I. Introduction and Background Information

The U.S. Army Corps of Engineers, Walla Walla District, (Corps) proposes (for a second time) to assist the city of Firth (Firth) with its Wastewater System Improvements Project under the authority of Section 595 of the Water Resources Development Act (WRDA) of 1999, as amended. Firth first approached the Corps in April 2018 after they received a Notice of Continuing Noncompliance from the Environmental Protection Agency noting over 523 violations of the Clean Water Act. The City then utilized Idaho Department of Environmental Quality (IDEQ) funding to pay for a Technical Memorandum (TM) (Fosgren Associates Inc. 2017) which identified approximately 3.6 Million worth of needed wastewater improvements.

The first time that the Corps assisted Firth under the Section 595 authority was in 2018. Firth had previously hired Schiess and Associates to complete an Engineering Information Document (EID) that evaluated five alternatives to improve wastewater treatment and disposal and two alternatives for collection system improvements. Due to the federal action of funding a portion of their wastewater improvement project and in compliance with the National Environmental Policy Act (NEPA), the EID and the TM were reviewed and accepted by the Corps and determined to contain accurate information and meet the environmental compliance requirements of NEPA. The documents were, therefore, incorporated (in entirety) in the Corps' Finding of No Significant Impact (FONSI) that was signed in April 2019 (PPL-C-2019-0012) for implementation of the proposed action alternative of mechanical treatment with advanced treatment and continued discharge into the Snake River.

However, since that time, it became evident that Firth needed to increase the capacity of their wastewater treatment plant enough to handle wastewater from the neighboring city of Basalt, because the amount of overflow wastewater they receive from Basalt is more than previously estimated (see Section 1.5 for more details).

The addition of equalization basins to allow Basalt to continue periodic high-volume discharge to Firth were previously considered, but ruled out due to the high cost associated with lining the existing lagoon to create equalization basins and because the funding agency (U.S. Department of Agriculture Rural Development (USDA RD)) suggested there was a low likelihood that equalization basins would be needed or used and therefore declined financial support for this project component. As a result, the
addition of equalization was not included in the EID and the TM did not conduct an environmental analysis on environmental resources impact determinations.

It was decided, that instead of constructing equalization basins, the cost of additional treatment could be eliminated with an agreement between Firth and Basalt (collectively referred to as the cities) requiring flow to be discharged over the entire year at a much lower rate. An evaluation conducted in 2018 for the Firth Wastewater Treatment Plant (Fosgren Associates Inc. 2018), stated that an agreement between the cities would be established that required Basalt to limit their average daily flows (ADF) to 0.02 mill gallons per day (MGD). However, a flow meter that was installed when Basalt replaced the deteriorating collection lines in 2019 showed that Basalt was already exceeding an ADF of 0.02 MGD.

The current proposed action of the new treatment plant sizing needs to consider the potential for 100 percent of Basalt’s wastewater, routed, diverted, and flowing to the treatment plant during times when the Basalt lagoons are full. For their proposed action, Firth considered two new alternatives: 1) increase the size of the wastewater treatment plant to accommodate all flows or 2) construct the equalization basins that were previously considered but rejected.

II. Purpose and Need

The purpose of the Corps project is to assist Firth with upgrading their wastewater system by providing funding to create a new treatment plant capable of handling 100 percent of the City of Basalt’s (Basalt) flow during times when the Basalt lagoons are full. The Corps project is needed because the current wastewater system is aging and not in compliance with the National Pollutant Discharge Elimination System (NPDES) permit issued by U.S. Environmental Protection Agency (EPA) and is too small to handle the expected wastewater flow from Firth and Basalt combined.

III. Project Alternatives

The Environmental Assessment (EA) evaluated three alternatives to improve treatment and disposal. These include: (1) No Change to Current Practice (No Action) - Basalt Control the Flow, (2) Upsize all Components of the Treatment Plant, and (3) Treatment Plant Upgrades with the Addition of Equalization Basins.

Treatment and Disposal Alternatives:

Alternative 1: No Action. This is the option that was agreed upon for the original design of the Firth treatment plant. Construction began on this alternative in June 2020. The No Action Alternative proposes a secondary treatment method that would consist of an IFFAS mechanical treatment system to complete the biological breakdown of suspended organic solids. This would be accomplished within the footprint of the existing Firth WWTP. This plan includes phosphorus removal as it may not be able to meet permit limits in the future due to growth or during the times of the year when Basalt requires treatment of their sewage. Discharge to the Snake River would
continue under the current NPDES permit. Disinfection with chlorine or ultraviolet (UV) light would still occur prior to discharge.

Additionally, 56 percent of the collection system was recommended for replacement. The pipes identified for replacement are concrete pipes. A combination of open-cut replacement and pipe bursting would be used. There are also many point repairs that are recommended on pipes not warranting replacement at this time. The combination of replacement and point repairs would ensure safe and effective sewage collection.

The No Action Alternative would require Basalt to limit their discharge to 0.02 ADF because this was a typical amount they had been discharging to Firth. In this option there would be a control structure put in place in order to limit the flows coming from Basalt to the Firth treatment plant. Since the current configuration only allows Basalt to flow to Firth or to the Basalt lagoons, the control structure that was planned would be an automatic valve and a flow meter. Once the flow meter reached 0.02 ADF, the automatic valve would change the direction of flow to the Basalt lagoons instead of Firth treatment.

**Alternative 2: Increase the size of the wastewater treatment plant.** This alternative allows for the current design of the mechanical treatment plant as described in the No Action Alternative, but with major equipment components upsized in order to facilitate the new design flows. The major equipment components to upsize include mechanical screen/grit, STM-Aerotor™, water clarifiers, UV disinfection system, and pumps. The STM-Aerotor™ Biological Nutrient Removal (BNR) System uses IFFAS technology as part of a process that provides biological nutrient removal for municipal and industrial wastewater treatment.

**Alternative 3: Treatment Plant Upgrades with the Addition of Equalization Basins (Proposed Action).** Under the Proposed Action Alternative, Firth would construct equalization basins, leaving the remainder of the original project as it was planned and stated under the No Action Alternative. Influent from the plant headworks would be processed through a fine screen in the headworks treatment building. Screening is a vital element of the treatment process and is required to prevent inert solids build up in the treatment process. Influent from the plant headworks would be processed through an aerated grit tank that is integral to the screen. Grit removal is important in the treatment process to prevent unnecessary wear on pumps and equipment due to grit in the wastewater. The design would include one automatic screen and one 1-inch manual bar screen in a bypass channel.

The IFFAS process would utilize a combination of fixed film and suspended bacteria to perform secondary treatment. Although there are a variety of IFFAS processes, the configuration that would be installed uses rotors that provide mixing, aeration, and provides a surface for fixed film growth. The IFFAS system includes a large surface area for fixed film on the interior and exterior of the polypropylene discs. The fixed film
increases the “effective” sludge age, which improves sludge settling. Approximately 15 to 25 percent of the total treatment is provided by the fixed film organisms.

The equalization basins would be sized to handle all of Basalt’s flows for 77 days, which is the duration of time that Basalt sent flows to Firth in 2019. Two equalization basins are needed to provide consistent flows through the treatment plant. The flow would come out of the headworks and gravity flow to the equalization basins. The equalization basins would be designed to provide consistent influent flow to the mechanical treatment plant by retaining peak flow occurrences throughout the day and year. Providing consistent flow and loading to a mechanical treatment plant is important to maintain optimal treatment and meet NPDES permit limitations.

Additionally, the lagoons would be relined to ensure the wastewater treatment plant (WWTP) would meet the Idaho Wastewater Rules located in Idaho Administrative Procedures Act (IDAPA) 58.01.16 and enable conformance with NPDES discharge limits. The basins would be a partitioned section of the existing Firth lagoon and would include manholes for inlet, intermediate, and outlet structures.

Corps funds under the WRDA Section 595 Program would not be used to complete the entire project, to include all upgrades and improvements identified in the study and TM (Forsgren 2018), and TM Addendum (Forsgren 2019), but would only be used to construct certain project features; specifically the purchase and installation of headworks process equipment and IFFAS equipment, and equalization basin construction.

An Environmental Assessment dated October 2020 (Attachment C) analyzed potential effects on environmental resources for the optimum operation of existing facilities which included alterations of the exiting sewer lagoon such as lining and partitioning. The addition of the equalization basins in the Proposed Action.

IV. Environmental Effects

The EA evaluated the effects of the Proposed Action on the following resources:

- Water Quality
- Aquatic Resources
- Terrestrial Environment
- Threatened and Endangered Species
- Historic and Cultural Resource
- Socioeconomics
- Aesthetics and Visual Resources
- Environmental Justice
- Land Use
- Noise
- Recreation
- Geology and Soils
- Air Quality
The analysis did not identify any significant impacts to the human environment should the Proposed Action be implemented. Short-term negative effects that may occur during project construction include temporary disruption of the wastewater systems, increased noise, increased dust pollution, increased potential for stormwater runoff, and disruption of localized traffic conditions. There would not be long-term or cumulative effects as a result of the Proposed Action. The contractor would be responsible for managing the temporary disruptions of the system and implementing Best Management Practices to reduce negative construction effects.

a. National Environmental Policy Act (NEPA). This Environmental Assessment (EA) was prepared pursuant to regulations implementing NEPA, (42 U.S.C. 4321 et seq.). NEPA provides a commitment that federal agencies consider the environmental effects of their proposed actions prior to implementing those actions. Completion of this EA and signing of a Finding of No Significant Impact (FONSI), if applicable, fulfills the requirements of NEPA. The final, signed FONSI will be posted to the Corps website and available to the public.

b. Endangered Species Act (ESA). The Endangered Species Act (ESA) established a national program for the conservation of threatened and endangered fish, wildlife and plants and the habitat upon which they depend. Section 7(a)(2) of the ESA requires federal agencies to consult with the USFWS and NMFS (the Services), as appropriate, to ensure that their actions are not likely to jeopardize the continued existence of endangered or threatened species or adversely modify or destroy their critical habitats. Section 7(c) of the ESA and the federal regulations on endangered species coordination (50 CFR §402.12) require that federal agencies prepare biological assessments (BA) of the potential effects of major actions on listed species and critical habitat.

There are no threatened or endangered species in the project area under USFWS or NMFS jurisdiction.

c. National Historic Preservation Act (NHPA). The National Historic Preservation Act (NHPA) of 1966 as amended, directs federal agencies to assume responsibility for all cultural resources under their jurisdiction. Section 106 of NHPA requires agencies to consider the potential effects of their actions on properties that are listed, or are eligible for listing, on the National Register of Historic Places (NRHP). The NHPA implementing regulations, 36 Code of Federal Regulations (CFR) Part 800, requires that the federal agency consult with the State Historic Preservation Officer (SHPO), Tribes and interested parties to ensure that all historic properties are adequately identified, evaluated and considered in planning for proposed undertakings.

Firth consulted with the regional Tribes and Idaho State Historic Preservation Office for the initial WWTP construction and did not identify any historic properties of potential religious or cultural significance to Native American tribes.
within the project area. Firth received a letter from the Idaho SHPO on January 3, 2014 concurring with the no potential to affect historic properties determination (Appendix B). No comments were received from the Tribes. The Corps concurs with the SHPO and has determined that the proposed construction of equalization basins would be restricted to the previously approved and constructed lagoon and roads and would have no potential to affect historic properties.

d. **Clean Water Act (CWA).** The Clean Water Act of 1972 establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. Section 401 of the federal Clean Water Act requires that any federal activity that may result in a discharge to waters of the United States must first receive a water quality certification from the state in which the activity will occur. Section 402 requires that construction-related ground disturbing activities greater than one acre with the potential of run-off into a surface water of the U.S. requires the applicant obtain a Construction General Permit from the Idaho Department of Environmental Quality, develop a Stormwater Pollution Prevention Plan, and implement Best Management Practices to control erosion and stormwater runoff throughout construction activities. Section 404 of the Clean Water Act established a program to regulate the discharge of dredged or fill material into waters of the United States.

The proposed action would not disturb more than one acre of ground or result in fill entering waters of the United States and therefore does not require a Section 402 or 404 permit. Any discharge in the Snake River is covered under the current NPDES permit issued to the City of Firth.

e. **Executive Order 11988: Floodplain Management.** This Executive Order outlines the responsibilities of federal agencies in the role of floodplain management. Each agency must evaluate the potential effects of actions on floodplains and avoid undertaking actions that directly or indirectly induce development in the floodplain or adversely affect natural floodplain values.

The proposed action would not change floodplain function or increase floodplain development in the action area

V. Coordination

The Corps distributed this EA and draft FONSI for a 30-day public review and comment period between October 20, 2020 and November 20, 2020. Notification letters went to the following agencies, organizations, and Tribes: Bingham County, Bureau of Land Management, Environmental Protection Agency, Idaho Department of Agriculture, Idaho Department of Commerce, Idaho Department of Environmental Quality, Idaho Department of Fish and Game, Idaho Department of Transportation, Idaho Southeast District Health

VI. Finding

Having reviewed the EA, I find that the actions addressed are substantially the same actions that the Corps is authorized and committed to participate in pursuant to Section 595 of the Water Resources Development Act of 1999 with the City. Further, the EA provide sufficient discussions on the need for the Proposed Action, alternatives to the Proposed Action, the environmental impacts of the Proposed Action and the alternatives, and a listing of agencies and persons consulted. Finally, after an independent review of the EA, the Corps has determined the documents provide both sufficient evidence and analysis to meet its requirements pursuant to NEPA, except as supplemented or explained above.

I have taken into consideration the technical aspects of the Corps Project, best scientific information available, public comments, and the information contained in the EA. Based on this information, I have determined that the proposed Corps Project would not significantly affect the quality of the human environment, and therefore an environmental impact statement is not required. The Corps will proceed to fund the proposed Corps Project under the authority of Section 595 of the Water Resources Development Act of 1999, when funds are made available for that purpose.

RICHARD T. CHILDERS, P.E.  
Lieutenant Colonel, EN  
Commanding

