

Technical Memorandum

October 31, 2023

Project# 27003.014

To: Lisa Cornutt, ODOT
Karl MacNair, City of Medford

From: Rachel Barksdale and Brian Bauman

RE: Task 3.12B Final Environmental Setting Report

INTRODUCTION

The purpose of this memo is to provide a summary of existing environmental resources within the vicinity of South Stage Road and the South Medford and Phoenix interchanges. The draft Area of Potential Impact¹ (API; Figure 1) encompasses I-5 with a 1,000-foot-wide buffer and includes a 1-mile-long section of South Stage Road that runs perpendicular to I-5, where the approximate alignment alternatives are anticipated to be located. This area, delineated on the maps in this memo, represents the area that could be directly affected by potential I-5 overpass and/or interchange concepts, and or potential auxiliary lanes/noise walls along I-5 between the South Medford and Phoenix interchanges. Note, however, that environmental resources are also mapped and discussed for the broader area which could be affected by changes in traffic patterns or other indirect effects. The majority of the potentially affected area falls within the city limits of Medford and Phoenix, with a small portion at the southern end outside of the Urban Growth Boundary (UGB) within Jackson County. The most recent publicly available information, databases, aerial images, and maps of the draft API were reviewed to document existing conditions which may have a bearing on possible impacts, mitigation measures, and on a recommended alternative. This planning document may be adopted in a subsequent environmental review process in accordance with 23 USC 168 Integration of Planning and Environmental Review and 23 CFR 450 Planning Assistance and Standards.

¹ Following the completion of the Future Conditions Analysis and acceptance of the Purpose & Need Statement by ODOT and FHWA, the project team will identify the need to further expand the draft API.

Figure 1. Draft Area of Potential Impact

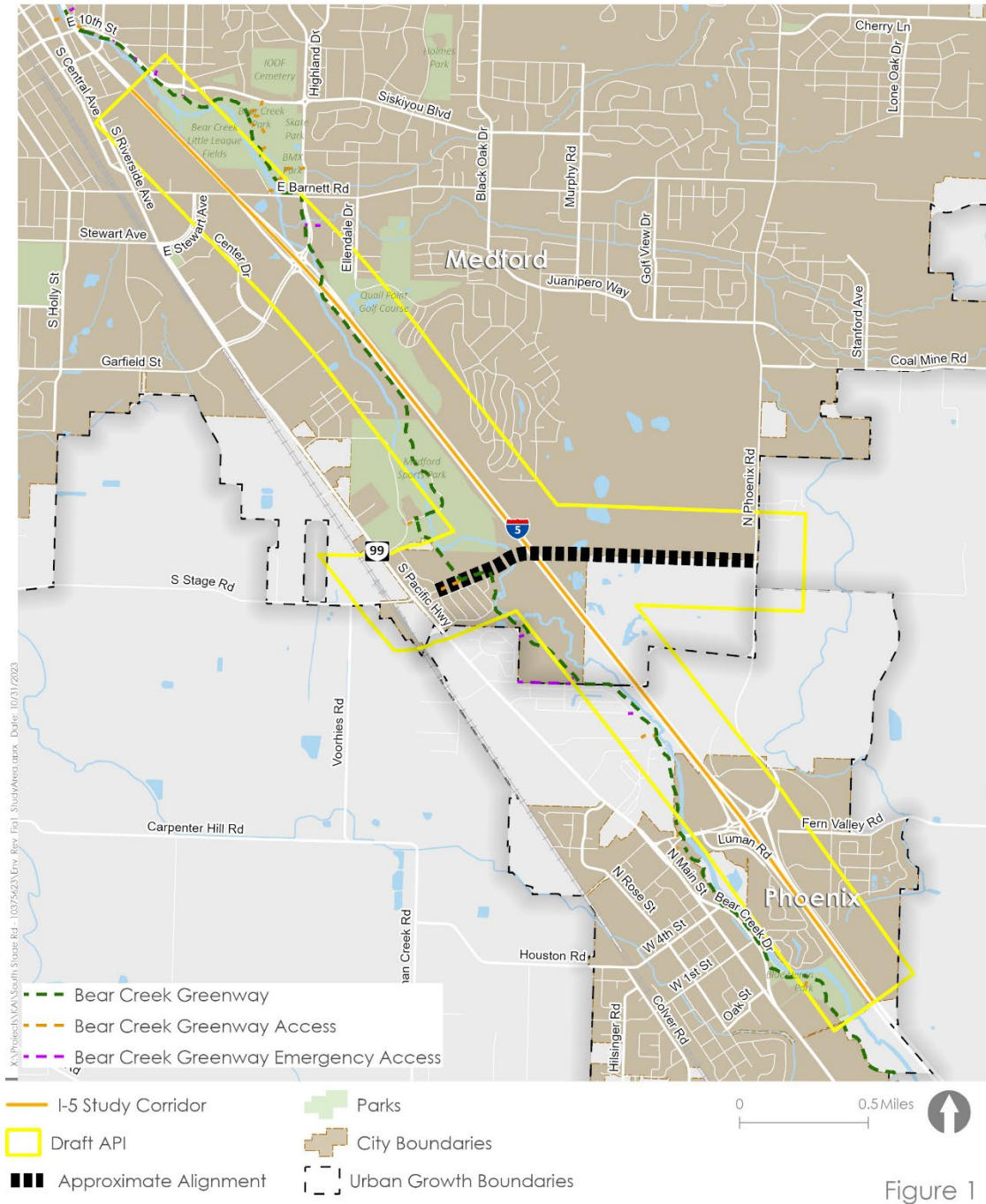


Figure 1
Environmental Existing Conditions - Draft API
Jackson County, Oregon



Land Use

The Statewide Agency Coordination Rule (OAR 660-30) requires that state agencies must assure that a project is in compliance with the Statewide Planning Goals and local comprehensive plans if land uses will be affected. If a project does not comply with the Statewide Planning Goals, goal exceptions may be required.

A Land Use Technical Memorandum was prepared for the project that summarizes the existing and planned land uses in the draft API. The zoning designations within the draft API include industrial, residential, commercial, and public parks uses. A portion of the draft API is outside of city limits and is therefore within the jurisdiction of Jackson County. South of South Stage Road, east of I-5, the land is designated as Exclusive Farm Use (EFU), which is protected under Statewide Planning Goal 3 (Agricultural Lands). Because EFU lands are present, the project could require a goal exception as some transportation improvements are not allowed on rural lands.

The project will ensure consistency with Statewide Planning Goals, as well as local plans as discussed in Technical Memorandum 3.1.1 Plans and Policies Review. Refer to Technical Memos 3.1.1 for additional information on existing Plans and Policies, and 4.4A for additional project-related Land Use information.

Social and Economic

Executive Order 12898 Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, February 11, 1994 was supplemented by Executive Order 14096, Revitalizing Our Nation's Commitment to Environmental Justice for All, April 26, 2023 which directs federal agencies, as appropriate and consistent with applicable law: to identify, analyze, and address disproportionate and adverse human health and environmental effects (including risks) and hazards of Federal activities, including those related to climate change and cumulative impacts of environmental and other burdens on communities with environmental justice concerns. The Federal Highway Administration (FHWA) Order 6640.23A establishes policies and procedures for FHWA to use in complying with EO 12898. The FHWA has identified environmental justice as "...identifying and addressing disproportionately high and adverse effects of the agency's programs, policies, and activities on minority and low-income populations to achieve an equitable distribution of benefits and burdens." EPA's *Promising Practices for EJ Methodologies in NEPA Reviews (2016)* notes that what constitutes a "meaningfully greater" low-income or minority population (for purposes of EJ assessments) is when the percentage of low-income or minority populations in a selected geographic unit (i.e., census tract or block group) exceeds that of an appropriate reference community (e.g., state or county) by a reasonable threshold.

DEMOGRAPHICS

The draft API is comprised of 10 census block groups (Figure 2). Census data from the U.S. Census Bureau were reviewed along with guidance from *Promising Practices for EJ Methodologies in NEPA Reviews* (USDA 2016) to identify potential minority and low-income populations in the draft API. Based on the guidance, the project team considers three different methods to identify the potential for EJ populations in the area: (1) No-Threshold analysis; (2) Fifty Percent analysis; and (3) Meaningfully Greater analysis.

Figure 2. Census Block Groups in the draft API

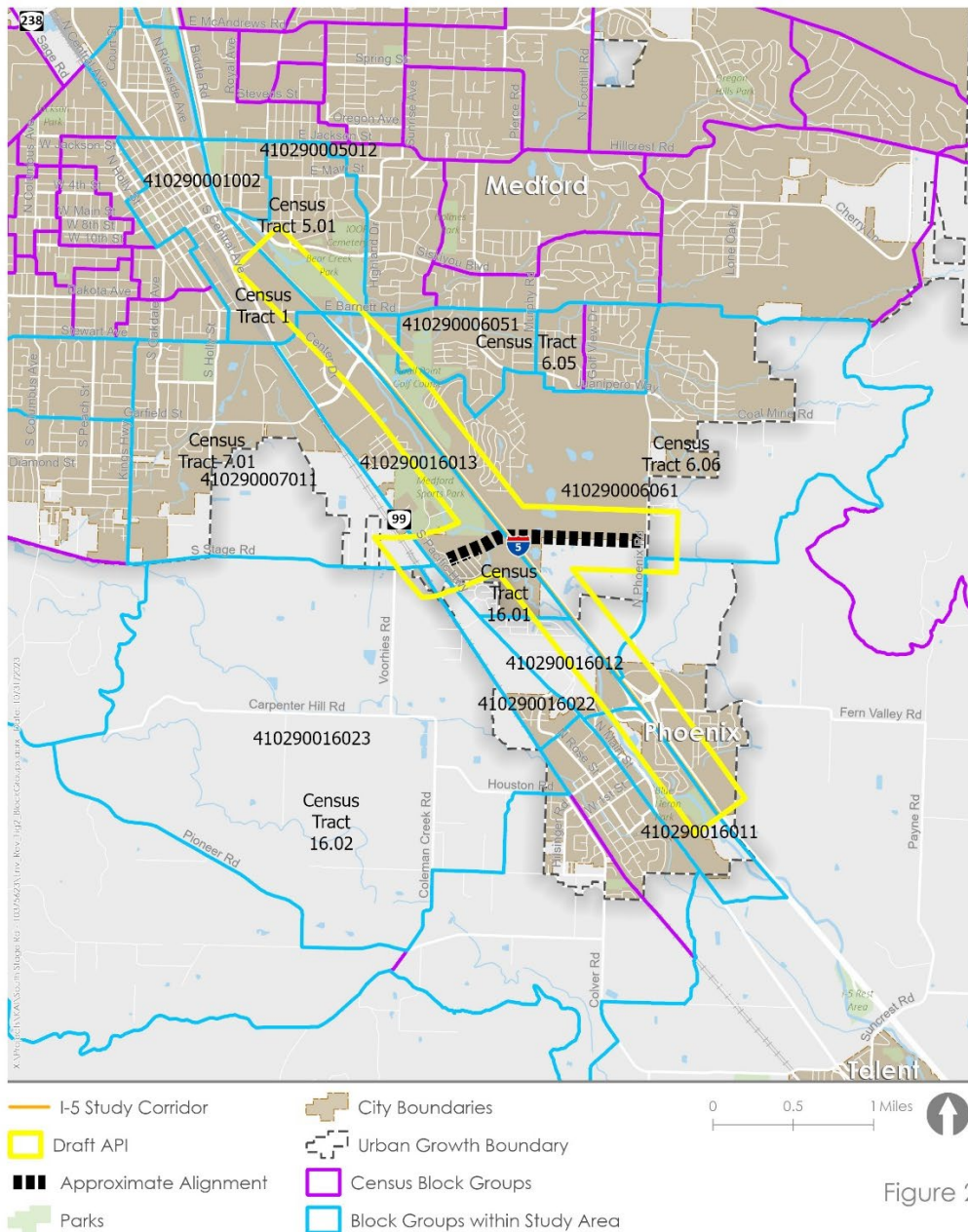


Figure 2



Environmental Existing Conditions - Census Block Groups Medford, Oregon

In the No-Threshold analysis, the percentages of low-income and minority individuals are computed, but no “threshold” is identified – the percentages of low-income and minority populations are simply presented in tabular and map form. The total number of individuals living in each block group and the total number of minority individuals in each block group are reported in Table 1 below and shown in Figure 3. The statistics for low-income households are similarly presented. As can be seen in the table, there are more 955 households below the poverty level within the project vicinity. The percentages of minorities in the draft API block groups range from 23% to 85% and the percentage of low-income households range from range from 0% to 49% per block group (Table 1, Figure 3).

The “Fifty Percent analysis” essentially establishes a threshold of “50%” as a meaningful way to identify whether there is a minority or low-income population that rises to a level of concern. There are five census block groups that have minority populations that exceed 50%, which are highlighted in Table 1. The guidance suggests that if the percentage of minorities (or low-income households) residing in the affected environment exceeds 50%, then there is a need for a heightened focus throughout the analysis.

Finally, the “Meaningfully Greater” analysis compares the percentage of minority or low-income populations to a reference community for comparison. If the block group has a percentage that is “meaningfully greater” than the reference community, then there is an EJ concern. For this project, reference communities include Jackson County, the City of Medford, and the City of Phoenix. Five block groups have a minority population percentage that exceeds that of their respective reference community. Low-income populations were determined by the poverty status in the past 12 months by household type. Those households that had income in the past 12 months below the poverty level are reported below for each block group and reference community. There are three block groups that have percentages of households with poverty status higher than the respective reference community.

The guidance indicates that: “the Meaningfully Greater analysis requires use of a reasonable, subjective threshold (e.g., ten or twenty percent greater than the reference community).” However, “what constitutes ‘meaningfully greater’ varies by agency, with some agencies considering any percentage in the selected geographic unit of analysis that is greater than the percentage in the appropriate reference community to qualify as being meaningfully greater.”

The project team has not selected a threshold at this time but will consider making such a determination based on future public and agency input. The information in this memorandum will be used during future consultation through public outreach and agency involvement to determine if meaningful EJ populations are present. Nonetheless, there are census block groups with populations present that exceed the population percentages of reference communities and some have a considerably higher percentage of minority and low-income populations compared to their reference communities. For these reasons, there is a need for a heightened focus on

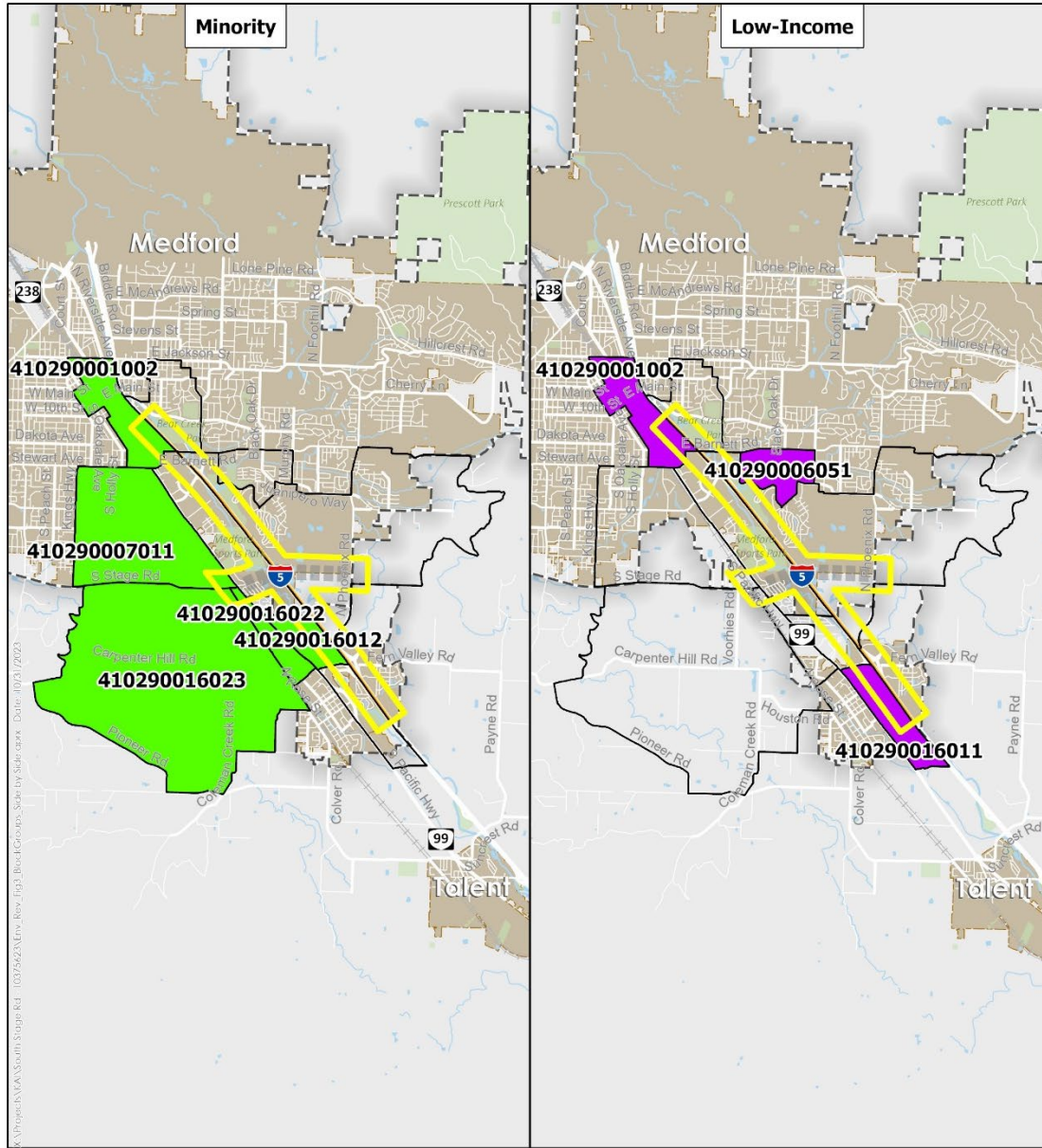
environmental justice analysis throughout the PEL and subsequent NEPA analysis. A detailed environmental justice analysis may be warranted when the project moves into the NEPA phase.

Table 1. Census Data for Block Groups within the Draft API

Reference Community/Block Group	Total Population (number of individuals)	Minority Population (number of individuals)	Minority Percentage (%)	Total Households	Households with Income below Poverty Level	Low-Income Percentage (%)
Jackson County	221,662	50,907	23%	87,417	13,093	15%
• 410290016012	1,896	1,608	85%	854	38	4%
• 410290016022	1,325	695	52%	769	99	13%
• 410290016023	631	327	52%	366	0	0
Phoenix	4,475	1,857	41%	2,252	429	19%
• 410290016011	656	127	19%	417	114	27%
Medford	85,824	39,077	46%	31,655	5,390	17%
• 410290006061	2,255	514	23%	1,013	48	5%
• 410290016013	2,035	860	42%	944	135	14%
• 410290007011	2,249	1,058	47%	739	45	6%
• 410290006051	1,606	674	42%	744	153	21%
• 410290005012	1,930	668	35%	932	87	9%
• 410290001002	955	562	59%	479	236	49%

*Highlighted cells represent block groups that have a minority percentage exceeding the respective reference community.

Figure 3 – Census Blockgroups with Minority and Low-Income Populations



- I-5 Study Corridor
- Draft API
- Approximate Alignment
- Parks
- City Boundaries
- Urban Growth Boundary
- Block Groups within Study Area
- Block Groups with a Population Percentage Exceeding Reference Community
- Block Groups with a Population Percentage Exceeding Reference Community



Figure 3

**Environmental Existing Conditions -
Minority and Low-Income Populations
Jackson County, Oregon**



PUBLIC SERVICES

Although there are no stations within the draft API, police and fire services are provided in the draft API by the Medford Police Department, Medford Fire-Rescue, the Phoenix Police Department, the Jackson County Sherriff’s Office, and the Jackson County Fire District. Several parks are within the draft API (see Parks section below). There are no schools within the draft API, but there are several adjacent to the draft API that are part of the Medford School District and the Phoenix-Talent School District. See Figure 4 for a map of public services in and adjacent to the draft API.

Figure 4. Public Services in and adjacent to the Draft API



Figure 4

BUSINESS AND ECONOMY

Current business trends and economic elements were reviewed from the City of Medford Comprehensive Plan (2016), the City of Phoenix Comprehensive Land Use Plan (2019), the Jackson County Comprehensive Plan (2015), and the South Stage Crossing Plans and Policies Review and Land Use Technical Memoranda. In the City of Medford, the economy is currently driven by medical and professional services and regional distribution of goods. The Medford Comprehensive Plan indicated anticipated growth sectors included food processing and manufacturing, as well as precision instrument and machine tool manufacturing. There are several enterprise zones (areas established to incentivize business investments - businesses that locate to or expand in these areas are eligible for local property tax breaks for a certain number of years) for commercial and industrial uses within the draft API (Figure 5). Within Jackson County, the industry with the largest employment growth was construction, followed by professional and business services, and education and health services. In the City of Phoenix, the local economy is supported by business such as food preparation and processing businesses, educational facilities, beverage distribution, and retailers. The Phoenix Comprehensive Land Use Plan noted that the majority of Phoenix residents travel elsewhere (i.e., outside of Phoenix) for work.

Between the northern limits of the draft API and Garfield Street in Medford, business centers (areas with offices, shopping centers, stores, and restaurants) are present on the east and west sides of I-5 that include hotels, retail stores, grocery stores, and fast-food restaurants (Figure 5). South of Garfield Street, many businesses are located west of the draft API along the OR-99 corridor, which include retail stores, hotels, restaurants, storage facilities, and warehouses. This business corridor spans the length of the draft API along OR-99. In the southern portion of the draft API, shopping centers with retail stores, gas stations, restaurants, storage facilities, and hotels are present on both side of I-5 in Phoenix.

Figure 5. Business Centers

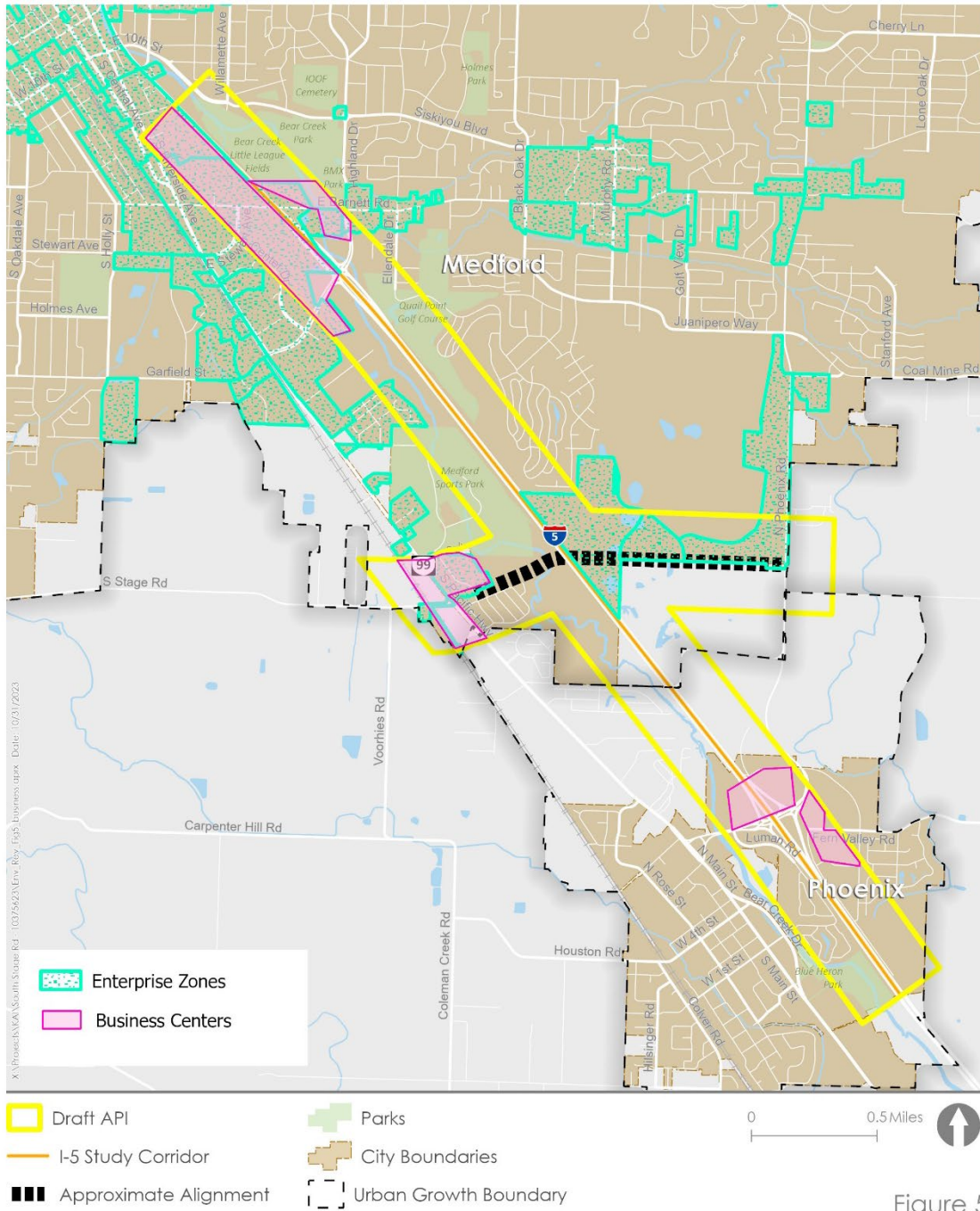


Figure 5



Environmental Existing Conditions - Business Centers
Jackson County, Oregon

Water Resources and Wetlands

Jurisdictional waterbodies and wetlands are regulated under federal and state laws by either the U.S. Army Corps of Engineers (USACE) or the Oregon Department of State Lands (DSL). Impacts to waters should be considered when evaluating alternatives. Project designs must attempt to avoid impacts to jurisdictional waters. If impacts are unavoidable, minimization measures must be incorporated, and compensatory or other mitigation may be required. Project alternatives selected for advancement and permitting with USACE should align with the USACE requirement to select the least environmentally damaging practicable alternative.

WATERS

Several named waterbodies are within the draft API (see Figure 6), including Coleman Creek, Larson Creek, Lazy Creek, Payne Creek, Crooked Creek, and Bear Creek, all of which are perennial streams. Gore Creek, an intermittent stream, is also present, as well as several unnamed intermittent streams. The Medford Irrigation Canal is also within the draft API.

WETLANDS

Local Wetland Inventories (LWIs) for the City of Medford and the Medford Urban Growth Boundary show several existing wetlands within and adjacent to the draft API. Jurisdictional wetlands are regulated by USACE and DSL and require a permitting process if proposed to be impacted, which can include compensatory or other mitigation. Additionally, vernal pools, which are an aquatic resource of special concern (ARSC) to DSL, are also present within the draft API. ARSCs are jurisdictional waters that provide functions and values that are limited in quantity and follow a stricter permitting protocol. Preservation of ARSCs is the preferred compensatory mitigation option by DSL after all practicable avoidance and minimization measures are implemented. Impacts to ARSCs do not qualify for many of the rule exceptions that can help streamline the permitting process, and mitigation for unavoidable impacts must involve the same ARSC type.

FLOODPLAIN

The draft API is within the FEMA-regulated floodway and the 100-year floodplain of Bear Creek. Development within the floodplain would require a certification demonstrating that no rise in the base flood elevation would occur from the project.

Figure 6. Existing Waters, Wetlands, and Flood Zones

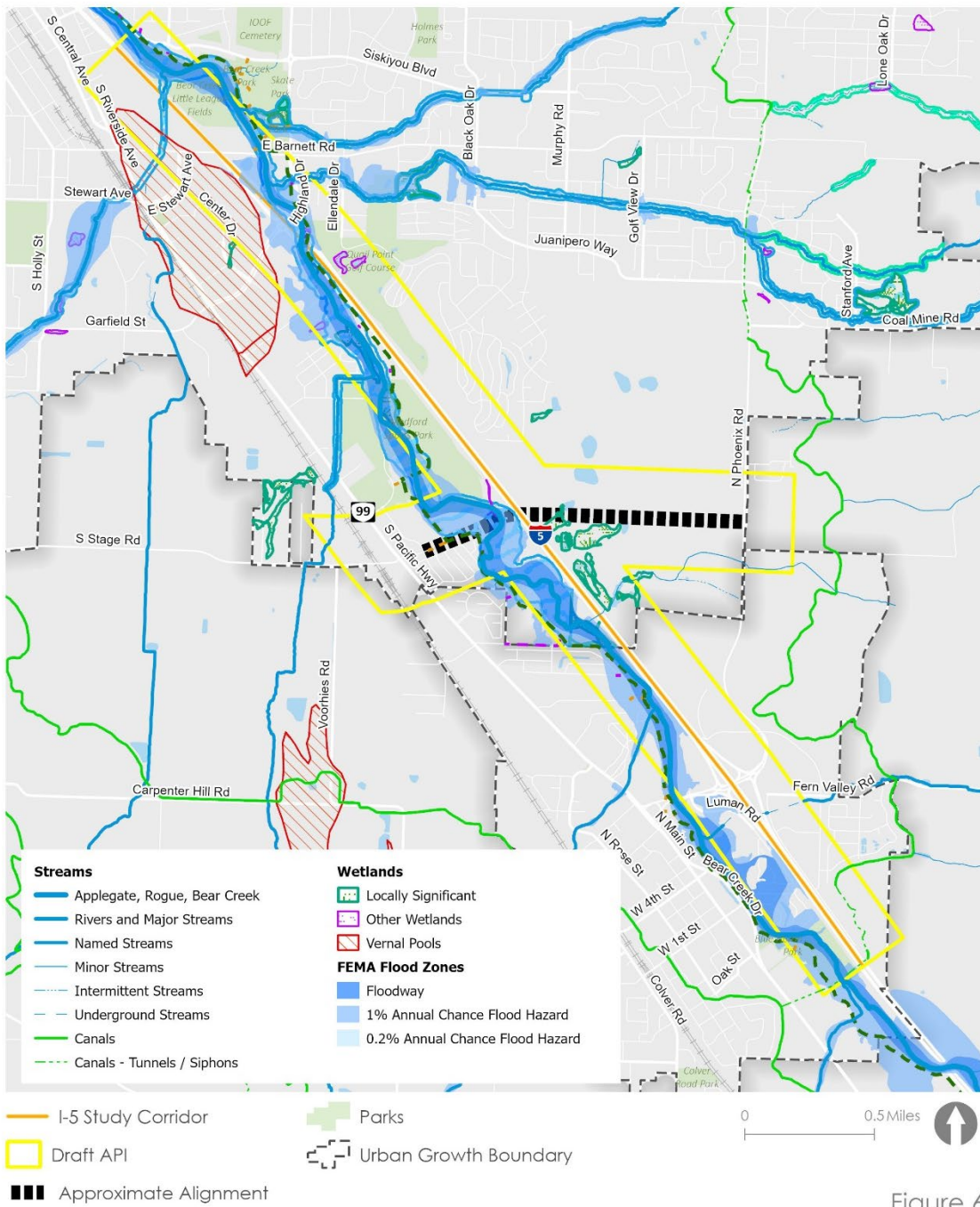


Figure 6

Environmental Existing Conditions - Water Resources
Jackson County, Oregon



Biological Resources

The U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consulting (IPaC) tool was used to determine potential presence of species listed under the Endangered Species Act (ESA) as threatened or endangered species within or near the draft API. Threatened and endangered species that are known or expected to be within Jackson County include gray wolf (*Canus lupus*; endangered), northern spotted owl (*Strix occidentalis caurina*; threatened), Franklin's bumble bee (*Bombus franklini*; endangered), Gentner's fritillary (*Fritillaria gentneri*; endangered), monarch butterfly (*Danaus plexippus*: ESA candidate), vernal pool fairy shrimp (*Branchinecta lyncei*: ESA candidate), Cook's lomatium (*Lomatium cooki*: endangered), and big-flowered wooly meadowfoam (*Limnanthes floccosa ssp. grandiflora*: endangered). In addition to USFWS-protected species, ESA listed aquatic species are regulated by the National Marine Fisheries Service. The following ESA-listed species are likely present in the draft API: Chinook salmon (*Oncorhynchus tshawytscha*: threatened) and Coho salmon (*Oncorhynchus kisutch*: ESA candidate). There is no designated critical habitat within the draft API. Impacts to threatened or endangered fish species, including from downstream stormwater impacts, require consultation with the USFW or NMFS. If the project is federally funded, ESA consultation would be required to comply with Section 7. Section 7 requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of designated critical habitat.

The Oregon Department of Fish and Wildlife (ODFW) Oregon Fish Habitat Distribution and Barriers mapper lists the following protected fish species in Bear Creek, Gore Creek, and Coleman Creek: coastal cutthroat trout (*Oncorhynchus clarkii clarkii*), Chinook salmon, Coho salmon, Pacific lamprey (*Entosphenus tridentatus*), and steelhead (*Oncorhynchus mykiss*). Bear Creek, Crooked Creek, Lazy Creek, Larson Creek, Gore Creek, Coleman Creek, Payne Creek are listed as Essential Salmonid Habitat (ESH) by DSL for Chinook salmon, Coho salmon, or steelhead. Any proposed crossings of streams with historical or current use by native migratory fish would be required to meet NMFS and ODFW fish passage criteria.

Cultural Resources

If the project has a federal nexus (i.e., if it is federally funded or requires a federal permit), the compliance with Section 106 of the National Historic Preservation Act (NHPA) would be required. Section 106 of the NHPA of 1966 requires that federal agencies consider the effects of their actions on historic properties. The policy was created in an effort to preserve historic properties of significance, including cultural resources, historic resources, and archaeological resources. The project design would need to consider cultural resources and attempt to avoid, minimize, or mitigate adverse effects. If an alternative would result in unavoidable adverse effects to historic properties, mitigation measures would likely be required.

ARCHAEOLOGICAL RESOURCES

There are many previously recorded archaeological sites/isolates within the draft API and several more within one mile of the draft API. Previously undisturbed lands are within the draft API, creating a high probability of containing archaeological resources. An archaeological survey would be required to understand if and how resources may be impacted by the project in compliance with Section 106. The public disclosure of the locations of archaeological resources is prohibited, and therefore no mapping is provided in this memo.

HISTORIC RESOURCES

The Oregon State Historic Preservation Office (SHPO) Historic Sites Database shows four resources within the draft API (Figure 7), two of which are listed as not eligible/non-contributing, and one that is demolished. One resource, the June Earhart House, is listed as eligible/contributing to the National Register of Historic Places (NRHP). Several buildings and structures within the draft API that are 45 years or older would need to be evaluated for eligibility for listing on the NRHP.

Historic properties eligible for listing on the NRHP, which can include specific types of archaeological sites, are also Section 4(f) resources. Impacts to NRHP-eligible resources that result in an adverse effect would require a Section 4(f) evaluation (if federally funded by the Federal Highway Administration [FHWA]). Section 4(f) evaluations analyze avoidance and minimization measures; if there is a feasible and prudent avoidance alternative, it must be selected.

Figure 7. Historic Resources in the Draft API

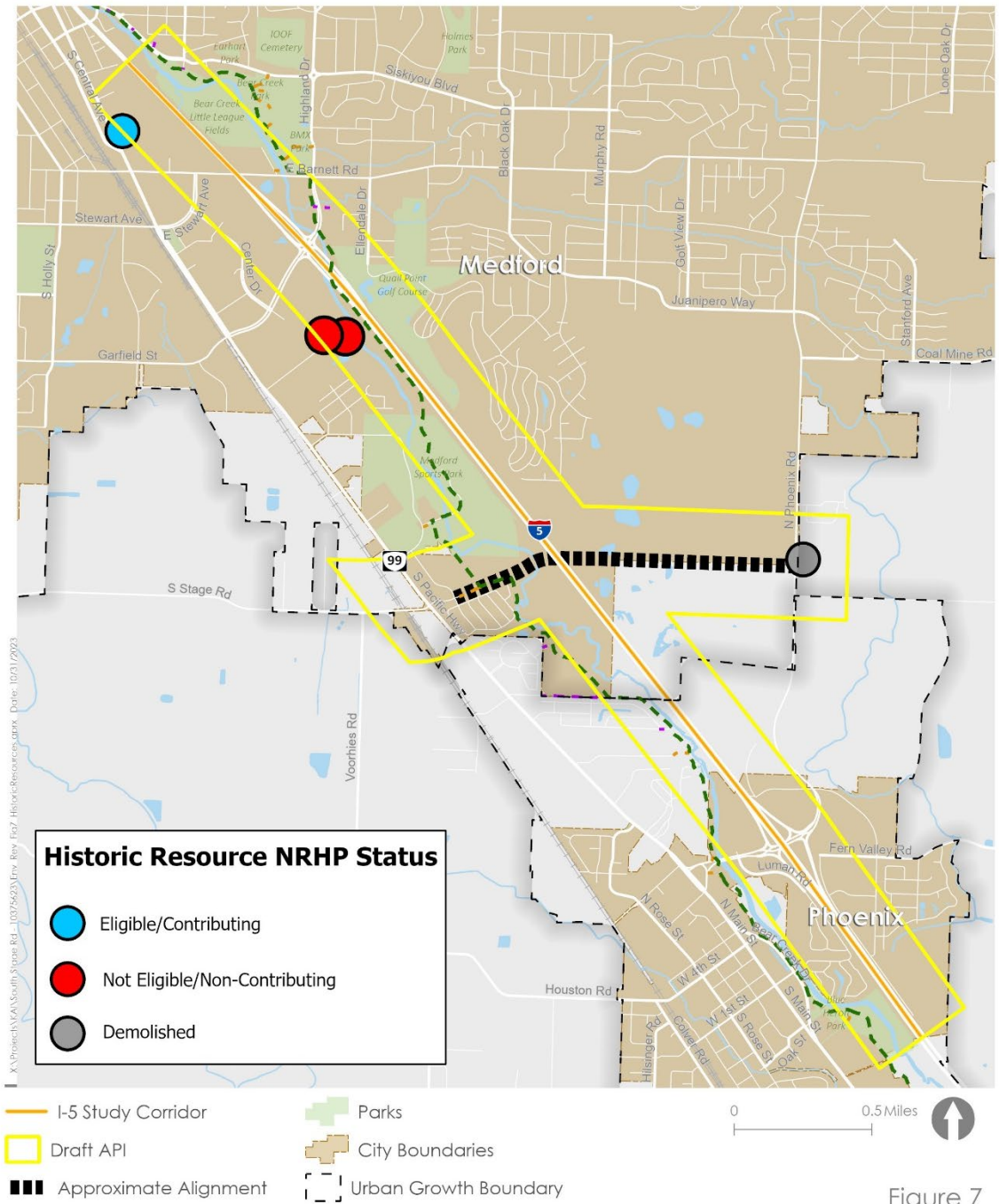


Figure 7



Environmental Existing Conditions - Historic Resources
Jackson County, Oregon

Visual Resources

Visual resources are typically associated with National Wild and Scenic Rivers, Oregon Wild and Scenic Rivers, National Scenic Byways, and Scenic Bikeways. None of these designations are within the draft API. Visual resources are not anticipated to be a major issue, however, that assessment could change pending additional public and agency input.

Parks

Several parks and recreational facilities are present within the draft API, including the Bear Creek Greenway, Bear Creek Park, Blue Heron Park, Medford Sports Park, and Lithia & Driveway Fields.

Publicly owned parks and recreational facilities are protected under Section 4(f) of the U.S. Department of Transportation Act of 1966. Additionally, parks that utilized Land and Water Conservation Act funds are protected under Section 6(f) of the Land and Water Conservation Act. Within the draft API, the Medford Sports Park and the Lithia & Driveway Fields are Section 4(f) resources; Bear Creek Park, Bear Creek Greenway, and Blue Heron Park are both Section 4(f) resources and Section 6(f) resources. The golf courses within the draft API are not 4(f) resources as they are not owned and operated by a public agency.

Impacts to Section 4(f) properties are designated as a “use,” and can include permanent right-of-way acquisition that transfers land as part of a transportation process; a temporary occupancy that is adverse in terms of the Section 4(f) statute’s preservation purposes; or a constructive use. A *de minimis* impact involves a determination of no adverse effect resulting from the use of Section 4(f) property. Use of a Section 4(f) property may only be approved if there is no prudent and feasible alternative to using the Section 4(f) resource or if the use is determined to be *de minimis*.

Occupancy of any part of Bear Creek Park or the Bear Creek Greenway (which includes Blue Heron Park) for more than 180 days would likely trigger a 6(f) property conversion, requiring approval from the National Park Service (NPS). Section 6(f) property conversions require the converted portion of the park to be replaced by property that has fair market value and recreation opportunities as the converted property. Temporary non-recreation activities that occur for a duration of less than six months must also be reviewed by NPS as a temporary non-conforming use.

Air Quality

The draft API is within the Medford-Ashland PM10 Air Quality Maintenance Area (through 2026). Highway crossing projects are listed in Table 1 of 40 CFR 93.126 are exempt from completing MSAT analysis; however, projects that would relocate roadways closer to sensitive or vulnerable populations (e.g., residents, parks, active sports areas), would be subject to additional

transportation and regional conformity analysis to ensure the project is consistent with air quality goals and MSAT analysis so the impacts of the project can be documented.

Noise

Noise sensitive land uses are present within the draft API on both sides of I-5, including residential, active sports areas, hotels, trails, offices, and restaurants. The project may be considered a Type I project in 23 CFR 772 if it results in the physical alteration of a roadway which significantly changes either the horizontal or vertical alignment, increases the number of through-traffic lanes, or adds auxiliary lanes. Type I projects require a noise study to analyze traffic noise impacts from the project. Noise studies model the existing noise levels at the sensitive receivers and the future noise levels in the design year. If the future noise levels at a sensitive receiver are expected to increase by 10 decibels (dBA), or if the noise level at a sensitive receiver is 2 dBA less than the corresponding FHWA noise abatement criteria (which ranges from 50 dBA to 70 dBA depending on the category of receiver), noise abatement must be considered.

Hazardous Materials

The Oregon Department of Environmental Quality Facility Profiler was reviewed for the draft API, which provides information on hazardous materials sources. Existing hazardous materials sources are present within the draft API, including four underground storage tanks, four hazardous waste generators, one environmental cleanup site information (ECSI) site, and two leaking underground storage tanks (Figure 8). A Phase I Hazardous Materials Corridor Survey would be required to identify any additional known hazardous materials sources or areas previously impacted by hazardous materials in the draft API.

Figure 8. Existing Hazardous Materials Sources in the Draft API

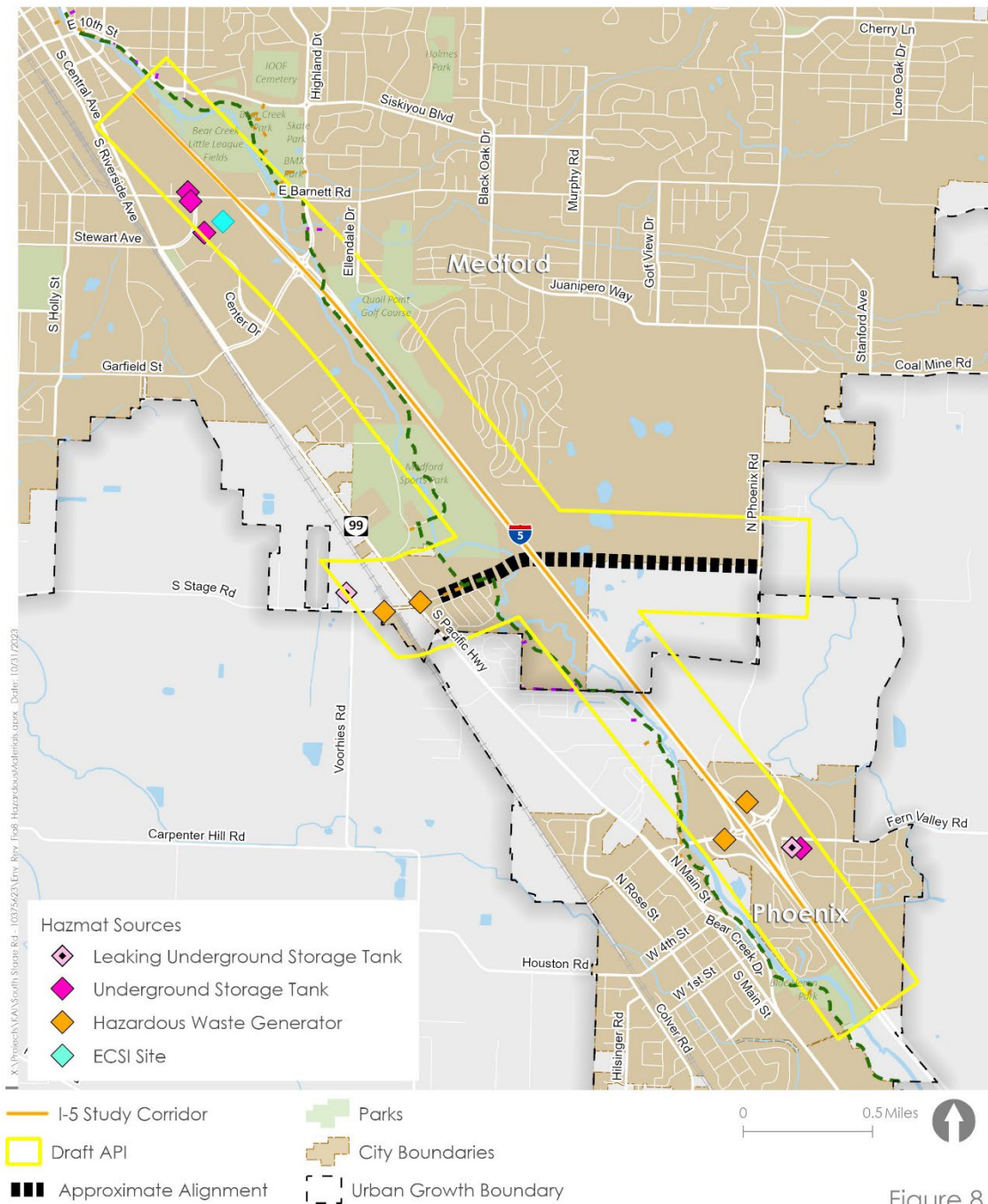


Figure 8

**Environmental Existing Conditions - Hazardous Materials Sources
Medford, Oregon**



Summary

This analysis of the draft API based on readily available data has identified several existing environmental resources that could be impacted by roadway development. Field investigations and resource agency consultations will be required to validate the findings of this technical memorandum and determine if additional resources such as NRHP-eligible historic properties, wetlands, waters, and ESA listed terrestrial species may be present within the draft API. Additional analysis will be required to determine how a proposed development may impact the surrounding population such as sensitive noise receivers and protected populations.

Any selected alternative that has more than a *de minimis* impact to a Section 4(f) resource will be required to demonstrate there is no prudent and feasible alternative to using the Section 4(f) resource, and any conversion of properties that utilized Land and Water Conservation Funds will require replacement property of functionally equal recreational value.