



Technical Memo 2C

Date: Tuesday, March 16, 2021

Project: US 97 Baker Road IAMP

To: John Bosket and Kayla Fleskes, DKS

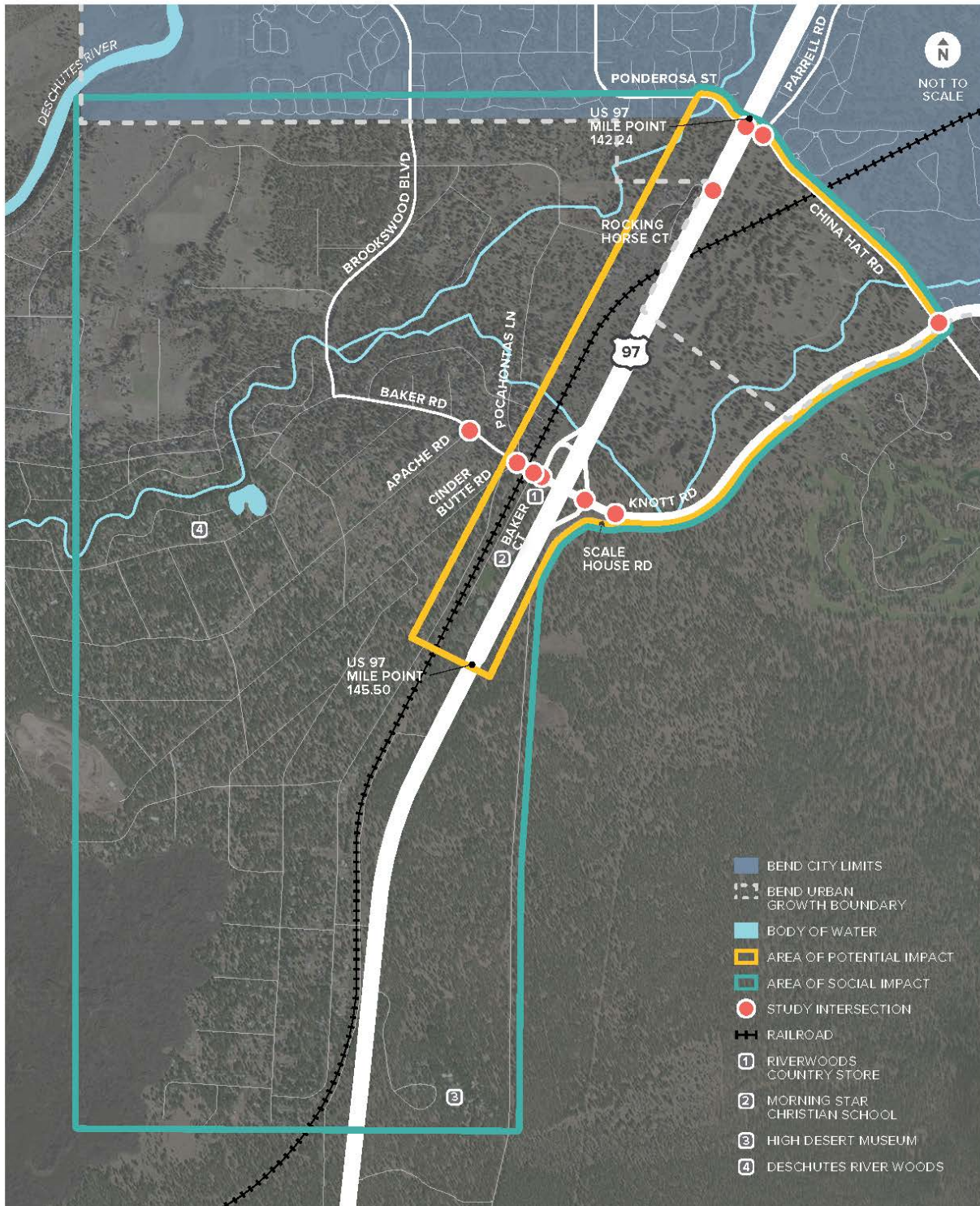
From: Carol Snead, Brian Bauman, Andrew Johnson, Camille Alexander, HDR

Subject: **Tasks 4.5 and 4.6 – Environmental Review**

1.0 Introduction

This memo describes the social environment and the natural and cultural resources in the area potentially affected by improvements associated with the Interchange Area Management Plan (IAMP) for the Baker Road/US 97 interchange in Deschutes County, Oregon. Figure 1 shows the area of social impact and the area of potential impact for natural and cultural resources (API). The information provided in this memo will inform alternatives development during later phases of the Project.

Figure 1: Area of Potential Impact for Environmental Resources and Area of Social Impact



2.0 Task 4.5 Social Environment: Protected Populations

The area of social impact identified in Figure 1 represents the area in which the interchange project could affect populations protected under Title VI of the Civil Rights Act of 1964, the Americans with Disabilities Act (ADA), federal Environmental Justice policies, and Policy 1.2, Equity, Efficiency and Travel Choices, of the Oregon Transportation Plan. These populations are inclusive of racial and ethnic minorities, low-income populations, persons with physical or mental impairment, and the elderly.

For the purpose of this assessment, and as defined by U.S. Department of Transportation (USDOT) and Federal Highway Administration (FHWA) guidance, “minority” populations are defined as persons who are Black, Hispanic or Latino¹, Asian American, American Indian and Alaska Native, or Native Hawaiian or other Pacific Islander, and “low-income” populations are those whose median household incomes are at or below the U.S. Department of Health and Human Services poverty guidelines (USDOT 2012; FHWA 2012). Collectively, minority and low-income populations are referred to as “environmental justice populations.” U.S. Census Bureau data, including American Community Survey (ACS) estimates, provide indicators of population characteristics within specific geographic areas, but do not provide conclusive determination of minority or low-income status of individuals potentially affected by the project.

Information on the populations in the area of social impact was obtained from the Environmental Protection Agency’s (EPA) EJSCREEN online tool, which provides population data from the 2013-2017 ACS estimates, and the U.S. Census Bureau online database. The information is available at the Census block group level and compared to state and county data for the same population groups. The area of social impact encompasses portions of three Census block groups (see Figure 2).

¹ White and non-white Hispanic or Latino populations are considered minority populations.

Figure 2: Census Block Groups in Area of Social Impact

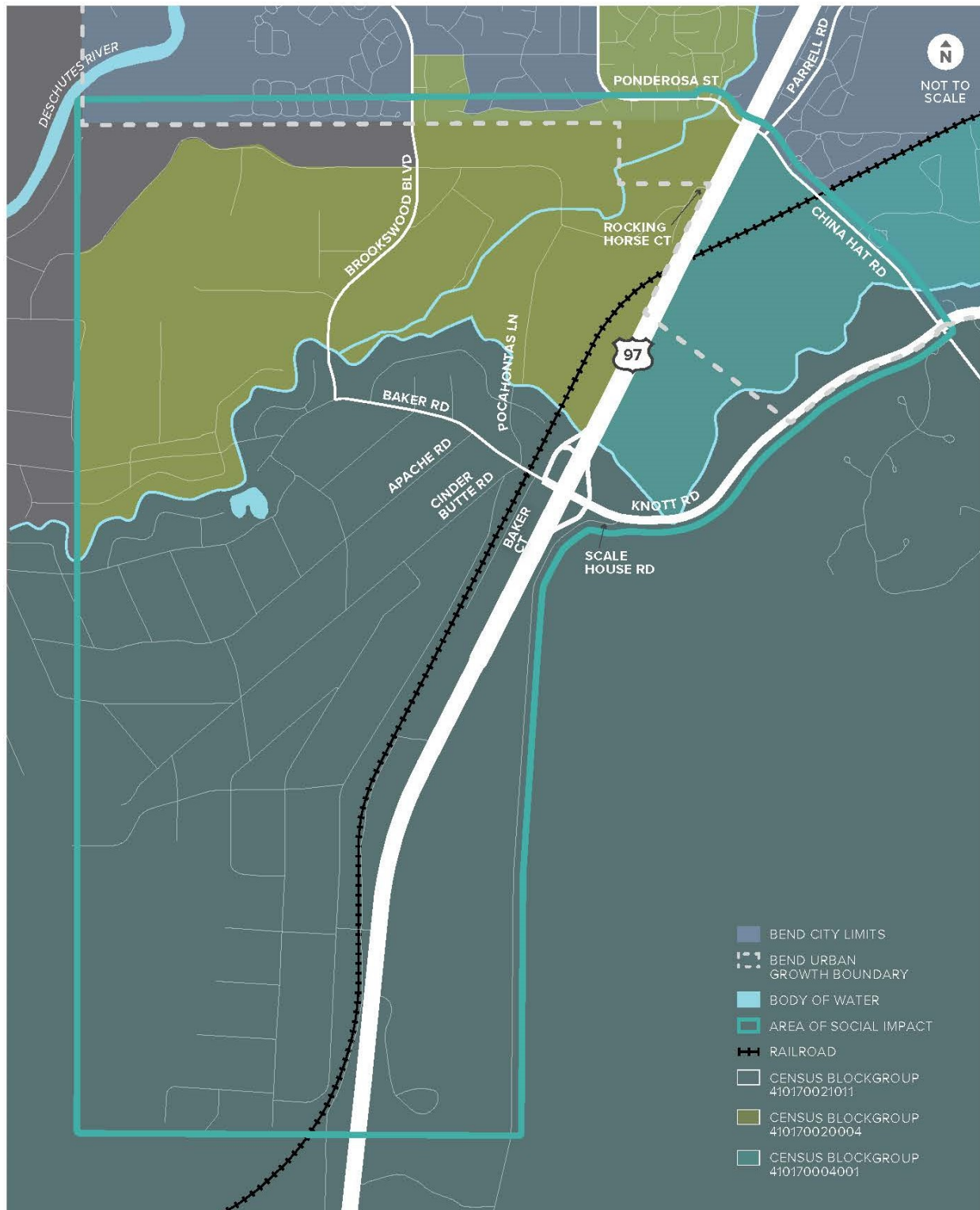




Table 1 presents the data related to the population in the block groups partially included in the area of social impact, as well as data for Deschutes County and the State of Oregon for comparison. For purposes of this analysis, the elderly population is defined as persons over the age of 65. Census data on persons under the age of 65 with disabilities is used to represent the population with physical or mental impairment.

Table 1: Population Information – Area of Social Impact

	Block group 410170004011	Block group 410170020001	Block group 410170021004	Deschutes County	State of Oregon
	(2013-2017 ACS estimates)			(2019 estimate)	
Total population	3,254	995	1,831	175,321	4,217,737
Size	41.44 square miles*	1.84 square miles	1.62 square miles	3,054 square miles	98,466 square miles
Minority	11%	5%	3%	13.2%	24.9%
Low-income	30%	11%	31%	9.2%	34%
Over 65	9%	43%	16%	20.5%	18.2%
Under 65 with disability	N/A	N/A	N/A	8.4	9.9

Source: EJSCREEN online tool <https://ejscreen.epa.gov/mapper/> and U.S. Census Quick Facts <https://www.census.gov/quickfacts/deschutescountyoregon>

EPA’s *Promising Practices for EJ Methodologies in NEPA Reviews* (2016) notes that 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 subjective threshold, it constitutes a “meaningfully greater” low-income or minority population for purposes of environmental justice assessments. In this assessment, the county is used as the reference population and the “meaningfully greater” is 150% of the reference population. The low-income populations in block group 410170004011 and 410170021004, at 30% and 31% respectively, are meaningfully greater than in Deschutes County overall (9.2%). The elderly population (over 65) in block group 41017002001, at 43%, is meaningfully greater than in Deschutes County overall (20.5%).

While there is no data at the block group level to represent the number of persons with physical or mental impairment, the county and state levels are similar. There is nothing to indicate a higher percentage of persons with physical or mental impairment are living in the area of social impact.

Transit serves a small portion of the area of social impact. Cascade East Transit has a stop at River Woods Baptist Church on Cinder Butte Road near its intersection with Baker Road. This may be representative of the public services available to populations potentially affected by the project.

3.0 Task 4.6 Environmental Reconnaissance

Existing data and maps were reviewed to determine the presence of natural and cultural resources in the API. The topics included in this discussion include Goal 5 resources, floodplains, wetlands, riparian areas, wildlife habitat, threatened and endangered species, historic and archaeological resources, resources protected under Section 4(f) and 6(f) of the Department of Transportation Act, and topographic constraints (i.e., steep slopes).

3.1 Goal 5 Resources

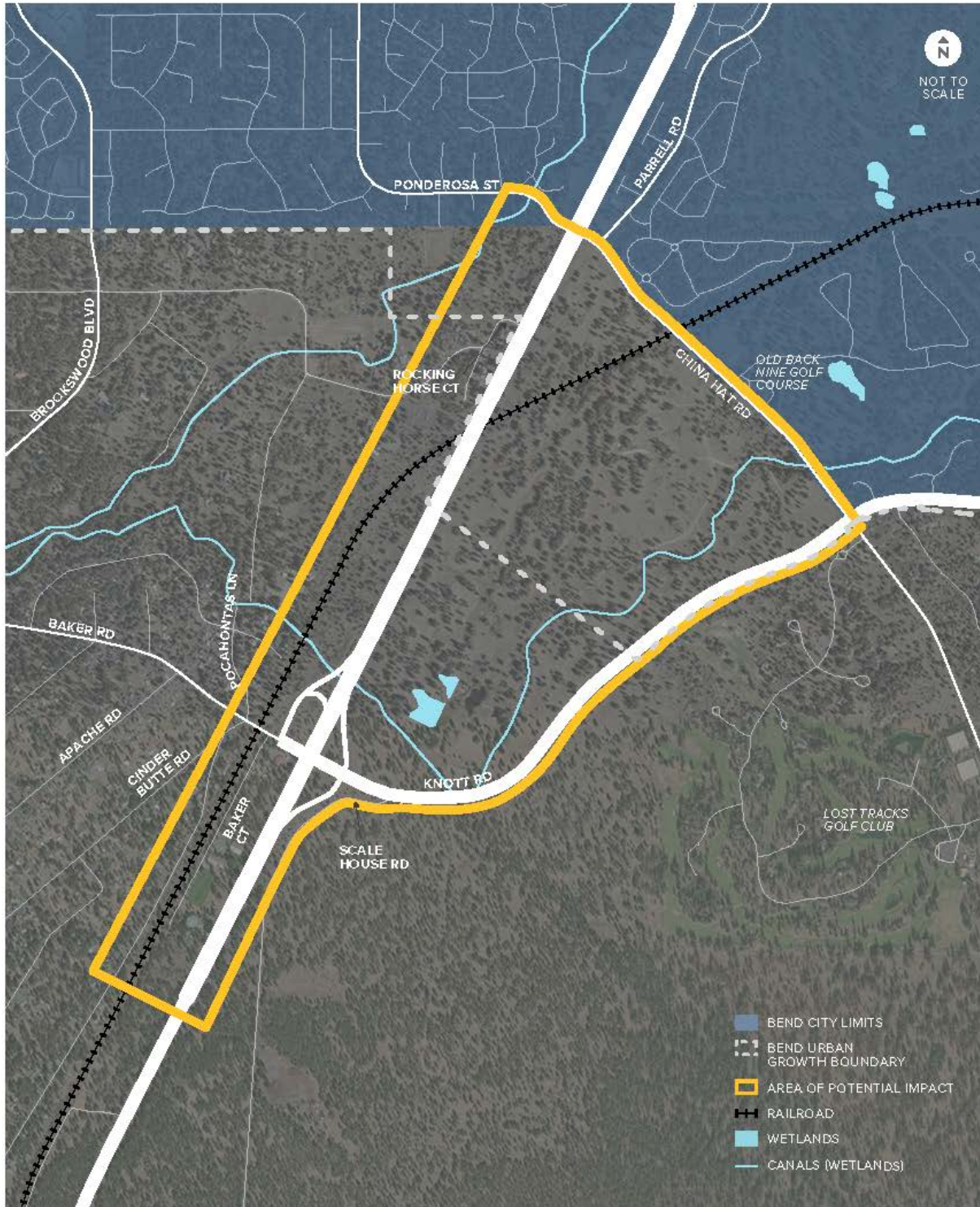
Deschutes County has an inventory of the following Goal 5 resources in its 2011 Comprehensive Plan: water; wildlife; open space and scenic views and sites; wilderness, natural areas, and recreation; and cultural and historic resources. The inventoried water resources include National Wetland Inventory (NWI) and Local Wetland Inventory (LWI) mapped wetlands. Such wetlands have been mapped within the API, as shown in Figure 3 and described in Section 3.2. The wildlife inventory includes over 150 species of bird, amphibian, reptile, and mammal species and their relative abundance in the county, many of which likely inhabit or transit the API. Field survey would be required to determine which species occur within the API and how they could be affected by the Project.

There are no landscape management rivers or streams in the API, or other areas of open space and scenic views identified in the Goal 5 inventory. There are no Goal 5 inventoried wilderness areas, ecologically and scientifically significant natural areas, or recreation trails within the API. The API does not include any of the cultural and historic resources identified in the Goal 5 inventory.

3.2 100-year Floodplain, Wetlands, Riparian Areas, and Wildlife Habitat

The API is in an area of minimal flood hazard with no 100-year Federal Emergency Management Agency floodplain. There are wetlands within the API, as shown in Figure 3. One NWI mapped wetland is the Arnold Canal, which derives water from the Deschutes River to support agriculture. This wetland is described as an intermittent, seasonally flooded, riverine wetland. There are no mapped riparian areas adjacent to the canal. The other wetlands in the API, and shown in Figure 3, are mapped in the Oregon LWI. They appear as open water ponds in online aerial photos.

Figure 3: Environmental Resources in the Area of Potential Impact



The API is within the Eastern Cascades Slopes and Foothills Level III ecoregion, which is in the rain shadow of the Cascades Mountains and has a semi-arid climate. The wildlife habitat is characterized as Ponderosa pine woodland and forest, with sagebrush dominating the shrub layer. Disturbed areas are typically dominated by cheat grass and other weedy herbaceous species.

US 97 through Bend is designated a hotspot for deer collisions, averaging 5 to 10 per year. US 97 within the API has had reports of 28 deer collisions between 2010 and 2020, which averages to fewer than 3 per year.

3.3 Threatened and Endangered Species

Improvements called for by the IAMP require review for potential impacts on threatened and endangered species. A review of the U.S. Fish and Wildlife Information for Planning and Consultation, an online database, was completed to identify threatened and endangered species known to occur in the project vicinity. Because no field investigation was conducted, the database results covered a broader area than the API. Two species are listed with the potential to occur in the broader study area: Oregon spotted frog (*Rana pretiosa*) and yellow-billed cuckoo (*Coccyzus americanus*). Oregon spotted frog is a threatened species. It is associated with areas of standing water with abundant emergent or floating aquatic plants. This habitat type is not found within the API. Yellow-billed cuckoo also is a threatened species. These birds were never common in Oregon. Their decline is attributable to loss and fragmentation of floodplain forests along larger rivers. Based on the database review, there is no designated critical habitat of any species listed as threatened or endangered under the Endangered Species Act present in the API.

3.4 Cultural and Historic Sites

The Oregon Historic Sites Database was reviewed to determine if any known historic or archaeological resources are present in the study area. None is listed. There may be buildings or sites located within the API that have not been evaluated for historic eligibility, requiring a historic resources survey for further investigation. Similarly, most of the API has not been surveyed for archaeological resources and archaeological resources may be present in the API. Development of areas of the API, including the US 97 corridor, the Baker Road interchange, and connecting roads, have resulted in ground disturbance that likely obscured intact archaeological artifacts. The probability of finding archaeological resources is higher in the undeveloped portions of the API. Further investigation would be needed to characterize historic and archaeological resources potentially affected by the project.

3.5 Section 4(f) and Section 6(f) Resources

Section 4(f) resources are publicly owned park and recreation areas that are open to the general public, publicly owned wildlife and waterfowl refuges, and public or privately owned historic sites. The term “historic sites” includes prehistoric and historic districts, sites, buildings, structures or objects listed in, or eligible for, the National Register of Historic Places. This may also include places of traditional religious and cultural importance to an Indian tribe or Native

Hawaiian organization and that meet the National Register criteria. There is a public golf course, Old Back Nine, at 60650 China Hat Road; however, the course is not publicly owned and, therefore, is not a Section 4(f) resource. There are no publicly owned parks or wildlife refuges in the API. As noted in Section 3.4, there are no known public or private historic sites in the API. There are no existing Section 4(f) resources in the study area.

Section 6(f) resources are those properties that were acquired or developed with grants from the Land and Water Conservation Fund and are prohibited from conversion to a non-recreational purpose. There are no Section 6(f) recreation resources present within the study area.

3.6 Topographic Constraints

Topography of the API is gently sloped, rising from elevations of approximately 3,860 feet at the northern end of the API to 3,940 feet near the southern end of the API. There are no steep or unstable slopes in the API.

4.0 References

[Environmental Justice Strategy | US Department of Transportation](#)

[FHWA Order 6640.23A - Resources | Federal Highway Administration \(dot.gov\)](#)

<https://ejscreen.epa.gov/mapper/>

<https://www.census.gov/quickfacts/deschutescountyoregon>

ODOT [Project Vicinity Mapping Application \(arcgis.com\)](#)

[Promising Practices FOR EJ Methodologies IN NEPA Reviews](#)

https://www.deschutes.org/sites/default/files/fileattachments/community_development/page/730/chapter_5_-_supplemental_sections.pdf

FEMA Flood Map Service Center | [Search By Address](#)

<https://ecos.fws.gov/ipac>

<https://www.fs.usda.gov/detail/deschutes/learning/nature-science/?cid=stelprdb5270646>

[OFWO - Yellow-billed cuckoo \(Western population\) \(fws.gov\)](#)

[OFWO - Oregon spotted frog \(fws.gov\)](#)

[Department of State Lands : Local Wetlands Inventories : Waterways & Wetlands : State of Oregon](#)

[Deer and Elk Collision Density 2010-2016 \(oregon.gov\)](#)

http://editors.eol.org/eoearth/wiki/Ecoregions_of_Oregon