RECLAMATION
Managing Water in the West

City of Quincy 5-Year Nonagricultural Discharge Authorization

FINDING OF NO SIGNIFICANT IMPACT AND ENVIRONMENTAL ASSESSMENT

Columbia Basin Project, Washington

Pacific Northwest Region

PN FONSI 17-07

PN EA 17-07

U.S. Department of the Interior
Bureau of Reclamation
Columbia-Cascades Area Office
Yakima, Washington

August 2017

MISSION STATEMENTS

U.S. Department of the Interior

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The Department of the Interior protects America's natural resources and heritage, honors our cultures and tribal communities, and supplies the energy to power our future.

Bureau of Reclamation

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

City of Quincy 5-Year Nonagricultural Discharge Authorization

FINDING OF NO SIGNIFICANT IMPACT

U.S. Department of the Interior
Bureau of Reclamation
Columbia-Cascades Area Office

PN FONSI 17-07

1 Introduction

The Bureau of Reclamation has prepared an environmental assessment (EA) analyzing the effects of issuing the City of Quincy (City) in Washington State an authorization to cross Federal lands to discharge nonagricultural treated industrial wastewater into Federal irrigation facilities. The authorization would enable the City to continue the operation and maintenance of a treated nonagricultural wastewater pipeline and outfall structure on rights-of-way owned by the United States. The City would use the pipeline and outfall structure year-round to transport and deliver Class A wastewater from its industrial wastewater treatment plant (Treatment Plant) to Reclamation's Columbia Basin Project (CBP) return flow DW237 Drain.

This action would enable the City to upgrade their existing facilities to a reuse Class A Treatment Plant. When completed, the upgraded Treatment Plant would eliminate nonagricultural discharge to DW237 Drain to achieve conformance with Reclamation policy. The authorization would safeguard CBP conformance with the Clean Water Act (CWA) agricultural exemption.

Alternatives Considered

Alternative 1 – No Action, whereby Reclamation would not issue an authorization to the City to operate and maintain a treated wastewater pipeline and outfall structure in rights-of-way owned by the United States.

Alternative 2 – Proposed Action (Preferred Alternative), whereby Reclamation would issue a 5-year authorization to the City to operate and maintain a treated wastewater pipeline and outfall structure in rights-of-way owned by the United States.

The Recommended Alternative

Reclamation has selected Alternative 2 (Preferred Alternative) to issue a 5-year authorization to the City as the recommended Proposed Action for implementation.

Proposal

Reclamation proposes to issue a 5-year authorization to the City. The project consists of the following:

- Authorization to continue the operation and maintenance of a treated nonagricultural wastewater pipeline and outfall structure on rights-of-way owned by the United States.
- Allow the discharge of Class A wastewater into the DW237.
- The City, in conjunction with Reclamation's 5-year authorization, will maintain their National Pollutant Discharge Elimination System (NPDES) permit and remain in compliance with those limitations.

Finding

Reclamation has reviewed the proposed project in consultation with appropriate staff from the Washington Department of Ecology and Reclamation's Pacific Northwest Regional Office, and laws, regulations, Reclamation policies included in the *Reclamation Manual Directives and Standards,* and found there is no reasonable foundation to deny the authorization. The finding of no significant impact (FONSI) is based on the following:

Endangered Species Act

The Endangered Species Act (ESA) requires Federal agencies to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. No effect to ESA listed species would occur.

Magnuson-Steven Act

The Magnuson-Stevens Act (MSA) is a Federal law that requires heightened consideration of fish habitat in resource management decisions. The MSA defines Essential Fish Habitat (EFH) and requires that Federal agencies consult with NMFS if an agency action may adversely affect EFH. No EFH occurs within the project area.

Indian Trust Assets

Indian Trust Assets (ITAs) are legal interests in property or rights held in trust by the Federal Government for federally recognized Indian Tribes or individual Indians. There are no identified ITAs or Sacred Sites within the Area of Potential Effect.

Indian Sacred Sites

Executive Order 13007, dated May 24, 1996, instructs Federal agencies to promote accommodation of access to and protect the physical integrity of American Indian sacred sites. A "sacred site" is a specific, discrete, and narrowly delineated location on Federal land. Indian Sacred Sites occur within the project area.

Clean Water Act

Reclamation's issuance of an authorization to cross Federal land and discharge nonagricultural treated industrial wastewater into Federal irrigation facilities is unlikely to jeopardize the CWA agricultural exemption because the City's discharge is regulated by Washington State Department of Ecology (Ecology) through a NPDES permit. In accordance with Reclamation Manual Directive and Standards Environmental Management (ENV 06-01), Reclamation evaluated the City's authorization request concurrently with their efforts to obtain the required individual NPDES permit to discharge nonagricultural treated industrial wastewater into Federal irrigation facilities. The issuance of the authorization is unlikely to adversely affect the water quality of the receiving waters.

Hydrology

The City performed an irrigation system capacity investigation and analysis of the affected irrigation system to identify culverts that could potentially be at risk with the additional 5 cubic feet per second (cfs). The investigation and analysis determined that there is adequate capacity in the downstream drainage to accommodate the City's 5 cfs wastewater discharge. No change in water use or delivery would result from implementation of the Proposed Action.

Socioeconomic

Reclamation's proposed 5-year authorization would allow the City to implement the non-discharge goal sustaining and providing infrastructure for continuation and potential improvement of the socioeconomic conditions in the City.

Environmental Justice

With the Proposed Action, the City would continue to provide nonagricultural wastewater services fostering continuance of existing employment and community offerings with no adverse effect on minority and low-income populations or underserved communities.

Cumulative Effects

The Proposed Action would support the City's long-term prosperity giving rise to associated but undefined benefits and detriments inherent to population and economic growth. No past, present, or future related actions were identified that would have direct or indirect cumulative effects resulting from issuance of a 5-year land use authorization by Reclamation to the City.

2 Decision

Based on the environmental analysis as presented in the EA, Reclamation concludes that implementation of the Proposed Action and associated environmental commitments would have no significant impact on the quality of the human environment or the natural resources in the affected environment.

This FONSI has been prepared and submitted to document environmental review and evaluation in compliance with the National Environmental Policy Act of 1969, as amended

Recommended:

Acting For

August 8, 2017

Candace McKinley
Environmental Program Manager
Yakima, Washington

Date

Approved:

(Acting)

9/20/2017

Dawn Wiedmeier
Area Manager, Columbia-Cascades Area Office
Yakima, Washington

Date

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ACRONYMS AND DEFINITIONS

CBP ..... Columbia Basin Project

CFR ..... Code of Federal Regulations

cfs ..... Cubic feet per second

City ..... City of Quincy

CWA..... Clean Water Act

Districts ..... East, Quincy, and South, Columbia Basin Irrigation districts

EA..... Environmental Assessment

Ecology..... Washington State Department of Ecology

E. coli ..... Escherichia coli

EPA ..... U.S. Environmental Protection Agency

FONSI ..... Finding of No-Significant Impact

FSMA ..... Food Safety Modernization Act

Food Processors.... ConAgra Foods Lamb Weston Inc., and Quincy Foods LLC

ITA ..... Indian Trust Assets

mL ..... Milliliter

MGD..... Million Gallons per Day

NEPA ..... National Environmental Policy Act

NPDES ..... National Pollutant Discharge Elimination System

Reclamation..... Bureau of Reclamation

TDS ..... Total Dissolved Solids

TMDL..... Total Maximum Daily

Treatment Plant .... Industrial Wastewater Treatment Plant

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CONTENTS

Figures

Tables

City of Quincy 5-Year Nonagricultural Discharge Authorization

ENVIRONMENTAL ASSESSMENT

U.S. Department of the Interior
Bureau of Reclamation
Columbia-Cascades Area Office

PN EA 17-07

1 Introduction

The Bureau of Reclamation proposes to issue to the City of Quincy (City) an authorization to cross Federal land to discharge nonagricultural treated industrial wastewater into Federal irrigation facilities. The Washington State Department of Ecology (Ecology), Water Quality Program is developing an individual wastewater discharge permit under the National Pollutant Discharge Elimination System (NPDES). Reclamation has initiated evaluation of the City's application for authorization concurrently with the applicant's efforts to maintain the necessary NPDES documentation (Ecology 2017). The City is located within Reclamation's Columbia Basin Project (CBP) in Grant County, central Washington State (Figure 1).

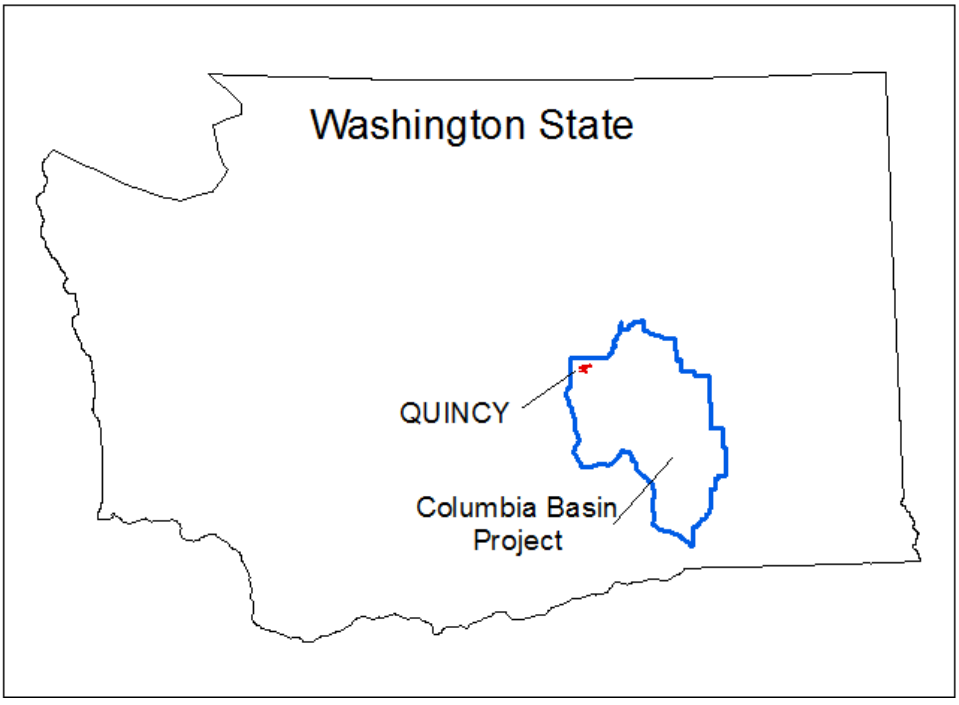

Figure 1. The City of Quincy is located within Reclamation's Columbia Basin Project, Grant County, Central Washington State.

In 1965, Reclamation issued the City a 50-year authorization to cross Federal rights-of-way to discharge industrial wastewater to Reclamation's DW237 Drain, a return flow component of the Columbia Basin Project (CBP).

The 1965 authorization between the City and Reclamation (Contract No. 14-06-100-5302) stipulated the flow and water quality requirements (Reclamation 1965).

The City has experienced industrial growth and is challenged, historically, to provide adequate water treatment services to industrial wastewater customers. The City's current industrial wastewater treatment plant (Treatment Plant) is being upgraded to a reuse Class A Treatment Plant. When completed, the upgraded Treatment Plant would eliminate nonagricultural discharges into the DW237 Drain (Figure 2). Since 2014, Reclamation has participated in monthly technical meetings with Ecology; the City; Brown and Caldwell, the City's consultant; Quincy Food LLC and ConAgra Foods Lamb Weston, Inc. (Food Processors); and the Quincy-Columbia Basin Irrigation District, South Columbia Basin Irrigation District, and the East Columbia Basin Irrigation District (Districts). In September 2015, Reclamation issued the City a 2-year authorization, and Ecology administratively extended the City's NPDES Permit because it had expired, and the City was making good progress in their Treatment Plant upgrades.

Reclamation has discussed discharge elimination with the Districts and the City over the past decade. Between March and June of 2016, Reclamation received letters of concern from the Districts regarding the City's nonagricultural discharge. The Districts have the following main concerns:

- Compromised water quality and impacts on the Food Safety Modernization Act (FSMA) requirements.
- Insufficient legal precedence to protect the Clean Water Act (CWA) agricultural exemption.
- Commingling of nonagricultural discharge with CBP water could possibly jeopardize the CWA agricultural exemption for the Districts.

Reclamation understands the Districts concerns, but believes the City has sufficient protections in place in addition to stringent requirements in the 5-year license that would protect both the District and Reclamation.

Reclamation understands the Districts' concern about commingling nonagricultural discharge with CBP water, which could possibly jeopardize their CWA agricultural exemption; therefore, Reclamation proposes a 5-year authorization concurrent with the City's NPDES Permit issued by Ecology. The proposal is being considered pursuant to Reclamation Manual Directives and Standards (D&S), Environment Management (ENV 06-01), the agency directive for obtaining authorization to allow nonagricultural discharges into Federal facilities.

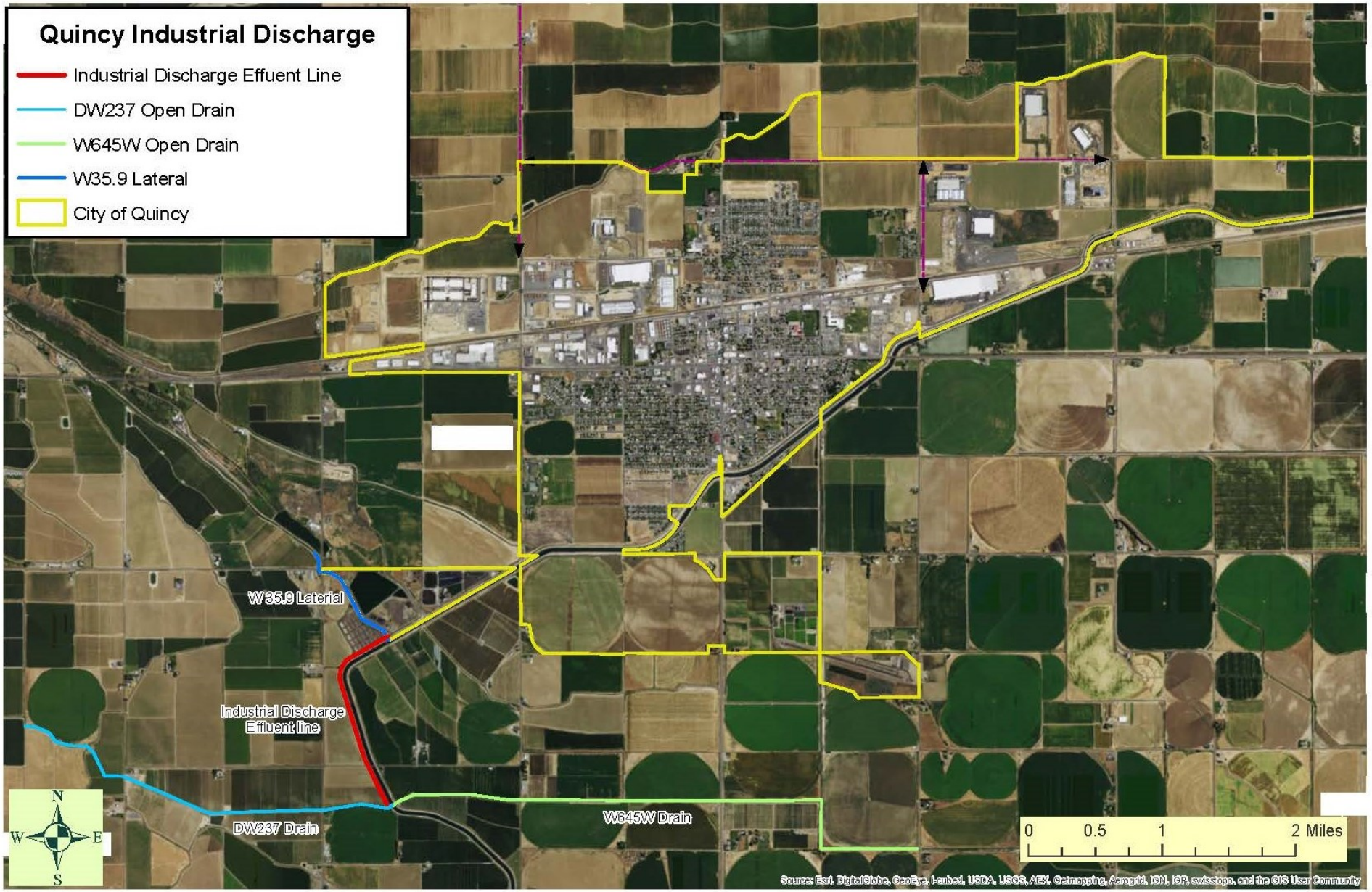

Figure 2. Location of the industrial discharge into Drain DW237 and potentially affected nearby facilities (see Section 5.2).

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1.1 Purpose

The purpose of this action is to determine issuance of a 5-year land use authorization by Reclamation to allow the City to continue the operation and maintenance of a treated nonagricultural wastewater pipeline and outfall structure on rights-of-way owned by the United States. The City would use the pipeline and outfall structure year-round to transport and deliver 5 cfs of wastewater from the Treatment Plant to Reclamation's return flow DW237 Drain in the CBP.

1.2 Need

The need for this proposed action is to comply with the requirements set forth in 43 CFR part 429 and the Reclamation Manual D&S ENV 06-01 in evaluating the City's authorization request concurrently with the City's efforts to obtain the required individual NPDES permit.

1.3 Project Location

The portion of the project that is located on Reclamation rights-of-way consists of an industrial wastewater system and necessary appurtenances upon, over, under, and across the following rights-of-way of the United States in Grant County, Washington (**Fi**gure 2):

- W35.9 – SE¼NW¼ of Sec. 24, T. 20 N., R. 23 E., W. M.
- West Canal –W½ of Sec. 24 & the N½NW¼ of Sec. 25, T. 20 N., R. 23 E., W. M.
- DW237 Drain – NE¼NW¼ of Sec. 25, T. 20 N., R. 23 E., W. M.

The proposed area varies in width and is 5,547.87 feet long, and about 1.28 acres, (Contract No. 15-07-16-L5488, 2-year authorization).

2 Related Laws and Permits

2.1 Authority

The authority for this project is the Reclamation Act of June 17, 1902 (32 Stat. 388; 43 USC §391), and acts amendatory thereof or supplementary thereto, collectively referred to as the Federal Reclamation Laws 43 CFR 429.1.

2.2 Reclamation Manual

Reclamation Manual D&S ENV 06-01 states in part, that where the requirements are determined to be applicable, any action by Reclamation to allow nonagricultural discharges into Reclamation facilities must comply with the requirements for use authorizations that are set forth at 43 CFR part 429 and the *Reclamation Manual D&S.* This authorization would include a provision allowing Reclamation to terminate the use, remove the discharge outfall or authorize removal by the CBP irrigation districts, and recover costs of removal from the City, if it fails to meet the requirements of the NPDES permit.

The NPDES permit or other authorization to discharge in compliance with the CWA is the responsibility of the Washington State Department of Ecology, not Reclamation.

A nonagricultural discharge that meets the general requirements set forth by Ecology must also comply with applicable regional requirements prior to authorization by Reclamation.

Reclamation may authorize the use of its facilities to accept nonagricultural discharges, including those that may become commingled with irrigation return flows or other waters exempt from NPDES permitting requirements, when doing so is not detrimental to the best interests of the United States and any transferred-works operating entities. Reclamation is under no obligation to provide such use authorizations. Reclamation will deny the authorization of any discharge that, in its judgement and sole discretion or for any other reason deemed appropriate by the agency, would jeopardize existing exemptions from NPDES permit requirements associated with the receiving waters (Reclamation 2014).

2.3 National Environmental Policy Act

Reclamation is responsible for determining if the proposed project might have significant effects to the environment under the National Environmental Policy Act of 1969 (NEPA). If Reclamation determines that effects would not be significant, a finding of No Significant Impact (FONSI) will be prepared. A FONSI would allow Reclamation to proceed with the Proposed Action Alternative without preparation of an environmental impact statement.

This environmental assessment (EA) will address the irrigation facilities and infrastructure associated with the City's continued operation and maintenance of the wastewater pipeline and outfall structure located on rights-of-way owned by the United States.

2.4 Endangered Species Act

The Endangered Species Act (ESA) requires Federal agencies to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. Section 7 of the ESA [16 USC Section 1536(a)(2)] requires all Federal agencies to consult with the National Marine Fisheries Service (NMFS) for marine and anadromous species, or the U.S. Fish and Wildlife Services (Service) for freshwater and wildlife species, if an agency is proposing an action that may affect listed species or their designated habitat. If such species may be present, the Federal agency must conduct a biological assessment (BA) for analyzing the potential effects of the project on listed species and critical habitat in order to establish and justify an effect determination. Agencies must use their authorities to conserve listed species and make sure that their actions do not jeopardize the continued existence of listed species. No listed species or critical habitats occur in the project area.

2.5 Magnuson-Steven Act

The Magnuson-Stevens Act (MSA) is a Federal law that requires heightened consideration of fish habitat in resource management decisions. The MSA defines Essential Fish Habitat (EFH) and requires that Federal agencies consult with NMFS if an agency action may adversely affect EFH. No EFH occurs within the project area.

2.6 Indian Trust Assets

Indian Trust Assets (ITAs) are legal interests in property or rights held in trust by the Federal Government for federally recognized Indian Tribes or individual Indians. Trust status originates from rights imparted by treaties, statutes, or Executive Orders. Examples of ITAs include lands, minerals, instream flows, water rights, and hunting and fishing rights. A defining characteristic of an ITA is that an asset cannot be alienated, sold, leased, or used for easement without approval from the United States. The Department of the Interior Departmental Manual, Part 512.2, defines the responsibility for ensuring protection of ITAs to the heads of bureaus and offices (DOI 1995). DOI is required to protect and preserve ITAs from loss, damage, unlawful alienation, waste, and depletion (DOI 2000). It is the responsibility of Reclamation to determine if the proposed project has the potential to affect ITAs. There are no identified ITAs within the area of potential effect.

2.7 Indian Sacred Sites

Executive Order 13007, dated May 24, 1996, instructs Federal agencies to promote accommodation of access and to protect the physical integrity of American Indian sacred sites. A "sacred site" is a specific, discrete, and narrowly delineated location on Federal land. An Indian Tribe or an Indian individual determined to be an appropriately authoritative representative of an Indian religion must identify a site as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion provided the Tribe or authoritative representative has informed the agency of the existence of such a site.

2.8 National Historic Preservation Act

The National Historic Preservation Act (NHPA) of 1966 (16 USC 470, P.L. 95-515) requires that Federal agencies complete inventories and site evaluation actions to identify historic resources that may be eligible to the National Register of Historic Places (National Register), and then ensure those resources "are not inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly." Regulations titled "Protection of Historic Properties" (36 CFR 800) define the process for implementing requirements of the NHPA, including consultation with the appropriate State Historic Preservation Office (SHPO) and the Advisory Council on Historic Preservation.

2.9 Clean Water Act

The CWA establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulates quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was significantly reorganized and expanded in 1972 (see Section 5.1).

2.10 Environmental Justice

Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. The Presidential Executive Order 12898 and the Departmental Environmental Justice Policy require that Federal agencies consider the impacts of their actions on minority and low-income populations and communities, as well as the equity of the distribution of benefits and risks of those decisions (see Section 5.4).

3 Alternatives

3.1 Alternative 1 - No Action Alternative

Reclamation would not issue an authorization to the City to continue the operation and maintenance of a treated wastewater pipeline and outfall structure in rights-of-way owned by the United States. When the existing 2-year authorization Contract No. 15-07-16-L5488 expires on September 21, 2017, the City must discontinue the nonagricultural discharge into the DW237 Drain (Reclamation 2015).

3.2 Alternative 2 - Proposed Action (Preferred)

Reclamation would issue the City a 5-year authorization to continue the operation and maintenance of a treated wastewater pipeline and outfall structure in rights-of-way owned by the United States. Before the 5-year authorization expires, the city would have discontinued the nonagricultural discharge into Reclamation's DW237 Drain and decommissioned the associated infrastructure.

Reclamation is evaluating the City's authorization request concurrently with Ecology's review and development of a 5-year NPDES permit. Currently, the City is operating under their existing NPDES permit (WA0021067), which has been administratively extended according to Washington State Administrative Procedures Act, Revised Code of Washington 34.05.422 (3) since October 1, 2015, because Ecology was unable to issue a new permit by the expiration date. The extension allows the City to continue discharge as indicated under the existing permit issued May 7, 2012 (Ecology 2015). On June 30, 2017, Ecology notified the City that a new NPDES permit would be issued in December 2017. The NPDES permit and the 5-year authorization would synchronize to expire in 5 years to comply with all applicable Federal and Washington State regulations (Section 5.1).

4 Affected Environment and Environmental Consequences

Table 1 is a list of resources previously analyzed and determined to have no environmental consequence and not discussed further in the EA.

Table 1. Non-issue resources categories.

Resource or Concern	Justification
Fish and Wildlife	No impacts on fish and wildlife were identified with this project (see Section 5.2).
Threatened and Endangered Species	No impacts on threatened and endangered species were identified with this project.
Groundwater	No impacts on groundwater were identified with this project.
Wetlands	No impacts on wetlands were identified with this project.
Geology/Soils	No impacts were identified for geology/soils with this project.
Land Use	No impacts on land use were identified with this project.
Recreation	No impacts were identified for recreation with this project.
Climate/Air Quality	No impacts on climate or air quality were identified with this project.
Noise and Visual Impacts	No noise impacts were identified with this project.
Wild and Scenic River	No Wild and Scenic Rivers are located within the project area.
Vegetation	No impacts were identified for vegetation with this project.
Hazardous and Toxic Materials	No impacts were identified for hazardous and toxic materials with this project.
Indian Trust Assets	No impacts were identified for Indian Trust Assets with this project.
Indian Sacred Sites	No impacts were identified for Indian Sacred Sites with this project
Cultural Resources	No Potential to Cause Effects on Historic Properties, assuming such historic properties were present [36 CFR part 800.3 (a)(1)]

4.1 Water Quality

Affected Environment

Water quality is defined by its capability to support beneficial water uses. These include uses such as domestic water supply, livestock watering, irrigation, aquatic life, recreation, navigation, and aesthetics. A water quality problem occurs when the beneficial or intended use of the waterbody becomes impaired. To measure water quality, chemical, physical, and biological parameters are usually used. Common parameters include bacteria, dissolved oxygen, nutrients, pH, sedimentation, turbidity, temperature, electrical conductivity, and toxics (NRCS 2002).

The CWA regulates the quality of the Nation's waterbodies. Section 301(b)(1)(C) of the CWA requires the development of limitations in permits necessary to meet water quality standards. Federal regulation 40 CFR 122.4(d) prohibits the issuance of any NPDES permit that does not ensure compliance with the State's water quality standards. Washington State established water quality standards for surface waters to protect public health and enjoyment of the waters, as well as propagation and protection of fish, shellfish, and wildlife (WAC Chapter 173-201A). Ecology has administratively extended the City's NPDES permit since it expired September 2015.

Waterbodies that have been identified as impaired are subject to waste-load allocations measured by total maximum daily load (TMDL), which defines the amount of a pollutant that can be present in a waterbody and still meet water quality standards. The Treatment Plant is currently under TMDL conditions that Ecology addresses in the City's NPDES Permit.

The water quality parameters of primary interest for this EA include bacteria, fecal coliform, Escherichia coli (E. coli), and total dissolved solids (TDS) as well as flow addressed in Hydrology, Section 5.2.

In 2011, the City submitted an application for NPDES Permit WA0021067 to Ecology. Washington Administrative Code (WAC) Chapter 173-201A-240 (the new Human Health Criteria became effective December 15, 2016) requires applicants to perform additional analysis outside permit monitoring. This resulted in the City needing to perform 12 additional analyses for Bis (2-ethylhexyl) phthalate (DEHP).

DEHP is a known carcinogen and is frequently detected in wastewater effluent. Phthalates are plasticizers commonly used in hundreds of everyday consumer and building products. The ubiquitous chemical has been identified as a common sampling and laboratory contaminate. Ecology's Cost Benefit Analysis (CBA) associated with the human health criteria rule identified the chemical as difficult to control as it enters the environment and surface waters through various pathways. If phthalates are detected in a facility's effluent, permit writers will require permittees to resample the effluent using clean sampling techniques to confirm that the detection is not a result of either sampling or laboratory contamination. Resampling can occur during permit development at the request of the permit writer following acceptance of the permit application (Personal Communication 2017).

Mixing Zones

The delivery points for the irrigation water may be located anywhere along the drain and could be located within the mixing zone; therefore, the NPDES permit will not allow a mixing zone for irrigation criteria such as E. coli and TDS. Reclamation identified other pollutants that do not have suggested standards in, *Establishing Surface Water Quality Criteria for the Protection of Agricultural Water – Draft Discussion Paper* (Hicks, 2002); therefore, this permit allows a mixing zone for the other pollutants.

Bacteria

Currently, there is no water quality standard for E. coli in Washington State; however, the Environmental Protection Agency (EPA) released recommendations for water quality criteria for recreation (EPA 2012) to guide states in establishing their own criteria for E. coli. In 2011, the Food and Drug Administration released the Food Safety Modernization Act to regulate on-farm activities to prevent crop bacterial contamination by quantifying the quality of the irrigation water applied to crops (CWA 1977).

The FSMA specifies an E. coli limit not to exceed a geometric mean of 126/100mL of water. Ecology's draft NPDES permit has a fecal coliform limit not to exceed a geometric mean of 50/100mL. The draft NPDES permit would be consistent with the intent of the TMDL to protect Class A waters receiving wastewater discharge. The fecal coliform limit is more stringent because E. coli is a subset of fecal coliform. The City's discharge under the proposed NPDES permit would be better water quality than the receiving waters (FSMA, 2011).

Total Dissolved Solids

There is not an established water quality standard for TDS. For agricultural purposes, TDS concentrations are relevant to crop production and the water delivery systems. Salinity (the concentration of salt) can be problematic for crop and foliage production if concentrations in the soil or in irrigation water exceed salt tolerance levels. Salt accumulation breaks down soil structure, reduces water infiltration, and is toxic to crops. High salt concentrations in waterbodies can also harm freshwater plants and animals (NRCS 2002). The suggested TDS value from the literature is below 450 mg/L (Reclamation, 2007).

Environmental Consequences

No Action

Under the No Action Alternative, Reclamation would not issue the City an authorization to operate and maintain a treated wastewater pipeline and outfall structure in rights-of-way owned by the United States.

As a result, the City and the Food Processors would need to develop an alternative disposal solution or discontinue operations that create the need for such disposal. Section 5.3, Socio-economic, discusses the impact of discontinuing nonagricultural discharge into the DW237 Drain.

In 2010, Reclamation specified to the City and its consultants that they must reduce TDS concentrations for continued discharge into the drain. The City's technical committee is addressing this compliance issue along with infrastructure upgrades.

In 2014, Reclamation identified a bacterial compliance issue and notified the City. The City and its consultants determined the cause of the high bacterial counts, which they immediately addressed with a process change. The City has been collecting samples weekly for bacteria: fecal coliform (range between 67 and 84 samples depending on location) and E. coli (range between 68 and 94 samples depending on location) and sends them out for analysis. Table and Table 3 below illustrate the minimum, maximum, geomean, and median for the bacterial samples. In August 2016, the City began collecting 19 TDS samples along with the bacteria samples for analysis. Table 4 illustrates the minimum, maximum, mean, and median for the samples.

Table 2. Washington State water quality criteria for fecal coliforms (Chapter 173-201A WAC).

Category	Bacteria Indicator
Extraordinary primary contact recreation	Fecal coliform levels must not exceed a GM* value of 50 colonies /100 mL with not more than 10 percent of all samples (or any single sample when less than 10 sample points exist) obtained for calculating the GM* value exceeding **200 colonies/100 mL**
Primary contact recreation	Fecal coliform levels must not exceed a GM* value of 50 colonies /100 mL with not more than 10 percent of all samples (or any single sample when less than 10 sample points exist) obtained for calculating the GM* value exceeding **200 colonies/200 mL**
Secondary contact recreation	Fecal coliform levels must not exceed a GM* value of 50 colonies /100 mL with not more than 10 percent of all samples (or any single sample when less than 10 sample points exist) obtained for calculating the GM* value exceeding **200 colonies/400 mL**

*GM refers to geometric mean.

Table 3. EPA recommended guidance for recreational water quality for E. coli.

Indicator	GM* cfu/100 mL	STV* cfu/100mL	GM* cfu/100 mL	GM* cfu/100 mL
E. Coli (fresh water)	126	410	100	320

*****GM – geometric mean. STV – statistical threshold value.

Criteria Element Recommendation 1: Cultural E. Coli at GM of 126 cfu per 100 mL and an STV of 410 cfu per 100 mL using EPA Method 1603 or any other equivalent method that measure culturable E. coli. The estimated illness rate for E. coli is 36/1,000

Criterial Element Recommendation 2: Cultural E. coli at a GM of 100 cfu per 100 mL and an STV of 320 cfu per 100 mL using EPA Method 1603, or any other equivalent method that measures culturable E. coli. The estimated illness rate for E. coli is 32/1,000.

Table 4. Food and Drug Administration FSMA Regulation

Criteria Elements	Food and Drug Administration Regulation	
Indicator	GM* cfu/100 mL (n=5 or 20)	STV* cfu/100 mL (less than 410)
E.Coli (fresh water	126	410

cfu - colony forming units. n - number of samples.

Proposed Action (Preferred Alternative)

Reclamation would issue the City a 5-year authorization to continue the operation and maintenance of a treated wastewater pipeline and outfall structure in rights-of-way owned by the United States. Continuing wastewater discharge would meet the requirements set forth in the City's NPDES permit and Reclamation's 5-year authorization. The City has developed and is implementing a new utility, the Quincy 1 Water Plan, which will integrate its industrial and municipal wastewater treatment systems. This integrated system would recycle all wastewater discharges resulting in a closed-loop system. Reclamation would issue the authorization in accordance with the NPDES permit and consequently meet FSMA and CWA standards.

4.2 Hydrology (Drainage Capacity)

Affected Environment

The irrigation project has many miles of canals, laterals, wasteways, and drains. The City releases the treated wastewater through a discharge pipe into Reclamation's DW237 Drain (Figure 2).

CBP irrigation facilities include both surface irrigation facilities and underground pipe drains. The irrigation facilities included in the proposed 5-year authorization are located in the Quincy-Columbia Basin Irrigation District. The DW237 Drain flows to the W645, which is a series of wasteways that drain into Frenchman Hills Wasteway and into Potholes Reservoir. The City's current and proposed operations could possibly affect the following facilities: West Canal, W35.9 Lateral, DW237 Drain, the W645W, W645WN, W645 wasteways, and buried pipe drains.

Environmental Consequences

No Action

Under the No Action Alternative, Reclamation would not issue a 5-year authorization to the City to operate and maintain a treated wastewater pipeline and outfall structure in rights-of-way owned by the United States. Under the No Action Alternative, there would be no effect on system capacity.

Proposed Action (Preferred Alternative)

Reclamation would issue a 5-year authorization to the City to operate and maintain a treated wastewater pipeline and outfall structure in rights-of-way owned by the United States. When the 5-year authorization expires, the City would have discontinued the nonagricultural discharge into the DW237 Drain and decommissioned the associated infrastructure. Reclamation is evaluating the City's authorization request concurrently with Ecology's review and development of a 5-year NPDES permit.

The City has been monitoring flow in the DW237 Drain for over a decade as a requirement of their NPDES permit, which allows for a maximum daily discharge of 5 cubic feet per second (cfs). In the event of a storm or precipitation, the City would reroute the wastewater discharge into holding ponds to avoid facility capacity exceedance of the DW237 Drain. Reclamation requires that the Treatment Plant have a storage capacity of 4 days. The capacity

evaluation identified that the Treatment Plant has a capacity to store wastewater for 6.5 to 14.5 days (Brown and Caldwell, 2016).

Reclamation and Ecology requested that the City evaluate the capacity of the receiving drainage system to determine if the permitted discharge volume of 5 cfs would exceed the capacity of the irrigation facility (see Section 5.3.1 Hydraulic Capacity).

The City evaluated the canal capacity through a field investigation and analysis of the affected irrigation system to identify culverts that could potentially be at risk with the additional 5 cfs. The evaluation determined that there is adequate capacity in the downstream drainage for the City's 5 cfs wastewater discharge (Brown and Caldwell, 2016). The authorization would contain a provision specifying that the applicant does not hold any rights to the use, control, or release of the waters discharged to Reclamation facilities. The subject 5 cfs of wastewater discharge comingled with CBP water would diminish to zero over the period of authorization, and as a result of evaporation and system losses does not warrant specific delivery or water contract development for specific beneficial use.

4.3 Socioeconomic

Affected Environment

The City's economy is based on agricultural related industries (Table 5). The median income was $51,145 per household in 2014. With a population of 7,355, approximately 4,854 people are employed with an average annual per capita income of $15,827. Approximately 66 percent of the workforce is employed in an occupation that is dependent on, or supported by, the agricultural industry (City-Data.com, 2014).

Table 5. **Leading employers for the City of Quincy**.

Leading Employers	Number of Employees	Product or Service
Celite Corp.	70	Mineral Processing
Columbia Colstor	160	Warehousing and Storage
ConAgra Foods, Inc.	460	Food Processing
Dell	50	Data Center
Intuit	33	Data Center
Microsoft	150	Data Center
National Frozen Foods Corp.	275	Food Processing
Quincy Foods LLC	370	Food Processing
Sabey	50	Data Center
Yahoo!	50	Data Center

Source: http://www.grantedc.com/site-selection/community-information/quincy

Environmental Consequences

No Action

Reclamation would not issue the City an authorization to operate and maintain a treated wastewater pipeline and outfall structure in rights-of-way owned by the United States. Under the No Action Alternative, there would be no effect on system capacity.

The local farmers provide more than 26,000 acres of crops to the Food Processors. In response to the potential cessation of discharge to DW237 Drain, the City has considered discharge and non-discharge options that include alternative location discharge, evaporation ponds, injection wells, and land application of treated wastewater. Reclamation's 2-year authorization expires on September 21, 2017, and the non-discharge option would take up to 5 years to implement. This time constraint may result in closures of food processing plants and related industries in the City. The cessation of discharge and subsequent disruption of food processing operations would have significant adverse economic impacts on the socioeconomic environment, as food processors have already threatened to move out of the area.

Proposed Action (Preferred Alternative)

Reclamation would issue a 5-year authorization to the City to operate and maintain a treated wastewater pipeline and outfall structure in rights-of-way owned by the United States. When the 5-year authorization expires, the City would have discontinued the non-agricultural discharge into the DW237 Drain and decommissioned the associated infrastructure. Reclamation is evaluating the City's authorization request concurrently with Ecology's review and development of a 5-year NPDES permit.

Adequate wastewater disposal enables the Food Processors to continue providing the City's economic base. Reclamation's proposed 5-year authorization would allow the City to accomplish the non-discharge goal with seamless continuation and a stable economic foundation

The 5-year authorization would allow time for the City to implement its undertakings to develop the wastewater infrastructure necessary to meet the demands of a growing population and its industrial base. The City is committed to eliminating the discharge from the DW237 Drain within 5 years. At the end of 5 years, the City would manage their wastewater without the need for an authorization to cross Federal lands and discharge into the DW237 Drain.

4.4 Environmental Justice

Affected Environment

The Presidential Executive Order 12898 and the Office of Environmental Justice policy require that Federal agencies consider the impacts of the Department of the Interior's actions on minority and low-income populations and communities, as well as the equity of the distribution of benefits and risks of those decisions.

No Action

Reclamation would not issue an authorization to the City to operate and maintain a treated wastewater pipeline and outfall structure in rights-of-way owned by the United States.

The City's population is more than 74 percent Hispanic. The income per capita for the City is $15,827 (City-Data.com 2014). If Food Processors are disrupted and employment opportunities are reduced because of Alternative 1 - No Action, the adverse impacts on these populations could be significant.

Proposed Action (Preferred Alternative)

Reclamation would issue a 5-year authorization to the City to operate and maintain a treated wastewater pipeline and outfall structure in rights-of-way owned by the United States. With the Proposed Action, the City would continue to provide nonagricultural wastewater services fostering a continuation of existing employment and community offerings with no adverse effect on minority and low-income populations and communities.

4.5 Cumulative Impacts

Agencies must identify and list the important past, present, and reasonably foreseeable future actions contributing to cumulative effects.

Detailed information reflecting reasonably foreseeable future growth is unavailable. In past years, the City's economy has been supported mainly by agricultural businesses. In recent years, the City and its surrounding area has experienced a considerable amount of growth in data centers, as reflected in Table 5. The availability of affordable power and inexpensive land has attracted several companies to locate in the City (Grant County EDC, 2017).

Alternative 1 - No Action

Reclamation would not issue an authorization to the City to operate and maintain a treated wastewater pipeline and outfall structure in rights-of-way owned by the United States. Under the No Action Alternative, there would be no effect on CBP irrigation system capacity.

Detailed information reflecting reasonably foreseeable future growth is unavailable. Anecdotal information gathered during involvement with the City's technical committee meetings provide strong evidence of anticipated growth. Without the discharge of treated wastewater, the City's main economic drivers may suffer substantial losses resulting in employment deficiencies and population outmigration. Local farmers dependent upon the Food Processors would be forced to transport crops to more distant markets.

Alternative 2 - Proposed Action (Preferred Alternative)

Reclamation would issue a 5-year authorization to the City to operate and maintain a treated wastewater pipeline and outfall structure in rights-of-way owned by the United States.

Environmental consequences under the Proposed Action would support the City's long-term prosperity giving rise to associated, but undefined, benefits and detriments inherent to population and economic growth.

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