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*Final Environmental Information Document*

**Eagle Sewer District,  
Facility Plan Update**

Prepared for  
**The Idaho Department of Environmental Quality**

On Behalf of  
**Eagle Sewer District**

Prepared by  
**CH2MHILL**  
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# Abbreviations and Acronyms

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AOI	area of impact
APE	area of potential effect
BGEPA	Bald and Golden Eagle Protection Act
BMPs	Best Management Practices
BOD	biological oxygen demand
CatEx	categorical exclusion
CDC	Conservation Data Center
CGP	construction general permit
CWA	Clean Water Act
DEQ	Idaho Department of Environmental Quality
EID	environmental information document
ESA	endangered species act
ESD	Eagle Sewer District
EWC	Eagle Water Company
FONSI	Finding of No Significant Impact
IDAPA	Idaho Administrative Procedures Act
IDFG	Idaho Department of Fish and Game
IFWIS	Idaho Fish and Wildlife Information System
IFAS	integrated fixed film activated sludge
IPC	Idaho Power Company
MBTA	Migratory Bird Treaty Act
mgd	million gallons per day
MBBR	moving bed bioreactors
msl	mean sea level
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NOI	notice of intent

NPDES	National Pollutant Discharge Elimination System
NTUs	nephelometric turbidity units
O&M	operations and maintenance
PFO	palustrine forested
SCADA	supervisory control and data acquisition
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SPCC	Spill Prevention Control and Countermeasures
SWPPP	storm water pollution prevention plan
TSS	total suspended solids
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
UWI	United Water of Idaho
WAS	waste activated sludge
WoUS	Waters of the U.S.
WWTF	wastewater treatment facility
WWTP	wastewater treatment plant

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# Environmental Information Document

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## Project Identification

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## Project Cost Estimates

### Estimated Construction Costs

The estimated construction cost for each of Eagle Sewer District's (ESD) wastewater treatment plant (WWTP) system upgrades included in the Proposed Action is outlined in Table 1. The schedule for hydraulic and aeration system upgrades is flexible since the ESD does not maintain a National Pollutant Discharge Elimination System (NPDES) permit; it has an agreement with the City of Boise to treat its wastewater at the West Boise Wastewater Treatment Facility (WWTF), but the cost varies with the level of treatment before discharge. As such, the ESD has flexibility for when they construct planned improvements.

TABLE 1  
Proposed Action Construction Cost Summary

Treatment System Improvement Project	Project Location	Anticipated Schedule	Construction Cost Estimate (2015 dollars)
Hydraulic upgrades – hydraulic bottlenecks	Inside existing lagoon system footprint	As soon as reasonably possible	\$853,000
Upgrade existing aeration system	Inside existing lagoon system footprint	As soon as reasonably possible	\$1,770,000
Construct new lagoon system and effluent pump station	North of Headworks building on ESD land	2020	\$7,695,000
Upgrade effluent force main to West Boise WWTF	Between ESD WWTP and West Boise WWTF - Route to be determined	2027 (when flows reach 3.4 million gallons per day [mgd] annual average)	\$6,386,000
<i>Subtotal</i>			<i>\$16,704,000</i>
EAL (Engineering, Administration, and Legal; 25% of Subtotal)			\$4,176,000
Total Improvements			\$20,880,000

## Funding

Project funding for improvement projects is anticipated to be provided by the ESD through connection fees and user rates. If actual growth rates are significantly higher than expected or projects become advantageous to construct sooner than planned, the ESD may desire additional funding through the State Revolving Loan Fund administered by the Idaho Department of Environmental Quality (DEQ). This Environmental Information Document (EID) addresses proposed project components and is intended to satisfy National Environmental Policy Act (NEPA) requirements for all phases of proposed wastewater system improvements.

Anticipated project funding includes the following components:

- ESD share = \$16,704,000
- DEQ Share = \$0

## Estimated User Costs

The current average wastewater user rate is \$34.00 per month. It is anticipated that the ESD will not increase rates to finance the selected improvements.

## Abstract

The existing ESD wastewater treatment plant is reaching a point where it does not have sufficient capacity to treat the wastewater to the same quality as it has historically. In addition, growth and development in the ESD Service Area is expected to continue for the foreseeable future. The ESD, therefore, is planning to upgrade its wastewater treatment system in response to this growth.

The project area location is within the ESD property in Eagle, Idaho (Figure 1). The Area of Potential Effect (APE) is also shown in Figure 1 and encompasses the boundary of the ESD Service Area. The ESD is planning to expand its current wastewater treatment lagoons by adding an additional lagoon train of two new lagoons with its associated aeration system, and an effluent pump station as presented in Figure 2. This second lagoon train would allow Eagle Sewer District to split flow between the two lagoon systems and maintain their current treatment capacity as growth continues.

This EID describes the purpose and need for the proposed project, the various alternatives considered to address these needs, and the preferred alternative (Proposed Action) in detail. The existing condition of human and natural resources in the area are described in the Affected Environment section of this document, and anticipated effects resulting from the Proposed Action and alternatives are identified in the Environmental Effects section. The resource areas that are anticipated to be affected as a result of the Proposed Action include physical aspects, climate, economic and social profile, flora, fauna, open space, air quality, noise, and energy. Of these, none are anticipated to have any long-term adverse effects as a result of the Proposed Action.

DEQ determined that the proposed project is not eligible for a Categorical Exclusion (CatEx) due to projected excessive growth (greater than 25 percent); therefore, the decision document for this EID will be a Finding of No Significant Impact (FONSI) with limited documentation.

## **Purpose and Need for the Proposed Project**

The ESD is a quasi-governmental agency that was formed to provide wastewater collection and treatment services for the area that generally coincides with the City of Eagle's impact area. The ESD Wastewater Treatment Plant provides wastewater treatment services to residents and businesses in the Eagle area. The ESD is completing a wastewater facility plan update in order to ensure that they are in a position to serve their customers now and in the future.

The objective of the proposed wastewater treatment system improvements for ESD is to facilitate the District's ability to provide reliable, cost effective wastewater treatment services to their service area by updating their treatment facilities and optimizing their level of treatment before discharging the wastewater to the City of Boise for further treatment.

Specifically, the hydraulic upgrades are designed to increase the hydraulic capacity of the treatment plant to avoid the risk of untreated wastewater being discharged to the environment or backed up into residences. The aeration system upgrades will allow ESD to maintain its current level of treatment as future flows and loads increase thereby staying within the current discharge agreement limits. At a future point, the flows and loads to the upgraded treatment system will exceed system capacity and a second lagoon train will be required. The effluent forcemain to the West Boise WWTF will reach its capacity and need to be upgraded. All of these upgrades serve the purpose of fulfilling ESD's goal of providing wastewater collection and treatment services to their customers which contributes to human health and environmental stewardship.



Figure 1. Project Vicinity, Eagle Sewer District Service Area, and Area of Potential Effect



WT1204151032B01

Figure 1. Project Vicinity, Eagle Sewer District Service Area, and Area of Potential Effect

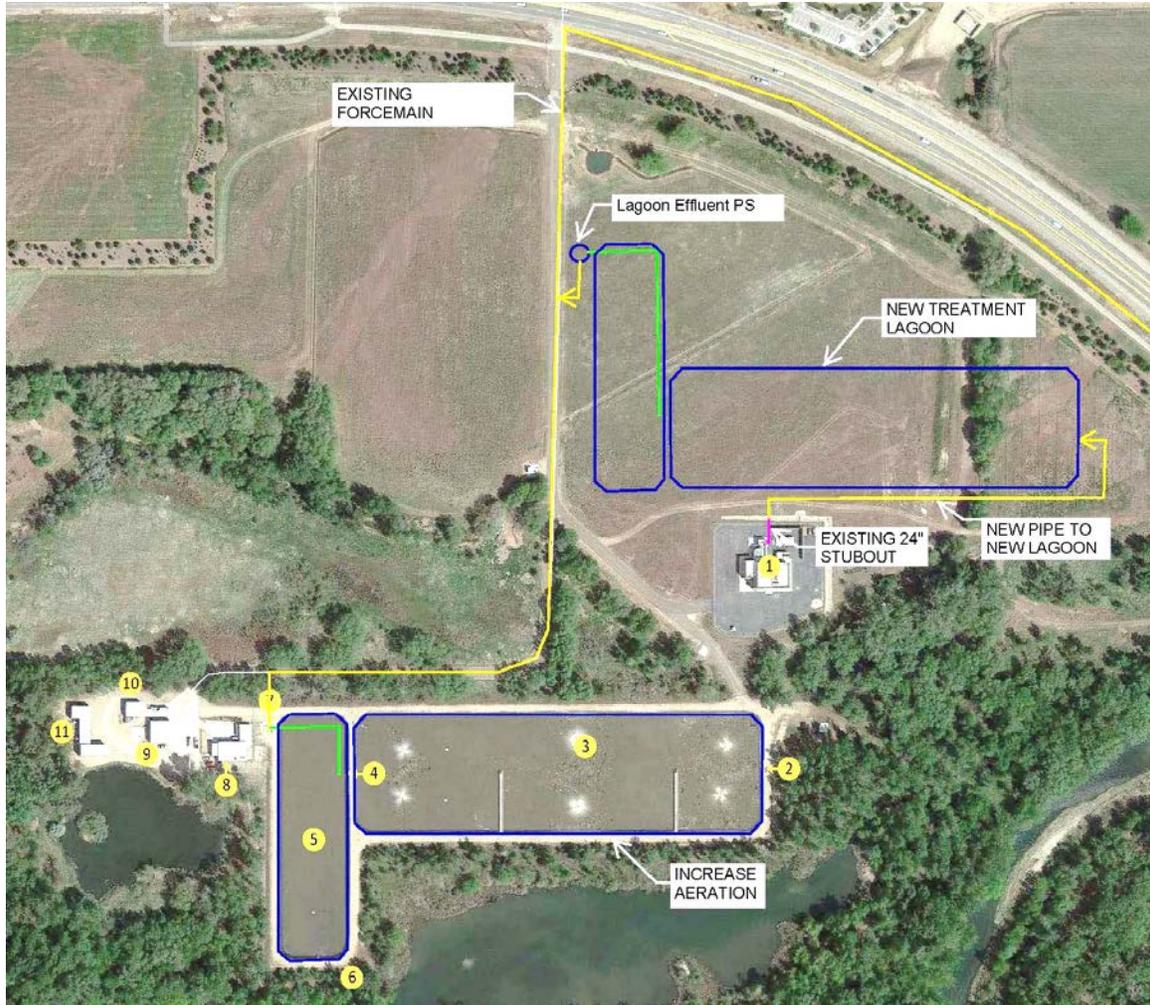


Figure 2: Eagle Sewer District Wastewater Treatment Plant Upgrade

The ESD service area has historically experienced variable growth, and according to the City of Eagle Planning Department, is expected to grow significantly in the future, albeit at a continued variable rate. The improvements described herein are in response to this growth. The existing treatment plant has a treatment capacity of 3.1 million gallons per day (mgd) at current loading and a hydraulic capacity of 3.45 mgd. This means that the treatment plant can maintain current discharge characteristics until flow reaches 3.1 mgd. No hydraulic issues are expected, such as hydraulic structure overtopping or weirs being submerged until flow reaches 3.45 mgd. The wastewater treatment plant currently (2015) sees an annual average load of 1.89 mgd. Actual growth will determine when the treatment and hydraulic capacities will be reached. In addition, increasing the level of treatment will decrease the cost charged by the City of Boise for further wastewater treatment. Construction of the proposed improvements will increase the redundancy and operability of the existing system while making the system more cost effective as the service area grows.

## Preliminary Alternatives Considered but not discussed in the *Feasibility Study* or *EID*

An initial list of wastewater treatment system alternatives — including lagoon upgrades and expansion, secondary treatment, tertiary treatment, and biosolids handling — was developed by CH2M and presented to ESD at a workshop for preliminary screening. The purpose of the workshop was to present the extensive list of alternatives, conduct a preliminary evaluation, and narrow down the alternatives to a better defined set of treatment alternatives to be further evaluated. Criteria discussed included:

- Treatment efficiency
- Cost relative to other alternatives
- How common the technology or approach is in the industry
- Ability to use existing infrastructure
- Operability and maintenance requirements
- Environmental sustainability
- Social impacts and community acceptance

This section provides a brief discussion and tables developed to summarize the initial list of alternatives developed for the ESD in the workshop.

### Secondary Treatment Enhancements

This section summarizes the alternatives that were developed and evaluated as enhancements to the secondary treatment process. The major liquids process alternatives that can achieve the long-term wastewater treatment objectives of the ESD are summarized in the following sections.

#### Aeration System Upgrades

Increasing the dissolved oxygen concentration in Lagoon 1 will enhance the ability of the existing lagoon system to treat future flows and loading, specifically by reducing the Biological Oxygen Demand (BOD) loading. There are multiple methods to increase the aeration and mixing including:

- Install additional surface aerators
- Install submerged fine diffused aerators
- Install submerged fine and coarse diffused aerators

Multiple equipment manufacturers supply surface aerators and submerged aerators (Table 2). An alternative analysis of the aeration system types should be undertaken when the aeration and mixing system is upgraded to determine the most appropriate system. No further analysis to identify a specific aeration system for the upgrade will be undertaken as part of this facility plan.

TABLE 2  
Aeration Upgrade Options

Manufacturer/ Equipment Type	Description	Include in Alternative Analysis (Yes/No)	Explanation
Surface aerators/ Multiple manufacturers	Install additional surface aerators	Yes	Surface aerators are low capital cost, but reportedly have lower oxygen transfer efficiency and have additional power requirements than fine bubble submerged aerators.
Parkson Biolac	Fine bubble submerged aerators suspended from a floating header	Yes	Submerged fine bubble aerators typically have higher oxygen transfer efficiency than surface aerators, but require blowers and air distribution piping.
Triplepoint Environmental MARS aerators	Submerged fine and coarse bubble aeration and mixing system sits on the lagoon liner	Yes	Submerged fine bubble aerators have high oxygen transfer and coarse bubble provides mixing.
Bioworks Oxiworks	Fine bubble submerged aerators suspended from a floating header	Yes	Submerged fine bubble aerators typically have higher oxygen transfer efficiency than surface aerators, but require blowers and air distribution piping. Very similar to Parkson Biolac with major difference in maintenance.

### Increased Solids Inventory

Lagoon wastewater treatment differs from conventional activated sludge treatment in the mixed liquor concentration. Conventional activated sludge includes physical separation of solids, typically through secondary clarifiers, and a return of the solids to the treatment process. This increase of mixed liquor solids allows the system to treat additional flows and loads. Excess mixed liquor (Waste Activated Sludge – WAS) is typically continuously or intermittently removed from the system and dewatered before disposal. The increased solids inventory in the treatment system will cause a reduction in the effluent BOD and ammonia.

Multiple equipment manufacturers supply clarifier mechanisms, mixed liquor pump stations, and solids dewatering equipment.

### Ammonia Reduction

Once the BOD has been consumed, and in the presence of oxygen, nitrifying bacteria will begin to oxidize ammonia to nitrite and then to nitrate. The nitrifying bacteria grow slowly and are inhibited by the presence of BOD and are very sensitive to cold temperatures. Their activity decreases as temperatures decrease to the point where little nitrification takes place. It is common in colder climates to construct fixed film processes for nitrification to give the bacteria a protected environment to grow. Fixed film processes range from moving bed bioreactors (MBBR) and integrated fixed film activated sludge (IFAS), to rock filters and trickling filters. A preliminary screening of alternatives are presented in Table 3.

TABLE 3  
Ammonia Reduction Technologies

Manufacturer/ Equipment Type	Description	Include in Alternative Analysis (Yes/No)	Explanation
Moving Bed Bioreactor (MBBR)	Attached growth process using biofilm carriers to provide environment for nitrifying bacteria	Yes	MBBR are proven to nitrify at low temperatures.
Integrated Fixed Film Activated Sludge (IFAS)	Essentially an MBBR with returned activated sludge (RAS) to increase treatment	Yes	Addition of RAS to MBBR system increases treatment capacity.
Rock Filter (SAGR)	Attached growth process using a submerged stone filter	No	Vendor requires 30 day HRT in the aerated lagoon system prior to SAGR system which is not compatible with current system or future system with increasing flows.

In addition to reducing ammonia, the MBBR or IFAS systems could be used after the existing or expanded lagoon system as a tertiary process to reduce the BOD and ammonia to very low levels.

### Phosphorus Removal

ESD is not currently charged for phosphorus discharge, but the City of Boise has been adding unit processes to remove phosphorus in order to meet discharge limits. Often phosphorus is removed via chemical addition with metal salts upstream of dewatering which allows the phosphorus to precipitate out of the liquid stream and be removed with the biosolids. Since ESD does not have either a charge for phosphorus nor a solids handling system, phosphorus removal should be further investigated when the City of Boise begins to charge for phosphorus or when designing a dewatering process.

### Biosolids Management Options

The biosolids were removed from the treatment system for the first time in 2007 when the lagoon liners were replaced. A biosolids contractor used centrifuges to dewater the sludge and the solids were landfilled at the Ada County Landfill. Biosolids are anticipated to be removed for the second time in 2016. As flows and loads increase the solids will need to be removed more frequently, as often as every 2 years. Using historical cost data as a reference, at a future point it will be economically viable to construct a permanent solids dewatering facility. There are multiple solids dewatering technologies and an alternative analysis of each of the technologies should be conducted to determine the most appropriate system for the ESD. No further analysis of biosolids management will be undertaken as part of this facility plan.

## Project Alternatives

Based in the planning criteria and future flows and loads, five wastewater treatment alternatives were developed for detailed analysis that will allow ESD to treat the anticipated wastewater flows and loads during the planning period (2015 to 2040). The alternatives

were evaluated and discussed with ESD staff and will be culminated in a future public meeting prior to confirmation and completion of the EID process. The five alternatives are summarized as follows:

- **Alternative 1 - Do Nothing.** No capital investment would be undertaken as part of this alternatives. As equipment reaches the end of its useful life, it would be replaced without any additional investment made. As flows and loads increase, the treatment capacity of the existing lagoon system would degrade and the effluent water quality would degrade in time. This alternative would incur substantial capacity and operations and maintenance (O&M) costs from the City of Boise and, therefore, also increase District charges.
- **Alternative 2 - Existing Lagoon Upgrades.** The existing lagoons would have aeration upgrades made to increase treatment capacity. BOD would be reduced somewhat, but as the flows increase, the BOD and total suspended solids (TSS) loadings would increase, which incurs higher capacity and O&M costs from the City of Boise.
- **Alternative 3 - Lagoon Expansion.** A new lagoon system and effluent pump station would be constructed and flow would be split between the two lagoon systems. This would provide a completely redundant lagoon system accommodating seepage testing. The treatment capacity of the system would be sufficient to maintain current discharge concentrations of BOD and TSS as influent flows and loads increase. Ammonia and phosphorus discharge concentrations would remain unchanged.
- **Alternative 4 - Lagoon Expansion, Clarification, MBBR, Tertiary Filter, and Solids Handling.** In addition to lagoon expansion, a MBBR would be constructed for BOD polishing and ammonia removal. A tertiary filter would help with TSS removal and a chemical addition system before the filter would remove phosphorus. A clarifier would boost the solids concentration in the system to increase treatment performance and a solids dewatering facility would be constructed to remove unneeded solids. This alternative has the potential to produce effluent water quality. Because of filtration step, effluent would be considered a Class A reuse water typically allowed to be directly discharged to the Boise River under typical current NPDES permits.
- **Alternative 5 - MBR with NPDES Discharge and Solids Handling.** This alternative includes a new membrane bioreactor (MBR) activated sludge type facility. This would take the place of the lagoon system all together and include a bioreactor (aeration basin), membrane filtration, solids stabilization and solids handling, and odor control. This system would reduce BOD, TSS, ammonia, and phosphorus to levels that would meet typical Boise River NPDES permit requirements and also produce a Class A reuse water. The alternative would discharge to the Boise River when the reuse system is not operational, such as for maintenance or seasonal constraints.

## Proposed Action

The wastewater treatment system alternatives, including liquids treatment, and biosolids, were developed by CH2M with direction from the ESD. Workshops were conducted by CH2M for the ESD to discuss each alternative. CH2M then facilitated the evaluation and ranking of each alternative discussed.

Evaluation criteria were developed to complete the assessment of each alternative. Evaluation criteria are broken into two main categories of non-monetary criteria and monetary criteria.

To support evaluation and strategic plan alignment, the following non-monetary evaluation criteria were developed by ESD Staff and CH2M. The following criteria were developed based on ESD objectives:

- Effluent Quality
- System reliability
- Ease of operation and maintenance
- Adaptability and phasing
- Environmental sustainability
- Social impacts

Costs for each of the alternatives were estimated based on four different categories with the intent to provide clarity on the magnitude of each cost for the given category presented below (Table 4):

- Eagle Sewer District Capital Costs
- Eagle Sewer District WWTP Operations and Maintenance Costs
- City of Boise Wastewater Treatment Capacity Costs
- City of Boise Monthly Operation and Maintenance Costs

Alternative 3, Construct Additional Lagoon Train, was selected as the Proposed Action by the ESD Board of Directors and vetted through a public meeting held on March 14, 2016. Information relative to public notification and the dates and attendance of these meetings can be found in Appendix A. The Proposed Action consists of a series of improvement projects presented in Figure 2 (above) including the following:

- Upgrading the existing lagoon system to correct hydraulic issues and provide for future expansion
- Upgrading the aeration system in the existing lagoon system
- Constructing a new lagoon system with its associated effluent pump station.

At some point in the future, the treatment plant upgrade will require upgrading the existing force-main between the ESD WWTP and the West Boise WWTF. A route has not been determined for the force-main upgrade and once identified will be evaluated as a re-evaluation of this EIS or development of an additional EID; however, the cost of constructing the force-main is included in the project cost estimate.

The Proposed Action is the preferred alternative because it ranks the highest of the all the alternatives in both monetary and non-monetary considerations.

Resources within the APE are described in the Affected Environment Section. Some of these resource areas may be potentially impacted through implementation of the Proposed Action. However, none of the impacts are significant and require mitigation. Agencies consulted with during the process of developing this EID are identified in Appendix B. Permanent and temporary impacts resulting from construction of the Proposed Action and alternatives are identified in the Environmental Effects Section. Temporary and permanent impacts resulting from construction of the Proposed Action may include effects

TABLE 4

Monetary Comparison of Eagle Sewer District WWTP Treatment Alternatives

Cost Category	Alternative 1: No Action	Alternative 2: Existing Lagoon Mixing System Upgrades	Alternative 3: Construct Additional Lagoon Train	Alternative 4: Construct Additional Lagoon Train with MBBR and Tertiary Filter	Alternative 5: New MBR Plant with Tertiary Filters and River Discharge
	Capital replacement with no capital investment	Upgrade existing system with new aeration and mixing system	Operate two lagoons in parallel for redundancy	Remove BOD, Ammonia, and Phosphorus before sending to West Boise WWTP	New mechanical plant with NPDES permit
ESD Capital Replacement Cost	\$7,500,000	\$7,900,000	\$14,700,000	\$38,700,000	\$103,100,000
ESD O&M Costs	\$10,700,000	\$12,500,000	\$14,400,000	\$61,000,000	\$41,200,000
City of Boise Capacity Charges	\$19,900,000	\$11,900,000	\$10,300,000	\$5,800,000	0
City of Boise O&M Charges	\$44,800,000	\$30,000,000	\$29,100,000	\$19,700,000	0
<b>Total NPV Cost (2015 Dollars)</b>	<b>\$82,900,000</b>	<b>\$62,300,000</b>	<b>\$68,500,000</b>	<b>\$125,200,000</b>	<b>\$144,300,000</b>

to physical aspects, climate, economic and social profile, flora, fauna, open space, air quality, noise, and energy. Of these, none are anticipated to have any long-term adverse effects as a result of the Proposed Action. Impacts to physical aspects, climate, economic and social profile, flora, open space, air quality, noise, and energy to some extent would be permanent, while effects to fauna, air quality, and noise would occur only over the short-term. Potential effects to all resource areas of concern are described in the Affected Environment and Environmental Effects Sections below.

## Implementation and Schedule for Selected Approaches

Currently there are hydraulic issues at the ESD WWTP that should be addressed to make the system more reliable and reduce the potential for overtopping flow control structures. These issues should be corrected as soon as reasonably possible. Some of the more involved issues can be resolved when the lagoons are isolated for solids removal or after a new lagoon system has been constructed. The new inlet pipe at the Cell 1 inlet should be completed when the influent flow reaches 2.3 mgd, which is expected in 2017.

Upgrading the aeration system in the existing lagoon system has the potential to save electricity costs and increase the oxygen transfer by changing from surface aerators to submerged aerators. It is recommended that the existing lagoon aeration system be upgraded as soon as reasonably possible. This upgrade is expected to increase treatment and reduce electrical costs.

The existing treatment plant capacity of 2.6 mgd, see Chapter 2 of the Facility Plan, is projected to be reached in 2023-2024. Design and construction of the new lagoon system should be completed ahead of reaching the treatment capacity to avoid the risk of not being able to treat incoming wastewater or risk human health or environmental exposure to untreated wastewater. Consequently, the design and construction of the new lagoon system is planned for 2020.

The effluent force-main to the West Boise WWTF will need upgraded when the flow reaches 3.4 mgd which is expected to be reached in 2027. The route of the force-main has not been determined at this time and will require a significant planning and design effort prior to construction. The new force-main is anticipated to include a new sampling station at the West Boise WWTF.

As flows increase to 4.3 mgd, the existing effluent pump station pumps will need to be upgraded. The system is expected to reach this flowrate in 2034.

## Construction Schedule

Construction of the hydraulic improvements can occur at any time of the year, given that proper attention is given to construction quality in extremely hot or cold temperatures. The decision of when to complete this improvements relies on the scheduling constraints of ESD Staff and financial planning, but is expected as soon as 2017.

The aeration system improvement can occur during any time of the year, although warm temperatures would allow for easier construction. The timing for this improvement depends on scheduling constraints of ESD and financial planning, but by 2020.

Construction of the new lagoon system is anticipated to last 1 year. The lagoon should be constructed in 2020 with major earthwork portions of the work being completed in warm weather.

## Cursory Environmental Screening of Alternatives Considered

The cursory environmental screening in Table 5 describes, in general, anticipated impacts associated with the various alternatives discussed above, as well as comparative costs of construction. More detail relative to anticipated impacts associated with the proposed action and alternatives may be found in the Affected Environment and Environmental Effects sections.

In general, all alternatives including the No Action Alternative, would result in increased user rates. Upgrading the existing lagoons and No Action are the lowest cost alternatives, with full mechanical treatment (Alternative 5) being the highest in cost. No alternative would affect population, commercial, or industrial growth; land use; wild and scenic rivers; environmental justice; agricultural lands; water quality or quantity; or regionalization. Other resources would be temporarily or permanently impacted to various degrees as shown in Table 5 and described in the Affected Environment and Environmental Effects sections.

TABLE 5  
Wastewater Treatment Plant Upgrade Cursory Environmental Screening

Environmental Criteria	Alternatives				
	Proposed Action	No Action	Existing Lagoon Upgrade	Lagoon Expansion, Clarification, Moving Bed Bioreactor, Tertiary Filter, and Solids Handling	Membrane Bioreactor with NPDES Discharge and Solids Handling
Physical Aspects (topography, geology, and soils)	Requires excavation for new lagoon train and connecting infrastructure	No impact	No impact	Requires excavation for new lagoon train, treatment buildings, and connecting infrastructure	Requires excavation for new treatment buildings, connecting infrastructure, and discharge to river pipeline
Climate	Slight increase in GHG emissions from increased power requirements	No impact	No impact	Slight increase in GHG emissions from increased power requirements	Slight increase in GHG emissions from increased power requirements
Population, Commercial, and Industrial Growth	No impact	No impact	No impact	No impact	No impact
Economics and Social Profile	Increased user rates	Increased user rates	Increased user rates	Increased user rates	Increased user rates
Land Use	No impact	No impact	No impact	No impact	No impact
Floodplain Development	No impact	No impact	No impact	No impact	Temporary effect during construction
Wetlands and Waters of the U.S.	Small drainage ditch will be moved	No impact	No impact	Small drainage ditch will be moved	Small drainage ditch will be moved

**TABLE 5**  
Wastewater Treatment Plant Upgrade Cursory Environmental Screening

Environmental Criteria	Alternatives				
	Proposed Action	No Action	Existing Lagoon Upgrade	Lagoon Expansion, Clarification, Moving Bed Bioreactor, Tertiary Filter, and Solids Handling	Membrane Bioreactor with NPDES Discharge and Solids Handling
Wild and Scenic Rivers	No Wild and Scenic Rivers within project vicinity	No Wild and Scenic Rivers within project vicinity	No Wild and Scenic Rivers within project vicinity	No Wild and Scenic Rivers within project vicinity	No Wild and Scenic Rivers within project vicinity
Cultural Resources	No impact	No impact	No impact	No impact	Potential for cultural resources along the river
Environmental Justice	No impact	No impact	No impact	No impact	No Impact
Flora	Loss of grassland	No impact	No impact	Loss of grassland	Loss of grassland
Fauna	Temporary disturbance during construction	No impact	Temporary disturbance during construction	Temporary disturbance during construction	Temporary disturbance during construction
Recreation/Open Space	Reduction in open space on the ESD property	No impact	No impact	Reduction in open space on the ESD property	Reduction in open space on the ESD property
Agricultural Lands	No impact	No impact	No impact	No impact	No impact
Air Quality	<ul style="list-style-type: none"> <li>• Temporary construction dust</li> <li>• Slight permanent increase in odors</li> </ul>	No impact	<ul style="list-style-type: none"> <li>• Temporary construction dust</li> <li>• Slight permanent increase in odors</li> </ul>	<ul style="list-style-type: none"> <li>• Temporary construction dust</li> <li>• Slight permanent increase in odors</li> </ul>	<ul style="list-style-type: none"> <li>• Temporary construction dust</li> <li>• Slight permanent increase in odors</li> </ul>
Noise	<ul style="list-style-type: none"> <li>• Temporary construction noise</li> <li>• Increased operating machinery noise</li> </ul>	No impact	<ul style="list-style-type: none"> <li>• Temporary construction noise</li> <li>• Increased operating machinery noise</li> </ul>	<ul style="list-style-type: none"> <li>• Temporary construction noise</li> <li>• Increased operating machinery noise</li> </ul>	<ul style="list-style-type: none"> <li>• Temporary construction noise</li> <li>• Increased operating machinery noise</li> </ul>
Water Quality and Quantity	No impact	No impact	No impact	No impact	No impact
Public Health	Increased mosquito population	No impact	No impact	Increased mosquito population	No impact
Energy	Double the energy use	No impact	No impact	Triple the energy use	Triple the energy use
Regionalization	No impact	No impact	No impact	No impact	No impact
Capital Replacement Cost Comparison	\$14,700,000	\$7,500,000	\$7,900,000	\$38,700,000	\$103,100,000

## Affected Environment

### Proposed Project Planning Area

Figure 1 is a vicinity map for the proposed project. It identifies the ESD's service area and force-main to the Boise WWTP. The service area and force-main route represent the area of potential effect (APE). It includes the City of Eagle (Eagle) and the Boise River. Population distribution within the APE is concentrated in Eagle and in the subdivisions being constructed within and around Eagle. There are also scattered residences and businesses throughout the APE, as well as undeveloped farmland, parks, and natural areas.

Major features of the proposed project are detailed above in the Proposed Action section of this document, and key topographic and other physical, biological, cultural, social, and economic features of the area are described in the Pertinent Natural and Man-made Features Relating to Environmental Effects Section to follow.

The Proposed Action also includes the eventual construction of a replacement forcemain from the ESD WWTP to the West Boise WWTP. At this time, the location of the forcemain has not been identified and is not planned for many years into the future; therefore, impacts from construction of the force main cannot be evaluated. The Affected Environment does not include information on the forcemain route. Depending on the timing of the forcemain construction, the Affected Environment will be presented in an addendum to this EID or as part of a separate EID.

## Pertinent Natural and Man-made Features Relating to Environmental Effects

### Physical Aspects

No physical conditions (including topography, geology, and soils) would adversely affect or be adversely affected by construction of the proposed project. Topography, geology, and soil composition in the APE would remain consistent with baseline conditions. No unique or unusual geological features would be affected. More detail relative to existing physical conditions in the area follows.

### Topography

The APE is located primarily north of the Boise River but also extends to the south of the River in the center of the service area. Elevation near the river is 2,540 feet above mean sea level (msl). From this point, the project area continues up in elevation to the north of Eagle into foothills, which is approximately 2,900 feet above msl.

### Geology

Eagle, Idaho, is located in the Boise Valley, in the lower valley and terraces of the Boise River that extend from the mountains across the western Snake River Plain to join the Snake River. Othberg and Gillerman 1994 provide an excellent summary of Boise Valley geology. The following summary is taken primarily from Othberg and Gillerman, 1994.

The Boise Valley is in the western Snake River Plain. The western Snake River Plain graben has been classified as a tectonic continental rift (Othberg, 1994; Wood, 1994). The western

Snake River Plain is a northwest-trending physiographic lowland, a graben separating the Cretaceous Idaho batholith of west-central Idaho from batholith outliers in southwestern Idaho, with features similar to continental rifts (Mabey, 1982; Smith et al, 1985; Wood, 1994). Sedimentation of the basin began shortly after a thick, basal volcanic basement was formed. The sediments were deposited in lake, stream, and alluvial fan environments (Middleton et al., 1985; Smith et al., 1985; Jenks and Bonnicksen, 1989; Wood, 1994). The Boise River flows just south of the wastewater treatment plant. The plant lies south, approximately 1 mile from the Boise foothills. The Boise foothills and the uplands and high terraces of the plain are broken by many small faults typically striking parallel to the northwest-southeast trend of the western plain (Othberg and Stanford, 1992).

Cretaceous Idaho batholith, predominantly granodiorite, is the basement rock under the younger rocks in the Boise foothills. The Idaho batholith ranges in age from 65 to 95 million years. Biotite granodiorite is the most common rock type and has been reported to be 75 to 85 million years old based on K-Ar radiometric dating (Lewis et al., 1987; Johnson et al., 1988).

There is no evidence of Tertiary rocks in the Boise Valley and the Boise Foothills. Igneous activity in the Boise Valley resulted in a series of Miocene (24 to 5 million years) and younger volcanic rocks. The Columbia River Basalt, erupted from about 17 to 14 million years ago. These flood basalts have been reported to form the basement rocks under the western Snake River Plain (Mabey, 1982).

The majority of the Boise foothills are made up of Idaho Group sediments, and these sediments overlie the basaltic rocks. The Pierce Gulch sand and the Terteling Springs Formation, were mapped in the project area (Othberg and Burnham, 1990; Othberg et al., 1990). They can exhibit large-scale cross bedding, which has been reported to have been deposited in a deltaic setting where rivers from the mountains north of Boise entered an extensive lake, Lake Idaho, located in the graben that formed the western Snake River Plain (Othberg and Burnham, 1990). The Idaho Group sediments in the Boise Valley are 800 to 1,000 feet below the surface along the Boise range-front fault zone, comprising the Boise aquifer, a primary source of drinking water to most of the Boise Valley. The sediments range from coarse alluvial fan gravels in the east to fine sands and mudstones in the west, toward the center of the ancient lake (Othberg, 1994).

The subsurface near the project area includes Holocene alluvium (clay, silt, sand, and gravel sediment), underlain by the Boise aquifer. There are mapped faults in the Boise foothills, and there are no known mapped faults in the project area.

## Soils

The majority of the soils in the APE have developed from alluvium (sediment deposited from flowing water), lacustrine deposits (lake bottom deposition), or loess (wind-blown finer sediment). The predominant soil series within the APE are Purdam silt loam, 0 to 2 percent Slopes, Notus-LesBois complex, 0 to 1 percent slopes, Power silt loam, 0 to 2 percent slopes, Bissell loam, 0 to 2 percent Slopes, Urban land-Bissell complex, 0 to 2 percent slopes, Urban land-Oxyaquic Torrifluvents complex, 0 to 1 percent slopes, and Moulton-Notus complex, 0 to 1 percent slopes (NRCS, 2015). Predominant soils at the ESD WWTP are Notus-LesBois complex, 0 to 1 percent slopes and Bissell loam, 0 to 2 percent Slopes (NRCS, 2015).

## Climate

This region experiences warm to hot, dry summers, and cold dry winters with summer high temperatures averaging 85°F and winter low temperatures averaging 25.6°F. According to the [Köppen Climate Classification](#) system, Eagle has a [warm-summer Mediterranean climate](#), abbreviated "Csb" on climate maps. Many of the regions with Mediterranean climates have relatively mild winters and very warm summers.

The average temperature for the year in Eagle is 51.3°F. The warmest month, on average, is August with an average temperature of 90.5°F. The coolest month on average is January, with an average temperature of 26.2 °F (Western Regional Climate Center, 2015).

The highest recorded temperature in Eagle is 106.0°F, which was recorded in the month of August. The lowest recorded temperature in Eagle is -23.0°F (-30.6°C), which was recorded in the month of December.

The average amount of precipitation for the year in Eagle is 11 inches. The month with the most precipitation on average is December with 2.5 inches of precipitation. The month with the least precipitation on average is July with an average of 0.4 inches ([link here](#)).

No unusual or special meteorological constraints are known to occur in the area that would affect feasibility of the proposed alternative or result in an air quality problem. Climate would not be changed or adversely affected with implementation of this project.

## Population, Commercial, and Industrial Growth

The city of Eagle Idaho was incorporated in February of 1971. The population in 1980 was approximately 2,260 individuals. Since that time the population (as of 2013) has increased nearly 10 times. Table 6 provides population numbers for Eagle as described in the *2015 Eagle Comprehensive Plan*, Adopted 2/10/2015 (City of Eagle, 2015). These numbers were projected from the known population in 1999 out to 2025. Assuming a 4 percent growth rate, the 25 year projected population for the City of Eagle would be approximately 44,846 in the year 2025. According to the U.S. Census Bureau in 2013, the city of Eagle, Idaho, population was 21,646, and in 2014 the population was 22,502 ([www.census.gov](http://www.census.gov)), which demonstrates slightly lower numbers than initially projected in 1999.

TABLE 6  
Projected population numbers for the City of Eagle, Idaho in Ada County (2007-2025)

Year	1999	2007	2010	2015	2020	2025
Eagle	7,500	22,144	24,901	30,296	36,860	44,846

Source: City of Eagle, 2015

Table 7 provides the corresponding projected wastewater flowrates associated with the population growth.

**TABLE 7**  
Eagle Sewer District WWTP Projected Flowrates

<b>Date</b>	<b>Annual Average Flow (mgd)</b>
2015	1.9
2020	2.3
2025	2.8
2030	3.5
2035	4.3
2040	5.2

Note: See Facility Plan Section 3.1 and Section 7.3.5 for additional treatment plant and collection system projected flowrate information.

The City of Eagle is primarily a residential community which places emphasis on retaining its historic rural character. In turn, limited commercial and industrial activity currently occurs and growth in this sector is anticipated to remain at approximate 5% of total land use.

Implementation of the proposed project would not lead to increased or decreased population growth or development of commercial activity, although it would provide the City with the ability to accommodate potential and anticipated growth. Population would not be adversely affected as a result of the proposed action.

## Economics and Social Profile

The economy of Eagle, Idaho is robust when compared to other cities in Idaho and the United States. The only estimate that the Census Bureau has done for cities (except the very largest metropolitan areas) is the 2010 to 2014 5-year average from its American Community Survey. The City of Eagle median household income for this period was estimated at \$82,264 ([www.census.gov](http://www.census.gov)). In the same 5-year period, U.S. median household income was \$53,482 and Idaho median household income was \$47,334. Ada County was estimated by the U.S. Bureau of Census as \$55,805 ([www.census.gov](http://www.census.gov)).

The city and surrounding areas continue to demonstrate strong economic growth. Eagle is home to a wide range of businesses which include retail trade, services, construction, government and agriculture. The 2000 Eagle Comprehensive Plan designated 1930 acres (11%) of the area of city impact (AOI) with commercial, mixed use, business or industrial uses. In 2002, Eagle had 0.57 jobs per household compared to Boise at 1.7 and Meridian at 1.2, as calculated by the Eagle Community Planning Association. Over the next 20 years, employment in Eagle is projected to grow at 65 percent, which is a higher rate than the population is projected to grow over the same period. The economic development goal is to promote the City of Eagle to grow beyond a bedroom community. The expansion of the AOI to State Highway 16 and north to the Planning Boundary Line provides additional opportunities to expand the employment options and capture the additional tax base associated with these uses. The distribution of land uses within the western impact area will shift the non-residential uses from 11% to 25% of the City's area of impact (AOI) and will provide additional land to promote employment options within the City. Projected

employment in Eagle is expected to continue to grow. Eagle's recent highway improvements (for example, SH 44 and five-lane Eagle Road) will encourage new development opportunities (City of Eagle, 2015).

In 2014 it was estimated that 96.4% of the residents had education equivalent or greater than a high school graduate. 5.8% of the people in Eagle were considered to be living below the poverty level and the overall population of the city of Eagle, Idaho consisted of primarily white (approximately 94.4%) individuals, 4.7% Latino, and 1.6 Asian.

No disadvantaged group would be adversely affected by this project and no population segment would substantially benefit from the project. Land values would not be affected, nor would the social distribution/social profile of the community be affected by this project. Economics for the larger community would not be affected, but at the individual level some minimal impacts would be incurred by local Eagle residents within the ESD WWTP's client demographic. These effects are described below in the Environmental Effects Section.

## Land Use

Land use in the Eagle Sewer District service area is predominantly agricultural, suburban housing, commercial, and rural residential. Population distribution within the APE is concentrated in Eagle and in the subdivisions being constructed within and around Eagle. There are also scattered residences and businesses throughout the APE, as well as undeveloped farmland, parks, and natural areas.

The project is compatible with land use plans and is not anticipated to change land use from its current use. The project area is not currently used for mining, large industrial work, or energy development. Land use would not be adversely affected as a result of the proposed action.

## Floodplain Development

The Boise flows through the APE and is also adjacent to the ESD WWTP. The Boise River upstream of APE drains an area of approximately 2,800 square miles in central Idaho. The Boise River has a history of occasional flooding.

The ESD WWTP property is partially located in zones designated AE and X on FIRM Map Number 160003 0134 H that was last revised February 19, 2003. Zone AE indicates the 1 percent annual chance flood (100-year flood), also known as the base flood, and must be kept free of encroachment so the 1 percent base flood can pass without increasing the flood elevation. Zone X (where the ESD WWTP facilities are located) is the 0.2 percent annual chance (500-year) floodplain. Figure 3 shows the locations of existing and proposed project facilities relative to the 100- and 500-year floodplains.

Aeration improvements would be located within the 100-year floodplain. Proposed work in the 100-year or 500-year floodplain has no floodplain implications (no need for a no-rise certification) as the floodplain conveyance is not affected. The new lagoons and effluent pump station locations are not within the 100-year or 500-year floodplains. There would be no floodplain effects or permits required.

## Wetlands and Waters of the U.S.

Wetlands present within the APE are primarily adjacent to the Boise River or around Dry Creek. Wetland in the National Wetlands Inventory database are shown in Figure 4. Figure 5 focuses in on the ESD WWTP location. There are also a number of canals throughout the project area. The main wetland types include freshwater emergent wetland, freshwater forested/shrub wetland, and riverine. The Boise River, Dry Creek, and potentially some canals are Water of the U.S. (WoUS) located in the APE. Both forested and emergent wetlands are located on the ESD WWTP property. A small drainage ditch passes through the uplands where the new lagoons would be built. Small areas of emergent marsh dominated by cattails have formed where water collects in the ditch. No formal wetland delineations were conducted, but a formal delineation will be made a condition of the Finding of No Significant Impact (FONSI) and will be completed prior to construction to determine if a Section 404 Permit will be required from the U.S. Army Corps of Engineers (USACE). The new lagoons and associated infrastructure would mostly be located in uplands that were previously used in agriculture. Activities at the existing lagoon would be limited to previously disturbed areas.

If the ditch is determined to be a wetland, mitigation for impacts will be accomplished through re-routing the ditch around the facility improvements.

## Wild and Scenic River

The segment of Boise River adjacent to the proposed project is not listed as a Wild and Scenic River. There would be no effects to Wild and Scenic rivers as a result of the proposed action.

## Cultural and Historic Resources

No known National Register eligible historical or archeological resources occur within the boundaries of the ESD WWTP where construction activities would occur. The Burns-Paiute, Shoshone-Piute, and Shoshone-Bannock tribes have been contacted relative to potential cultural resources. Idaho State Historic Preservation Office (SHPO) was also contacted relative to historical and cultural resources. Tribal agencies did not respond with concerns. With implementation of SHPO-recommended mitigation measure, there will be no direct, indirect, short-term, long-term or cumulative adverse effects to cultural or historical resources for project related activities associated with this project.

## Environmental Justice

No potential environmental justice concerns are known to occur in the vicinity of the project area. Additionally, the economic and social demographic of the residents of Eagle that lie in the service area of the ESD WWTP demonstrate no environmental justice concerns (see the Economics and Social Profile Section).

No disadvantaged group would be adversely affected by this project and no population segment would substantially benefit from the project. No disproportionately high or adverse effect to human health or environmental effects to low-income, minority, or Native American peoples would result from construction of the proposed project. There are no environmental justice issues with this project.

## Flora and Fauna

### Vegetation

Much of the proposed ESD's service area is urbanized; however, there are agricultural parcels and areas retaining native habitats. Natural areas are concentrated in the foothills and along the Boise River.

Riparian or palustrine forest (PFO) woodlands are present throughout the APE adjacent to the Boise River. The riparian areas are dominated by cottonwood (*Populus trichocarpus*) in the overstory. Red-osier dogwood (*Cornus sericea*), woods rose (*Rosa woodsii*), and willow (*Salix* sp.) are common in the understory. The ESD WWTP is located within this riparian area adjacent to the River.

The foothills are dominated by sagebrush habitat. Some areas are higher quality with more diverse vegetation and other areas have been impacted by grazing, development, or fire. Weeds have become established over most of the foothill areas.

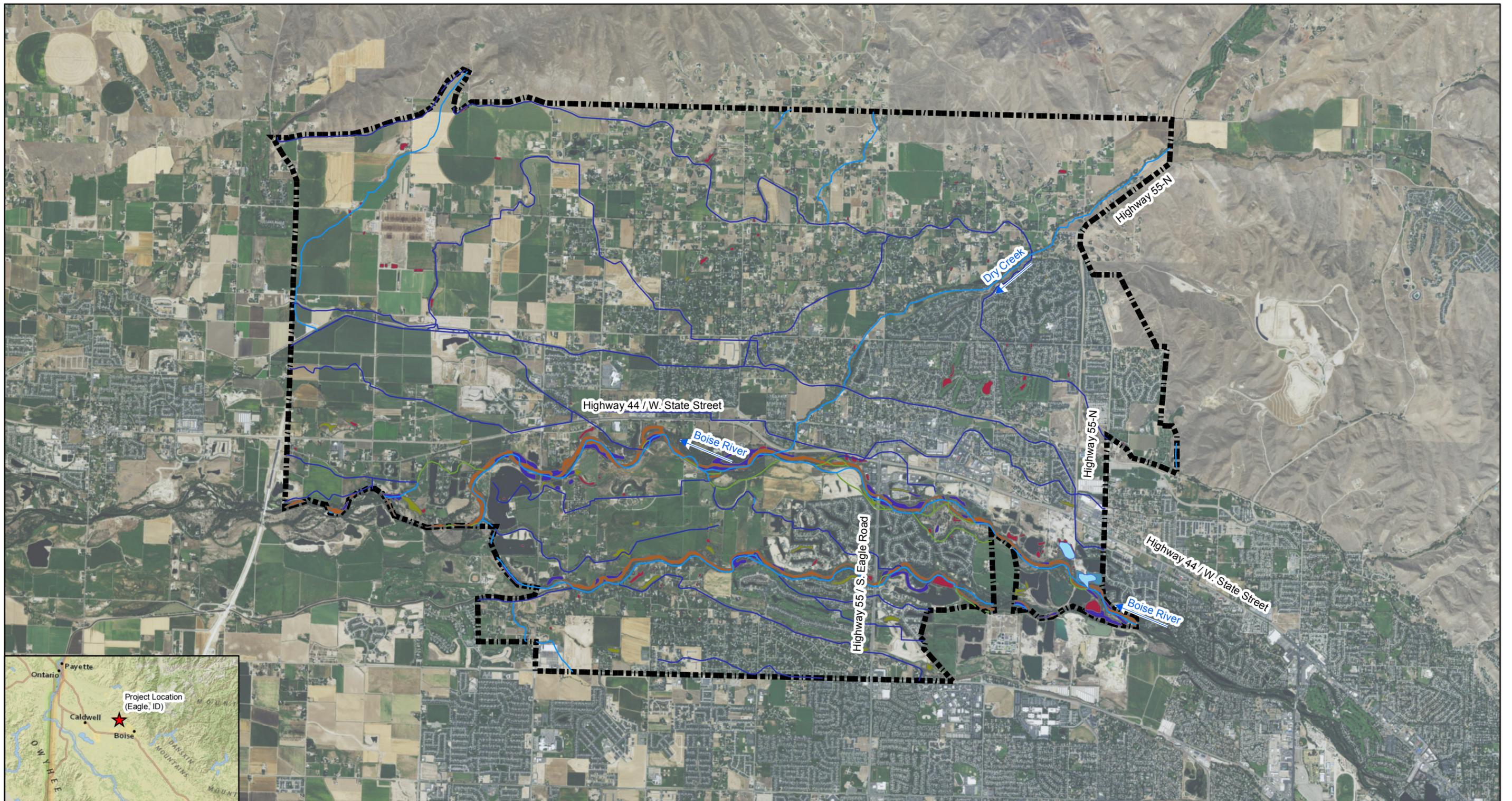
Vegetation in the area to be disturbed at the ESD WWTP has been seeded with a native grass/forb mixture to provide wildlife habitat and prevent the establishment of weeds. This area was previously farmed prior to becoming ESD property.

### Weeds

Cheatgrass is the most common weed species that occurs within the project study area.

Spotted knapweed (*Centaurea maculosa*) and Canada thistle (*Cirsium arvense*), both Idaho noxious weeds, can also be found in the APE. Areas disturbed by construction would be re-vegetated with native species to prevent the establishment of weed species. The proposed project would not lead to an increase in area dominated by seed species.





Source: Aerial (ESRI Online Streaming, Accessed April 2016); National Wetlands Inventory (US Fish & Wildlife Service, Accessed April 2016); National Hydrography Dataset (USGS, Accessed April 2016)

**Legend**

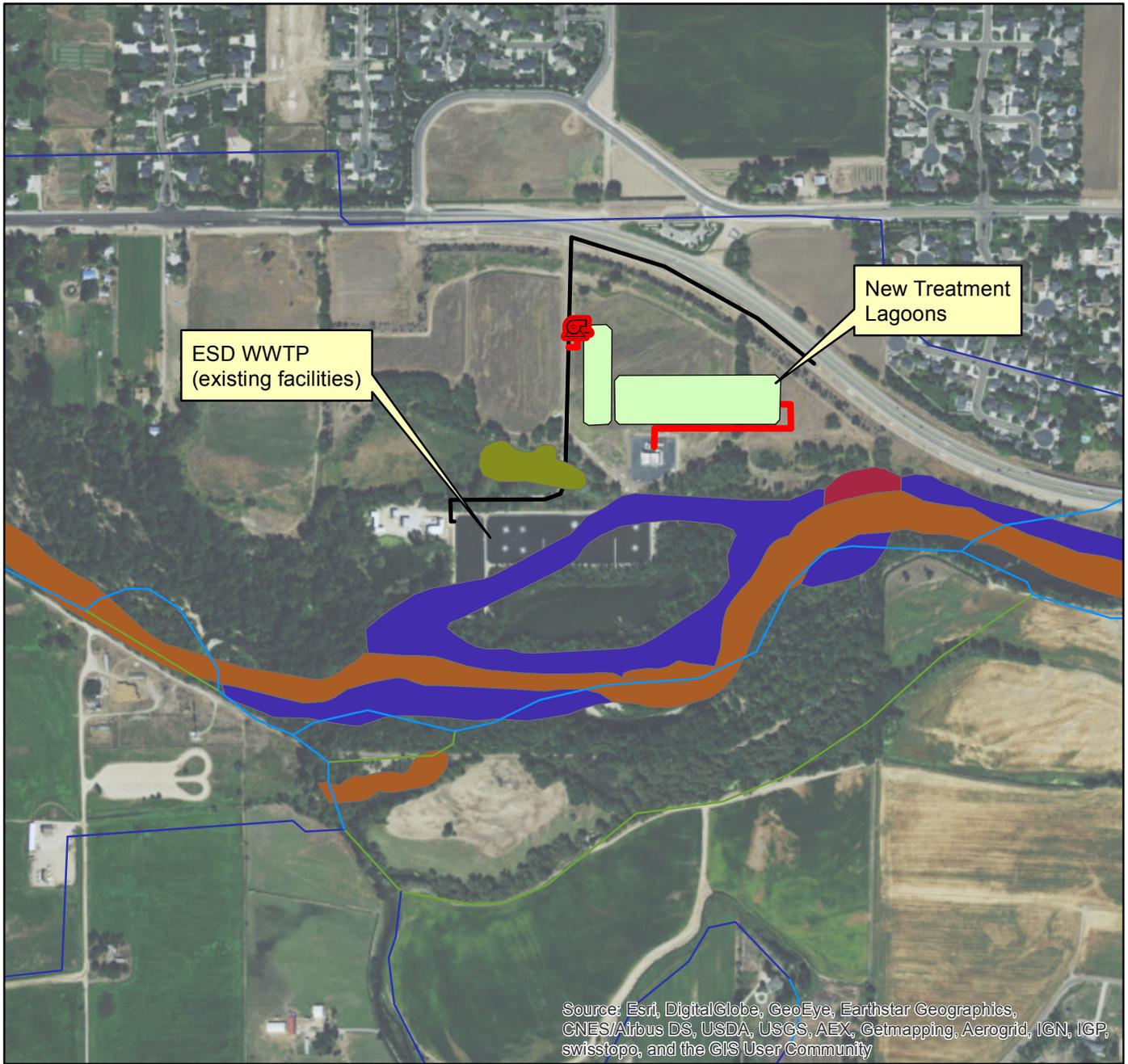
- Eagle Sewer District Service Area
- NHD Water Body**
- Lake/Pond
- NHD Flowtype**
- Artificial Path
- Canal/Ditch
- Coastline
- Connector
- Pipeline
- Stream/River
- Underground Conduit
- NWI Wetlands**
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

Wetland Type and Total Acreage Within Service Area	
Wetland Type	Total Area (Acres)
Freshwater Emergent Wetland	57.5
Freshwater Forested/Shrub Wetland	147.9
Freshwater Pond	77.4
Lake	12.4
Riverine	686.7



Figure 4  
**Mapped NWI Wetlands located in the ESD Service Area**  
 April 2016





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

VICINITY MAP

LEGEND

- New Pump Station
- New Lagoons
- New Pipelines
- Existing Pipelines
- NHD Flowtype**
- Artificial Path
- Canal/Ditch
- Coastline
- Connector
- Pipeline
- Stream/River
- Underground Conduit

**NHD Water Body**

Lake/Pond

**NWI Wetlands**

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

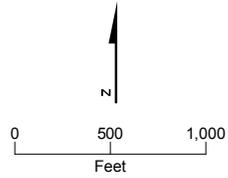


Figure 5  
**Mapped NWI Wetlands located in the Vicinity of the ESD WWTP**  
 April 2016



### State Sensitive Plants

Two state sensitive species, Mulford's milkvetch (*Astragalus mulfordiae*) ranked S2 and Aase's onion (*Allium aaseae*) ranked S3 potentially occur in the foothill areas. No project-related ground disturbing activities would occur in the foothills. There would be no long-term or cumulative adverse effects on sensitive plant species.

### Wildlife

Mule deer (*Odocoileus hemionus*) and possibly whitetail deer (*Odocoileus virginianus*), wild turkey (*Meleagris gallopavo*), and bald eagle (*Haliaeetus leucocephalus*) are residents at and near the ESD WWTP site. A variety of migratory birds such as Brewer's sparrow (*Spizella breweri*), Cassin's finch (*Carpodacus cassinii*), green-tailed towhee (*Pipilo chlorurus*), Lewis's woodpecker (*Melanerpes lewis*), and fox sparrow (*Passerella iliaca*) could be expected to occur near the WWTP. Common species, such as American robin (*Turdus migratorius*), American kestrel (*Falco sparverius*), song sparrow (*Melospiza melodia*), and western meadowlark (*Sturnella neglecta*) are also likely to use sites within the APE. Belted kingfisher (*Ceryle alcyon*) and various waterfowl, such as mallards (*Anas platyrhynchos*), eared grebe (*Podiceps nigricollis*), western grebe (*Aechmophorus occidentalis*), and wood ducks (*Aix sponsa*), would be expected to use the river habitats. Northern river otters (*Lontra canadensis*) have been observed in or along waterways in the vicinity of Eagle as well. Wildlife in the upland areas would include coyote (*Canis latrans*), mule deer, mountain lion (*Puma concolor*), cottontail rabbit (*Sylvilagus floridanus*), jack rabbit (*Lepus californicus*), and red fox (*Vulpes vulpes*), among others.

### State Sensitive Wildlife Species

A total of 35 special status terrestrial animal species with statewide ranks of S1, S2, or S3 for Idaho as assigned by the Idaho Conservation Data Center (CDC) have been observed in the APE. A list of these State ranked species is provided on Table 8. Figure 6 provides location information received by the Idaho Department of Fish and Game (IDFG) Idaho fish and Wildlife Information System (IFWIS) CDC. No sensitive species have been reported at the ESD WWTP location. The Townsend's pocket gopher (*Thomomys townsendii*) is the most likely sensitive species to be present in the location where construction at the ESD WWTP may occur.

TABLE 8  
State Listed Terrestrial Species that have been observed in the APE.

Common Name	Scientific Name	State Rank
Birds		
American white pelican	<i>Pelecanus erythrorhynchos</i>	S1B
Great egret	<i>Ardea alba</i>	S1B
Common loon	<i>Gavia immer</i>	S1B,S2N
Trumpeter swan	<i>Cygnus buccinator</i>	S1B,S2N
Bohemian waxwing	<i>Bombycilla garrulus</i>	S1B,S3N
Eurasian wigeon	<i>Anas penelope</i>	S1N
Black-crowned night-heron	<i>Nycticorax</i>	S2B
Caspian tern	<i>Sterna caspia</i>	S2B
Clark's grebe	<i>Aechmophorus clarkii</i>	S2B

TABLE 8  
State Listed Terrestrial Species that have been observed in the APE.

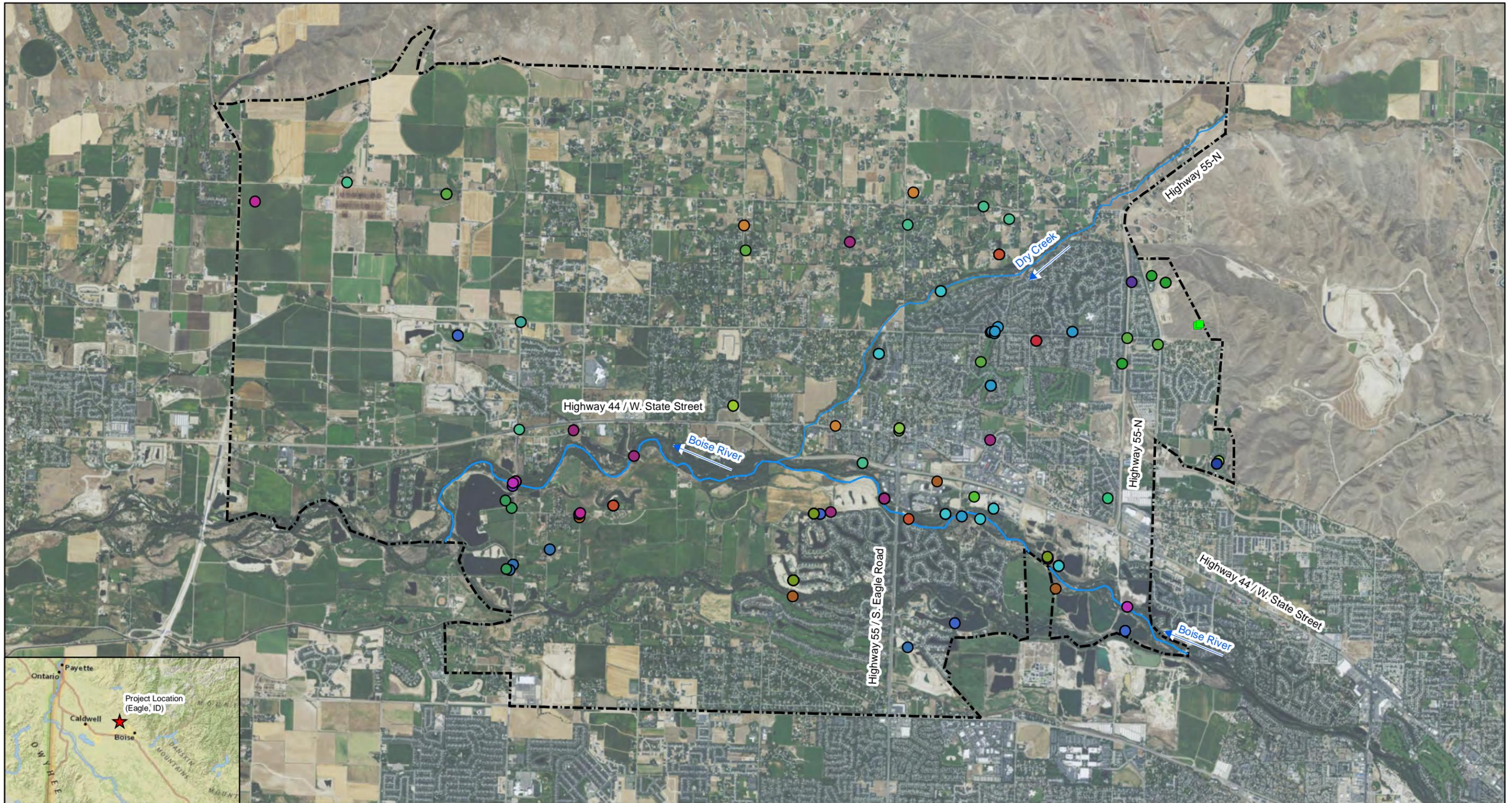
Common Name	Scientific Name	State Rank
Double-crested cormorant	<i>Phalacrocorax auritus</i>	S2B
Franklin's gull	<i>Larus pipixcan</i>	S2B
Lesser goldfinch	<i>Carduelis psaltria</i>	S2B
Long-billed curlew	<i>Numenius americanus</i>	S2B
Peregrine falcon	<i>Falco peregrinus</i>	S2B
Red-necked grebe	<i>Podiceps grisegena</i>	S2B
Western grebe	<i>Aechmophorus occidentalis</i>	S2B
Merlin	<i>Falco columbarius</i>	S2B,S2N
California gull	<i>Larus californicus</i>	S2B,S3N
Hooded merganser	<i>Lophodytes cucullatus</i>	S2B,S3N
Black rosy-finch	<i>Leucosticte atrata</i>	S3
Lesser scaup	<i>Aythya affinis</i>	S3
Northern goshawk	<i>Accipiter gentilis</i>	S3
Black-necked stilt	<i>Himantopus mexicanus</i>	S3B
Brewer's sparrow	<i>Spizella breweri</i>	S3B
Ferruginous hawk	<i>Buteo regalis</i>	S3B
Lewis' woodpecker	<i>Melanerpes lewis</i>	S3B
Olive-sided flycatcher	<i>Contopus cooperi</i>	S3B
Sandhill crane	<i>Grus canadensis</i>	S3B
Swainson's hawk	<i>Buteo swainsoni</i>	S3B
Bald eagle	<i>Haliaeetus leucocephalus</i>	S3B,S4N
Canvasback	<i>Aythya valisineria</i>	S4B,S2N
Northern pintail	<i>Anas acuta</i>	S5B,S2N
Northern Shoveler	<i>Anas clypeata</i>	S5B,S2N
Mammals		
Townsend's pocket gopher	<i>Thomomys townsendii</i>	S2
Amphibians		
Woodhouse's toad	<i>Anaxyrus woodhousii</i>	S2

S1 = Critically imperiled: at high risk because of extreme rarity (often 5 or fewer occurrences), rapidly declining numbers, or other factors that make it particularly vulnerable to rangewide extinction or extirpation.

S2 = Imperiled: at risk because of restricted range, few populations (often 20 or fewer), rapidly declining numbers, or other factors that make it vulnerable to rangewide extinction or extirpation.

S3 = Vulnerable: at risk because of restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors that make it vulnerable to rangewide extinction or extirpation.

B = Breeding: conservation status refers to the breeding population of the species. N = Nonbreeding: conservation status refers to the non-breeding population of the species.



Source: Aerial (ESRI Online Streaming, Accessed December 2015); Special Status Species Animal and Plant Data (Idaho Department of Fish and Game Information System, 2015)

**Legend**

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li> Eagle Sewer District Service Area</li> <li> Fish Presence in Streams</li> </ul> <p><b>Animal Species Observations, Common Name</b></p> <ul style="list-style-type: none"> <li> American White Pelican</li> <li> Bald Eagle</li> <li> Black Rosy-finch</li> <li> Black-crowned Night-Heron</li> <li> Black-necked Stilt</li> <li> Bohemian Waxwing</li> <li> Brewer's Sparrow</li> <li> California Gull</li> <li> Canvasback</li> <li> Caspian Tern</li> <li> Clark's Grebe</li> <li> Common Loon</li> <li> Double-crested Cormorant</li> <li> Eurasian Wigeon</li> <li> Ferruginous Hawk</li> <li> Franklin's Gull</li> <li> Great Egret</li> <li> Hooded Merganser</li> <li> Lesser Goldfinch</li> <li> Lesser Scaup</li> <li> Lewis' Woodpecker</li> <li> Loggerhead Shrike</li> <li> Long-billed Curlew</li> <li> Merlin</li> <li> Northern Goshawk</li> <li> Northern Pintail</li> <li> Northern Shoveler</li> <li> Olive-sided Flycatcher</li> <li> Peregrine Falcon</li> <li> Red-necked Grebe</li> <li> Sandhill Crane</li> <li> Swainson's Hawk</li> <li> Townsend's Pocket Gopher</li> <li> Trumpeter Swan</li> <li> Western Grebe</li> <li> Woodhouse's Toad</li> </ul> | <p><b>Plant Species Observations, Common Name</b></p> <ul style="list-style-type: none"> <li> Wovenspore Lichen</li> </ul> |
|---|--|



Figure 6. State-Listed Animal and Plant Observations December 2015



## Townsend's Pocket Gopher

Townsend's pocket gophers inhabit land with deep, moist soils close to rivers and lakes, occasionally as high as 6,500 feet, but more usually in lower valley bottoms (Verts and Carraway, 2003). They may also be found in high numbers in artificially irrigated cropland.

Townsend's pocket gopher feeds largely on the root-stalks of saltgrass, but also eats other grasses, alfalfa, and other large rooted plants, including agricultural crops such as potatoes. Like other pocket gophers, Townsend's species spends most of its adult life underground.

Burrows are 3.9 to 4.7 inches wide, and are marked on the surface by numerous mounds of excavated earth. The entrances to the tunnels are normally kept blocked with earth to prevent access by predators. Individuals are solitary outside of the breeding season. Their expansion into neighboring areas may be limited by absence of saltgrass or by competition with Botta's pocket gopher. Potential Townsend's pocket gopher burrows were not observed during site visits; therefore, they are unlikely to be present.

## Aquatic Species

The Boise River is the main habitat for aquatic species in the APE. Although there is suitable habitat, there would be no construction activities that would affect the Boise River. There will be no adverse long-term or cumulative effects on aquatic species.

## Threatened and Endangered Species

DEQ initiated Section 7 consultation by formally requesting a species list from the U.S Fish and Wildlife Service (Consultation Code: 01EIFW00-2016-SLI-0131). Proposed Endangered slickspot peppergrass (*Lepidium papilliferum*) is the only species protected under the Endangered Species Act (ESA) in Ada County with potential to exist in the project area (Appendix C). Proposed critical habitat for slickspot peppergrass is also present in Ada County. The DEQ's Eagle Sewer District Wastewater Improvements Threatened/Endangered Species and Essential Fish Habitat Determination is also included in Appendix C.

## Terrestrial Species

### *Slickspot Peppergrass*

Slickspot peppergrass is listed as Proposed Endangered with Proposed Critical Habitat in the County. It occupies microsites characterized by soil depressions in sagebrush-steppe communities where a crust of natric (sodium) soil has formed because of standing water. These microsites also had clay and salt enrichment in the surface horizon of the soil, and reduced levels of organic matter and bound nutrients were found because of lower biomass production in these microsites. Soil depressions that may have the potential to support slickspot peppergrass are generally lighter in color with few or no grasses or forbs growing within the perimeter.

Areas at the ESD WWTP that will be permanently disturbed do not provide suitable habitat for the peppergrass. The Proposed Action is not likely to jeopardize the continued existence of slickspot peppergrass.

## Recreation and Open Space

There are no publicly available open space resources within the ESD facility. The Boise River, is located directly adjacent to the proposed new WWTP facilities. The Boise River in this area is utilized for fishing, floating and other recreational activities and is visible from State Highway 44 to the south. Recreational public access to the Boise River is present upstream and downstream of the proposed WWTP. Flow changes in the Boise River as a result of project implementation would be negligible. There would be no direct, indirect, short-term, long-term or cumulative adverse impacts to recreation or open space as a result of the proposed action.

## Agricultural Lands

There are no Prime Farmlands in the Proposed Action's area. Properties within the ESD WWTP site are maintained as undeveloped open space for the WWTP or as treatment facilities. There would be no direct, indirect, short-term, long-term, or cumulative adverse impacts to agricultural lands as a result of the proposed action.

## Air Quality and Noise

A State Implementation Plan (SIP) is the framework for each state's program to protect the air. It is not a single plan, but the accumulated record of a number of air pollution documents showing what the state has done, is doing, or plans to do to assure compliance with federal [National Ambient Air Quality Standards \(NAAQS\)](#) for "criteria" pollutants. As shown in Figure 7, Ada County is a Maintenance Area for coarse particulate matter (PM<sub>10</sub>) smaller than 10 micrometers and carbon monoxide (CO) and an Area of Concern for fine particulate matter (PM<sub>2.5</sub>) smaller than 2.5 micrometers and ozone (O<sub>3</sub>).

The treatment of effluent by nature emits odor, which can degrade air quality in the general vicinity. Otherwise, there are no air quality concerns with the existing treatment plant or associated infrastructure. Potential short and long-term effects to air quality are described below, in the Environmental Effects section. Operational or long-term noise impacts would not occur as a result of the proposed action. Potential short-term effects from noise are also described in the Environmental Effects of the Proposed Project Section below.

## Water Quality

The ESD does not discharge effluent or any other waters directly into the Boise River or any connected waterways. All water used by the treatment facility is either lost through use and evapotranspiration or transferred with effluent to the City of Boise WWTP.

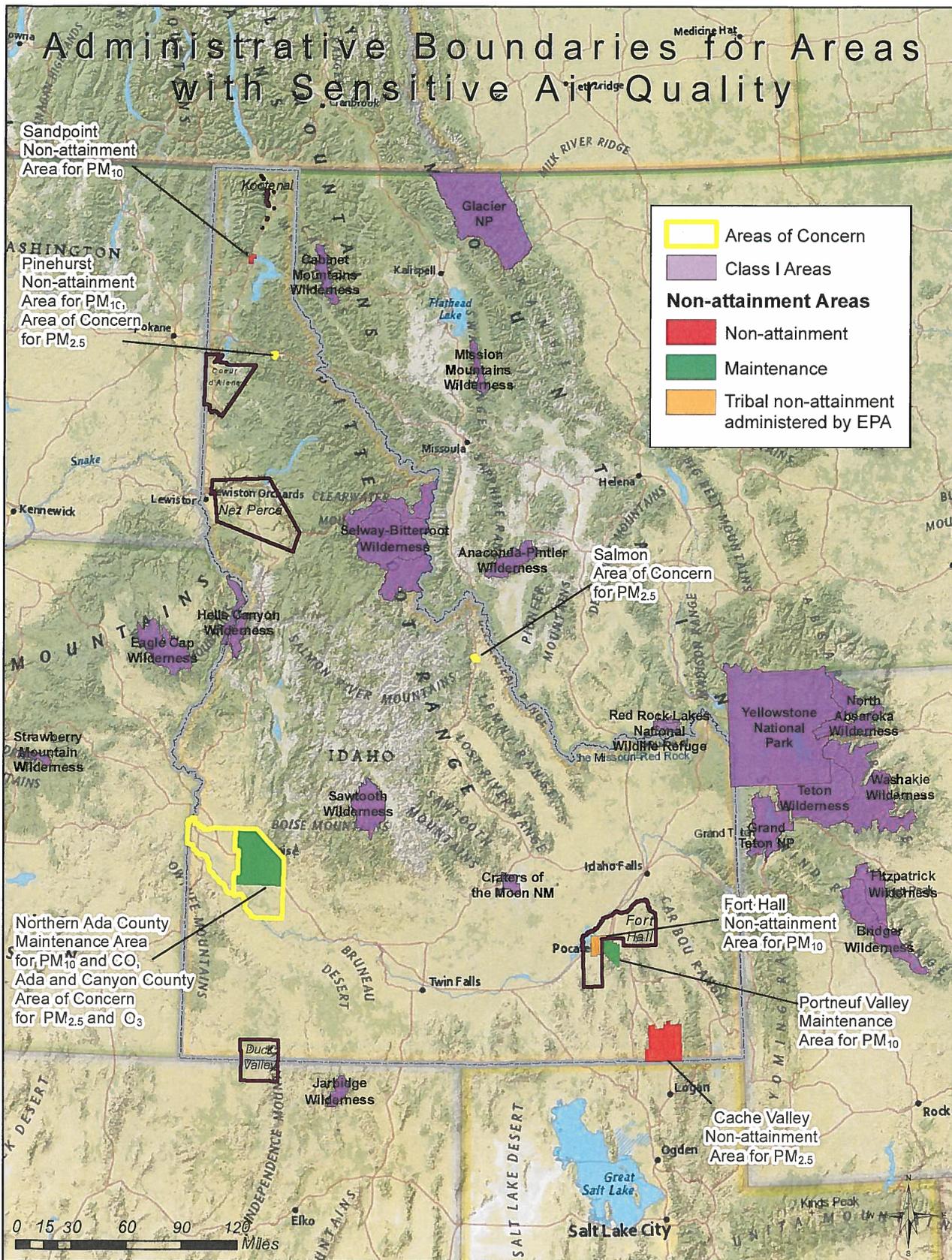
The proposed project would not result in any additional discharge into nearby waterbodies, nor would it result in any additional waters (treated, untreated, or otherwise) contributed to the aquifer through groundwater infiltration, as all lagoon are lined and tested regularly. Therefore, no short-term, long-term or cumulative adverse effects to water quality are anticipated in association with the proposed project.

## Water Quantity

Eagle Water Company (EWC), United Water Idaho (UWI) and the City of Eagle (City) are the major domestic water providers in and around the City. A few residential subdivisions own and operate their own water systems and individual domestic wells are also used in

the City. UWI provides backup fire and emergency storage to the eastern portion of the City's service area through an agreement approved by the Public Utilities Commission.

0.75" margin



Source: www.deq.idaho.gov/attainment-nonattainment

Always include JETT number and FileName.

Figure 7. Administrative Boundaries for Areas with Sensitive Air Quality





In 2005, the City adopted a Water System Master Plan that defines existing and future service areas. The Master Plan identifies major infrastructure requirements in the service area including storage tanks and water transmission mains from Linder Road to Highway 16 and from Homer Road to Highway 20/26. The Master Plan called for the City to create a Public Works Department including hiring a Public Works Director. Subsequently, the City has undertaken efforts to budget for and hire staff to begin the process of realizing that goal. The City has also implemented other aspects of the Plan including applying for water rights and obtaining approval for wells for its western growth area. Construction of a one million gallon reservoir, a new city well and a supervisory control and data acquisition (SCADA) control system were completed in the fall of 2007 (City of Eagle, 2015).

The ESD uses a combination of municipal water (which is supplied by the City, EWC and UWI) for their headworks and well water for other operations. No additional water consumption would occur as a result of the proposed project. There would therefore be no direct, indirect, short-term, long-term or cumulative adverse effects to water rights or water quantity as a result of the proposed action and no adverse effect to groundwater would occur.

## Public Health

There will be one public health issue with the project. An increase in surface water with the new lagoons will increase breeding habitat for vectors, such as mosquitoes. No other adverse effect to public health would occur as a result of the Proposed Action. Additionally, the reliable treatment of wastewater that would be available to the population as a result of the Proposed Action would be beneficial to maintaining public health. Failure to address concerns associated with the growing wastewater treatment demands of the City of Eagle and the linked Ada and Canyon County areas may have a potentially adverse effect on public health in the future.

## Energy

Idaho Power Company (IPC) provides electrical service throughout the City of Eagle (approximately 10,222 customers in 2014) and the Eagle AOI, which includes the ESD. Intermountain Gas currently provides natural gas services to the Eagle area. Energy in the form of electricity will be used to power pumps and process equipment required to operate the treatment facilities. Heating and cooling at the facility will use either electricity or L.P. gas. The proposed project would incorporate high efficiency motors and variable speed drives to reduce energy consumption and pumping costs. Although this may reduce energy requirements of the treatment plant to some extent, the use of energy to operate the proposed improvements would vary depending on the alternative selected. Anticipated effects related to the use of energy as a result of the proposed project are described in Environmental Effects Section below.

## Regionalization

During the initial phases of the project development of a number of regionalization efforts were examined. One of these efforts explored sending more effluent to the City of Boise for treatment and/or sending effluent at various levels of treatment. This approach would incur additional costs to ESD and it is difficult to anticipate that with current rates of growth in the Treasure Valley, that available capacity at the Boise wastewater treatment facility may

not accommodate the projected needs of the City of Eagle. The proposed project does not involve regionalization efforts relative to treating wastewater from other areas of the Treasure Valley. The proposed project would have no direct, indirect, short-term, long-term or cumulative adverse effect to regionalization.

## Environmental Effects of Proposed Project

Only those resource areas that have the potential to be adversely affected/impacted through implementation of the Proposed Action are addressed in this section. The rationale for no impact to a resource area not addressed in this section is discussed in the Affected Environment Section above.

The Proposed Action also includes the eventual construction of a replacement forcemain from the ESD WWTP to the West Boise WWTP. At this time, the location of the forcemain has not been identified. Therefore impacts from construction of the force main cannot be evaluated. Depending on the timing of the forcemain construction, impacts will be evaluated in an addendum to this EID or as part of a separate EID.

## Physical Aspects

### Soils

There will permanent and temporary impacts to soils at the ESD WWTP site. Approximately 5.7 acres of soil will be excavated to construct permanent project facilities. An additional 1 acre of soil will be temporarily disturbed for construction of pipelines and other underground facilities.

The small area of permanent disturbance relative to the total area in the project area will not result in a significant impact to soil resources. The temporary impacts will be mitigated as discussed below.

## Economics and Social Profile

Over the short-term The Proposed Action would not have an effect on economics in the service area of ESD. Over the long-term, economics for the larger community would not be affected either. Minimal long-term economic effects under Proposed Action however may occur to residents and businesses that utilize the services of ESD through potential additional costs transferred on to users. The extent of these costs would be in relation to the expense associated with the extent of improvements made. Data will be provided when available. The ESD does not anticipate raising rates at this time. It is anticipated that any future rate hikes associated with the Proposed Action alternatives would be minimal.

## Wetlands and Waters of the U.S.

The small drainage ditch traversing the location of the planned lagoons will be permanently impacted during construction when the ditch is re-located around the facility. Jurisdictional wetlands have not been formally delineated adjacent to the ditch to determine the extent of wetlands and WOUS. Recent rulings have indicated that wetland ditches located entirely in uplands are no longer regulated under the Clean Water Act. The area of potential wetland is much less than 0.1 acres, so if required, a Nationwide Section 404 Permit may be applicable. However, only the USACOE can determine the wetland's jurisdictional status and type of Permit needed. A formal delineation will be prepared and submitted to the USACOE for a

jurisdictional determination prior to any construction activities. If required, a Section 404 permit application will be prepared.

If wetlands are present in the segment of drainage ditch that is re-located, wetland plants will be established in the new ditch to replace them by salvaging the wetland topsoil and re-spreading it.

## Flora and Fauna

### Vegetation

Approximately 5.7 acres of mainly grassland habitat will be permanently lost during construction. There will also be a small number of trees removed. Approximately 1 acre of grassland will be temporarily disturbed during construction.

The construction footprints will be kept as small as possible to minimize impacts to native vegetation, particularly trees and the native grass established at the ESD WWTP construction location. Weed control will be implemented on all ground being disturbed by this project. All disturbed areas will be re-vegetated immediately after construction to minimize open ground where weeds can germinate. Conservation measures are designed to prevent weed spread, particularly between construction areas. There is a legal requirement in the State of Idaho to control legally designated noxious weed species, which requires land owners to prevent above-ground growth for at least 2 years.

### Wildlife

General wildlife will be temporarily disturbed during construction by construction equipment noise. Although construction noise may be loud, it is unlikely to affect animals that are used to urban noises in Eagle. Some areas of grassland habitat will be lost to project facilities. The abundance of similar habitat in the area should not result in long-term adverse effects to wildlife. No long-term or cumulative adverse effect to wildlife would occur as a result of the proposed project.

### *Migratory Bird Treaty Act*

Removal of structural vegetation would impact nesting birds if vegetation is removed during the breeding season. With implementation of Conservation Measures to cut and chip all woody vegetation during the non-breeding season (September to February), impacts to nesting birds would avoid "take" under the Migratory Bird Treaty Act (MBTA).

### *State Sensitive Wildlife Species*

The Townsend's pocket gopher has the potential to be impacted by the proposed project. Because the pocket gopher utilizes grassland habitat, it may be directly impacted through excavation activities. No pocket gopher burrows were observed during site visits. However, conservation measures listed below will be implemented to reduce direct impacts to this species.

## Recreation and Open Space

No long-term or cumulative impacts would occur to recreation and open space (including pathways or access routes) as a result of the proposed action. Reduction in open space on the ESD property is expected, however these areas are not publically accessible as they are part of the ESD facility.

## Air Quality and Noise

Minimal short-term impacts may occur to air quality in the area as a result of the proposed project in association with fugitive dust. This would be minimal (due to the nature of soils on the site and the implementation of best management practices (BMPs) and conservation measures) and occur only in relation to ground breaking activities. Any short-term change in air quality would likely not be recognizable off of the ESD property. Long-term impacts to air quality would also have the potential to occur as a result of the Proposed Action, as a result of increased loadings in the wastewater treatment system that could result in the potential for more concentrated odors. Any increase in odor emissions are anticipated to be negligible. The Proposed Action would not have significant long-term effects to air quality.

Consultation with IDEQ's air quality branch indicated that the only possible action requiring a permit would be if a generator was constructed for the new facility. There are no plans to include a new generator as part of the Proposed Action. Therefore there will be no need for air quality permitting.

Short term noise impacts would likely occur in association with general construction activities. This may result in some disturbance to the local population proximate to areas of construction however these effects are anticipated to be minimal and only occur during the daylight hours. No long-term or cumulative effects relative to noise would occur as a result of the Proposed Action.

## Public Health

West Nile Virus has been found in Ada County. The virus is transmitted through mosquito bites. Increased lagoon surface area is likely to increase mosquito breeding habitat and lead to an increase in the local mosquito population. However, aeration of the lagoons results in constant water motion, reducing the amount of area available for breeding. It is possible that some of the increased mosquitos may contract and pass on West Nile Virus. There is no way to accurately measure what this possibility is, although a significant impact would not be expected.

## Energy

No short-term effects to energy would occur as a result of the Proposed Action. In general, high efficiency motors and variable speed drives would reduce per unit energy consumption and pumping costs. Although this may reduce energy requirements of the treatment plant to some extent, over the long-term the use of energy to operate the proposed improvements would most likely rise. It is anticipated that the Proposed Action would use approximately twice as much energy as the No Action Alternative. The Proposed Action would not significantly affect energy consumption over the long-term.

## Means to Mitigate Adverse Environmental Effects

Mitigation measures to minimize direct, indirect, short-term, and long-term impacts associated with the proposed action (in addition to those identified in the project description above) are described in the following text. No cumulative impacts are anticipated in association with the proposed action and in turn no mitigation to address cumulative

impacts is required. Guidelines that would be followed during construction of project features include:

### State Historic Preservation Office (SHPO) Measures

Section 106 of the National Historic Preservation Act (36 CFR 800) requires consultation with SHPO. SHPO review of the project indicated there would be *no adverse effect* to historic properties if the following conditions are met (see Appendix B):

1. An unanticipated discovery plan/protocol will be developed by a professional archaeologist and agreed upon by our office prior to any significant ground disturbing activity.
2. A professional archaeologist will be retained to provide a training session for any construction managers and or relevant staff that will be participating in significant ground disturbing activities/excavation. The training session will go over the inadvertent discovery plan, explain the legal protections provided to significant cultural materials, and provide training in the identification and protection of significant cultural material.

### U.S. Fish and Wildlife Service (USFWS) Measures

All migratory birds in North America are protected under the MBTA of 1918, as amended, and eagle species are protected under the Bald and Golden Eagle Protection Act (BGEPA), as amended. These laws provide civil and criminal penalties for the “take” of such species. “Take” under MBTA is defined as to “pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt any of these acts.” Take under BGEPA is defined as to “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb.”

Trees and shrubs that will be removed for pipeline routes will be cut in winter when no eggs and/or non-mobile nestlings are present and chipped for use as mulch for site restoration.

### Terrestrial Conservation Measures

Areas of temporary disturbance will be excavated in layers with the topsoil layer reserved for placement over temporarily disturbed areas prior to reseeded.

Any temporary disturbance areas will be reseeded with native seed mix acclimated to the project elevation and climate to avoid activities or habitat alterations that could adversely affect wildlife.

Constraints to avoid driving onto reseeded areas will be incorporated into the project design.

Areas to be excavated will be surveyed by a qualified biologist prior to construction activities to locate Townsend’s pocket gopher burrows. If burrows are identified, attempts to trap and relocate the gophers will be conducted.

Wetlands on the ESD WWTP property where project activities are planned will be delineated. Potential wetland impacts will be kept to the minimum needed for construction. Wetlands to not be impacted will be shown on construction drawings and orange construction fencing installed around them.

## Maintaining Terrestrial Habitat Integrity

Prior to entering the worksite and after work is finished, all vehicles will be power washed to minimize the spread of noxious weeds.

Disturbed areas will be reseeded with a mixture of native species, such as basin wildrye (*Leymus cinereus*), purple threeawn (*Aristida atropurpurea*), needle and thread grass (*Hesperostipa comata*), and Indian ricegrass (*Achnatherum hymenoides*). Trees removed will not be replaced as the ESD recently planted a large number of trees on their property near State Street.

All weeds germinating on reseeded or revegetated construction sites shall be controlled using a herbicide approved for use near wetlands. A dye will be placed in the weed control slurry, so that spray radius can be seen by both the sprayer and ESD staff. Spraying will include a dripless wand method so that spray is not accidentally dripped on unintended vegetation.

Control of existing weed species is recommended in order to maintain the integrity of native habitats and avoid spreading weeds.

## Pollution Control Measures

### State Water Quality Guidelines and CWA

The CWA requires states to set water quality standards sufficient to protect designated and existing beneficial uses. In Idaho, "Sediment shall not exceed quantities...which impair designated beneficial uses. Determinations of impairment shall be based on water quality monitoring and surveillance and the information utilized as described in Section 350." (Idaho Administrative Procedures Act [IDAPA] 58.01.02.200.08). In Idaho State Water Quality Standards for Aquatic Life (Section 250), "Turbidity shall not exceed background turbidity by more than 50 nephelometric turbidity units (NTUs) instantaneously (at any point in time)" (IDAPA Idaho Code 58.01.02.350.01.a). In Section 350 (Rules Governing Nonpoint Source Activities), "Best management practices should be designed, implemented, and maintained to provide full protection or maintenance of beneficial uses. Violations of water quality standards which occur in spite of implementation of best management practices would not be subject to enforcement action. However, if subsequent water quality monitoring and surveillance indicate water quality standards are not met due to nonpoint source impacts, even with the use of current best management practices, the practices will be evaluated and modified as necessary by the appropriate agencies in accordance with the provisions of the Administrative Procedures Act." (IDAPA 58.01.02.350.01.a).

Project actions will follow all substantive requirements of the CWA and provisions for maintenance of water quality standards under the jurisdiction of the DEQ. Project activities will be in substantive compliance with all applicable state and federal laws and processes.

### Spill Prevention, Containment, and Reporting

All vehicles carrying fuel will have specific equipment and materials needed to contain or clean up any incidental spills at the project site. Equipment and materials will be specific to the project site and will include a spill kit appropriately sized for specific quantities of fuel (absorbent pads, straw bales, containment structures and liners, and/or booms). Storing and refueling areas will be located in staging areas away from streams in areas where a spill

would not have the potential to reach live water. Containment structures will be used as appropriate to prevent spilled material from reaching live water. All pumps and generators used within the Boise River floodplain will have appropriate spill containment structures and/or absorbent pads in place during use.

Should quantities of stored fuel for the project exceed 1,320 gallons, the ESD will be required to have a standard U.S. Environmental Protection Agency (USEPA)-written Spill Prevention Control and Countermeasures (SPCC) Plan onsite that describes measures to prevent or reduce impacts from potential spills (from fuel, hydraulic fluid, etc.) (40 CFR 112, Oil Pollution Act relating to SPCC Plans).

The ESD will be required to prepare a written spill plan, also known as a Stormwater Pollution Prevention Plan (SWPPP). The plan will conform with NPDES general permit requirements and contain a description of the specific hazardous materials, procedures, and spill containment that will be used, including inventory, storage, and handling.

Federal and Idaho state regulations regarding spills will be followed (see ). Any spills resulting in a detectable sheen on water shall be reported to the USEPA National Response Center (1-800-424-8802). Any spills over 25 gallons will be reported to the DEQ (1-800-632-800), and cleanup will be initiated within 24 hours of the spill.

#### **NPDES Construction General Permit (CGP)**

Compliance with a NPDES CGP will prevent water quality impacts. EPA, Region 10, is the NPDES permitting authority for Idaho and as such is responsible for issuing NPDES stormwater permits (DEQ does not have an EPA approved NPDES program). Construction site operators engaged in clearing, grading, and excavating activities that disturb 1 acre or more are required to obtain coverage under an NPDES permit for their stormwater discharges. Coverage under the CGP will be necessary for storm water management associated with construction activities (clearing, grading, and excavation) and requires a Notice of Intent (NOI), and a Storm Water Pollution Prevention Plan (SWPPP), containing erosion control measures. Coverage under this permit is available only if stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities are not likely to jeopardize the continued existence of any species that are federally-listed as endangered or threatened under the ESA or result in the adverse modification or destruction of habitat that is federally-designated as critical under the ESA ("critical habitat"). This federally issued CGP triggers the requirement for ESA Review. ESA Review requires informal consultation with the U.S. Fish and Wildlife Service (USFWS), or may trigger formal Section 7 Consultation between the USEPA and USFWS. This may result in the requirement for biological surveys to assess risk of federally listed species and mitigative action under Section 10 of the ESA. In order to be eligible for coverage under this permit, consultation must result in a "no jeopardy opinion" or a written concurrence by the USFWS on a finding that the stormwater discharge(s) and stormwater discharge-related activities are not likely to adversely affect listed species or critical habitat.

Coverage under the CGP does not trigger review under NEPA because the CGP does not regulate new sources (that is, dischargers subject to New Source Performance Standards under section 306 of the CWA), and is thus statutorily exempted from NEPA. However, some construction activities might require review under NEPA for other reasons such as federal funding or other federal involvement in the project.

## Minimize Exposure to Heavy Equipment Fuel/Oil Leakage

Methods to minimize fuel/oil leakage from construction equipment into the stream channel will include the following:

- i.* All equipment used for instream work will be cleaned of external oil, grease, dirt and mud, and leaks repaired, prior to arriving at the project site. All equipment will be inspected by the Contract Administrator before unloading at site. Any leaks or accumulations of grease will be corrected before entering streams or areas that drain directly to streams or wetlands. Equipment shall not have damaged hoses, fittings, lines, or tanks with the potential to release pollutants into any waterway.
- ii.* Equipment used for instream or riparian work will be fueled and serviced in an established staging area. When not in use, vehicles will be parked in the designated staging area. The staging area will be in an area that would not deliver fuel, oil, etc., to streams.
- iii.* Oil-absorbing floating booms and other equipment, such as absorbent pads appropriate for the size of the stream, will be available onsite during all phases of construction. Booms will be placed in a location that facilitates an immediate response to potential petroleum leakage.
- iv.* Vehicle staging, cleaning, maintenance, refueling, and fuel storage will occur as far as possible from any stream, waterbody, or wetland to minimize concerns associated with exposure to fuel and other fluids.

## Aquatic Invasive Control Measures

Many streams have invasive aquatic species such as the New Zealand Mudsnail and Whirling Disease. Many of these species are practically invisible to the naked eye and impossible to detect if attached to heavy equipment. To ensure that equipment is not contaminated, any visible plants, mud, and dirt will be removed at a predetermined decontamination area away from the Boise River or other waters.

## Erosion Control Measures

### Minimize Site Preparation Impacts

- i.* Site clearing, staging areas, access routes, and stockpile areas will be identified to minimize overall disturbance, minimize disturbance to riparian vegetation, and preclude sediment delivery to stream channels.
- ii.* Silt fence, straw bales, straw wattles, or other sediment barriers will be placed around disturbed sites to prevent sediment from entering a stream directly or indirectly, including by way of roads and ditches.

### Minimize Earthmoving-Related Erosion

- i.* Ground-disturbing activities will be confined to the minimum area necessary to complete the project.
- ii.* An onsite supply of erosion control materials (for example, silt fence and straw bales) will be used to respond to sediment emergencies. Sterile straw or “weed free” certified straw bales will be used to prevent introduction of noxious weeds.

*iii.* All project operations will cease, except efforts to minimize storm or high flow erosion, under precipitation and high flow conditions that result in uncontrollable erosion in the construction area.

*iv.* Sediment control measures will be installed prior to construction activities and will remain in place, until the DEQ determines that they can be removed. After DEQ makes this determination, all sediment control measures will be removed within 30 days and disposed of in accordance with all Federal, state, and local laws and regulations.

### Site Rehabilitation

*i.* Upon project completion, project-related waste will be removed. Rehabilitation of all disturbed areas will be conducted in a manner that results in conditions similar to pre-work conditions through spreading of stockpiled soil materials, seeding, and/or planting with native seed mixes or plants.

*ii.* Only approved herbicide application will occur as part of the action.

*iii.* Site rehabilitation activities (with the exception of further years' seeding and revegetation) will be completed prior to the end of the construction field season.

## Public Participation

A public meeting was held at 5 p.m. on March 14, 2016 at the Eagle Sewer District office. The meeting was advertised in the Idaho Statesman from February 2, 2016 to March 3, 2016 (Appendix A). Eagle Sewer District Board members and consultant staff were at the meeting to present the project to the public and answer questions. No members of the public attended.

## Agencies Consulted

DEQ consulted with USFWS and the Native American Tribal groups during preparation of this document. The IDFG was contacted to identify species of concern in the project area. The Idaho State Historic Preservation Office was consulted to identify cultural resource concerns. The IDEQ Air Quality branch was consulted concerning the need for air quality permitting.

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Wright, M. and R.E. Escano. 1986. *Montana Bald Eagle Nesting Habitat Macro-Habitat Description*. USDA, Forest Service. Missoula, Montana.

Appendix A

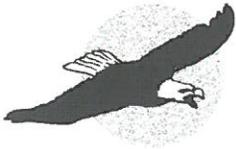
## Public Participation Documentation

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EAGLE  
SEWER  
DISTRICT

44 N. Palmetto Avenue • Eagle, Idaho 83616  
Phone (208) 939-0132 • Fax (208) 939-8986  
www.EagleSewer.com

October 17, 2016

Mr. Mike May, Sr. Water Quality Specialist  
Idaho Department of Environmental Quality  
1410 North Hilton  
Boise, Idaho 83706

**Re: Eagle Sewer District Facility Plan Approval for EID:**

Dear Mr. May:

It was the intention of the Eagle Sewer District Board of Directors in finalizing the Wastewater Facility Plan Update to also accept the recommendation to proceed with the Alternative 3, Lagoon Expansion Improvements.

The minutes of the March 14, 2016 Eagle Sewer District Board meeting were amended to include the following at the end of the Unfinished Business section entitled ESD Facility Plan Update.

*The Wastewater Facility Plan Update is formally accepted and the Eagle Sewer District will proceed with the recommended Alternative 3, Lagoon Expansion Improvement approach and implementation schedule outlined in Section 6 of the plan.*

Sincerely,

Ervin Ballou  
Chairman of the Board

ATTACHMENT: Amended March 14, 2016 Eagle Sewer District Board Minutes

Cc: file



Appendix B

**Agency and Tribal Coordination Letters and Responses**

---





CH2M [Boise]  
322 E Front St.  
Suite 200  
Boise, ID 83702  
O +1 208 345 5310  
F +1 208 345 5315  
www.ch2m.com

Ken Reid  
State Archeologist and Director  
State Historic Preservation Office  
210 Main Street  
Boise, ID 83702

July 1, 2015

Subject: Eagle Sewer District Wastewater Improvements – Request for Comments for Preparation of an Environmental Information Document

Dear Mr. Reid,

The Eagle Sewer District (ESD) is preparing a facility planning document to identify and make necessary improvements to its wastewater system that are cost effective and environmentally sound. Construction of the proposed project may be financed in whole or in part by federal funds through a loan from the Department of Environmental Quality (DEQ) State Revolving Fund (SRF), which requires compliance with the Rules for Administration of Water Pollution Control Loans (IDAPA 58.01.12.) The purpose of this letter is to request your review and response regarding any historic and cultural resource impacts that the State Historic Preservation Office (SHPO) may identify for this proposed project pursuant to the Idaho Department of Environmental Quality's State Environmental Review Process, which mirrors the National Environmental Policy Act.

The proposed wastewater improvements are expected to be completed in phases, as needed:



- Installation of aerators in the existing lagoons to improve treatment capacity;
- Construction of an additional aerated lagoon treatment train with ancillary pump and valves. ESD expects to construct this train in 2020, but possibly as early as 2018.
- Construction of a second pressure main to the City of Boise on a route yet to be determined to transport treated wastewater to the West Boise Treatment Plant for additional treatment and discharge to the Boise River. ESD expects to need this supplemental capacity in approximately 2027.

The project is being proposed to provide for lagoon isolation in order to conduct mandatory lagoon testing, improve treatment capacity and provide an orderly pathway for system growth, while protecting human health and the environment. Figure 1 shows the proposed project improvements and area of potential direct effect for all construction activities. The ESD owns the entire parcel where the project is being constructed.

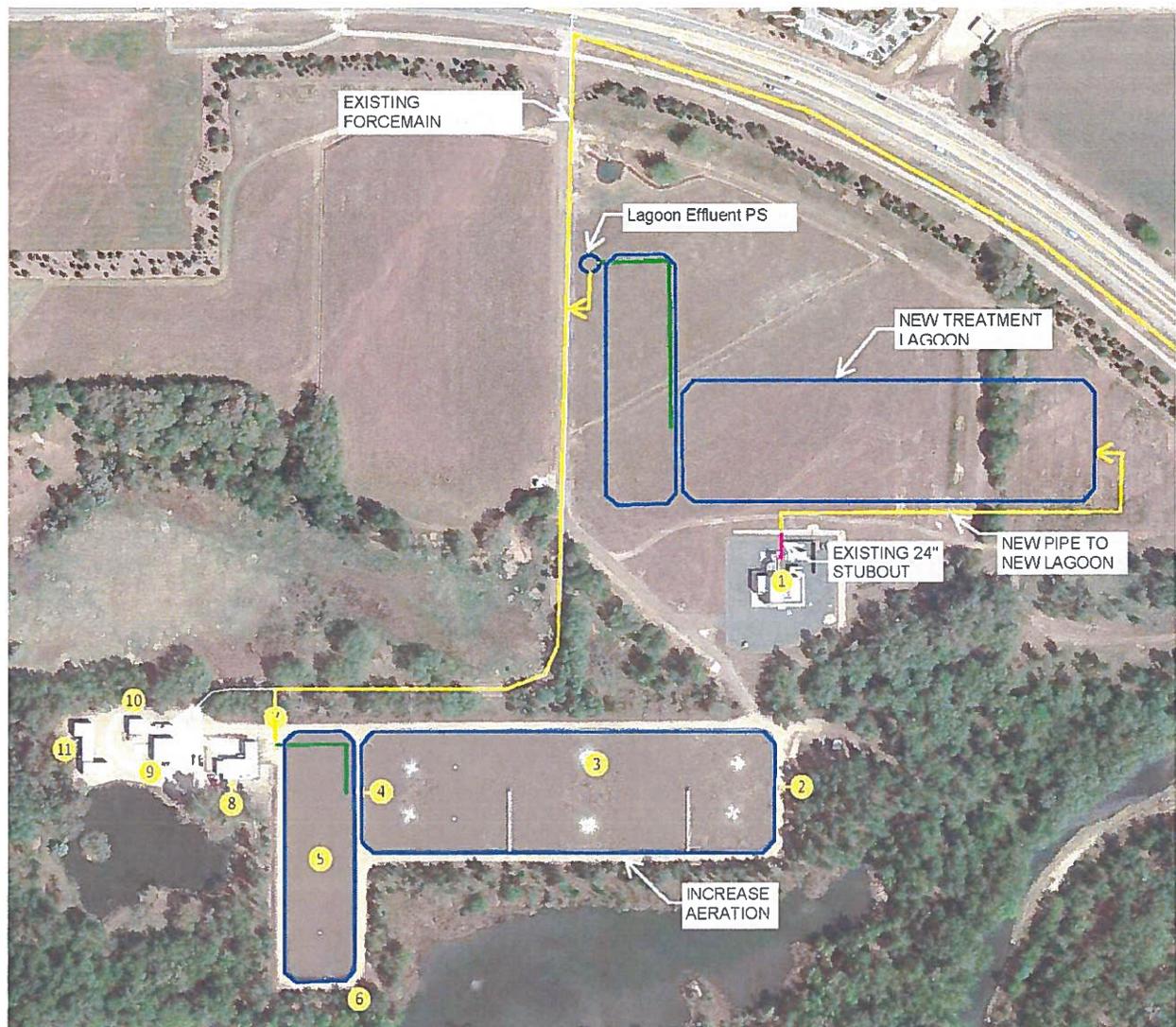


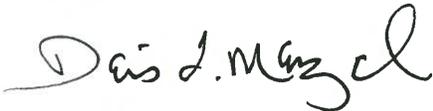
Figure 1. Eagle Sewer District wastewater treatment plant upgrade.

The area of potential effect includes the entire ESD (attached), but there would be no actions related to this project outside the direct impact area. The second pressure main listed in the bullets above falls outside the time frame being addressed in the Environmental Information Document (EID) and is not included as part of this action. When the pressure main is determined to be needed, potentially 2027, a separate analysis and EID will be prepared.

We request that you advise us of any comments that you may have regarding this project, so the ESD can proceed with the completion of the EID.

If you have any questions concerning this proposed project or if you need any further information, please feel free to contact me at [denny.mengel@ch2m.com](mailto:denny.mengel@ch2m.com) or at (208) 383-6202.

Regards,  
CH2M

A handwritten signature in black ink that reads "Denny Mengel". The signature is written in a cursive style with a large, looping initial "D".

Denny Mengel  
Environmental Scientist

Encl: ESD Map

c: Michael May, IDEQ



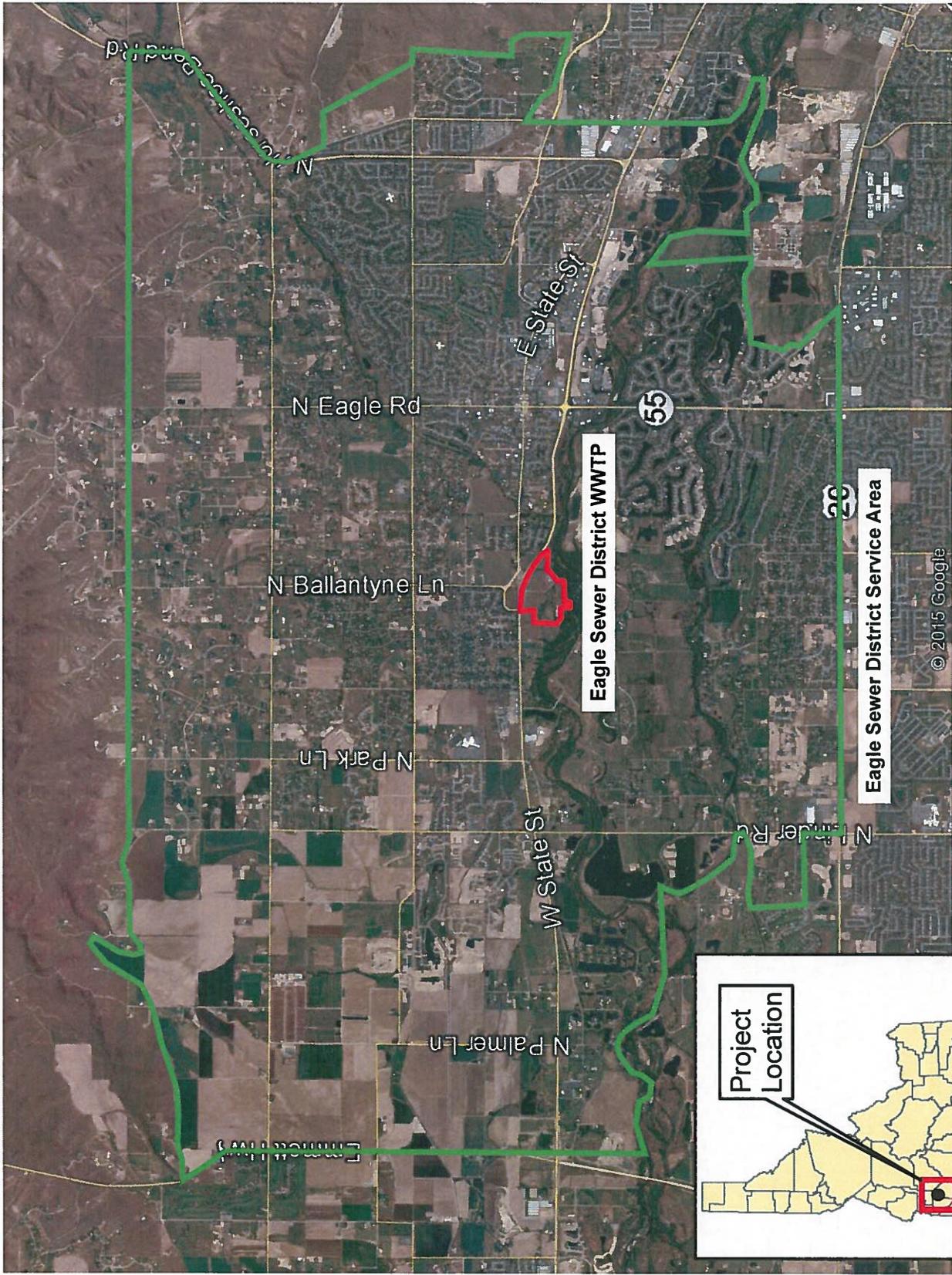


Figure 1. Project Vicinity, Eagle Sewer District Service Area, and Area of Potential Effect







C.L. "Butch" Otter  
Governor of Idaho

March 30, 2016

Janet Gallimore  
Executive Director

Denny Mengel  
Environmental Scientist  
CH2M  
322 E. Front Street  
Suite 200  
Boise, ID 83702

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

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

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

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

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

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

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

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

RE: Eagle Sewer District Wastewater Improvements (Idaho SHPO REV 2016-552)

Dear Mr. Mengel,

Thank You for your informational letter and project materials regarding the proposed improvements to the Eagle Sewer District Wastewater Facility. We understand that you are soliciting comments from our office on behalf of the Eagle Sewer District in anticipation of receipt of federal funding through the Drinking Water State Revolving Loan Fund. This triggers compliance with Section 106 of the National Historic Preservation Act (36CFR800) which requires consultation with our office.

We have reviewed the proposed undertaking and believe components of it may the potential to effect *historic properties* (36CFR800.4)

The National Register Eligible Oregon Trail's alignment (10AA121/IHSI# 01-2627) is known to have crossed through the general area of the treatment plant. While there is very little potential for any intact cultural material on the surface due to modern disturbances we believe there may be potential for subsurface deposits. These deposits could be adversely affected during any ground disturbing activity that extends below modern disturbances. In particular we have concerns about the excavation of the new treatment lagoons as well as any newly installed ancillary subsurface delivery systems.

We believe the value of a professional study of the area of potential effect is limited due to a very low potential for any intact surficial cultural material. In addition, having a professional archaeology monitor excavation is likely not warranted due to the relative small scope of the undertaking and the poorly documented location of the Oregon Trail. Therefore we recommend that the undertaking will have no adverse effect to historic properties if the following conditions are met (36CFR800.4):

1. An unanticipated discovery plan/protocol will be developed by a professional archaeologist and agreed upon by our office prior to any significant ground disturbing activity.
2. A professional archaeologist will be retained to provide a training session for any construction mangers and or relevant staff that will be participating in significant ground disturbing activities/excavation. The training session will go over the inadvertent discovery plan, explain the legal protections



provided to significant cultural materials, and provide training in the identification and protection of significant cultural material.

We appreciate your consulting with our office and look forward to further consultation. A list of qualified archaeological professionals can be found on Preservation Idaho's website: <http://www.preservationidaho.org/resources/cultural-resources-consultants>.

If you have any questions feel free to contact me at 208-334-3847 x107 or [ethan.morton@ishs.idaho.gov](mailto:ethan.morton@ishs.idaho.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Ethan Morton", with a long horizontal flourish extending to the right.

Ethan Morton, State Historic Preservation Office

cc Michael May, IDEQ



STATE OF IDAHO  
DEPARTMENT OF  
ENVIRONMENTAL QUALITY

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

C.L. "Butch" Otter, Governor  
John H. Tippetts, Director

November 18, 2015

Certified Mail No: 7013 1710 0000 9751 7238

Kenton Dick  
Cultural Resource Program Manager  
Burns-Paiute General Council  
— HC-71, 100 Pasigo Street  
Burns, Oregon 97920-9303

RE: Eagle Sewer District Wastewater Improvements – Request for Comments for Preparation of an Environmental Information Document

Dear Mr. Dick:

The Eagle Sewer District (ESD) is preparing a facility planning document to identify and make necessary improvements to its wastewater system that are cost effective and environmentally sound. Construction of the proposed project may be financed in whole or in part by federal funds through a loan from the Department of Environmental Quality (DEQ) State Revolving Fund (SRF), which requires compliance with the Rules for Administration of Water Pollution Control Loans (IDAPA 58.01.12.) The purpose of this letter is to request your review and response regarding any historic and cultural resource impacts that the Shoshone-Bannock Tribe may identify for this proposed project pursuant to the Idaho Department of Environmental Quality's State Environmental Review Process, which mirrors the National Environmental Policy Act.



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**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Kenton Dick  
Cultural Resource Program Manager  
Burns-Paiute General Council  
— HC-71, 100 Pasigo Street  
Burns, Oregon 97920-9303

2. Article Number  
(Transfer from service label)

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature  
X *Kurtin Seavey*  Agent  Addressee

B. Received by (Printed Name) C. Date of Delivery  
11-23-15

D. Is delivery address different from item 1?  Yes  No  
If YES, enter delivery address below:

NO MORE HC-71

3. Service Type  
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 Registered  Return Receipt for Merchandise  
 Insured Mail  C.O.D.

4. Restricted Delivery? (Extra Fee)  Yes

7013 1710 0000 9751 7238



STATE OF IDAHO  
DEPARTMENT OF  
ENVIRONMENTAL QUALITY

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www.deq.idaho.gov

C.L. "Butch" Otter, Governor  
John H. Tippetts, Director

November 18, 2015

Certified Mail No.: 7013 1710 0000 9751 7719

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

RE: Eagle Sewer District Wastewater Improvements – Request for Comments for Preparation of an Environmental Information Document

Dear Ms. Boyer-Smith:

The Eagle Sewer District (ESD) is preparing a facility planning document to identify and make necessary improvements to its wastewater system that are cost effective and environmentally sound. Construction of the proposed project may be financed in whole or in part by federal funds through a loan from the Department of Environmental Quality (DEQ) State Revolving Fund (SRF), which requires compliance with the Rules for Administration of Water Pollution Control Loans (IDAPA 58.01.12.) The purpose of this letter is to request your review and response regarding any historic and cultural resource impacts that the Shoshone-Bannock Tribe may identify for this proposed project pursuant to the Idaho Department of Environmental Quality's State Environmental Review Process.



The project is in phase 1 of the wastewater treatment plant with 2020 a row of Boise Boise application

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

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

2. Article Number  
(Transfer from service label)

PS Form 3811, February 2004

COMPLETE THIS SECTION ON DELIVERY

A. Signature  Certified Mail  Express Mail  
 Registered  Return Receipt for Merchandise  
 Insured Mail  C.O.D.

B. Received by (Printed Name) C. Date of Delivery  
Carolyn Boyer-Smith 11/23/15

D. Is delivery address different from item 1?  Yes  
If YES, enter delivery address below:  No

3. Service Type  
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 Registered  Return Receipt for Merchandise  
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4. Restricted Delivery? (Extra Fee)  Yes

7013 1710 0000 9751 7719

Domestic Return Receipt

102595-02-M-1540

PS Form 3800, August 2006

See Reverse for Instructions



STATE OF IDAHO  
DEPARTMENT OF  
ENVIRONMENTAL QUALITY

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

C.L. "Butch" Otter, Governor  
John H. Tippetts, Director

November 18, 2015

Certified Mail No.: 7013 1710 0000 9751 7702

Ted Howard  
Shoshone-Paiute Tribe  
P.O. Box 219  
Owyhee, Nevada 89832

RE: Eagle Sewer District Wastewater Improvements – Request for Comments for Preparation of an Environmental Information Document

Dear Mr. Howard:

The Eagle Sewer District (ESD) is preparing a facility planning document to identify and make necessary improvements to its wastewater system that are cost effective and environmentally sound. Construction of the proposed project may be financed in whole or in part by federal funds through a loan from the Department of Environmental Quality (DEQ) State Revolving Fund (SRF), which requires compliance with the Rules for Administration of Water Pollution Control Loans (IDAPA 58.01.12.) The purpose of this letter is to request your review and response regarding any historic and cultural resource impacts that the Shoshone-Paiute Tribe may identify for this proposed project pursuant to the Idaho Department of Environmental Quality's State Environmental Review Process, which mirrors the National Environmental Policy Act.



The proposed wastewater improvements are expected to be completed in phases.

**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Ted Howard  
Shoshone-Paiute Tribe  
P.O. Box 219  
Owyhee, Nevada 89832

2. Article Number  
(Transfer from service label)  
PS Form 3811, February 2004

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature  
X [Signature]

B. Received by (Printed Name)  
Alice Gurnett

C. Date of Delivery  
11/24/15

D. Is delivery address different from item 1?  Yes  
If YES, enter delivery address below:  No

3. Service Type  
 Certified Mail     Express Mail  
 Registered     Return Receipt for Merchandise  
 Insured Mail     C.O.D.

4. Restricted Delivery? (Extra Fee)  Yes

7013 1710 0000 9751 7702



Appendix C

## USFWS Threatened and Endangered Species List

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**From:** Michael.May@deq.idaho.gov  
**To:** [Jenkins, Neil/BOI](#)  
**Cc:** [Aimee.Hill@deq.idaho.gov](#); [MaryAnna.Peavey@deq.idaho.gov](#)  
**Subject:** ESA/EFH Memo update - Eagle SD - 19 Dec 2016 [EXTERNAL]  
**Date:** Monday, December 19, 2016 5:24:08 PM  
**Attachments:** [Updated Species List - Eagle SD - 19 Dec 2016.tr5](#)  
[Threatened, Endangered and Candidate Species and EFH Determination - Eagle SD - 21 June 2016.tr5](#)

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-----< Attachments >-----

Title : Updated Species List - Eagle SD - 19 Dec 2016  
Title : Threatened, Endangered and Candidate Species and EFH Determination - Eagle SD - 21 June 2016

Neil,

The official endangered species list for the Eagle Sewer District project has expired. This email provides a formal update to our June 21, 2016 *Threatened, Endangered and Candidate Species and EFH determination* memo, a copy of which is attached, along with a new official species list, obtained today from the US Fish & Wildlife *Information for Planning and Conservation* (IPaC) web site.

The project scope and the Official Species List are unchanged. Therefore, the determination in the June 21, 2016 memo stands. Please attach a copy of this email and the accompanying species list to the copy of the memo in your Environmental Information Document (EID).

### **Summary of Determination**

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 endangered, threatened, proposed or candidate species or critical habitat .
- The proposed project will have **NO EFFECT** on Essential Fish Habitat.
- Migratory birds, including bald eagles, could potentially be affected by project activities. You may wish to contact USF&WS or Idaho Department of Fish and Game to ensure project activities do not impact migratory birds or bald eagles.

**Mike May**  
Sr. Water Quality Specialist  
Idaho Department of Environmental Quality  
1410 North Hilton  
Boise, Idaho 83706  
(208) 373-0406

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## MEMO

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**TO:** Denny Mengel, CH2M Hill ([robertr@aquang.com](mailto:robertr@aquang.com))

**FROM:** Mike May, DEQ Grant and Loan Program

**SUBJECT:** Eagle Sewer District Wastewater Improvements  
Threatened/Endangered Species and Essential Fish Habitat Determination

**DATE:** June 21, 2016

---

The February 2016 *Wastewater Collection and Treatment Facilities Plan* for the Eagle (Idaho) Sewer District identified the following construction projects over the 20-year planning period, and their approximate implementation schedule:

- Installation of aerators in existing lagoons (2017);
- Construction of an additional aerated lagoon treatment train with ancillary pumps and valves, adjacent to the existing treatment train (2018-20);
- Ongoing maintenance to existing collection lines;
- Upgrade effluent pump station (~2034); and
- Additional pipeline to West Boise wastewater treatment plant (WWTP)(~2027).

This *Threatened/Endangered Species and Essential Fish Habitat* determination memorandum examines the potential effects for the near-term projects on threatened and endangered species and essential fish habitat. The additional pipeline to the West Boise wastewater treatment plant is more than a decade in the future, and is outside the scope of this review.

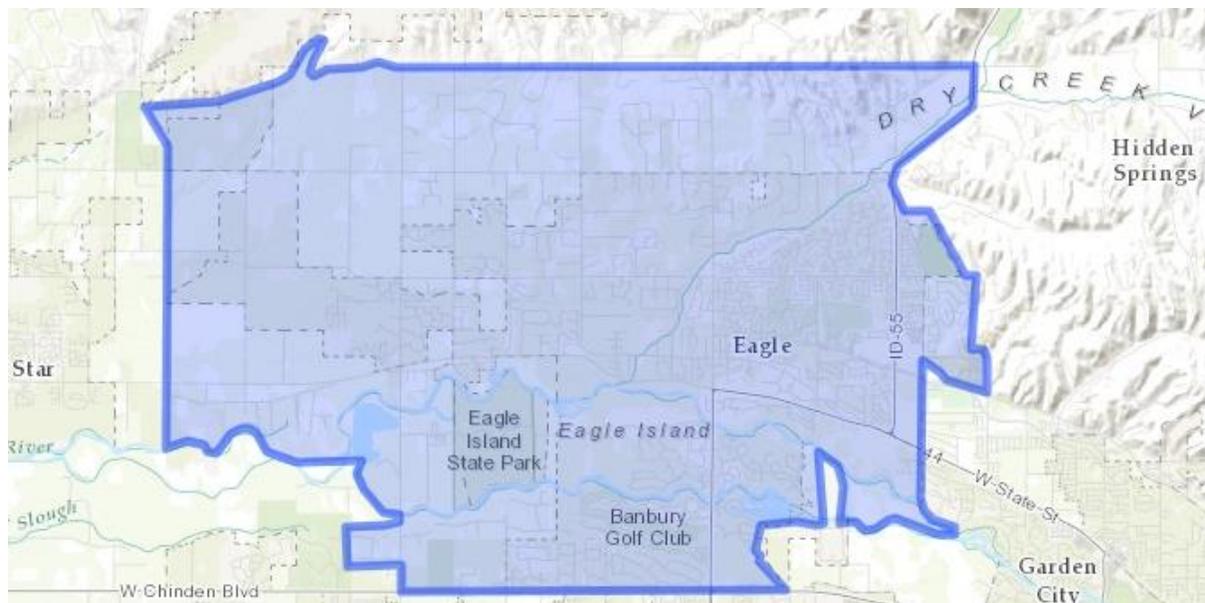


Figure 1. Proposed Project Planning Area<sup>1</sup>

## 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 endangered, threatened, proposed or candidate species or critical habitat .
- The proposed project will have **NO EFFECT** on Essential Fish Habitat.
- Migratory birds, including bald eagles, could potentially be affected by project activities. You may wish to contact USF&WS or Idaho Department of Fish and Game to ensure project activities do not impact migratory birds or bald eagles.

## USF&WS THREATENED, ENDANGERED AND CANDIDATE SPECIES

An official threatened and endangered species list<sup>2</sup> was obtained from the U.S. Fish and Wildlife Service's (USF&WS) Information for Planning and Conservation (IPaC) system on June 21, 2016. The project area identified for this list is the entire service area of the Eagle Sewer District, shown in Figure 1 below.

The following species was listed as “proposed endangered” and under the jurisdiction of USF&WS within the project area:

1. **Slickspot peppergrass** (*Lepidium papilliferum*) – Slickspot peppergrass occupies small-scale depressions in sodic/saline soils overlying clay layers (“slickspots”) within the sagebrush steppe of the Snake River Plains.<sup>3</sup> The WWTP project area is on alluvial and lacustrine soils<sup>4</sup> adjacent to the Boise River, consisting of both deciduous woodlands and open space. No slickspots are expected in this area, nor are they visible on aerial photos, such as Fig.2. There may have historically been some slickspots in the upland areas that are now urbanized. Collection line maintenance will all be within existing paved roadways, which do not contain Slickspot habitats. Therefore, **the proposed project will have NO EFFECT on Slickspot peppergrass.**

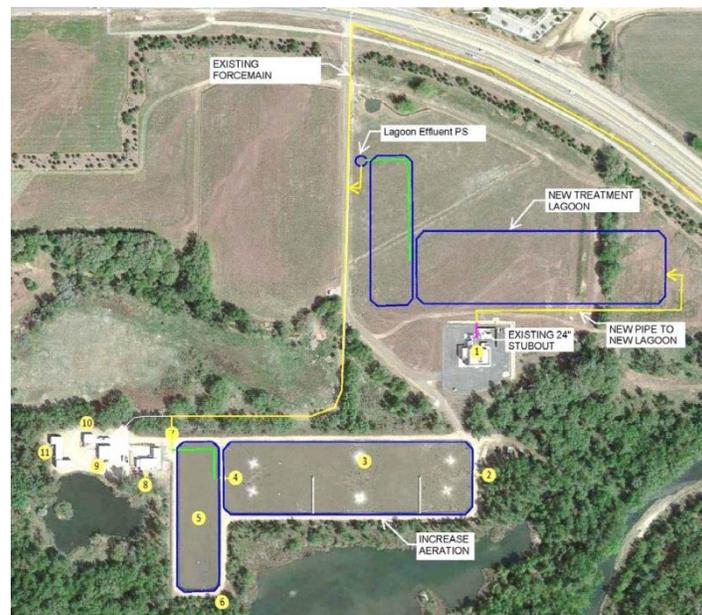


Figure 2. Wastewater Treatment Plant proposed improvements<sup>5</sup>

## Critical Habitat

The USF&WS did not identify any critical habitat within Ada County, except for that of Slickspot peppergrass (see above). Therefore, **the project will have NO EFFECT on critical habitat.**

## Migratory Birds and Bald Eagles

Under authority of the Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703-712), it is unlawful to take, kill, or possess migratory birds, their parts, nests, or eggs. "Take" is defined as any attempt or success at pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting. Migratory Bird Permits must be obtained through the United States Fish and Wildlife Service (USFWS) Migratory Bird Permit Office for any unavoidable violation of the MBTA.

Bald eagles are afforded protection under two separate Acts of Congress. In addition to the MBTA, the Eagle Protection Act (16 U.S.C. 668) provides specific protection for bald and golden eagles. The act makes it illegal to take, possess, sell, purchase, barter, or transport any bald or golden eagle, alive or dead, or any part, nest, or egg thereof. "Take" includes pursuing, shooting, shooting at, poisoning, wounding, killing, capturing, trapping, collecting, molesting, or disturbing.

USFWS is responsible for implementing the MBTA of 1918 and Bald and Golden Eagle Protection Act of 1940. You may wish to contact USFWS at (208) 378-5256 or your local Idaho Department of Fish and Game office at (208) 465-8465 to ensure project activities do not impact migratory birds protected under the MBTA or bald eagles protected under the Bald and Golden Eagle Protection Act.

## NOAA ESSENTIAL FISH HABITAT

Oceangoing fish are blocked from the upper reaches of the Snake River watershed by dams in Hells Canyon. The City of Eagle is outside the range of Fish Habitat (EFH), as shown on the attached map. **Therefore, the project will have NO EFFECT on Essential Fish Habitat.**

## MLM

Attachments: Idaho Species List, last downloaded June 21, 2016  
DEQ, Chinook Salmon Essential Fish Habitat in Idaho (map)

## References

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<sup>1</sup> Shape file provided by CH2M Hill.

<sup>2</sup> USF&WS, *Information for Planning and Conservation*, <http://ecos.fws.gov/ipac/>, last downloaded June 16, 2016.

<sup>3</sup> Natural Resources Conservation Service, *Plant Guide: Slickspot Peppergrass *Lepidium papilliferum**, [http://plants.usda.gov/plantguide/pdf/pg\\_lepa17.pdf](http://plants.usda.gov/plantguide/pdf/pg_lepa17.pdf), accessed December 2009.

<sup>4</sup> Soil Conservation Service, *Soil Survey of Ada County, Idaho*, May 1980

<sup>5</sup> CH2M Hill, *Draft Environmental Information Document, Eagle Sewer District, Facility Plan Update*, Fig.2, May 2016.



# United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Idaho Fish and Wildlife Office  
1387 SOUTH VINNELL WAY, SUITE 368  
BOISE, ID 83709  
PHONE: (208)378-5243 FAX: (208)378-5262

Consultation Code: 01EIFW00-2016-SLI-0131

December 19, 2016

Event Code: 01EIFW00-2017-E-00315

Project Name: Eagle Sewer District - WWTP Upgrades

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

## To Whom It May Concern:

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

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

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

A Biological Assessment is required for construction projects (or other undertakings having

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

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

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

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

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

Please note: The IPaC module for producing a list of proposed and designated critical habitat is currently incomplete. At this time, we ask that you use the information given below to determine whether your action area falls within a county containing proposed/designated critical habitat for a specific species. If you find that your action falls within a listed county, use the associated links for that species to determine if your action area actually overlaps with the proposed or designated critical habitat.

**Canada Lynx (*Lynx canadensis*) - Designated February 24, 2009.**  
Counties: Boundary County.

Federal Register Notice:

<http://www.gpo.gov/fdsys/pkg/FR-2009-02-25/pdf/E9-3512.pdf#page=1>

Printable Maps:

[http://www.fws.gov/mountain-prairie/species/mammals/lynx/criticalhabitat\\_files/20081222\\_fedre](http://www.fws.gov/mountain-prairie/species/mammals/lynx/criticalhabitat_files/20081222_fedre)

GIS Data: [http://criticalhabitat.fws.gov/docs/crithab/zip/lynx\\_ch.zip](http://criticalhabitat.fws.gov/docs/crithab/zip/lynx_ch.zip)

KML for Google Earth: (None Currently Available)

**Selkirk Mountains Woodland Caribou (*Rangifer tarandus Caribou*) - Proposed November 30, 2011.**

Counties: Bonner and Boundary Counties.

Federal Register Notice: <http://www.fws.gov/idaho/home/2011-30451FINALR.pdf>

Printable Maps: [http://www.fws.gov/idaho/home/Map1\\_sub1\\_150.pdf](http://www.fws.gov/idaho/home/Map1_sub1_150.pdf)

GIS Data: (None Currently Available)

KML for Google Earth: (None Currently Available)

**Bull Trout (*Salvelinus confluentus*) - Designated September 30, 2010.**

Counties: Adams, Benewah, Blaine, Boise, Bonner, Boundary, Butte, Camas, Clearwater, Custer, Elmore, Gem, Idaho, Kootenai, Lemhi, Lewis, Nez Perce, Owyhee, Shoshone, Valley, and Washington Counties.

Federal Register Notice:

<http://www.gpo.gov/fdsys/pkg/FR-2010-10-18/pdf/2010-25028.pdf#page=2>

Printable Maps: [http://www.fws.gov/pacific/bulltrout/CH2010\\_Maps.cfm#CHMaps](http://www.fws.gov/pacific/bulltrout/CH2010_Maps.cfm#CHMaps)

GIS Data: <http://criticalhabitat.fws.gov/docs/crithab/zip/bulltrout.zip>

KML for Google Earth:

[http://www.fws.gov/pacific/bulltrout/finalcrithab/BT\\_FCH\\_2010\\_KML.zip](http://www.fws.gov/pacific/bulltrout/finalcrithab/BT_FCH_2010_KML.zip)

**Kootenai River White Sturgeon (*Acipenser transmontanus*) - Designated July 9, 2008.**

Counties: Boundary County.

Federal Register Notice:

<http://www.gpo.gov/fdsys/pkg/FR-2008-07-09/pdf/E8-15134.pdf#page=1>

Printable Maps: (None Currently Available)

GIS Data: [http://criticalhabitat.fws.gov/docs/crithab/zip/fch\\_73fr39506\\_acit\\_2009.zip](http://criticalhabitat.fws.gov/docs/crithab/zip/fch_73fr39506_acit_2009.zip)

KML for Google Earth: (None Currently Available)

**Slickspot Peppergrass (*Lepidium papilliferum*) - Proposed May 10, 2011. Counties: Ada, Canyon, Elmore, Gem, Owyhee, and Payette Counties.**

Federal Register Notice: <http://www.gpo.gov/fdsys/pkg/FR-2011-10-26/pdf/2011-27727.pdf>

Printable Maps: <http://www.fws.gov/idaho/Lepidium.html>

GIS Data: (None Currently Available)

KML for Google Earth: (None Currently Available)

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

Attachment



United States Department of Interior  
Fish and Wildlife Service

Project name: Eagle Sewer District - WWTP Upgrades

## Official Species List

### Provided by:

Idaho Fish and Wildlife Office  
1387 SOUTH VINNELL WAY, SUITE 368  
BOISE, ID 83709  
(208) 378-5243

**Consultation Code:** 01EIFW00-2016-SLI-0131

**Event Code:** 01EIFW00-2017-E-00315

**Project Type:** WASTEWATER FACILITY

**Project Name:** Eagle Sewer District - WWTP Upgrades

**Project Description:** Installation of aerators in existing lagoons;

Construction of additional aerated lagoon treatment train with ancillary pump and valves, expected to be built in 2020, but possibly as early as 2018

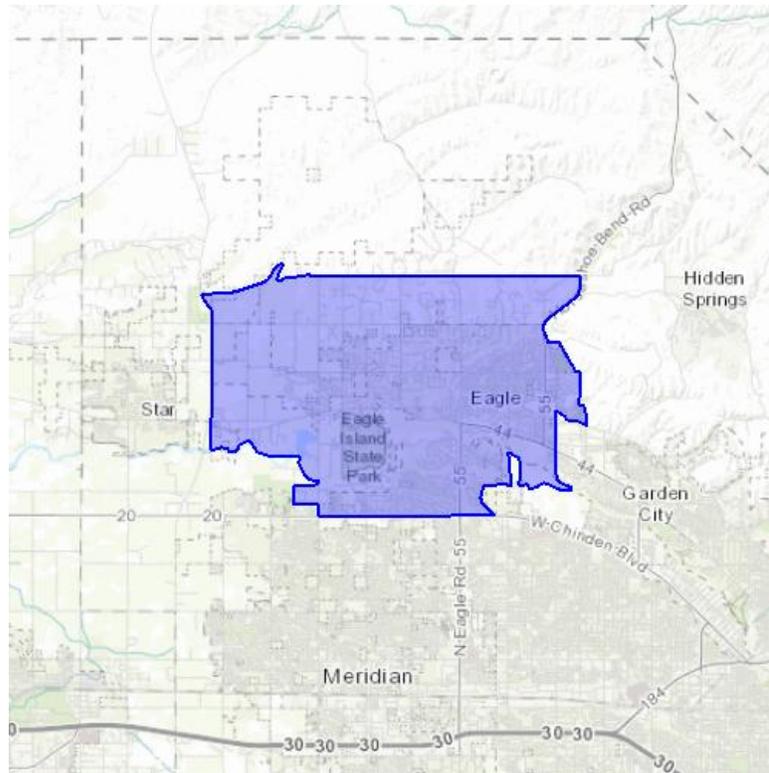
**Please Note:** The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.



United States Department of Interior  
Fish and Wildlife Service

Project name: Eagle Sewer District - WWTP Upgrades

### Project Location Map:



**Project Coordinates:** The coordinates are too numerous to display here.

**Project Counties:** Ada, ID



United States Department of Interior  
Fish and Wildlife Service

Project name: Eagle Sewer District - WWTP Upgrades

## Endangered Species Act Species List

There are a total of 1 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Flowering Plants	Status	Has Critical Habitat	Condition(s)
Slickspot peppergrass ( <i>Lepidium papilliferum</i> )	Threatened	Proposed	



United States Department of Interior  
Fish and Wildlife Service

Project name: Eagle Sewer District - WWTP Upgrades

## Critical habitats that lie within your project area

The following critical habitats lie fully or partially within your project area.

Flowering Plants	Critical Habitat Type
Slickspot peppergrass ( <i>Lepidium papilliferum</i> )	Proposed

# Salmon Essential Fish Habitat (EFH) in Idaho

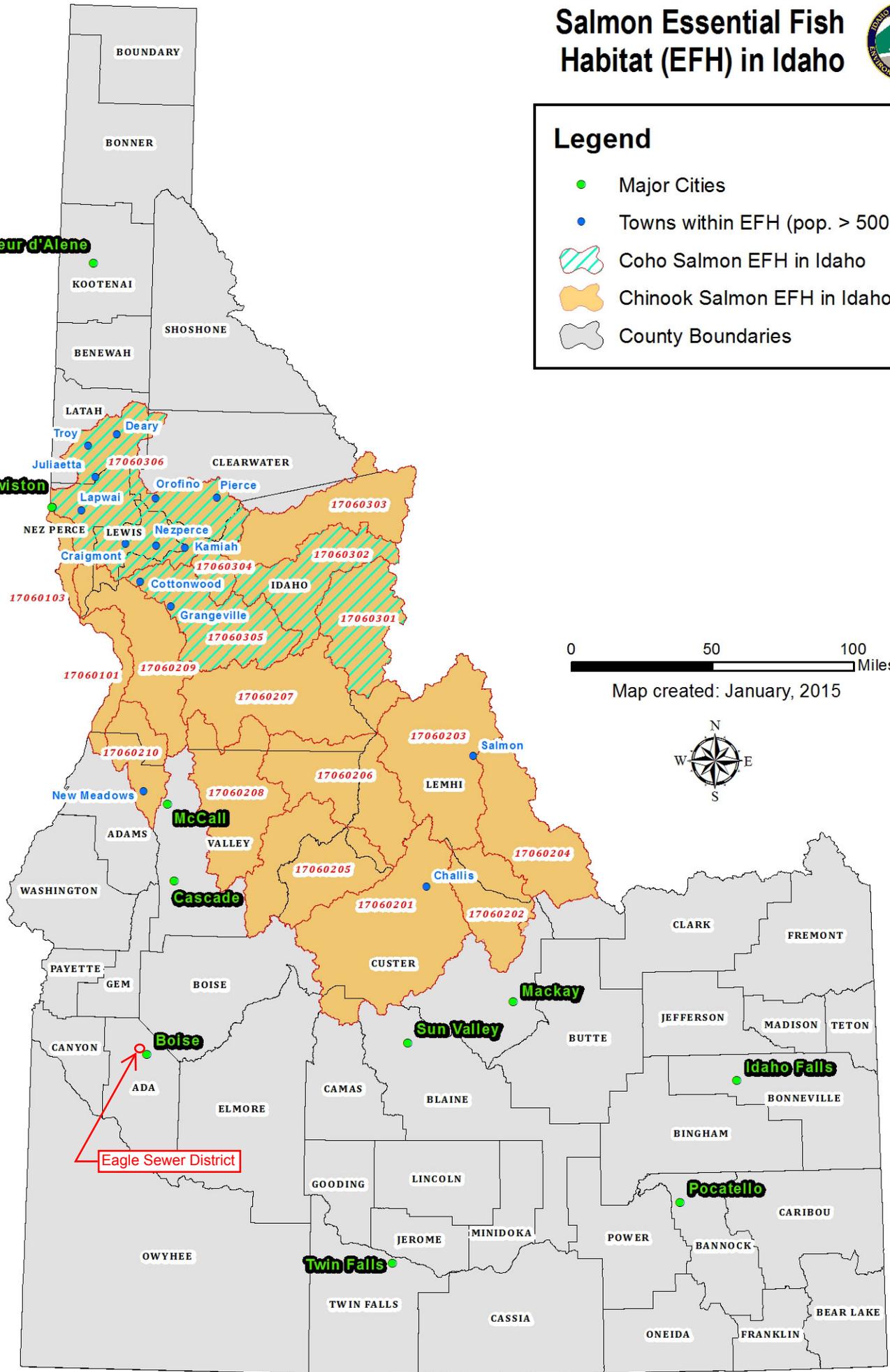


## Legend

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

**Coeur d'Alene**

**Lewiston**



0 50 100 Miles

Map created: January, 2015



Eagle Sewer District

**Boise**

**McCall**

**Cascade**

**Sun Valley**

**Mackay**

**Idaho Falls**

**Pocatello**

**Twin Falls**