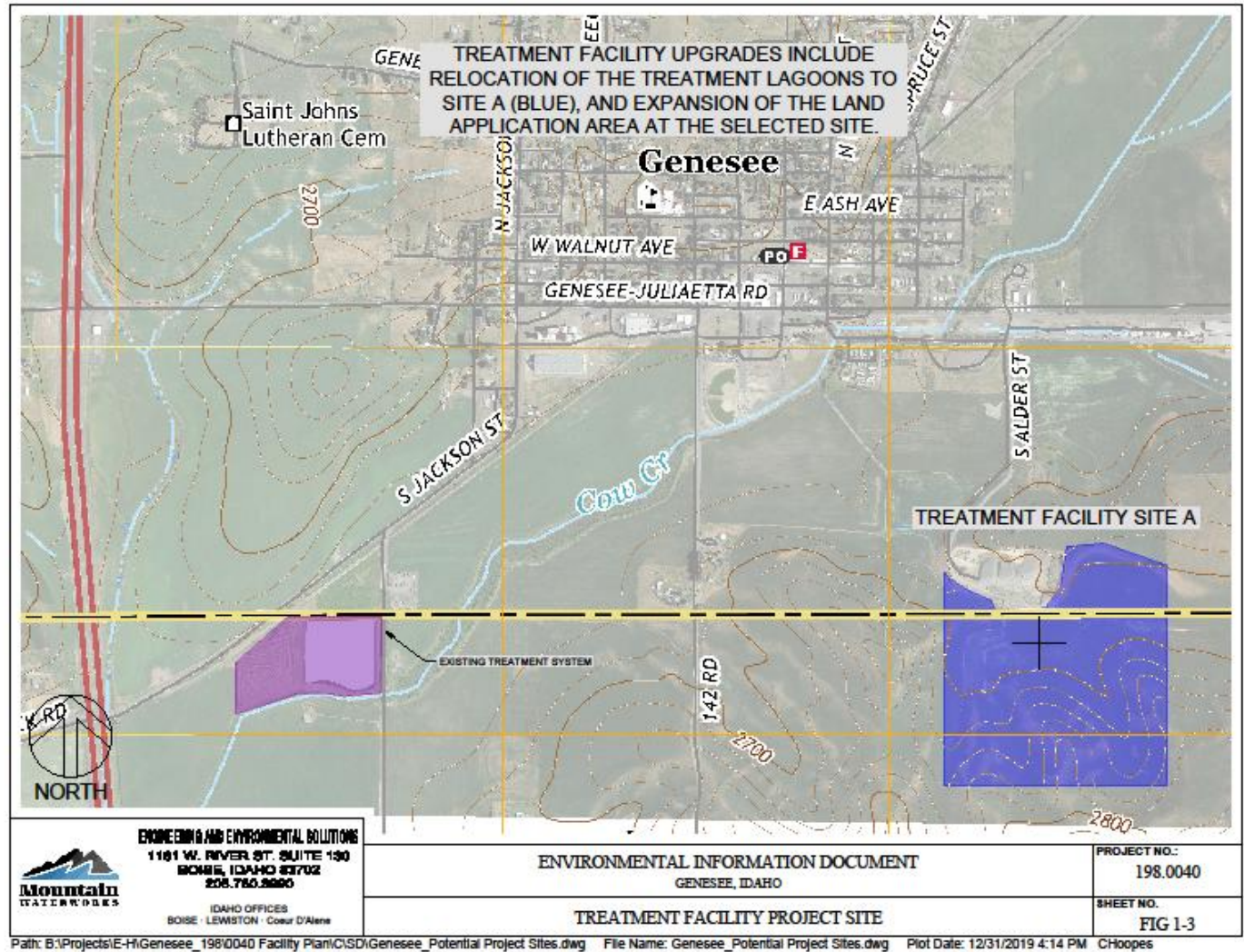
Appendix. Maps and photographs of the City of Genesee Wastewater Treatment Facilities Relocation Project area.



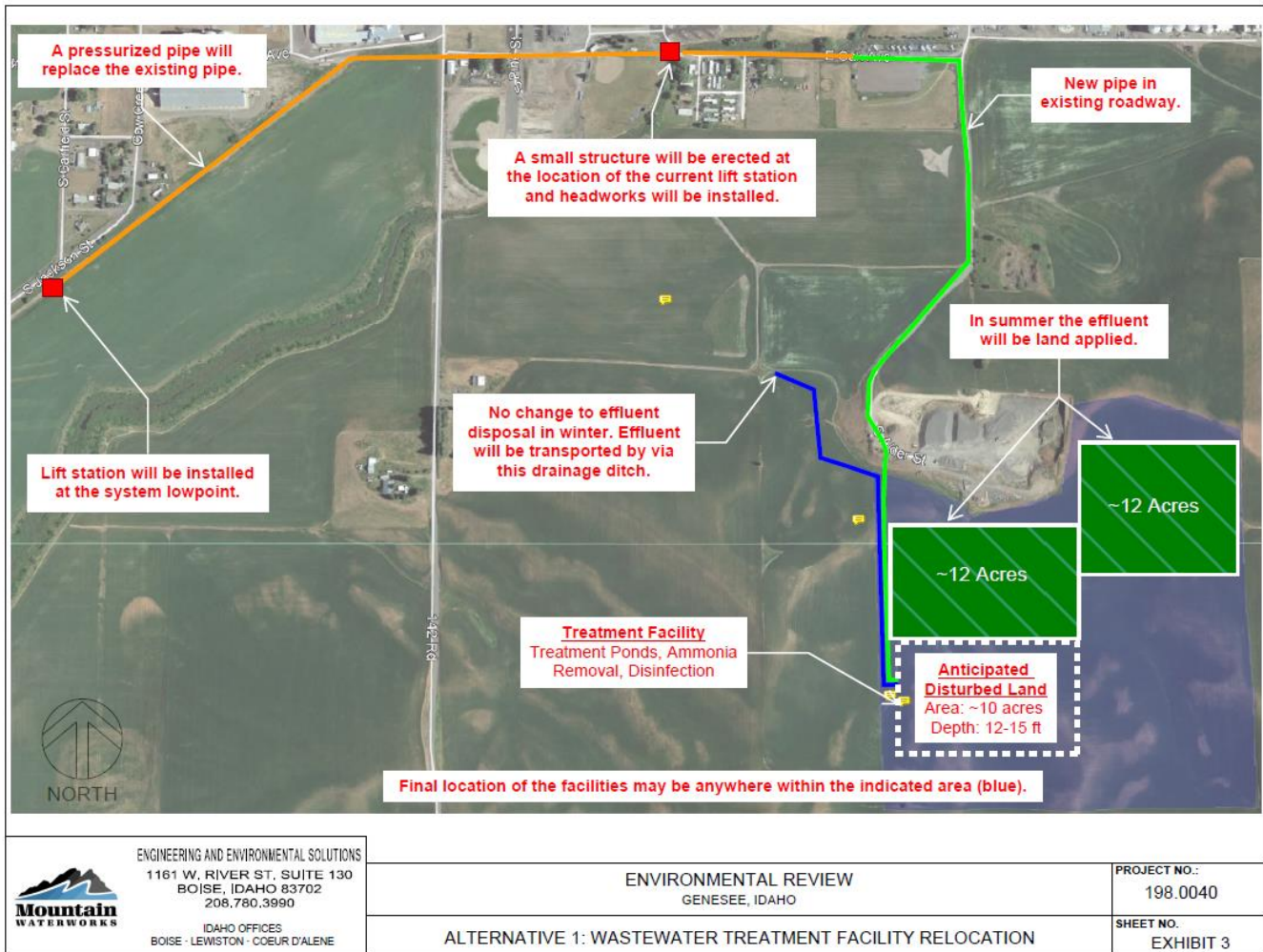
Map 1. Location of the City of Genesee Wastewater Treatment Facilities Relocation Project (indicated by the star).



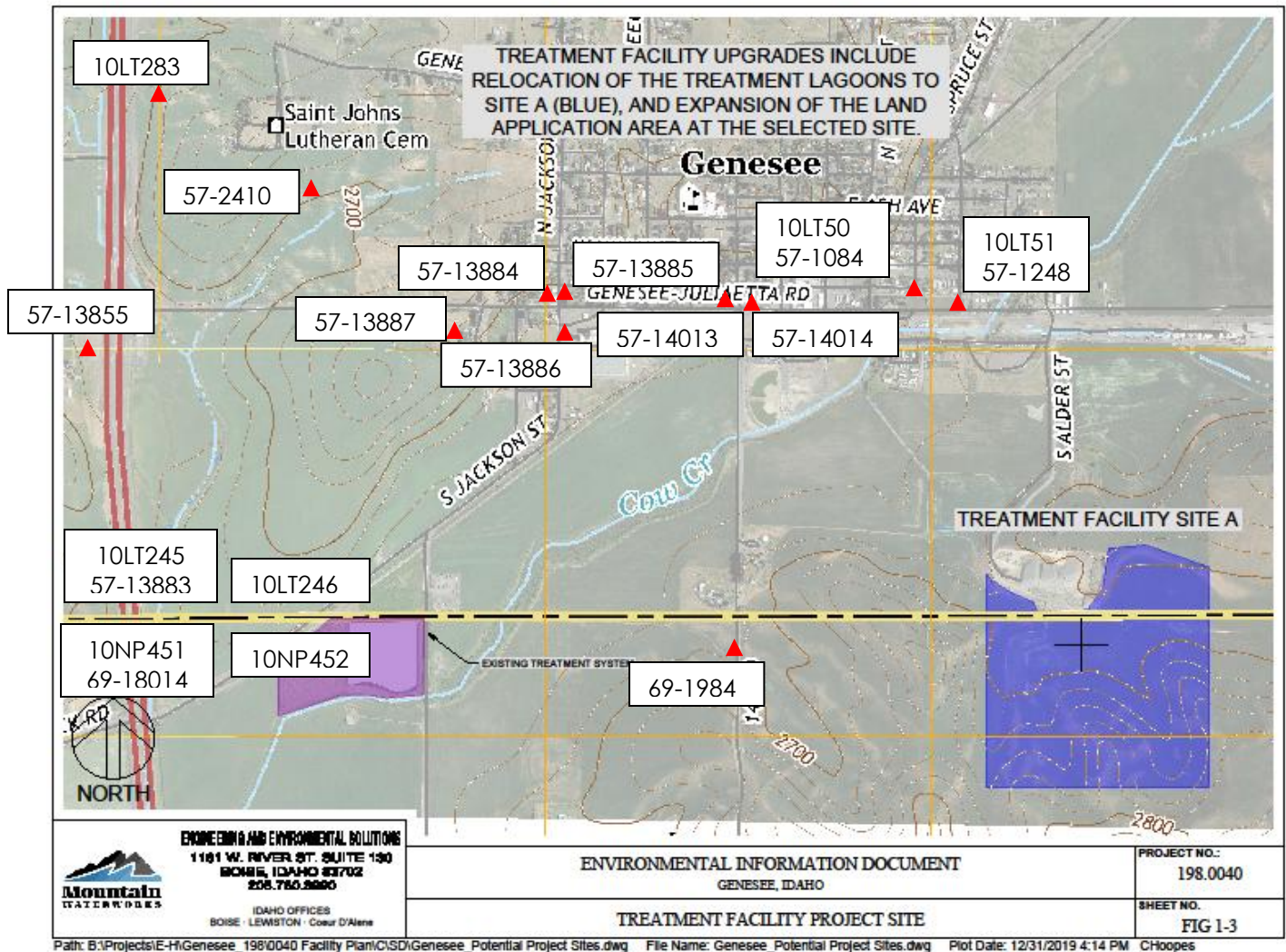
Map 2. Aerial photograph map showing the location of the City of Genesee Wastewater Treatment Facilities Relocation Project area (labeled and provided by Mountain Waterworks).

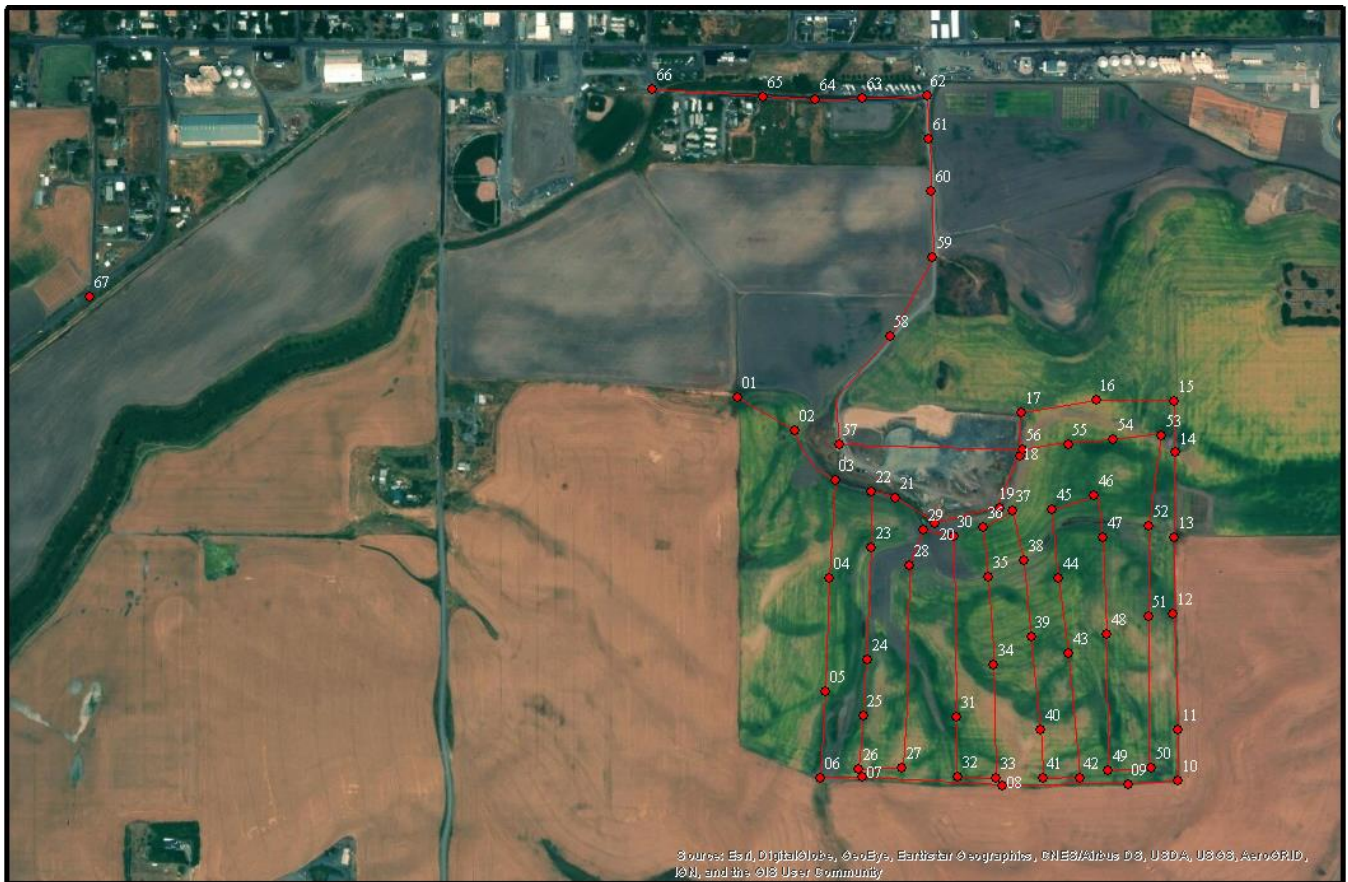


Map 3. Topographic map showing the location of the City of Genesee Wastewater Treatment Facilities Relocation Project area (adapted from the Genesee, ID quadrangle map, labeled and provided by Mountain Waterworks).



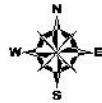
Map 4. Plan map showing the details for the City of Genesee Wastewater Treatment Facilities Relocation Project (labeled and provided by Mountain Waterworks).





Legend

- GPS Points
- GeneseeTransects



0 100 200 400 600 800
Meters

Map 6. Shape file map of the City of Genesee Wastewater Treatment Facilities Relocation Project area. All recorded GPS points are indicated by the circles; the transect routes are indicated by the red lines.



Figure 1. Photograph of the City of Genesee Wastewater Treatment Facilities Relocation Project area. The photograph was taken at the northwest corner of the APE; the ditch is in the right foreground. The view is to the northwest.



Figure 2. Photograph of the City of Genesee Wastewater Treatment Facilities Relocation Project area. The photograph was taken near the northwest corner of the APE with the rock quarry in the right background. The view is to the north.



Figure 3. Photograph of the City of Genesee Wastewater Treatment Facilities Relocation Project area. The photograph was taken along the west side of the APE; the view is to the northeast.



Figure 4. Photograph of the City of Genesee Wastewater Treatment Facilities Relocation Project area. The photograph was taken along the west side of the APE near the southwest corner of the APE; the view is to the northeast.



Figure 5. Photograph of the City of Genesee Wastewater Treatment Facilities Relocation Project area. The photograph was taken along the south side of the APE near the southwest corner of the APE; the view is to the east.



Figure 6. Photograph of the City of Genesee Wastewater Treatment Facilities Relocation Project area. The photograph was taken along the south side of the APE near the southeast corner of the APE (note the vegetation change in the right background). The view is to the east.



Figure 7. Photograph of the City of Genesee Wastewater Treatment Facilities Relocation Project area. The photograph was taken on the east side of the APE near the southeast corner of the APE. The view is to the north.



Figure 8. Photograph of the City of Genesee Wastewater Treatment Facilities Relocation Project area. The photograph was taken on the east side of the APE. The view is to the north.



Figure 9. Photograph of the City of Genesee Wastewater Treatment Facilities Relocation Project area. The photograph was taken on the north side of the APE near the northeast corner of the APE. The view is to the southwest.



Figure 10. Photograph of the City of Genesee Wastewater Treatment Facilities Relocation Project area. The photograph was taken on the east side of the rock quarry in the northeast part of the APE. The view is to the southwest.



Figure 11. Photograph of the City of Genesee Wastewater Treatment Facilities Relocation Project area. The photograph was taken on the south side of the rock quarry in the northwest part of the APE. The view is to the south.



Figure 12. Photograph of the City of Genesee Wastewater Treatment Facilities Relocation Project area. The photograph was taken near the south side of the APE. The view is to the east.



Figure 13. Photograph of the City of Genesee Wastewater Treatment Facilities Relocation Project area. The photograph was taken near the center the APE. The view is to the northeast.



Figure 14. Photograph of the City of Genesee Wastewater Treatment Facilities Relocation Project area. The photograph was taken near the center the APE. The view is to the southeast.



Figure 15. Photograph of the City of Genesee Wastewater Treatment Facilities Relocation Project area. The photograph was taken near the center the APE. The view is to the northeast.



Figure 16. Photograph of the City of Genesee Wastewater Treatment Facilities Relocation Project area. The photograph was taken along South Alder Street; a new pipe will be installed in the roadbed. The view is to the northeast.



Figure 17. Photograph of the City of Genesee Wastewater Treatment Facilities Relocation Project area. The photograph was taken along South Alder Street; a new pipe will be installed in the roadbed. The view is to the northeast.



Figure 18. Photograph of the City of Genesee Wastewater Treatment Facilities Relocation Project area. The photograph was taken along East Oak Avenue; a new pipe will be installed in the roadbed. The view is to the west.



Figure 19. Photograph of the City of Genesee Wastewater Treatment Facilities Relocation Project area. The photograph was taken in the vicinity of the existing lift station (in the right center background behind two fences) where headworks will be installed. The view is to the south.



Figure 20. Photograph of the City of Genesee Wastewater Treatment Facilities Relocation Project area. The photograph was taken in the vicinity of the new lift station at the lowpoint near the intersection of South Garfield Street and Cow Creek Road; Cow Creek Road is at the left. The view is to the east.

Appendix H

Endangered Species Act/Essential Fish Habitat Memo

MEMO

TO: EMILY NICHOLAS, MOUNTAIN WATERWORKS
FROM: ADAM OLIVER, DEPARTMENT OF ENVIRONMENTAL QUALITY GRANT AND LOAN PROGRAM
SUBJECT: CITY OF GENESEE WASTEWATER IMPROVEMENT PROJECT – THREATENED/ENDANGERED SPECIES AND ESSENTIAL FISH HABITAT
DATE: SEPTEMBER 10, 2019

The proposed project for the City of Genesee (City) is located in Latah County and is proposing to make improvements to their wastewater system. The project consists of the following:

- In-place replacement of priority components of the collection system (manholes and sewer pipe). All work will be conducted within existing footprint in previously disturbed areas.
- Relocation and upgrade of the wastewater treatment facility. Proposed facility location will include excavation for the wastewater lagoons (treatment ponds) and connection to the existing sewer collection system. All areas of the proposed land application are currently used for crop production and will remain so upon completion of this project.

The project will address deficiencies related to the collection and treatment system which will bring the system into compliance with the City's discharge permit specifications.

Summary of Determinations

Based on the information presented in the following sections of this memorandum, DEQ has made the following impact determinations:

- The proposed project will have “**NO EFFECT**” on federally listed, proposed, or candidate species or critical habitat.
- The proposed project will have “**NO EFFECT**” on Essential Fish Habitat.

Endangered Species Act

DEQ utilized the Information Planning and Conservation (IPaC) Tool to aid in determining endangered and threatened species within the area of potential effect (APE). The IPaC Tool can currently be accessed at the following internet address:

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

The official species list obtained via the IPaC tool on September 9, 2019, indicated there are two threatened, endangered, or candidate species on this species list. The species list indicated there are no critical habitats wholly or partially located within the boundaries of the APE. The output from the IPaC tool is attached to this memorandum.

Spalding's Catchfly (*Silene spaldingii*; threatened) – The plant prefers open moist grasslands, however it could also be found in sagebrush-steppe habitats and pine forests. Spalding's catchfly grasslands are comprised of Idaho fescue and bluebunch wheatgrass. The proposed improvements will have **"NO EFFECT"** on the species and its critical habitat because no critical habitats have been identified within the project area.

Water Howellia (*Howellia aquatilis*; - threatened) – The species grows in firm consolidated sediments associated with glacial potholes and former river oxbows which flood in spring and typically dry to some extent by late summer. Microhabitats include shallow water and the edges of deep ponds that are partially surrounded by deciduous trees such as black cottonwood and aspen. The proposed improvements will have **"NO EFFECT"** on the species and its critical habitat because no critical habitats have been identified within the project area.

Therefore, the proposed project will have **"NO EFFECT"** on federally listed, proposed, or candidate species or critical habitat.

Essential Fish Habitat

The project is located inside of all Essential Fish Habitat (EFH) for Chinook Salmon (*Oncorhynchus tshawytscha*) and Coho Salmon (*Oncorhynchus kisutch*) as identified in the attached EFH map. "All those water bodies occupied or historically accessible" in the identified hydrologic units are considered EFH, according to 50 CFR 660.412. The project will have **"NO EFFECT"** on Essential Fish Habitat.

The proposed project does not include work in Cow Creek and will improve water quality discharged into the creek. The following list of best management practices (BMPs) and mitigation measures are recommended to minimize or eliminate impacts to the EFH.

- Implement BMPs to avoid and minimize the introduction of sediment into the creek, including the following:
 - Erosion control waddles, sediment drift fences, or other barriers to sediment traveling off the project area
 - Equipment staging areas must be slanted away from the creeks to minimize sediment delivery to the creek
 - Any other practices that would minimize the possibility of sedimentation to avoid the possibility of adverse effects to chinook salmon and coho salmon
- Equipment and material staging areas should be located in areas requiring the least amount of new soil disturbance and outside topographic lows where water may concentrate during snowmelt or storm events.
- Equipment should be cleared of all dirt, mud, seeds, and vegetative matter prior too arriving on site to reduce the risk of invasive species introduction. The same equipment should be cleaned again prior to leaving, if warranted.
- Fuel storage should only occur within staging areas, and refueling shall not occur within 150 feet of the creek. If fueling must occur within 150 feet, it will occur inside an impervious containment structure with a volumetric hold capacity equal to at least 110 percent of the fueling tank. Engine and hydraulic fluids will be monitored for leaks. Spill packs must be on hand for minor leaks/spills.

- Washing of tools and equipment will occur only within staging areas where there is no potential for rinsate to reach surface waters.
- Materials resulting from demolition or site preparation should be removed to an appropriate disposal site.
- If poured in place concrete is used ensure that measures are taken to prevent green concrete from entering the creek.

Because the project will not include work in Cow Creek, and the BMPs and mitigation measures identified above are protective of the creeks, any potential effects are insignificant in size or discountable. The project will have **“NO EFFECT”** to Essential Fish Habitat.



- Major Cities
- Towns within EFH (pop. > 500)
-  Coho Salmon EFH in Idaho
-  Chinook Salmon EFH in Idaho
-  County Boundaries

City of Genesee

A horizontal scale bar with markings at 0, 50, and 100. The word "Miles" is written at the right end of the bar.

Map created: January, 2015





United States Department of the Interior

FISH AND WILDLIFE SERVICE

Idaho Fish And Wildlife Office
1387 South Vinnell Way, Suite 368
Boise, ID 83709-1657
Phone: (208) 378-5243 Fax: (208) 378-5262



In Reply Refer To:

September 09, 2019

Consultation Code: 01EIFW00-2019-SLI-1824

Event Code: 01EIFW00-2019-E-03831

Project Name: City of Genesee

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (<https://www.fws.gov/migratorybirds/pdf/management/eagleconservationplanguidance.pdf>). Additionally, wind energy projects should follow the wind energy guidelines (<https://www.fws.gov/ecologica-services/energy-development/wind/html>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds/collisions/communication-towers.php>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
 - USFWS National Wildlife Refuges and Fish Hatcheries
 - Migratory Birds
 - Wetlands
-

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Idaho Fish And Wildlife Office
1387 South Vinnell Way, Suite 368
Boise, ID 83709-1657
(208) 378-5243

Project Summary

Consultation Code: 01EIFW00-2019-SLI-1824

Event Code: 01EIFW00-2019-E-03831

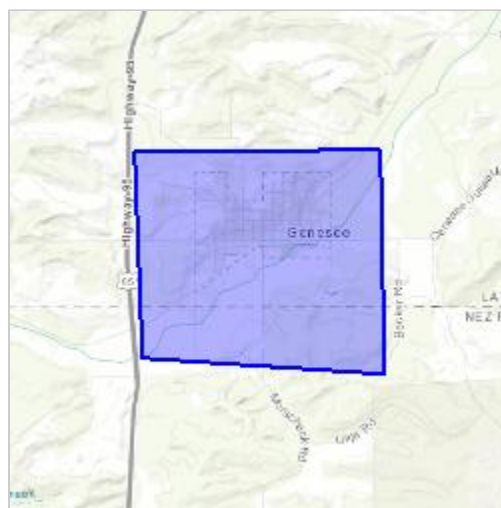
Project Name: City of Genesee

Project Type: WASTEWATER FACILITY

Project Description: In-place replacement of priority components of the collection system (manholes and sewer pipe). All work will be conducted within the existing footprint in previously disturbed areas.
Relocation and upgrade of the wastewater treatment facility. There are currently two possible locations to which the wastewater treatment system may be relocated.
Both alternatives will include excavation for the wastewater lagoons (treatment ponds) and connection to the existing sewer collection system. All areas of proposed land application are currently used for crop production and will remain so upon completion of this project.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/46.54719578685738N116.92856583221368W>



Counties: Latah, ID | Nez Perce, ID

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Flowering Plants

NAME	STATUS
Spalding's Catchfly <i>Silene spaldingii</i> There is proposed critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3681	Threatened
Water Howellia <i>Howellia aquatilis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7090	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

-
1. The [Migratory Birds Treaty Act](#) of 1918.
 2. The [Bald and Golden Eagle Protection Act](#) of 1940.
 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Dec 1 to Aug 31
Lesser Yellowlegs <i>Tringa flavipes</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ “Proper Interpretation and Use of Your Migratory Bird Report” before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

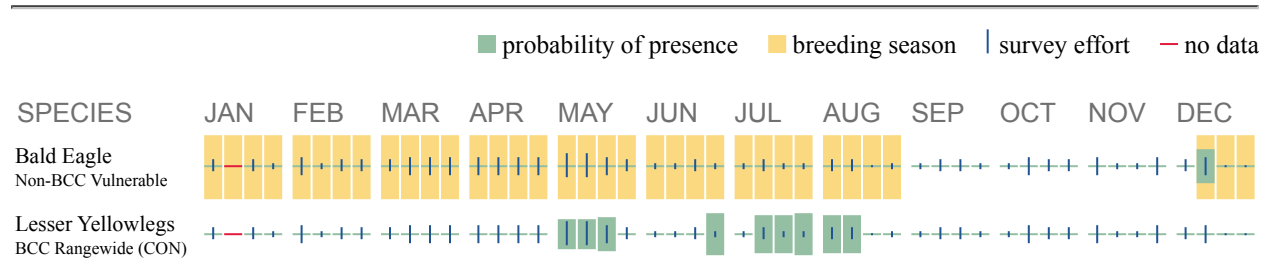
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as

occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC

species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ “What does IPaC use to generate the migratory birds potentially occurring in my specified location?”. Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ “Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds” at the bottom of your migratory bird trust resources page.

Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

FRESHWATER EMERGENT WETLAND

- [PEM1C](#)
- [PEM1Cx](#)

FRESHWATER POND

- [PUBHx](#)

RIVERINE

- [R5UBH](#)
 - [R4SBC](#)
 - [R4SBCx](#)
-

Appendix I

Documentation of Public Participation

- I-1: Preliminary Alternative Presentation (Signed Meeting Minutes; PowerPoint)
- I-2: Genesee Community Day Brochure and Posters
- I-3: Public Meeting Presentation (Signed Meeting Minutes; PowerPoint)
- I-4: Formal Alternative Selection (Signed Meeting Minutes)
- I-5: Public Notice of Public Comment Period; Comments Received
- I-6: Bond Education Brochure

CITY OF GENESEE

CITY COUNCIL

November 20, 2018

REGULAR MEETING

MINUTES

4:00 PM

Location: 140 E Walnut Street, Genesee, ID 83832

CALL TO ORDER - The Genesee City Council met November 20, 2018. Mayor, Steve Odenborg, called the meeting to order at 4:00pm.

ROLL CALL – Present at the meeting were council members: Edie McLachlan, Ryan Banks, Art Lindquist, Linda James, Maintenance Supervisor Dustin Brinkly, City Engineer Scott Becker, and Deputy City Clerk/Treasurer Debi Zenner.

VISITORS: Jim Stravens, Ryan Rehder, Richard Wayt, Bill Hartley, Ted English, Paul Turner, Ron Zenner, Doug & Kathy Bennett, and Steve Broemeling

Jim Stravens : Mayor Odenborg and Jim attended a Parks & Rec meeting in Lewiston. Jim spoke about having an income survey done and feels almost certain it would fail. Thinks it's a waste of time and money. Spoke about Grants that may be available, but would like feedback from the City, as to what is needed. If we wanted to replace the restroom in the City Park, with something similar to our current RV Park, we could expand the RV Park, possibly in the area where the playground is now, and it wouldn't cost the City, except the work our maintenance guys would do and office work, forwarding invoices to the State. We could re-locate the playground equipment. Another option would be to design a trail around the City, add the restroom, parking, bike shop, etc., which would be a 20% match to the City. If the City decided to only replace the restroom, the estimated cost to the City would be \$100K. If the City would like to apply, the application would be due the end of January.

Ryan Rehder: Gave council handouts regarding the schedule for facility plan. 1st Phase area, and critical milestones, are the DEQ Letter of Intent, due January 2019; would like included, the cost estimated by the City. May, 2019, would be the Bond election and we would need to know the exact amount before then. An alternative to our current lagoon is critical because of the limits on ammonia and phosphorus. Ryan answered questions and explained his handout. Ryan plans to work with Edie and Dustin to discuss the different alternatives, and then get back with council for further discussion.

CONSENT AGENDA: Ryan made a motion, seconded by Linda, to accept the consent agenda along with payment of the bills and financial statement **ROLL CALL VOTE: McLachlan, Banks, Lindquist, James, Ayes; motion carried.**

CITY OFFICIAL, COUNCIL AND STAFF REPORTS-

Edie-Dustin will give report. **WATER:** Replaced service lines on Hazel Street last week. In regard to the Genesee-Julietta water line replacement, suggested getting Erin (City Atty) and ICRMP involved, as well as business owners out that way. Steve would like to meet with them before Christmas.

STREETS: Dustin reported on the Cedar Street reconstruction. \$273K was the lowest bid we received. We would like to get this done and on the schedule after the first of the New Year. Ben will try and shrink the project down so we can get it done with the awarded \$100K. **PARKS:** Lights will be up by December 2nd for the Civic Christmas Party. Ted is back to work, on light duty. **Electricity on RV Dump:** Guy Esser was told the power needs to be restored at the RV dump site, as it was taken when the construction of the new Fire Hall began.

Scott-No Report

Ryan-Will talk further on Agenda.

Art- Wished Debi a Happy Birthday (yesterday). Fire Department: All bills should be caught up. Hoping to minimize confusion with bills and payments. Hoping the Fire Department construction will be finished enough to work on the inside construction this winter. The kitchen at the new Fire Station was mentioned. Art said the kitchen facility will be better than what is in the current Fire Hall. Will be doing a presentation about Internet Crimes against children, with the school's resource officer; November 28th, 7pm in the school, for all adults.

Linda- RV Park has made almost 12K to date. Rich and Karyl Wayt are doing an excellent job with the Park and the Facebook Page.

Debi- Talked about the gift for Wayne, who retired from Avista. Was decided to give a \$50 Brass Lantern Gift Certificate.

Steve- Had lunch with the Mayor of Moscow to discuss the EPA and DEQ. Thought maybe one of our council might run for the AIC Board. They would like someone who could represent smaller communities.

INTRODUCTION, READINGS AND ADOPTION OF ORDINANCES & RESOLUTIONS

UNFINISHED BUSINESS-

Grant Support Letters-Sidewalks-Ryan had examples of the last sidewalk support letters and asked for help getting a new version of them. He would like them by our next Council meeting, December 4, 2018.

NEW BUSINESS:

GL Transfer to offset beginning cash balances (01 to 03 and 02)- Edie thought WATER should be included in this, (01-Administration, 03-Parks and 02-Streets) would like to TABLE until she checks with Karyn.

RED TAG Penalty-TABLE until after first of the year

Income Survey- Edie thinks it would be a great idea to allow CEDA to do an income survey for the City of Genesee, since she feels so many things have changed since the last one. There was discussion if every department should split the cost of \$1500, but if there isn't money in the other departments, Edie said it could come out of Sewer Professional Fees. Edie made a motion to ask CEDA to do an Income Survey for the City of Genesee for \$1500, seconded by Ryan; **ROLL CALL VOTE: McLachlan, Banks, Lindquist, James, Ayes; motion carried.**

RV Park Stay- Richard Wayt discussed how he and his wife have advertised for the City's RV Park. Rich would like permission to allow extended stay for more than the 15 day limit, on a case by case basis. If there is a space in Creekside RV, he lets people know they need to move there. At the moment, he has a family who is wanting to buy a house in Genesee; both parents work and they have their children enrolled in the Genesee School. Rich also has construction workers, who are working on the new Fire Station, that are only staying 3 nights during the week, but are paying \$25/day to keep their camper parked there. Jay & Tedi Roach will be asked to come to the next meeting to discuss. It was also mentioned, Creekside RV pays only half of the current water/sewer rates for their park. The minutes from that meeting will be made available for the next meeting. Art made a motion, seconded by Edie to let the campers, who are currently there, stay until a decision is made at the next meeting. **VOICE VOTE: Ayes; motion carried.**

Opening of Alley between Birch/Beech Streets-Ted English explained Lori Callahan purchased two lots 27 years ago. There was a 10' vacation, which she thought was the alley. 7 years ago, the lots were split and it was surveyed. At that time, she learned the 10' vacation was Hazel Street. Doug Bennett, who is part owner in the pasture that borders the alley way, said he doesn't expect the alley to be opened right away, but it could be a possibility in the future. He explained he wanted the City to be aware of this and would also like the City to investigate where the water is coming from, that is in the pasture, as it hasn't always been there.

Christmas Garbage Pickup at no charge (December 31st)-Council agreed to continue with this and waive any extra garbage fees after Christmas.

PROJECTS IN PROGRESS-

Sub Division Ordinance Committee-(Edie will report 2019)

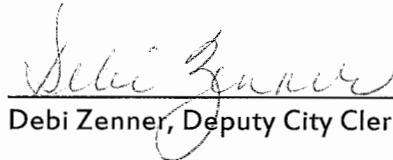
CORRESPONDENCE: None

EXECUTIVE SESSION-Art made a motion, seconded by Linda to go into Executive Session under Idaho Code 74-206B and 74-206F; **ROLL CALL VOTE: McLachlan, Banks, Lindquist, James, Ayes; motion carried.**

Out of Executive Session at 7:45pm

ADJOURNMENT- Art made a motion, seconded by Linda, to adjourn at 7:45pm. **VOICE VOTE: Ayes; motion carried.**


Steve Odenborg, Mayor

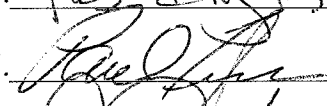



Debi Zenner, Deputy City Clerk/Treasurer

City of Genesee

Sign in Sheet

Date of Meeting 11-20-18

Name	Address	Email	Male/Female M or F	Disabled Y/N	Do you wish to Speak? Y/N
------	---------	-------	-----------------------	-----------------	------------------------------

1. Richard Wrayt m yes
2. Bill GARTLEY No
3. Ryan Rehder M No
4. Ted English yes
5.  no
6.  (J.P. STRAVENS)
7. Ryan Ziemer
8. Kathy Bennett
9.  yes
10. Alan Bromberg

PROPOSED PROJECT

Relocate Wastewater Facility

- 3 cells that will meet redundancy requirements and improve maintenance
- Modern liners will prevent seepage beyond limits
- Nitrification unit will enable the system to meet discharge ammonia limits
- While alternatives are still being explored, disinfection is anticipated to be similar to the existing site
- Land application sites will increase in size, reducing the loading per unit area and meeting population demands
- Spot repairs in the collection system to fix leaks

ESTIMATED COST

The preliminary cost estimate of the recommended project is \$6.2M. The City of Genesee has been approved for a low-interest loan from the Idaho Clean Water State Revolving Fund with \$250,000 in loan forgiveness and is on the list to receive \$1.5M from the Army Corps of Engineers. Revenue generated from 2018 rate increases will also be applied to bond repayment, should the bond pass in November 2019.

**Vote on
November 5th**

IT'S UP TO YOU!

This is YOUR community! Take advantage of the available opportunities to learn more about this project!

The Facility Plan is available at the Genesee City Hall and online at www.cityofgenesee.com.

June 18: Engineer's Presentation at City Hall, Senior Center, 6:00 PM

June 3-19: Comment Period
Submit written comments to City Hall or email comments to engineer

Genesee's Bond Election will be held November 5th at City Hall, Senior Center



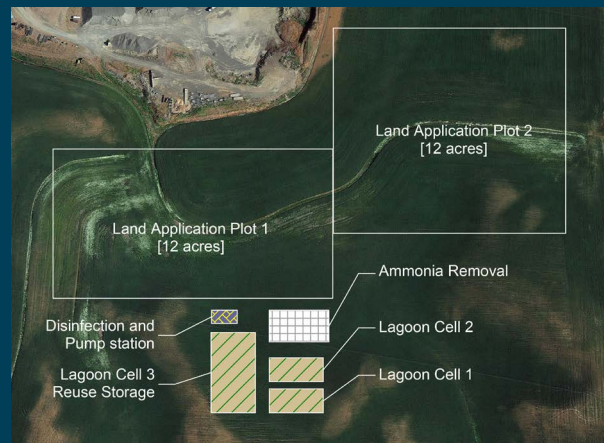
**Mountain
WATERWORKS**

ENGINEER INFORMATION

Ryan Rehder, P.E.

Office: 208-780-3995

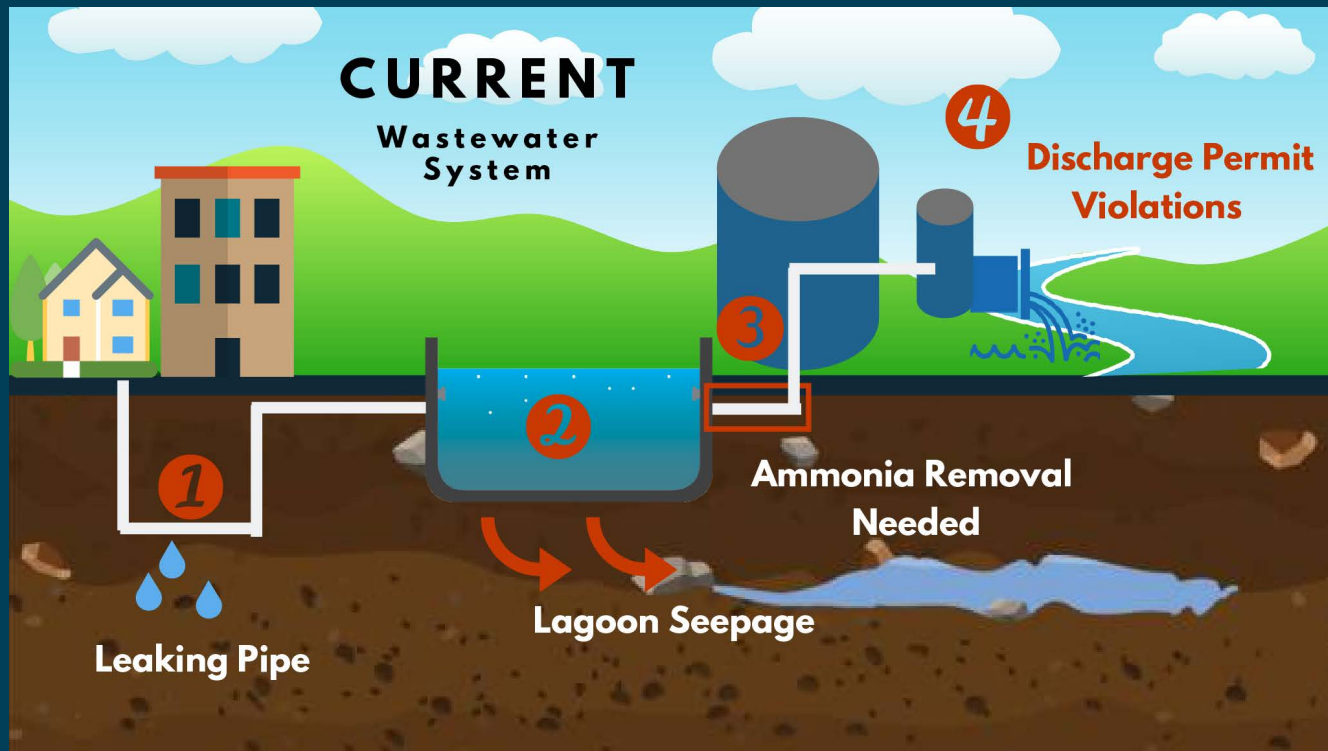
Email: rrehder@mountainwtr.com



CITY OF GENESEE

Wastewater Improvement Project

INFORMATION GUIDE



SYSTEM DEFICIENCIES

- The lagoon does not meet state and federal requirements:
 - Needs to be higher above the groundwater
 - Lies in the Cow Creek Floodplain
 - Seepage is above acceptable limit
- Lagoon redundancy is required should one be rendered unusable
- Unable to meet the new ammonia EPA limit
- Collection system has leaks, causing excessive system flows

DID YOU KNOW?

First built in the 1930s, the Genesee wastewater facility has served the City for more than 70 years. In the 1950s the system was upgraded to replace public septic tanks with the current earthen-lined lagoon.

The facility is due for another upgrade.

Over the last 5 years the EPA has fined the City two times. The most recent fine in 2018 was originally \$216,000 but was negotiated down to \$30,000 with the agreement that compliance would be met by 2023. These fines are likely to increase in the future, and if the deadline is not met, the City will be vulnerable to lawsuits again.

“Nationally, the need for wastewater infrastructure exceeds \$271 billion.”

Source: 2017 American Society of Civil Engineers
Infrastructure Report Card: infrastructurereportcard.org

PROJECT ALTERNATIVES

Criteria	Upgrade Existing System	Seasonal Land Application	100% Land Application	Mechanical Treatment w/ Ammonia, P Removal	New Lagoons with Ammonia, P Removal
Capital Cost	\$7.5M	\$6.2M	\$7.7M	\$12.0M	\$9.5M
Annual O&M Costs	Moderate	Low/Moderate	Moderate	High	Moderate
Land Requirement	Small	Moderate	Large	Small	Small/Moderate

WASTEWATER NEEDS

The City's goal is to help the community. In order to meet EPA permitting restrictions and avoid future costly fines, a new system is needed. Of the five alternatives proposed, the City is implementing the “Seasonal Land Application - New Location” project. This alternative is the most cost-efficient, while also able to meet current and possible future limits.

CITY OF GENESEE

Wastewater Facility

DID YOU KNOW?

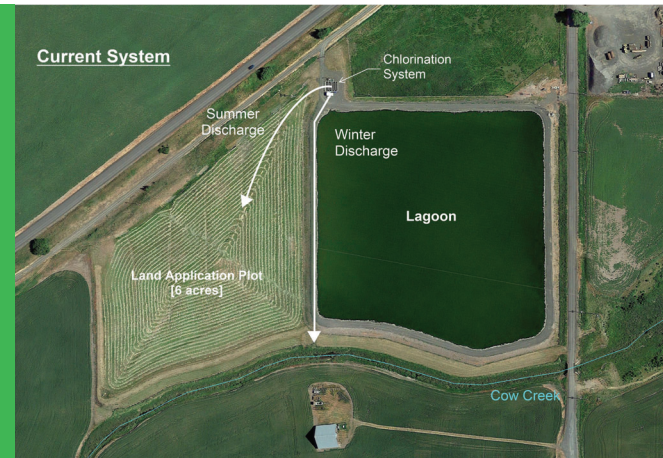
First built in the 1930s, the Genesee wastewater facility has served the City for more than 70 years. In the 1950s the system was upgraded to replace public septic tanks with the current earthen-lined lagoon. The facility is due for another upgrade. Over the last 5 years the EPA has fined the City two times. The most recent fine in 2018 was originally \$216,000 but was negotiated down to \$30,000 with the agreement that compliance would be met by 2023. These fines are likely to increase in the future, and if the deadline is not met the City will be vulnerable to lawsuits again.

BY THE NUMBERS

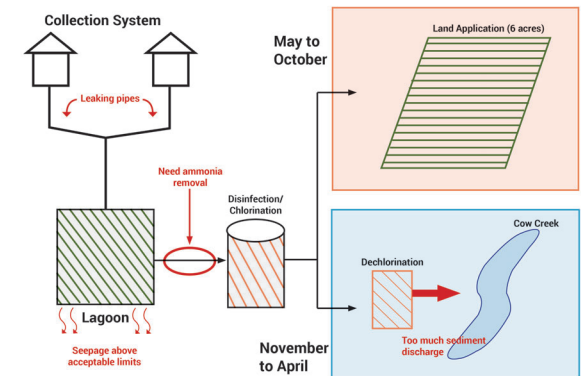
The existing system serves **442 connections**. It treats an average **193,000 gallons** a day. Conservative growth forecasting for the City has the flow increasing to **217,000 gallons** a day.

THE NEED

The City of Genesee needs a system that will meet all limits and requirements now and in the future, while controlling costs.



CURRENT GENESEE WASTEWATER SYSTEM



SYSTEM DEFICIENCIES

- The lagoon does not meet state and federal requirements:
 - Needs to be higher above the groundwater
 - Lies in the Cow Creek Floodplain
 - Seepage is above acceptable limit
- Lagoon redundancy is required should one be rendered unusable
- Unable to meet the new ammonia EPA limit
- Collection system has leaks, causing excessive system flows

CITY OF GENESEE

Wastewater Improvement Project

THE GOAL

The City's goal is to help the community. In order to meet EPA permitting restrictions and avoid future costly fines, a new system is needed.

KEEP IN MIND

Of the five alternatives proposed, the City is considering implementing the "Seasonal Land Application - New Location" project. This alternative is the most cost-efficient, while also able to meet current and possible future limits.

IMPORTANT DATES

- **June 18:** Engineer's presentation at City Hall, Senior Center, 6:00 PM
- **June 3-19:** Comment period - Submit written comments to City Hall, email comments to engineer
- **November 5:** Bond Election at City Hall, Senior Center

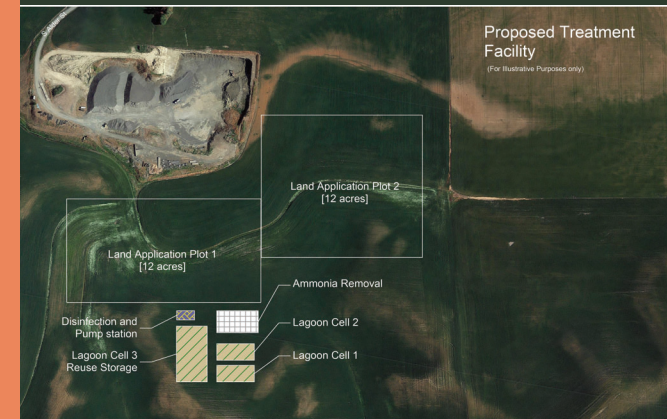
Facility plan available at the Genesee City Hall and online at www.cityofgenesee.com

PROPOSED PROJECT Relocate Wastewater Facility

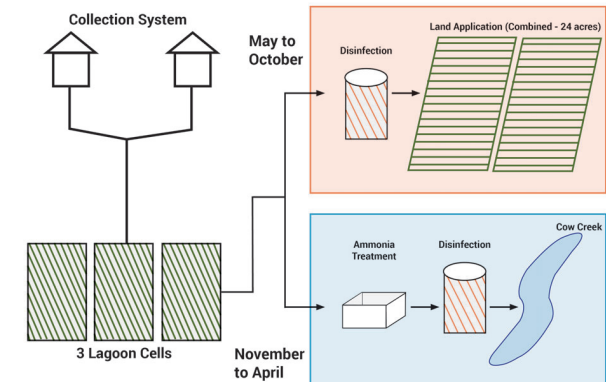
- 3 cells that will meet redundancy requirements and improve maintenance
- Modern liners will prevent seepage beyond limits
- Nitrification unit will enable the system to meet discharge ammonia limits
- While alternatives are still being explored, disinfection is anticipated to be similar to the existing site
- Land application sites will increase in size, reducing the loading per unit area and meeting population demands
- Spot repairs in the collection system to fix leaks

ESTIMATED COST

The preliminary cost estimate of the recommended project is \$6.0M. The City of Genesee has been approved for a low-interest loan from the Idaho Clean Water State Revolving Fund with \$250,000 in loan forgiveness and is on the list to receive \$1.5M from the Army Corps of Engineers. Revenue generated from 2018 rate increases will also be applied to bond repayment, should the bond pass in November 2019.



PROPOSED GENESEE WASTEWATER SYSTEM



PROJECT ALTERNATIVES

Criteria	Upgrade Existing System	Seasonal Land Application	100% Land Application	Mechanical Treatment w/ Ammonia, P Removal	New Lagoons with Ammonia, P Removal
Capital Cost	\$7.5M	\$6.2M	\$7.7M	\$12.0M	\$9.5M
Annual O&M Costs	Moderate	Low/Moderate	Moderate	High	Moderate
Land Requirement	Small	Moderate	Large	Small	Small/Moderate



ENGINEER INFORMATION
Ryan Rehder, P.E.
Office: 208-780-3995
Email: rrehder@mountainwtr.com

CITY OF GENESEE

CITY COUNCIL

June 18, 2019

REGULAR MEETING

MINUTES

4:00 PM

Location: 140 E Walnut Street, Genesee, ID 83832

CALL TO ORDER - The Genesee City Council met June 18, 2019. Mayor, Steve Odenborg, called the meeting to order at 4:00pm.

ROLL CALL - Present at the meeting were council members: Edie McLachlan, Ryan Banks, Art Lindquist, Nyla Roach, City Engineer Scott Becker, City Clerk/Treasurer Karyn Wright and Deputy City Clerk/Treasurer Debi Zenner.

VISITORS: Bill & Jenelle Krick, Carl Heilman and Randy Hall

CONSENT AGENDA: Edie made a motion, seconded by Art, to accept the consent agenda, along with payment of the bills and financial statement **ROLL CALL VOTE: McLachlan, Banks, Lindquist, Roach, Ayes; motion carried.**

CITY OFFICIAL, COUNCIL AND STAFF REPORTS-

Karyn-Would like permission to move forward with a Public Hearing to require a Special Use Permit, when building a residence in a commercial zone. Council feels this needs to happen, so we will publish twice and have a Public Hearing at the July 16, 2019 Council Meeting. Scott also thought, giving the City a say, is a good idea.

Edie-Wanted to correct the amount on her report from last meeting. The water adjudication cost was actually \$514, instead of \$380. Would like to have a budget workshop with all departments, maybe do this after our next 4pm meeting. Council agreed.

Ryan-Ryan is happy with the radar signs, but wondered if they could be adjusted so it will capture higher speeds; 40mph or more. Compression brakes still seem to be used as trucks drive into town, even though prohibited. Will work with the County to do more patrolling and maybe use cameras. **CEDAR STREET:** Ryan knocked on doors to let people know the road would be resurfaced from June 17 thru July 1st, approximately. Will need to let Latah Sanitation know before next garbage day, as they may not be able to service everyone. Debi will let Amanda know and call anyone who puts their garbage tote on Cedar, they will need to put it in the alley or Ash Street. Chip seal was done with a great outcome. Community Day turned out well and wanted to thank everyone for their work and especially Nyla for all the work she did so our Parks look great.

Scott- David Evans & Associates will meet tomorrow at 2pm, with Scott and Ryan, to see if the bridge on the Genesee-Juliaetta Road could be raised, approximately 18", to help with flooding. There also may be places along Cow Creek that could be dredged to help with flooding, and we could put that in next year's budget. Scott will check to see the weight limit on the Oak Street bridge to make sure it can handle big trucks, during our LHTAC project.

Art- Purchased an additional air conditioner for the Library to help with the heat this summer. On Community Day, the fireworks were good, but the Rec District members wanted Art to let Council know they left a lot of debris on the fields. **Fire Department Update:** Art would like all entities involved in a meeting to discuss how things will work with the Community Center and other rooms in the new station. Everything needs to be finalized by July 11th, as Jenelle will be out of town for a while. Art drove by Cedar Street and there are no signs where to go for a detour, only Road Closed signs. Randy Hall said it would be nice if there were signs letting people know before they travel Old Highway 95 to Genesee, that Cedar Street will be closed. **Bill Krick** reported they purchased a fire truck for \$1.00 from Moscow and now just need to get it equipped. Bill also talked with Rollie, at Stonebraker Insurance, regarding insurance premiums going down with the Construction of our new Fire Station. Art would like to schedule a tour of the lagoon and wells if anyone would like to see how they operate. **Nyla-**Would like a bike clinic for kids for safety and helmets. Could we partner with Civic and have another Movie Night? Steve will check into the licensing rights and see if maybe we could borrow a license from Lewiston? Steve will get back to council with this.

Debi- No Report

Steve-Bill and Steve went to the Moscow City Council Meeting. Fire truck was the last item on the Agenda; the truck was purchased for \$1 and it will benefit the City.

The Food Bank has to be out of the Mason Lodge by June 30th, if anyone has ideas for a new location, please let Jenni know.

UNFINISHED BUSINESS-

NEW BUSINESS-

Code Compliance Report-Ted has been driving around looking at different compliance violations, taking pictures and talking with residents. If he cannot get a hold of the resident, he will write them a letter with a picture. For the most part, people are cleaning up once they are aware of the problem. Ted would also like to send each one, who takes care of their issue, a Thank You note. Art mentioned Tim Sperber might get his football players to help elderly people with things they just can't do, or afford to have done. They could also help out in the winter, shoveling sidewalks and driveways. Ted will get a list of these people, so we'll have it when the time comes.

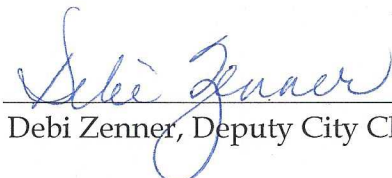
PROJECTS IN PROCESS-

Sidewalk Replacement-Ryan is looking at how other cities address this. Will report back.

CORRESPONDENCE: None

ADJOURNMENT- Edie made a motion, seconded by Art, to adjourn at 5:15pm. **VOICE VOTE:** Ayes; motion carried.


Steve Odenborg, Mayor


Debi Zenner, Deputy City Clerk/Treasurer

City of Genesee Wastewater Facility Plan

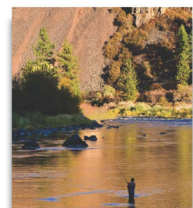
Presented by Mountain Waterworks

Ryan Rehder, P.E.
June 18, 2019



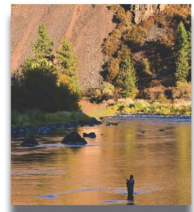
Agenda

1. Background and Purpose
2. Community Planning
3. Existing Facilities
4. System Deficiencies
5. Capital Improvement Alternatives
6. User Rates and Impacts
7. Funding Update
8. Schedule / Next Steps
9. Questions



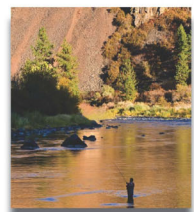
Background and Purpose

- New Surface Water Discharge Permit
 - Stringent ammonia limits
 - Restrictive phosphorus limits in the summer (seasonal limit)
 - Temperature limits in the summer
- EPA Compliance
 - Historic violations led to significant fines
- Existing Lagoon Limitations
 - Does not meet current regulatory requirements
- Risk of 3rd Party Lawsuits



New Surface Water Discharge Permit

- Effective July 1, 2017 – Issued by the EPA
- New Ammonia, Phosphorus, and Temperature Limits
- Year-Round Ammonia Limits
 - Compliance Schedule
- Seasonal Phosphorus and Temperature (summer)



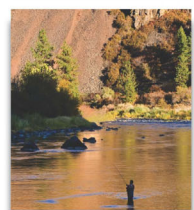
EPA Compliance

- Existing facility compliance deficiencies
 - Between 2014 and 2017: 1,326 violations of the clean water act
- Two fines over the past 5 years
- Most recent was 2018 in the amount of \$30,000
 - Negotiated down from \$216,000
- Upgrades necessary to avoid future permit violations and fines



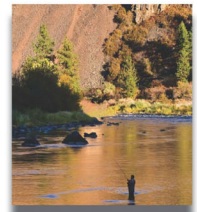
Existing Lagoon Limitations

- Single lagoon available for treatment – no redundancy
- Idaho Department of Environmental Quality requires periodic lagoon seepage testing
- Existing lagoon does not meet seepage requirements
 - 2004 Facility Plan indicates leakage rate above State standards
- Improvements necessary to meet current regulatory conditions
 - Groundwater separation
 - Seepage
 - Redundancy

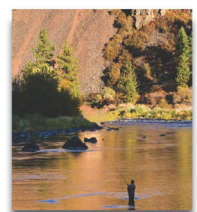
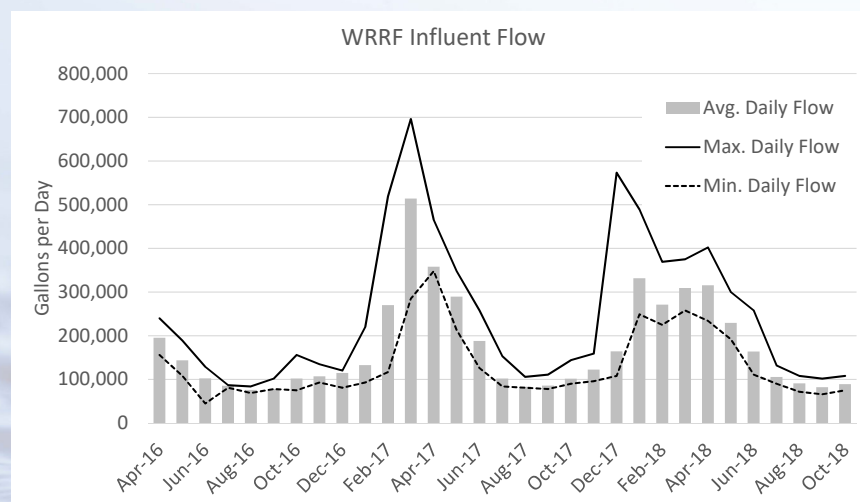


Summary

- Existing lagoon treatment system does not meet regulatory standards
- Upgrades necessary to meet new permit limits
- Significant penalties likely if situation is not addressed
 - EPA Enforcement Actions
 - 3rd Party Lawsuits



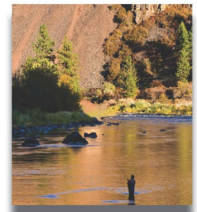
Community Planning



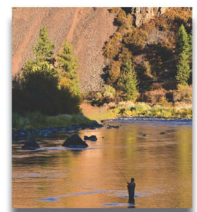
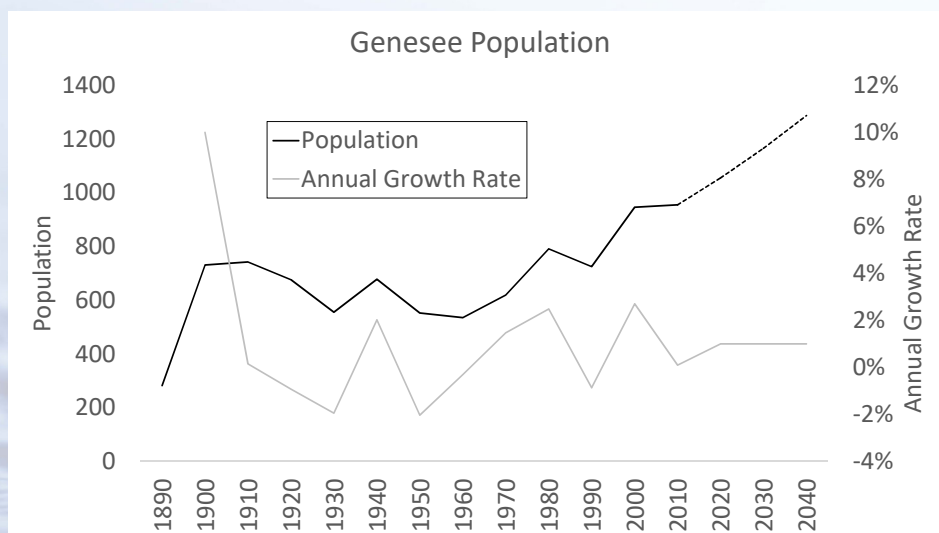
Community Planning

Parameter	Value	Units	Value	Units
Average Day (AD)	193,000	gpd	134	gpm
Maximum Month Average Day ¹ (MMAD; January)	402,000		279	
Maximum Day ² (MD)	573,000		483	
Peak Hour ³ (PH)	772,000		966	

1. MMAD represent the 75th percentile as calculated from flow data collected between January 2014 through April 2018
2. MD represents the maximum daily flow recorded between January 2014 and April 2018, excluding 2017
3. Estimate based on peaking factor of 4.0 (PH to AD) per Ten State Standards



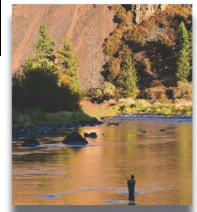
Community Planning



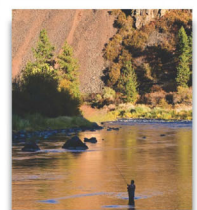
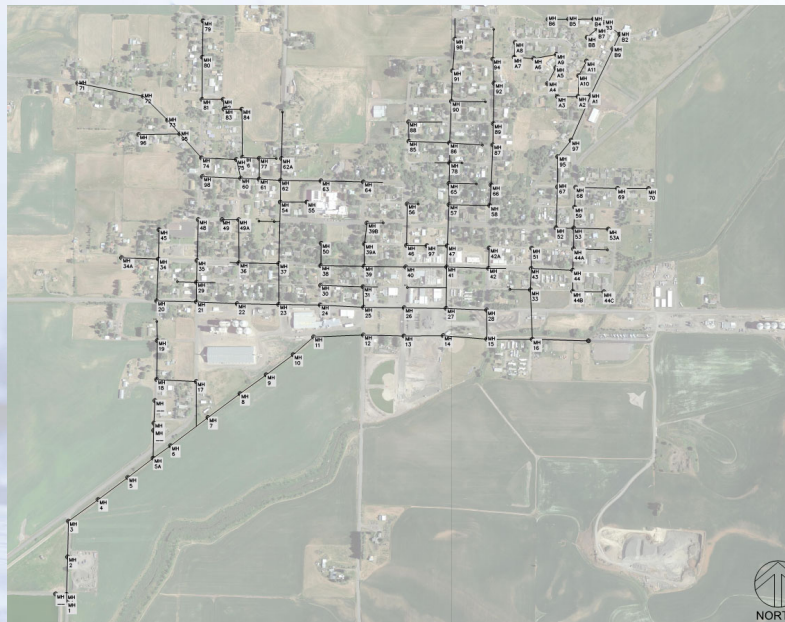
Community Planning

20 Year Design Influent Flow Parameters						
	Flow (gal/day)	Flow* (gal/day)	BOD ₅	TSS	NH ₃	TP
Design Loads						
lb/day	-	-	283	463	25.75	9.65
lb/capita/day	-	-	0.22	0.36	0.02	0.005
Design Concentration, mg/L						
Average Day	155,000	217,000	157	257	14.25	3.56
Max. Month Average Day	310,000	434,000	78	128	7.13	1.78
Maximum Day	465,000	651,000	52	86	4.75	1.19
Peak Hour	620,000	868,000	39	64	3.56	0.89

* If I/I issues are not addressed

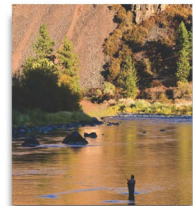


Existing Facilities – Collection System



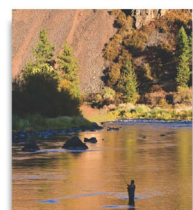
Existing Facilities – Collection System

Pipe Diameter (inches)	Pipe Length (feet)
15	867
12	6,371
10	1,151
8	13,349
6	17,108
4	832
Pipe Material Type	Pipe Length (feet)
Concrete	5,364
Polyvinyl Chloride (PVC)	3,057
Asbestos Concrete (AC)	7,458
Vitrified Clay (VC)	23,575
Cast Iron (CI)	224
Total Length of Collection System:	39,678 ft

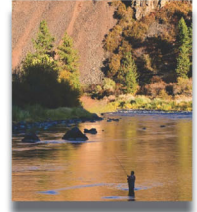
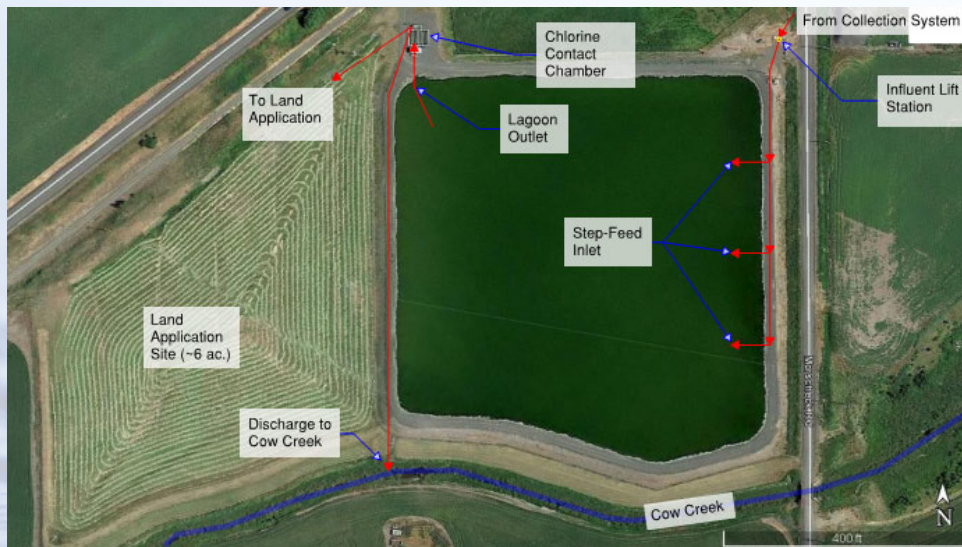


Existing Facilities – Collection System

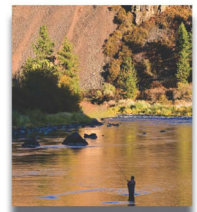
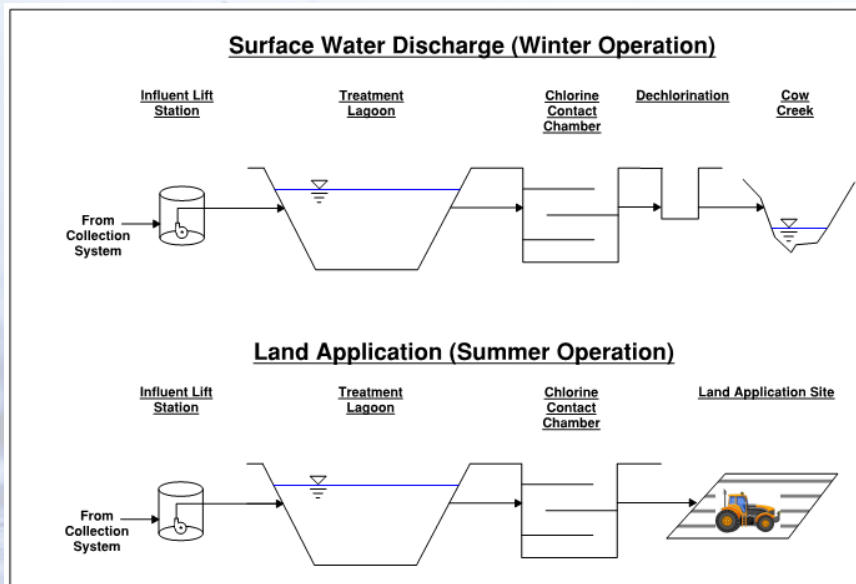
Parameter	Wastewater Flow ¹ (gpd/IDM)	Wastewater Flow ³ (gpcd, Table 2.2)
Maximum Allowable Amount	1,500	120
Annual Average Day	2,897	202.1
Max Month Average Day (March)	6,034	420.9
Max Day	8,601	600.0
Peak Hour ²	11,588	808.4



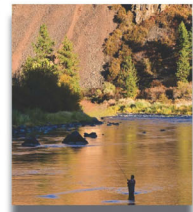
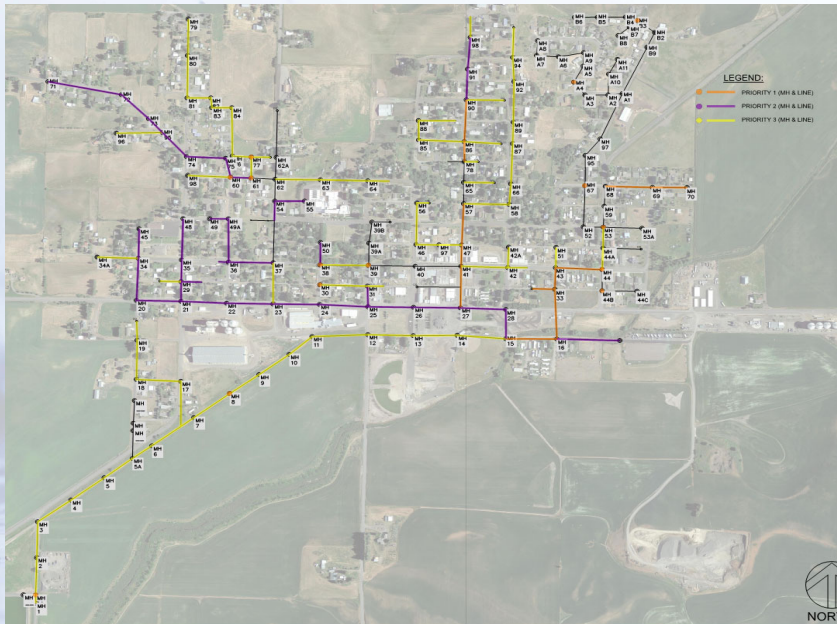
Existing Facilities – Treatment Facility



Existing Facilities – Treatment Facility

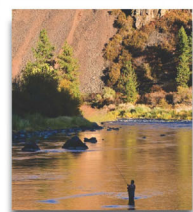


Deficiencies – Collection System

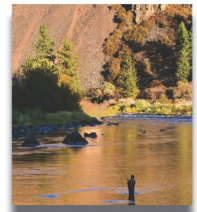


Deficiencies – Treatment Facility (Revisited)

- Single lagoon available for treatment – no redundancy
- Idaho Department of Environmental Quality requires periodic lagoon seepage testing
- Existing lagoon does not meet seepage requirements
 - 2004 Facility Plan indicates leakage rate above State standards
- Improvements necessary to meet current regulatory conditions
 - Groundwater separation
 - Seepage
 - Redundancy

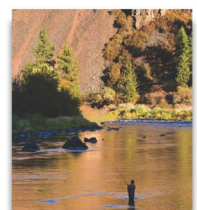


Capital Improvement Alternatives



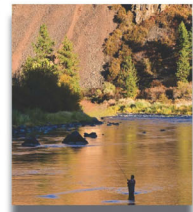
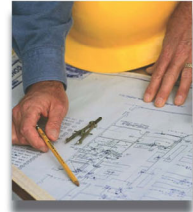
Capital Improvement Alternatives

Collection System Alternatives	
CS-1	No Action Alternative
CS-2	Priority 1 Pipe and Manhole Replacement
CS-2	Priority 2 Pipe and Manhole Replacement
CS-3	Priority 3 Pipe and Manhole Replacement
Treatment Facility Alternatives	
TF-1	No Action Alternative
TF-2	Upgrade Existing Lagoon(s) and Add Ammonia Removal
TF-3	New Lagoon Site with Summer Land App. / Winter Discharge
TF-4	New Lagoon Site with Summer Land App. / Winter Storage
TF-5	Mechanical Treatment with Effluent Cooling
TF-6	New Lagoons with Ammonia, Phosphorus, and Temp Removal



Collection System Improvements CS-1 Through CS-3

NO.	DESCRIPTION	Subtotal	Contingency (15%)	Engr., Legal, Admin.	Total
CS-1	No Action Alternative	Not Feasible			
CS-2	Priority 1 Pipe and Manhole Replacement	\$473,000	\$70,950	\$141,900	\$686,000
CS-2	Priority 2 Pipe and Manhole Replacement	\$923,000	\$138,450	\$276,900	\$1,339,000
CS-3	Priority 3 Pipe and Manhole Replacement	\$1,711,000	\$256,650	\$513,300	\$2,481,000



TF-1 “No Action”

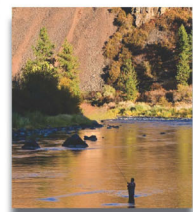
No Action Alternative

Selection of this alternative will likely result in severe future fines and penalties assessed by EPA and/or 3rd party lawsuits

The State may impose a building moratorium within the City’s service area

Worst case – the EPA/State/3rd Party enforce fines against the City that are collected through imposition of a property tax lien or other mandatory resident-funded revenue source. This would likely result in a severe reduction in property values within the City.

This alternative is not carried forward

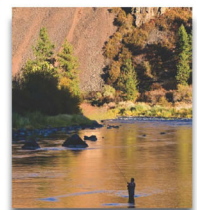


TF-2 Reconstruct Lagoons at Existing Site

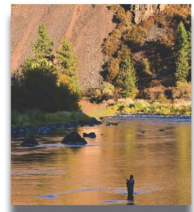
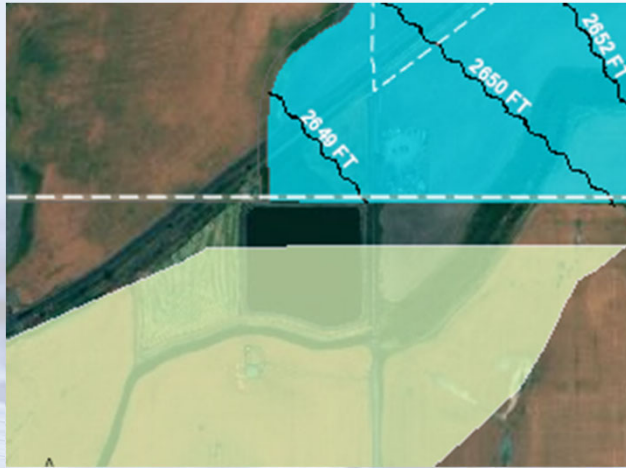
Primary Project Components:

- New influent flow measurement
- New headworks facility
- Dredge and upgrade existing lagoon
- Construct two new lagoon cells
- New tertiary treatment to remove ammonia

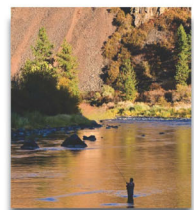
Engineer's Opinion of Probable Cost \$7,536,000



Cow Creek Floodplain



Conceptual Layout

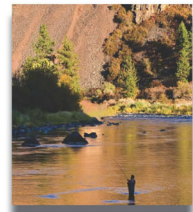


Alternative TF-3 – Lagoon-Based Treatment at a New Location with Winter Ammonia Removal and Summer Land Application

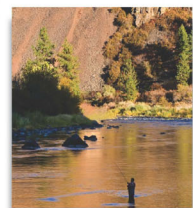
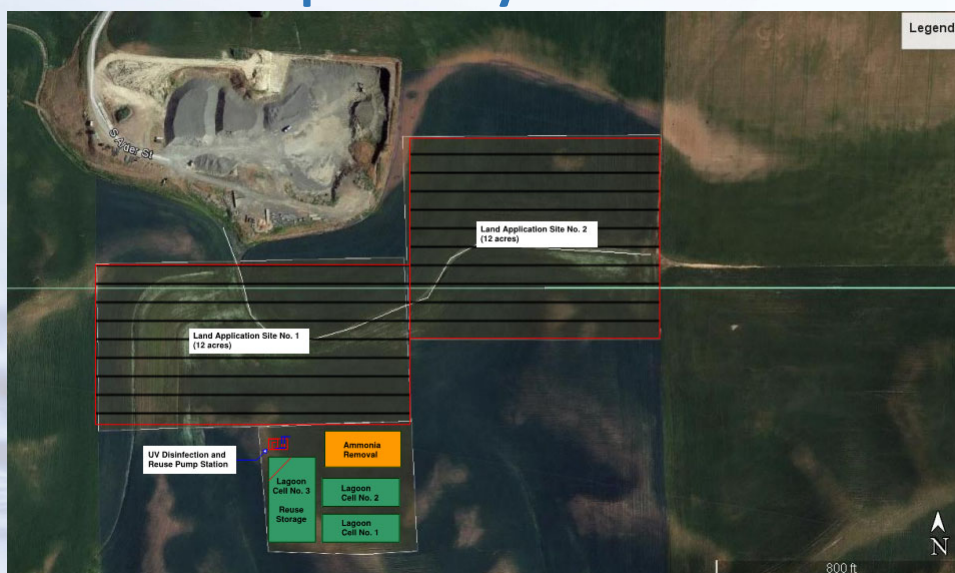
Primary Project Components:

- New centralized lift station with flow measurement
- New headworks facility
- New three-cell lagoon system on a new site
- New tertiary treatment to remove ammonia
- New disinfection facilities
- Develop new land application area
- Dredge and abandon existing lagoons

Engineer's Opinion of Probable Cost \$6,136,000



TF-3 Conceptual Layout

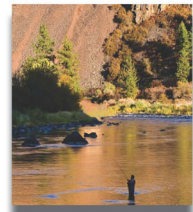
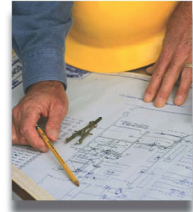


Alternative TF-4 – Lagoon-Based Treatment at a New Location with Winter Storage and Summer Land Application

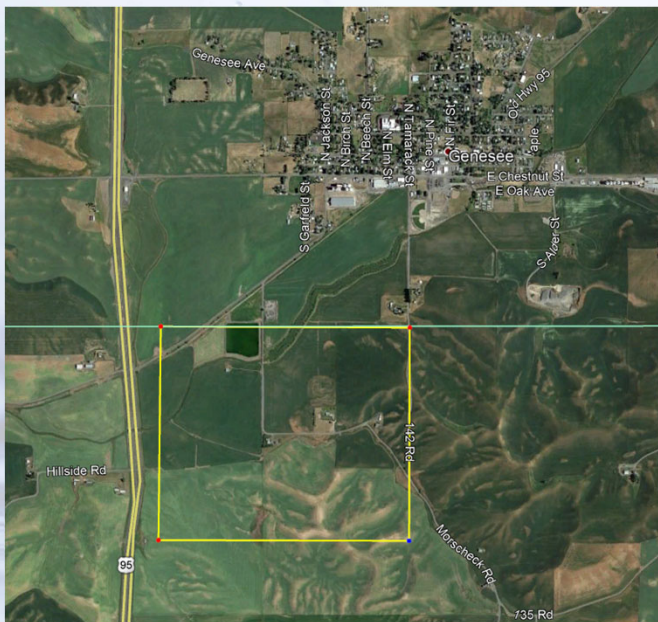
Primary Project Components:

- New centralized lift station with flow measurement
- New headworks facility
- New three-cell lagoon system on a new site (enlarged third cell for winter storage)
- New disinfection facilities
- Develop new land application area
- Dredge and abandon existing lagoons

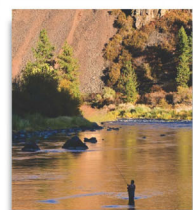
Engineer's Opinion of Probable Cost \$7,719,000*



Required Application Area



- ~350 Acres

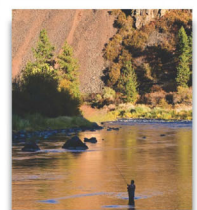
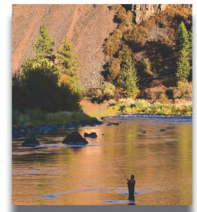


Alternative TF-5 – Mechanical Treatment with Phosphorus Removal and Effluent Cooling

Primary Project Components:

- New influent flow measurement
- New headworks facility
- New mechanical treatment plant capable of removing phosphorus and ammonia
- New effluent cooling facility
- Rehab existing disinfection facilities
- Dredge and abandon existing lagoons

Engineer's Opinion of Probable Cost \$12,112,000

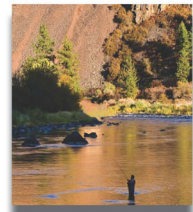
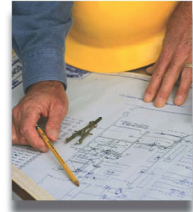


Alternative TF-6 – New Lagoon-Based Treatment with Ammonia and Phosphorus Removal and Effluent Cooling

Primary Project Components:

- New centralized lift station with flow measurement
- New headworks facility
- New three-cell lagoon system on a new site
- New tertiary treatment to remove phosphorus
- New tertiary treatment to remove ammonia
- New effluent cooling facility
- New disinfection facilities
- Dredge and abandon existing lagoons

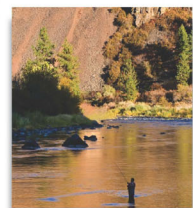
Engineer's Opinion of Probable Cost \$9,522,000



Alternative Summary

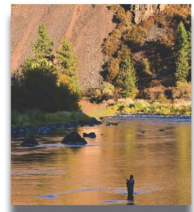
Criteria	TF-2: Upgrade Existing System	TF-3: Seasonal Land Application	TF-4: 100% Land Application	TF-5: Mechanical Treatment with Ammonia and P Removal	TF-6: New Lagoons with Ammonia and P Removal
Capital Cost (\$)	7,536,000	6,163,000*	7,719,000*	12,112,000	9,522,000
Annual O&M Costs	Moderate	Low / Moderate	Moderate	High	Moderate
Land Required	Small	Moderate	Large	Small	Small/Moderate
Operator Classification	Class I / LA	Class I / LA	Class I / LA	Class III	Class II
Manpower Req'd	Moderate	Low	Moderate	High	Moderate

*: Does not include purchase of required lands.



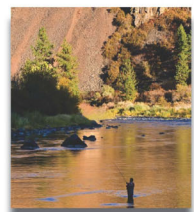
User Rates

- 2018 rate hikes increased rates from \$31.58/month to \$51.58 over 6 months
- Additional rate adjustment likely needed depending on final funding package
- Goal is to keep rates in the neighborhood of \$55/month



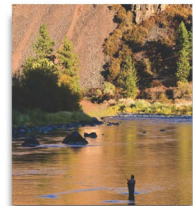
User Rates – Example Table

Financial Summary for \$7,000,000 Total Project Budget			
Loan	Grant	Rate Impact	Total Rate After Project
\$ 3,000,000	\$ 4,000,000	\$ 24.39	\$ 54.39
\$ 3,500,000	\$ 3,500,000	\$ 28.46	\$ 58.46
\$ 4,000,000	\$ 3,000,000	\$ 32.53	\$ 62.53
\$ 4,500,000	\$ 2,500,000	\$ 36.59	\$ 66.59
\$ 5,000,000	\$ 2,000,000	\$ 40.66	\$ 70.66
\$ 5,500,000	\$ 1,500,000	\$ 44.72	\$ 74.72
\$ 6,000,000	\$ 1,000,000	\$ 48.79	\$ 78.79
\$ 6,500,000	\$ 500,000	\$ 52.86	\$ 82.86
\$ 7,000,000	-	\$ 56.92	\$ 86.92



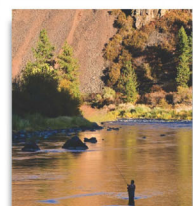
Funding

- IDEQ SRF Funding
 - \$7,000,000 loan at 1.75% interest rate – 30 year term
 - \$220,000 grant
- US Army Corps 595 Program
 - FY 2020: \$750,000
 - FY 2021: \$750,000
- ~~US Bureau of Reclamation~~
- Currently working on getting political support for additional grant money



Schedule / Next Steps

City of Genesee - Wastewater Facility Plan	
Event	Date
Facility Plan Draft Findings (Council Presentation)	Complete
Submit Technical Draft FP to DEQ	Complete
DEQ Technical Draft Approval	Complete
Advertise and Start Public Comment Period	Complete
Public Meeting (Council Presentation)	18-Jun
End of Public Comment Period	19-Jun
Council Selection of Alternatives	2-Jul
Environmental Information Document (EID)	Jul-Aug
Submit Final FP to DEQ	15-Sep
DEQ Final Draft Approval	15-Oct

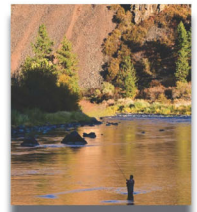


Questions?

Thank You

Presented by Mountain Waterworks, Inc.
June 18, 2019

Ryan Rehder, P.E.
208-780-3995
rrehder@mountainwtr.com



CITY OF GENESEE

CITY COUNCIL

July 2, 2019

REGULAR MEETING

MINUTES

7:00 PM

Location: 140 E Walnut Street, Genesee, ID 83832

CALL TO ORDER - The Genesee City Council met July 2, 2019. Mayor, Steve Odenborg, called the meeting to order at 7:00pm.

ROLL CALL – Present at the meeting were council members: Edie McLachlan, Ryan Banks, Art Lindquist, Nyla Roach, Maintenance Supervisor Dustin Brinkly, City Clerk Karyn Wright and Deputy City Clerk/Treasurer Debi Zenner

VISITORS: Bill & Jenelle Krick, Cody Bailey, Bill Hartley, Grant Tucker, Rich Wayt, Gary Kiss, Carl Heilman, and Cindy Langstaff

CONSENT AGENDA: Art made a motion, seconded by Edie, to accept the consent agenda along with payment of the bill and Quarterly Finance Report, **ROLL CALL VOTE: McLachlan, Banks, Lindquist, Roach, Ayes; motion carried.**

CITY OFFICIAL, COUNCIL AND STAFF REPORTS

Edie: Will be working on budget information for the next meeting.

Ryan: Street striping has been done and looks great. Cedar Street also turned out well. We were able to widen and lengthen the approaches. Radar signs have been adjusted to pick up speeds up to 50mph. Edie would like to know if they can pick up even higher speeds? Dustin will talk to Drew and have him adjust it to pick up higher speeds. Had a meeting with Scott and a couple of representatives from David Evans & Associates. They looked at seeing if the bridge on the Genesee-Juliaetta road can be raised 18-20" to prevent flooding. The guys from David Evans said this is definitely do-able; raising the bridge with a crane and pouring concrete over existing abutments. We would need to do a hydrology study. Estimated cost is \$150-300K. Kudos to Scott for arranging the meeting. Oak Street would be the detour.

Dustin: Chestnut sewer replacement: Mountain Waterworks is working on a bid. The collection system needs to be replaced. We are currently looking for ways to fund this project.

Art: Sheriff's office has been in Genesee for theft and domestic issues. Art would like a notice put in the Newsletter for people to use common sense and report suspicious behavior.

Nyla: Considering raising rent at the RV Park. Would like to take \$2 for each night's rent to contribute to water and sewer. Would also like to check with a couple places to get a price for WI-FI. The Mayor asked if people are contributing to the RV Dump Station and Dustin said we have a little over \$100, since he put the donation box up.

Debi: No Report

Karyn: No Report

Steve: Drove to the Association of Idaho Cities meeting, in Boise, with Edie. Lots of good meetings with other small town Mayors. It seems so many are having similar issues. The meeting he was hoping to have, with Representative Carolyn Nilsson Troy and Congressman Mike Simpson didn't happen; really wanted to discuss our wastewater system. Edie has received a lot of help, from AIC with the water adjudication.

Bill Hartley feels the small towns, with wastewater issues should band together to fight the large costs. Seems we're being taken advantage of. Bill Lambert and Steve are District II representatives for AIC. Steve would like to have a Mayors' Round table. Steve showed pictures to Justin, from AIC of our new Fire Station. Justin commended us for being able to make it work with two different taxing districts.

UNFINISHED BUSINESS

Wastewater Facilities Plan Alternative Selection: Ryan Rehder will provide flyers to send out to our residents to put in a mailer and include on our Newsletter. Art made a motion, seconded by Edie to move forward with Alternative, TF-3-Seasonal Land Application for approximately 6.2M. **ROLL CALL VOTE: McLachlan, Banks, Lindquist, Roach, Ayes; motion carried.**

NEW BUSINESS:

Fire Station Policies & Procedures: Bill Krick handed out the Policies and Procedures from the long meeting they had Monday night to go through everything, line by line. He asked Council to please look it over and get back to him with any questions. Bill would like a vote, from Council, to adopt these by the next meeting, if possible. There was discussions regarding rental fees of the Community Center and if Fireman would each get a free rental per year.

Movie Night License--TABLE

PROJECTS IN PROGRESS-

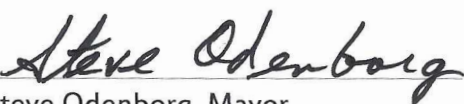
Sidewalk Replacement--TABLE

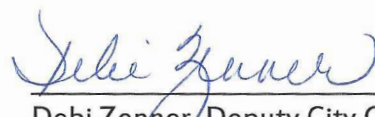
CORRESPONDENCE: Wells Fargo Letter, Genesee Branch closing September 18, 2019
Deposits continue to be made at Wells Fargo in Moscow, after this closure.

EXECUTIVE SESSION- 74-206C Labor Negotiations. Motion made by Edie, seconded by Ryan to go into Executive Session at 8:40pm; **ROLL CALL VOTE: McLachlan, Banks, Lindquist, Roach, Ayes; motion carried.**

OUT OF EXECUTIVE SESSION: Motion made by Art, seconded by Edie to come out of Executive Session at 9:32pm; **ROLL CALL VOTE: McLachlan, Banks, Lindquist, Roach, Ayes; motion carried.**

ADJOURNMENT- Edie made a motion, seconded by Art, to adjourn at 9:34pm. **VOICE VOTE: Ayes; motion carried.**


Steve Odenborg, Mayor


Debi Zenner, Deputy City Clerk/Treasurer

NEWS REVIEW PUBLISHING COMPANY

The Moscow-Pullman Daily News

P.O.Box 957

Lewiston, Idaho 83501

(208) 743-9411

Date:

06/11/2019

INVOICE NO.

152348

Account No.

339420

Description

152348 NOTICE O

Times

2

Lines

29

Tab. lines

\$ 41.33**LEGAL ADVERTISING
INVOICE**

Sold To: CITY OF GENESEE
PO BOX 38
GENESEE ID 83832

PO#

NOTICE: This is a invoice of Purchase made by you. Statement will be rendered the first of the month
Please Retain This Invoice as Your Statement Will Refer to Invoice by No. Only.

**NOTICE OF PUBLIC
MEETING**

152348

The City of Genesee will hold a public meeting June 18th, 2019 at 6:00 pm in the Senior Center, 140-East Walnut, Genesee, Idaho, regarding the Wastewater System Draft Facility Plan. The Draft Facility Plan will provide system alternatives to expand the wastewater system and ensure future regulatory com-

pliance. The public is invited to review and comment on the Draft Facility Plan upon the first publication of this notice. Hardcopies are available for review at City Hall. Verbal comments may be given at the public meeting June 18th, 2019 and written comments may be received via US Mail at City Hall, 140 East Walnut, Genesee, Idaho, and via email: Mayorodenborg@gmail.com

AFFIDAVIT OF PUBLICATION

Julie L. Winters _____, Legal Clerk
being first duly sworn, on oath deposes
and says: I am the printer of
Moscow-Pullman Daily News, a newspaper
of general circulation, published daily
except Sunday at Moscow, Latah County,
Idaho, in compliance with Sections 60-106,
60-107, and 60-108 of the Idaho Code and the
amendments thereto; and an official newspaper
for Whitman County, Washington as required
by R.C.W. 36.72.071 and other provisions of
the Revised Code of Washington and the
amendments thereto: that the notice of which the
annexed is a full, true and correct printed
copy was published in the regular and entire
issues of said newspaper and not in a
supplement thereto, upon the following dates:

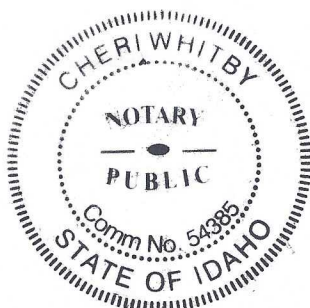
June 4th & 11th2019

the same being the date designated for
the publication of said notice.

Julie L. Winters

On this 11th day of June
in the year of 2019, before me, a Notary Public,
personally appeared Julie L. Winters,
known or identified to me to be the person
whose name subscribed to the within instrument,
and being by me first duly sworn, declared that
the statements therein are true, and acknowledged
to me that he executed the same.

Cheri Whitby
Notary Public for Idaho,
Residing at Lewiston, Idaho
My Commission Expires 4/17/21



From: [Karyn Wright](#)
To: [Ryan Rehder](#)
Subject: Fwd: Genesee Facility Plan
Date: Friday, June 21, 2019 8:03:27 AM

----- Forwarded message -----

From: **Stan Sobczyk** <stans@nezperce.org>
Date: Wed, Jun 19, 2019 at 4:11 PM
Subject: Genesee Facility Plan
To: karyn@cityofgenesee.com <karyn@cityofgenesee.com>

Karyn,

My comments on the Genesee Facility Plan are as follows.

Thank you,

Stan Sobczyk

I would prefer that the city move forward on Alternative TF-3 – Lagoon-Based Treatment at a New Location with Winter

Ammonia Removal and Summer Land Application and Alternative CS-2 – Priority 1 Collection System Improvements.

If possible, it appears that the most economical location for the new lagoons would be north of Cow Creek Road above the flood plain and near the present lagoon. This location could continue to utilize the existing 6-acre

land application site currently employed by the City. Also, I would attempt to retain the current lagoon as an emergency backup to the new system rather than a complete remediation.

The scope of the project should be limited to only Alternative TF-3 and Priority 1 Collection System Improvements. Grant funding should be used to lower the debt burden and not to expand further improvements to the collection system. Funding of additional improvements to collection system should be addressed separately. There is only a small pool of rate payers and tax payers to fund any city projects.

COMMON QUESTIONS

Will property taxes be used or raised in any way to pay for this project?

No. The bond will be repaid by wastewater rate revenue. No property taxes will be used for the construction of the project.

Why are voters being asked to give the City permission to finance this project?

Idaho cities can pass a bond in two ways:

1) The city can call on voters to pass a bond by simple majority; or **2)** The city can bypass the public and directly file a petition with its district court to pass a bond. Because this wastewater system serves you and operates off the rates you pay, **Genesee is opting for public approval of the bond.**

What happens if the bond fails to pass?

If the bond fails, the City will be unable to accept available loan assistance. The City will continue to be fined by the EPA, and likely be forced to follow a less predictable approach to rates, increasing them as needed to keep the system operating.

What is the wastewater project timeline?

If the bond passes, work on the project would begin in 2020 and be completed in 2023 to meet EPA's compliance deadline.

Were other alternatives considered to improve the wastewater system?

Yes, the City and its team of engineers studied 5 alternatives during a facility assessment. Considerations included building new facilities and installing new technologies. Project costs ranged from \$6.2M to \$12.0M. The preliminary opinion of probable cost for the selected project is \$7.2M.

IT'S UP TO YOU!

This is YOUR community!
Get involved and be sure to VOTE!

- **WHEN:** November 5th, 2019
- **WHERE:** City Hall, Senior Center
- **WHY:** Give City Council authority to incur debt to improve the City's wastewater facilities.

The Wastewater Improvement Project is the result of a robust planning study. You are welcome to read the resulting Facility Plan, available in hard copy at the Genesee City Hall and online at www.cityofgenesee.com.



Mountain
WATERWORKS

ENGINEER INFORMATION

Ryan Rehder, P.E.

Office: 208-780-3995

Email: rrehder@mountainwtr.com

The City of Genesee is not alone in needing to update its wastewater system. Learn more at infrastructurereportcard.org

“Nationally, the need for wastewater infrastructure exceeds \$271 billion.”

Source: 2017 American Society of Civil Engineers
Infrastructure Report Card: infrastructurereportcard.org

CITY OF GENESEE

Wastewater Improvement Project



NOVEMBER 5TH BOND INFORMATION GUIDE

HOW DID WE GET HERE?

Over the last 70 years, the wastewater facility has sufficiently served the City of Genesee. That's a lot of quality service.

But the current facility has been operating beyond its useful life and is in desperate need of modernization. System issues include:

- ◆ **The lagoon does not meet state and federal requirements**
 - » Lies in the Cow Creek Floodplain
 - » Lagoon redundancy is required should one lagoon be rendered unusable
 - » Seepage is above the acceptable limit
 - » Current treatment is unable to meet the new ammonia EPA limit
- ◆ **Collection system has leaks, causing excessive system flows**

Over the last 5 years the EPA has fined the City twice. The most recent fine in 2018 was originally \$216,000 but was negotiated down to \$30,000 with the agreement that compliance would be met by 2023. If the deadline is not met, the City will be vulnerable to lawsuits again, and fines are likely to increase in the future.

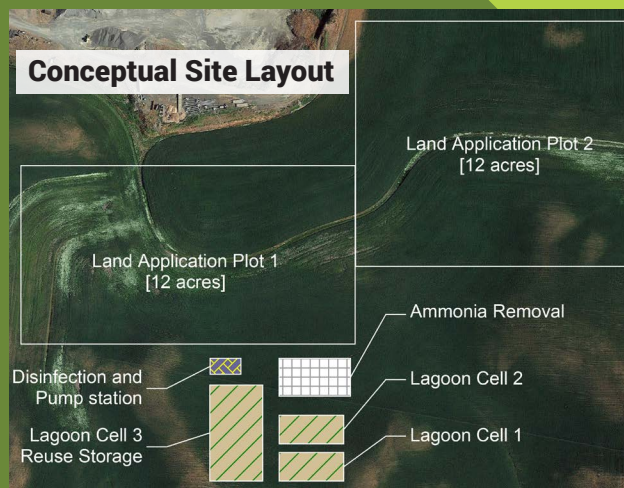
The required upgrades come with a cost. That's why **the City has scheduled a bond election for November 5th**. Voters will decide if the City should incur the debt to finance these improvements.

VOTE!
on November 5th

SELECTED PROJECT Relocate Wastewater Facility

The City of Genesee has formally selected and is moving forward with the "Seasonal Land Application" project alternative:

- Treatment facility will be relocated out of the Cow Creek floodplain
- 3 lagoon cells will meet redundancy requirements and improve efficiency
- Modern liners will prevent seepage beyond limits
- Nitrification unit will enable the system to meet discharge ammonia limits
- While alternatives are still being explored, disinfection is anticipated to be similar to the existing site
- Land application sites will increase in size, reducing the loading per unit area and meeting population demands
- Spot repairs in the collection system to fix leaks



GENESEE CITIZENS HAVE A SAY!

Voting "YES"	Voting "NO"
Poises wastewater facilities to meet new permit requirements.	Delays wastewater improvements needed to comply with EPA regulations.
Authorizes the City to lock into low-interest loans and grants.	The City will not have the ability to accept loan assistance.
Offers more stability regarding rate increases.	Forces the City to take a more unpredictable "pay as you go" approach.

HOW DOES THE BOND AFFECT MY TAXES?

The proposed revenue bond will have no impact on anyone's taxes. Revenue bonds are paid for by rates—most of the City's 2018 wastewater rate increases will be applied to bond repayment. Voting "yes" to pass the bond is a vote for financial assistance from IDEQ's Idaho Clean Water State Revolving Fund (SRF), which is an ultra low-interest loan that includes \$220,000 in loan forgiveness (grant).