

CITY OF PENDLETON WATER SYSTEM IMPROVEMENT PROJECTS

Environmental Information Document

Prepared for

May 2017

City of Pendleton



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ACRONYMS

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ACRONYMS

BE - Biological Evaluation
BMP - Best Management Practice
CH - Critical Habitat
CIP - Capital Improvement Plan
DEQ - Department of Environmental Quality
DLCD - Department of Land Conservation and Development
DSL - Department of State Lands
EFH - Essential Fish Habitat
EFU - Exclusive Farm Use
EID – Environment information document
FEMA - Federal Emergency Management Agency
FPPA - Farmland Protection Policy Act
HUC - Hyrdologic Unit Code
LCDC - Land Conservation and Development Commission
LE - Listed Endangered
LT - Listed Threatened
LWI - Local Wetland Inventory
MCR - Middle Columbia River
MSA - Murray, Smith & Associates
NMFS - National Marine Fisheries Service
NOAA - National Oceanic and Atmospheric Administration
NRCS - Natural Resources Conservation Service
NRHP - National Register of Historic Places
NWI - National Wetland Inventory
ODFW - Oregon Department of Fish and Wildlife
OHA – Oregon Health Authority
ORBIC - Oregon Biodiversity Information Center
PFMC - Pacific Fisheries Management Council
SERP – State Environmental Review Process
SHPO - State Historic Preservation Office
SRF - State Revolving Fund
URB- Urban Growth Boundary
USACE - United States Army Corps of Engineers
USDA - United States Department of Agriculture
USEPA - United States Environmental Protection Agency
USFWS - United States Fish and Wildlife Service
USGS - United States Geological Survey

1.0 INTRODUCTION

The City of Pendleton (City) is requesting financing for municipal water system improvements through Oregon's Drinking Water State Revolving Fund (DWSRF), administered by the Oregon Health Authority (OHA). This Environmental Information Document (EID) has been prepared to satisfy requirements of the State Environmental Review Process (SERP) for the proposed improvements. The format and content of this EID follows guidance presented in the OHA's *Environmental Review Process Handbook for Drinking Water State Revolving Loan Fund* (OHA, 2012). The purpose of this Environmental Information Document (EID) is to provide the OHA with the information necessary to determine the potential for environmental impacts and support informed decision-making about the allocation of state financing.

1.1 Project Overview and Location

The City has identified 65 water supply system improvements throughout the City that are needed in the next 10 years to address capacity, service pressures, aging infrastructures, and storage based on population and water demand projections. The proposed projects address existing and future capacity deficiencies and on-going repair and replacement of aging infrastructure. The majority of the projects serve to address flow deficiencies related to the volume and pressure required for fire flow (emergency water supply) and projected growth within 10 years. To meet supply deficiencies, the City plans to construct one 1,500 gpm (2.2mgd)-well in the next 5 years. In addition to supply and capacity projects, there are proposed pipe replacement projects based on a 100-year life cycle (MSA 2015).

The City is located in Umatilla County, approximately 200 miles east of Portland in Township, Range, Section: T3N, R32E, sec31 and T2N, R32E, sec5, Willamette Meridian, within the lower Umatilla River Basin. The City is situated in the Columbia River Plateau just west of the foothills of the Blue Mountains, which extend from northeastern Oregon to southeast Washington. The terrain downtown and along the Umatilla River is relatively flat, with rolling hills rising to the south and north of city center. Elevations range from approximately 950 feet to over 1,500 feet above mean sea level.

1.2 Document Content and Organization

This report is an analysis of the effects of a preferred alternative and a no-action alternative for the City's 5- and 10-year water supply infrastructure improvements. The document is organized into the following chapters, consistent with the content and format guidance presented in the OHA's *Environmental Review Process Handbook for Drinking Water State Revolving Loan Fund* (OHA, 2012):

- Chapter 1: Introduction
- Chapter 2: Proposed Action, Purpose, and Need
- Chapter 3: Description of Existing Environment
- Chapter 4: Environmental Consequences
- Chapter 5: Impact Minimization Measures
- Chapter 6: References

2.0 PROPOSED ACTION, PURPOSE AND NEED

2.1 Purpose and Need

The water system improvements described in this EID address needs specifically identified in the City's Water System Master Plan (MSA, 2015), which was adopted by City Council and approved by OHA in 2015. The Master Plan includes population and demand projections for the 5-, 10-, 20-year, and build-out planning horizons, along with a description of existing conditions and a performance analysis of the City's water supply infrastructure. The improvements addressed in this EID are limited to needs for the 5- and 10-year planning horizons, which include the following:

- Capacity: The capacity of the City's water supply system is adequate to meet existing demands; however, an additional 1.3 mgd of firm supply capacity will be required to meet projected demands within the 10-year planning horizon.
- Service Pressures: The City's 13 existing pressure zones provide adequate service pressures to most water system customers; however, there are two existing deficiencies that will intensify if not addressed in the 5- and 10-year planning horizons. The first deficiency is inadequate fire flow in several portions of the City. Existing available fire flow in the Airport Industrial Area and several residential areas are well under the required minimums due to undersized piping, limited looping in the area, and high elevations. The second deficiency is less than desirable service pressure for customers at the highest elevations in the Skyline Reservoir pressure zone (MSA, 2015).
- Aging Infrastructure: The majority of the distribution piping is greater than 60 years old with 63 percent of the piping installed prior to 1950 (MSA, 2015). Elements of the aging infrastructure are due for replacement/repair to ensure reliable service.
- Storage: The City's water system has adequate distribution storage for existing conditions; however, additional storage of about 200,000 gallons will be required for both the Skyline Reservoir and Airport Industrial Area to meet projected demands.

2.2 Description of the Proposed Action

Pendleton's existing water service area covers approximately 11.3 square miles within the current city limits. The water system is divided into 13 pressure zones serving approximately 17,700 people through 5,800 residential, commercial and industrial service connections. Pendleton's water supply is taken from both the Umatilla River and eight groundwater wells located throughout the City. The distribution system consists of approximately 107 miles of pipeline and includes 13 booster pump stations, nine pressure-reducing valves and eight distribution storage reservoirs (MSA, 2015).

Of the 65 proposed projects, 44 are located within an existing road prism, fill pad, or other fundamentally developed area. The remaining 21 sites are located in less disturbed/developed areas. As summarized below, 18 of the proposed projects are new infrastructure and the remaining 47 projects are either upgrades or replacements:

- 15 new water mains proposed (IM-50, IM-51, IM-54, M-4, M-17, M-19, M-32, M-33, M-34, M-36, M-35A, M-35B, M-48, M-53, T-56),
- One new well (either 9A or 9B)
- One permanent new pump stations (P-3)
- One new reservoir (R-1)
- The remaining 47 projects are either upgrades or replacements of existing pipes (43) or pump stations (4). Refer to figures provided in Appendix A for maps of individual water project locations¹ and Appendix B which includes a summary of all of the proposed projects.

2.2.1 Projects within existing road prisms

For new pipe installation and pipe replacements within an existing road prism, the pipes will be located in trenches with the top of pipes at least 3 feet below the ground surface. Trench dewatering (and land application of dewatering discharges) is not expected to be needed because of the amount of fill in the road prism. Each project involves the following elements:

- Abandoning the existing segment of a water pipe (if applicable) along a specific road length;
- Installing new segments of pipe;
- Connecting the pipes with existing lines on either end and along the right-of-way;
- Restoring the road prism to existing conditions.

2.2.2 Projects outside existing road prisms

For new water pipes and valves outside of an existing road prism, fill pad, or other altered landscape, trenches will be excavated up to 8 feet below the ground surface. All new projects will be located within a City right-of-way. The finished elevation will have the top of pipes at least 3 feet below the ground surface. Trench dewatering (and land application of dewatering discharges) may be required in areas outside of a footprint of an existing facility. Each project involves the following elements:

- Excavating new trenches;
- Installing new segments of pipe;
- Connecting the pipes to the system; and
- Restoring elevations to existing conditions.

The existing water supply line from the Water Filtration Plant to the South Hills Reservoirs (Project ID T-55) is pumped through a 1.3-mile long, 30- and 24-inch diameter transmission main. The 30-inch concrete portion of this main, constructed approximately 100 years ago, has reached the end of its useful life and needs to be replaced. This transmission line is located in the southeast corner of the Urban Growth Boundary (UGB) in an agricultural field and is offset of Interstate 84 right-of-way by approximately 90 feet (see Appendix A). For this water transmission line replacement, the City will investigate the feasibility and potential cost savings of using trenchless construction techniques, such as sliplining or pipe bursting, to install the new transmission main within the existing main.

¹ All site plans are located in Appendix A.

For the new well (9A or 9B), the City has identified two locations that present the greatest opportunity for expanded supply. The first location, 9A, is near existing Well 8 and the Eastern Oregon Correctional Institution and the other potential location, 9B, is near existing Well 11 and the City Resource Recovery Facility (see Appendix A). Well 11 currently serves the Wastewater Treatment Plant through a small, private system and may connect to the rest of the City system in the future (MSA, 2015). The proposed well will be located close to an existing supply well and will have a distribution infrastructure adequate to deliver the expanded supply. Existing groundwater wells have depths ranging from 500 to 1,000 feet below ground surface and new groundwater wells will be installed at similar depths. The footprint of the new well will be approximately 450 square feet of additional impervious surfaces.

The new pump station (Project ID P-3) and pump station replacements (Project IDs P-1, P-4, and P-5) will be installed at a depth similar to the water mains, approximately 6 feet below the ground surface. Excavation will be up to 8 feet below the ground surface to account for the angular gravel bedding and concrete pads. Each unit will involve of a footprint of 600 – 1,000 square feet of additional impervious surfaces installed on undisturbed ground adjacent to the water main. The new 2MG reservoir (Project ID R-1) associated with the pump station upgrade (Project ID P-1) will be located in close proximity to P-1 and will be installed at a depth similar to the water mains, approximately 6 feet below the ground surface.

2.3 Alternatives – Preferred and No Action

The Proposed Action described in Section 2.2 represents the City’s preferred alternative for meeting the project purpose and need. The water system improvements proposed were adopted by City Council and approved by OHA in 2015. Of the 65 proposed projects 47 involve the replacement or upgrading of existing pipes so alternative sites or locations for the proposed improvements are not applicable. For the remaining projects, alternative locations were evaluated in the City’s Water System Master Plan (MSA, 2015). These locations represent the best siting because they either follow an existing right-of-way, are location dependent, or were sited for public health and safety reasons.

The OHA’s *Environmental Review Process Handbook for Drinking Water State Revolving Loan Fund* (OHA, 2012) require the consideration of a “no action” alternative, which provides a reference point for assessing the effects of approving a project with the effects of not approving a project. The No Action Alternative and the preferred alternative are both evaluated in this EID.

3.0 DESCRIPTION OF THE EXISTING ENVIRONMENT

All 65 projects identified in Appendix B were evaluated to identify existing environmental conditions. Existing environmental conditions for those categories that are applicable to the City’s proposed water projects are described in sub-sections 3.1 through 3.5. Environmental consequences for each of the applicable environmental impact categories are addressed for the Proposed Action and the No Action alternatives in Chapter 4.

The following impact categories are not further addressed in this EID for the reasons summarized below.

Air Quality

The Clean Air Act is a federal law designed to control air pollution on a national level. Oregon DEQ implements these air quality standards on a statewide level. On March 6, 2017 DEQ Air Quality Program Eastern Region contact, Tom Hack, was consulted for comments on the City of Pendleton's proposed water supply system projects (Appendix C). The projects may involve an increase in short-term emissions for construction, but would not have a long-term impact on air quality. Best Management Practices (BMPs) to manage fugitive dust will be implemented during the construction and excavation processes. DEQ guidance documents will be adhered to for all construction involving non-friable asbestos insulated water (transite) pipes.

Drinking Water

The Safe Drinking Water Act of 1974 and its amendments establishes the basic framework for protecting the drinking water used by public water systems in the United States. This law contains requirements for ensuring the safety of the nation's public drinking water supplies. The proposed water supply system projects would not involve direct discharges to groundwater, the drinking water resource for the City of Pendleton, either during construction or post-construction. The proposed projects are not located within or near a Sole Source Aquifer for drinking water (Environmental Protection Agency's Sole Source Aquifer Map, 2013). These water supply system projects are not expected to impact drinking water resources.

Coastal Resources

In the State of Oregon, the Coastal Zone Management Act applies to Clatsop, Columbia, Tillamook, Washington, Yamhill, Lincoln, Polk, Benton, Lane, Douglas, Coos, and Curry counties. The entire City of Pendleton is within Umatilla County, outside of Oregon's coastal zone, and thus all water supply infrastructure projects discussed in this EID will not require consultation with Department of Land Conservation and Development (DLCD) and would have no impact on the Coastal Zone Management Area

Hazardous Materials, Solid Waste, and Pollution Prevention

Federal laws providing the framework for many waste management regulations include the federal Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the Resource Conservation and Recovery Act (RCRA). CERCLA requires notifying the public about hazardous substance releases exceeding reportable quantities and establishes criteria for recovery, cleanup, and response plans. RCRA defines hazardous wastes and establishes provisions to ensure that hazardous wastes are managed appropriately from production to final disposal (from "cradle to grave").

The proposed projects are not located on or adjacent to properties identified by the U.S. Environmental Protection Agency (EPA) as RCRA corrective action sites or CERCLA National Priorities List (NPL) sites for contamination or cleanup activities (USEPA, 2017). The Pendleton Airport is identified by the Oregon DEQ as a state cleanup site (ECSI Site No. 779) for potential past contaminant releases related to

pesticide spraying operations, leaking underground storage tanks (USTs), PCB-containing electrical transformers, and paints, thinners, and solvents, which have reportedly been removed from the site (DEQ, 2017a). Maps contained in DEQ ECSI Site No. 779 file materials indicate the USTs and a former ordnance building where the electrical transformers and miscellaneous substances were reported do not coincide with the proposed water line projects (DEQ, 2017b).

The proposed projects upgrade the water supply system throughout the City, and the operation of the proposed system improvements would not generate significant quantities of hazardous materials or solid waste. Hazardous Materials, Solid Waste, and Pollution Prevention is not further addressed in this EID.

Natural Resources and Energy Supply

The water supply projects would require the use of consumable natural resources (e.g., fuels for construction equipment), but the projects would not alter long-term fuel usage. Supplies of electricity and fuels are sufficient to accommodate the current and future demands of the City. Further analysis for Natural Resources and Energy Supply is therefore not needed for this EID.

Socioeconomics and Low Income and Minority Populations

Socioeconomic indicators include economic activity, employment, income, population, housing, public services, and social conditions. The principal social impacts to be considered are typically those associated with relocation or other community disruption, transportation, planned development, and employment (OHA, 2012). The proposed action does not require the relocation of residents or community businesses, would not reduce the levels of service of roads serving the city and surrounding communities, and would not disrupt or divide the physical arrangement of an established community. The proposed action, by addressing work needed to ensure the continued health and safety of the community (water for fire suppression) and provides the projected demand needs of the community.

The City is located within Census Tract 59950600. The percentage of minority residents in the vicinity of the City is 13% and the percentage of residents living in poverty in the Pendleton vicinity is 15%. (U.S. Census, 2010). The proposed action does not have the potential to lead to disproportionately high and adverse impacts to low income or minority populations.

Wild and Scenic Rivers

The National Wild and Scenic River System was created by Congress in 1968 to preserve certain rivers with outstanding natural, cultural, and recreational values. The UGB and incorporated city limits of Pendleton are located within the Umatilla River Watershed (HUC8 ID# 17070103) and there are no rivers in this watershed that are designated as Wild & Scenic on the National Wild & Scenic River System (National Wild and Scenic River System, 2017) and thus all water supply system projects discussed in this EID will not require consultation with the relevant federal agencies.

Park Land or Other Public Lands of Recognized Scenic or Recreational Value

None of the proposed projects go through park land or public lands of recognized scenic or recreation value. Therefore, no further analysis is needed in this EID.

3.1 Historic and Cultural Resources

Pendleton has been a Certified Local Government (CLG) since 2014 by the State Historic Preservation Office (SHPO). Each CLG is responsible for maintaining an historic preservation commission and complying with OAR 660-023-0200, Goal 5, which specifies that local government must, among other things, protect National Register resources. The National Register of Historic Places (NRHP) and recommendations of the State Advisory Committee on Historic Preservation is used in designating historic sites in accordance with the LCD's Goal 5 (OAR 660-15-0000(5)). A letter describing the proposed projects was sent to the Confederation Tribes of the Umatilla Indian Reservation on April 13, 2017. No response has been received back from the Tribe.

A records search of SHPO's online GIS for Archaeological Records Data was conducted on May 18, 2017, to identify any previously recorded historic or precontact cultural resources or cultural resources surveys in the Project Area. Additionally, the City's Local Landmark Register was reviewed.

The City has a Historic District (S. Main St. Historic District) and there are several buildings throughout the City that maybe considered eligible for listing in the NRHP. Additionally, there may be buildings at the Pendleton Airport may be eligible for listing.

3.2 Wetlands and Rivers

A wetland delineation along each of the proposed project alignments was conducted for this project (Capital Improvement Plans Wetland Delineation Report, April 2017). The Umatilla River flows westerly through the City and joins the Columbia River approximately 40 miles downstream. Tributaries of the Umatilla River in the Pendleton vicinity include Wildhorse Creek, Tutuilla Creek, McKay Creek and Nelson Creek. No wetlands were identified to occur within any of the proposed project areas. One project would cross the Umatilla River. No other creeks would be crossed.

There is one project site (SE 3rd St.) that is located adjacent to the Umatilla River. The project area is in an altered but mostly natural state. Alterations that have occurred include the restriction of the floodplain by a levee, introduction of non-native species, and general disturbance from human access. Project site SE 3rd Street is located approximately 500 meters downstream of the SE 8th Street Bridge. The Umatilla River has all characteristics expected for a mid-sized perennial stream: presence of aquatic macrovertebrates, wetland plants lining the stream banks within its riparian corridor, obvious streambed morphology, and a slope of approximately five percent. The width of the river (between OHWM) at these locations is approximately 35 meters and is entirely a riffle-run.

3.3 Floodplains

The FEMA 100-year floodplains are shown in Appendix A. There is one proposed project, SE 3rd St., that crosses the Umatilla River and is within the mapped 100-year floodplain.

3.4 Farmland

The City has designated several areas within the UGB zoned as Exclusive Farm Use (EFU), and there is also EFU in the urban reserve which is under the jurisdiction of Umatilla County. Areas zoned as EFU are shown in the figures provided in Appendix A.

3.5 Protected Species and Habitat

A Biological Evaluation (BE) was prepared for the proposed water supply system projects (Water Improvement Projects Biological Evaluation, April 2017) to assess the potential effects of project construction on species and habitat protected under the federal Endangered Species Act, and on Essential Fish Habitat protected under the Magnuson-Stevens Fisheries Conservation Act (MSA), to allow informed decision-making about the allocation of state financing.

The Endangered Species Act of 1973 provides for the conservation of species that are endangered or threatened and the conservation of the ecosystems on which they depend. It is administered by the U.S. Fish and Wildlife Service (USFWS) and NOAA's National Marine Fisheries Service (NMFS). USFWS has primary responsibility for terrestrial and freshwater organisms, while the responsibilities of NMFS are mainly marine wildlife such as anadromous fish. Species and habitat protected under the Endangered Species Act which could potentially occur within or near the project areas are listed in Table 1.

Table 1. Endangered Species Act Species Potentially Present Within the Project Vicinity

| Species Name (<i>Scientific Name</i>) | Federal Status* | Suitable Habitat Evaluation | Critical Habitat |
|---|-----------------|--|---|
| Gray wolf (<i>Canis lupus</i>) | LE | The nearest potential suitable habitat is in the Blue Mountains, > 25 miles east of the study area. | No critical habitat has been designated for this species in Oregon. |
| Yellow-billed cuckoo (<i>Coccyzus americanus</i>) | LT, P | Requires large blocks (≥ 200 ac) of riparian forest; not considered an active breeding species in WA or OR. | No critical habitat has been designated for this species in Oregon. |
| Bull trout (<i>Salvelinus confluentus</i>) | LT, CH | Suitable habitat for migration and rearing exists in the Umatilla River in the project vicinity. | Critical Habitat has been designated and includes the Umatilla River. |
| Steelhead (<i>O. mykiss</i>), Middle Columbia River (MCR) | LT, CH | Suitable habitat for migration and rearing exists in the Umatilla River and for spawning and rearing in McKay Creek in the project vicinity. | Critical Habitat has been designated and includes the Umatilla River and McKay Creek. |

*LE-Listed Endangered, LT-Listed Threatened; CH - Critical Habitat has been designated for this species; P - Critical Habitat has been proposed for the yellow-billed cuckoo but not in Washington or Oregon.

There is no suitable habitat for either the gray wolf and for the yellow-billed cuckoo in the project areas, and they are not expected to occur. The Umatilla River in the Pendleton vicinity is identified by the Oregon Department of Fish & Wildlife as suitable rearing and migration habitat for bull trout and for Mid-Columbia River (MCR) steelhead (StreamNet, 2017). The Umatilla River is also designated Critical Habitat for bull trout and for MCR steelhead. Tributary streams in the Pendleton vicinity are not identified for bull trout use and are not designated as Critical Habitat for bull trout. Wildhorse Creek and McKay Creek, which are tributary streams that enter the Umatilla River in the eastern and western portions of the City, respectively, are identified as potential spawning and rearing habitat for MCR steelhead.

The Magnuson-Stevens Act was originally enacted in 1976 and amended several times. In 1996, the Act was amended to incorporate essential fish habitat (EFH), which calls for heightened consideration of fish habitat in resource management decisions and direct action to stop or reverse the continued loss of fish habitats. NMFS implements and enforces the management measures through fisheries management plans. The Pacific Fisheries Management Council (PFMC) has designated EFH for the Pacific salmon fishery, federally managed groundfish, and coastal pelagic fisheries. StreamNet (2017) identifies the Umatilla River in the Pendleton vicinity for use by Chinook salmon (*Oncorhynchus tshawytscha*) and coho salmon (*Oncorhynchus kisutch*), and would therefore be considered Pacific salmon EFH.

4.0 ENVIRONMENTAL CONSEQUENCES

This section evaluates the direct, indirect, and cumulative impacts of proposed action and no action alternatives. It also addresses compliance with regulatory requirements.

The majority of areas where the water supply projects are located have been altered by human development on more than one occasion in the past. The majority of the area within the city limits is developed as an urban environment. The areas within the urban reserve are mostly actively farmed. Each of the 65 proposed water supply projects identified in Appendix B were evaluated individually to identify direct, indirect, and cumulative impacts to environmental resources. The majority of the proposed projects (48) would not affect any protected resources for the following reasons:

- They will be located entirely within existing, developed right-of-way;
- They are located outside of the Historic District or there are no adjacent historic resources/buildings;
- There are no known cultural resources in the area;
- They do not cross or are adjacent to any delineated wetlands or waterbodies;
- They are located outside of the 100-year floodplain;
- They are not located in land designated as Exclusive Farm Use;
- They are an allowed/compatible land use and within the Urban Growth Boundary (UGB);
- They have been determined to have no effect on species and habitat protected under the Endangered Species Act; and
- They are located outside of a sole source aquifer.

Table 2 summarizes the subset of 17 water system projects which required further review for potential impacts to environmental resources, according to the criteria provided in OHA's *Environmental Review Process Handbook for Drinking Water State Revolving Loan Fund* (OHA, 2012).

Table 2. Water supply projects which could potentially impact an environmental resource

| Project ID | Description | Location | Timing | Environmental Resource |
|------------|--|--|---------|--|
| IM-50 | New Airport Interim water main | Along southeast boundary of Airport Industrial Area | 5-year | Located outside UGB; Farmland (located within EFU) |
| IM-51 | New Airport Interim water main | Along southeast boundary of Airport Industrial Area | 5-year | Located outside UGB; Farmland (located within EFU) |
| M-19 | New water main | NW 4th Street alignment from north of NW Johns Lane through undeveloped area to future Meacham Road alignment then along Meacham Road alignment east to Johns Lane | 10-year | Small portion located outside UGB; Farmland (located within EFU) |
| M-32 | New water main for airport industrial area | Along the eastern boundary of the airport and Old Airport Rd. | 10-year | Farmland (located within EFU); portion located outside city limits |
| M-33 | New water main for airport industrial area | Along Old Airport Rd. and utility right-of-way | 10-year | Farmland (located within EFU); portion located outside city limits |
| M-34 | New water main for airport industrial area | Along southeast boundary of Airport Industrial Area | 10-year | Farmland (located within EFU); portion located outside city limits |
| M-53 | New water main for airport industrial area | Along northeast boundary of Airport Industrial Area | 5-year | Located outside UGB; Farmland (located within EFU) |
| M-6 | Replacement project | Along Ellis and Lee streets from SE. 3rd St. to SE. 8th St. | 5-year | Cultural and Historic Resources |
| P-1 | Airport pump station upgrade | On Old Airport Road southeast of Airport Industrial Area | 10-year | Farmland (located within EFU); portion located outside city limits |
| R-1 | New 2 MG Reservoir, water main upgrade | On Old Airport Road southeast of Airport Industrial Area | 10-year | Farmland (located within EFU); portion located outside city limits |

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| Project ID | Description | Location | Timing | Environmental Resource | |
|--|--|--|----------------|--|---|
| UR-5 UR-37 UR-38 UR-39 UR-40 UR-41 UR-42 SE 3rd St. | Upgrade existing water main across length of 3 rd street, including bore hole and directional drilling alignment crossing | Length of SE 3rd Street, including crossing of the Umatilla River. NW. to Gilliam Ave from North W. 3rd St. to N. Main St. and includes N. Main St. from NW. Horn Ave. to NW. Gilliam Ave. | 2018 | Wetlands; crosses Umatilla River | Floodplains (crosses Umatilla River floodplain) |
| T-55 | WFP high-level transmission main to South Hill reservoirs | SE corner of UGB near I-84 | 10-year | Farmland (located within EFU); portion located outside city limits | |
| T-56 | Included in the conversion of Well 11 into a production / ASR well | Located along Houtama Road (SW 28 th) near the WWTP | Beyond 20-year | Farmland (located within EFU); portion located outside city limits | |
| UR-22 SE. 5th St. | Replacement project | From SE. Byers Ave. to SW. Court Ave. | 2017 | Historic Resource | |
| UR-4 SW. 1st St. | Replacement project | One block between SW. Court Ave. and SW. Dorion Ave.; also includes the block between SW. Goodwin Ave. and SW. Hailey Ave. | 2016/2017 | Located with South Main Street Commercial Historic District | |
| UR-8 UR-18 S. Main St. | Replacement project | Between SE. Emigrant Ave. and SE. Isaac Ave. | 2016/2017 | Located within South Main Street Commercial Historic District | |
| UR-9 SE. 15th St. | Replacement project | Between SE. Alexander Ave. and SE. Byers Ave. | 2017 | Cultural and Historic Resources | |

EFU: Exclusive Farm Use Zone
UGB: Urban Growth Boundary

4.1 Historic and Cultural Resources

The City of Pendleton Unified Development Code, Ordinance 3845, Section 7.02, outlines the process that must occur if alterations are proposed to resources listed in the Local Landmark Register; no alterations to any listed resources are proposed.

4.1.1 Proposed Action

There are no known cultural resources within any of the project areas, so adverse impacts are not anticipated to known cultural resources. If archaeological resources are identified during construction, impacts to cultural resources may occur. To mitigate for potential impacts, the City will prepare an Inadvertent Discovery Plan to outline procedures to be followed if buried cultural resources are identified during construction. If the resource is considered eligible to the NRHP and impacts cannot be avoided, then a treatment plan would be developed to mitigate for any impacts to the site. Project elements proposed to occur near known cultural resources include repair or replacement of existing underground water pipes.

No effects are anticipated to known historic resources. Projects that may be adjacent to recorded historic resources or within the S. Main St. Historic District will require all construction activities to be confined to the existing right-of-way.

4.1.2 No Action Alternative

63 percent of the water mains throughout the City were installed prior to 1950. If this aging infrastructure is not repaired under the No Action Alternative, there is potential that pipe failure and subsequent flooding could impact these archaeological resources and NRHP listed properties.

4.2 Wetlands and Rivers

4.2.1 Proposed Action

The only jurisdictional water resource occurring within the project limits of the 67 proposed project sites is the Umatilla River. The proposed project will not involve in-water work or disturbance to riparian areas of the Umatilla River or its tributaries. Construction for the water main upgrade attached to SE 3rd Street will occur during ODFW's recommended in-water work window of July 1 through August 15. No ground surface disturbance activities will occur within 150 feet of the FEMA floodplain.

Several types of mitigation measures will be implemented in order to prevent any direct or indirect impacts to water resources. The City will require construction contractors to prepare and implement erosion and sediment control plans for individual projects, to minimize the potential for soil erosion and sediment-laden runoff leaving the project sites during and after construction.

With the implementation of these measures, there will be no impacts to wetlands or other waters of the United States or State of Oregon.

4.2.2 No Action Alternative

The SE 3rd Street water main crossing of the Umatilla River is an aging pipe that has been identified as in need of repair. If this aging infrastructure is not repaired under the No Action Alternative, there is potential that pipe failure and subsequent discharge would impact this jurisdictional water body. Such a pipe failure would likely incur a temporary discharge of treated water supply into the stream, thus temporarily increasing turbidity and altering water chemistry.

4.3 Floodplains

Two Executive Orders related to floodplain management, 11988 of 1977 and 12148 of 1979, were issued to avoid the adverse impacts associated with the modification of floodplains, to avoid support of floodplain development wherever there is a practicable alternative, and to delegate functions related to disaster assistance and severe weather-related emergencies, among others, to the Federal Emergency Management Agency (FEMA).

4.3.1 Proposed Action

There is one proposed project, SE 3rd Street, that crosses the Umatilla River and is within the mapped 100-year floodplain.

Construction for SE 3rd Street will involve excavating bore holes and directional drilling on either side of the Umatilla River floodplain to install a slip line pipe replacement in the existing pipe which crosses under the River. No ground surface disturbance activities will occur within 150 feet of the FEMA floodplain, and all construction will occur during the ODFW recommended in-water work window of July 1 through August 15. The SE 3rd Street project will require a FEMA Floodplain Permit from the City.

With the implementation of these measures, there will be no impacts to wetlands or other waters of the United States or State of Oregon.

4.3.2 No Action Alternative

Under the No Action Alternative, there would be no impacts to the FEMA floodplain.

4.4 Farmland

LCDC sets standards for land use through the State. Cities and counties then apply these standards through local comprehensive plans and land use ordinances. The City has zoned several EFU areas within the UGB, and there are also areas zoned as EFU in the urban reserve which are under the jurisdiction of Umatilla County.

4.4.1 Proposed Action

There are 11 water supply projects that are proposed in areas zone as EFU, as indicated in Table 2. These projects include: IM-50, IM-51, M-19, M-32, M-33, M-34, M-53, P-1, R-1, T-55, and T-56. All of the projects that traverse through land zoned as EFU are outside of the city limits with the exception of T-

55. Additionally, all of these projects would involve new construction with the exception of T-55. EFU land outside of the City limits is under the jurisdiction of Umatilla County.

Umatilla County has determined that each of these water main projects are defined as “utility facilities necessary for public service” as provided in ORS 215.283(u) and ORS 215.213(c). Per requirements in ORS 215.275, the City has considered alternative locations for each of these water main projects in order to avoid impacts to EFU. However, the proposed facilities are sited within EFU because each project is either on an existing right of way, is location dependent, or is needed to provide public health and safety services (fire suppression).

According to Section 152.056 of the Umatilla County Development Code, the proposed water supply projects located within EFU are defined as “utility facility service lines” and are considered “uses permitted outright.” As a result, these projects (IM-50, IM-51, M-19, M-32, M-33, M-34, M-53, P-1, T-55, and T-56) will not be required to apply for a zoning permit with Umatilla County. Correspondence with Umatilla County has confirmed that these projects are an allowable use and would not require additional review.

Additionally, according to the City of Pendleton’s Unified Development Section 6.02E, the proposed water supply projects located within EFU are defined as “utility facility service lines” and are considered “uses permitted outright.”

Therefore, it has been determined that these projects would have no impact to farmland.

4.4.2 No Action Alternative

Under the No Action Alternative, there would be no impacts to farmland.

4.5 Protected Species and Habitat

4.5.1 Proposed Action

The Umatilla River in the Pendleton vicinity is identified as suitable rearing and migration habitat for bull trout and for MCR steelhead (StreamNet, 2017) and is also designated Critical Habitat for bull trout and for MCR steelhead. Tributary streams in the Pendleton vicinity are not identified for bull trout use and are not designated as Critical Habitat for bull trout. Wildhorse Creek and McKay Creek, which are tributary streams that enter the Umatilla River in the eastern and western portions of the City, respectively, are identified as potential spawning and rearing habitat for MCR steelhead.

There is one proposed project, SE 3rd Street, that would cross the Umatilla River. No other streams would be crossed by any other project.

Construction for SE 3rd Street would involve excavating bore holes and directional drilling on either side of the Umatilla River floodplain to install a slip line pipe replacement in the existing pipe which crosses under the River. No ground surface disturbance activities will occur within 150 feet of the FEMA

floodplain, and all construction will occur during the ODFW recommended in-water work window of July 1 through August 15.

The City will require construction contractors to prepare and implement erosion and sediment control plans for individual projects, to minimize the potential for soil erosion and sediment-laden runoff leaving the project sites during and after construction. Best Management Practices (BMPs) for sediment and erosion control would include, but are not limited to sediment fencing, erosion control blankets, and the delineation of clearing and grubbing limits with high visibility fencing. Pollution control measures would include maintaining appropriate containment and spill response materials on-site during all construction activities, and staging equipment and materials in designated areas away from any water bodies.

The proposed water supply system projects are anticipated to have **no effect** on the species and habitat protected under the Endangered Species Act. Construction of the projects does not involve in-water work, the ground surfaces of project areas will be restored to pre-construction conditions. Stormwater runoff created by increases to impervious surface from projects P-1, P-3, P-4, P-5 and the new well are expected to be negligible.

The Umatilla River in the Pendleton vicinity is considered Pacific salmon EFH. The proposed water supply system projects are anticipated to **not adversely affect** EFH for Pacific Salmon. Construction of the projects does not involve in-water work, the ground surfaces of project areas will be restored to pre-construction conditions, and the potential for stormwater-related impacts to the Umatilla River is negligible.

4.5.2 No Action Alternative

63 percent of the water mains throughout the City were installed prior to 1950. If this aging infrastructure is not repaired under the No Action Alternative, there is potential that pipe failure and subsequent discharge would temporarily impact Bull Trout, MCR steelhead, and EFH. Such a pipe failure would likely incur a temporary discharge of treated water supply into the stream, thus temporarily increasing turbidity and altering water chemistry.

5.0 IMPACT MINIMIZATION MEASURES

5.1 Minimization Measures For All Projects

The impact minimization measures discussed in Section 4.0 that will be implemented for all 67 water projects are summarized, as follows.

- BMPs to manage fugitive dust will be implemented during the construction and excavation processes.
- DEQ guidance documents will be adhered to for all construction involving non-friable asbestos insulated water (transite) pipes.

- An Inadvertent Discovery Plan has been prepared for the project and will be implemented during construction.
- The City will require construction contractors to prepare and implement erosion and sediment control plans for individual projects, to minimize the potential for soil erosion and sediment-laden runoff leaving the project sites during and after construction. Best Management Practices for sediment and erosion control will be employed. These would include, but are not limited to sediment fencing, erosion control blankets, and the delineation of clearing and grubbing limits with high visibility fencing.
- The City will require construction contractors to restore and reseed all ground surface disturbance resulting from the projects in order to prevent the infiltration of noxious weeds.
- Pollution control measures would include maintaining appropriate containment and spill response materials on-site during all construction activities, and staging equipment and materials in designated areas away from any water bodies.

5.2 Project Specific Minimization Measures

The impact minimization measures discussed in Section 4.0 that will be implemented for specific projects are summarized, as follows.

SE 3rd Street

- Construction occur during ODFW's recommended in-water work window (July 1 through August 15).
- No ground surface disturbance activities within 150 feet of the FEMA floodplain.

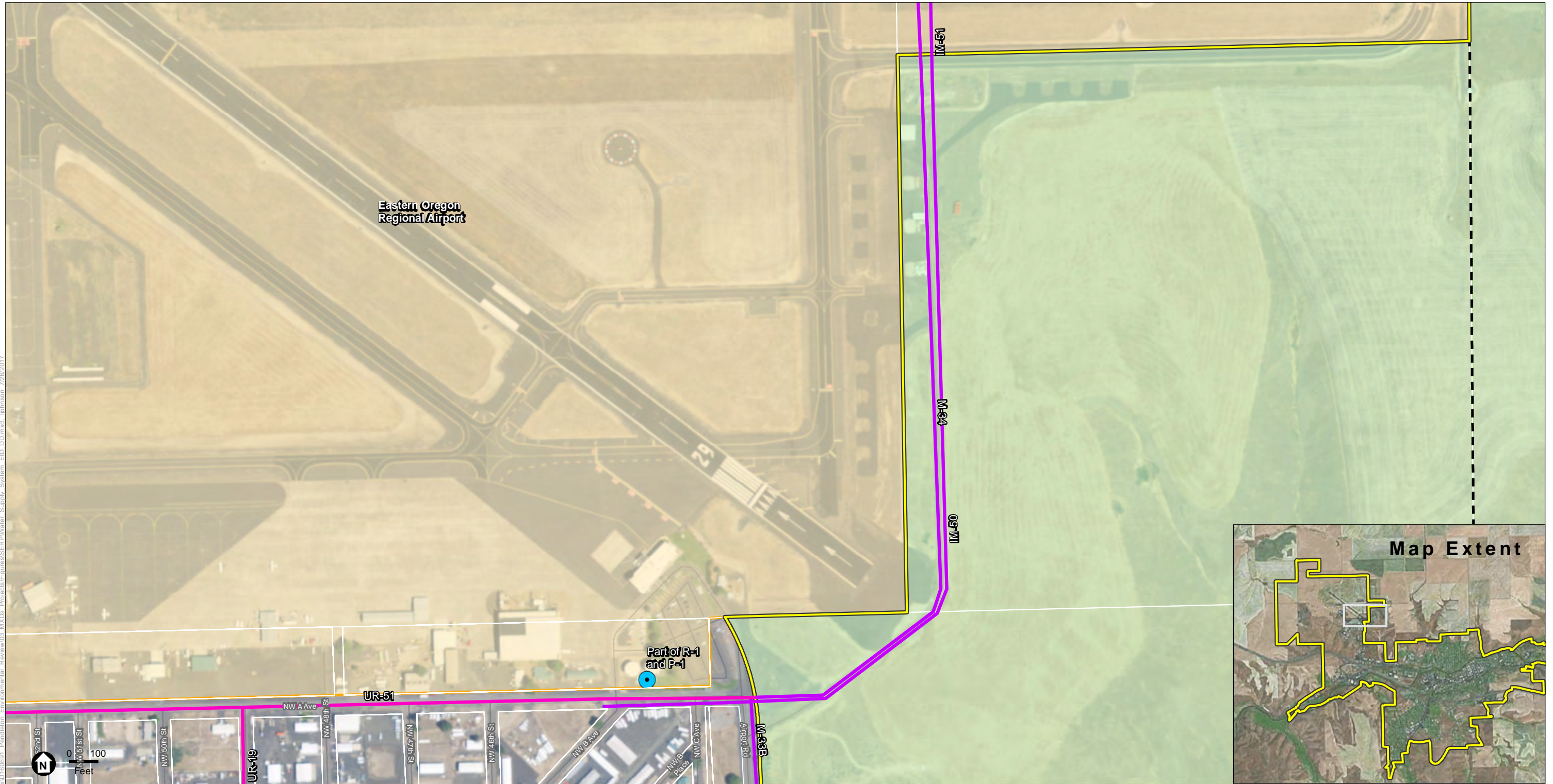
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APPENDIX A: FIGURES

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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID IM-50 - Site Plan
Water Supply System
City of Pendleton, OR

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| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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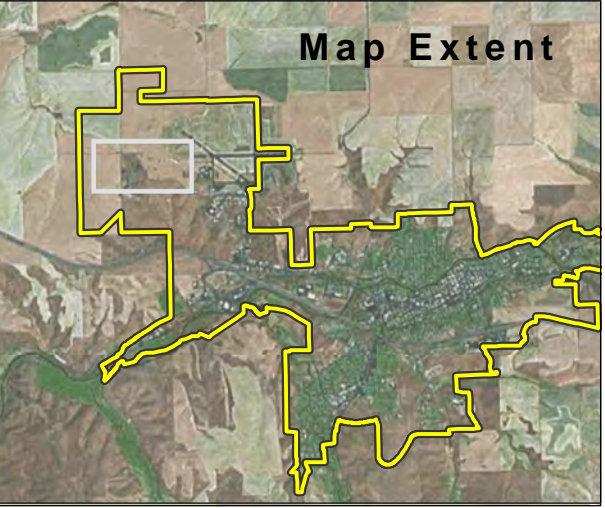
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ESA Project No.160691 Environmental Information Document

Project ID IM-51 - Site Plan
Water Supply System
City of Pendleton, OR

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| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

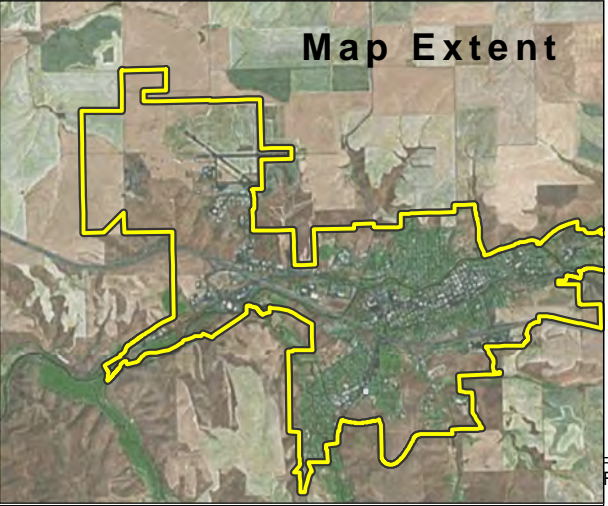
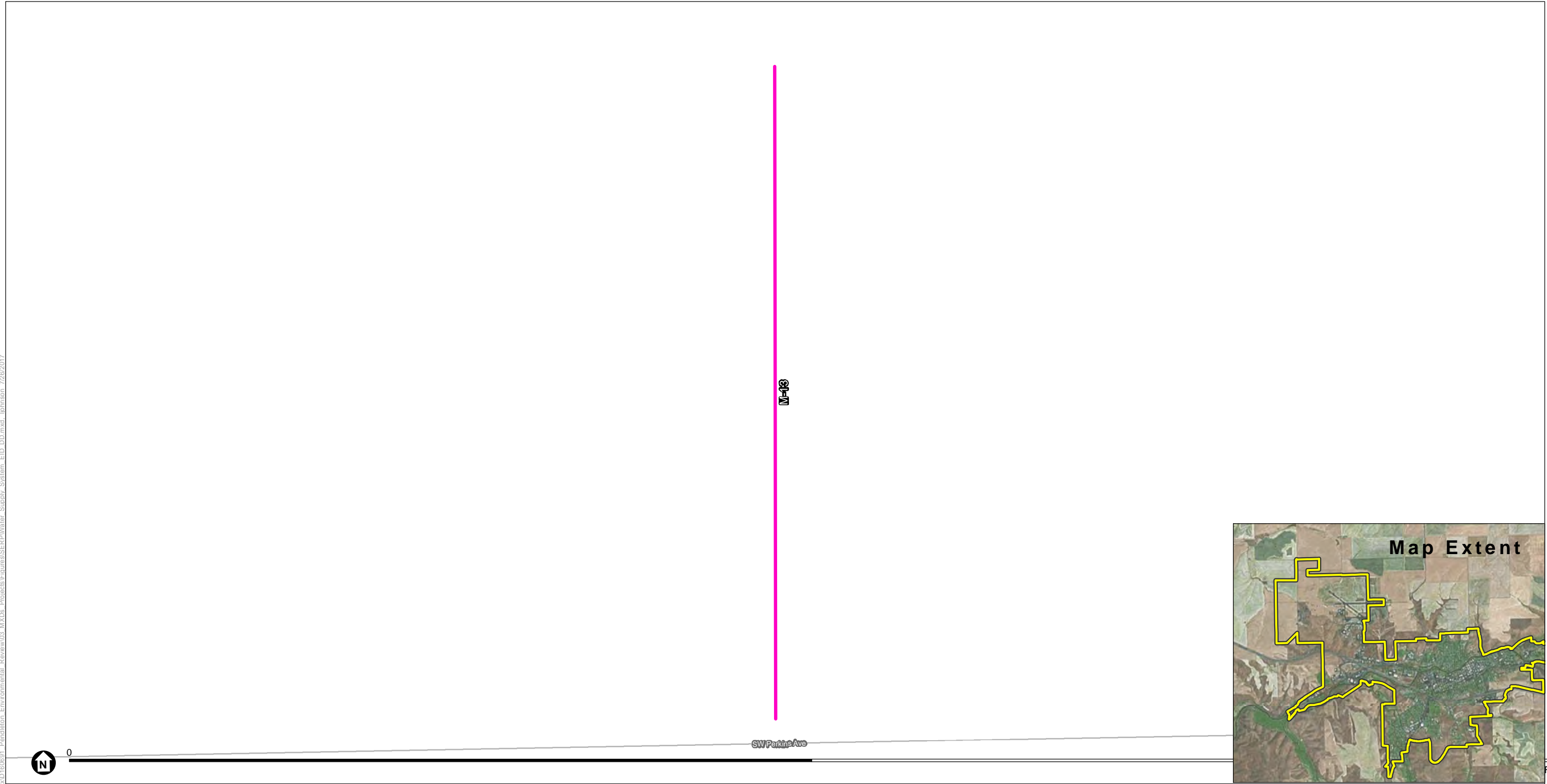
ESA Project No.160691 Environmental Information Document

Project ID IM-54 - Site Plan
Water Supply System
City of Pendleton, OR

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| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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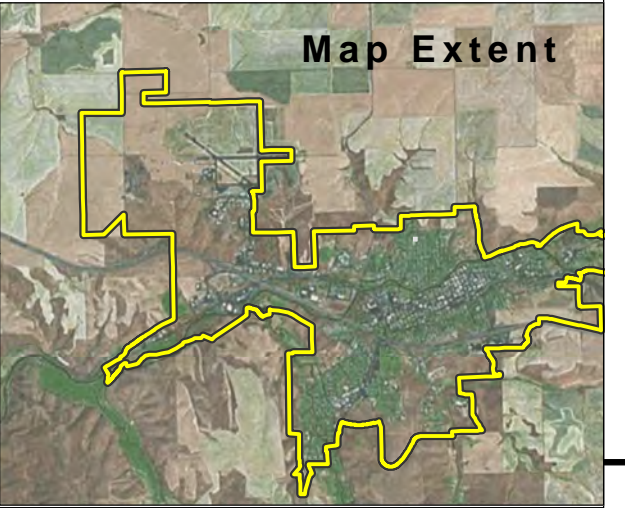
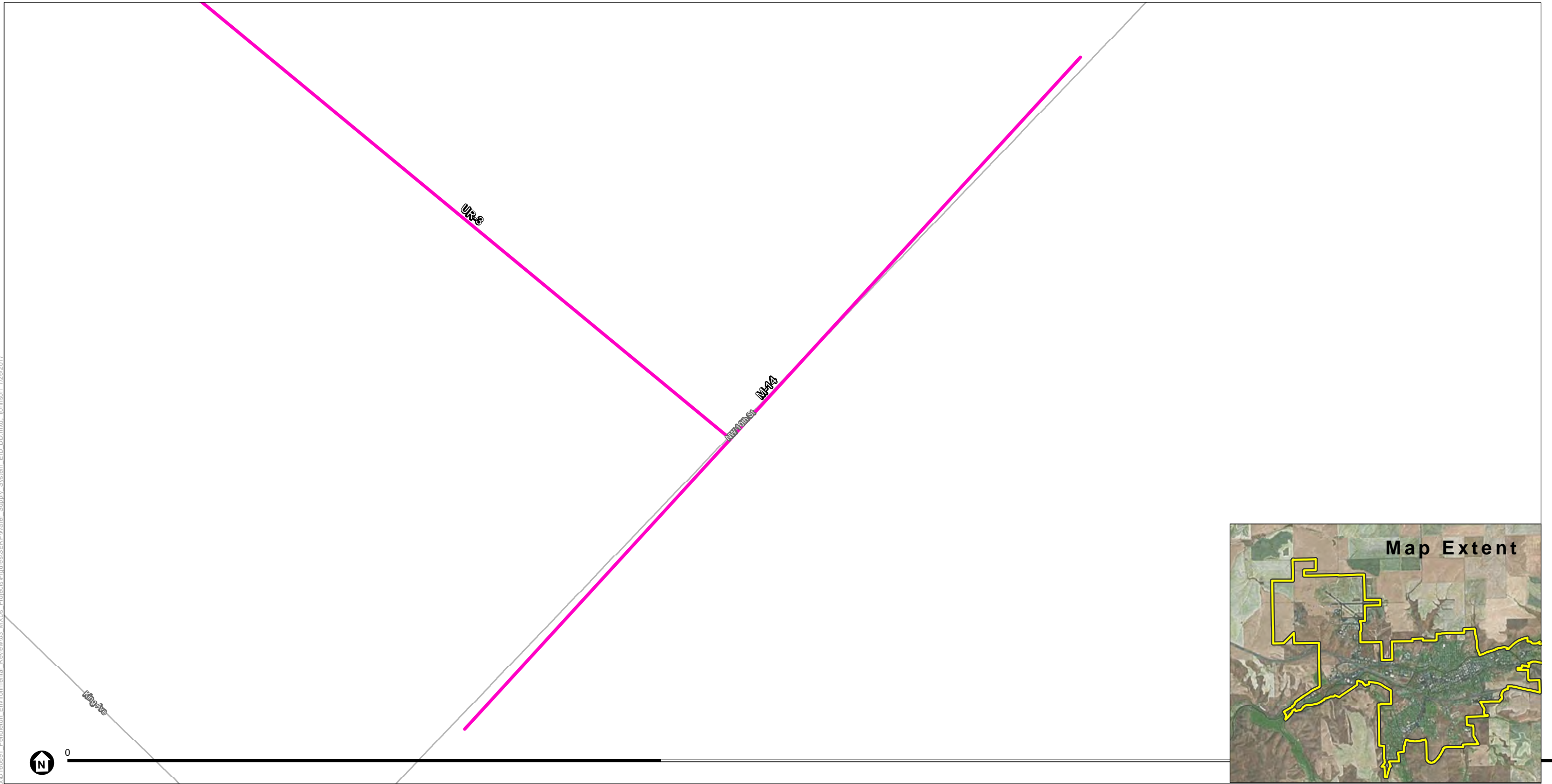
ESA Project No.160691 Environmental Information Document

Project ID M-13 - Site Plan
 Water Supply System
 City of Pendleton, OR

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| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station IP - Interim Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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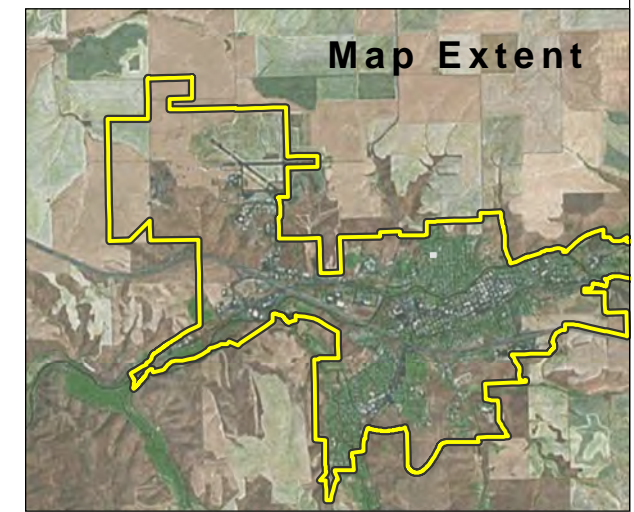
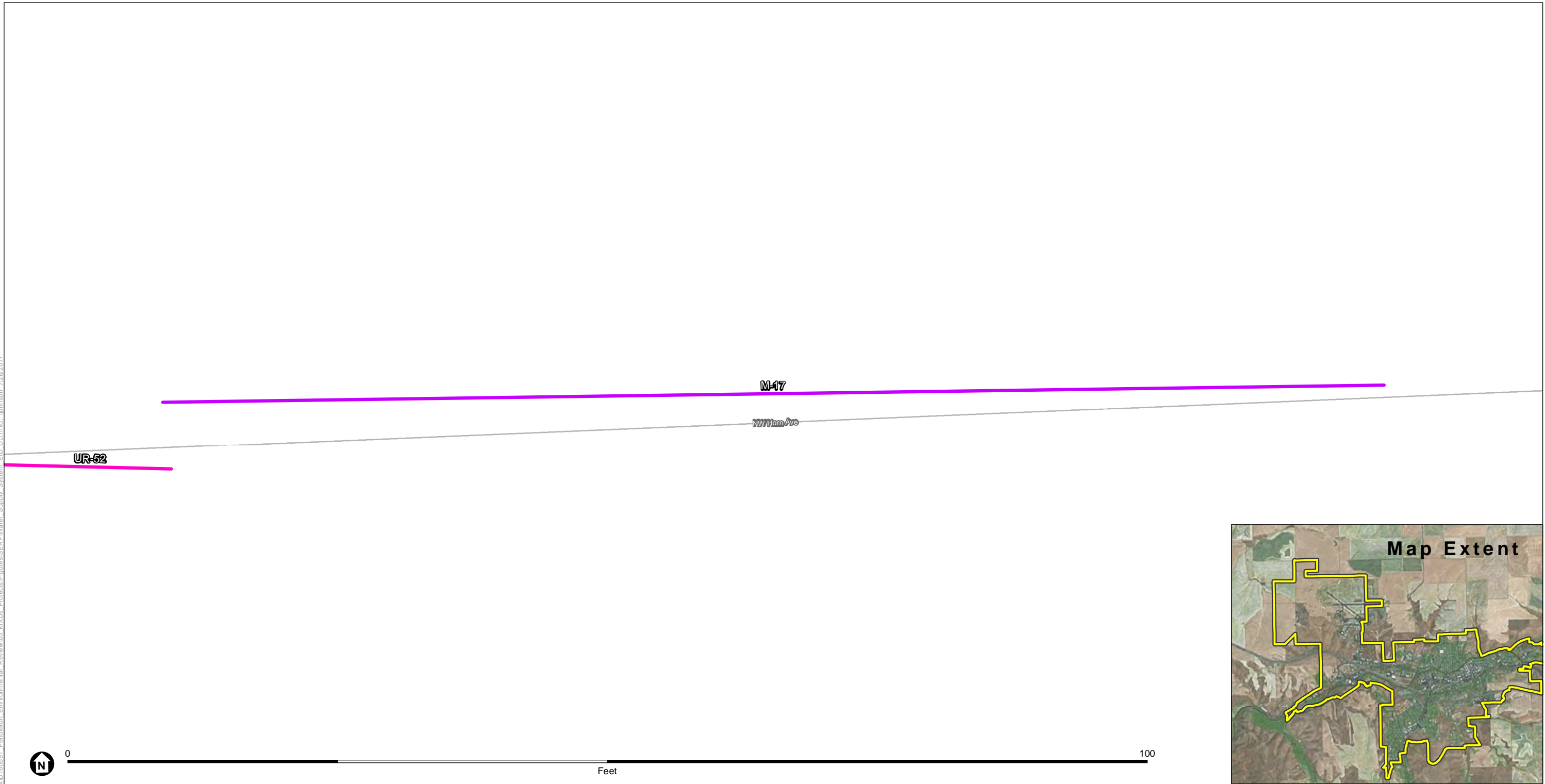
ESA Project No.160691 Environmental Information Document

Project ID M-14 - Site Plan
 Water Supply System
 City of Pendleton, OR

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| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |



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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID M-17 - Site Plan
 Water Supply System
 City of Pendleton, OR

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| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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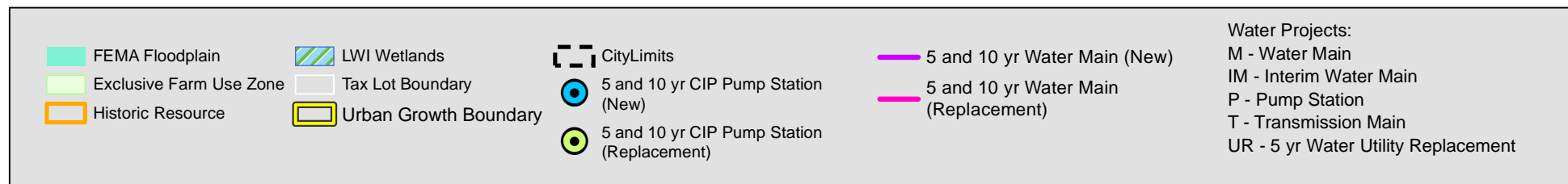


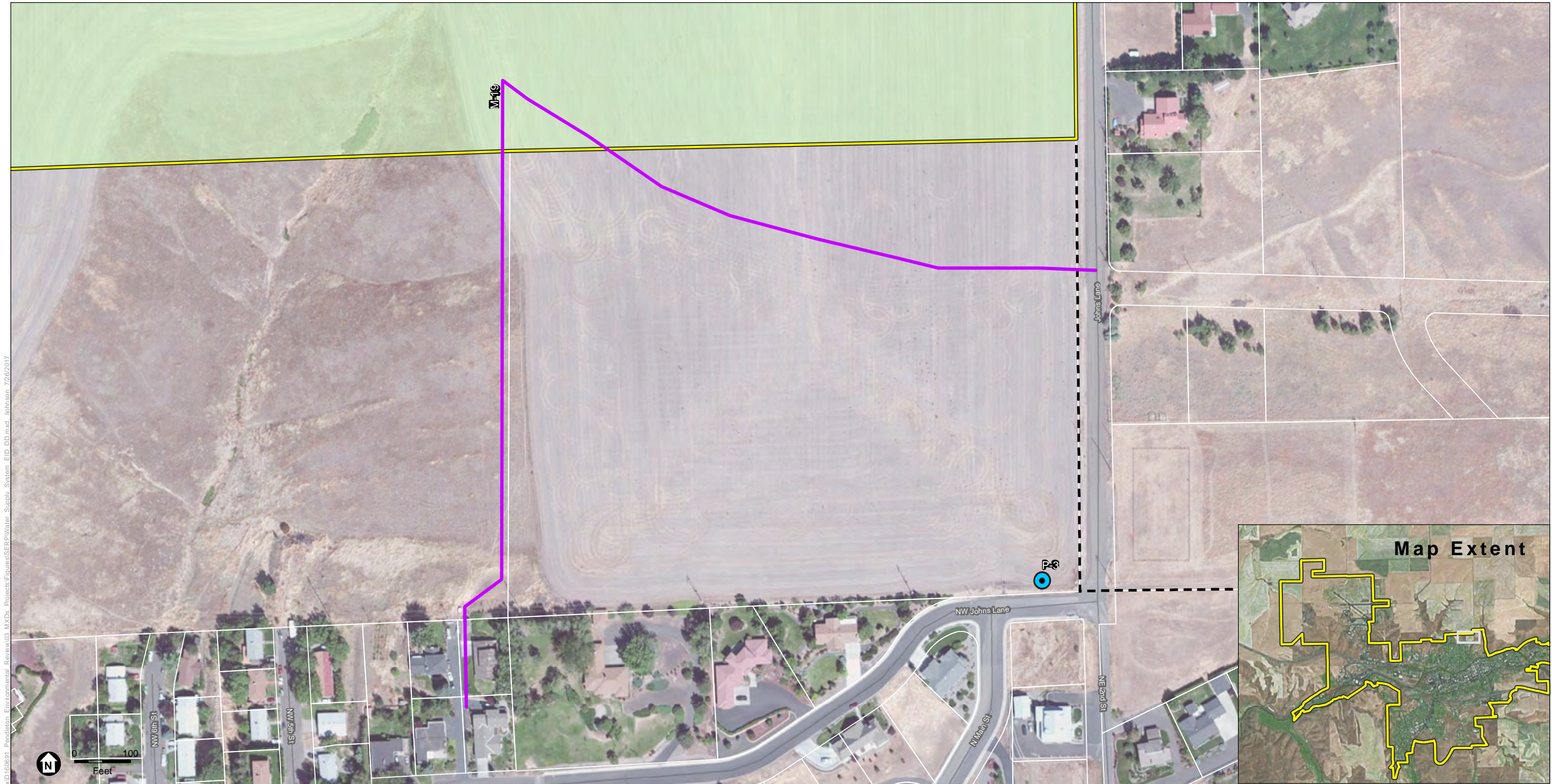
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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID M-18 - Site Plan
Water Supply System
City of Pendleton, OR



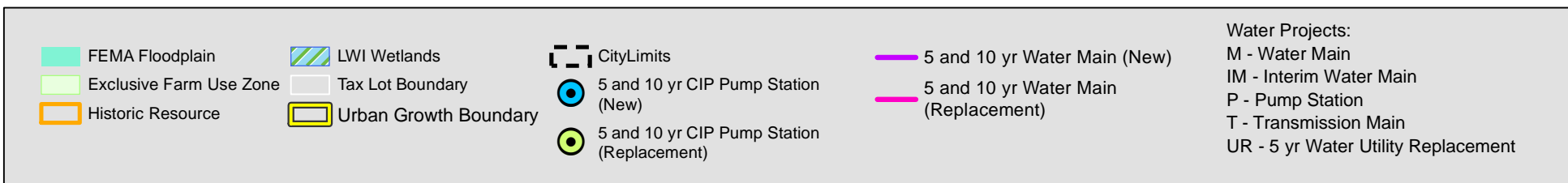


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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID M-19 - Site Plan
Water Supply System
City of Pendleton, OR





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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID M-30 - Site Plan
 Water Supply System
 City of Pendleton, OR

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| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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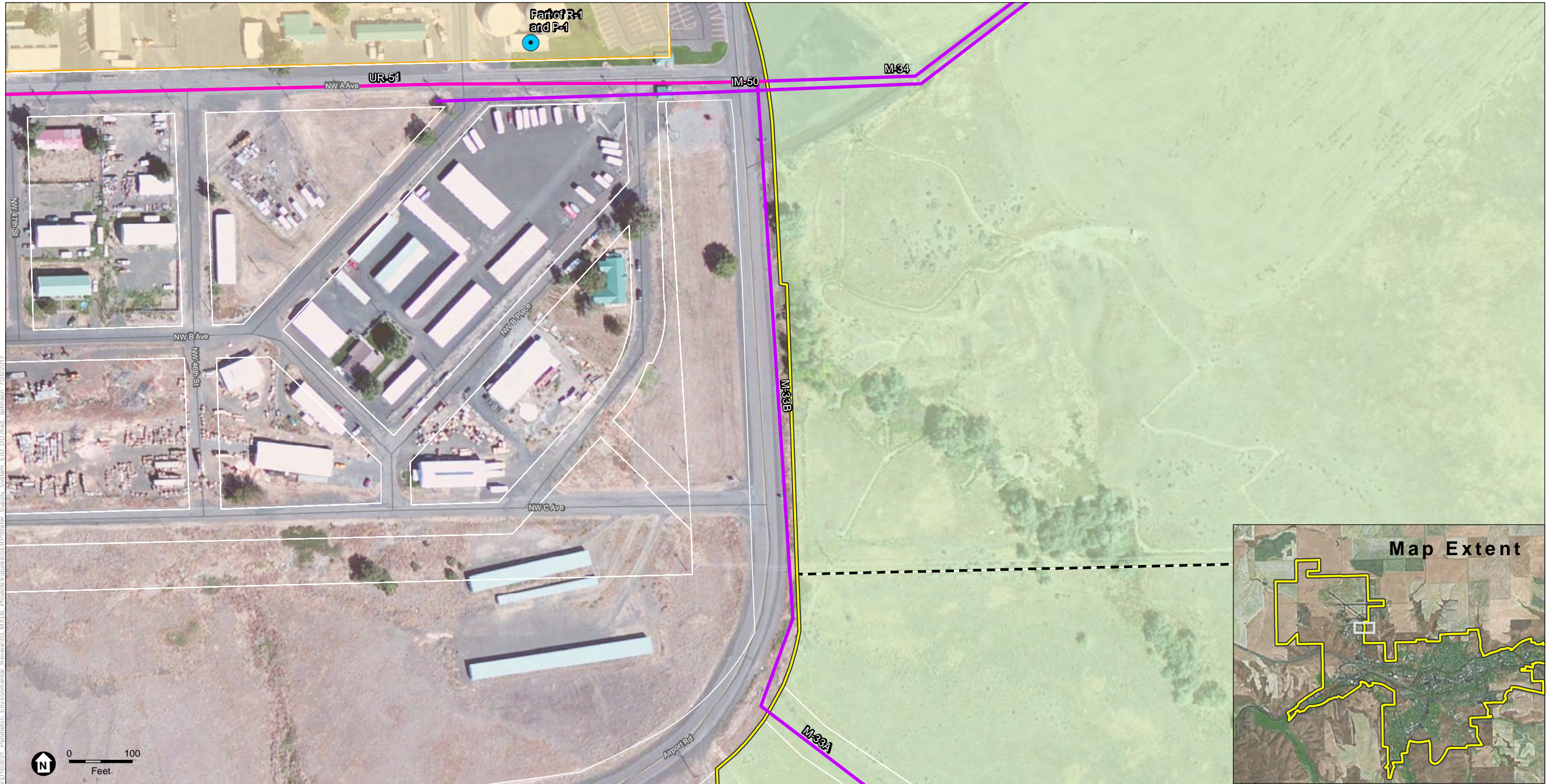
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ESA Project No.160691 Environmental Information Document

Project ID M-33A - Site Plan
 Water Supply System
 City of Pendleton, OR

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| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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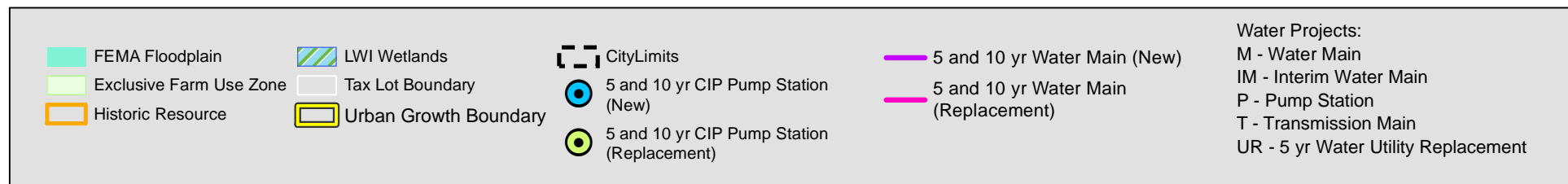


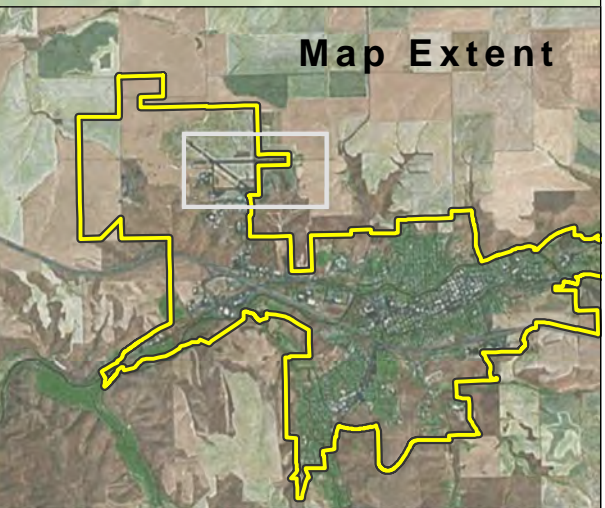
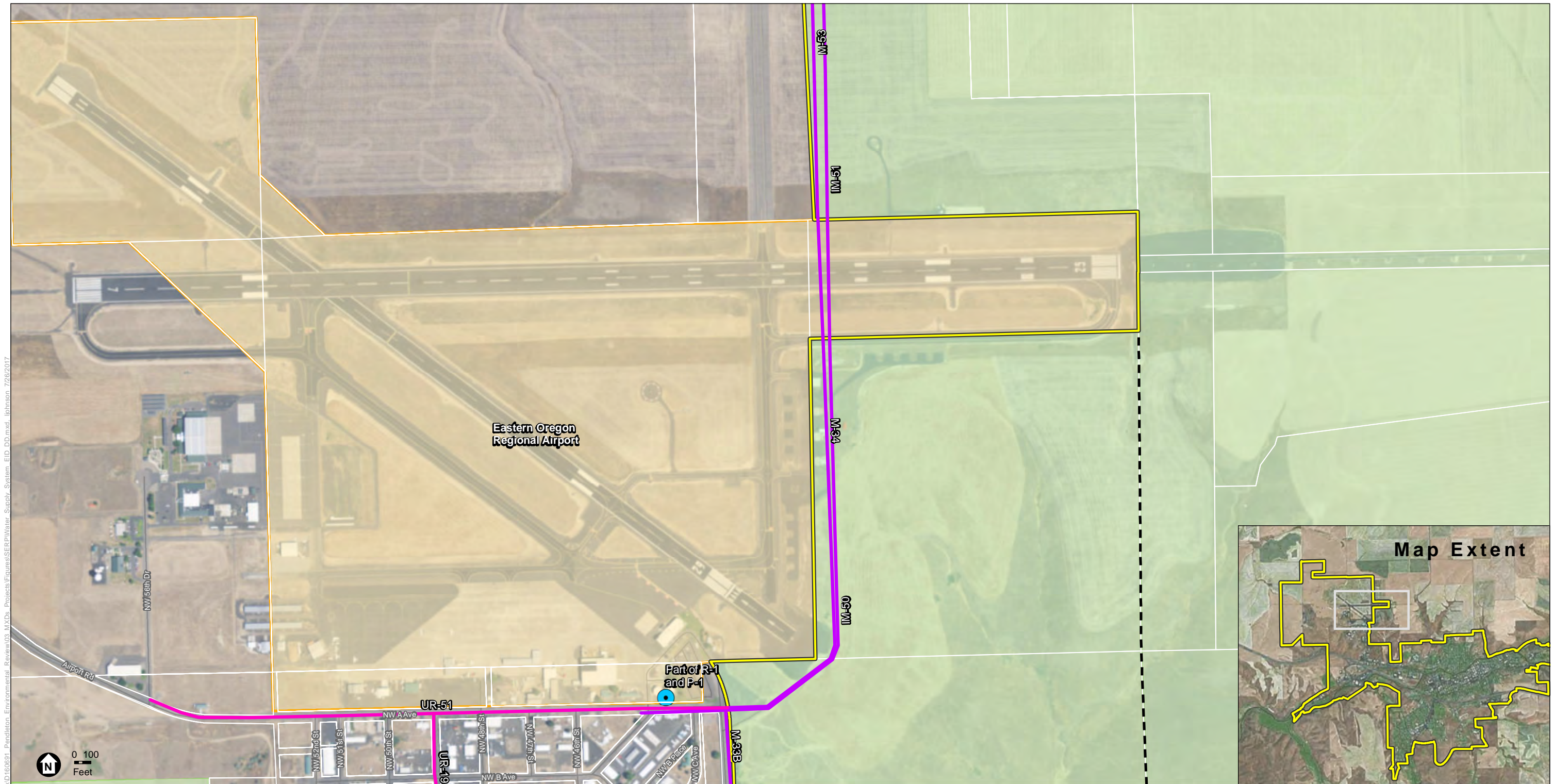
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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID M-33B - Site Plan
 Water Supply System
 City of Pendleton, OR





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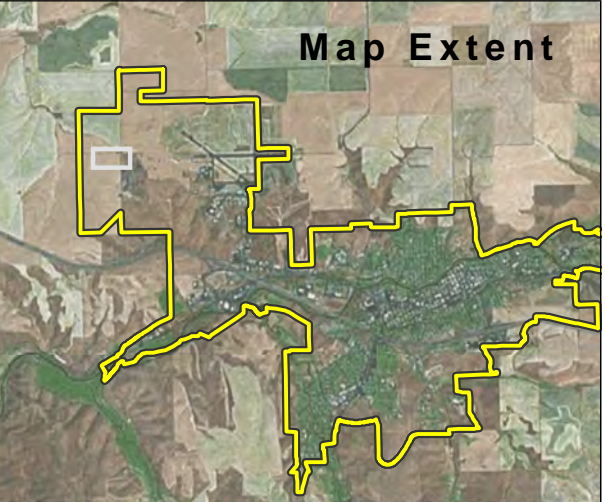
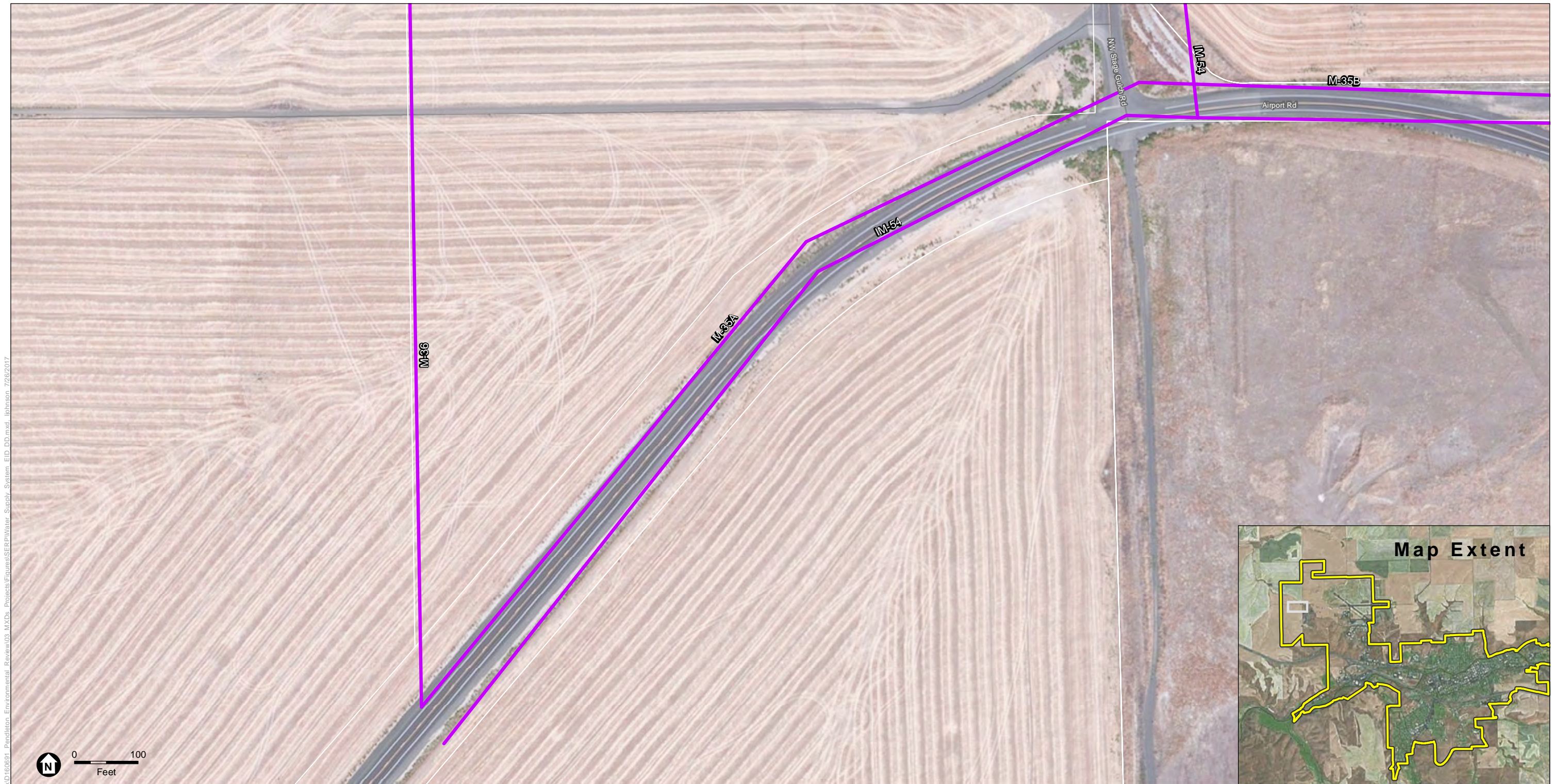
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ESA Project No.160691 Environmental Information Document

Project ID M-34 - Site Plan
Water Supply System
City of Pendleton, OR

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|-------------------------|-----------------------|--|--------------------------------------|--|
| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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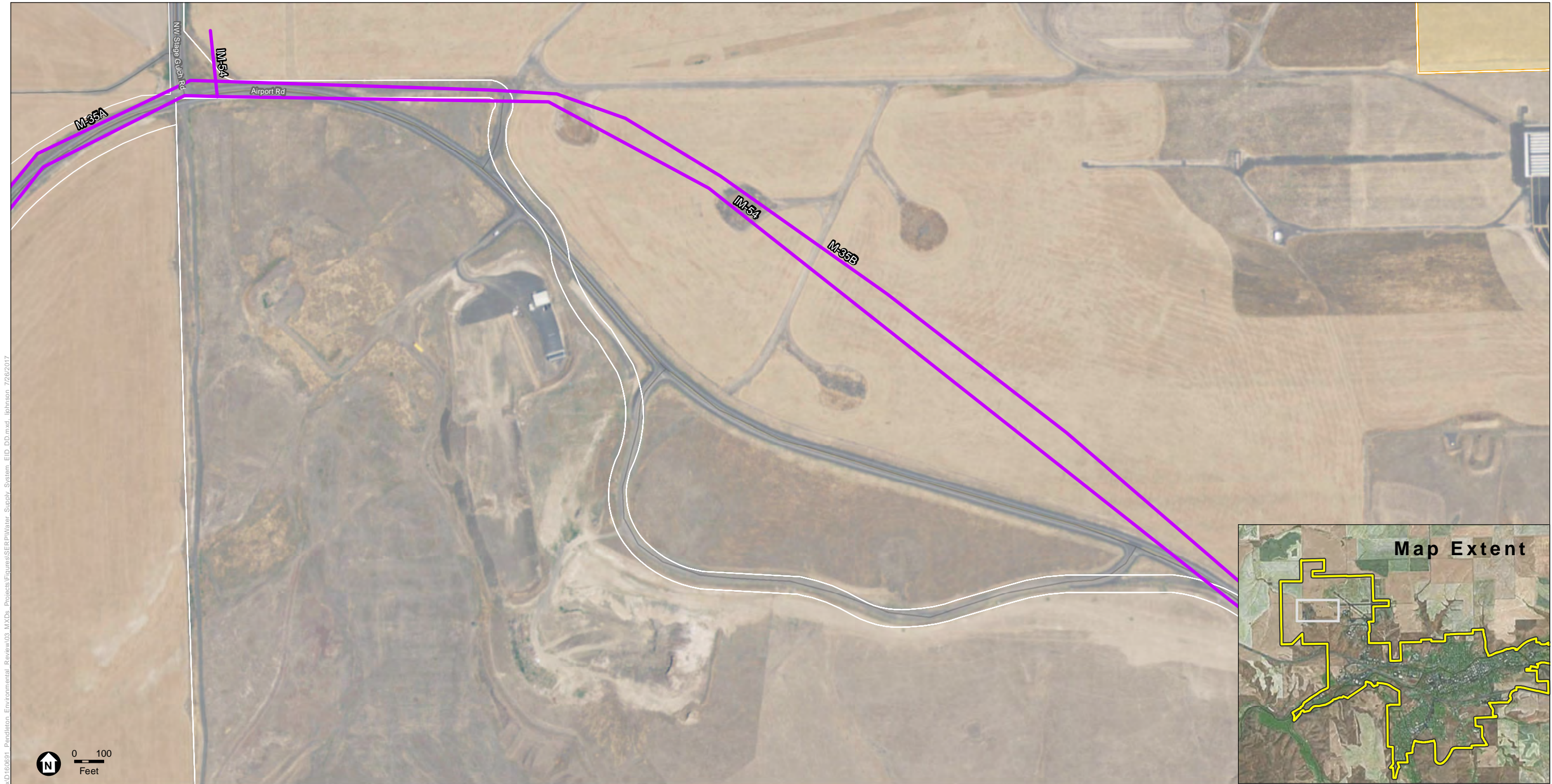
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ESA Project No.160691 Environmental Information Document

Project ID M-35A - Site Plan
 Water Supply System
 City of Pendleton, OR

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| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

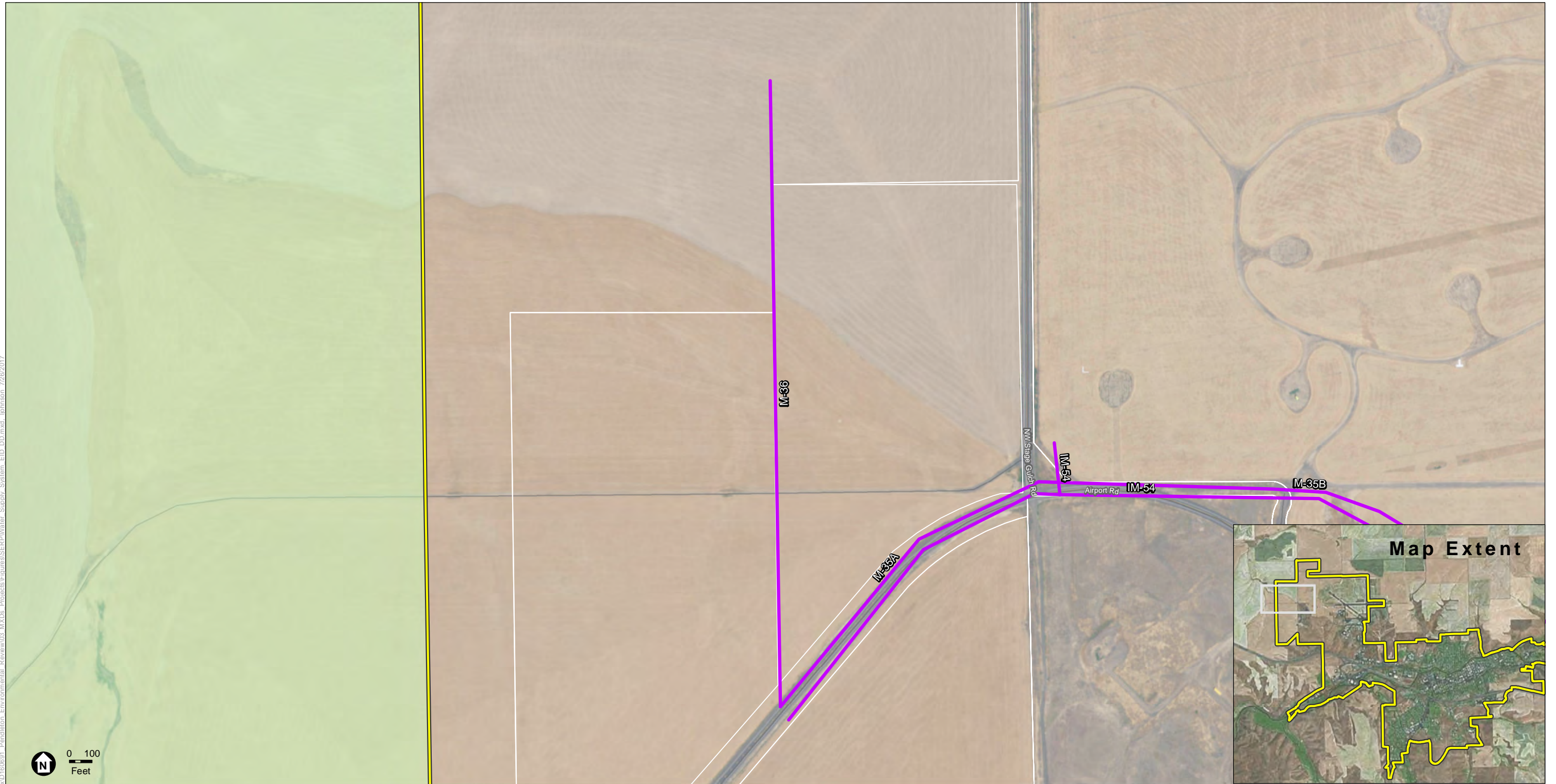
ESA Project No.160691 Environmental Information Document

Project ID M-35B - Site Plan
 Water Supply System
 City of Pendleton, OR

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|-------------------------|-----------------------|--|--------------------------------------|---|
| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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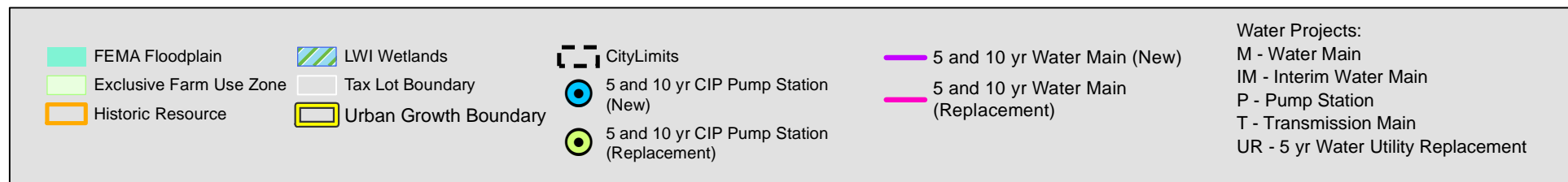
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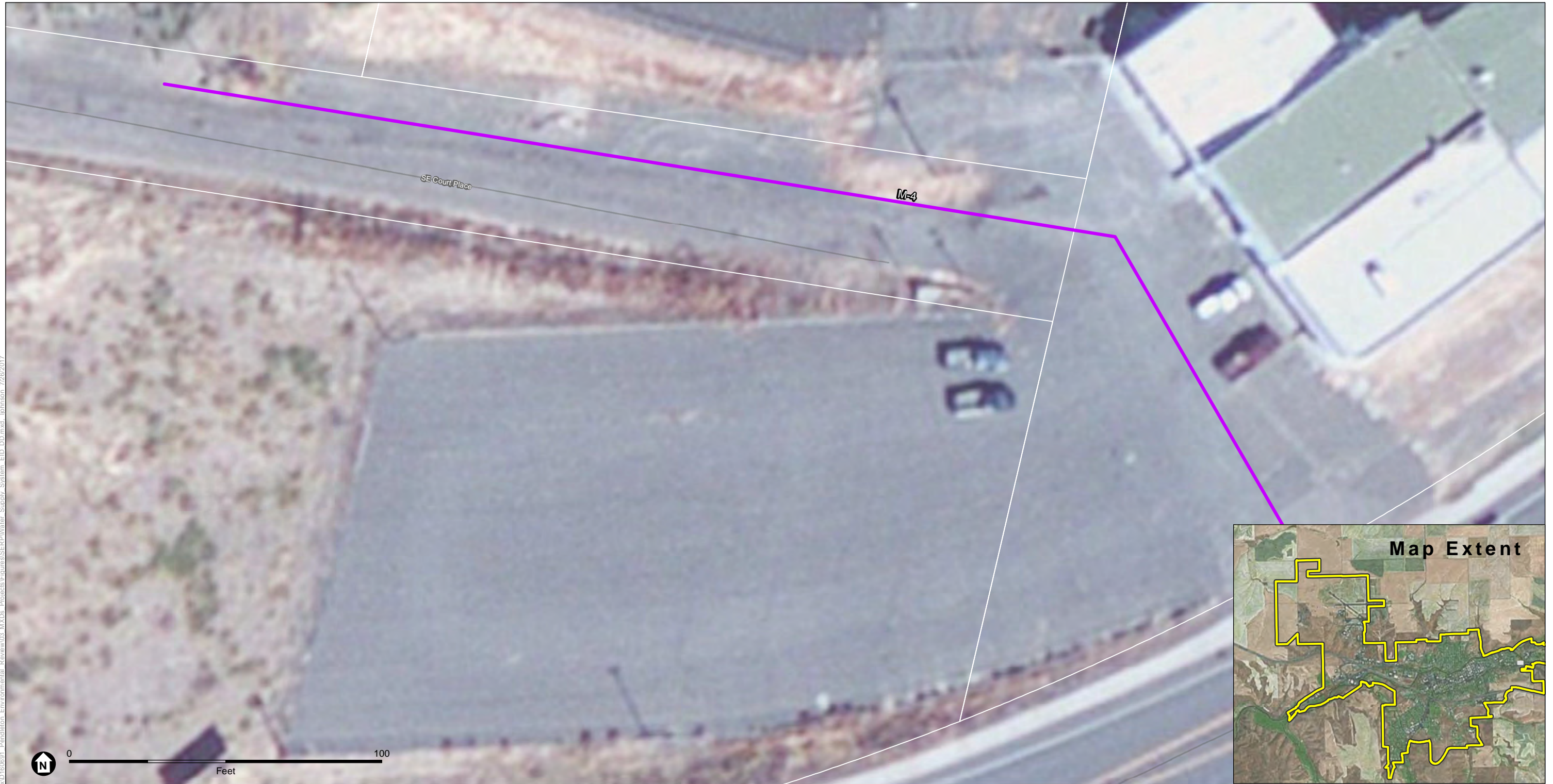
SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID M-36 - Site Plan
 Water Supply System
 City of Pendleton, OR



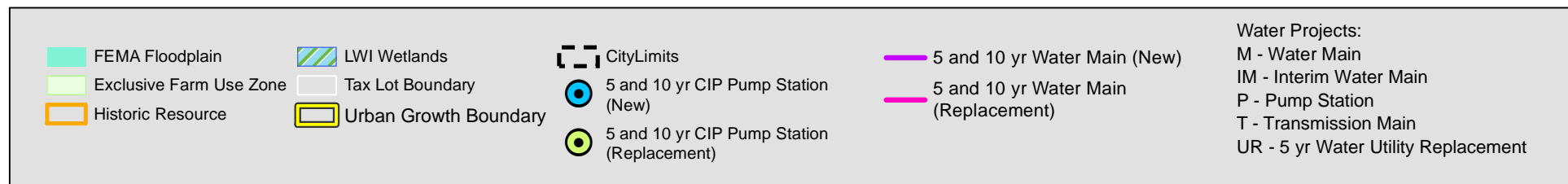
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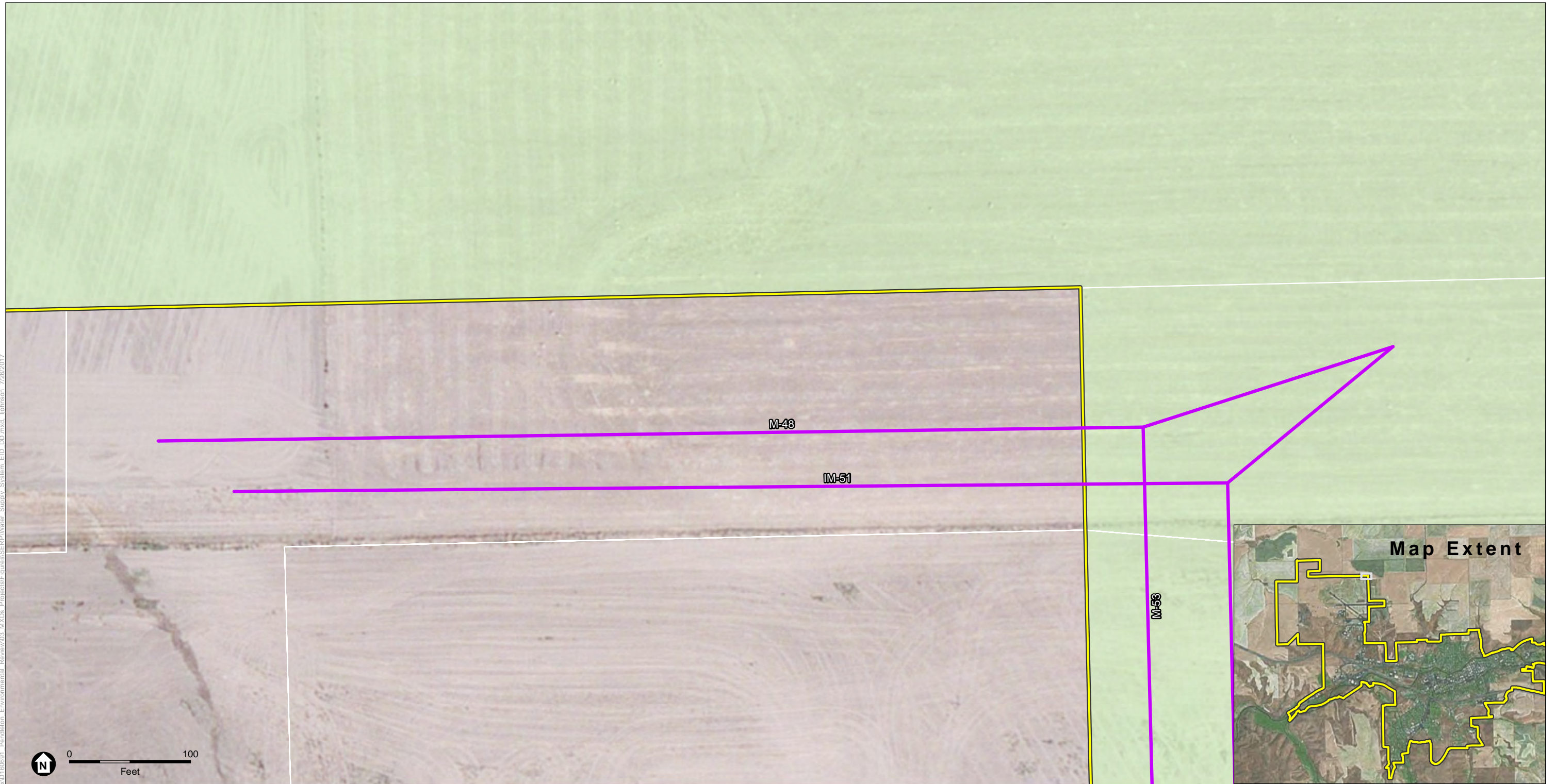
SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID M-4 - Site Plan
 Water Supply System
 City of Pendleton, OR



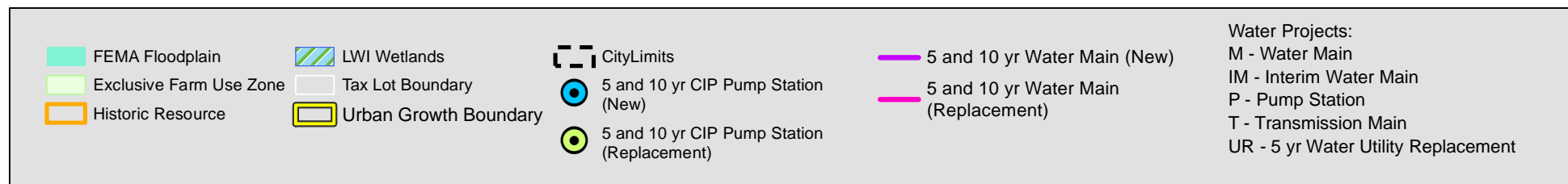
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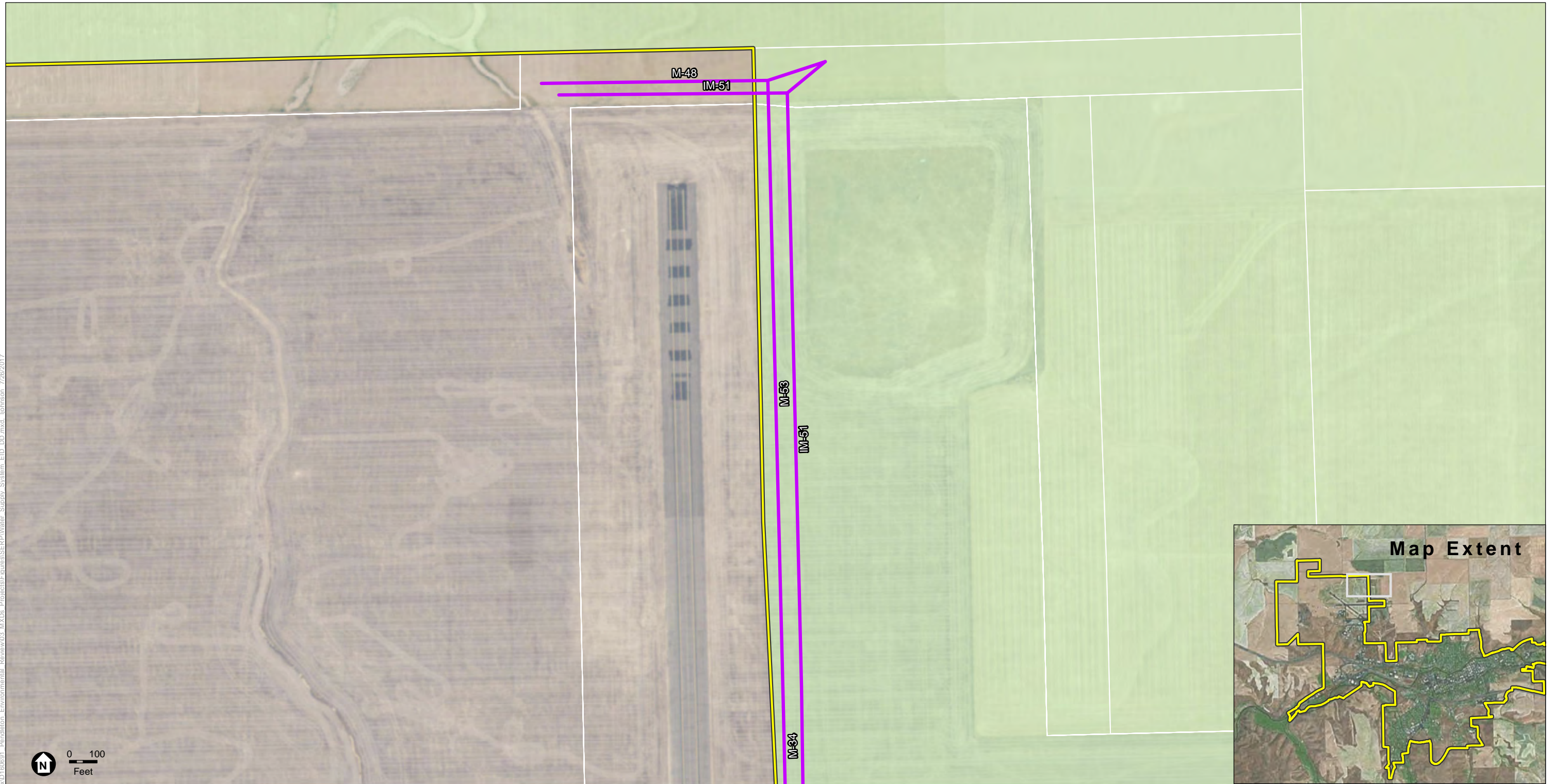
SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID M-48 - Site Plan
 Water Supply System
 City of Pendleton, OR



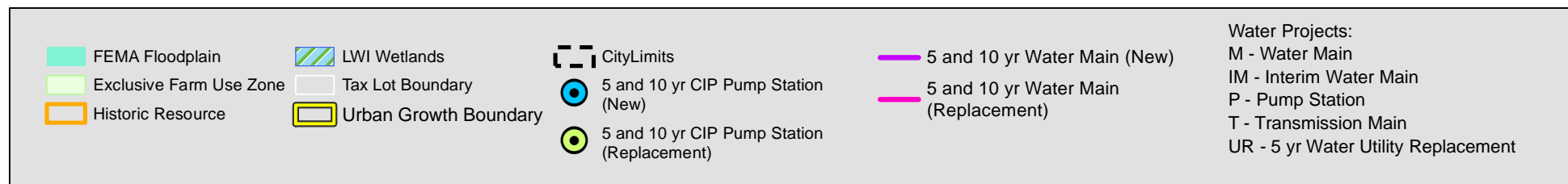
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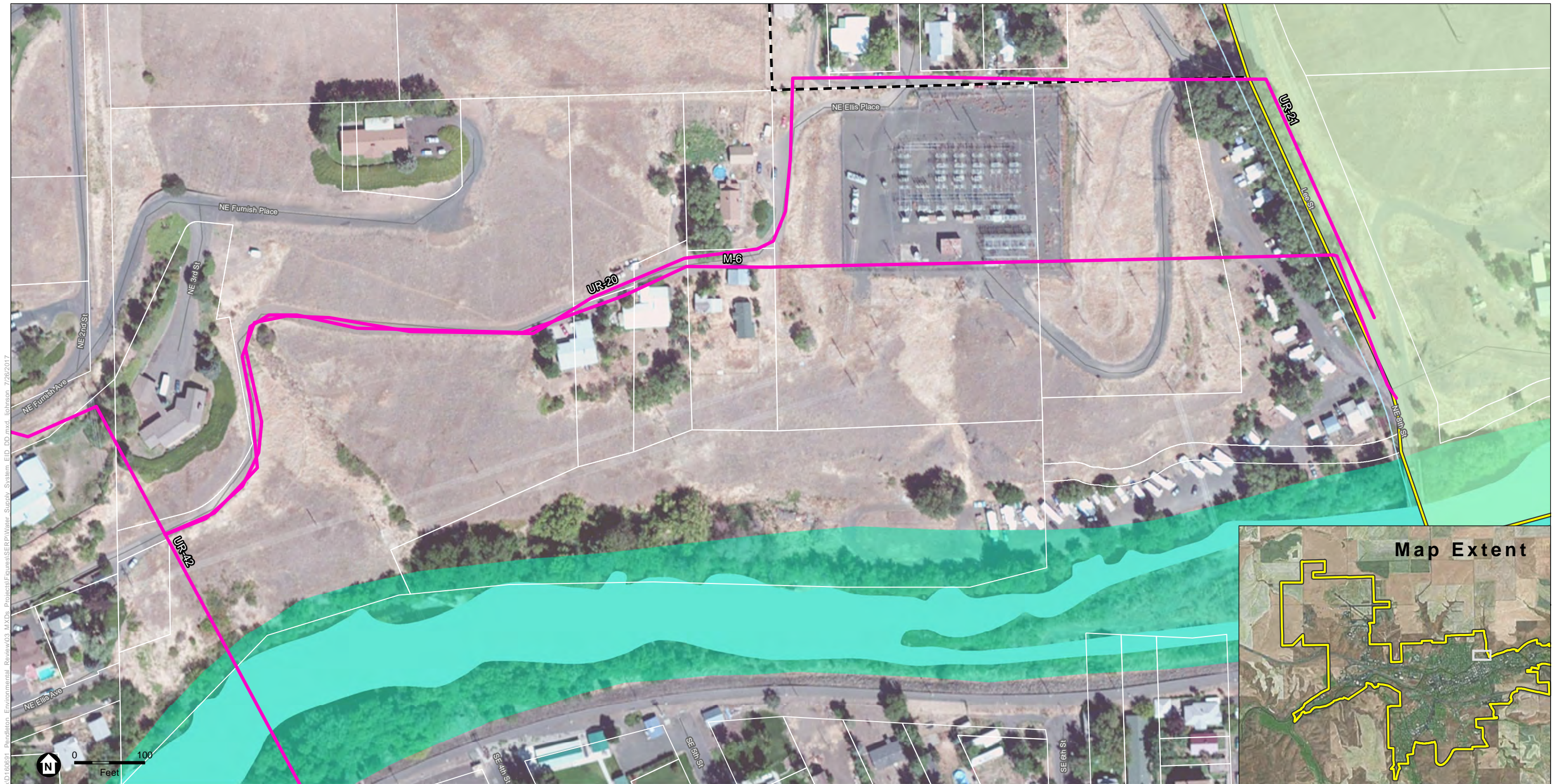


SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID M-53 - Site Plan
Water Supply System
City of Pendleton, OR





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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID M-6 - Site Plan
Water Supply System
City of Pendleton, OR

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| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

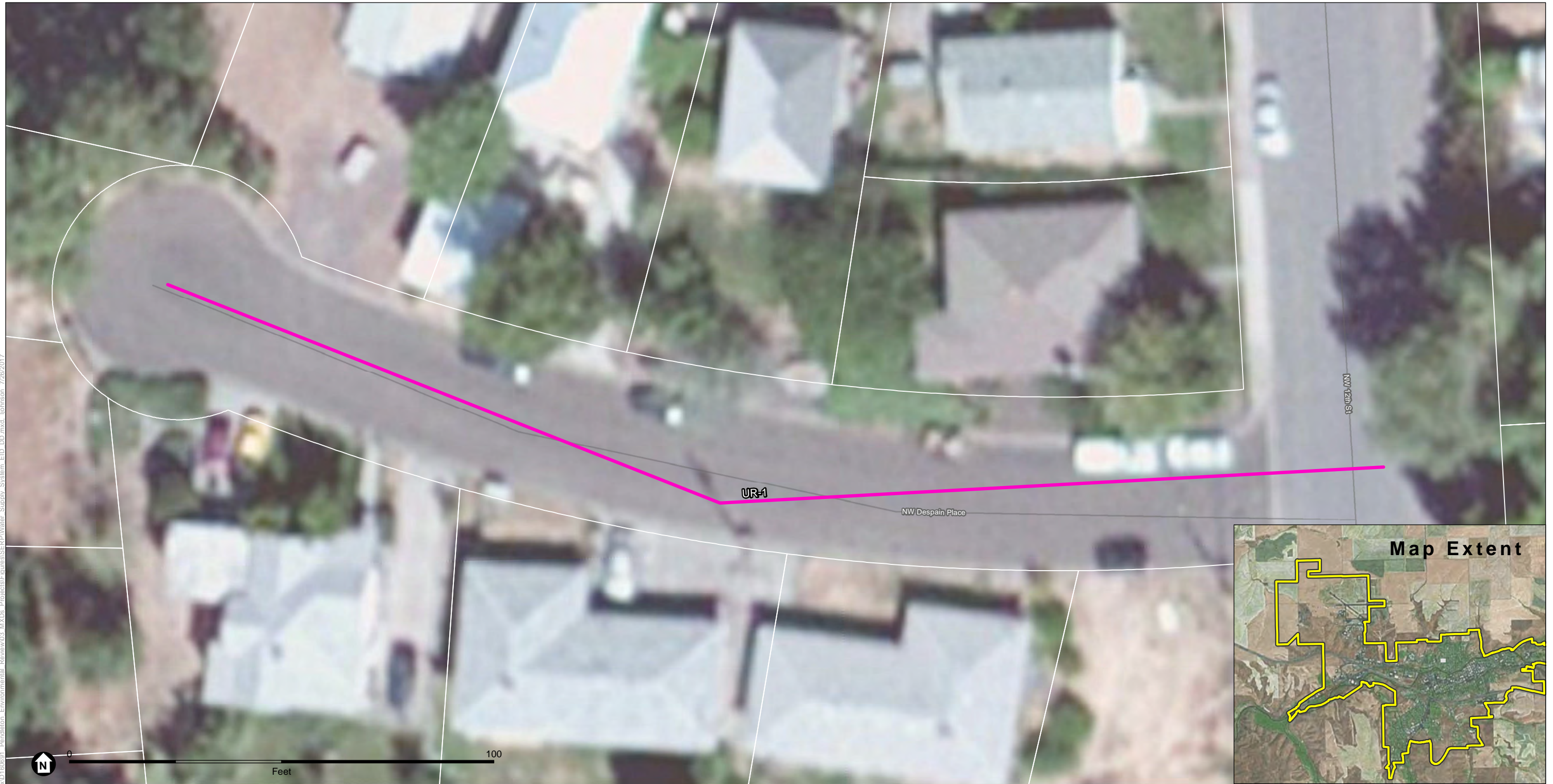
ESA Project No.160691 Environmental Information Document

Project ID T-55 - Site Plan
Water Supply System
City of Pendleton, OR

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| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |



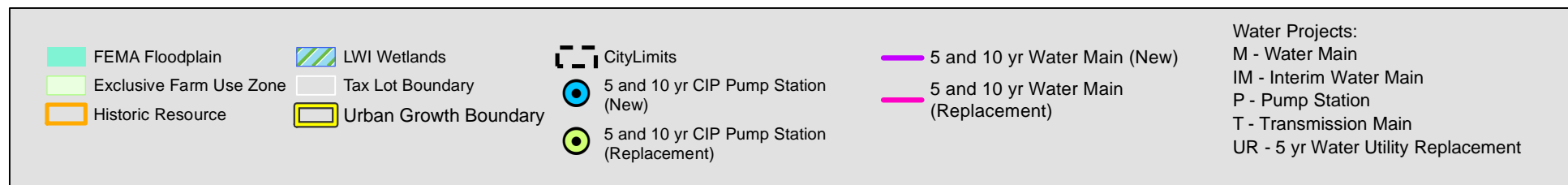
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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID UR-1 - Site Plan
Water Supply System
City of Pendleton, OR



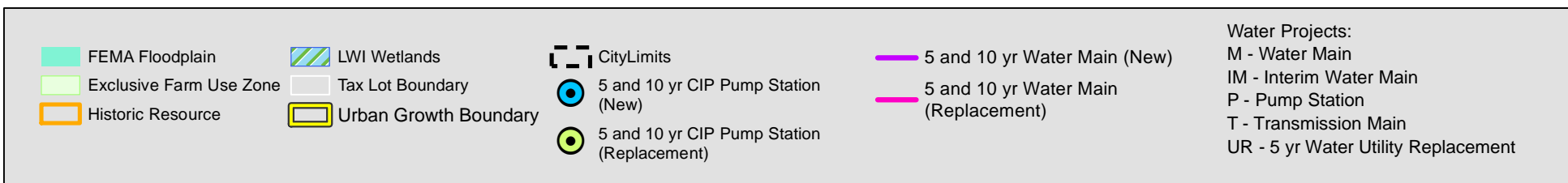


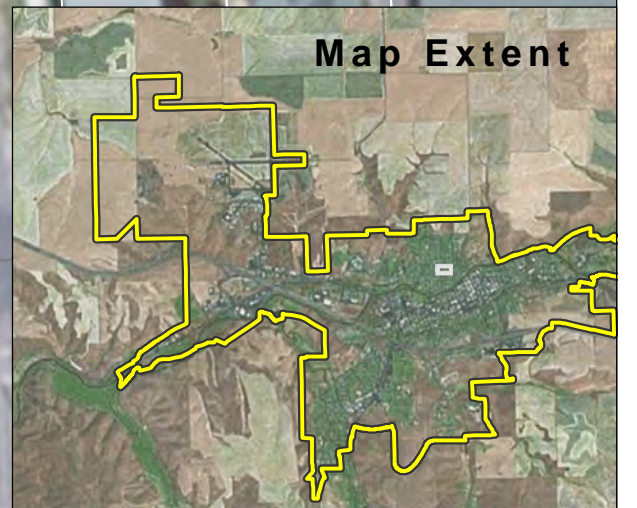
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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID UR-10 - Site Plan
Water Supply System
City of Pendleton, OR





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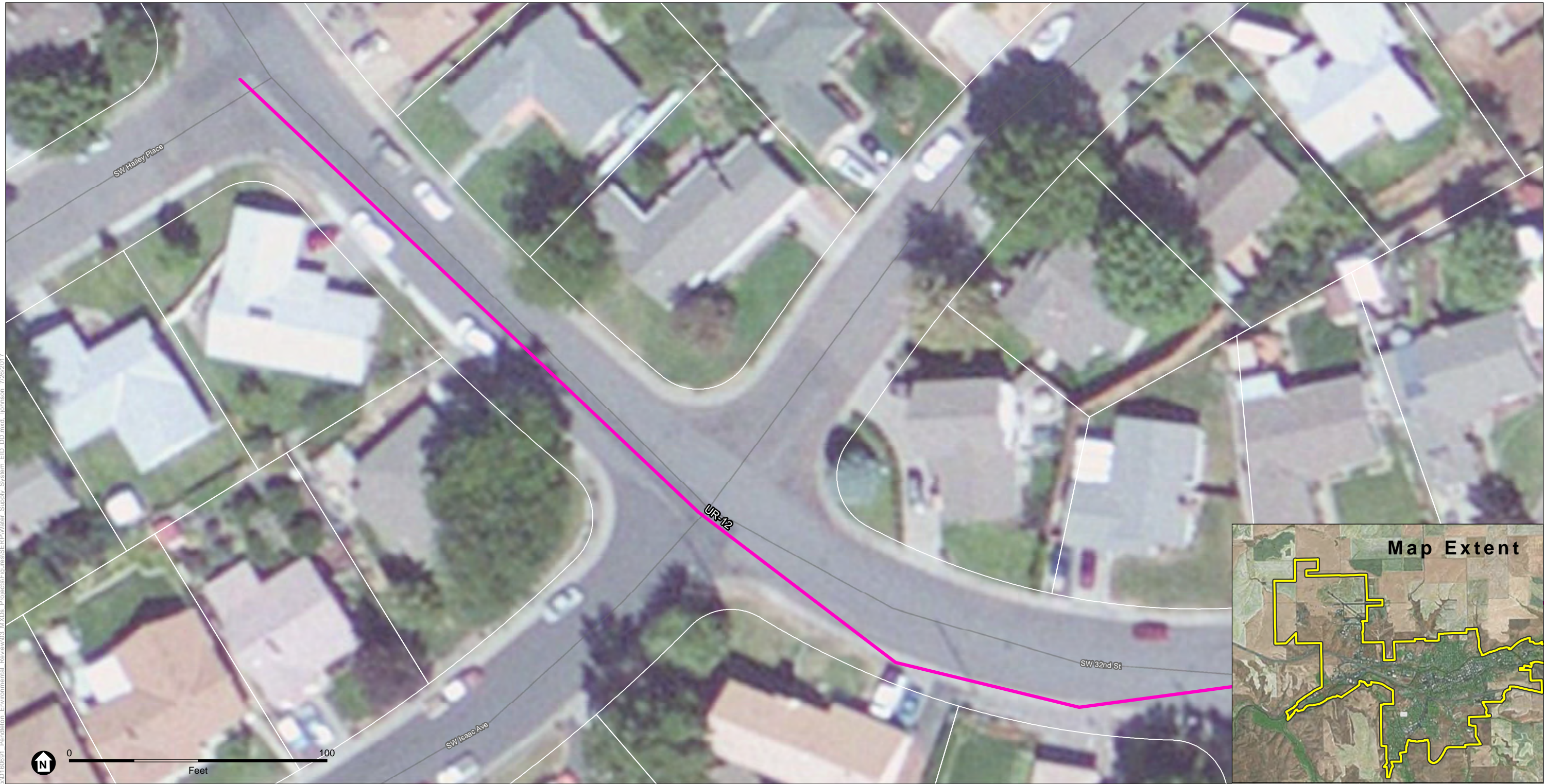
SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

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| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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ESA Project No.160691 Environmental Information Document

Project ID UR-11 - Site Plan
 Water Supply System
 City of Pendleton, OR



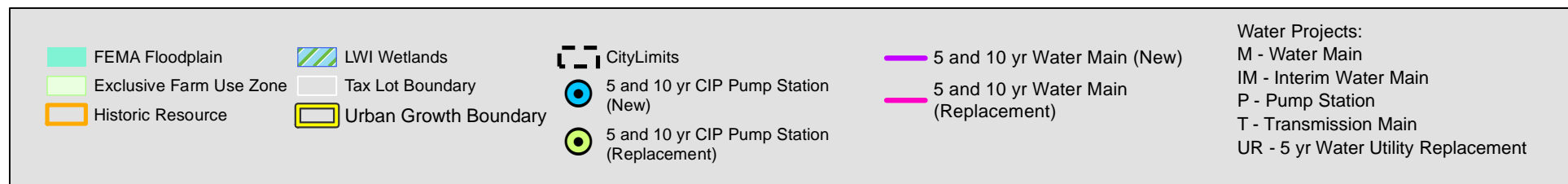


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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID UR-12 - Site Plan
Water Supply System
City of Pendleton, OR





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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

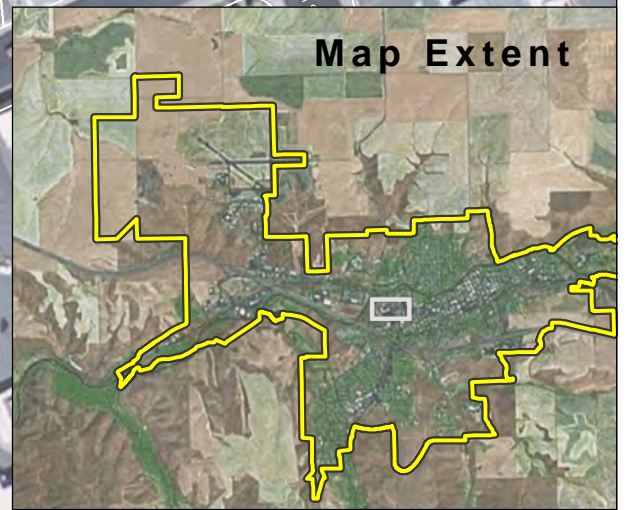
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Project ID UR-13 - Site Plan
Water Supply System
City of Pendleton, OR

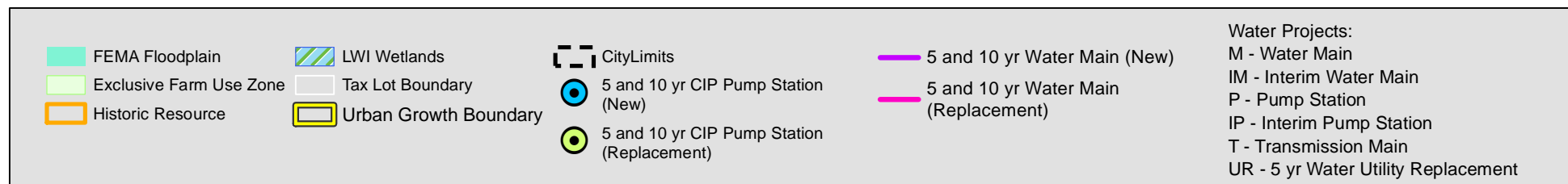
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| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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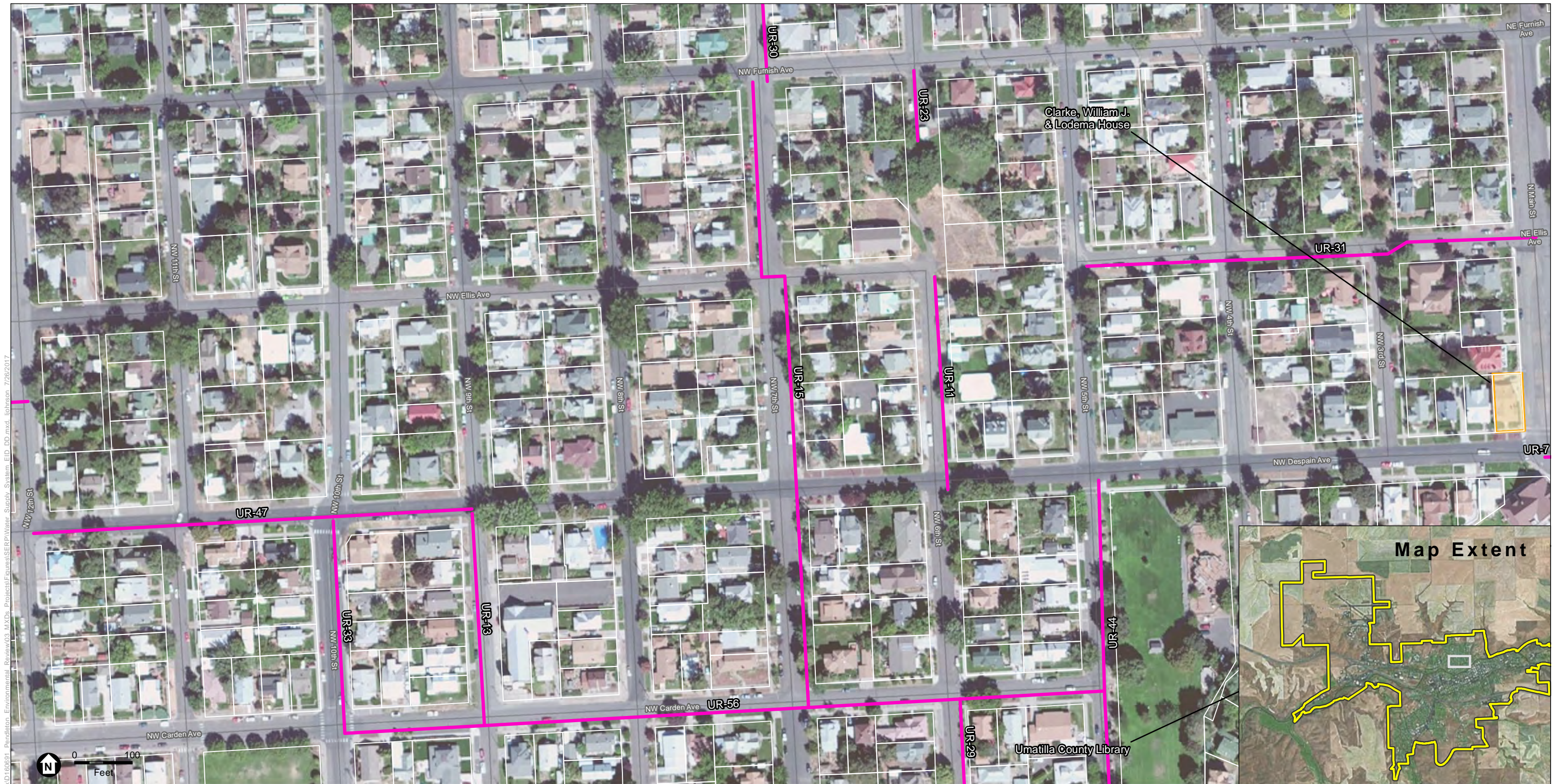
SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017



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Project ID UR-14 - Site Plan
 Water Supply System
 City of Pendleton, OR





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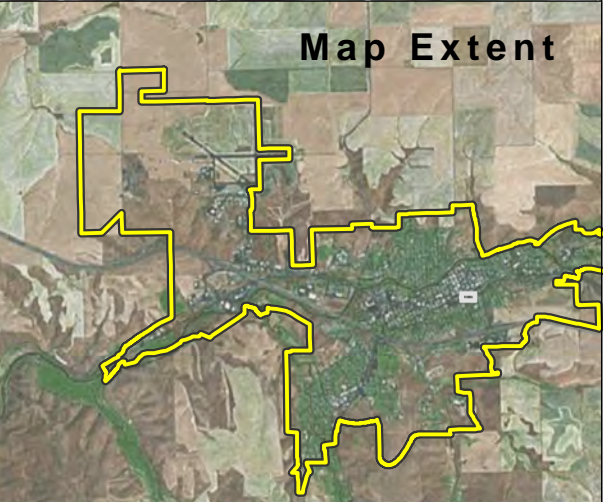
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ESA Project No.160691 Environmental Information Document

Project ID UR-15 - Site Plan
Water Supply System
City of Pendleton, OR

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| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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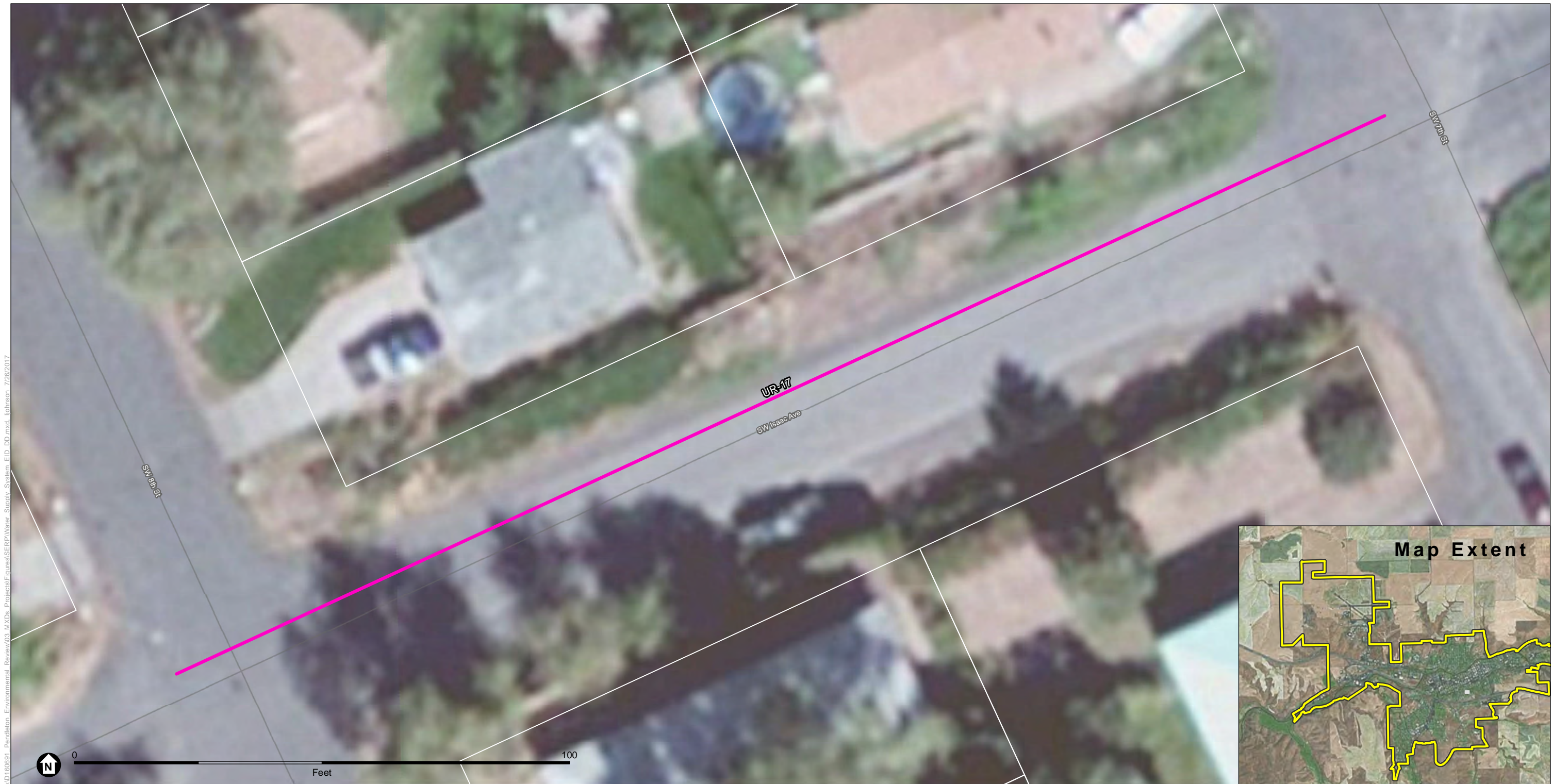
SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

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| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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ESA Project No.160691 Environmental Information Document

Project ID UR-16 - Site Plan
 Water Supply System
 City of Pendleton, OR





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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID UR-17 - Site Plan
Water Supply System
City of Pendleton, OR

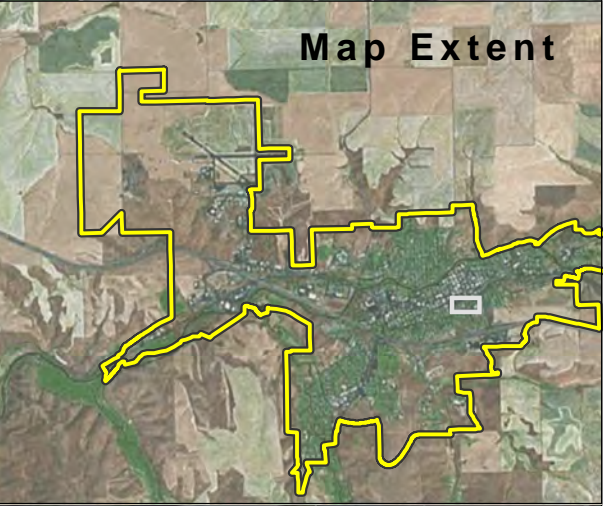
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| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

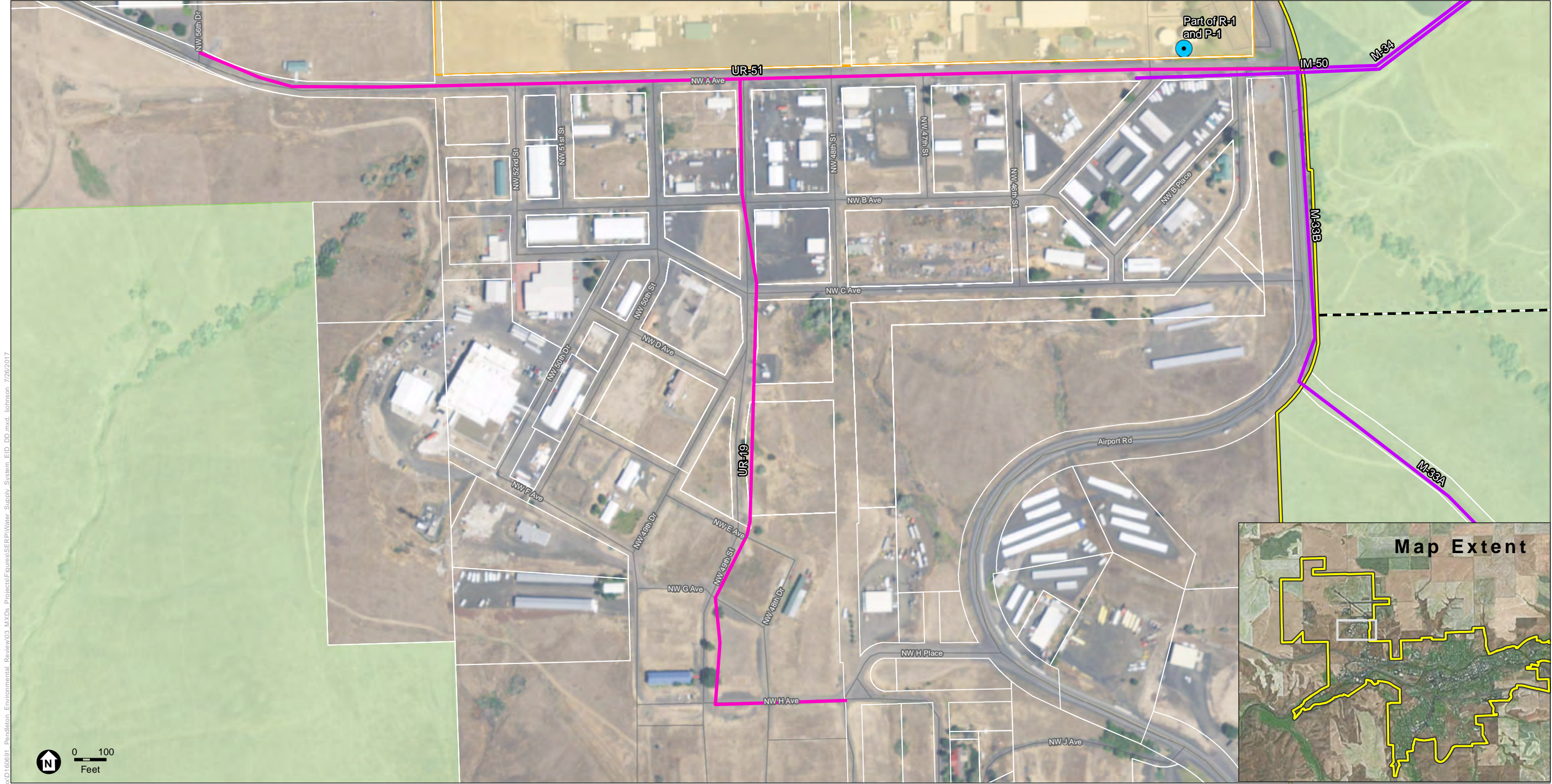


ESA Project No.160691 Environmental Information Document

Project ID UR-18 - Site Plan
 Water Supply System
 City of Pendleton, OR

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| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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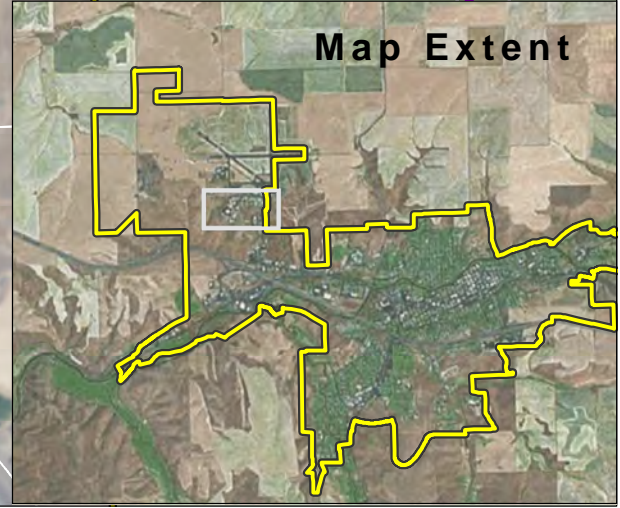




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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

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| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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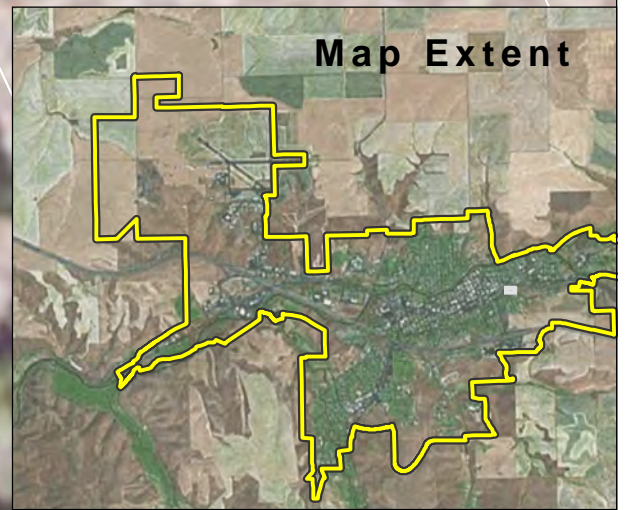


ESA Project No.160691 Environmental Information Document

Project ID UR-19 - Site Plan
 Water Supply System
 City of Pendleton, OR



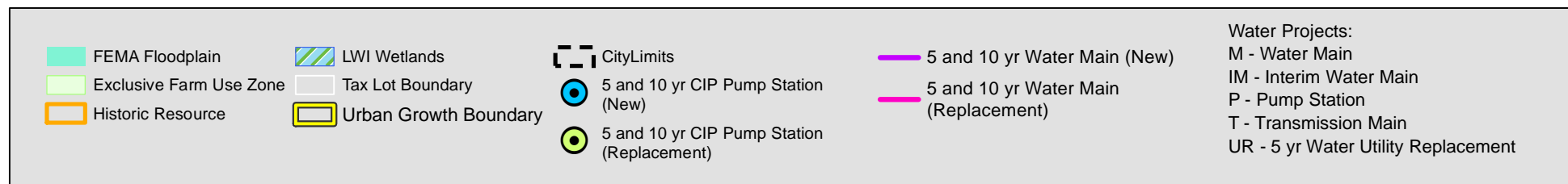
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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

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Project ID UR-2 - Site Plan
Water Supply System
City of Pendleton, OR





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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID UR-21 - Site Plan
 Water Supply System
 City of Pendleton, OR

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|-------------------------|-----------------------|--|--------------------------------------|---|
| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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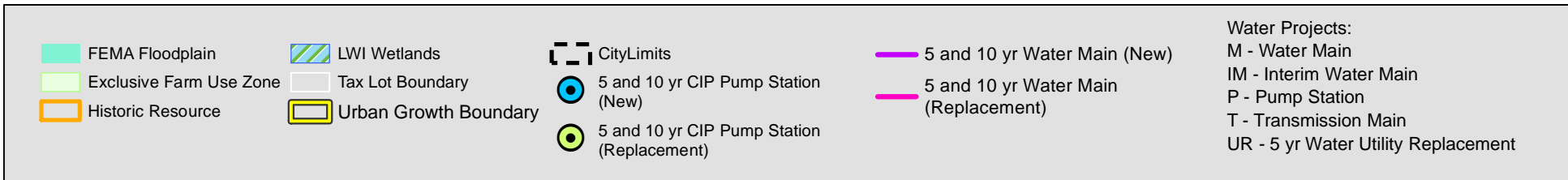


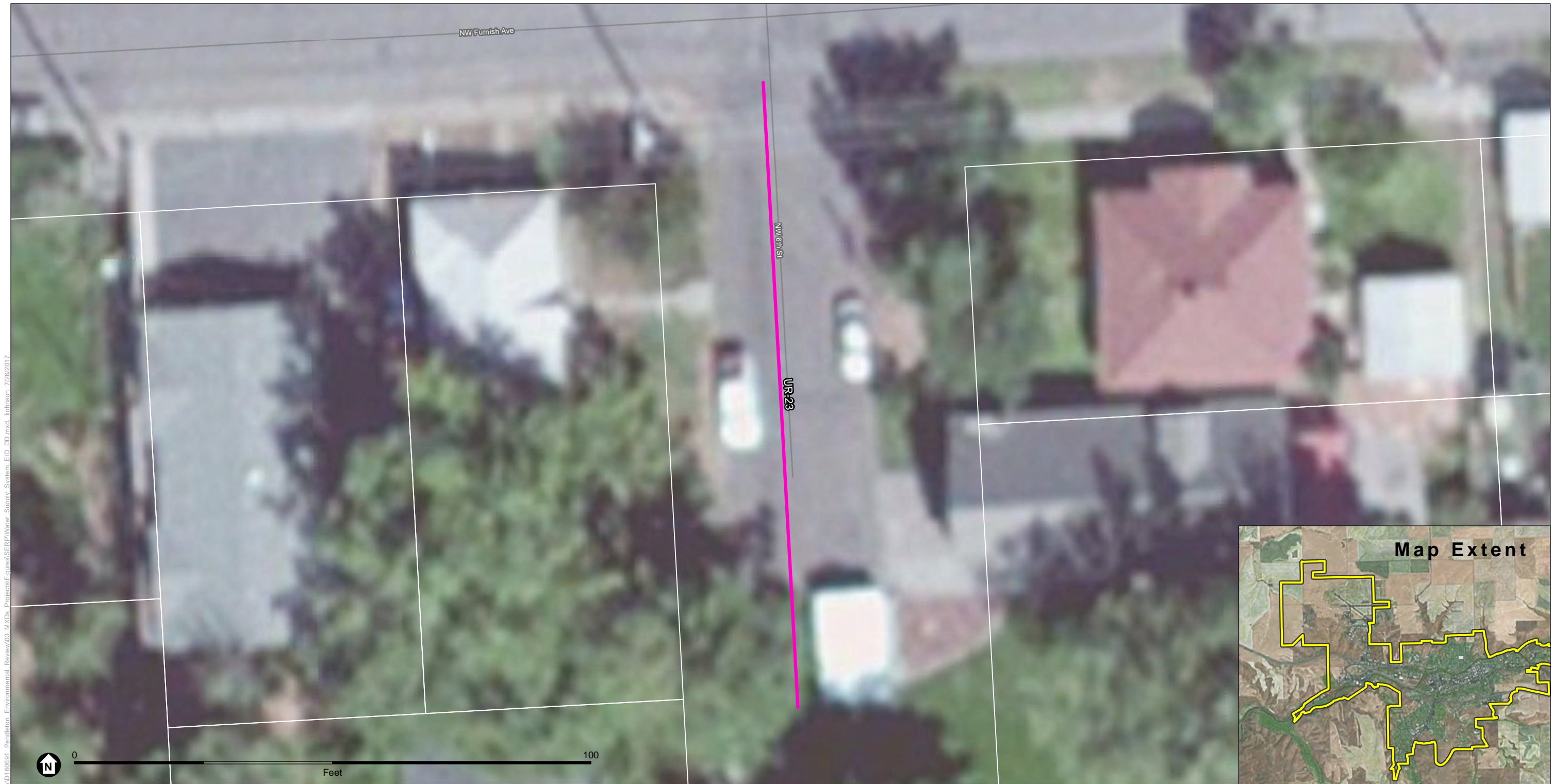
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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID UR-22 - Site Plan
Water Supply System
City of Pendleton, OR





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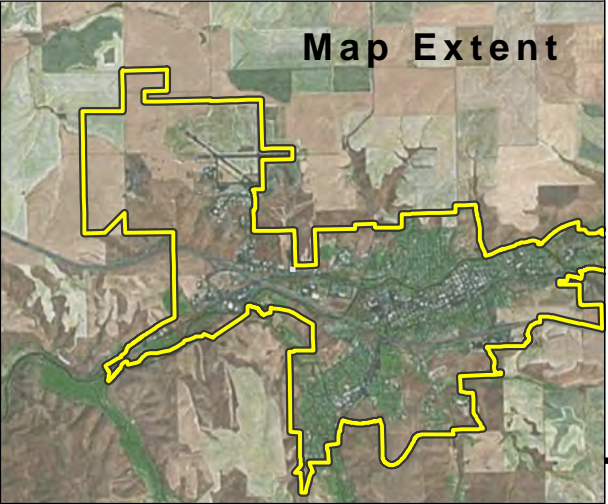
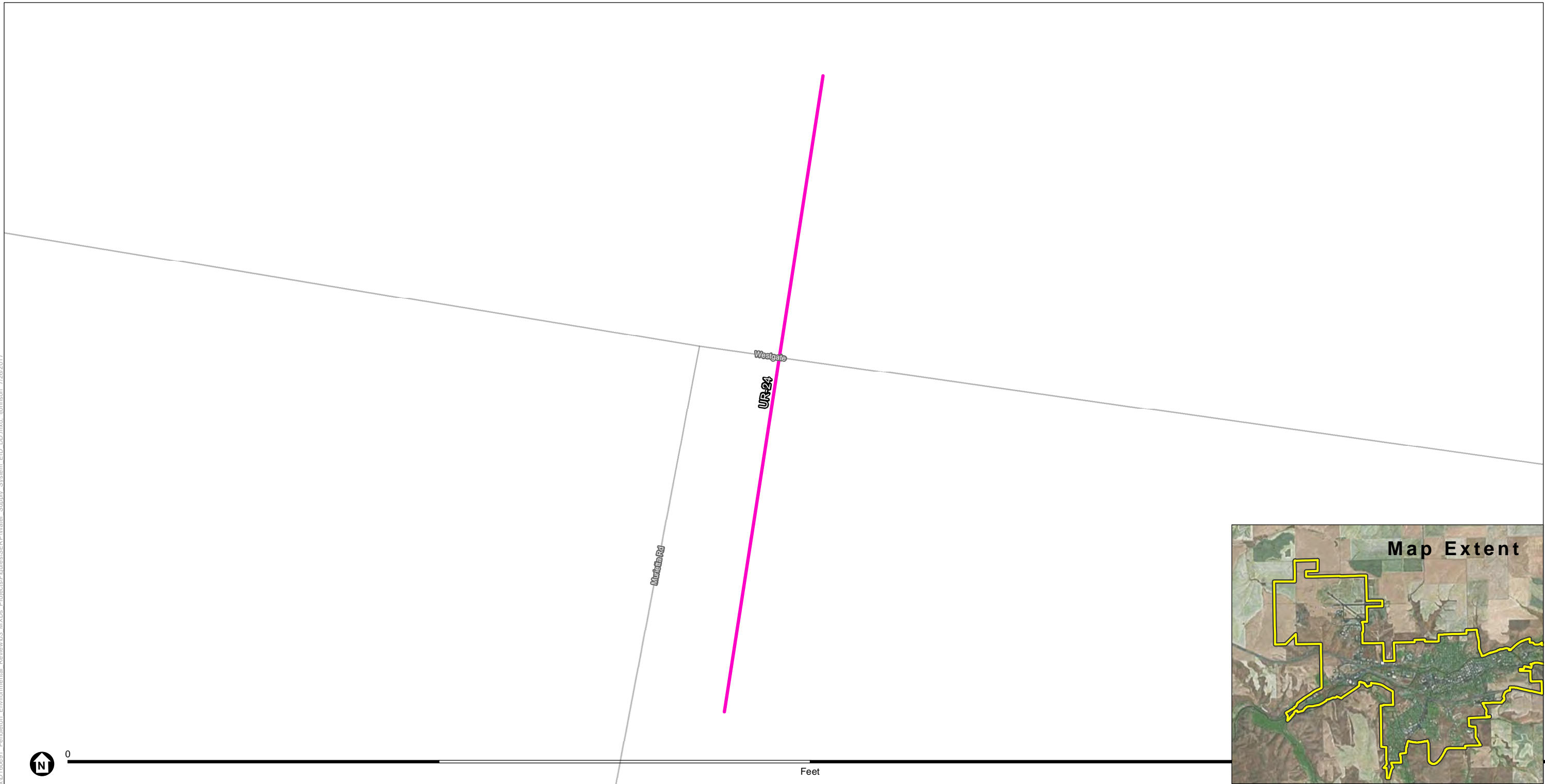
ESA Project No.160691 Environmental Information Document

Project ID UR-23 - Site Plan
 Water Supply System
 City of Pendleton, OR

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| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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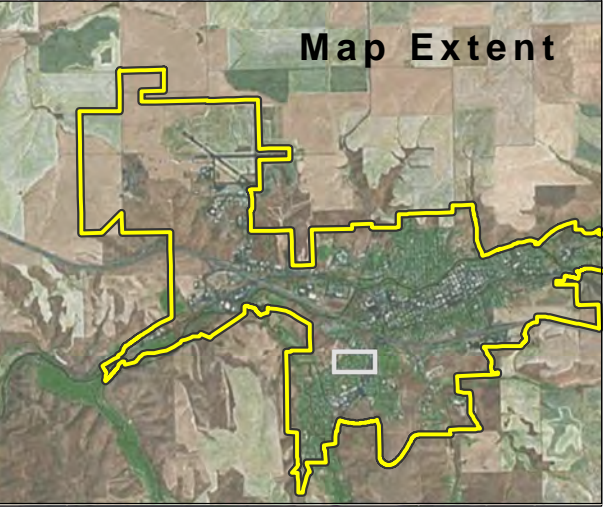
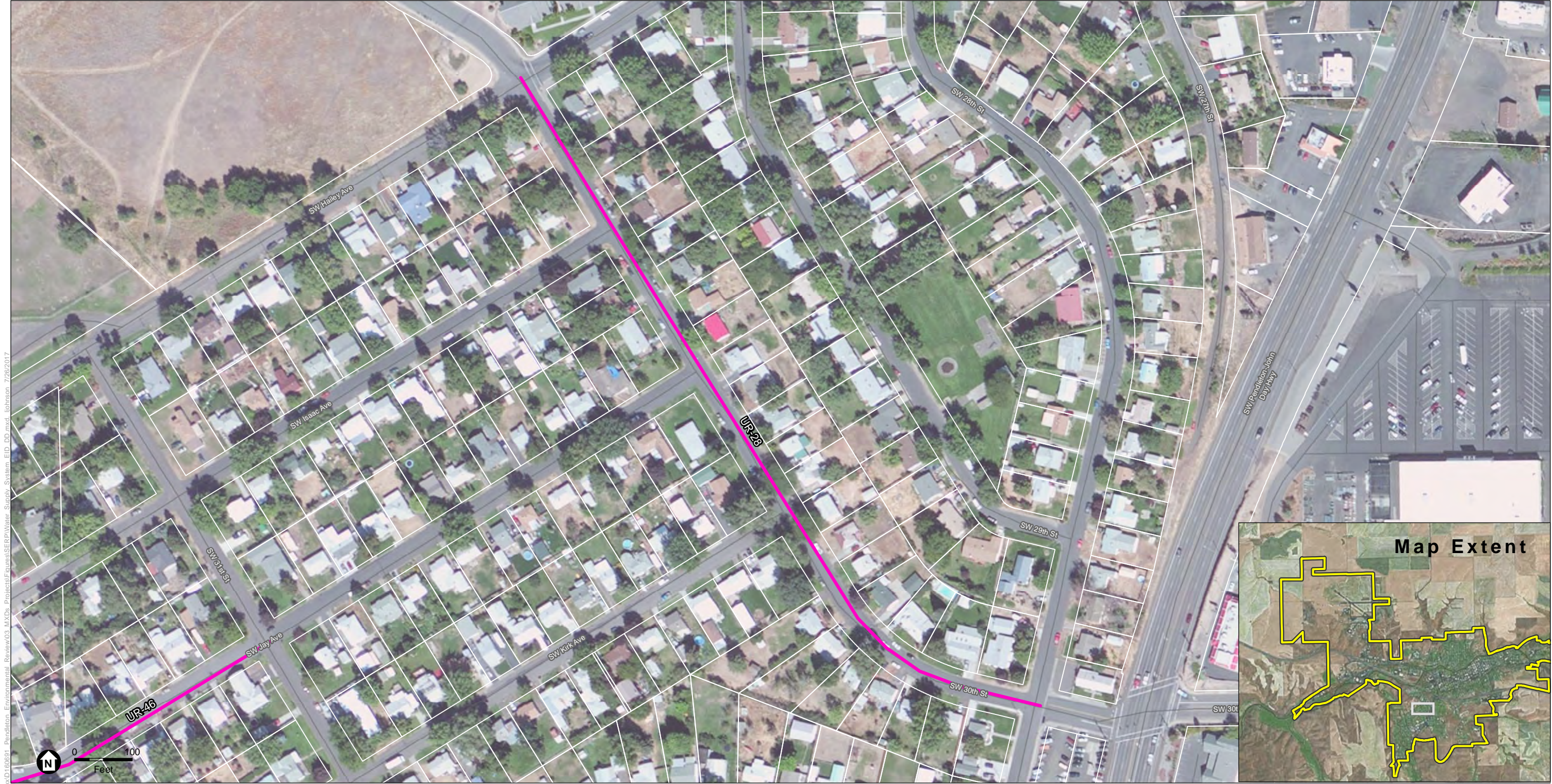
SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID UR-24 - Site Plan
 Water Supply System
 City of Pendleton, OR

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| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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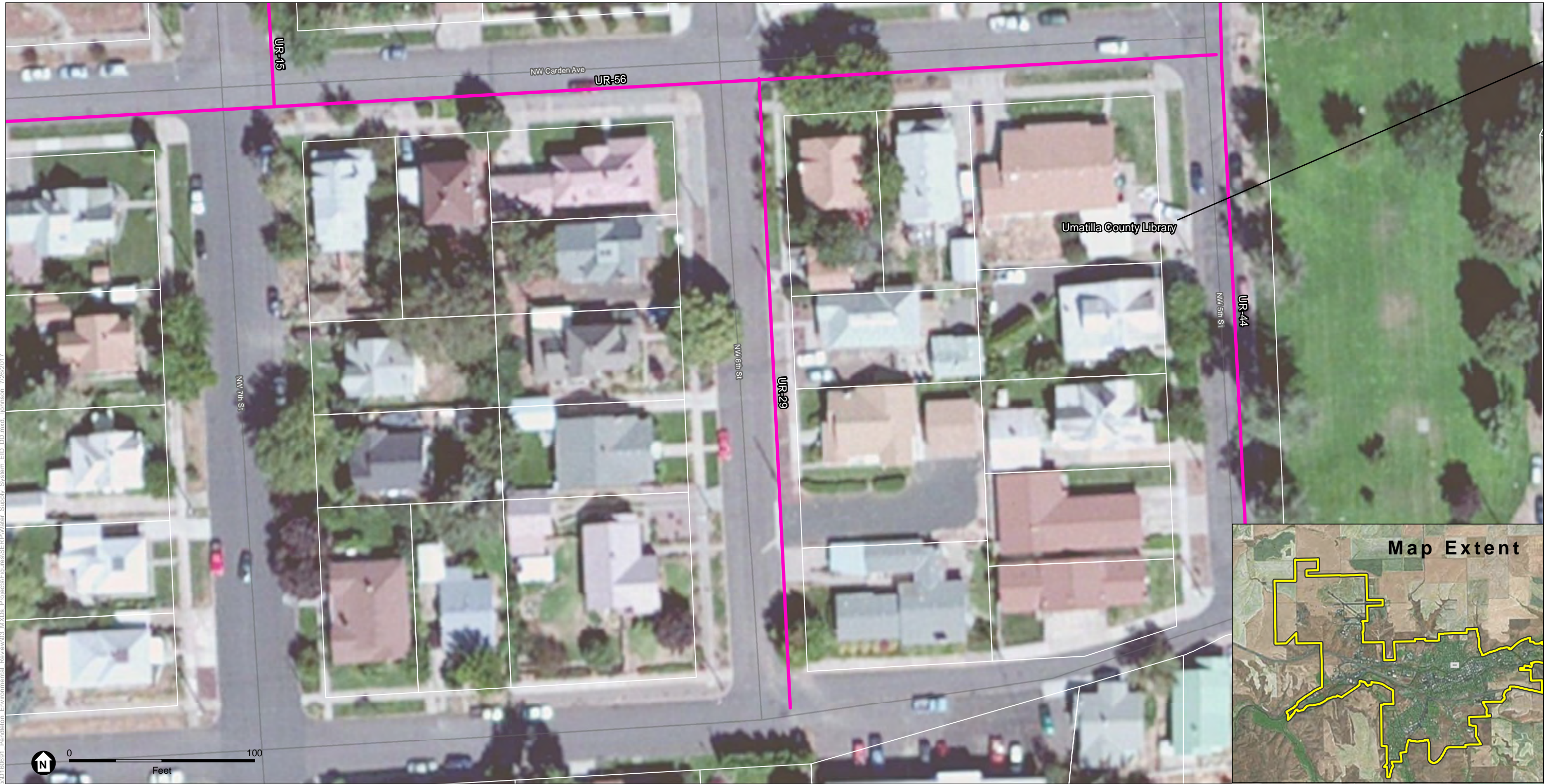
SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

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| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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ESA Project No.160691 Environmental Information Document

Project ID UR-28 - Site Plan
 Water Supply System
 City of Pendleton, OR



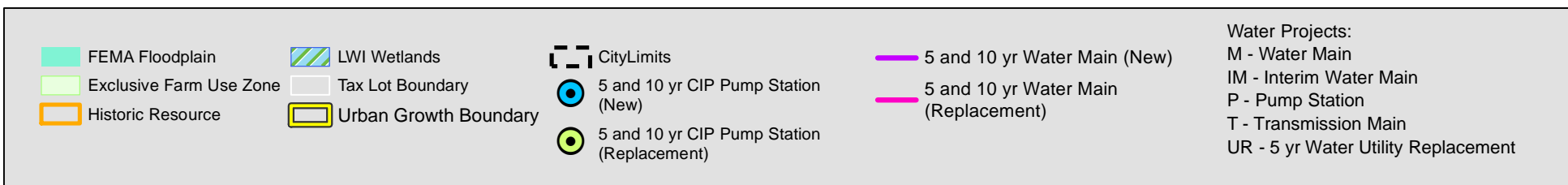


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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID UR-29 - Site Plan
Water Supply System
City of Pendleton, OR



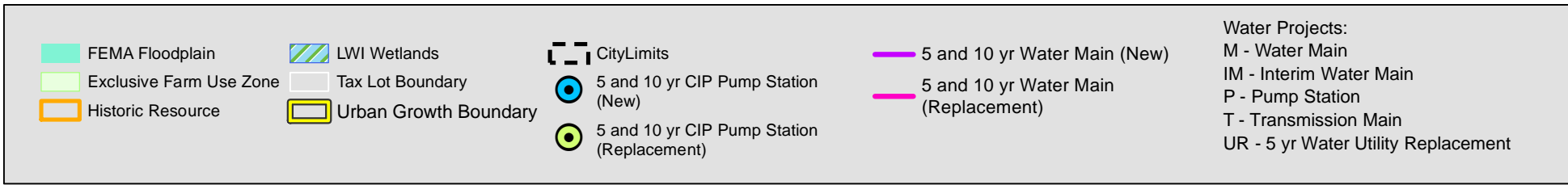


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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID UR-3 - Site Plan
Water Supply System
City of Pendleton, OR





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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID UR-30 - Site Plan
 Water Supply System
 City of Pendleton, OR

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|-------------------------|-----------------------|--|--------------------------------------|---|
| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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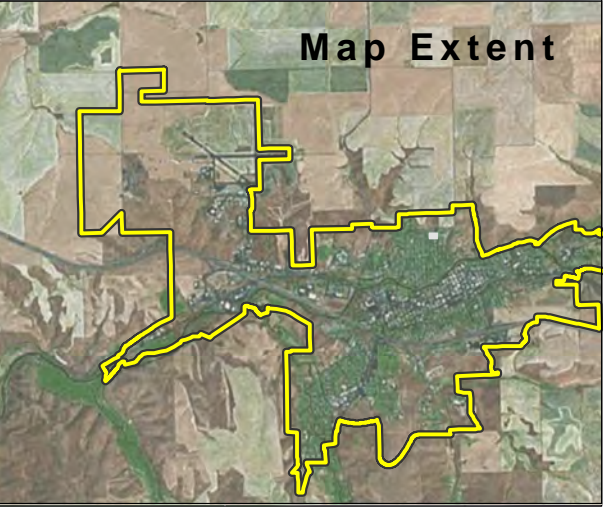
SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID UR-31 - Site Plan
Water Supply System
City of Pendleton, OR

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|-------------------------|-----------------------|--|--------------------------------------|--|
| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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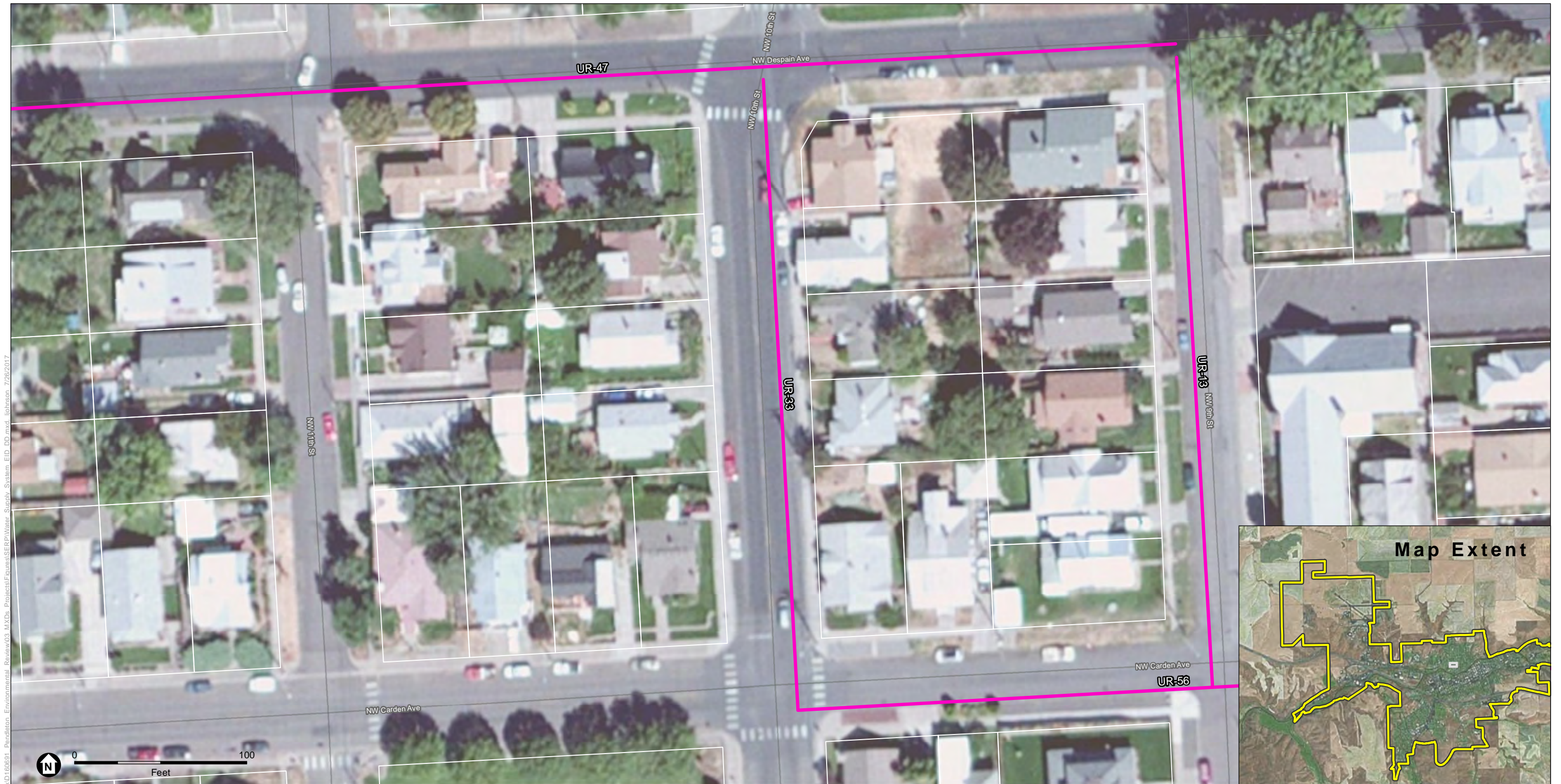
SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID UR-32 - Site Plan
Water Supply System
City of Pendleton, OR

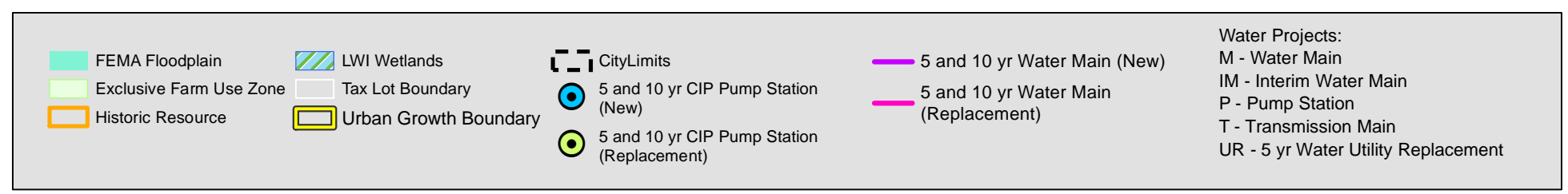
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|-------------------------|-----------------------|--|--------------------------------------|---|
| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017



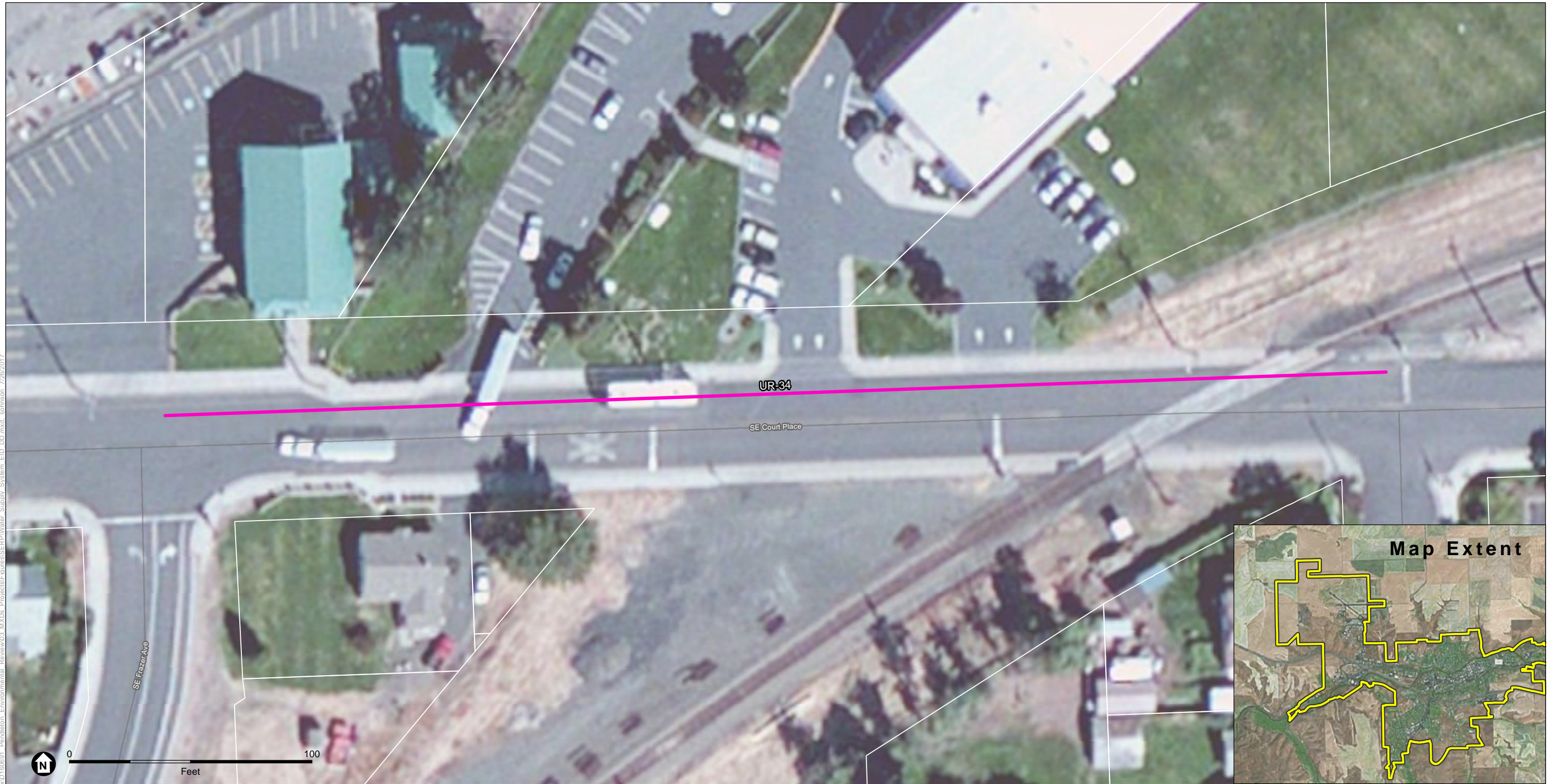
Water Projects:
M - Water Main
IM - Interim Water Main
P - Pump Station
T - Transmission Main
UR - 5 yr Water Utility Replacement

ESA Project No.160691 Environmental Information Document

Project ID UR-33 - Site Plan
Water Supply System
City of Pendleton, OR



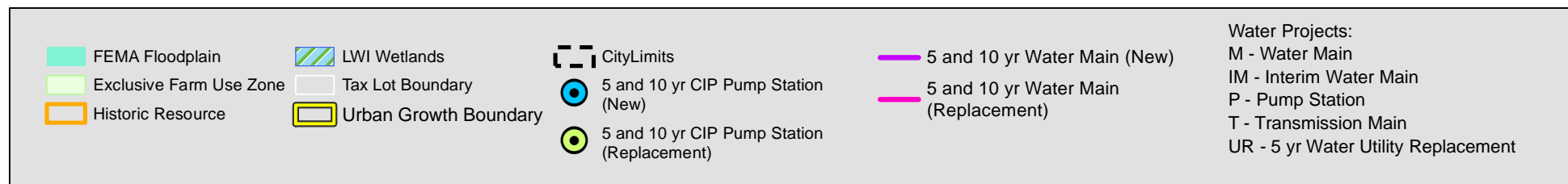
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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID UR-34 - Site Plan
Water Supply System
City of Pendleton, OR



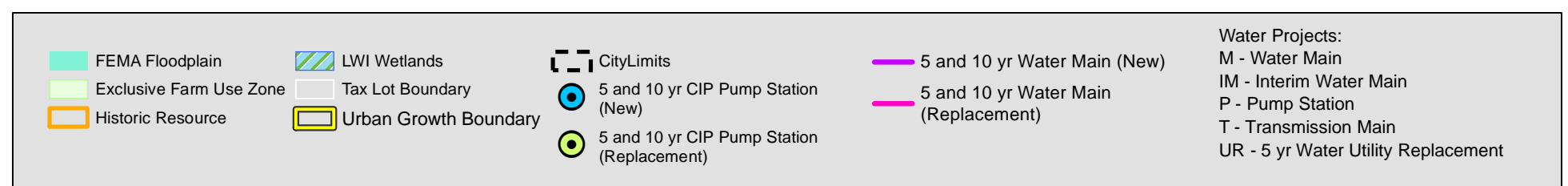


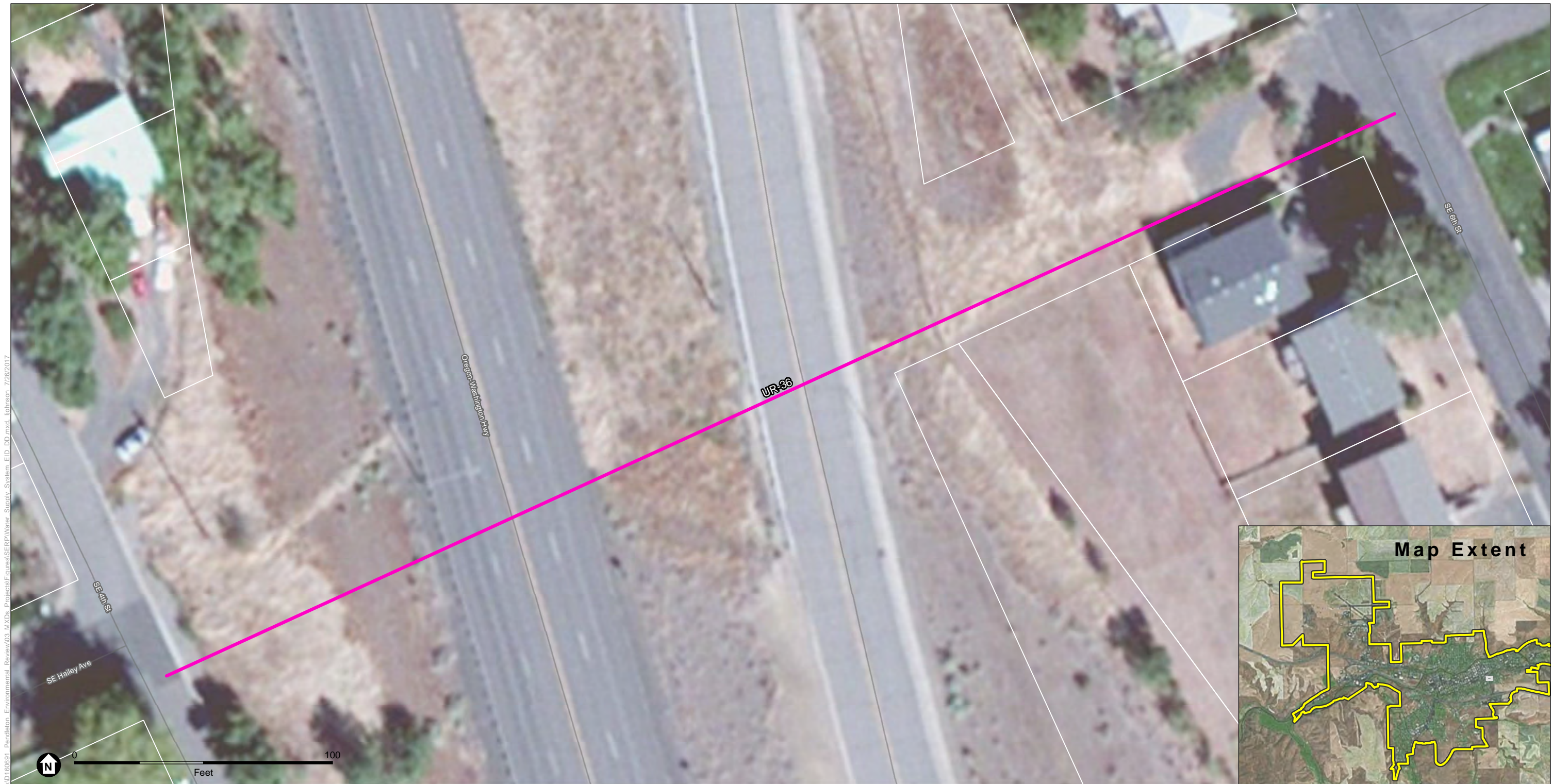
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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID UR-35 - Site Plan
Water Supply System
City of Pendleton, OR





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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID UR-36 - Site Plan
Water Supply System
City of Pendleton, OR

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|-------------------------|-----------------------|--|--------------------------------------|--|
| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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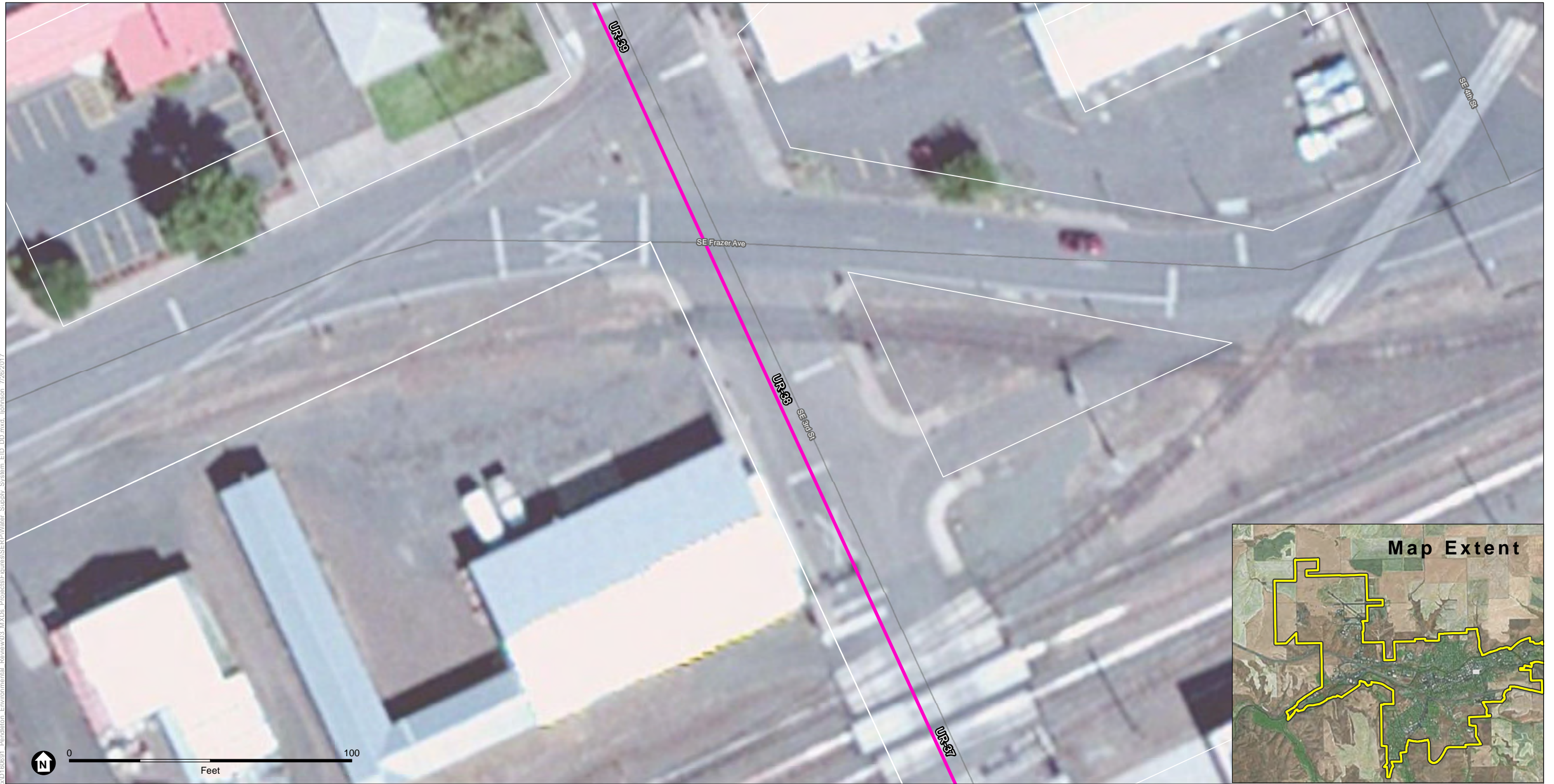
SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID UR-37 - Site Plan
Water Supply System
City of Pendleton, OR

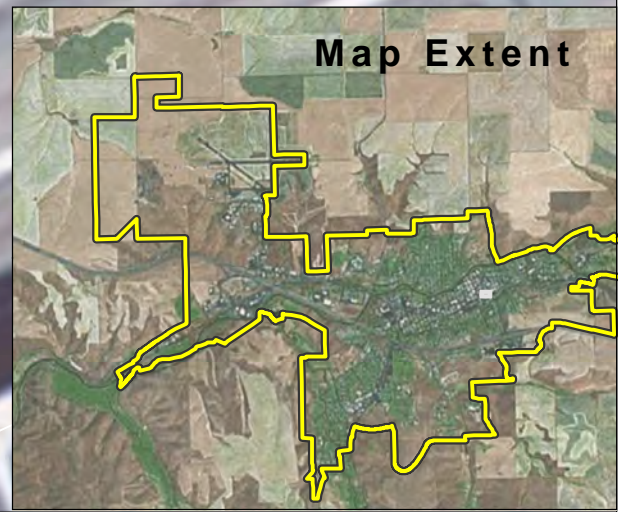
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| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

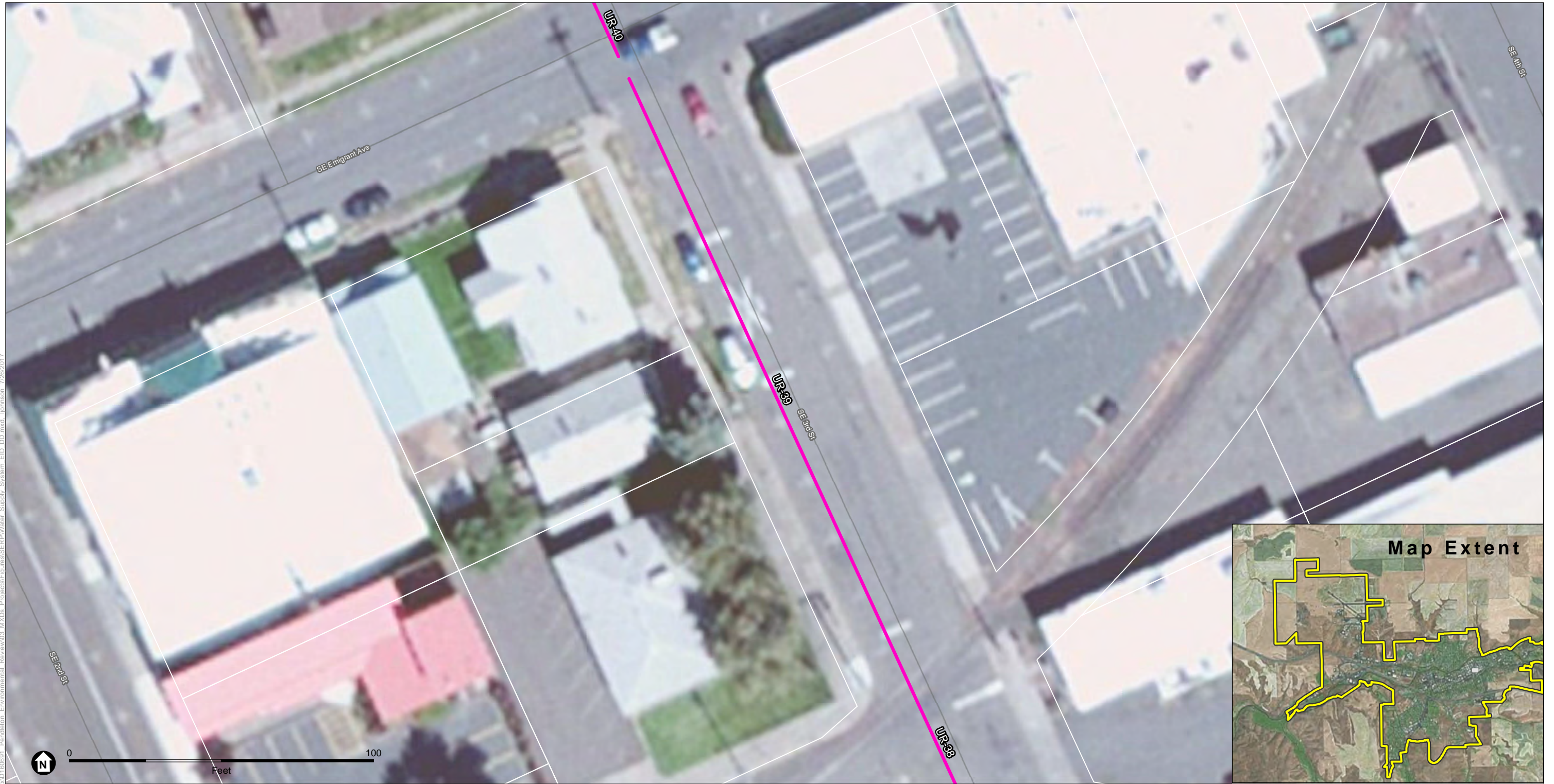


ESA Project No.160691 Environmental Information Document

Project ID UR-38 - Site Plan
Water Supply System
City of Pendleton, OR

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|-------------------------|-----------------------|--|--------------------------------------|---|
| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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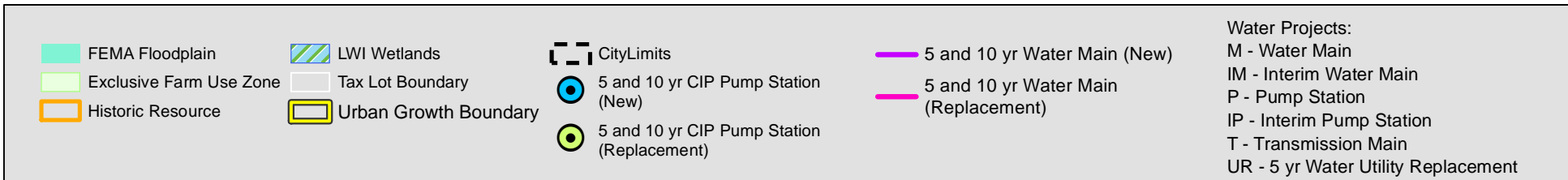


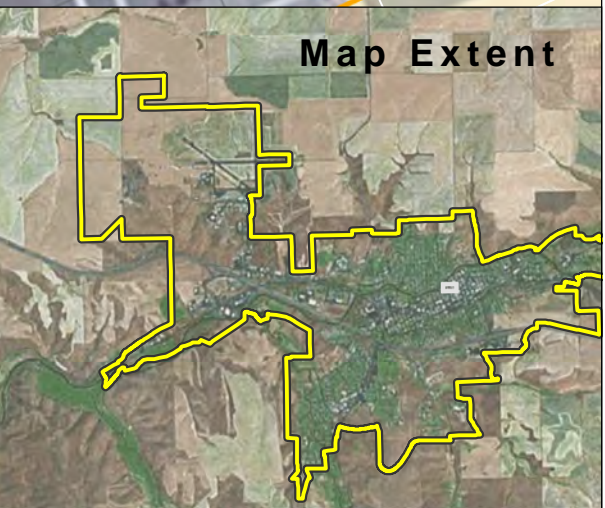
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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID UR-39 - Site Plan
Water Supply System
City of Pendleton, OR





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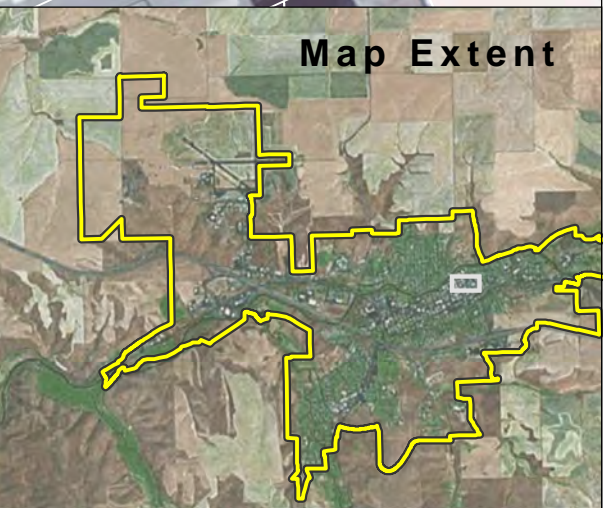
SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

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| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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ESA Project No.160691 Environmental Information Document

Project ID UR-4 - Site Plan
 Water Supply System
 City of Pendleton, OR





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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

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| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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ESA Project No.160691 Environmental Information Document

Project ID UR-40 - Site Plan
Water Supply System
City of Pendleton, OR





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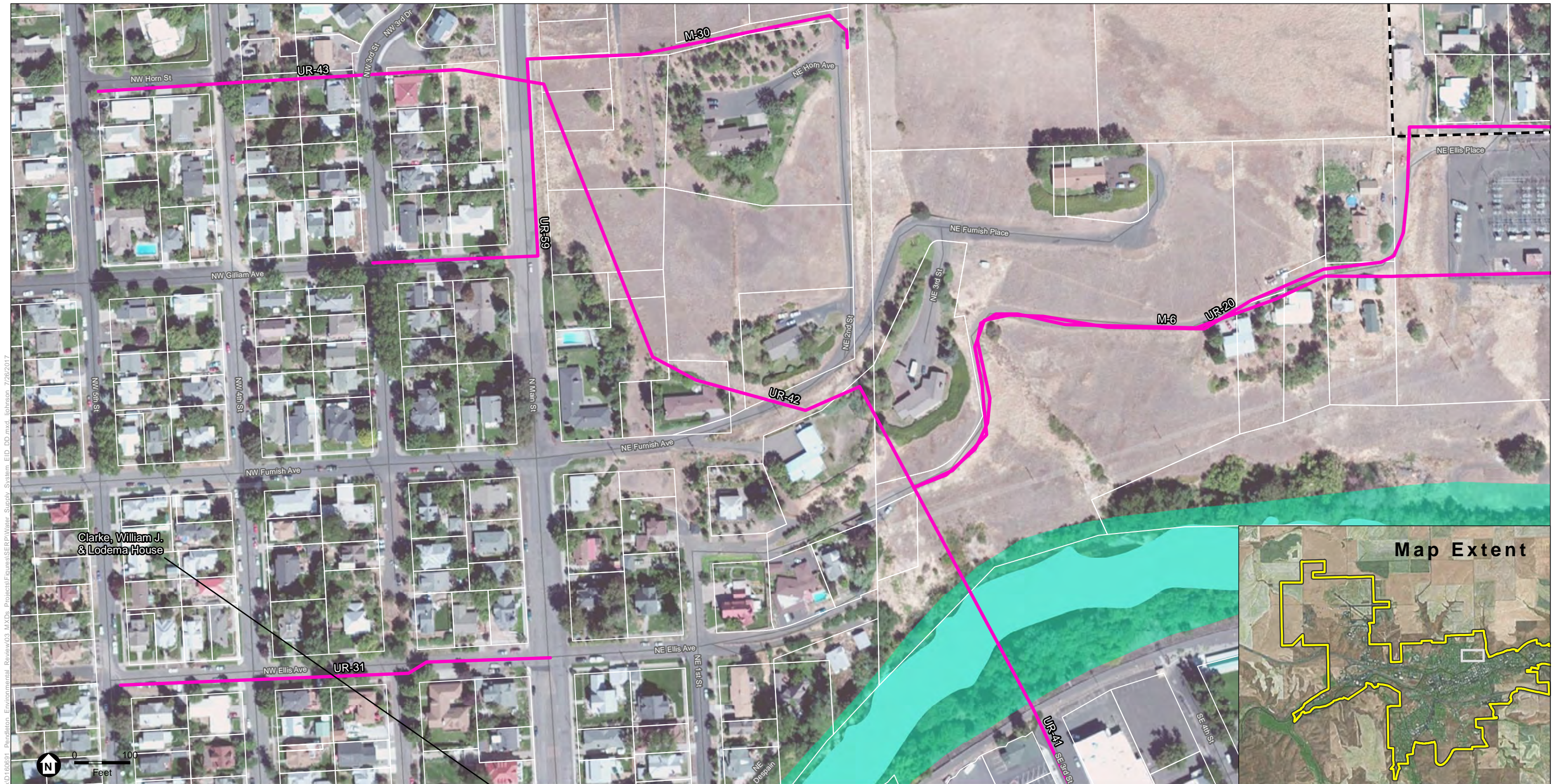
SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID UR-41 - Site Plan
Water Supply System
City of Pendleton, OR

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|-------------------------|-----------------------|--|--------------------------------------|--|
| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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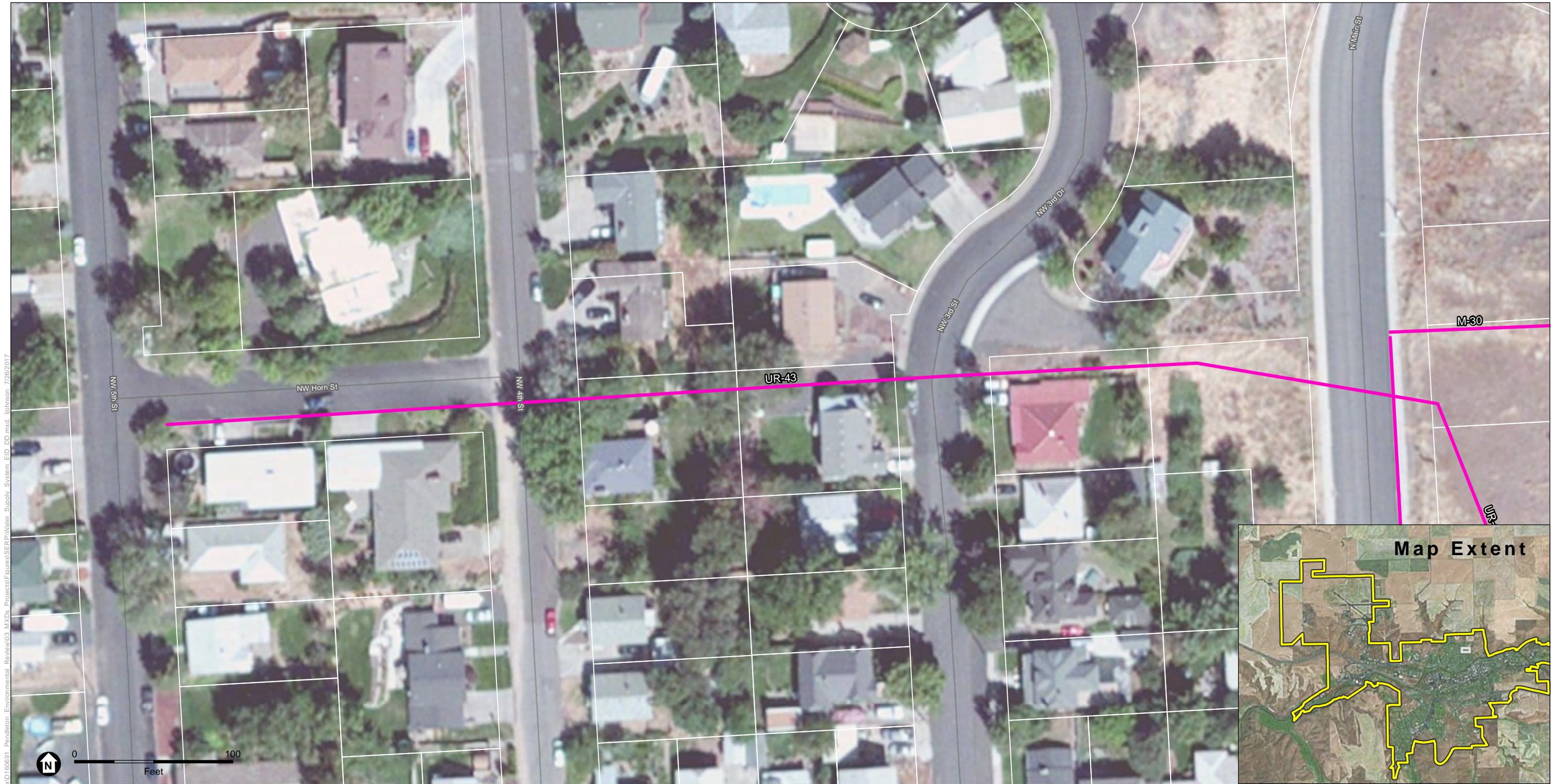
SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID UR-42 - Site Plan
Water Supply System
City of Pendleton, OR

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|-------------------------|-----------------------|--|--------------------------------------|--|
| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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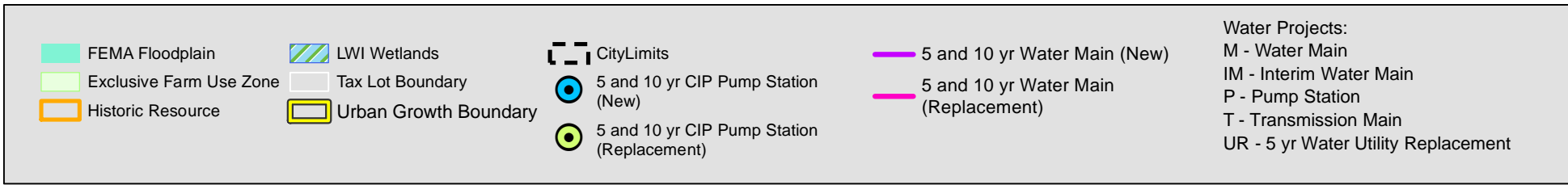


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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID UR-43 - Site Plan
Water Supply System
City of Pendleton, OR





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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

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|-------------------------|-----------------------|--|--------------------------------------|---|
| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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Project ID UR-44 - Site Plan
 Water Supply System
 City of Pendleton, OR





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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID UR-45 - Site Plan
Water Supply System
City of Pendleton, OR

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|-------------------------|-----------------------|--|--------------------------------------|--|
| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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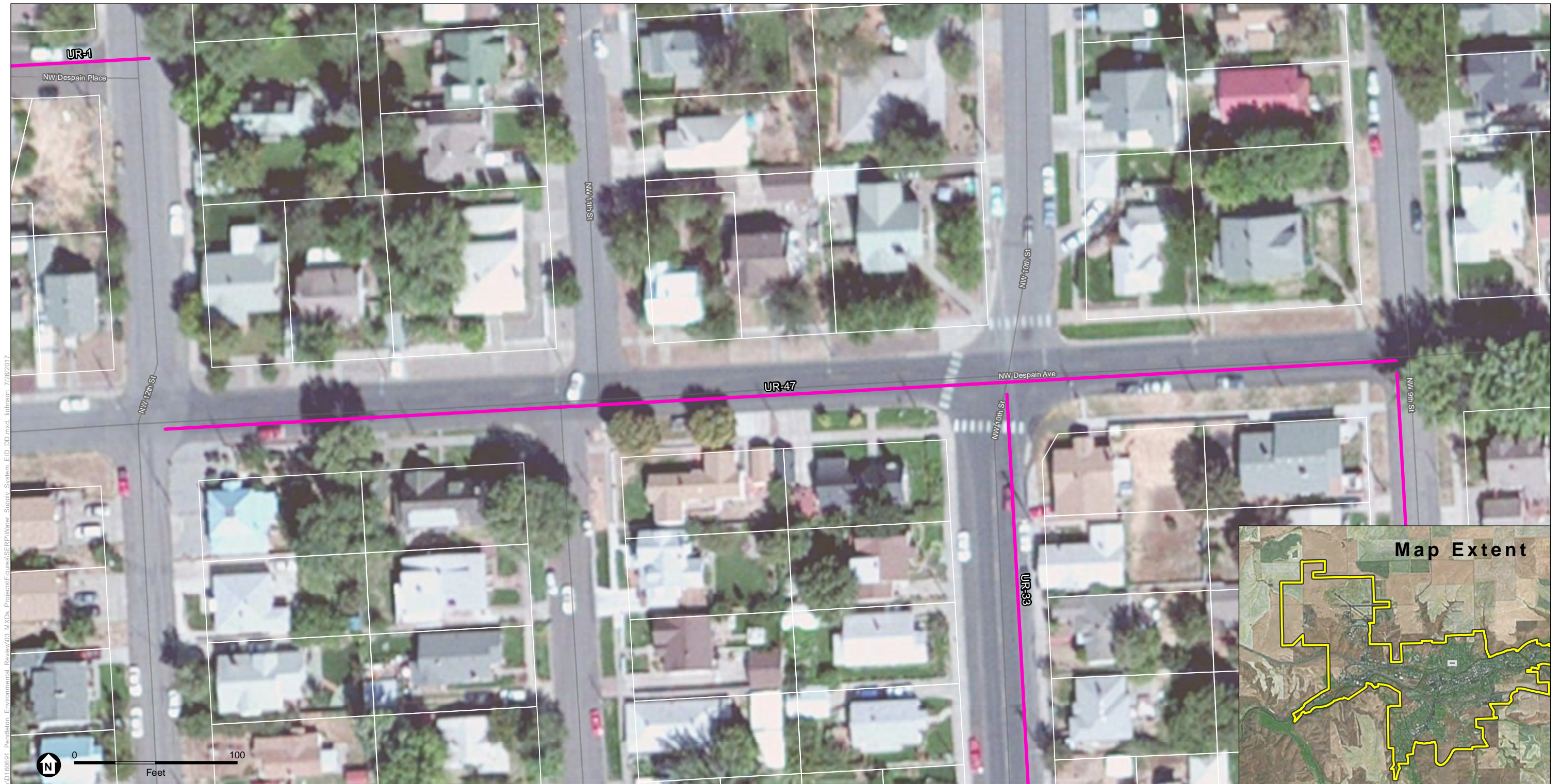
SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID UR-46 - Site Plan
Water Supply System
City of Pendleton, OR

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|-------------------------|-----------------------|--|--------------------------------------|---|
| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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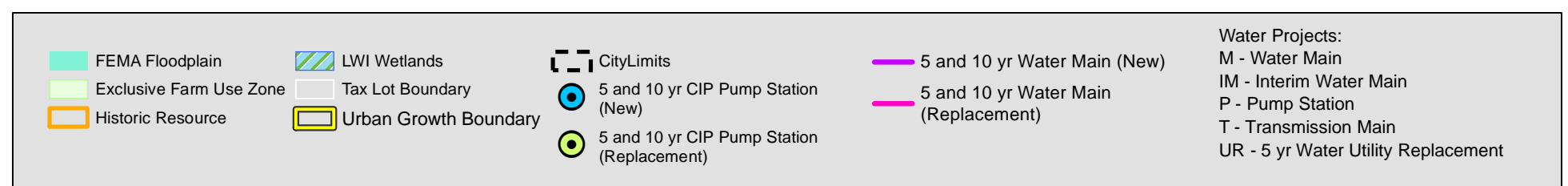


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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID UR-47 - Site Plan
Water Supply System
City of Pendleton, OR





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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

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|-------------------------|-----------------------|--|--------------------------------------|---|
| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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ESA Project No.160691 Environmental Information Document

Project ID UR-48 - Site Plan
Water Supply System
City of Pendleton, OR





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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID UR-49 - Site Plan
Water Supply System
City of Pendleton, OR

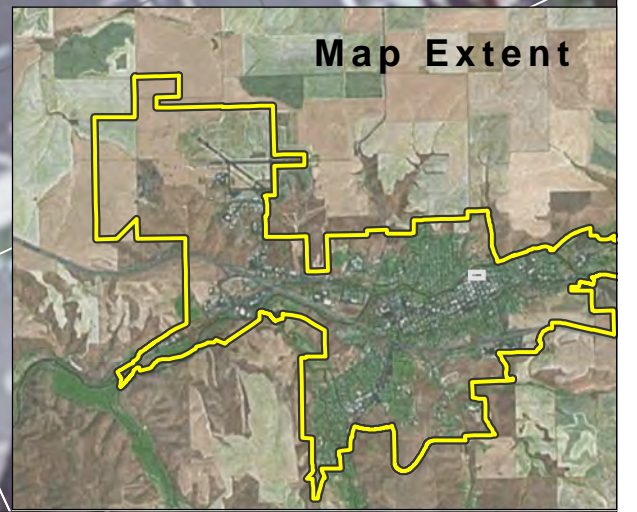
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|-------------------------|-----------------------|--|--------------------------------------|---|
| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017



ESA Project No.160691 Environmental Information Document

Project ID UR-5 - Site Plan
Water Supply System
City of Pendleton, OR

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|-------------------------|-----------------------|--|--------------------------------------|--|
| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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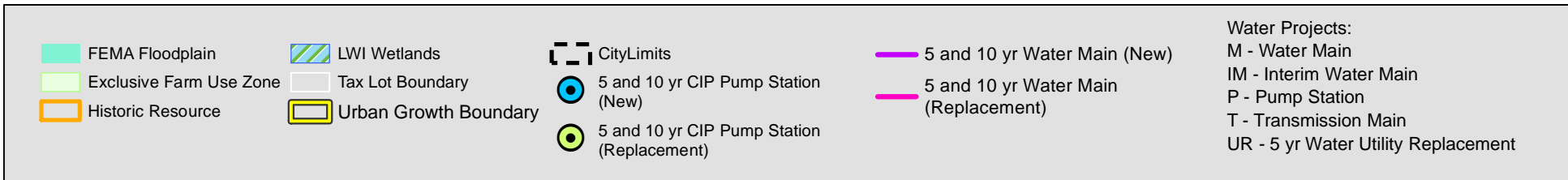


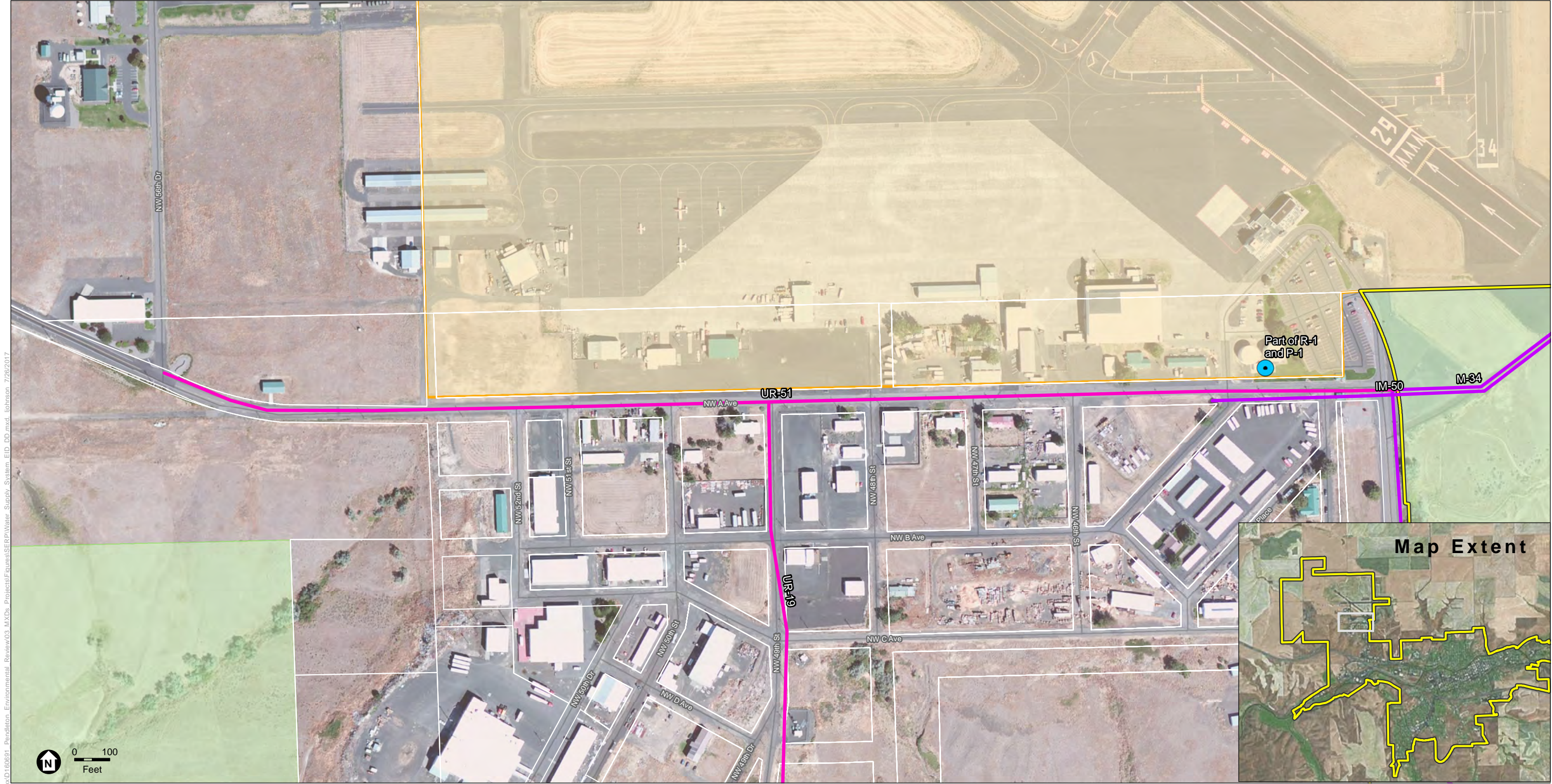
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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID UR-50 - Site Plan
Water Supply System
City of Pendleton, OR





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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID UR-51 - Site Plan
Water Supply System
City of Pendleton, OR

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|-------------------------|-----------------------|--|--------------------------------------|---|
| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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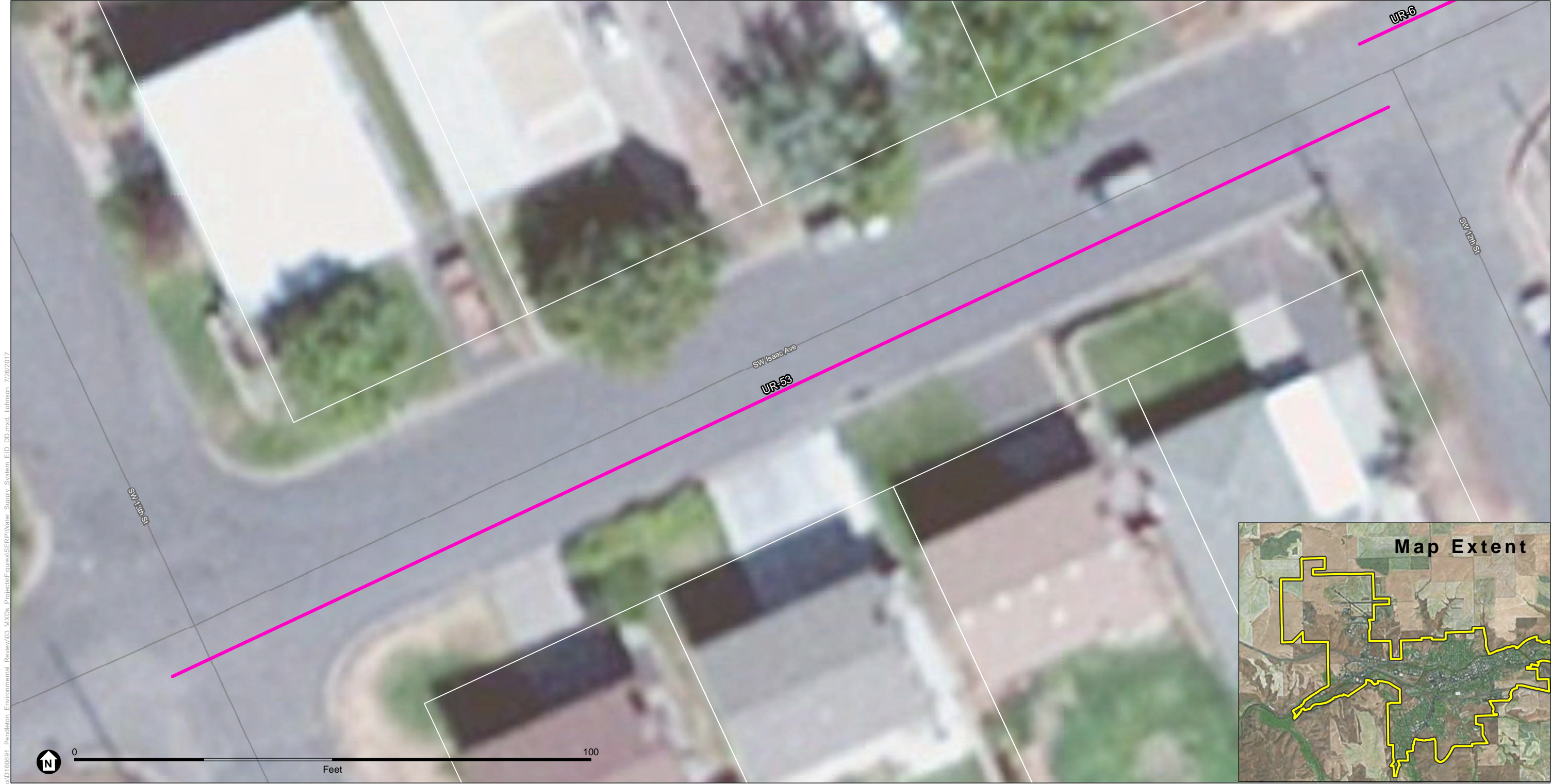
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ESA Project No.160691 Environmental Information Document

Project ID UR-52 - Site Plan
Water Supply System
City of Pendleton, OR

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|-------------------------|-----------------------|--|--------------------------------------|---|
| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID UR-53 - Site Plan
Water Supply System
City of Pendleton, OR

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|-------------------------|-----------------------|--|--------------------------------------|---|
| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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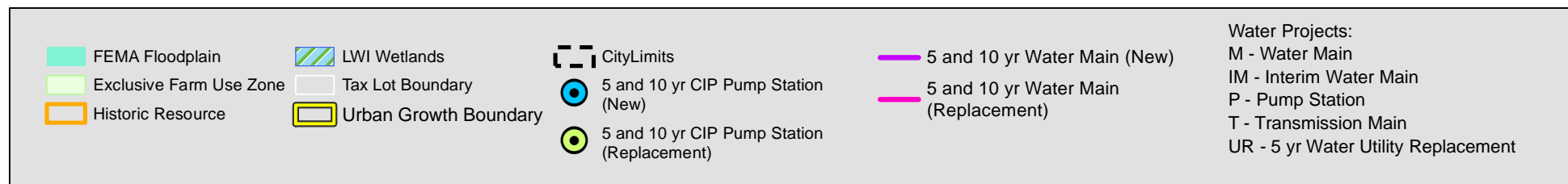


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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID UR-54 - Site Plan
Water Supply System
City of Pendleton, OR



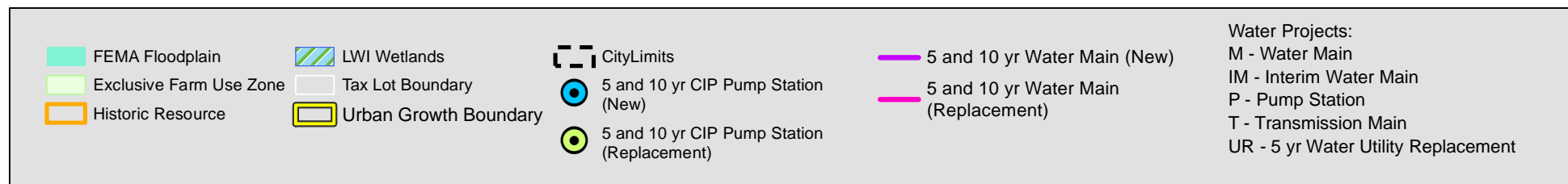


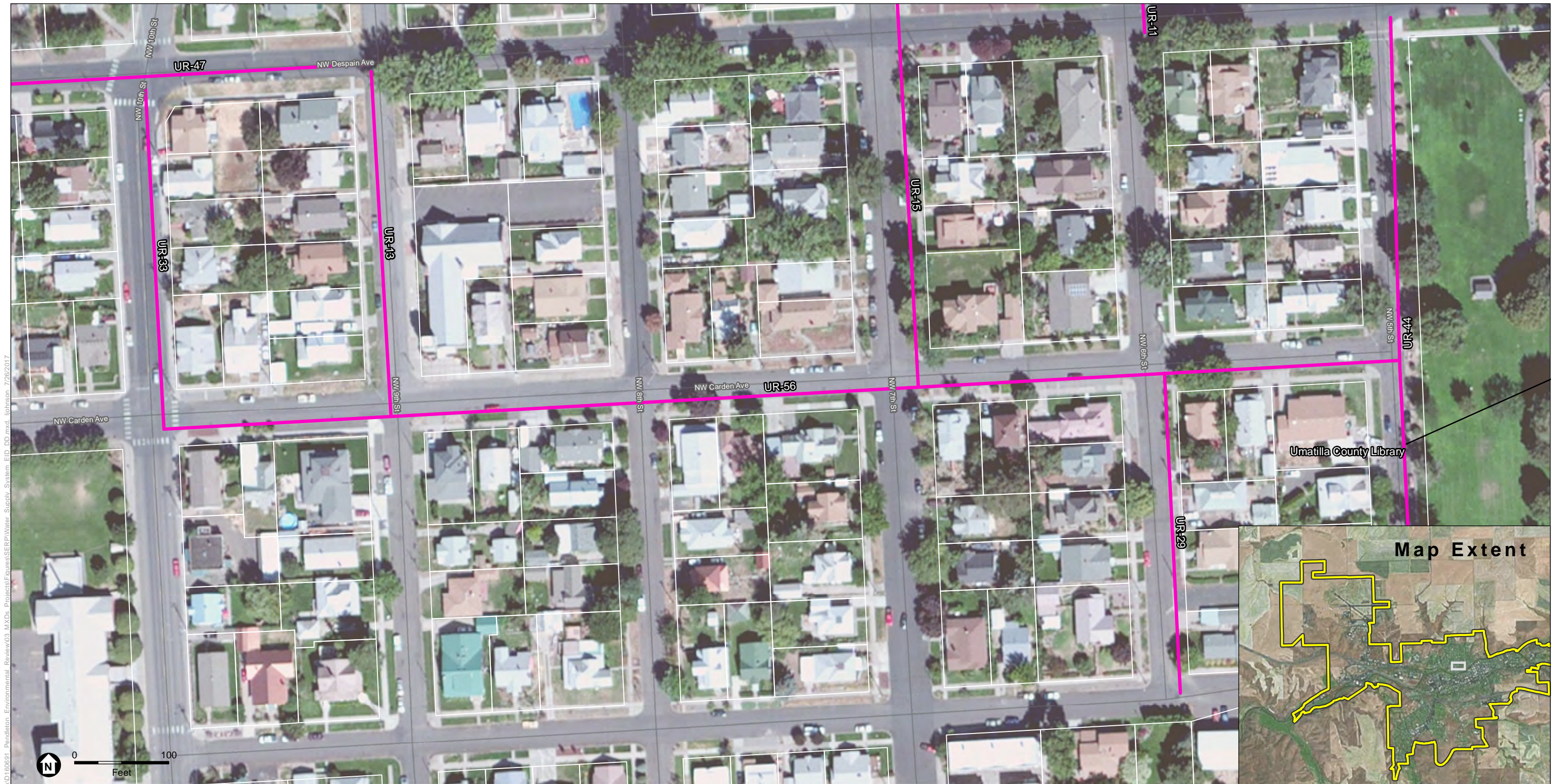
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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID UR-55 - Site Plan
Water Supply System
City of Pendleton, OR





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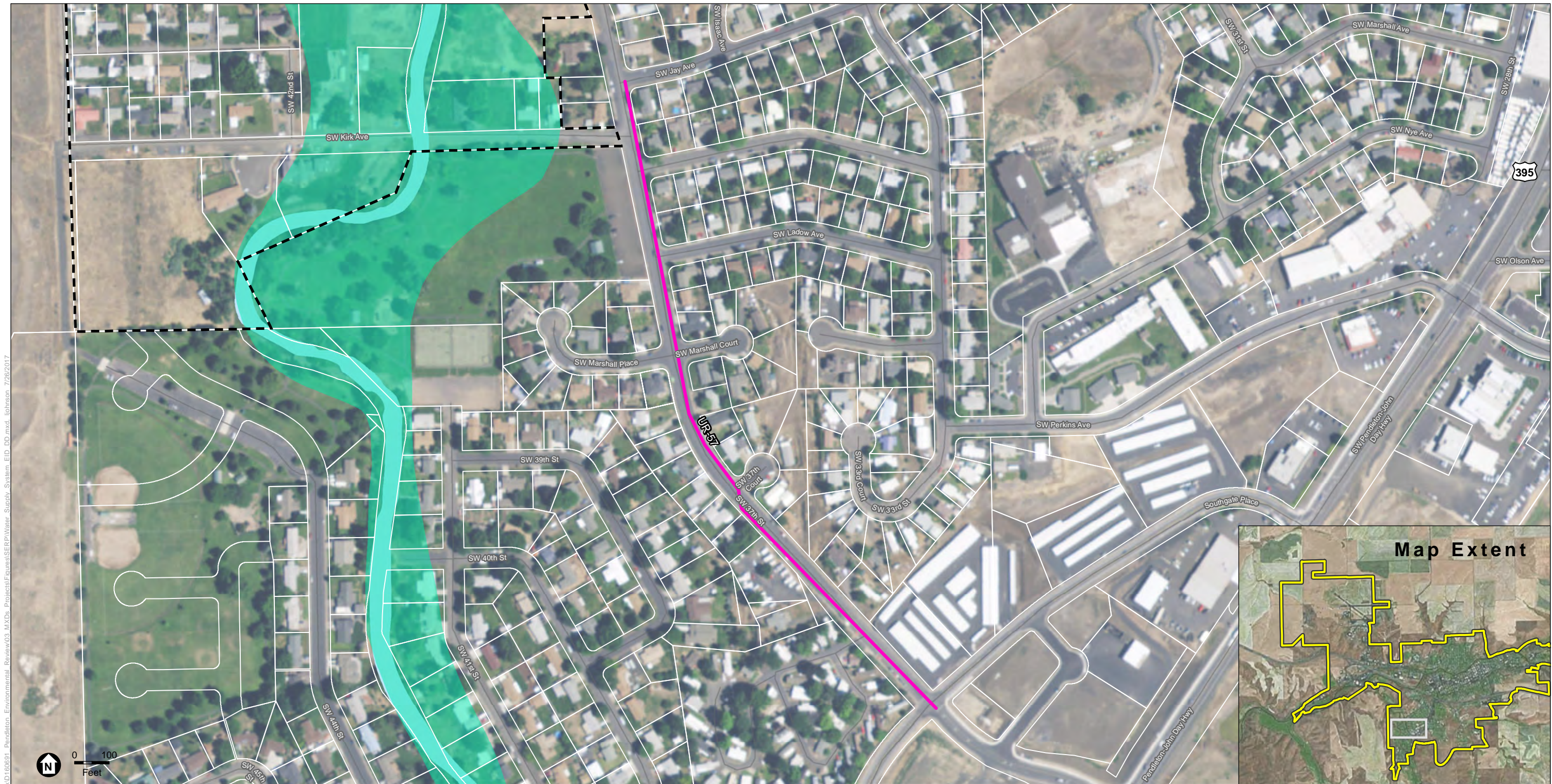
SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID UR-56 - Site Plan
Water Supply System
City of Pendleton, OR

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|-------------------------|-----------------------|--|--------------------------------------|--|
| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

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| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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ESA Project No.160691 Environmental Information Document

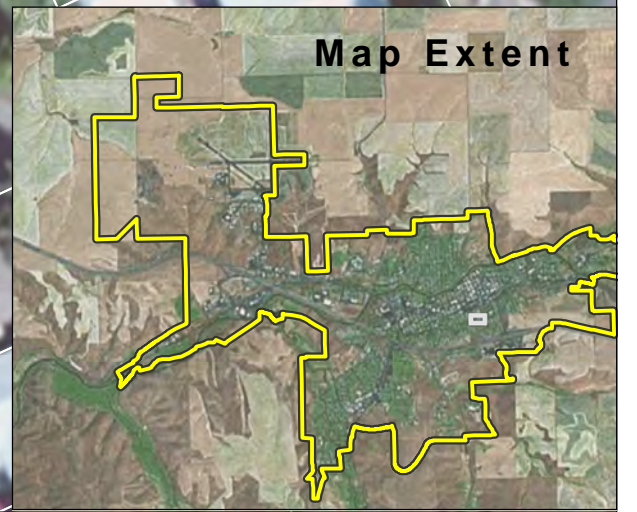
Project ID UR-57 - Site Plan
 Water Supply System
 City of Pendleton, OR





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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017



ESA Project No.160691 Environmental Information Document

Project ID UR-58 - Site Plan
Water Supply System
City of Pendleton, OR

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| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

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|-------------------------|-----------------------|--|--------------------------------------|
| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | |

Water Projects:
M - Water Main
IM - Interim Water Main
P - Pump Station
T - Transmission Main
UR - 5 yr Water Utility Replacement

ESA Project No.160691 Environmental Information Document

Project ID UR-59 - Site Plan
Water Supply System
City of Pendleton, OR



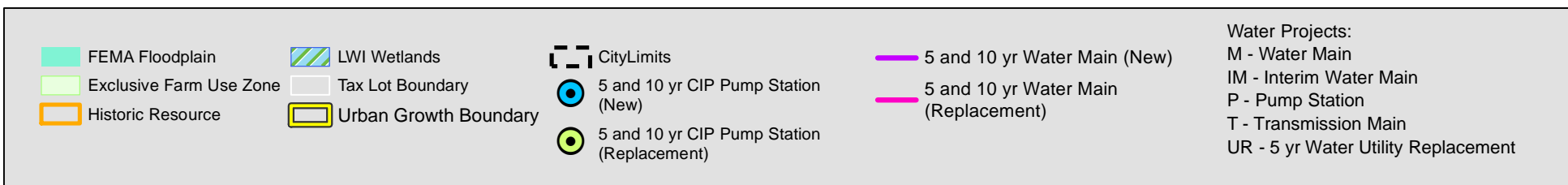
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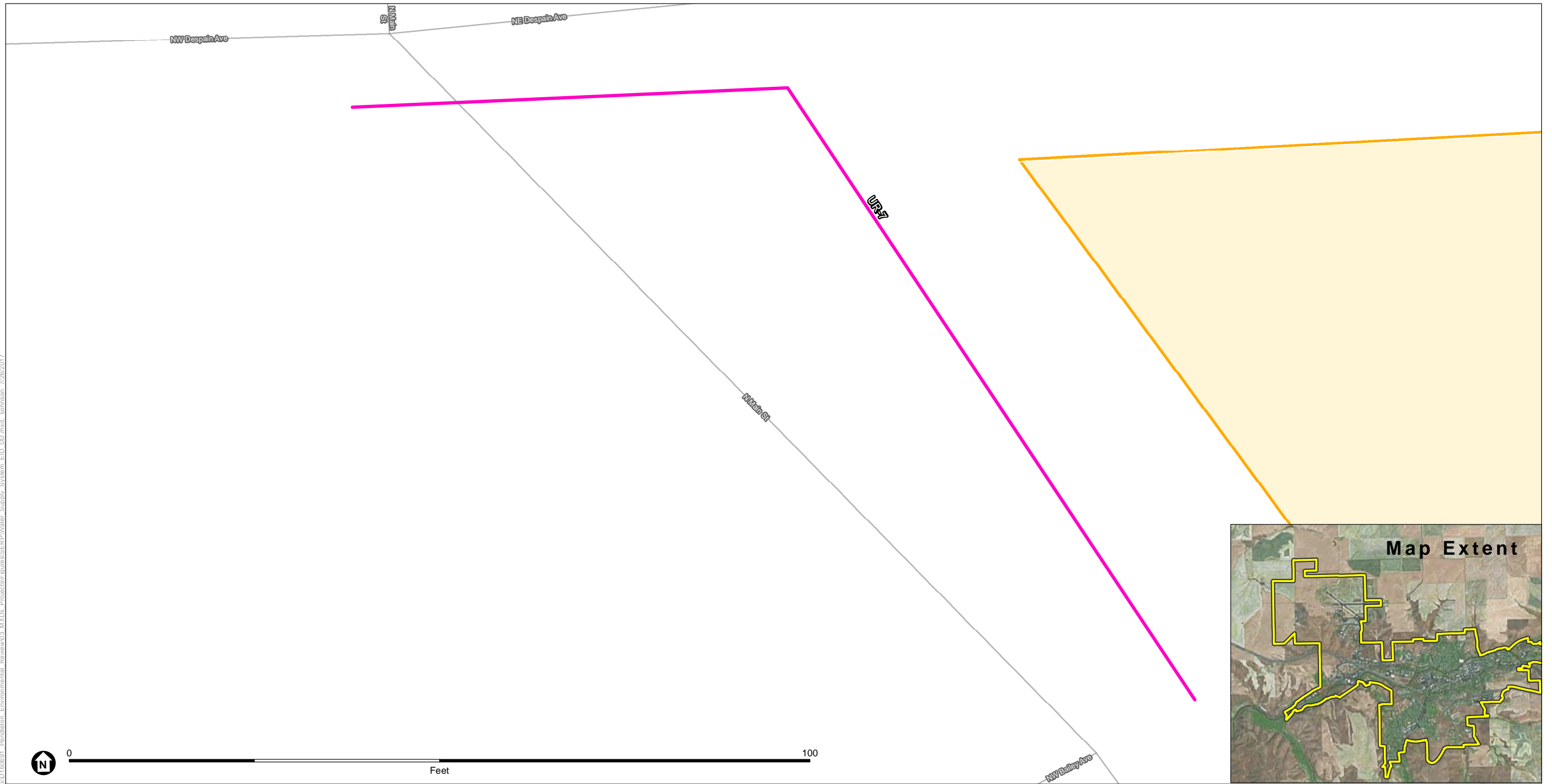
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ESA Project No.160691 Environmental Information Document

Project ID UR-6 - Site Plan
Water Supply System
City of Pendleton, OR



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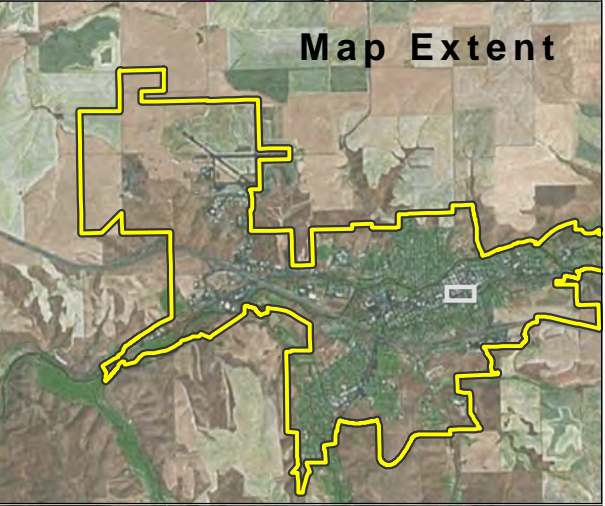
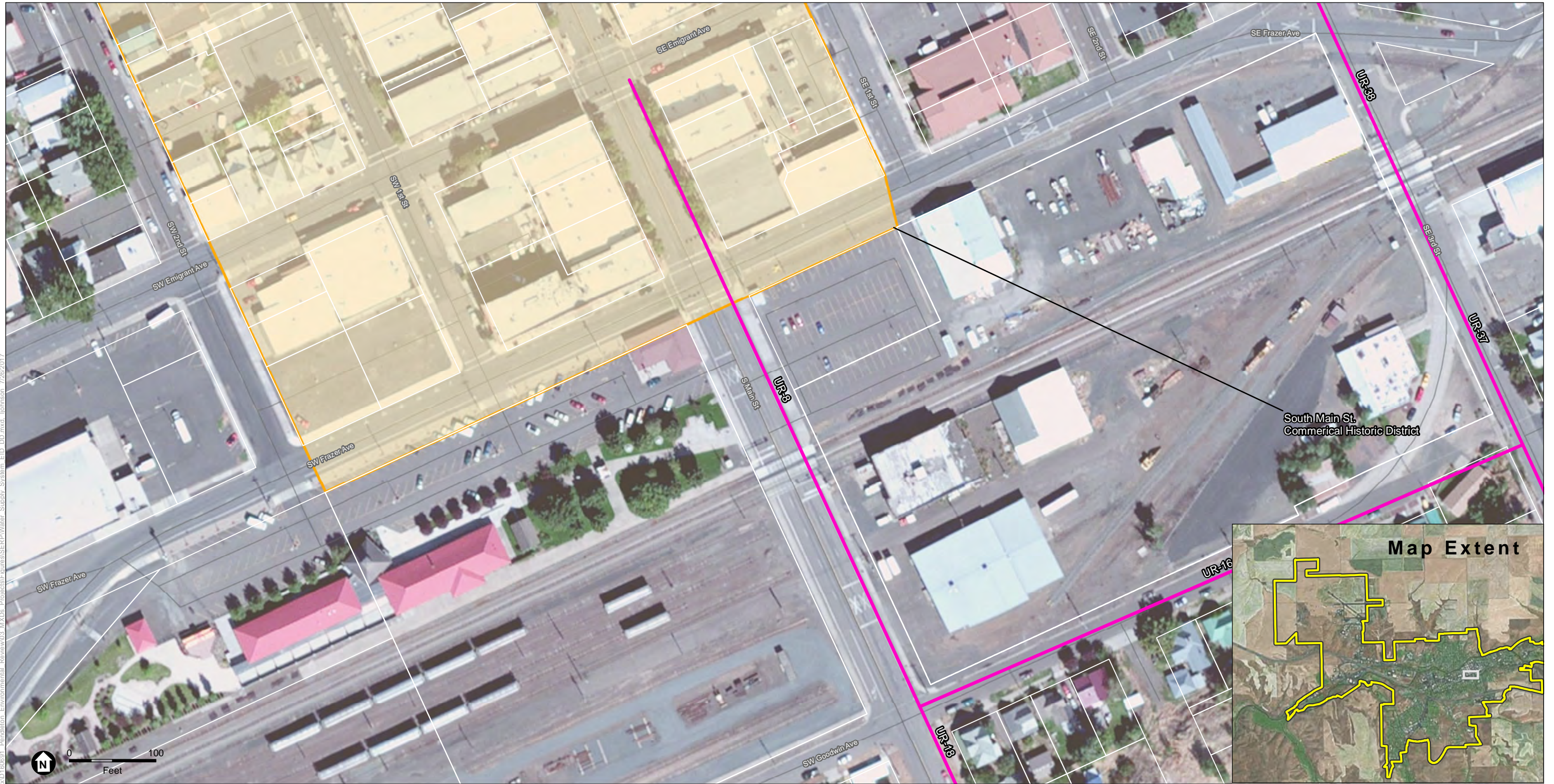
SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID UR-7 - Site Plan
 Water Supply System
 City of Pendleton, OR

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|-------------------------|-----------------------|--|--------------------------------------|---|
| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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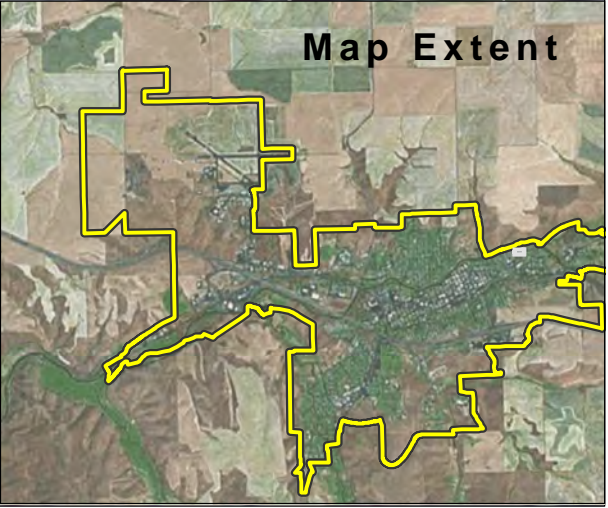
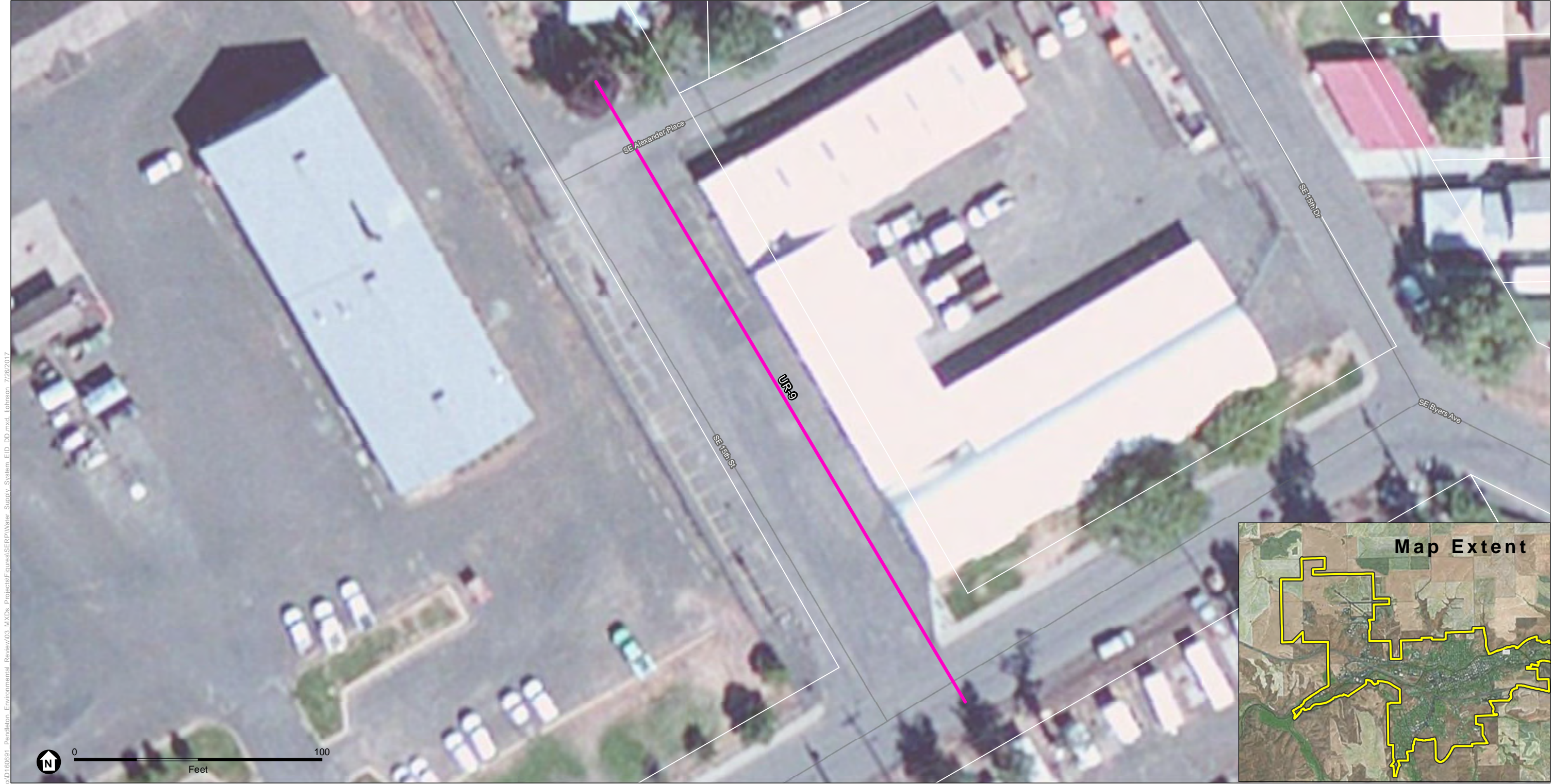
SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID UR-8 - Site Plan
Water Supply System
City of Pendleton, OR

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|-------------------------|-----------------------|--|--------------------------------------|---|
| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station IP - Interim Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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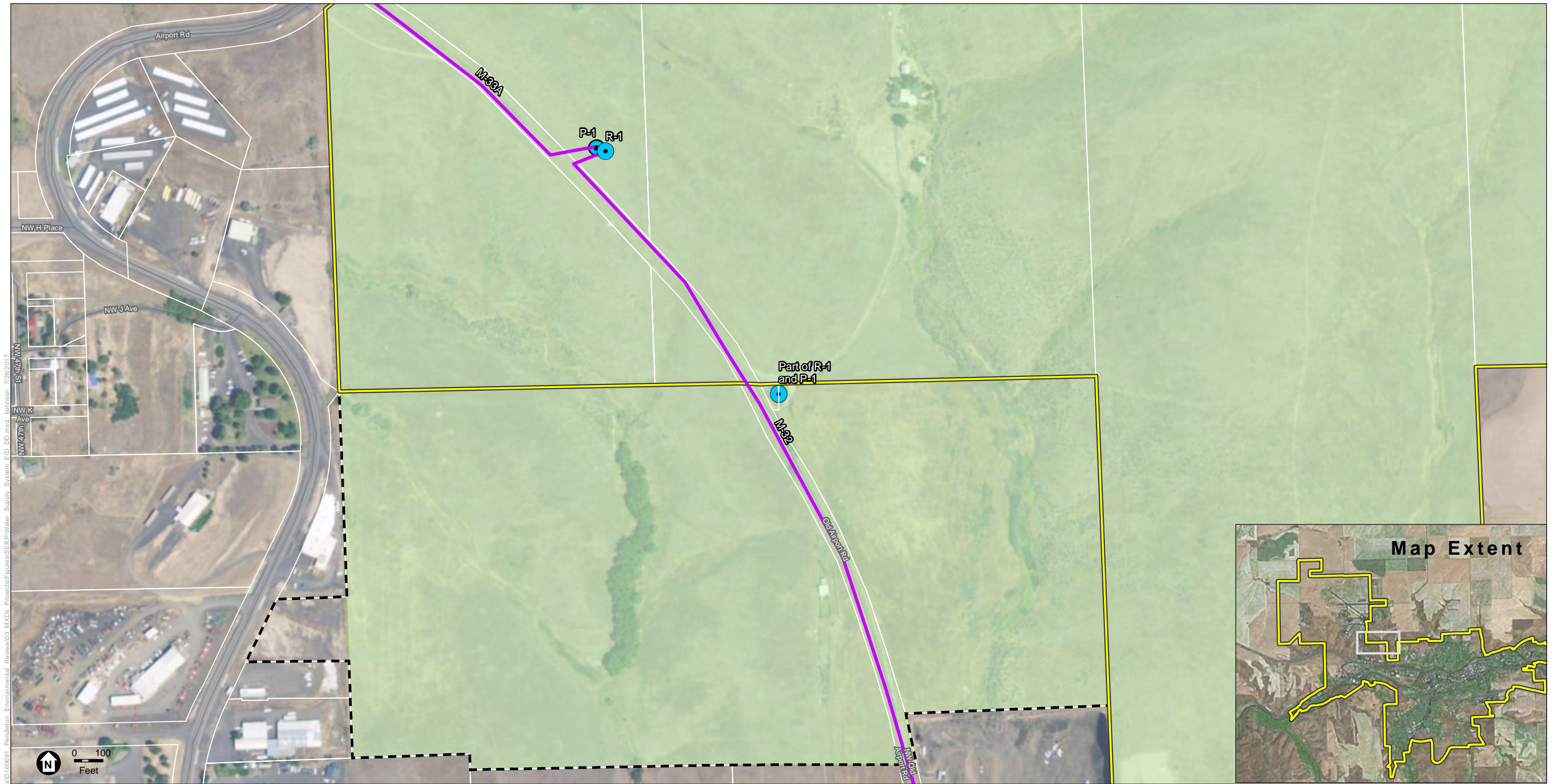
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ESA Project No.160691 Environmental Information Document

Project ID UR-9 - Site Plan
Water Supply System
City of Pendleton, OR

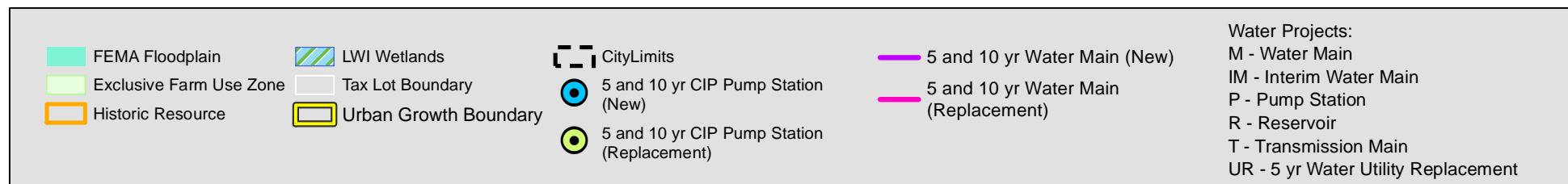
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| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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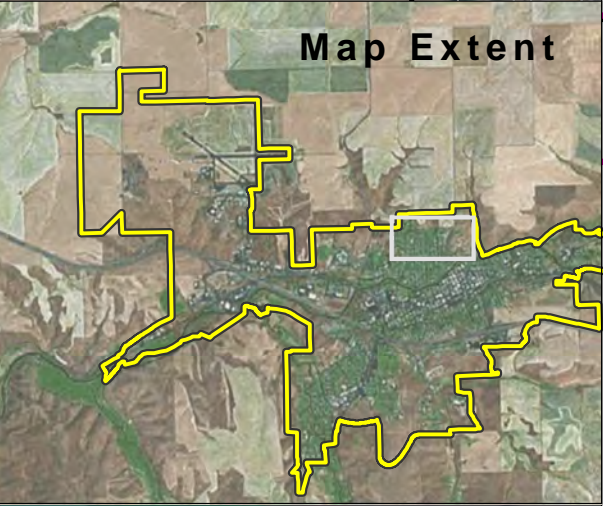
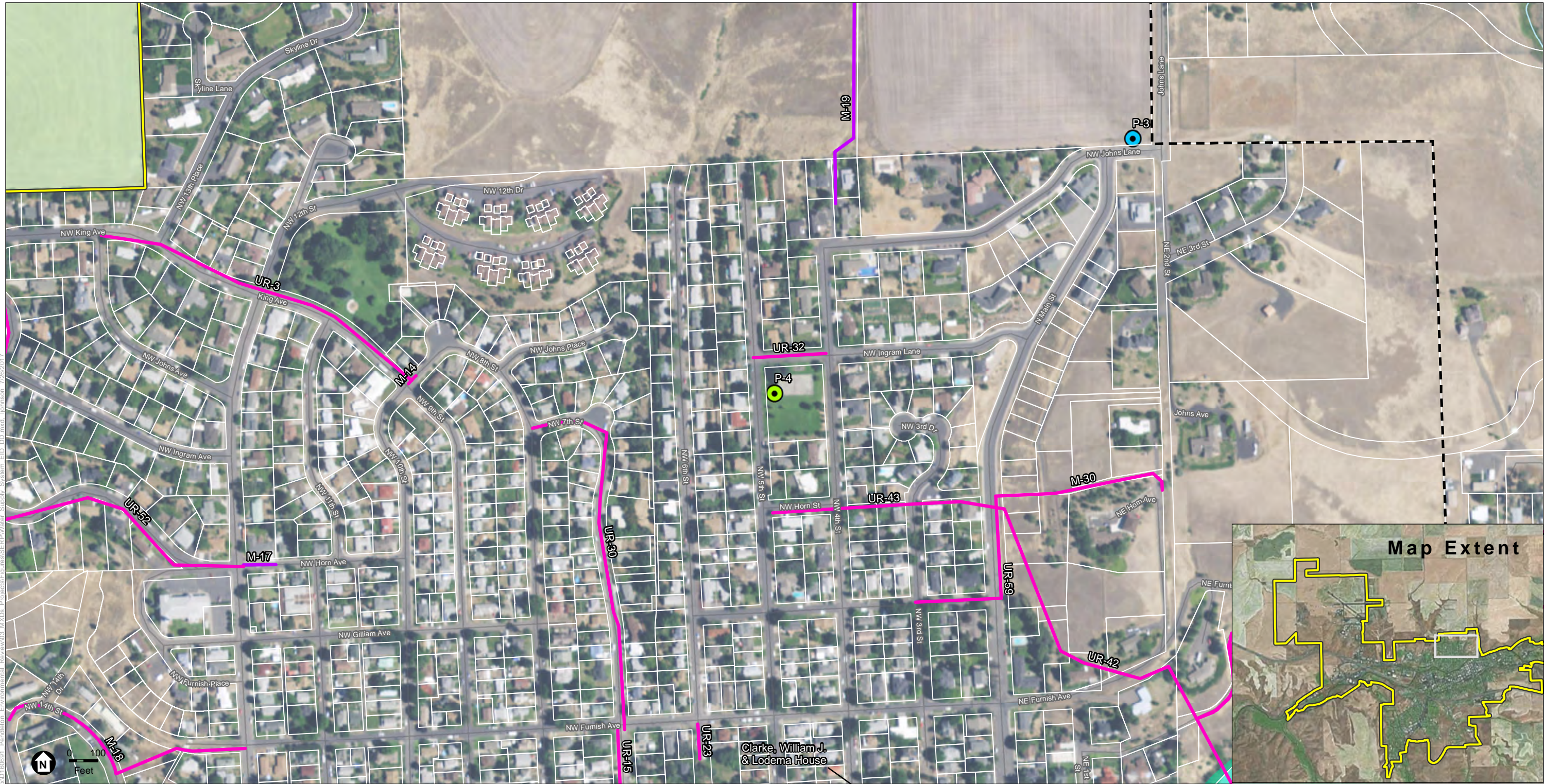
SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017



ESA Project No.160691 Environmental Information Document

Project ID Part of R-1 and P-1 - Site Plan
 Water Supply System
 City of Pendleton, OR





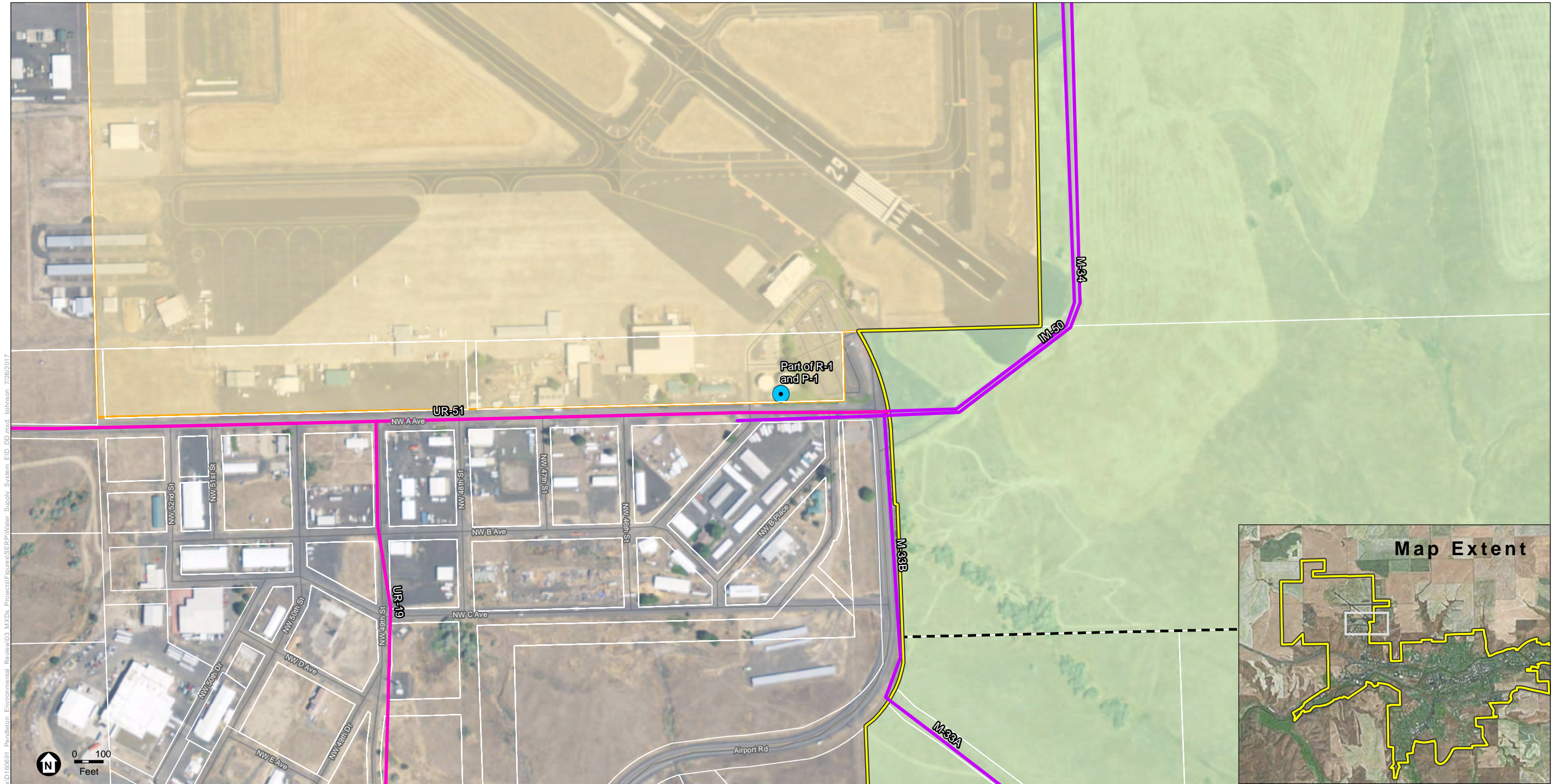
SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID P-4 - Site Plan
Water Supply System
City of Pendleton, OR

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|-------------------------|-----------------------|--|--------------------------------------|--|
| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station R - Reservoir T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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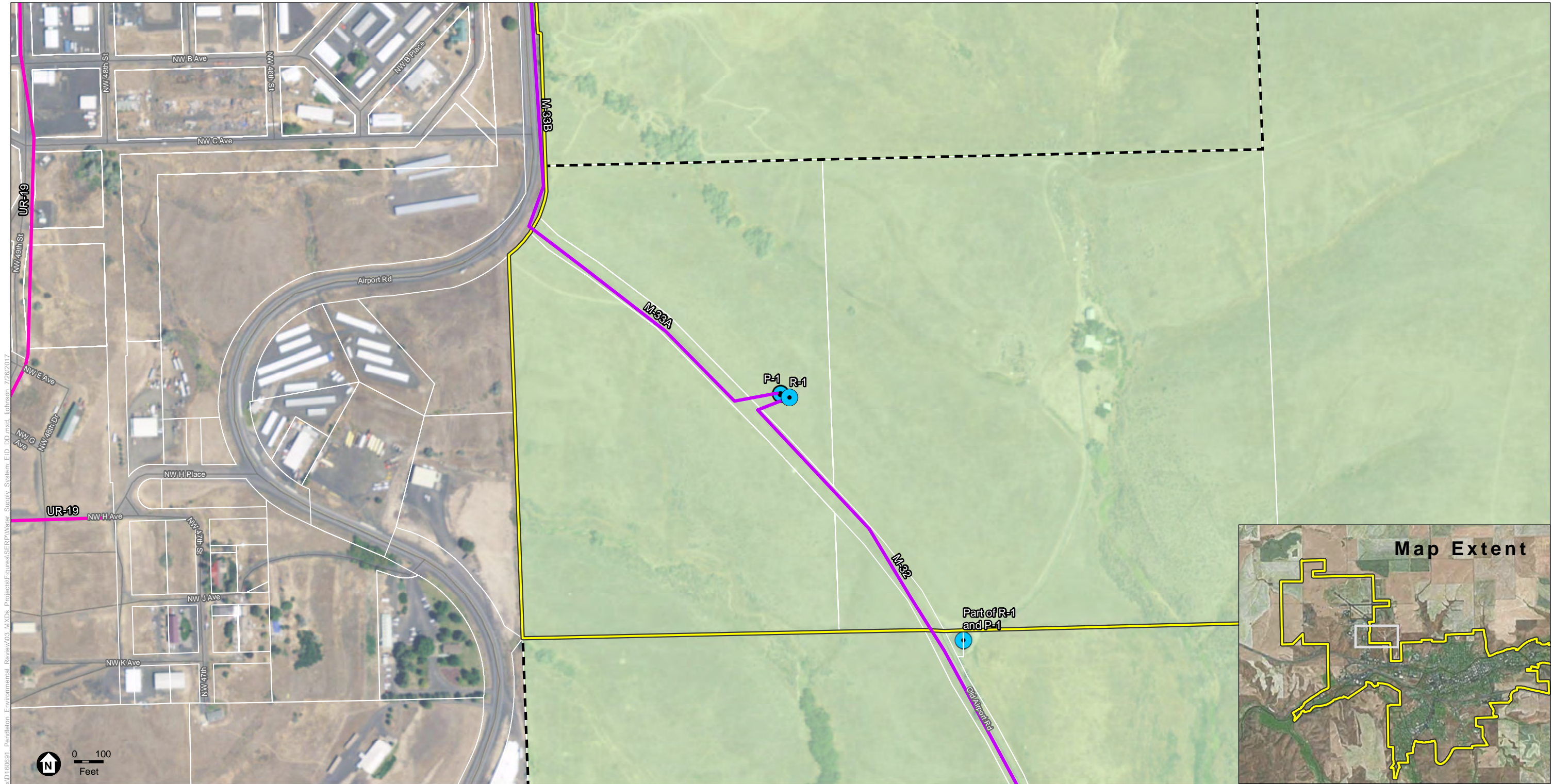
SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

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|-------------------------|-----------------------|--|--------------------------------------|--|
| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station R - Reservoir T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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ESA Project No.160691 Environmental Information Document

Project ID Part of R-1 and P-1 - Site Plan
Water Supply System
City of Pendleton, OR





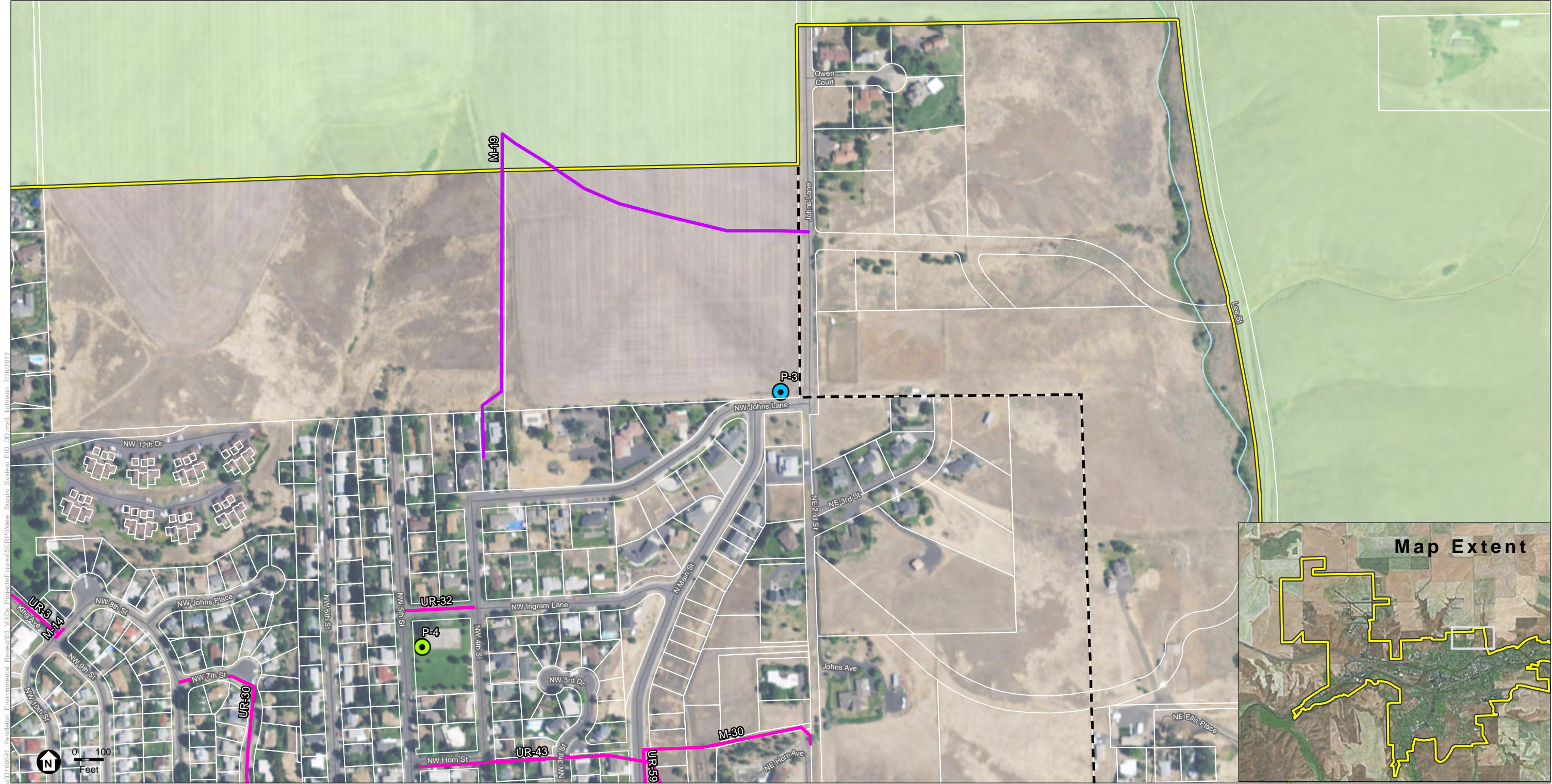
SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

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| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station R - Reservoir T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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Project ID P-1 - Site Plan
 Water Supply System
 City of Pendleton, OR





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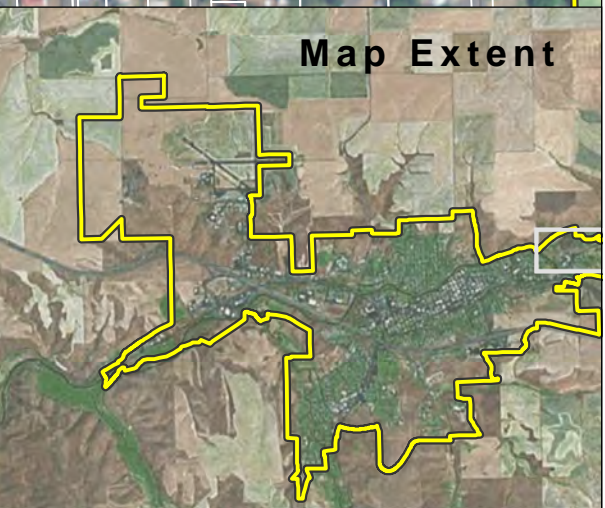
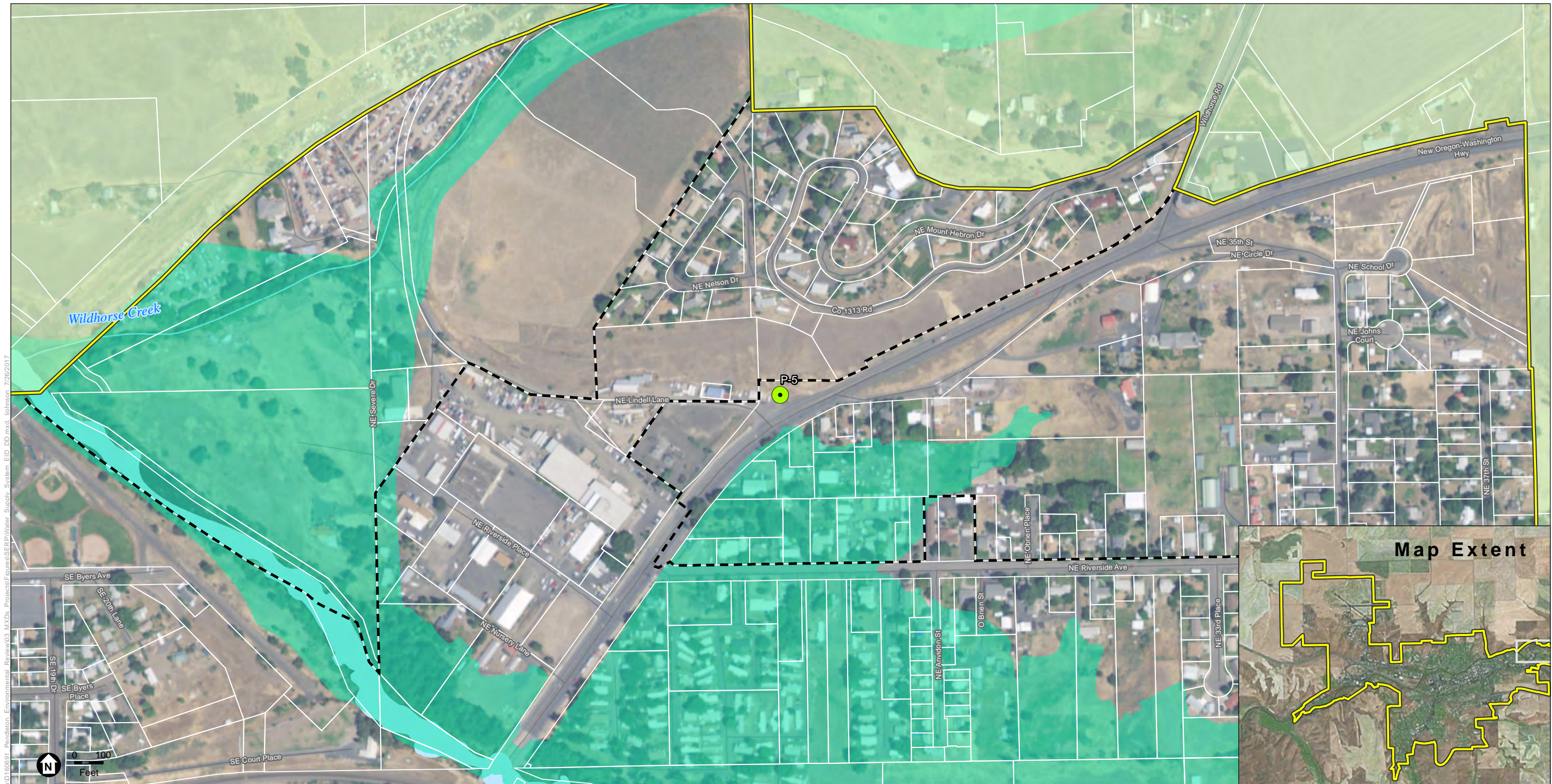
SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

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|-------------------------|-----------------------|--|--------------------------------------|--|
| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station R - Reservoir T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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ESA Project No.160691 Environmental Information Document

Project ID P-3 - Site Plan
 Water Supply System
 City of Pendleton, OR





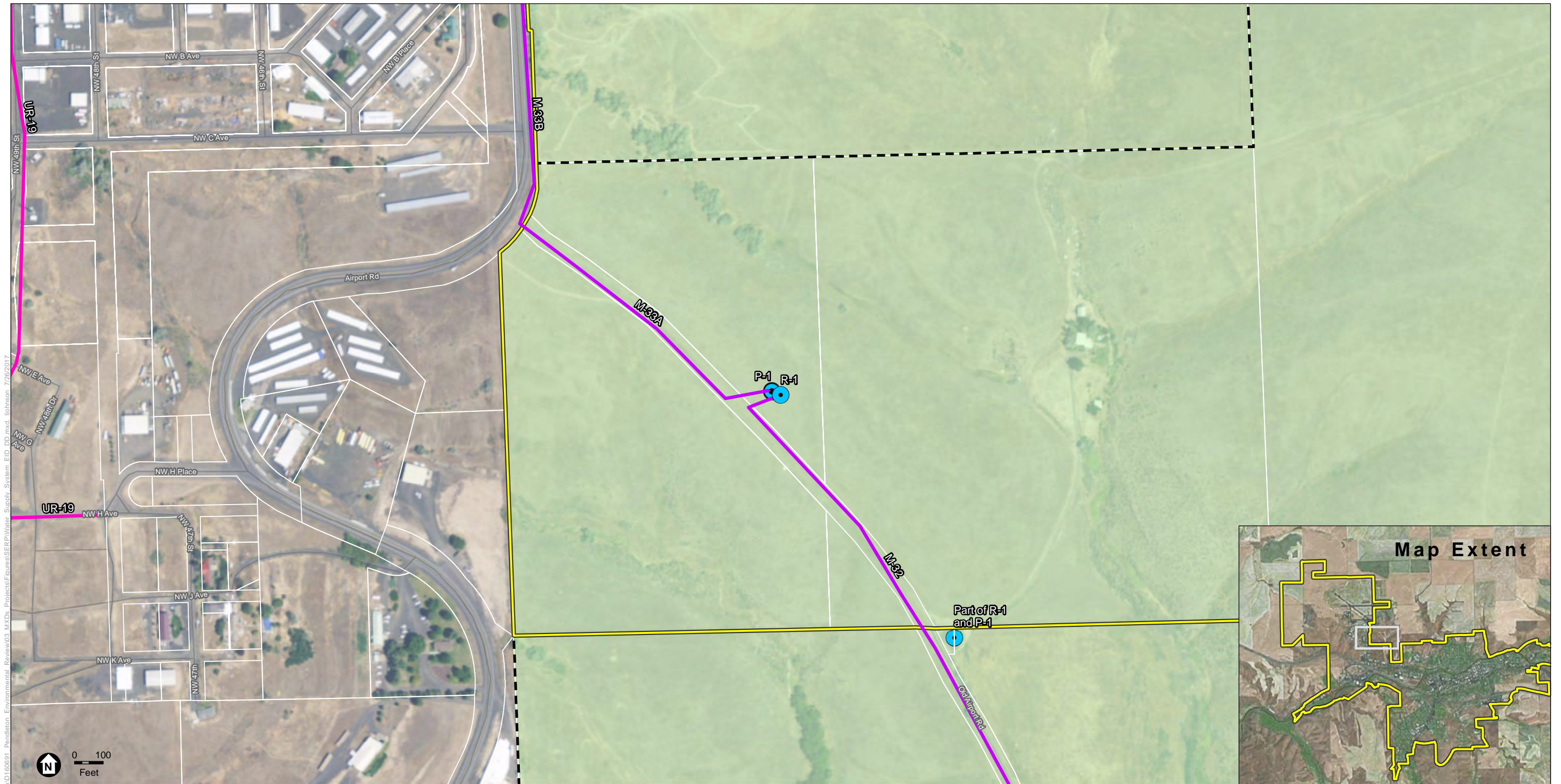
SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

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|-------------------------|-----------------------|--|--------------------------------------|--|
| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station R - Reservoir T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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ESA Project No.160691 Environmental Information Document

Project ID P-5 - Site Plan
Water Supply System
City of Pendleton, OR





SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

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|-------------------------|-----------------------|--|--------------------------------------|--|
| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station R - Reservoir T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |

Project ID R-1
Water Supply System
City of Pendleton, OR



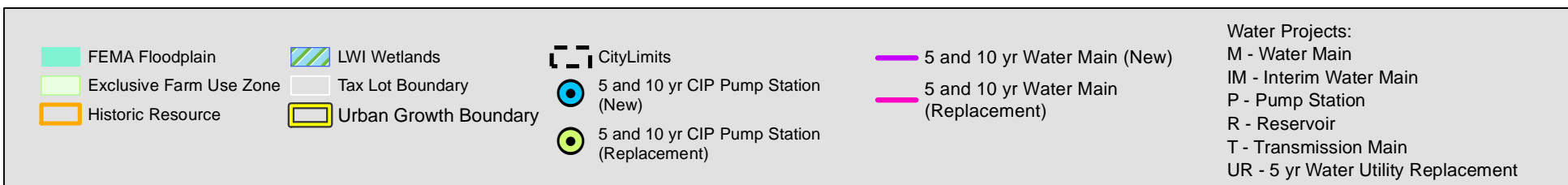


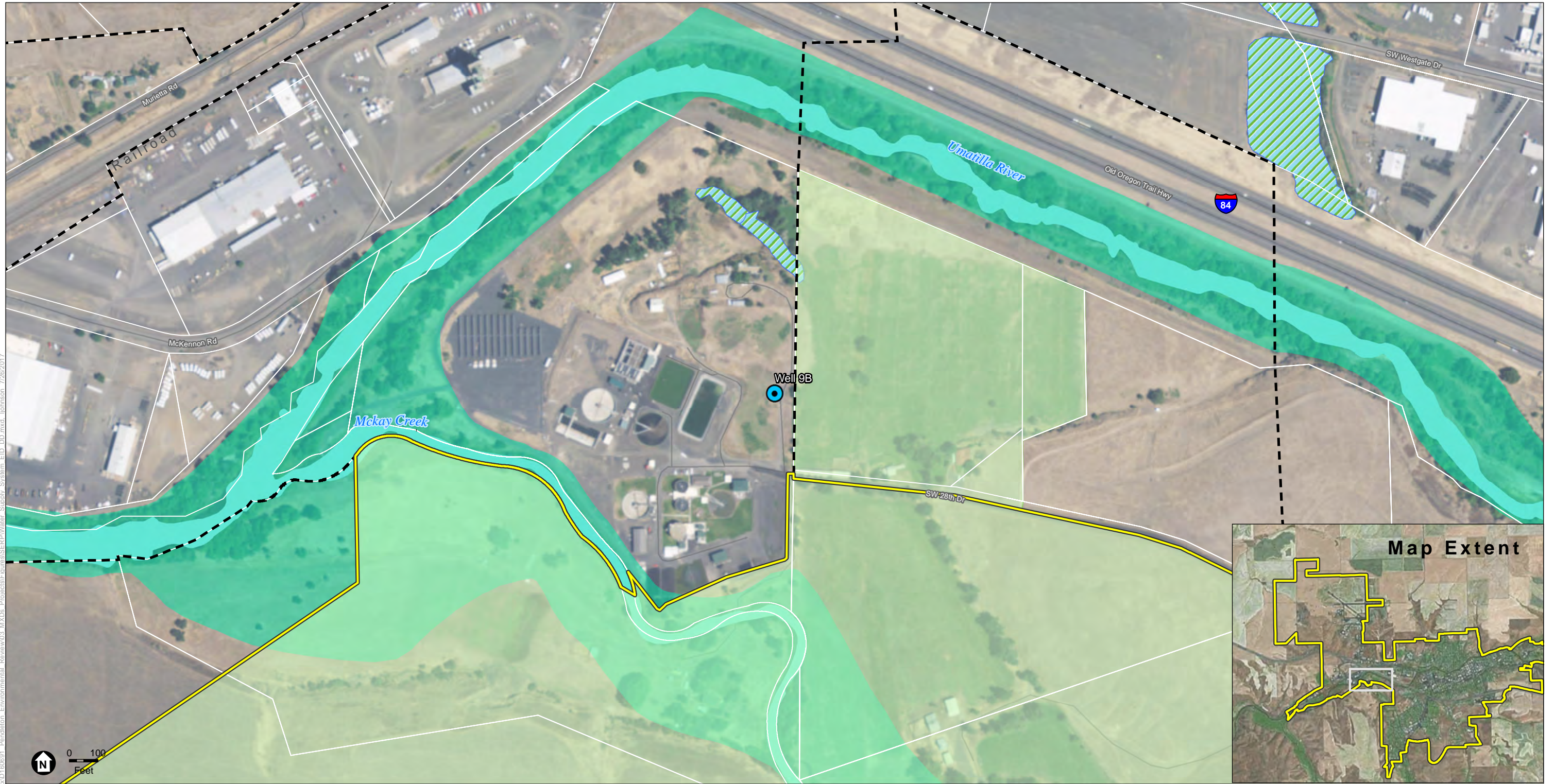
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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID Well 9A - Site Plan
Water Supply System
City of Pendleton, OR





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SOURCE: USDA NAIP, 2016; City of Pendleton, 2017; Open Street Maps, 2016; ESA, 2017

ESA Project No.160691 Environmental Information Document

Project ID Well 9B - Site Plan
Water Supply System
City of Pendleton, OR

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|-------------------------|-----------------------|--|--------------------------------------|---|
| FEMA Floodplain | LWI Wetlands | City Limits | 5 and 10 yr Water Main (New) | Water Projects: M - Water Main IM - Interim Water Main P - Pump Station R - Reservoir T - Transmission Main UR - 5 yr Water Utility Replacement |
| Exclusive Farm Use Zone | Tax Lot Boundary | 5 and 10 yr CIP Pump Station (New) | 5 and 10 yr Water Main (Replacement) | |
| Historic Resource | Urban Growth Boundary | 5 and 10 yr CIP Pump Station (Replacement) | | |
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NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations (BFEs)** and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) Report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS Report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study Report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study Report for information on flood control structures for this jurisdiction.

Provisionally Accredited Levee Notes to Users: Check with your local community to obtain more information, such as the estimated level of protection provided (which may exceed the 1-percent-annual-chance level) and Emergency Action Plan, on the levee system(s) shown as providing protection for areas on this panel. To maintain accreditation, the levee owner or community is required to submit the data and documentation necessary to comply with Section 65.10 of the NFIP regulations by July 4, 2009. If the community or owner does not provide the necessary data and documentation or if the data and documentation provided indicate the levee system does not comply with Section 65.10 requirements, FEMA will revise the flood hazard and risk information for this area to reflect de-accreditation of the levee system. To mitigate flood risk in residual risk areas, property owners and residents are encouraged to consider flood insurance and floodproofing or other protective measures. For more information on flood insurance, interested parties should visit the FEMA Website at <http://www.fema.gov/business/nfip/index.shtm>.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 11. The **horizontal datum** was NAD 83, GRS 1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov> or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, NNGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at <http://www.ngs.noaa.gov>.

Base map information shown on this FIRM was derived from multiple sources. Base map files were provided in digital format by the State of Oregon. This information was compiled from the U.S. Geological Survey (2007), Oregon Department of Transportation (2007), OR/WA Bureau of Land Management (2005), Oregon Department of Forestry (2003), NGS (2007), and USDA-FSA (2006) at a scale of 1:24,000.

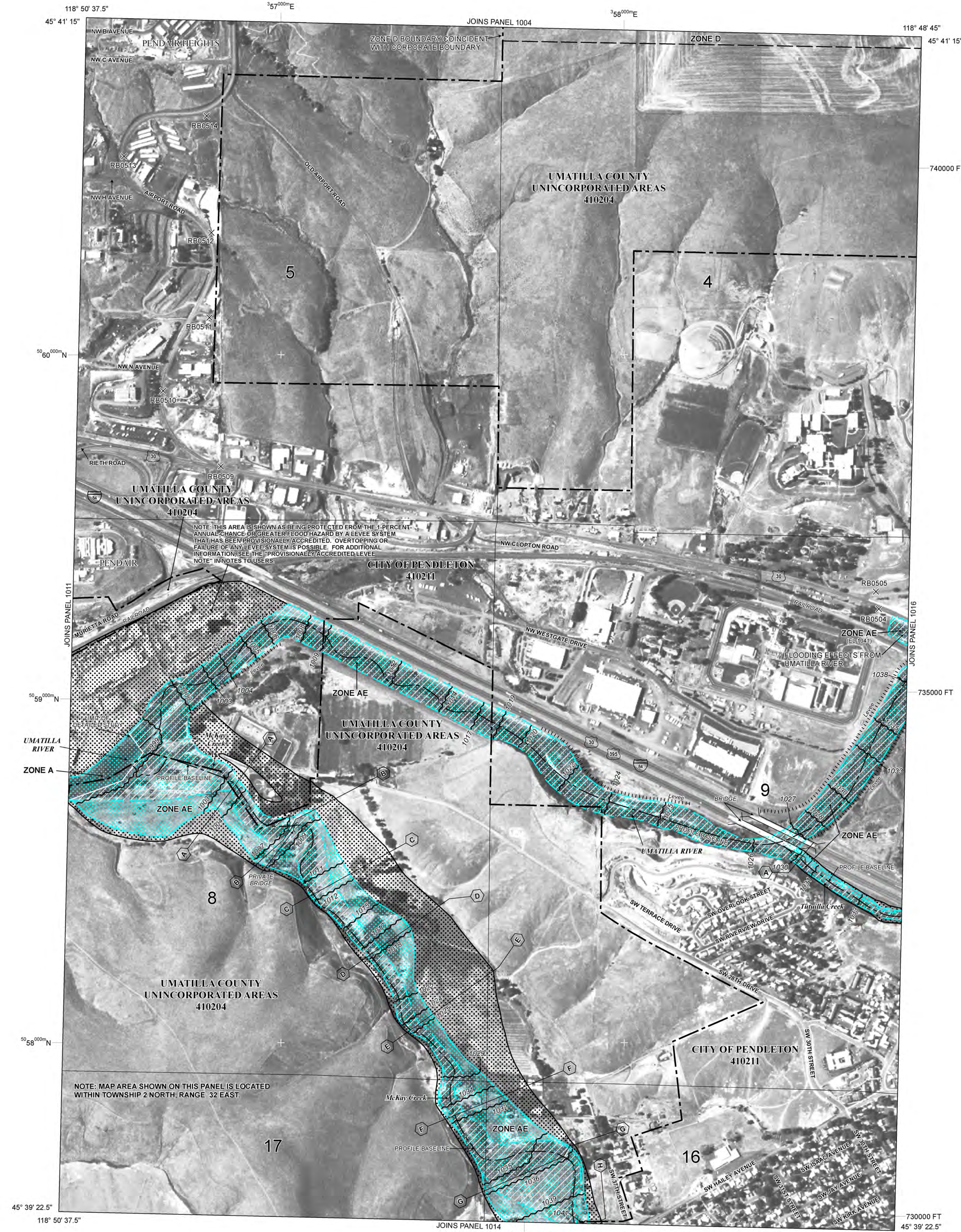
The **profile baselines** depicted on this map represent the hydraulic modeling baselines that match the flood profiles in the FIS report. As a result of improved topographic data, the **profile baseline**, in some cases, may deviate significantly from the channel centerline or appear outside the SFHA.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels, community map repository addresses, and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at <http://msc.fema.gov>.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA website at <http://www.fema.gov/business/nfip/>.



LEGEND

- SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD. The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.
- ZONE A** No Base Flood Elevations determined.
- ZONE AE** Base Flood Elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE AR** Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.
- FLOODWAY AREAS IN ZONE AE. The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.
- OTHER FLOOD AREAS. **ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile, and areas protected by levees from 1% annual chance flood. **ZONE D** Areas determined to be outside the 0.2% annual chance floodplain. **ZONE X-D** Areas in which flood hazards are undetermined, but possible.
- OTHER AREAS.
- COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS. Areas in which flood hazards are undetermined, but possible.
- OTHERWISE PROTECTED AREAS (OPAs). CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.
 - 1% Annual Chance Floodplain Boundary
 - 0.2% Annual Chance Floodplain Boundary
 - Floodway boundary
 - Zone D boundary
 - CBRS and OPA boundary
 - Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
 - Base Flood Elevation line and value; elevation in feet* (EL 987)
 - Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

- Cross section line
 - Transect line

45° 02' 08", 93° 02' 12" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere
 3100000 FT 5000-foot ticks: Oregon State Plane North Zone (FIPS Zone 3601), Lambert Conformal Conic projection
 89° 00' 00" N 1000-meter Universal Transverse Mercator grid values, zone 11N
 DX5510 X Bench mark (see explanation in Notes to Users section of this FIRM panel)
 * M1.5 River Mile
 MAP REPOSITORIES Refer to Map Repositories list on Map Index
 EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP September 3, 2010
 EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.
 To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'
 250 0 500 1000 FEET
 150 0 150 300 METERS

NFIP NATIONAL FLOOD INSURANCE PROGRAM

PANEL 1012G

FIRM
 FLOOD INSURANCE RATE MAP
 UMATILLA COUNTY,
 OREGON
 AND INCORPORATED AREAS

PANEL 1012 OF 2350
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

| COMMUNITY | NUMBER | PANEL | SUFFIX |
|--------------------|--------|-------|--------|
| PENDLETON, CITY OF | 410211 | 1012 | G |
| UMATILLA COUNTY | 410204 | 1012 | G |

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER 41059C1012G
 EFFECTIVE DATE SEPTEMBER 3, 2010
 Federal Emergency Management Agency

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

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Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study Report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study Report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 11. The **horizontal datum** was NAD 83, GRS 1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov> or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, NNGS12
National Geodetic Survey
SSMC-3, #5202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at <http://www.ngs.noaa.gov>.

Base map information shown on this FIRM was derived from multiple sources. Base map files were provided in digital format by the State of Oregon. This information was compiled from the U.S. Geological Survey (2007), Oregon Department of Transportation (2007), ORWA Bureau of Land Management (2005), Oregon Department of Forestry (2003), NGS (2007), and USDA-FSA (2006) at a scale of 1:24,000.

The **profile baselines** depicted on this map represent the hydraulic modeling baselines that match the flood profiles in the FIS report. As a result of improved topographic data, the **profile baseline**, in some cases, may deviate significantly from the channel centerline or appear outside the SFHA.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels, community map repository addresses, and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

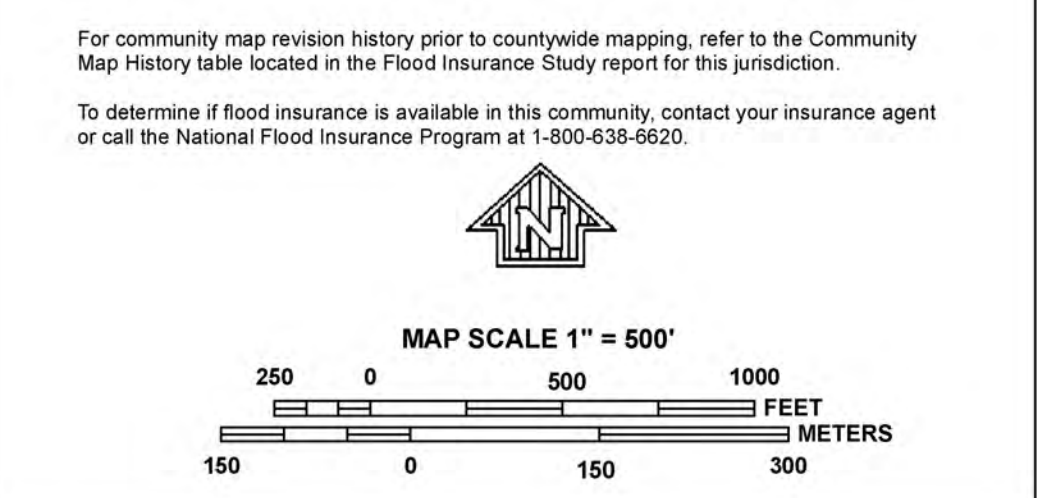
Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at <http://msc.fema.gov>.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call 1-877-FEMA MAP (1-877-336-2627) or visit the FEMA website at <http://www.fema.gov/business/nfip/>.



LEGEND

- SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD
- The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.
- ZONE A** No Base Flood Elevations determined.
- ZONE AE** Base Flood Elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE AR** Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently deteriorated. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.
- FLOODWAY AREAS IN ZONE AE
- The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.
- OTHER FLOOD AREAS
- ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
- OTHER AREAS**
- ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.
- ZONE D** Areas in which flood hazards are undetermined, but possible.
- COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS
- OTHERWISE PROTECTED AREAS (OPAs)
- CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.
- 1% Annual Chance Floodplain Boundary
- 0.2% Annual Chance Floodplain Boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- Base Flood Elevation line and value; elevation in feet*
- Base Flood Elevation value where uniform within zone; elevation in feet*
- *Referenced to the North American Vertical Datum of 1988
- Cross section line
- Transect line
- 45° 02' 08", 93° 02' 12" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere
- 3100000 FT 5000-foot ticks: Oregon State Plane North Zone (FIPS Zone 3601), Lambert Conformal Conic projection
- 1000-meter Universal Transverse Mercator grid values, zone 11N
- DX5510 X Bench mark (see explanation in Notes to Users section of this FIRM panel)
- * M1.5 River Mile
- MAP REPOSITORIES Refer to Map Repositories list on Map Index
- EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP September 3, 2010
- EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 1014G

FIRM FLOOD INSURANCE RATE MAP UMATILLA COUNTY, OREGON AND INCORPORATED AREAS

PANEL 1014 OF 2350
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

| COMMUNITY | NUMBER | PANEL | SUFFIX |
|--------------------|--------|-------|--------|
| PENDLETON, CITY OF | 410211 | 1014 | G |
| UMATILLA COUNTY | 410204 | 1014 | G |

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER 41059C1014G
EFFECTIVE DATE SEPTEMBER 3, 2010
Federal Emergency Management Agency

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations (BFEs)** and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) Report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS Report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study Report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study Report for information on flood control structures for this jurisdiction.

Provisionally Accredited Levee Notes to Users: Check with your local community to obtain more information, such as the estimated level of protection provided (which may exceed the 1-percent-annual-chance level) and Emergency Action Plan, on the levee system(s) shown as providing protection for areas on this panel. To maintain accreditation, the levee owner or community is required to submit the data and documentation necessary to comply with Section 65.10 of the NFP regulations by July 4, 2009. If the community or owner does not provide the necessary data and documentation or if the data and documentation provided indicate the levee system does not comply with Section 65.10 requirements, FEMA will revise the flood hazard and risk information for this area to reflect de-accreditation of the levee system. To mitigate flood risk in residual risk areas, property owners and residents are encouraged to consider flood insurance and floodproofing or other protective measures. For more information on flood insurance, interested parties should visit the FEMA Website at <http://www.fema.gov/business/nfip/index.shtm>.

The projection used in the preparation of this map was Universal Transverse Mercator (UTM) zone 11. The horizontal datum was NAD 83, GRS 1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov> or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, NNGS12
National Geodetic Survey
SSM-C-3 #202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

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If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call 1-877-FEMA-MAP (1-877-336-2827) or visit the FEMA website at <http://www.fema.gov/business/nfip/>.



LEGEND

- SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD. The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.
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- ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.
- FLOODWAY AREAS IN ZONE AE. The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.
- OTHER FLOOD AREAS. **ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile, and areas protected by levees from 1% annual chance flood. **OTHER AREAS** Areas determined to be outside the 0.2% annual chance floodplain. Areas in which flood hazards are undetermined, but possible.
- COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS.
- OTHERWISE PROTECTED AREAS (OPAs). CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.
- 1% Annual Chance Floodplain Boundary
- 0.2% Annual Chance Floodplain Boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- Base Flood Elevation line and value; elevation in feet* (EL 987)
- Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

Cross section line

Transect line

45° 02' 08", 93° 02' 12" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere

3100000 FT 5000-foot ticks: Oregon State Plane North Zone (FIPS Zone 3601), Lambert Conformal Conic projection

89° 00' 00" N 1000-meter Universal Transverse Mercator grid values, zone 11N

DX5510 X Bench mark (see explanation in Notes to Users section of this FIRM panel)

* M1.5 River Mile

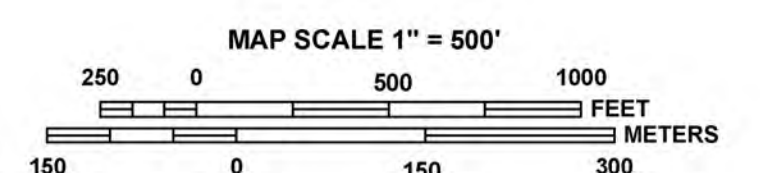
MAP REPOSITORIES Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP September 3, 2010

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 1016G

FIRM

FLOOD INSURANCE RATE MAP

UMATILLA COUNTY, OREGON AND INCORPORATED AREAS

PANEL 1016 OF 2350
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

| COMMUNITY | NUMBER | PANEL | SUFFIX |
|--------------------|--------|-------|--------|
| PENDLETON, CITY OF | 410211 | 1016 | G |
| UMATILLA COUNTY | 410204 | 1016 | G |

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER 41059C1016G

EFFECTIVE DATE SEPTEMBER 3, 2010

Federal Emergency Management Agency

NOTES TO USERS

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Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study Report for this jurisdiction.

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Provisionally Accredited Levee Notes to Users: Check with your local community to obtain more information, such as the estimated level of protection provided (which may exceed the 1-percent-annual-chance level) and Emergency Action Plan, on the levee system(s) shown as providing protection for areas on this panel. To maintain accreditation, the levee owner or community is required to submit the data and documentation necessary to comply with Section 65.10 of the NFIP regulations by July 4, 2009. If the community or owner does not provide the necessary data and documentation or if the data and documentation provided indicate the levee system does not comply with Section 65.10 requirements, FEMA will revise the flood hazard and risk information for this area to reflect de-accreditation of the levee system. To mitigate flood risk in residual risk areas, property owners and residents are encouraged to consider flood insurance and floodproofing or other protective measures. For more information on flood insurance, interested parties should visit the FEMA Website at <http://www.fema.gov/business/nfip/index.shtm>.

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NGS Information Services
NOAA, NNGS12
National Geodetic Survey
SSM-C-3 #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

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LEGEND

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- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- Base Flood Elevation line and value; elevation in feet*
- Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

Cross section line

Transect line

45° 02' 08", 93° 02' 12" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere

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1000-meter Universal Transverse Mercator grid values, zone 11N

DX5510 X Bench mark (see explanation in Notes to Users section of this FIRM panel)

* M 1.5 River Mile

MAP REPOSITORIES Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP September 3, 2010

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

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MAP SCALE 1" = 500'

250 0 500 1000 FEET METERS

150 0 150 300

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 1017G

FIRM

FLOOD INSURANCE RATE MAP

UMATILLA COUNTY, OREGON AND INCORPORATED AREAS

PANEL 1017 OF 2350
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

| COMMUNITY | NUMBER | PANEL | SUFFIX |
|--------------------|--------|-------|--------|
| PENDLETON, CITY OF | 410211 | 1017 | G |
| UMATILLA COUNTY | 410204 | 1017 | G |

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER 41059C1017G
EFFECTIVE DATE SEPTEMBER 3, 2010
Federal Emergency Management Agency

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NGS Information Services
NOAA, NNGS12
National Geodetic Survey
SSM-C-3 #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at <http://www.ngs.noaa.gov>.

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LEGEND

- SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD
The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.
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- ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.
- FLOODWAY AREAS IN ZONE AE
The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.
- OTHER FLOOD AREAS
- ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
- OTHER AREAS**
- ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.
- ZONE D** Areas in which flood hazards are undetermined, but possible.
- COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS
- OTHERWISE PROTECTED AREAS (OPAs)
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- 1% Annual Chance Floodplain Boundary
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- Base Flood Elevation line and value; elevation in feet*
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- *Referenced to the North American Vertical Datum of 1988
- Cross section line
- Transect line
- 45° 02' 08", 93° 02' 12" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere
- 3100000 FT 5000-foot ticks: Oregon State Plane North Zone (FIPS Zone 3601), Lambert Conformal Conic projection
- 1000-meter Universal Transverse Mercator grid values, zone 11N
- Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 River Mile
- MAP REPOSITORIES
Refer to Map Repositories list on Map Index
- EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
September 3, 2010
- EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 1018G

FIRM
FLOOD INSURANCE RATE MAP
UMATILLA COUNTY,
OREGON
AND INCORPORATED AREAS

PANEL 1018 OF 2350
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

| COMMUNITY | NUMBER | PANEL | SUFFIX |
|--------------------|--------|-------|--------|
| PENDLETON, CITY OF | 410211 | 1018 | G |
| UMATILLA COUNTY | 410204 | 1018 | G |

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
41059C1018G
EFFECTIVE DATE
SEPTEMBER 3, 2010
Federal Emergency Management Agency

NOTES TO USERS

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Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study Report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study Report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 11. The **horizontal datum** was NAD 83, GRS 1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

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*Referenced to the North American Vertical Datum of 1988

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- Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 River Mile
- MAP REPOSITORIES
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- EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
September 3, 2010
- EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

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PANEL 1019G

FIRM
FLOOD INSURANCE RATE MAP
UMATILLA COUNTY,
OREGON
AND INCORPORATED AREAS

PANEL 1019 OF 2350
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

| COMMUNITY | NUMBER | PANEL | SUFFIX |
|--------------------|--------|-------|--------|
| PENDLETON, CITY OF | 410211 | 1019 | G |
| UMATILLA COUNTY | 410204 | 1019 | G |

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MAP NUMBER
41059C1019G
EFFECTIVE DATE
SEPTEMBER 3, 2010
Federal Emergency Management Agency

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- Base Flood Elevation value where uniform within zone; elevation in feet*

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— Cross section line

— Transect line

45° 02' 08", 93° 02' 12"

3100000 FT

5000-foot ticks: Oregon State Plane North Zone (FIPS Zone 3601), Lambert Conformal Conic projection

1000-meter Universal Transverse Mercator grid values, zone 11N

DX5510 X Bench mark (see explanation in Notes to Users section of this FIRM panel)

M1.5 River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
September 3, 2010

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

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MAP SCALE 1" = 500'

250 0 500 1000 FEET
150 0 150 300 METERS

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 1036G

FIRM

FLOOD INSURANCE RATE MAP

UMATILLA COUNTY, OREGON AND INCORPORATED AREAS

PANEL 1036 OF 2350
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

| COMMUNITY | NUMBER | PANEL | SUFFIX |
|-----------------------------|--------|-------|--------|
| UMATILLA INDIAN RESERVATION | 410012 | 1036 | G |
| PENDLETON, CITY OF | 410211 | 1036 | G |
| UMATILLA COUNTY | 410204 | 1036 | G |

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER 41059C1036G
EFFECTIVE DATE SEPTEMBER 3, 2010
Federal Emergency Management Agency

APPENDIX B: PROPOSED WATER SUPPLY PROJECTS

| Project Name | Project Description | Project Location | Project Site Setting / Tax lot | Anticipated Construction Timing | Historic Resources | Wetlands | Floodplain | Farmland |
|--------------|---|--|--|---------------------------------|--------------------|----------|------------|----------|
| IM-50 | New interim water main | Along southeast boundary of Airport Industrial Area | 3N32000009900 (A1 – A7) 3N32000009901 | 5-year | No | No | No | Yes |
| IM-51 | New interim water main | Along southeast boundary of Airport Industrial Area | 2N32050000100 3N32000009900 3N32000009900 (A2-A7) 3N32000010500 3N32000010600 3N32000010700 | 5-year | No | No | No | Yes |
| IM-54 | New interim water main | Along Airport Road and through undeveloped airport property | Right-of-way 3N32331601 | 5-year | No | No | No | No |
| M-4 | New 4-inch water main | New main along SE Court Place from dead end south of railroad and east of SE 20th Street through Tire Factory driveway to OR11 | Unpaved / right-of-way 2N3212BB00100 | 5-year | No | No | No | No |
| M-6 | Upgrade existing water main | NE Ellis Place to Lee Street | Undeveloped / right-of-way | 5-year | No | No | No | No |
| M-13 | Upgrade existing 2-inch section of water main | 2439 SW Perkins Avenue, within 5-Year | Local Road / right-of-way | 5-year | No | No | No | No |
| M-14 | Upgrade existing 2-inch of water main | NW 10th Avenue from NW King Avenue northeast to fire hydrant | Local Road / right-of-way | 5-year | No | No | No | No |
| M-17 | Extend existing water main | NW Horn Avenue from NW 12th Street to existing dead end west of NW 11th Street | Local Road / right-of-way | 5-year | No | No | No | No |
| M-18 | Upgrade existing water main | NW 14th Street from NW 15th Drive to easement adjacent to 514 NW 14th Street then along NW Furnish Avenue to NW 12th Street | Local Road / right-of-way | 10-year | No | No | No | No |

City of Pendleton Water System Improvement Projects
Environmental Information Document

| Project Name | Project Description | Project Location | Project Site Setting / Tax lot | Anticipated Construction Timing | Historic Resources | Wetlands | Floodplain | Farmland |
|--------------|------------------------------------|--|---|---------------------------------|--------------------|----------|------------|----------|
| M-19 | New water main | NW 4th Street alignment from north of NW Johns Lane through undeveloped area to future Meacham Road alignment then along Meacham Road alignment east to Johns Lane | Unpaved / right-of-way 2N32030000100 2N32030000102 | 10-year | No | No | No | No |
| M-30 | Upgrade existing 6-inch water main | NE Horn Avenue alignment from N Main Street east to hydrant at NE 2nd Street | Unpaved / right-of-way | 10-year | No | No | No | No |
| M-32 | New water main | Old Airport Road from Westgate through Gilliam Canyon to proposed Airport Reservoir and Pump Station site northwest of existing Gilliam Canyon Pump Station | Unpaved / right-of-way 2N32050000201 (U1-U4) 2N32050000400 2N32050001201 A1 2N32050001400 | 10-year | No | No | No | Yes |
| M-33 | New water main | Airport Road from Old Airport Road to NW A Avenue | Local Road / right-of-way 2N32050000100 2N32050000201 (U1-U-4) | 10-year | No | No | No | Yes |
| M-34 | New water main | Old Airport Road | Local Road / right-of-way 2N32050000100 3N32000009900 3N32000009900 (A2-A7) 3N32000010500 3N32000010600 3N32000010700 | 10-year | No | No | No | Yes |
| M-36 | New water main | West of airport boundary from new Airport Road 18-inch (M-35) north to new road alignment south of Daniel Road and west of Stage Gulch Road | Unpaved / right-of-way 3N31000001400 3N31000005800 | 10-year | No | No | No | No |
| M-35A | New water main | Airport Road from west interim non- potable pump station (IP-1) to industrial development west of Stage Gulch Road | Unpaved / right-of-way 3N32000009900 (A1 – A7) | 5-year | No | No | No | No |

City of Pendleton Water System Improvement Projects
Environmental Information Document

| Project Name | Project Description | Project Location | Project Site Setting / Tax lot | Anticipated Construction Timing | Historic Resources | Wetlands | Floodplain | Farmland |
|--------------|---|---|--|---------------------------------|--------------------|----------|------------|------------|
| M-35B | New water main | Airport Road from west interim non- potable pump station (IP-1) to existing 12-inch dead end west of 56th | Unpaved / right-of-way 3N32000009900 (A1 – A7) 3N32000009901 | 5-year | No | No | No | No |
| M-48 | New water main | Airport East interim non-potable pump station (IP-2) to UAS Phase 4 north | Unpaved / right-of-way 3N32000009900 (A1 – A7) 3N32000009901 | 5-year | No | No | No | No |
| M-53 | New water main | Airport East interim non-potable pump station (IP-2) to UAS Phase 4 South | Unpaved / right-of-way 3N32000009900 (A1 – A7) 3N32000009901 | 5-year | No | No | No | No |
| T-55 | Water main, WFP High Level transmission main to South Hills Reservoir | South Hills Reservoir | Unpaved / right-of-way 2N3211D000101 2N3211D000200 2N32120001100 (U1-U4) 2N32120001102 | 10-year | No | No | No | Yes |
| T-56 | Included in the conversion of Well 11 into a production / ASR well | Located along Houtama Road (SW 28 th) near the WWTP | Local Road / right-of-way | Beyond 20-year | No | No | No | Yes |
| P-1 | Water pump station replacement | Old Airport Road southeast of Airport Industrial Area | Existing footprint 3N32000009900 | 10-year | No | No | No | Yes |
| P-3 | Water main, Future 157-Zone pump station | New pump station at the northwest corner of NE 2 nd St. and NW Johns Lane | Undeveloped 2N32030000102 | 5-year | No | No | No | No |
| P-2 | Water pump upgrade | Pump station upgrade near southeast corner of Cemetery | Existing footprint 2N3215BA04000 | Beyond 20-year | No | No | No | No |
| P-4 | Water main, North Hill pump station replacement | North Hill pump station | Existing footprint 3N32000009900 | 10-year | No | No | No | No |

City of Pendleton Water System Improvement Projects
Environmental Information Document

| Project Name | Project Description | Project Location | Project Site Setting / Tax lot | Anticipated Construction Timing | Historic Resources | Wetlands | Floodplain | Farmland |
|---|--|--|----------------------------------|---------------------------------|--------------------|------------|------------|------------|
| P-5 | Water main, Mt Hebron pump station replacement | Mt Hebron pump station | Existing footprint 3N32000009900 | 10-year | No | No | No | No |
| R-1 | New 2 MG Reservoir | Old Airport Road southeast of Airport Industrial Area | 3N32000009900 | 10-year | No | No | No | Yes |
| UR-1 NW Despain PI | Replace existing water main | NW Despain PI | Right-of-way | 5-year | No | No | No | No |
| UR-4 SW. 1st St. | Replace existing water main | SW 1st St between SW. Court Ave. and SW. Dorion Ave.; Also includes the block between SW. Goodwin Ave. and SW. Hailey Ave. | Local Road / right-of-way | 2018 | Yes | No | No | No |
| UR-5 UR-37 UR-38 UR-39 UR-40 UR-41 UR-42 SE 3rd St. | Upgrade existing water main across length of 3 rd street, including bore hole and directional drilling alignment crossing | Length of SE 3rd Street, including crossing of the Umatilla River. NW. to Gilliam Ave from North W. 3rd St. to N. Main St. and includes N. Main St. from NW. Horn Ave. to NW. Gilliam Ave. | Umatilla River | 2018 | No | Yes | Yes | No |
| UR-6 UR-17 UR-53 UR-58 SE. Isaac Ave. | Replace existing water main | SE Isaac Ave, 4 sections: between SW. 13th St. and SW. 12th St.; between SW. 12th St. and SW. 10th St.; between SW. 8th St. and SW. 7th St.; and between SW. 3rd Dr. and S. Main St. | Local Road / right-of-way | 2020 | No | No | No | No |
| UR-7 NW. Despain Ave. | Replace existing water main | Short corner north of Umatilla River | Local Road / right-of-way | 2017 | No | No | No | No |
| UR-8 UR-18 S. Main St. | Replace existing water main | S. Main St between SE. Emigrant Ave. and SE. Isaac Ave. | Local Road / right-of-way | 2018 | Yes | No | No | No |

City of Pendleton Water System Improvement Projects
Environmental Information Document

| Project Name | Project Description | Project Location | Project Site Setting / Tax lot | Anticipated Construction Timing | Historic Resources | Wetlands | Floodplain | Farmland |
|----------------------|-----------------------------|---|--------------------------------|---------------------------------|--------------------|----------|------------|----------|
| UR-9 SE. 15th St. | Replace existing water main | SE 15th St between SE. Alexander Pl. and SE. Byers Ave. | Local Road / right-of-way | 2018 | Yes | No | No | No |
| UR-10 SW. 10th St. | Replace existing water main | SW 10th St between SW. Dorion Ave. and SE. Emigrant Ave. | Local Road / right-of-way | 2020 | No | No | No | No |
| UR-11 NW. 6th St. | Replace existing water main | NW 6th St from NW. Furnish Ave. NW. Despain Ave. | Local Road / right-of-way | 2018 | No | No | No | No |
| UR-12 SW. 23rd St. | Replace existing water main | SW 23rd St south of SW. Court Ave. | Local Road / right-of-way | 2019 | No | No | No | No |
| UR-13 NW. 9th St. | Replace existing water main | NW 9th St between NW. Despain Ave. and NW. Carden Ave. | Local Road / right-of-way | 2017 | No | No | No | No |
| UR-15 NW. 7th St. | Replace existing water main | NW 7th St from the intersection with NW. 8th St., south to NW. Furnish Ave. | Local Road / right-of-way | 2019 | No | No | No | No |
| UR-19 NW. 49th St. | Replace existing water main | Extends 0.43 mile starting at Airport Road, south to NW H Ave. | Local Road / right-of-way | 2018 | No | No | No | No |
| UR-20 NE Ellis Place | Replace existing water main | NE Ellis Pl | Right-of-way | 5-year | No | No | No | No |
| UR 21 NE Lee Street | Replace existing water main | NE Lee St. from NE Ellis Pl. to 8 th Street Bridge | Local Road / right-of-way | 5-year | No | No | No | No |
| UR-22 SE. 5th St. | Replace existing water main | SE 5th St from SE. Byers Ave. to SW. Court Ave. | Local Road / right-of-way | 2018 | Yes | No | No | No |
| UR-28 SW. 30th St. | Replace existing water main | SW 30th St between SW. Hailey Ave. and SW. 28th St. | Local Road / right-of-way | 2019 | No | No | No | No |
| UR-29 NW. 6th St. | Replace existing water main | NW 6th St between NW. Carden Ave. and NW. Bailey Ave. | Local Road / right-of-way | 2019 | No | No | No | No |
| UR30 NW. 7th St. | Replace existing water main | NW 7th St from NW. Furnish Ave., south to NW. Carden Ave. | Local Road / right-of-way | 2018 | No | No | No | No |

City of Pendleton Water System Improvement Projects
Environmental Information Document

| Project Name | Project Description | Project Location | Project Site Setting / Tax lot | Anticipated Construction Timing | Historic Resources | Wetlands | Floodplain | Farmland |
|--------------------------------------|-----------------------------|---|--------------------------------|---------------------------------|--------------------|----------|------------|----------|
| UR-32 NW. Ingram Ln. | Replace existing water main | NW Ingram Lane between NW. 5th St. and NW. 4th St.2019 | Local Road / right-of-way | 2019 | No | No | No | No |
| UR-33 NW. 10th St. | Replace existing water main | NW 10th St. between NW. Despain Ave. and NW. Carden Ave. | Local Road / right-of-way | 2018 | No | No | No | No |
| UR-34 SE. Court Pl. | Replace existing water main | SE Court Pl between SE. 13th St. and SE. 14th St.2019 | Local Road / right-of-way | 2019 | No | No | No | No |
| UR-43 NW Horn Ave. | Replace existing water main | Approximate 0.4 mile section of road | Local Road / right-of-way | 2020 | No | No | No | No |
| UR-44 NW. 5th St. | Replace existing water main | NW 5th St from NW. Despain Ave. to NW. Bailey Ave. | Local Road / right-of-way | 2020 | No | No | No | No |
| UR-45 SE. 9th St. | Replace existing water main | SE 9th St south of SE. Hailey Ave. to the end | Unpaved / right-of-way | 2020 | No | No | No | No |
| UR-46 SW. Jay Ave. | Replace existing water main | SW Jay Ave, 2 sections: from SW. Hailey Ave. to just South of SW. Isaac Ave.; and the remaining portion of SW. Jay Ave. to SW. 31st St. | Local Road / right-of-way | 2017/2020 | No | No | No | No |
| UR-47 NW. Despain Ave. | Replace existing water main | NW Despain from NW. 12th St. to NW. 9th St. | Local Road / right-of-way | 2020 | No | No | No | No |
| UR-48 SW. Emigrant Ave. | Replace existing water main | SE Emigrant Ave between SW. 19th St. and SW. 15th St. | Local Road / right-of-way | 2020 | No | No | No | No |
| UR-49 UR-54 SE. Hailey Ave. | Replace existing water main | SE Hailey Ave between SW. 7th St. and SW. 5th St.; and between SW. 19th St. and SW. 15th St. | Local Road / right-of-way | 2020 | No | No | No | No |

City of Pendleton Water System Improvement Projects
Environmental Information Document

| Project Name | Project Description | Project Location | Project Site Setting / Tax lot | Anticipated Construction Timing | Historic Resources | Wetlands | Floodplain | Farmland |
|--------------------------------|--|---|--------------------------------|---------------------------------|--------------------|----------|------------|----------|
| UR-52 NW Horn Ave. | Replace existing water main | NW Horn Ave between NW. 5th St. and N. Main St. | Local Road / right-of-way | 2019 | No | No | No | No |
| UR-56 NW. Carden Ave. | Replace existing water main | NW Carden Ave from NW. 10th St. to NW. 5th St. | Local Road / right-of-way | 2021 | No | No | No | No |
| UR-57 SW. 37th St. | Replace existing water main | SW 37th St from SW. Jay Ave. to Southgate Place | Local Road / right-of-way | 2021 | No | No | No | No |
| UR-51 Airport Road | Replace existing water main | 0.66 mile section of Airport Road | Local Road / right-of-way | 2020 | No | No | No | No |
| Well 9A | New well | Located between Keystone RV and Eastern Oregon Correctional Institute on NW Westgate Drive. The proposed site is east of the existing Well 8 and south of NW Westgate Drive | Right-of-way | 5-year | No | No | No | No |
| Well 9B | Conversion of Well 11 into a production / ASR well | Located at Well 11 / T-56 alignment on Houtama Road (SW 28 th) near the WWTP | Right-of-way | 5-year | No | No | No | No |
| NW. 12th St. | Replace existing water main | Extends from the NW. King Ave. to NW. Ellis Ave. | Local Road / right-of-way | 2017 | No | No | No | No |
| SE. 2nd St. | Replace existing water main | SE 2nd St between SE. Byers Ave. and SE. Court Ave. | Local Road / right-of-way | 2017 | No | No | No | No |
| SE. Hailey Ave. | Replace existing water main | SE Hailey Ave from SE. 4th St. to SE. 6th St. | Local Road / right-of-way | 2019 | No | No | No | No |
| NE Ellis St. | Replace existing water main | NE Ellis St. from NE 5 th St. to N. Main St. | Local Road / right-of-way | 5-year | No | No | No | No |

APPENDIX C: CORRESPONDENCE



Oregon
Kate Brown, Governor

Parks and Recreation Department
State Historic Preservation Office
725 Summer St NE Ste C
Salem, OR 97301-1266
Phone (503) 986-0690
Fax (503) 986-0793
www.oregonheritage.org



May 15, 2017

Ms. Paula Johnson
ESA
5309 Shilshole Ave NW, Ste 200
Seattle, WA 98107

RE: SHPO Case No. 17-0578
City of Pendleton, Utilities Improvement Environmental Review for Water System
Water system upgrades
Multiple Legals, Pendleton, Umatilla County

Dear Ms. Johnson:

Our office has recently received a letter from your agency requesting concurrence regarding your Area of Potential Effect (APE) boundaries, information about cultural resources, and recommendations for future work for the project referenced above. Upon review of your letter, we concur with the proposed project's APE boundaries. Our office believes that the likelihood of finding archaeological resources in the project area is very high. We recommend doing extensive tribal consultation to help identify prehistoric archaeological resources and a robust historical background to identify historical resources. The thoroughness and outcome of the background research will help determine whether our office recommends monitoring or testing in the areas where asphalt is already present. In areas where bare soil remains our office recommends pedestrian surveys and shovel probes, especially in those areas near the river, or in the vicinity of past river channels. Depending upon the outcomes of these measures our offices recommendations may change and please feel free to contact us in the future as the project progresses. Additionally, we recommend having archaeological permits in hand whenever doing subsurface work or monitoring. Our office looks forward to receiving a copy of the cultural resource survey report for the project once it has been completed. Under federal and state law archaeological sites, objects, and human remains are protected on both public and private lands in Oregon. If you have not already done so, be sure to consult with all appropriate Indian tribes regarding your proposed project. If you have any questions or comments regarding this letter, please do not hesitate to contact me. In order to help us track your project accurately, please be sure to reference the SHPO case number above in all correspondence.

This letter refers to archaeological resources only. Comments pursuant to a review for above-ground historic resources will be sent separately.

Sincerely,

Jamie French, M.A.
SHPO Archaeologist
(503) 986-0729
Jamie.French@oregon.gov

Luke Johnson

To: Luke Johnson
Subject: RE: City of Pendleton infrastructure FEMA impact

Luke Johnson, Associate Biologist
ESA | Environmental Science Associates
503.274.2010 main | 503.274.2024 fax

From: Luke Johnson
Sent: Wednesday, May 3, 2017 10:31 AM
To: 'Brandon Seitz' <brandon.seitz@umatillacounty.net>
Subject: RE: City of Pendleton infrastructure FEMA impact

Brandon,

I just wanted to follow up and thank you again for your correspondence on the Floodplain Development permits for the two proposed water mains crossing the Umatilla River. I am coordinating with the City for the requirements regarding SE 3rd street. You will likely hear more about the 8th street bridge as planning for the project advances a bit further.

Thanks,

Luke Johnson, Associate Biologist
ESA | Environmental Science Associates
503.274.2010 main | 503.274.2024 fax

From: Brandon Seitz [<mailto:brandon.seitz@umatillacounty.net>]
Sent: Wednesday, April 19, 2017 8:55 AM
To: Luke Johnson <LJohnson@esassoc.com>
Subject: Re: City of Pendleton infrastructure FEMA impact

Luke,

Part of the 8th street bridge is within the City's jurisdiction and part of the bridge is in the County's jurisdiction. Based on where the bridge currently sits I'm assuming the bridge construction will require a Floodplain Development Permit from both the City and County.

You could certainly include the water main and any other utilities on the bridge Floodplain Development permit and lump all of the permits together. That seems to be the best route moving forward.

Any work within County right-of-way will require some sort of coordination and permit from the County Public Works Department. I'm assuming you could also lump the bridge and utility permits together for them as well. However, you will need to contact them directly.

Thanks,
Brandon

On Mon, Apr 17, 2017 at 11:34 AM, Luke Johnson <LJohnson@esassoc.com> wrote:

Hi Brandon,

Thanks for getting back to me. To offer some clarity for the SE 8th Street/Lee Street Bridge project, I am working on the permitting only for the water main along the bridge, which will likely be installed during construction of the bridge replacement project. However, I am wondering if the water main and the bridge construction can be reviewed for a Floodplain Development Permit concurrently? ESA is a part of the design team for this project, as a sub-consultant with OBEC, and have been involved in the FEMA floodplain analysis for various parts of the bridge. Do you think that a utility permit from the County Public Works Department will also be needed for the bridge itself and if so, could this permit be lumped to encompass the associated water main?

If this makes sense to you, all I would need from the County is correspondence indicating that any evaluation of Floodplain impacts related to this water main project would be included in the larger evaluation of the SE 8th St/ Lee Street Bridge replacement. Does sound like the right route to go? If so, email would be fine for my submittal to the Oregon Health Authority.

Thanks for your help, Brandon.

Luke Johnson, Associate Biologist

ESA | Environmental Science Associates

[503.274.2010](tel:503.274.2010) main | [503.274.2024](tel:503.274.2024) fax

From: Brandon Seitz [mailto:brandon.seitz@umatillacounty.net]

Sent: Friday, April 14, 2017 2:14 PM

To: Luke Johnson <LJohnson@esassoc.com>

Cc: Tamra Mabbott <tamra.mabbott@umatillacounty.net>

Subject: Re: City of Pendleton infrastructure FEMA impact

Luke,

Allow me to introduce myself. My name is Brandon Seitz and I am an assistant planner with Umatilla County. Tamra asked me to respond to your email. First the 3rd Street project is completely within City Limits and is within the City's planning jurisdiction for any FEMA floodplain determination or permitting requirements. The County would not have permitting requirements for that project.

Based on the information in your email and the attached floodplain map you may not need a Floodplain Development Permit for the 8th street bridge work in the County. It appears to me based on the attached map that the end of the bridge is out of the floodplain. In order to make an official determination I would need a more detailed map and description of work/ground disturbing activities for the 8th street bridge project.

If the northern end of the bridge is not in the floodplain and you are not doing any other work in the floodplain then you will likely only need a utility permit from the County Public Works Department. If on the other hand you have ground disturbing work within the floodplain the County will require a floodplain development permit.

If you have any question please let me know.

Thanks,

Brandon

On Thu, Apr 13, 2017 at 1:42 PM, Tamra Mabbott <tamra.mabbott@umatillacounty.net> wrote:

Please follow up with Luke. I think what he is asking is requesting floodplain determination and floodplain permit.

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

From: **Luke Johnson** <LJohnson@esassoc.com>

Date: Wed, Apr 12, 2017 at 11:23 AM

Subject: City of Pendleton infrastructure FEMA impact

To: "tamra.mabbott@umatillacounty.net" <tamra.mabbott@umatillacounty.net>

Hi Tamra,

I am working with the City of Pendleton to complete the environmental review for many of the infrastructure improvement projects proposed in the City's Capital Improvement Plan. The City is preparing to use federal Drinking Water State Revolving Funds (SRF) to implement the projects. These SRF are administered by Oregon Health Authority. In order to qualify for the program, the City needs to show compliance with applicable environmental laws, in accordance with the State Environmental Review Process (SERP). As a part of the Floodplain Management requirement under this process, I am requesting your comments on two proposed projects. These water main projects are located within the FEMA floodplain. The 8th Street Bridge project, as shown in the attached map, will be a replacement of an existing water main that crosses the Umatilla River by being attached to the 8th Street bridge. This project will likely involve minimal work, if any, within the FEMA floodplain. The 3rd Street project will be a sliplining project within an existing water

main which crosses underneath the Umatilla River. This project will not involve any excavation within the FEMA floodplain, all of the proposed excavation would be on the north and south sides of the river. I have attached a map, which shows the project names and locations. Can you please provide your comments on whether or not these projects will require a permit?

I would also like to coordinate with you on the following SERP actions: create and distribute early public notice of proposed project and to create a floodplain assessment. Any guidance and comments that you may have will be greatly appreciated. Ultimately, I will need a written determination (email) and a list of mitigation measures (if any) that I can use as documentation for the SERP.

Thanks for your time,

Luke Johnson, Associate Biologist

ESA | Environmental Science Associates
819 SE Morrison Street, Suite 310
Portland, OR 97214

[503.274.2010](tel:503.274.2010) main | [503.274.2024](tel:503.274.2024) fax

Ljohnson@esassoc.com | www.esassoc.com

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Tamra Mabbott, Planning Director

Umatilla County Department of Land Use Planning

216 SE 4th ST | Pendleton, OR 97801

Phone: [541-278-6246](tel:541-278-6246) | Fax: [541-278-5480](tel:541-278-5480)

<http://www.umatillacounty.net/planning> - Visit our website for copies of planning documents, permit applications and other helpful information.

Please Be Aware - Documents such as emails, letters, maps, reports, etc. sent from or received by the Umatilla County Department of Land Use Planning are subject to Oregon Public Records law and are NOT CONFIDENTIAL. All such documents are available to the public upon request; costs for copies may be collected. This includes materials that may contain sensitive data or other information, and Umatilla County will not be held liable for its distribution.

--

Brandon Seitz, *Assistant Planner*

Umatilla County Department of Land Use Planning

216 SE 4th ST, Pendleton, OR 97801

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--

Brandon Seitz, *Assistant Planner*

Umatilla County Department of Land Use Planning

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Luke Johnson

From: Carol Johnson <carol.johnson@umatillacounty.net>
Sent: Friday, May 5, 2017 10:36 AM
To: Luke Johnson
Cc: Tamra Mabbott
Subject: Re: City of Pendleton EFU designation request

Good morning Luke,

Thank you for the opportunity to provide some early input regarding land use permits for the City of Pendleton's infrastructure improvement projects.

As you provide in your email summary, some of the City's proposed pipeline routes cross land located within the city limits and some cross land located within the City's Urban Growth Boundary (UGB). All of the routes identified and submitted to the County for review are zoned County Exclusive Farm Use (EFU). Although unusual this also includes some routes across land zoned County EFU located within the city limits and routes across EFU lands outside of the UGB, but annexed into the city.

The EFU zoned areas located within the city limits but outside of the UGB do present some gray area; however, uses allowed in the EFU zoning include a process to establish and permit "utility facilities necessary for public service." The County Planning Department believes the City of Pendleton's infrastructure improvement projects are "utility facilities necessary for public service."

The City of Pendleton has authority, as delineated in the Joint Management Agreement (JMA), to process land use request applications within the city's UGB. Land use requests and applications affecting lands within the UGB would also follow JMA notice requirements to the County.

Lastly, mitigation measures should be implemented for areas disturbed as a result of pipeline installation across farm ground. Reseeding areas to native plants to control erosion and prevent the infiltration of noxious weeds should be required.

It is the desire of the County Planning Department to help the City's infrastructure improvement projects succeed. If we can be of further assistance please let us know.

Thank you,

Carol Johnson

On Thu, May 4, 2017 at 10:15 AM, Luke Johnson <LJohnson@esassoc.com> wrote:

Hi Carol,

Thanks for your call this morning. I just wanted to summarize our conversation for clarity sake. I have also attached the relevant EFU page from the SERP document, which can be found in entirety at this website:

<http://www.deq.state.or.us/wq/loans/docs/SERPApplicantGuide.pdf>

-All land use applications for County designated EFU lands within the UGB will likely be applied for and processed by the City. Although the land is County designated EFU, it is under the City's jurisdiction so long as the City adheres to the County adopted land use type.

-There are several portions of County designated EFU that are technically within the incorporated City limits, but not included in the UGB. These lands would be classified as State Planning Goal 3 lands because they are outside the UGB. Although this presents a technical gray area, you would expect that these lands would also be within the City's jurisdiction.

-In both instances it seems as though the City has authority to designate their projects as "utility facilities necessary for public service", however, you would expect that the City would coordinate with the County before approving any land use applications for County designated EFU lands.

Thanks for your help and I look forward to your formal response (email is fine) tomorrow.

Thanks,

Luke Johnson, Associate Biologist

ESA | Environmental Science Associates

Luke Johnson

From: BAILEY Mark <mark.bailey@state.or.us>
Sent: Friday, March 3, 2017 1:55 PM
To: Luke Johnson; BAILEY Mark
Cc: HACK Tom; John Vlastelicia
Subject: RE: City of Pendleton CAA Consultation

Thanks again.

From: Luke Johnson [mailto:LJohnson@esassoc.com]
Sent: Friday, March 03, 2017 1:36 PM
To: BAILEY Mark
Cc: HACK Tom; John Vlastelicia
Subject: RE: City of Pendleton CAA Consultation

Thanks for your response, Mark. I figured that we would need to have a more advanced conversation and mostly wanted to put this on your team's radar. I will look forward to continuing this conversation with Tom Hack at the Pendleton office.

Have a great weekend.

Luke Johnson, Associate Biologist
ESA | Environmental Science Associates
503.274.2010 main | 503.274.2024 fax

From: BAILEY Mark [mailto:mark.bailey@state.or.us]
Sent: Friday, March 3, 2017 1:25 PM
To: Luke Johnson <LJohnson@esassoc.com>
Cc: HACK Tom <tom.hack@state.or.us>
Subject: RE: City of Pendleton CAA Consultation

Thanks for reaching out. DEQ cannot make any specific air quality determination based on the information provided in your email. We can give general guidance on dust control from excavation activities and handling asbestos containing materials. Some old pipes do contain asbestos.

I have turned this over to Tom Hack (541-278-4626), in our Pendleton office.

Thanks

Mark Bailey
DEQ-Bend

From: Luke Johnson [mailto:LJohnson@esassoc.com]
Sent: Friday, March 03, 2017 8:58 AM
To: BAILEY Mark
Subject: City of Pendleton CAA Consultation

Mark,

I sent an identical email to Nancy Swofford, Permit Coordinator, yesterday afternoon and she informed me that this email was forwarded also to you, however, I thought it best to correspond directly with you.

The City of Pendleton is preparing to use federal Clean Water State Revolving Funds (SRF) to implement infrastructure improvements according to their Capital Improvement Plan (CIP). As a part of the Clean Air Act consultation requirement under the DEQ State Environmental Review Process (SERP), I am requesting your determination whether or not any of these projects will impact air quality. At this time we are interested in your comments only on the 5-year (immediate) and 10-year projects. I have attached three figures, one for each CIP category (water system, collection system, and storm water system), which illustrate the location and general nature of each project. The majority of the construction projects are new pipe installation, new pump station installation, and pipe replacements for the water, storm, and sewer systems. Please let me know any initial comments that you may have. Ultimately, I will need a written determination (email) and a list of mitigation measures (if any) that I can use as documentation for the SERP. Thank you in advance for your time and please do not hesitate to call with questions.

Thanks,

Luke Johnson, Associate Biologist
ESA | Environmental Science Associates
819 SE Morrison Street, Suite 310
Portland, OR 97214
503.274.2010 main | 503.274.2024 fax
Ljohnson@esassoc.com | www.esassoc.com
Follow us on [Facebook](#) | [Twitter](#) | [LinkedIn](#)

Luke Johnson

From: HACK Tom <tom.hack@state.or.us>
Sent: Monday, March 6, 2017 11:30 AM
To: Luke Johnson
Subject: FW: Removal of Asbestos-Containing Transite Piping
Attachments: F-ASBPIPE.2006.DOC

My apology, Luke:

It would help if I send the attachment. Have a great day!

Tom

From: HACK Tom
Sent: Monday, March 06, 2017 11:25 AM
To: 'LJohnson@esassoc.com'
Subject: Removal of Asbestos-Containing Transite Piping

Hello Luke:

Thank you for your inquiry this morning. As you requested, I have included DEQ Guidance on the proper removal of asbestos-containing transite piping.

As you are aware, fugitive dust must also be adequately controlled during the excavation and construction process.

If I can be of further assistance, please feel free to call me (541) 278-4626 or feel free to visit our website at www.deq.state.or.us

Tom Hack
Oregon DEQ
Air Quality Program
Eastern Region - Pendleton



HOW TO REMOVE NONFRIABLE ASBESTOS (AC) WATER PIPE

A Guide for Meeting DEQ Rules

Exposure to asbestos can result in severe health impacts and the Department of Environmental Quality (DEQ) regulates the removal, handling and disposal of asbestos-containing materials (ACM) during construction, remodeling, and demolition. This document outlines handling procedures for working with water pipe that contains asbestos.

The safest way to handle AC Pipe is to make sure the material stays in a nonfriable condition. Friable asbestos material will easily release fibers when crushed. Nonfriable asbestos material has a solid matrix that holds the asbestos fibers in check and will not allow asbestos fibers to release easily, unless mishandled, damaged, or in badly weathered condition. In most cases, AC Pipe is considered nonfriable.

Nonfriable asbestos materials in good condition are exempt from some DEQ rules. You **do not** need to be a DEQ licensed asbestos contractor or DEQ certified asbestos worker to do nonfriable removal. If you follow the procedures in this guide, the AC pipe should remain in nonfriable condition.

Nonfriable material must be handled, transported, and disposed of in a way that prevents it from becoming friable and releasing asbestos fibers. For more information about the asbestos rules or if you have questions contact one of the DEQ regional offices:

Eastern Region Bend at (541) 388-6146, ext. 226

Eastern Region Pendleton at (541) 278-4626

Eugene LRAPA (541) 736-1056, ext. 222

Northwest Region in Gresham at (503) 667-8414 x 55022, x 55018, or (800) 452-4011

Western

Region Salem at (503) 378-5086, or (800) 349-7677

Western Region Medford at (541) 776-6010, ext. 235 or (877) 823-3216

Western Region Coos Bay at (541) 269-2721, ext. 22

The Oregon Occupational Safety and Health Division (OR-OSHA) has rules about worker training, building surveys, and the safe handling of nonfriable asbestos. (See OAR 437, Division 3, Construction.) Contact OR-OSHA at (503) 378-3272, for current rule and policy information.

A. FOR AC WATER PIPE TO BE CONSIDERED NONFRIABLE IT MUST BE REMOVED IN WHOLE SECTIONS.

You cannot cause the AC pipe to shatter, crumble, be pulverized, or release asbestos fibers. You cannot sand, saw, grind, chip, or use power tools on AC pipe. If you use this guide, licensing as a DEQ asbestos abatement contractor and DEQ worker certification are not needed.

1. File a DEQ nonfriable notification and pay the nonfriable fee as outlined in OAR 340-248-0260.
2. Keep the material wet while you remove it. You can use a water hose, garden sprayer, spray bottles, or any method that keeps the material wet. **Wetting prevents fiber migration during removal.**
3. Pull the pipe up out of the ground in easy to handle lengths (3 feet to 5 feet), using DEQ approved cutting procedures.
4. DEQ suggests you place the pipe in leaktight containers with a warning statement “DANGER ASBESTOS-CONTAINING MATERIAL”. The asbestos-containing waste material (ACWM) must remain wet until disposed of at a landfill authorized to handle asbestos waste. It is also suggested that you fill out a DEQ ASN-4 waste shipment report for transport and give it to the landfill upon arrival. DEQ advises you to contact the landfill before you start your project so you can find out what that landfill’s disposal needs are. Many landfills require asbestos to be specially packaged and labeled. **Nonfriable asbestos waste may not be used as clean fill and DEQ rules do not allow on-site burial of AC pipe, unless the reason for this burial meets specific exception conditions!**

NOTE: *DEQ knows that some breakage and damage will occur during this process. However, that breakage will be minimized if you follow this guide.*

DEQ CAN ALLOW ALTERNATE REMOVAL AND DISPOSAL PROCEDURES:

The DEQ can consider unusual conditions and allow the use of a different removal and disposal procedure on a case by case basis. Some of these exceptions may include removal procedures not listed in this guide. Options for leaving AC pipe in place instead of removal and disposal may be available through this exception. AC pipe buried under a roadway, or AC pipe that goes under a structure normally is considered an acceptable reason for on site burial.

DEQ staff is willing to discuss any situation where the removal and disposal of AC pipe, instead of on site burial, may cause an extreme financial hardship. For more information about these exceptions or to see if your project qualifies for an exception, please contact the DEQ.

B. USE THE FOLLOWING PROCEDURES WHEN THE REMOVAL RESULTS IN THE AC PIPE BECOMING FRIABLE.

If AC PIPE is shattered, damaged, or badly weathered, it is considered to be friable and will likely release asbestos fibers. ***A DEQ licensed asbestos abatement contractor using DEQ certified workers must remove all friable asbestos materials.***

All asbestos abatement rules under OAR 340-248-0005 through -0280 must be followed, including the following:

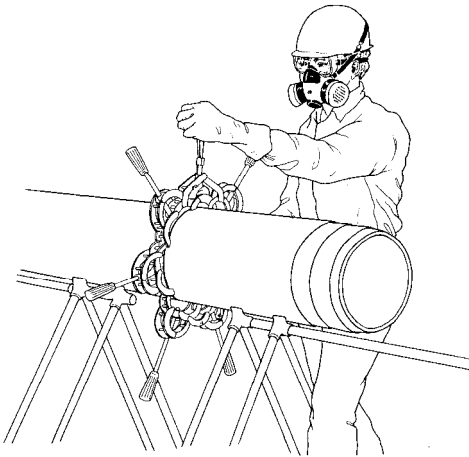
1. File a friable asbestos abatement notification and fee as outlined in OAR 340-248-0260.

2. Hire a DEQ licensed asbestos abatement contractor to remove the asbestos for you.

The following information was excerpted from the American Water Works Association guideline for handling AC pipe. This information is modified to make it compatible with the DEQ asbestos removal regulations. There may be other removal and handling procedures employing non-power options that are equally effective and also meet DEQ asbestos requirements.

AMERICAN WATER WORKS ASSOCIATION RECOMMENDED WORK PRACTICES FOR CUTTING AND SPLICING CEMENT WATER PIPE

1. **USING CARBIDE TIPPED BLADES TO CUT AC PIPE, IN SIZES FROM 3 INCH THROUGH 24 INCH.**

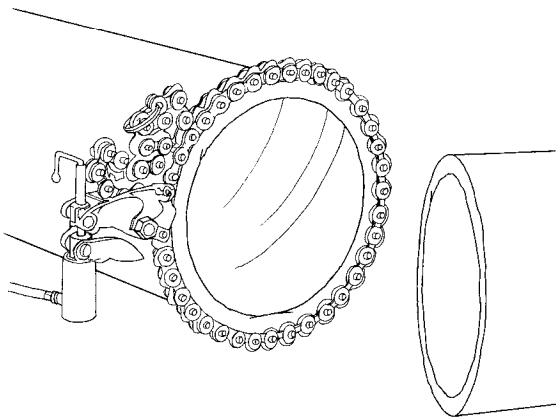


Blade cutters are frame adjustable to the circumference of the pipe and have a number of self-tracking rollers that align one or more carbide-tipped cutting blades. Because of the relatively low mechanical input and clean cutting action, hand operated blade cutters do not produce significant amounts of airborne asbestos dust.

KEEP MATERIAL WET AT ALL TIMES.

***DO NOT** blow out with compressed air, dry sweep, or vacuum with a non-HEPA rated vacuum cleaner!*

2. **USING SNAP CUTTERS TO CUT AC PIPE IN SIZE RANGES 3 INCH THROUGH 24 INCH.**

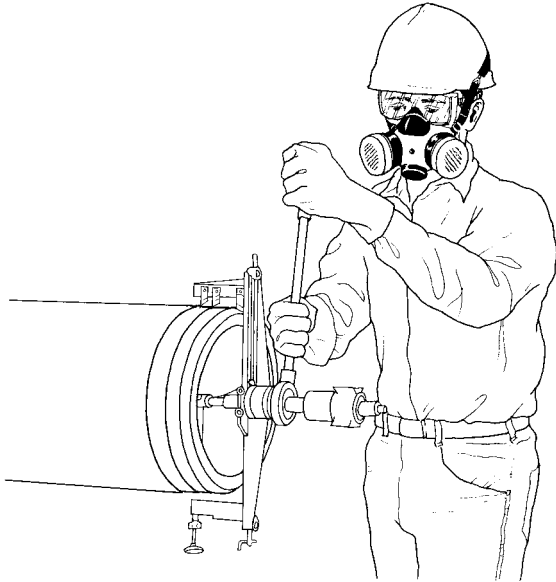


Snap cutters (“squeeze-and-pop” equipment) operate by means of cutting wheels mounted in a chain wrapper around the pipe barrel. Hydraulic pressure, applied by means of a remote, pneumatically, or manually operated pump, squeezes the cutting wheels into the pipe wall until the cut is made. This type of cutting minimizes the release of asbestos fibers.

KEEP MATERIAL WET AT ALL TIMES.

***DO NOT** blow out with compressed air, dry sweep, or vacuum with a non-HEPA rated vacuum cleaner!*

3. USING MANUAL FIELD LATHES TO MACHINE AC PIPE IN ALL SIZES.

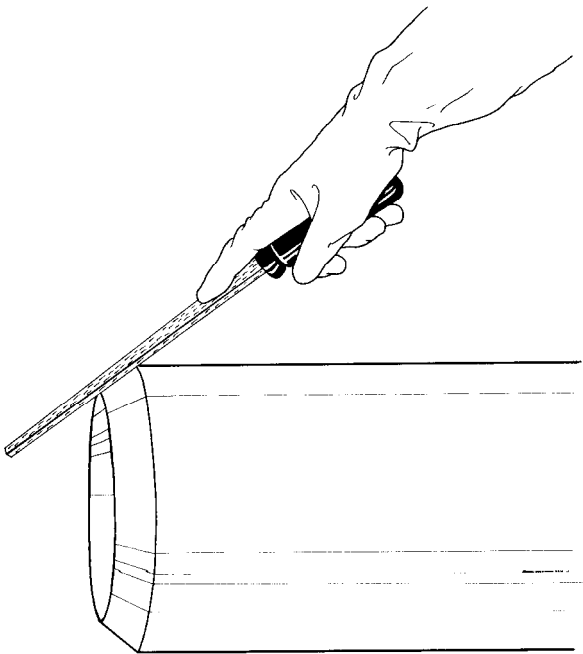


Manual field lathes are designed to end-trim and re-machine rough pipe barrels to factory-machined end profiles. The lathe consists of an adjustable, self-aligning arbor inserted into the pipe bore (which acts as a mandrel upon which the turning handle operates), a screw-fed turning frame, carbide machining blades, and manual (hand or ratchet) turning handles.

KEEP MATERIAL WET AT ALL TIMES.

***DO NOT** blow out with compressed air, dry sweep, or vacuum with a non-HEPA rated vacuum cleaner!*

4. USING A MANUAL RASP TO MACHINE AC PIPE IN ALL SIZES.



Short lengths of AC pipe, machined-end exclusively (MEE) and machined overall (MOA), can be cut to make closures and repairs and to locate fittings exactly. Field-cut ends may be re-beveled with a coarse wood rasp to form a taper approximating the profile of the factor-beveled end.

KEEP MATERIAL WET AT ALL TIMES.

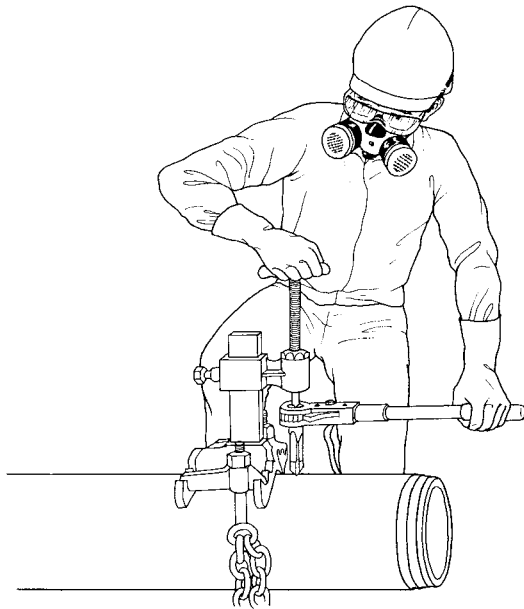
***DO NOT** blow out with compressed air, dry sweep, or vacuum with a non-HEPA rated vacuum cleaner!*

5. WET TAPPING AC PRESSURE PIPE IN ALL SIZES.



Pressure or “wet” tapping for service connections is performed in the trench while the pipe is under pressure. The equipment (manual driven) is affixed to the pipe by means of a chain yoke. A combination boring-and-inserting bar drills and taps the pipe wall and inserts a corporation stop or pipe plug. The pressure chamber, which protects against water leakage, also catches the asbestos-cement chips, so this is essentially a dust-free operation. To minimize (1) the fouling of valves, regulators, meters, and other equipment with chips and (2) unnecessary addition of asbestos to drinking water, provisions should be made for downstream flushing or use of tapping equipment with positive purge or “blow-off” features. **KEEP MATERIAL WET AT ALL TIMES. DO NOT blow out with compressed air, dry sweep, or vacuum with a non-HEPA rated vacuum cleaner!**

6. DRY TAPPING AC PRESSURE PIPE IN ALL SIZES.

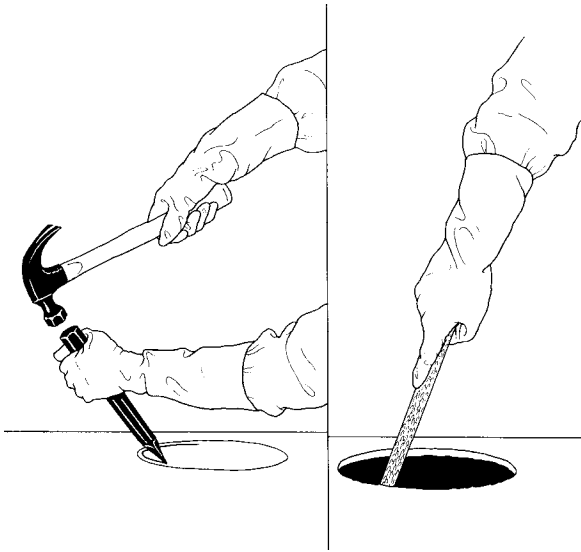


Non-pressure or “dry” tapping for service connections may be performed in or out of the trench. The equipment is affixed to the pipe by means of a chain yoke. Separate drills and taps or a combination tool is used to drill and tap the pipe wall. Remember; always keep the pipe wet during these processes. Corporation stops or other connections may then be affixed to the pipe. To minimize (1) the fouling of valves, regulators, meters, and other equipment with chips and (2) the unnecessary addition of asbestos to drinking water, all dust and cuttings should be removed from the pipe’s interior by flushing with water, wet mopping, or vacuuming with a HEPA rated vacuum cleaner.

KEEP MATERIAL WET AT ALL TIMES.

DO NOT blow out with compressed air, dry sweep, or vacuum with a non-HEPA rated vacuum cleaner!

7. USING CHISEL AND RASP TO HOLE CUT AC PIPE IN ALL SIZES.

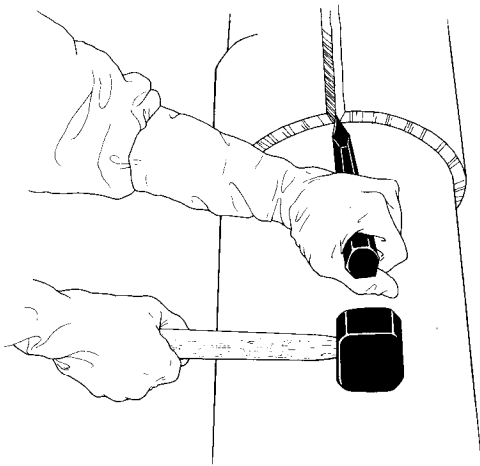


Holes may be cut into AC pipe with a hammer and chisel. The edge of a plumber's wood chisel is used to cut completely around the hole outline, about ¼ in. (7 mm) from the prescribed line. The operation is repeated and the cut deepened until through. The edges of the hole are then dressed with a coarse wood rasp. When cutting holes in AC pipe products, all dust and cuttings should be removed from the pipe or duct interior after the cutting operation. Removal may be accomplished by flushing with water, wet mopping or vacuuming with a HEPA rated vacuum cleaner.

KEEP MATERIAL WET AT ALL TIMES.

DO NOT blow out with compressed air, dry sweep, or vacuum with a non-HEPA rated vacuum cleaner!

8. USING HAMMER AND CHISEL TO REMOVE COUPLING FROM AC PIPE IN ALL SIZES.



Replacement of damaged pipe necessitates excavation, exposure and removal. AC coupling removal may be accomplished by gradually splitting the coupling lengthwise using a chisel and hammer. After the top of the coupling has been split, a crowbar or similar tool is used as a lever to split the bottom of the coupling.

KEEP MATERIAL WET AT ALL TIMES.

DO NOT blow out with compressed air, dry sweep, or vacuum with a non-HEPA rated vacuum cleaner!

DEQ and Oregon OSHA have carefully evaluated the above procedures and determined that they can be used safely when handling and repairing AC pipe.

REMEMBER, DEQ regulations require that all asbestos-containing materials be kept wet during removal and disposal in accordance with the asbestos disposal regulations. Exceptions to these requirements must be approved prior to starting an asbestos removal project.

(Revised 6/26/06)