



U.S. 95 SOUTH ENVIRONMENTAL SCAN OREGON STATE LINE TO NYSAA JUNCTION with U.S. 20/26

PINEHURST

NEW MEADOWS

COUNCIL

CAMBRIDGE

MIDVALE

WEISER



PAYETTE

FRUITLAND

PARMA

WILDER

HOMEDALE

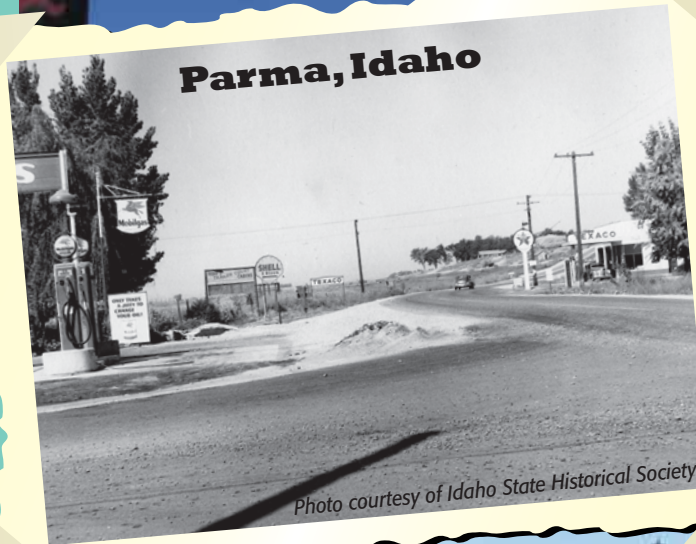


Photo courtesy of Idaho State Historical Society



JUNE 2014



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Executive Summary

The U.S. 95 South Environmental Scan (ES) covers 50.842 linear miles, and is one of three ES documents being prepared as a required component of the Oregon Line to New Meadows Corridor Plan. The U.S. 95 South ES provides a summary of critical and potential environmental issues within the right-of-way boundaries of U.S. 95 in Idaho, from the Oregon State line at Milepost 0.000, through the junction with U.S. 20/26 to 1.5 miles east of the Oregon State Line at Nyssa, ending at Milepost 53.557.

This ES identifies critical environmental resources within this section of the U.S. 95 corridor and addresses potential analysis/impacts and permit requirements for future projects outside the existing roadway but within the current right-of-way. Predictable future projects for this ES are limited to intersection improvements and minor roadway widening.

The proposed location, scope, and intensity of future transportation projects within the U.S. 95 corridor area will determine which environmental resources have the potential to be affected. The need for further evaluation and/or mitigation of each resource is also dependent on the location and scope of the project. A summary of existing environmental resources and relationship to future projects for this portion of the U.S. 95 South corridor are shown in **Table 1**.

Table 1 – Existing Identified Environmental Resources and Relationship to Future Projects

Resource	Location Where Resource Exists	Relation to Future Projects
Prime or Unique Farmlands	Environmental Scan Area	Prime farmland and farmland of statewide and local importance exists. May need to contact USDA to determine if a Farmland Conversion Impact Rating Form AD-1006 (03-02) and Form NRCS-CPA-106 would be required.
Air Quality	Canyon County	May require air quality analysis if the “Area of Concern” in an attainment area designation changes to a non-attainment area.
Sections 404 and 401	Owyhee County, Canyon County	There are two impaired waterways (McBride Creek/Snake River) and multiple irrigation canals, ditches and drains and wetland areas. Would need to contact the U.S. Army Corps of Engineers to determine if a 404 permit is required; and the Idaho Department of Environmental Quality to determine if a 401 permit is required.



Resource	Location Where Resource Exists	Relation to Future Projects
Floodplains	Canyon County, Payette County	Any changes in floodplains would require review by the local jurisdiction to determine if a floodplain permit is necessary.
Wetland and Riparian Areas	Environmental Scan Area	There are multiple wetland areas that would need to be delineated for jurisdictional boundaries.
Hazardous Materials	Owyhee County, Canyon County	Site-specific hazardous materials assessment would be necessary, especially in urban areas to evaluate potential contaminants or impacts to groundwater.
Threatened & Endangered (T&E) Species	Environmental Scan Area	The Snake River physa is listed as endangered and could be present in all three counties. The Bruneau hot springsnail is listed as endangered and could be present in Owyhee county. Bull trout is listed as a threatened species and could be present in Owyhee and Payette counties. A biological evaluation would be necessary to determine if the project would impact any T&E Species.
State Sensitive Species	Environmental Scan Area	Critically imperiled and at risk imperiled state sensitive species could be present in all three counties. A biological evaluation would be necessary to determine if the project would impact any State Sensitive Species.
Demographic Data	Environmental Scan Area	Low household income and population below poverty level would require review for any relocations.
Cultural Resources	Environmental Scan Area	Potential 4(f) and 6(f) properties in the ES area would necessitate a cultural resource survey.
Land Use and Zoning	Environmental Scan Area	Projects that would affect land use are not likely but any changes to the corridor would require review by the local jurisdiction.





Resource	Location Where Resource Exists	Relation to Future Projects
Noise	Environmental Scan Area	If a setback of at least 200 feet from the existing centerline and in certain cases a 50-foot setback cannot be maintained, a noise analysis may be required.

Any future projects should include the following during the planning phase:

- A qualified Biologist to study the project area and provide a biological evaluation for threatened, endangered, and sensitive species and critical habitat; and prepare a wetland evaluation/delineation;
- A qualified Environmental Planner to evaluate the project area and determine the proper level of environmental documentation required for the project;
- A qualified Architectural Historian and Cultural Resource Specialist to evaluate the project area and identify any potentially eligible historic structures and/or archaeological sites.



Introduction

The U.S. 95 South Environmental Scan (ES) covers 50.842 linear miles, and is one of three ES documents being prepared as a required component of the Oregon Line to New Meadows Corridor Plan. The U.S. 95 South ES provides a summary of critical and potential environmental issues within the right-of-way boundaries of U.S. 95 in Idaho, from the Oregon State line at Milepost 0.000, through the junction with U.S. 20/26, to 1.5 miles east of the Oregon State Line at Nyssa, ending at Milepost 53.557.

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Project Area

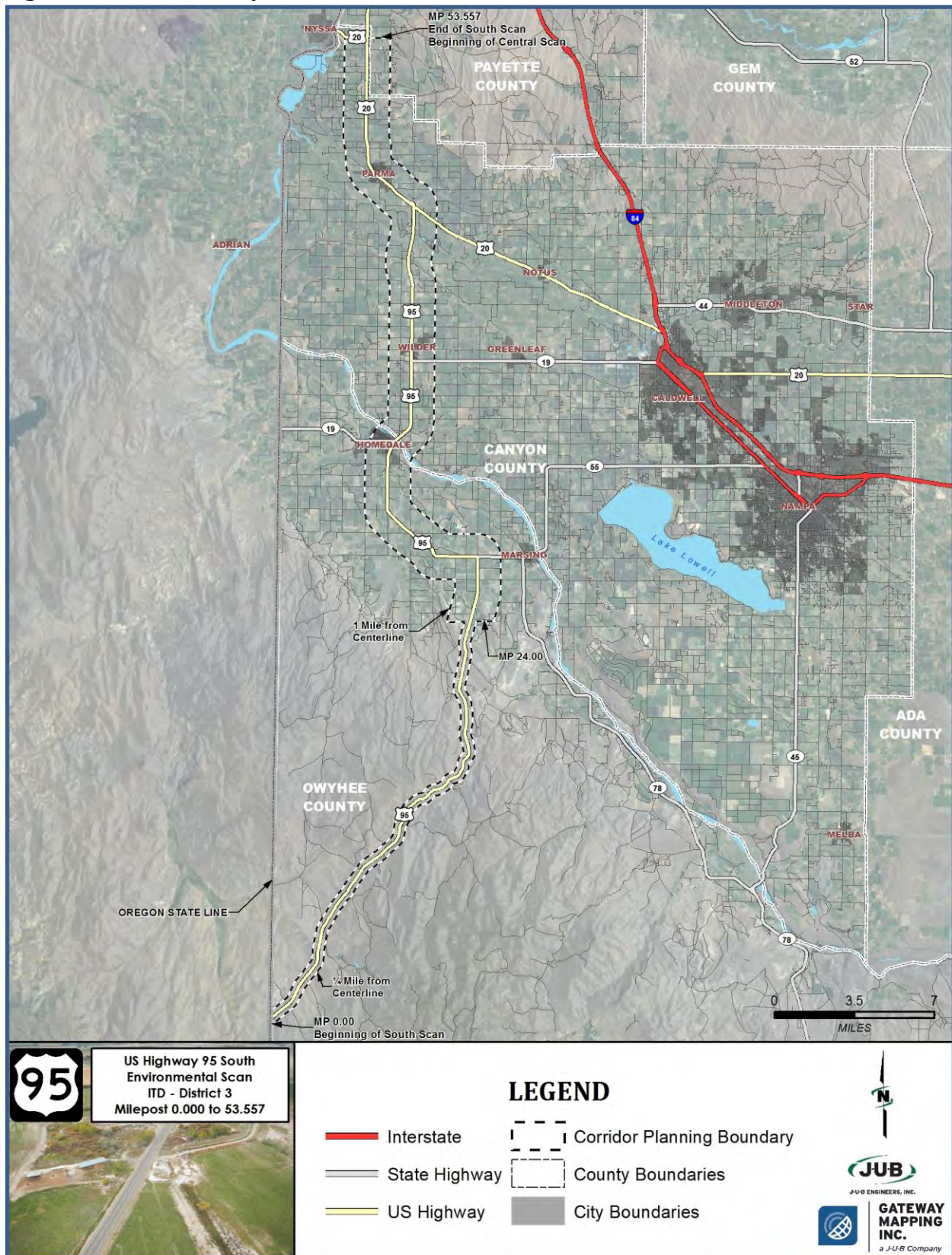
The U.S. 95 South ES corridor lies in Owyhee, Canyon and Payette counties in Idaho. Three cities, Homedale, Wilder, and Parma are located within the corridor. The ES study area includes a total distance of 50.842 linear miles, from Milepost 0.000 at the Oregon state line to Milepost 53.557, 1.5 miles east of Nyssa, Oregon. There is a mismatch between the linear distance and the mileposts due to routing and distance changes associated with the Elephant Butte realignment and the Homedale bypass projects.

The section of the ES study area from Milepost 0.000 to Milepost 24.00 is limited to a 1/4 mile distance from the centerline of U.S. 95 on either side of the roadway due to the rural setting of the U.S. 95 corridor. The lateral extent of the U.S. 95 South ES study area from Milepost 24.00 to Milepost 53.557 includes a one-mile distance from the centerline of U.S. 95 on either side of the roadway. **Figure 1** and **Appendix A.1** show the extent of the U.S. 95 South ES corridor study area.





Figure 1 – Corridor Study Area





Methodology and Data Sources

Methods used to prepare this ES included research and evaluation of local, state, and federal agency databases and resources; a helicopter flyover and a vehicle windshield survey. **Table 2** outlines specific methodologies used for each resource to develop the U.S. 95 South ES document. Data sources for the tables and maps are located on pages 61 and 62.

Table 2 – U.S. 95 South Environmental Scan Methodology and Data Sources

	Resource	Methodology	Assumptions
Physical Environment	Land Cover	Created a table of land cover using the U.S. Department of Agriculture (USDA) 2012 Idaho Cropland Geographic Information System (GIS) data layer.	None
	Soil Resources and Prime Farmland	Created a GIS map and table of prime farmland using the Natural Resources Conservation Service (NRCS) Soil Survey Geographic database (SSURGO) data layer.	None
	Air Quality	Referenced the Idaho Transportation Department (ITD) Air Quality policy and reviewed the Idaho DEQ Administrative Boundaries for Areas with Sensitive Air Quality map.	None
	Hydrology – Surface Waters	Created a GIS map of surface waters, irrigation district boundaries, and impaired water bodies. Researched and listed water body impairments.	None
	Hydrology – Floodplains	A flood zone GIS data layer from the Federal Emergency Management Agency (FEMA) was used to map floodplains. In addition, online floodplain maps were obtained from FEMA's website for reference purposes.	None
	Hydrology – Wetlands	Water features were approximated in GIS maps using information obtained through a review of existing National Wetland Inventory (NWI) maps, a vehicle windshield survey, and a helicopter flyover.	Full wetland delineation did not occur.
	Hydrology – Ground Waters	Reviewed the Environmental Protection Agency (EPA) Sole Source Aquifers map.	None
	Hazardous Materials	Researched EPA's Enviromapper database, Idaho Department of Environmental Quality's (IDEQ) UST/LUST databases, and conducted a windshield survey to identify potential hazardous material locations adjacent to the right-of-way along U.S. 95.	An initial site assessment was not conducted.





Resource		Methodology	Assumptions
Biological Resources	Threatened & Endangered (T&E) Species	Obtained and reviewed the countywide Endangered Species Act (ESA) species listing. Obtained an Official Species List for the ES area from the U.S. Fish and Wildlife Service Information, Planning and Conservation (IPAC) System.	A biological evaluation was not performed and no agency consultation occurred.
	Sensitive Species	The Idaho Conservation Data Center (CDC) database was queried and reviewed for Idaho Sensitive Species within the vicinity of the project area.	
	Wildlife and Fish Resources	Potential impacts to non-listed or proposed species are discussed. T&E Species habitat attributes are cross-referenced with the countywide ESA listing and briefly discussed in the ES.	
Human Environment	Demographic Information	Obtained GIS block group data from the 2010 U.S. Census for total population and minority populations by state, county, city, and corridor separated by county. Median household income and population below the poverty level was obtained from the 2007-2011 American Community Survey (ACS).	Census data was used at the block level. ACS data was used at the block group level.
	Environmental Justice	Researched 2010 U.S. Census data and performed a vehicle windshield survey to identify potential areas where environmental justice populations may exist.	None
	Cultural Resources	Researched the National Register of Historic Places (NRHP) database for historic properties in the ES area. Created a GIS map and conducted a windshield survey to document known and potentially eligible historic properties.	Only included properties within 100 feet of the roadway centerline.
	Visual Impacts	Reviewed potential visual impacts through a windshield survey.	A visual assessment did not occur.
	Section 4(f)/6(f)	Conducted a windshield survey, reviewed city and county zoning maps, aerial photography, and the Land and Water Conservation Fund (LWCF) database. Created tables and a GIS map of parks, schools, and LWCF properties.	A Section 4(f)/6(f) evaluation of properties did not occur.
	Land Use and Zoning	Obtained and reviewed current zoning and comprehensive land use plans and digital maps for the cities of Homedale, Wilder and Parma; and Owyhee, Canyon, and Payette counties.	GIS layers of current zoning and future land use designations are not included in the ES document.
	Noise	A ten-point transect analysis was conducted using the FHWA Traffic Noise Model software. A table of dBA levels for highway segments was prepared.	None
	FAA Airspace Intrusion	Local airports were researched and mapped in GIS.	No FAA Airspace GIS data layer is available.



Physical Environment

Land Cover

The USDA 2012 Idaho Cropland GIS data layer was used to identify land cover types within the U.S. 95 South ES study area. The study area covers a total of 44,477.10 acres. **Table 3** shows 52 land cover/cropland types within the ES study area. The three most common land cover/cropland types are corn (17.95 percent), shrub land (14.47 percent), and alfalfa (14.34 percent).

Table 3 – Corridor Land Cover within the U.S. 95 South ES Area

Land Cover/ Cropland Type	Acres	Percent of Corridor	Land Cover/ Cropland Type	Acres	Percent of Corridor
Corn	7,984.59	17.95%	Other Hay/Non Alfalfa	32.95	0.07%
Shrub land	6,437.67	14.47%	Barren	31.12	0.07%
Alfalfa	6,377.16	14.34%	Woody Wetlands	30.64	0.07%
Pasture/Grass	3,591.40	8.07%	Oats	25.15	0.06%
Developed/Open Space	3,222.74	7.25%	Clover/Wildflowers	9.79	0.02%
Pasture/Hay	2,875.81	6.47%	Turnips	9.79	0.02%
Winter Wheat	2,512.29	5.65%	Cherries	7.83	0.02%
Onions	2,169.67	4.88%	Plums	7.79	0.02%
Fallow/Idle Cropland	1,746.57	3.93%	Sod/Grass Seed	6.90	0.02%
Dry Beans	1,708.65	3.84%	Lettuce	6.69	0.02%
Developed/Low Intensity	1,007.61	2.27%	Peaches	6.63	0.02%
Sugar Beets	882.87	1.99%	Triticale	3.78	0.01%
Hops	787.38	1.77%	Radishes	3.56	0.01%
Potatoes	584.91	1.32%	Apricots	3.56	0.01%
Herbs	502.50	1.13%	Soybeans	3.10	0.01%
Open Water	447.71	1.01%	Sorghum	2.10	0.00%
Herbaceous Wetlands	343.27	0.77%	Double Crop Winter Wheat/Corn	1.72	0.00%
Sweet Corn	295.82	0.67%	Pears	1.34	0.00%
Peas	167.59	0.38%	Mint	1.11	0.00%
Apples	149.05	0.34%	Nectarines	0.69	0.00%
Spring Wheat	132.21	0.30%	Evergreen Forest	0.67	0.00%
Other Crops	120.84	0.27%	Background	0.47	0.00%
Carrots	66.10	0.15%	Miscellaneous Vegetables and Fruits	0.45	0.00%
Grapes	60.68	0.14%	Mustard	0.45	0.00%
Barley	53.17	0.12%	Developed/High Intensity	0.22	0.00%
Developed/Medium Intensity	50.12	0.11%	Peppers	0.22	0.00%
Total Land Cover				44,477.10	100%

Percent of corridor rounded to the nearest one-hundredth percent

Source: USDA 2012 Idaho Cropland data





Soil Resources and Prime Farmland

Land is not considered farmland if it is developed, if the U.S. Census considers it urban, if it exists within the footprint of rights-of-way or if it is land that is committed to urban development or water storage.

Congress enacted the Farmland Protection Policy Act (FPPA) as a subtitle of the 1981 Farm Bill. The purpose of the law is “to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses, and to assure that federal programs are administered in a manner that, to the extent practicable, will be compatible with state, unit of local government, and private programs and policies to protect farmland” (P.L. 97-98, Sec. 1539-1549; 7 U.S.C. 4201, et seq.).

Farmland (**Figure 2**) protected under the FPPA is defined in Section 4201 of the FPPA as prime farmland, farmland of statewide or local importance and unique farmland.

Figure 2 – Farmland, U.S. 95 South



Prime farmland soils are those that have the best combination of physical and chemical characteristics for producing food, feed, forage, fiber and oilseed crops, and are available for these land uses. Prime farmland can be either non-irrigated land or land that would be considered prime farmland if irrigated. Prime Farmland makes up a large portion (68 percent), which represents 30,225.61 acres of the ES Study area.

Farmland of statewide importance is land, other than prime and unique farmlands, that is of statewide importance for the production of food, feed, fiber, forage, and oilseed crops. Farmland of statewide importance makes up approximately 10 percent or 4,544.62 acres of the ES study area.

Unique farmland is land other than prime farmland used for production of specific high-value food and fiber crops e.g. cranberries or citrus. Idaho does not have farmland categorized as unique (Hal Swenson, Idaho State Soil Scientist, USDA Natural Resources Conservation Service).

Information on soils were obtained from the National Resources Conservation Service (NRCS) to determine the presence of prime, unique, statewide, or locally important farmland in the U.S. 95 South ES study area. The soil survey data for Owyhee, Canyon, and Payette counties indicate that the predominant soil types within the ES area include silt, sandy, and various other types of loam. Prime



farmland and farmland of statewide and local importance are listed in **Table 4**, and mapped in **Figure 3** and **Appendix A.2**.

Table 4 – NRCS Prime Farmland

Farmland Type	Acres	Percent of Corridor
Prime Farmland if irrigated	27,606.21	62%
Prime Farmland if irrigated and drained	1,942.56	4%
Prime farmland if irrigated and reclaimed of excess salts and sodium	676.84	2%
Total Prime Farmland	30,225.61	68%
Farmland of Statewide Importance if irrigated	4,544.62	10%
Total Farmland of Statewide Importance	4,544.62	10%
Unidentified	901.62	2%
Not Prime Farmland	8,786.12	20%
Total Corridor Study Boundary Limits	44,457.98	100%

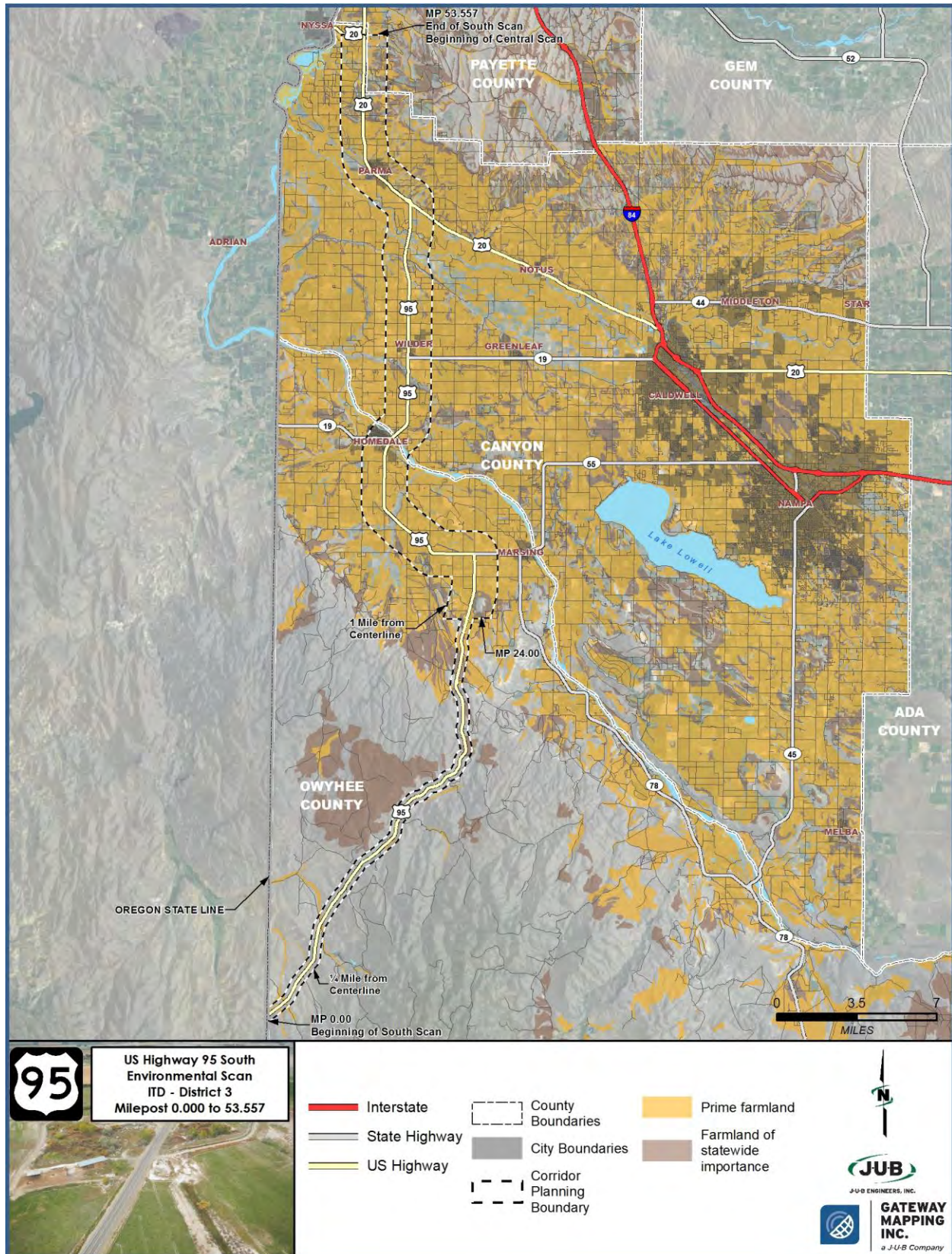
Source: NRCS SSURGO data

The USDA Farmland Conversion Impact Rating Form AD-1006 (03-02) and Form NRCS-CPA-106 (for corridor type projects) are used by the NRCS to inventory and evaluate impacts to the prime and important farmlands within the state. Future projects associated with the construction of any potential alternative route may convert farmland as defined in the FPPA to nonagricultural uses. For projects located within existing right-of-way, it is likely that one or both of these forms would need to be completed. The federal agency providing financial or technical assistance to a proposed project would need to coordinate with NRCS to determine potential farmland impacts.





Figure 3 – Prime Farmland





Air Quality

Under the authority of the federal Clean Air Act, the Environmental Protection Agency (EPA) has set National Ambient Air Quality Standards (NAAQS) for six criteria pollutants: ozone, sulfur dioxide, carbon monoxide, nitrogen dioxide, particulate matter, and lead (EPA, 2012, www.epa.gov/air/criteria.html, <http://www.epa.gov/airdata/>). The Idaho Department of Environmental Quality (DEQ) is required by the Idaho Environmental Protection and Health Act to supervise and administer a system to safeguard air quality in the State of Idaho. In Idaho, pollutants of concern include carbon monoxide, particulate matter (PM₁₀ and PM_{2.5}), and Mobile Source Air Toxics (MSAT) (EPA Air Quality Index Report, 2014, www.deq.idaho.gov/air-quality.aspx). Air quality impacts are evaluated for all Idaho Transportation Department (ITD) federally funded transportation projects to determine if the project will cause or contribute to a violation of NAAQS.

All state air quality jurisdictions are divided into three classes of air quality protection, Class I, II, and III. Class I areas are subject to maximum limits on air quality degradation called air quality increments, often referred to as PSD increments. Class I areas are special areas such as national parks, national monuments, and wilderness areas. These air quality increments are more stringent than national ambient air quality standards. Most areas are designated as Class II areas, areas that are subject to maximum limits on air quality degradation. Class II has more stringent air quality increments than national ambient air quality standards but less than Class I. Class III areas have no air quality increments and may be degraded to levels correspondent to national ambient air quality standards.

A Nonattainment Area is an air quality jurisdiction which has formally been recognized by the U.S. EPA as violating a national ambient air quality standard.

A Maintenance Area is one where a nonattainment area now meets the standards and additional redesignation requirements in the Clean Air Act.

An Area of Concern is an area that has exceeded the threshold of the National Ambient Air Quality Standards in the past, but has not violated those standards (David Luft, Airshed Manager, Idaho DEQ).

An airshed is a geographical area that is characterized by similar topography and weather patterns. Idaho DEQ bases the boundaries of airsheds on meteorological data. Certain geographical regions that violate NAAQS are designated as non-attainment areas. Non-attainment areas receive special attention and mitigation efforts in order to improve the ambient air quality to the established standards. **Figure 4** shows attainment and non-attainment areas throughout the State of Idaho. Air quality is discussed in more detail below for each county within the U.S. 95 South ES study area.

Owyhee County

Owyhee County is sparsely populated, with few emissions sources except from agricultural activities. According to Idaho DEQ, air quality in Owyhee County is generally good to excellent. Wildland fires that occur occasionally in summer and fall, or prescribed fire and agricultural burning that occur generally in spring and fall can cause poor air quality conditions. The Idaho/Montana Airshed Group is responsible for smoke management in Owyhee County. The Missoula Monitoring Unit is responsible for coordinating burning activities to minimize or prevent impacts from smoke emissions in this area.



Prescribed burning must be coordinated through the Missoula Monitoring Unit, which establishes air quality restrictions, information and smoke forecasting. There are no monitoring sites within Owyhee County.

Canyon County

Canyon County is part of the Treasure Valley airshed. The Treasure Valley airshed is considered an Area of Concern for PM_{2.5} and O₃. PM_{2.5} is particulate matter less than or equal to 2.5 microns in diameter; and O₃ is corrosive ozone. In the lower atmosphere, ozone is created by chemical reactions between air pollutants from vehicle exhaust, gasoline vapors, and other emissions. High concentrations of ozone are toxic to people and plants. Per the ITD Air Screening Policy, projects taking place in Canyon County may require an air quality analysis unless the project is an exempt type per 40 CFR 93.126.

Payette County

A small portion of the ES planning area extends into Payette County. Payette County is the smallest county in land area in Idaho. According to the Idaho DEQ, air quality in Payette County is generally good to excellent. Geographically, Payette County is classified by the EPA as an attainment area. Wildland fires that occur occasionally in summer and fall, or prescribed fire and agricultural burning that occur generally in spring and fall, can cause poor air quality conditions.

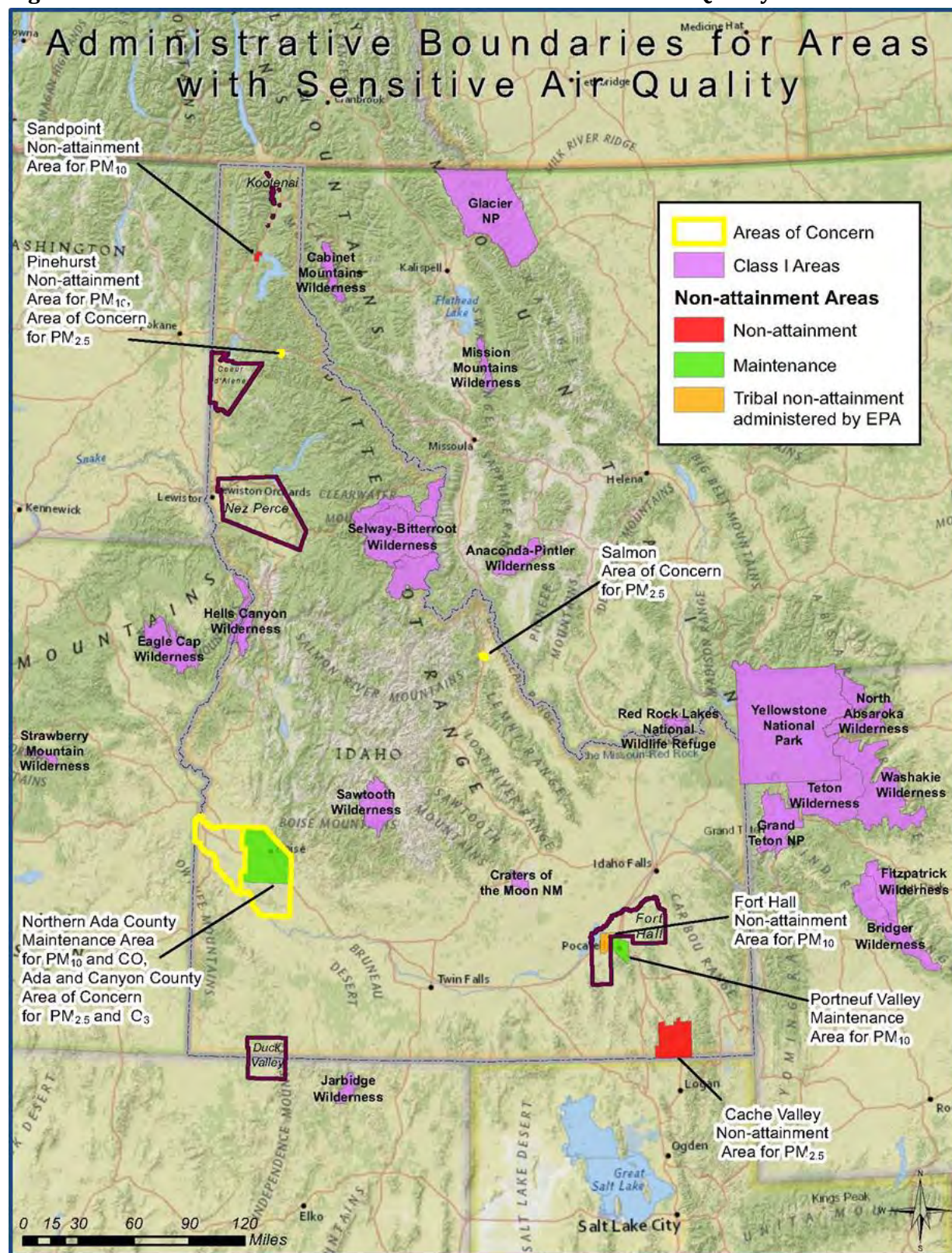
The following types of projects are considered to have the potential to impact air quality standards and would likely require an air quality analysis:

1. New or expanded highway projects that have a significant number of or significant increase in diesel vehicles (> 10,000 trucks per day);
2. Project affecting intersections that are at a level of service (LOS) D or worse with a significant number of diesel vehicles, or those that will change to LOS D or worse because of increased traffic volumes from a significant number of diesel vehicles related to the project;
3. New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a signal point;
4. Expanded bus and rail terminals, and expanded transfer points, which significantly increase the number of diesel vehicles congregating at a single location; and
5. Projects in or affecting locations, areas, or categories of sites, which are identified in the PM-10 State Implementation Plan (SIP) as sites of violation or possible violation (of which Idaho currently has none).

Any future project would need to follow ITD's Air Screening Policy to determine whether the proposed project would require an air quality analysis for MSAT. According to ITD's Air Screening Policy, *it is not necessary to address air toxics impacts in all Federal Highway Administration (FHWA) funded projects. The decision on whether or not to assess and document air toxics in conjunction with a project will depend on whether it is identified as an issue during the scoping process or subsequently through public comment. If MSAT is not identified as a potential issue, it DOES NOT need to be evaluated or documented in the project's National Environmental Policy Act (NEPA) document.*



Figure 4 – Administrative Boundaries for Areas with Sensitive Air Quality



Source: http://www.deq.state.id.us/media/662796-nonattainment_map.pdf





Hydrology

Surface waters, floodplains, wetlands, groundwater contaminants and sole source aquifers are discussed in detail below. Future construction projects including any alteration or other development work involving surface or groundwater would require various levels of regulatory compliance and/or permitting.

Surface Waters

Three Hydrologic Unit Code (HUC) sub-basins are located within the ES area: Middle Snake-Succor HUC17050103, Lower Boise HUC 17050114, and the Middle Snake-Payette HUC 17050115.

Canyon and Owyhee County have a total of 43 irrigation canals, ditches and drains – 18 are located within the ES area. Wilder has seven, Parma six, and Homedale has five irrigation canals, ditches, or drains located within the ES area. Payette County has two irrigation canals but they are not located within the ES planning area. In certain instances, irrigation ditches and canals may be considered jurisdictional waterways and specific regulatory requirements under Sections 404 and 401 of the Clean Water Act would apply to future work within these facilities (Idaho “A” Canals, 2014, <http://Idaho.hometownlocator.com/features/cultural/class/canal.cfm>).

There are two impaired waterways in the ES area McBride Creek (**Figure 5**) and the Snake River (**Figure 6**), as identified by the EPA MyWATERS Mapper, 2014, (<http://watersgeo.epa.gov>). **Figure 7** and **Appendix A.3** show the locations of surface waters within the ES area. Reasons for impairment include temperature, bacteria, suspended sediment/solids, phosphorus and dissolved oxygen. Impaired waterways are discussed in more detail below.

McBride Creek – 1st and 2nd order; McBride Creek – 3rd order

McBride Creek flows from headwaters to the Oregon Line just north of where the U.S. 95 South ES boundary enters Idaho from Oregon in Owyhee County. This watershed drains approximately 80 miles. The main stream comprises approximately 11.5 linear miles from the Owyhee front. Approximately 90 percent or more of McBride Creek watershed is rangeland, 6 percent is forested, and less than 2 percent is irrigated agriculture. McBride Creek is classified as impaired for cold water aquatic life. Causes for impairment are listed as sedimentation/siltation and temperature. See **Appendix B** for further information about McBride Creek.

Figure 5 – McBride Creek, U.S. 95 at Milepost 2.000





Snake River – Marsing (Rm425) to State Line

The Snake River located within the ES area is referred to as the Snake River – Marsing [River Mile (RM) 425] to State Line in Owyhee County. This section is approximately 17.1 miles located within the Middle-Snake Succor watershed, ranging from Marsing to the Oregon border, crossing U.S. 95 east of the City of Homedale. The Snake River at this location is listed as impaired for cold water aquatic life. Impairments of the Snake River include nutrient/eutrophication biological indicators, flow alterations, and temperature. See **Appendix B** for further information about the Snake River.

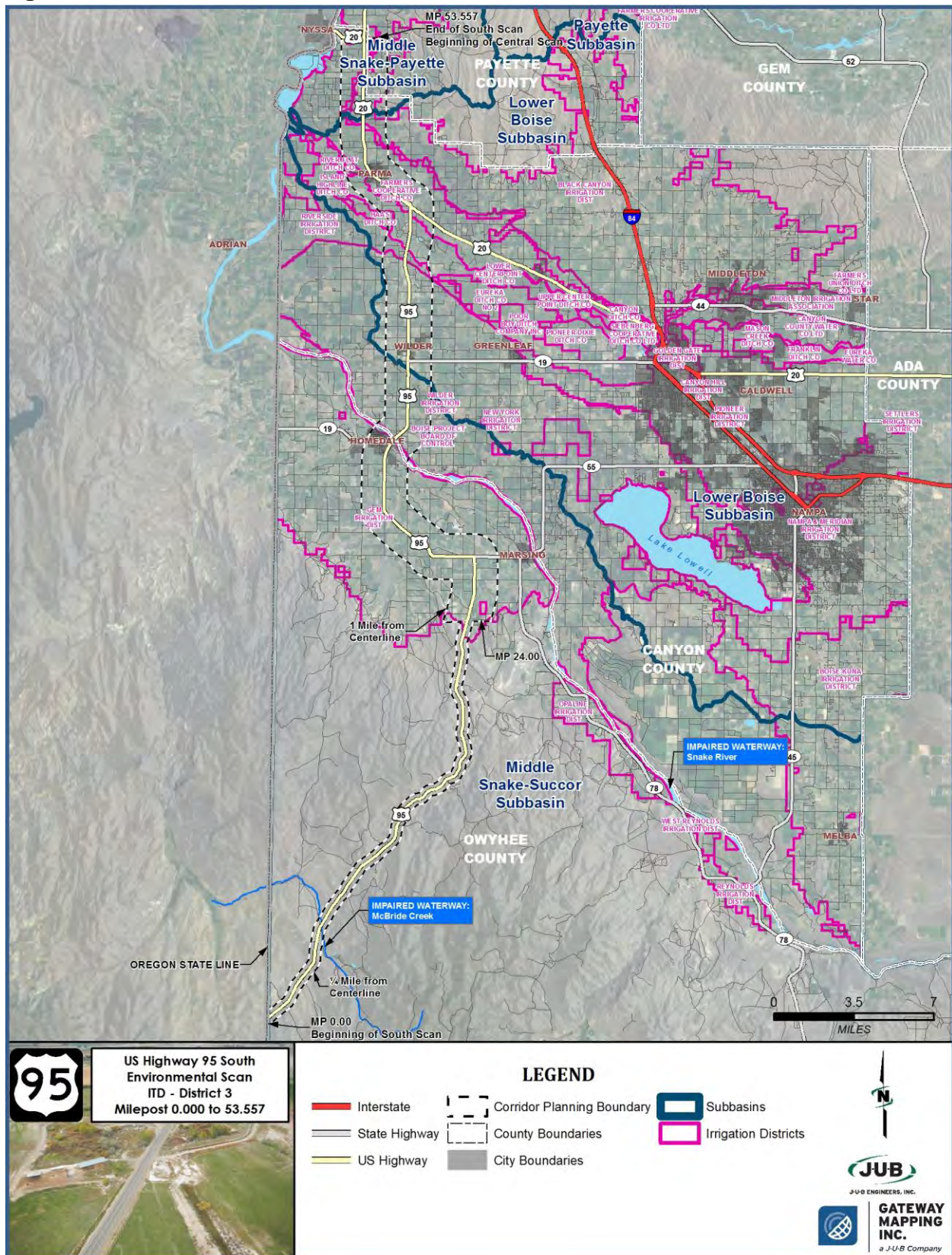
In the United States, a river mile is a measure of distance along a river from its mouth (usually beginning at zero) and increasing further upstream. A river mile is not the length of the river, it is a way of locating a feature along the river relative to its distance from the mouth.

Figure 6 – Snake River, U.S. 95 at Idaho 19





Figure 7 – Surface Waters





Floodplains

Executive Order (EO) 11988: Floodplain Management requires federal agencies to avoid to the extent possible, long and short-term adverse impacts associated with modification and/or development of floodplains whenever a practicable alternative exists. EO 11988 and 23 CFR 650 Part A requires an evaluation of project alternatives to determine the extent of any encroachment into the base floodplain. The base floodplain, also referred to as the “100-year-flood,” is the regulatory standard used by federal agencies for administering new development. This is a flood having a one percent chance of being equaled or exceeded in a given year. A “floodplain” is defined as a nearly flat plain along the course of a stream or river that is naturally subject to flooding.

As described in FHWA’s floodplain regulation (23 CFR 650 Part A), floodplains provide natural and beneficial values serving as areas for fish, wildlife, plants, open space, natural flood moderation, water quality maintenance and groundwater recharge. There is a 100-year and a 500-year floodplain within the ES area (Idaho Department of Water Resources, 2014, <http://maps.idwr.idaho.gov/FloodHazard/Map>).

The Federal Emergency Management Agency (FEMA) has not issued floodplain maps for Owyhee County. FEMA has issued floodplain maps for Canyon and Payette counties within the ES area. FEMA flood map index numbers for the U.S. 95 South ES area in Canyon and Payette counties are as follows: 160107B, 16027C0325F, 16027C0200F, 16027C0181F, 16027C0182F, 16027C0068F, 16027C0069F, 16027C0062F, 16027C0064F, 16027C0066F, 16027C0061F, 16027C0075F, and 1601980375B (FEMA Map Service Center, 2014, <https://msc.fema.gov>).

Canyon County Floodplains

There are 12 FEMA floodplain maps for Canyon County that show 100-year floodplains in the ES area:

- Snake River north of Homedale (160107B), Snake River east of Homedale (16027C0325F)
- North of Wilder (16027C0200F)
- North and south of the Boise River (16027C0181F, 16027C0182F, 16027C0068F, 16027C0069F)
- Through the City of Parma along the U.S. 95 South ES area (16027C0066F, 16027C0062F, 16027C0064F, 16027C0061F)
- Snake River following Oregon/Idaho State line (16027C0075F)

Payette County Floodplains

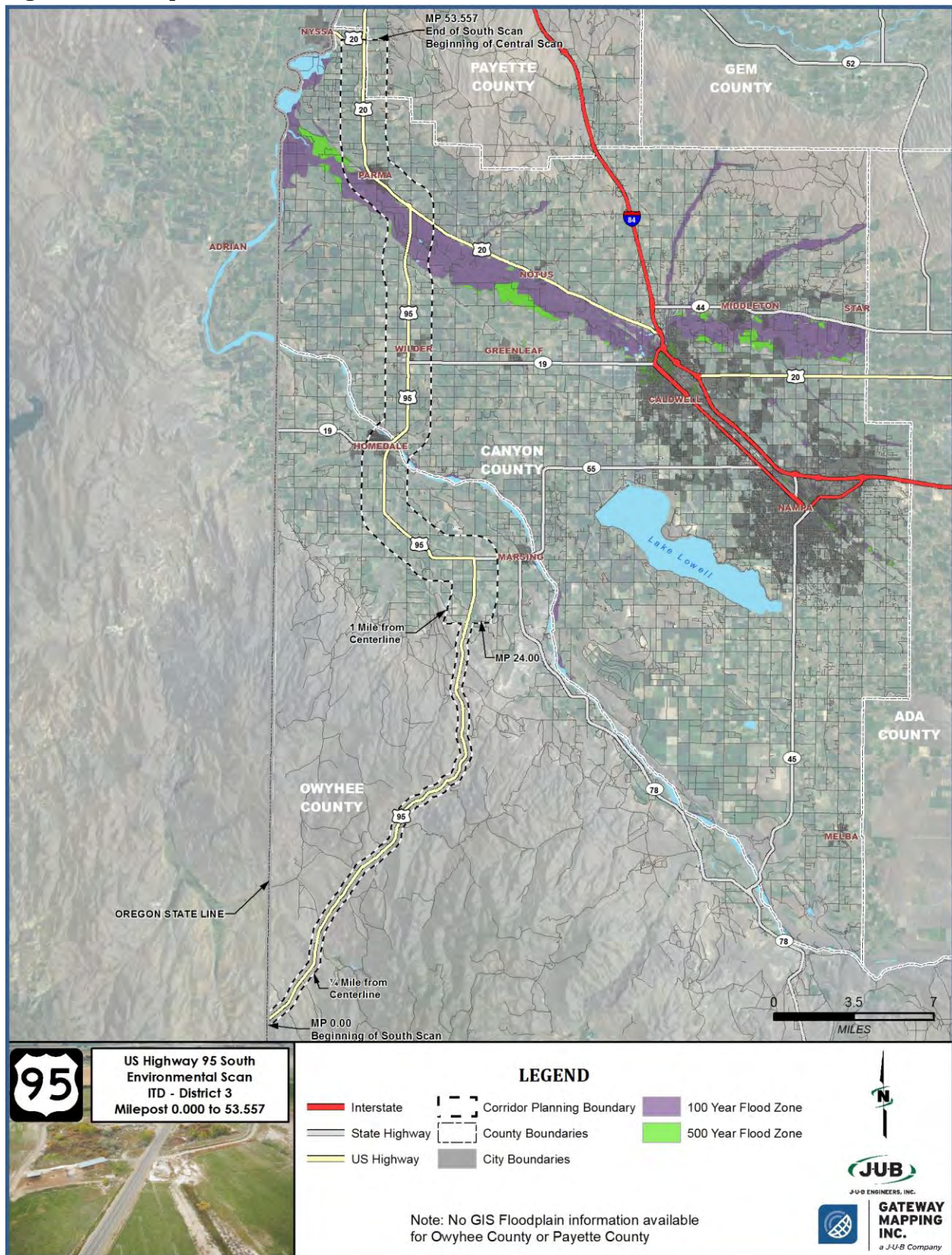
There is a small section of the ES South planning area that travels through southwest Payette County. The FEMA floodplain map (1601980375B) for Payette County indicates that there are no floodplains within the U.S. 95 South corridor study area in Payette County.

Coordination with Owyhee, Canyon, and Payette counties will be necessary during project development processes to determine if floodplain permits are required. See **Figure 8** and **Appendix A.4** for Floodplain locations in Canyon and Washington counties; there is no GIS data available for Owyhee and Payette counties. See **Appendix C** for additional floodplain information.





Figure 8 – Floodplains





Wetlands

Executive Order 11990 Protection of Wetlands requires all federal agencies to “minimize the destruction, loss or degradation of wetlands, and preserve and enhance the natural and beneficial values of wetlands.” This Executive Order, along with U.S. Department of Transportation Order 5660.1A, directs federal agencies to avoid new construction in wetlands unless there is no practicable alternative and the proposed action includes all feasible measures to minimize harm to wetlands. These directives have a long-term goal of no overall net loss of the Nation’s remaining wetlands.

Wetlands have been defined by the U.S. Army Corps of Engineers (USACE) and the EPA, pursuant to Section 404 of the Clean Water Act (CWA) as: those areas that are inundated or saturated by surface or groundwater (hydrology) at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation (hydrophytes) typically adapted for life in saturated soil conditions (hydric soils) (USACE, <http://www.usace.army.mil/>). Wetlands generally include swamps, marches, bogs, and similar areas that are saturated by surface or groundwater and support vegetation adapted for life in saturated conditions [40 CFR 232.2(r)]. They provide important functions including groundwater recharge, erosion control, shoreline stabilization, and fish and wildlife food and habitat. **Figure 9** illustrates a potential wetland type of irrigation canal.

Figure 9 – Riverside Canal, U.S. 95 at Milepost 43



The following presents the federal definition of Waters of the U.S., including wetlands. Wetlands are a subset of Waters of the U.S. and receive protection under Section 404 of the CWA. The term “Waters of the U.S.” as defined in Code of Federal Regulations (33 CFR 328.3[a]; 40 CFR 230.3[s]) includes:

1. All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide.
2. All interstate waters including interstate wetlands.



3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mud flats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce including any such waters
 - that are or could be used by interstate or foreign travelers for recreational or other purposes;
 - from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - that are used or could be used for industrial purposes by industries in interstate commerce.
4. All impoundments of waters otherwise defined as Waters of the U. S. under the definition.
5. Tributaries of waters identified in numbers one through four.
6. Territorial seas.
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in numbers one through six.

Waters of the U.S. do not include previously converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, the final authority regarding CWA jurisdiction remains with EPA (328.3[a][8] added 58 FR 45035, Aug. 25, 1993).

Potential wetland areas were initially identified using existing National Wetlands Inventory (NWI) maps (<http://www.fws.gov/wetlands/Data/Mapper.html>). This initial mapping was field verified by a helicopter flyover and windshield survey. Potential wetlands identified in the field were based solely on vegetation type and characterization. Formal wetland delineation in accordance with the 1987 USACE Manual and Arid West (2010) Regional Supplement would require a more detailed identification process, which would involve delineating hydric soils and hydrologic parameters. **Figure 10** and **Appendix A.5** show the approximate NWI and identified potential wetland boundaries based solely on vegetation type.

Table 5 summarizes the potential wetland acreages located within 100 feet of the centerline of U.S. 95 on both sides of the U.S. 95 South corridor. See **Appendix D** for further information.

**Table 5 – Identified Potential Wetlands and NWI Wetlands**

Identified Potential Wetlands			
Identified Potential Wetlands Map Code	Identified Potential Wetlands Description	Wetlands Map Book Pages	*Acres
EMW	Emergent Wetland	12, 14, 17, 18, 19, 20, 24, 26, 27, 28, 29, 37, 38, 41, 42, 44, 69, 70, 71, 109	15.09
FOR	Forested Wetland	3, 5, 6, 30, 40, 45, 47	0.71
IC	Irrigation Canal	26, 36, 37, 38, 39, 41, 43, 48, 61, 69, 70	1.18
OPW	Open Water Wetland	4, 9, 10, 11, 12, 20, 21, 51, 55, 56, 57, 58, 59, 62, 63, 64, 65, 67, 68, 72	4.46
PS	Perennial Stream	23, 45, 54	0.41
RSD	Roadside Ditch	56, 57, 58, 59	1.38
SSW	Scrub-Shrub Wetland	22, 23, 25, 28, 53, 54, 94, 95, 96, 108, 109	3.42
Total			26.64

NWI Wetlands			
NWI Map Code	NWI Description	Wetlands Map Book Pages	*Acres
PEM1C, PEM1Cx, PEMA, PEMC	Freshwater Emergent Wetland	14, 18, 19, 23, 24, 53, 95, 97, 99, 108, 109, 118, 119, 120	0.85
PSSC	Freshwater Forested/Shrub Wetland	94, 95, 96	0.81
PUBH, PUBHX	Freshwater Pond	23, 47	0.11
R3UBH, R4SBA, R4SBC	Riverine	23, 45, 94, 95, 96, 97, 98, 99, 103, 104, 105, 106, 108, 109, 114, 115, 116, 119	5.37
Total			7.14
Grand Total			33.78

Source: <http://www.fws.gov/wetlands/Data/Mapper.html>

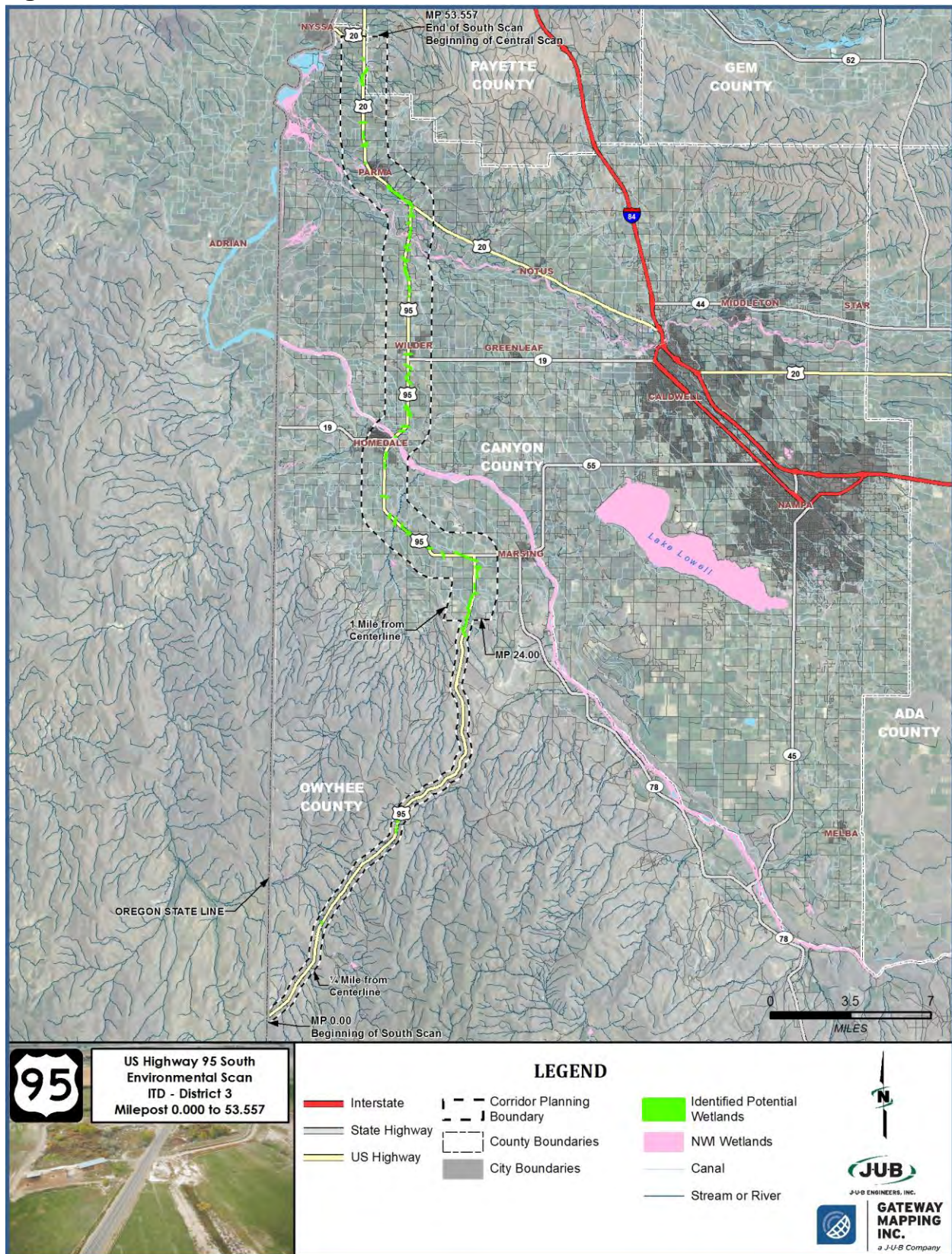
*Acres rounded to the nearest one-hundredth

For future projects, formal wetland delineations would need to be completed according to USACE defined procedures during the project development process. Jurisdictional determinations of wetlands must also occur during the project development process. Wetland impacts should be avoided to the extent practicable. All unavoidable wetland impacts will need to be mitigated as required by USACE. Coordination with USACE will be necessary to determine appropriate mitigation, as needed.





Figure 10 – Potential Wetlands

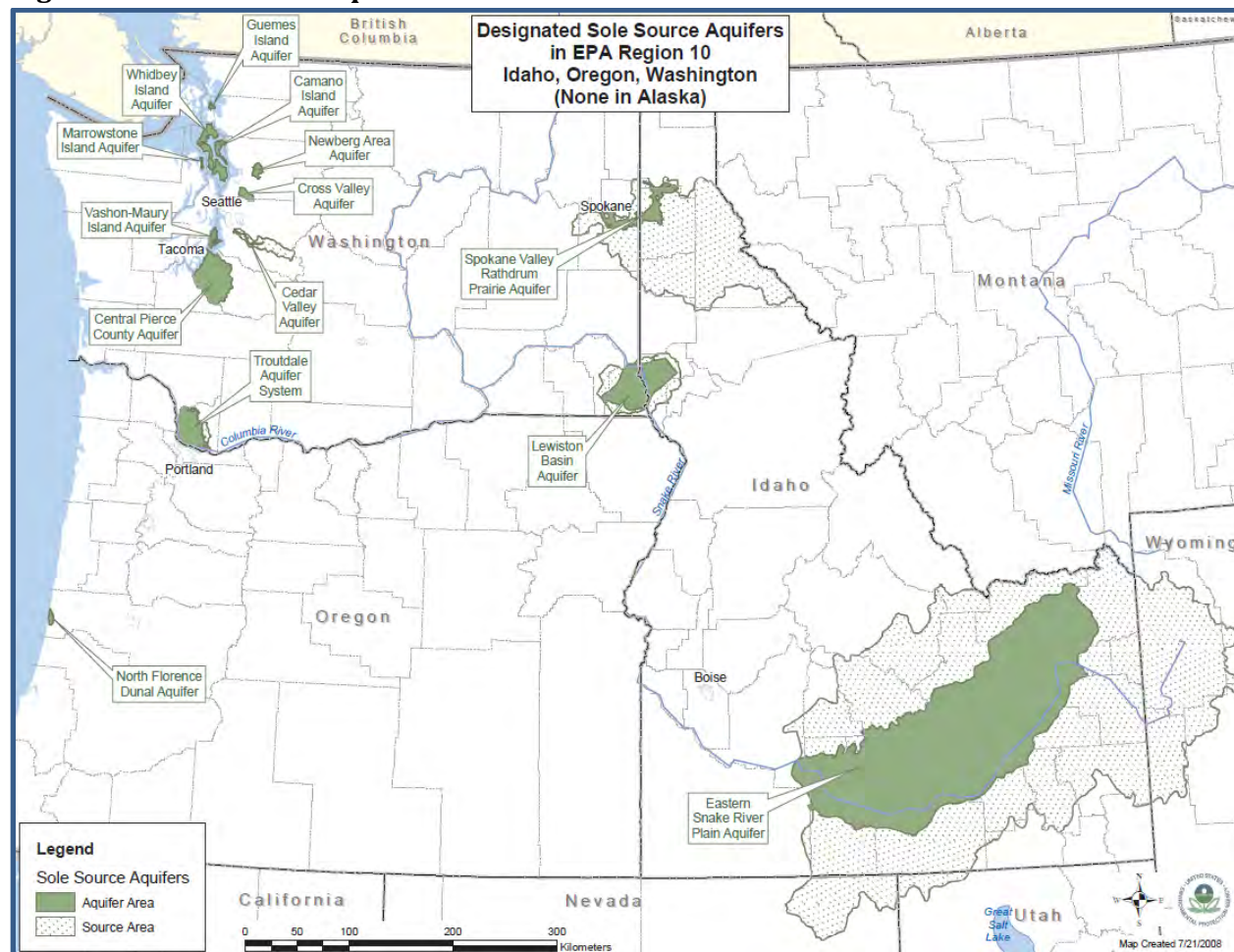




Groundwater/Sole Source Aquifers

A sole source aquifer is an underground water supply designated by the EPA as the “sole or principal” source of drinking water for an area. Projects that are to receive “federal financial assistance” and which have the potential to contaminate the aquifer “so as to create a significant hazard to public health” under the Safe Drinking Water Act of 1974 (42 U.S.C. 201, 300 et seq., and 21 U.S.C. 349) are subject to EPA review and approval. As shown in **Figure 11**, there are no designated sole source aquifers within the ES area.

Figure 11 – Sole Source Aquifers



Source: http://www.deq.idaho.gov/media/462639-sole_source_aquifers_west_map.pdf



Hazardous Materials

The EPA Envirofacts and Idaho DEQ databases were searched for the regulated hazardous facilities reporting to the EPA (Envirofacts, 2014, <http://www.epa.gov/enviro/index.html>). The databases contain information about environmental activities that may affect air, water, and land. The facilities reporting to the EPA may include reporting about waste, water quality, toxics, air quality, radiation and other information associated with different types of facilities. **Table 6** lists sites identified in EPA's database including Underground Storage Tanks (USTs), Leaking Underground Storage Tanks (LUSTs), and Resource Conservation and Recovery Act (RCRA) sites.

RCRA, enacted in 1976, is an amendment to the Solid Waste Disposal Act to address volumes of municipal and industrial solid waste generated nationwide. Unlike the Comprehensive Environmental Response, Compensation, and Liability Act that deals with cleaning up inactive and abandoned hazardous waste sites, RCRA deals with materials that are currently destined for disposal or recycling.

As shown in **Table 6**, there are a total of 30 UST sites, 14 of which are designated as LUSTs within the ES area. There are two LUST sites in use and 10 RCRA sites. Additional unknown contaminated sites may be identified during the project development process and/or during future project construction. Hazardous Materials sites identified within the project study area are shown in **Figure 12** and **Appendix A.6**.

Table 6 – Hazardous Materials Summary

Facility ID	Facility Name	Street Address	City	Type	LUST ID Status Date
3-370003	Hoff Forest Products	Pioneer and Jump	Homedale	UST	
3-370033	Floyd Wood	Box 1107	Homedale	UST	
3-370024	South Board of Control	10 SW 1 st	Homedale	UST	
3-370019	Old Goodman Oil (J)	120 S Main Street	Homedale	UST	
3-370026	JC Watson Co	1056 Industrial Road	Homedale	UST	
3-370025	Homedale Municipal Airport	14 Airport Way	Homedale	UST LUST RCRA	1194 Closed 2/3/2005
3-370021	Conoco Homedale/Jacksons Food Store #004	101 E Idaho Street	Homedale	UST LUST RCRA	855 Closed 12/1/1999
3-370602	Robert J Ensley	401 E Idaho Street	Homedale	UST LUST	902 Closed 2/27/1997
3-370600	Homedale Central Office	17 N Main Street	Homedale	UST LUST	901 Closed 1/10/1996



Facility ID	Facility Name	Street Address	City	Type	LUST ID Status Date
3-370017	Cahill Bulk Plant Inc.	1 S Main Street	Homedale	UST LUST	134 Closed 10/16/2013
3-370018	Circle K No 1410	11 Main Street	Homedale	UST LUST	135 Closed 7/9/2002
3-370022	Owyhee Motor Sales	3 S Main Street	Homedale	UST LUST	136 Closed 9/13/2005 896 Closed 12/1/1992
3-370023	Matteson's	202 S Main Street	Homedale	UST LUST	1839 In Use 8/10/2010
ID000201590	Local Motion Inc.	331 E Idaho Street	Homedale	RCRA	
IDD081833444	Campbell Tractor	17258 Batt Corner Road	Homedale	RCRA	
ID0000550442	US DA FHA Obendorf Farm	23769 Batt Corner Road	Homedale	RCRA	
3-140120	Doug Gross Farm	25688 Highway 19	Wilder	UST	
3-140667	Jacksons Food Store No. 3	128 5 th Street	Wilder	UST	
3-140101	Matteson's Country Store	Highway 95	Wilder	UST	
3-140196	Boise Project Board of Control	108 S 5 th Street	Wilder	UST	
3-140227	Wilder School District	210 A Avenue E	Wilder	UST	
3-140101	Matteson's Country Store	Highway 95	Wilder	UST LUST	1039 In Use 6/14/1996 1972 In Use 7/15/2011 1553 Closed 3/3/2009
3-140050	Sonny's Chevron	204 5 th Street	Wilder	UST LUST	1300 Closed No date available





Facility ID	Facility Name	Street Address	City	Type	LUST ID Status Date
3-140601	Golden Gate Highway District No. 3	220 3 rd Street	Wilder	UST LUST	209 Closed 4/17/1997
3-140601	Golden Gate Highway District No. 3	220 3 rd Street	Wilder	UST LUST	585 Closed 3/1/1999
IDD000467274	Simplot Grower Solutions	535 Peckham Road #105	Wilder	RCRA	
IDD984668814	Union Pacific Railroad, Wilder	Huff and Peckham	Wilder	RCRA	
3-140119	Tamura Onion Company	Main Street	Parma	UST	
3-140191	Dean's Tire Service	Highway 20-26/809 E Grove	Parma	UST	
3-140042	Parma School District No. 13	1105 E McConnell Avenue	Parma	UST	
3-140232	David Shuff	107 Main Street	Parma	UST	
3-140038	Southwest Idaho Research and Extension Center	29603 U of I Lane	Parma	UST	
3-140626	Arco Seed Company	Anderson Corner Road	Parma	UST	
3-140073	Jak'z Café Phillips Conoco	310 E Grove Avenue	Parma	UST LUST	2237 In Use 4/19/2013
3-140641	Jackson's Food Store #143/David Reynolds	7 East Grove Avenue	Parma	UST LUST	213 Closed 10/29/2013
IDD984669234	Rim Ranches Inc.	24034 Batt Corner Road	Parma	RCRA	
IDD984667758	US DOJ DEA Drug Lab Parma	28672 Rocky Road	Parma	RCRA	
IDD984675264	Parma Post and Pole	29640 S Highway 95	Parma	RCRA	

Source: <http://www.deq.idaho.gov/applications/ust-lust/>

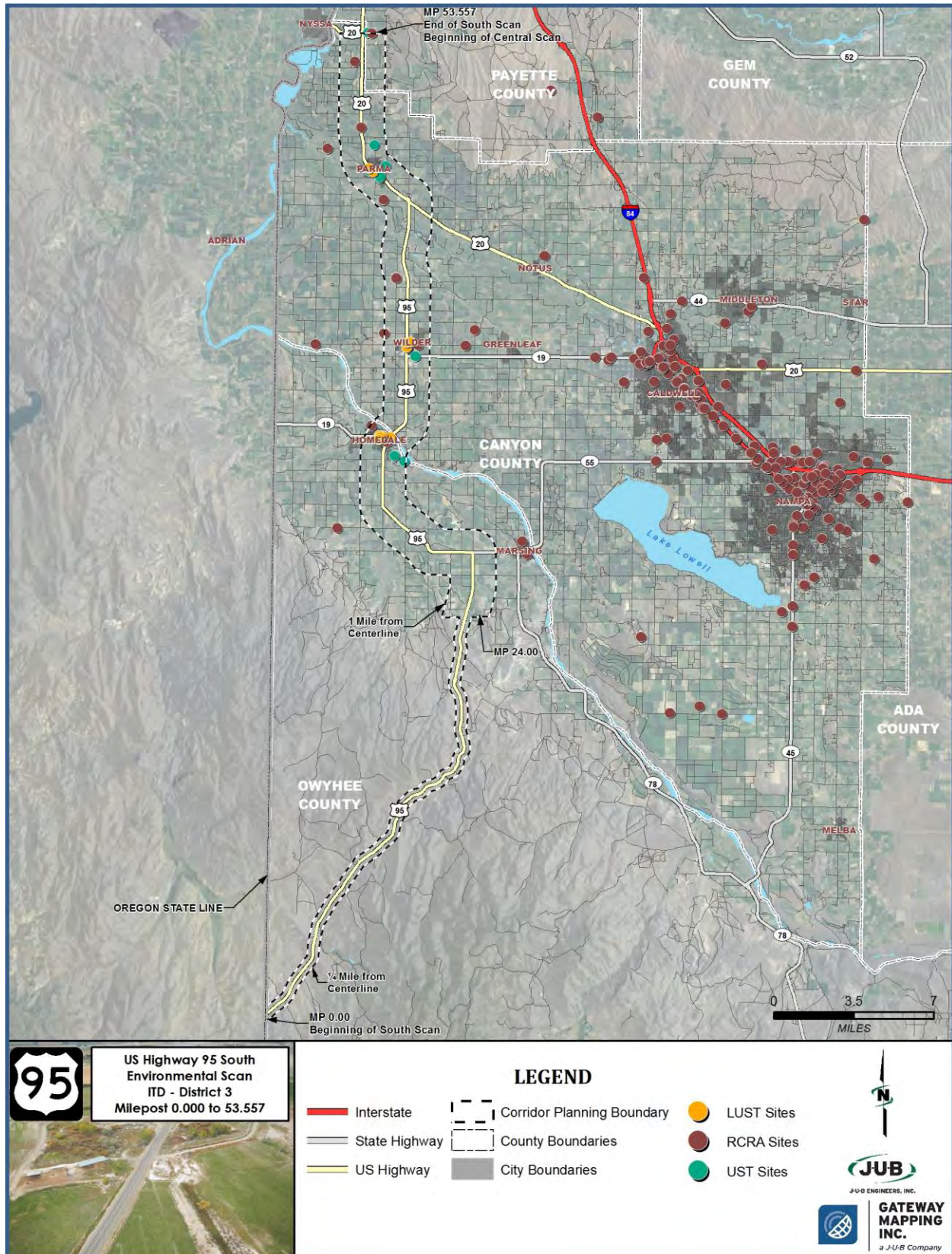
Source: <http://www.epa.gov/enviro/facts/rcrainfo/search.html>

Further evaluation may be needed during project development to determine if there is a potential for encountering specific sites or contaminated areas during construction. This may include subsurface investigation activities to determine the extent of soil and groundwater contamination.

If an investigation determines that contaminated soils or groundwater could be encountered during construction, handling/disposing of the contaminated material will need to be conducted in accordance with federal, state, and local laws and specifications.



Figure 12 – Hazardous Materials





Biological Resources

Biological Resources including threatened and endangered species, state sensitive species and wildlife, and fish resources are discussed in detail below.

Threatened and Endangered Species

The Endangered Species Act (ESA) of 1973 (16 U.S.C. §1531 et seq.) protects federally listed threatened and endangered plant and animal species and the critical habitats in which they are found. Endangered species are those that are in danger of extinction throughout all or a significant portion of their range. Threatened species are those that are likely to become endangered in the near future throughout all or a significant portion of their range. Candidate species are those that are actively being considered for listing as endangered or threatened under the ESA, as well as those species for which the National Marine Fisheries Service has initiated an ESA status review (Federal Register, Volume 64, 1999).

Candidate species receive no protection under the ESA. Proposed species are candidate species found to warrant listing as either threatened or endangered and were officially proposed as such in a Federal Register notice after the completion of a status review and consideration of other protective conservation measures. The Idaho Fish and Wildlife Office in Boise, Idaho, maintains the State of Idaho's ESA list of endangered, threatened, proposed, and candidate species with associated proposed and critical habitats. Below is a summary of the species listed in Owyhee, Canyon, and Payette counties. See **Appendix E** for additional information.

An Official Species List through the U.S. Fish and Wildlife Service Information, Planning and Conservation (IPAC) System was obtained for the ES area. The IPAC system listed four threatened, endangered, or candidate species located within the ES planning boundary: Columbia spotted frog (*Rana luteiventris*), greater sage-grouse (*Centrocercus urophasianus*), slickspot peppergrass (*Lepidium papilliferum*), and Snake River physa snail (*Physa natricina*). No critical habitats within the ES planning boundary were listed in the IPAC System listed (26 March 2014, <http://ecos.fws.gov/ipac/>).

Owyhee County

There are two endangered species, one threatened species, one designated critical habitat, two proposed species, one proposed critical habitat, and two candidate species listed in Owyhee County. The Bruneau hot springsnail (*Pyrgulopsis bruneauensis*) and the Snake River physa (*Haitia (Physa) natricina*) are listed as endangered in Owyhee County. Bull trout (*Salvelinus confluentus*) and its designated critical habitat are listed as threatened in Owyhee County. The Yellow-billed cuckoo (*Coccyzus americanus*) is listed as a proposed species and slickspot peppergrass (*Lepidium papilliferum*) and its critical habitat are listed as proposed in Owyhee County. The Columbia spotted frog (*Rana luteiventris*) and greater sage-grouse (*Centrocercus urophasianus*) are listed in Owyhee County as candidate species.

Canyon County

Canyon County has one endangered species, one proposed species, and one critical habitat. The Snake River physa (*Haitia (Physa) natricina*) is listed as an endangered species in Canyon County. Slickspot peppergrass (*Lepidium papilliferum*) and its critical habitat are listed as proposed in Canyon County.



Payette County

There is one endangered species, one threatened species, one proposed species, one proposed critical habitat, and three candidate species in Payette County. The Snake River physa (*Haitia (Physa) natricina*) is listed as endangered in Payette County. Bull trout (*Salvelinus confluentus*) is listed as threatened in Payette County. Slickspot peppergrass (*Lepidium papilliferum*) and its critical habitat are listed as proposed in Payette County. The greater sage-grouse (*Centrocercus urophasianus*), southern Idaho ground squirrel (*Urocitellus endemicus*), and Packard's milkvetch (*Astragalus cusickii* var. *packardiae*) are listed as candidate species in Payette County.

Below is a summary of the attributes of the listed endangered, threatened, proposed and candidate species in Owyhee, Canyon and Payette counties.

Bruneau Hot Springsnail

The Bruneau hot springsnail is listed as an endangered species. The tiny Bruneau hot springsnail is only about 0.08 inches in size. It is only found in geothermal springs and seeps along a 5-mile length of the Bruneau River in southwest Idaho. It prefers wetted rock faces of springs and flowing water with large cobbles and boulders. The principal threat to the Bruneau hot springsnail is the reduction and/or elimination of its geothermal habitats as a result of groundwater withdrawal, primarily for agriculture. Spring temperatures are the predominant factor that determines the springsnail's distribution and abundance; the springsnail requires constant spring water temperatures to survive. Threats to the species include unstable groundwater levels and a declining number of geothermal springs occupied by the springsnail. Bruneau hot springsnail populations show declining trends, and connectivity between the remaining colonies has been reduced. Conservation actions include efforts to increase and stabilize geothermal water levels. These actions might include voluntary conservation easements (lease/purchase water rights), irrigation system improvements to reduce agricultural water use, continued monitoring of water levels and snail distribution, control of non-native fish known to prey upon springsnail, and/or establishment of regulatory measures that are adequate to permanently protect the springsnail from future groundwater reductions (USFWS Species Profile, <http://ecos.fws.gov/speciesProfile>).

Snake River Physa

The Snake River physa is listed as an endangered species. The Snake River physa is a freshwater mollusk found in the middle Snake River of southern Idaho. It has an ovoid shell that is amber to brown in color, and has 3 to 3.5 whorls (curls or turns in the shell). The physa can reach a maximum length of about 0.26 inches. The Snake River physa is believed to have evolved in the Pliocene to Pleistocene lakes and rivers of northern Utah and southeastern Idaho. While much information exists on the family Physidae, very little is known about the biology or ecology of this species. It is believed to be confined to the Snake River, inhabiting areas of swift current on sand to boulder-sized substrate. In 1995, the USFWS reported the known modern range of the species to be from Grandview, Idaho (RM 487) to the Hagerman Reach of the Snake River (RM 573). More recent investigations have shown this species to occur outside of this historic range to as far downstream as Ontario, Oregon (RM 368), with another population known to occur downstream of Minidoka Dam (RM 675).





In the United States, a river mile (RM) is a measure of distance along a river from its mouth (usually beginning at zero) and increasing further upstream. A river mile is not the length of the river, it is a way of locating a feature along the river relative to its distance from the mouth.

While the species' current range is estimated to be over 300 river miles, the snail has been recorded in only 5 percent of over 1,000 samples collected within this area, and it has never been found in high densities. The species' status is uncertain within the current known range, but portions of the middle Snake River (e.g., Milner Reservoir, RM 663 to Lower Salmon Falls Reservoir, RM 572) are of questionable habitat value given current water quality and water use issues.

In addition, the sampling in this reach has been limited. Very few live specimens have been recovered from reservoirs which have been extensively sampled. The recovery area for the species extends from Snake River mile 553 to Snake River mile 675 (USFWS Species Profile, <http://ecos.fws.gov/speciesProfile>).

Columbia Spotted Frog

The Columbia spotted frog is listed as a candidate species. The Columbia spotted frog ranges from southeast Alaska through Alberta, Canada, and into Washington, Idaho, Wyoming, Montana, and distinct areas of Nevada and Utah. Habitat degradation and loss have led to declines in many of these populations. With a goal of recovering the Columbia spotted frog, several government agencies are working cooperatively under a Conservation Agreement to eliminate or significantly reduce the threats facing the species (USFWS Species Profile, <http://ecos.fws.gov/speciesProfile>).

The Columbia spotted frog breeds as early in the spring as winter thaw allows, with eggs hatching in 3 to 21 days, depending on temperature. The species seems to prefer isolated springs and seeps that have a permanent water source, although individuals are known to move overland in spring and summer after breeding. During cold winter months, spotted frogs burrow in the mud and become inactive.

Adult frogs eat a wide variety of food items, ranging from insects to snails, whereas tadpoles eat algae, plants, and small aquatic organisms. The dorsal (back) coloration of the spotted frog ranges from light brown to gray, with varying degrees of spotting. Ventral (belly) coloration ranges from red to yellow.

Greater Sage-Grouse

The greater sage-grouse is listed as a candidate species. As the name implies, greater sage-grouse depend on sagebrush-dominated landscapes for their forage, cover, nesting habitat, and ultimate survival (Sage-Grouse Habitat in Idaho 2010). The largest of all grouse, the greater sage-grouse is up to 30 inches long, two feet tall, and weighs from two to seven pounds (USFWS 2010). Male greater sage-grouse have a white breast ruff, mottled gray-brown overall, and a black belly, black throat and bib, and long stiff spike like tail feathers. Females are a mottled gray-brown overall, a black belly, a white throat, and lack the yellow eye comb seen in the males.

Diet consists of evergreen leaves, plain sagebrush shoots, blossoms, leaves, pods, buds, and insects (Alsop 2001). The dominant species of sagebrush in Owyhee County is Basin and Wyoming big sagebrush. Wyoming big sagebrush is usually found between 2,500 and 6,500 feet in elevation (Sage-



Grouse Habitat in Idaho 2010). Land clearing and overgrazing by livestock are documented threats to this species' habitat.

Yellow-billed Cuckoo

The yellow-billed cuckoo is listed as a proposed species. As the name suggests, this avian species has a yellow lower mandible. It has rufous wings that contrast against the gray-brown wing coverts and upperparts. The underparts are white and they have large white spots on a long black undertail (Alsop 2001). It is a neotropical migrant, which winters in South America. Breeding often coincides with the appearance of massive numbers of cicadas, caterpillars, or other large insects (Ehrlich et al. 1992).

Its incubation/nestling period is the shortest of any known bird, because it is one of the last neotropical migrants to arrive in North America and chicks have very little rearing time before embarking on their transcontinental migration. Yellow-billed cuckoos arrive in Idaho in late May or early June and breed in late June through July. Cuckoos typically start their southerly migration by late August or early September (Parrish et al. 1999). Yellow-billed cuckoos are considered a riparian obligate and are usually found in large tracts of cottonwood/willow habitats with dense sub-canopies (below 33 feet).

Bull Trout

Bull trout is listed as a threatened species. Bull trout (*Salvelinus confluentus*) are members of the family Salmonidae and are native to Washington, Oregon, Idaho, Nevada, Montana, and western Canada. Compared to other salmonids, bull trout have more specific habitat requirements that appear to influence their distribution and abundance. They need cold water to survive, so they are seldom found in waters where temperatures exceed 59 to 64 degrees (F). They also require stable stream channels, clean spawning and rearing gravel, complex and diverse cover, and unblocked migratory corridors. Bull trout may be distinguished from brook trout (*Salvelinus fontinalis*) by several characteristics: spots never appear on the dorsal (back) fin, and the spots that rest on the fish's olive green to bronze back are pale yellow, orange or salmon-colored. The bull trout's tail is not deeply forked as is the case with lake trout (*Salvelinus namaycush*). Bull trout exhibit two forms: resident and migratory. Resident bull trout spend their entire lives in the same stream/creek. Migratory bull trout move to larger bodies of water over winter and then migrate back to smaller waters to reproduce.

An anadromous form of bull trout also exists in the Coastal-Puget Sound population, which spawns in rivers and streams but rears young in the ocean. Resident and juvenile bull trout prey on invertebrates and small fish. Adult migratory bull trout primarily eat fish. Resident bull trout range up to 10 inches long and migratory forms may range up to 35 inches and up to 32 pounds. Bull trout are currently listed within a common boundary as a threatened species. (USFWS Species Profile, <http://ecos.fws.gov/speciesProfile>).

Bull trout spawn in the fall in streams with cold, unpolluted water, clean gravel and cobble substrate, and gentle stream slopes (USFWS 1998). Bull trout eggs require a long incubation period, hatching in late winter or early spring. Some may live near areas where they were hatched; however, others migrate from streams to lakes or reservoirs a few weeks after emerging from the gravel. Bull trout habitat consists mainly of lakes characterized by low accumulation of dissolved nutrient salts, supporting a





sparse growth of algae and other organisms, and having high oxygen content, and deep pools of pristine cold fluvial habitats in mountainous regions, mainly 45 to 55 degrees Fahrenheit (Sternberg 1996).

Slickspot Peppergrass

Slickspot peppergrass is a proposed species. The slickspot peppergrass is endemic to southwestern Idaho, where it is restricted to unique small-scale openings within sagebrush steppe habitats. Also known as Idaho pepperweed, slickspot peppergrass is an annual or biennial tap-rooted plant, averaging 2 to 8 inches in height. Leaves and stems are covered with fine, soft hairs, and the leaves are divided into linear segments. When in bloom, the clusters of small white flowers nearly cover the entire plant. Flowers are numerous, 0.1 inches in diameter, and have four petals. This flower only grows where puddles or small pools form after rains or snow, and then dry up in hot climate.

Known only from southwestern Idaho on the Snake River Plain and a disjunct population on the Owyhee Plateau approximately 40 miles south (USFWS 2007). The overall threat impact is classified as very high to medium, this specie is threatened by the invasion of cheatgrass and the subsequent increasing fire frequency (USFWS 2007). Livestock trampling has the potential to greatly increase extinction risk (Meyer, 2006, pp 891-902).

Southern Idaho Ground Squirrel

The southern Idaho ground squirrel is a candidate species in Idaho. The southern Idaho ground squirrel (*Urocitellus endemicus*) is one of two subspecies of the Idaho ground squirrel, which is endemic to Idaho and among the most geographically restricted mammals in North America . This species inhabits rolling foothills at elevations between 2,200-3,600 feet, dominated by basins, sagebrush, native bunchgrass, and forbs. Nonnative habitat features may enhance their survival such as alfalfa hay fields, haystacks and fence lines. Its range is bounded on the south by the Payette River, on the west by the Snake River and on the northeast by lava flows with little soil.

Individuals hibernate and estivate for 7 to 8 months per year. Adult ground squirrels emerge from seasonal hibernation in late January or early February and remain above ground for about 4 to 5 months until late June or early July when they return to their burrows for hibernation. This ground squirrel species generally weighs between .3 pounds and .4 pounds and has an average length 8 to 9 inches. Commonly mistaken with the Columbia ground squirrel, the southern Idaho ground squirrel has tan feet and ears, a grey-brown coat, with a short narrow tail.

This species became a candidate species in 2004. Recent population size has been estimated to be 2,000-45,000 individuals in 2001; a dramatic decrease since the late 1980s when population was estimated to comprise 40,000 individuals (Yensen 2001a). Most populations are small groups. Many measures are being undertaken to try and conserve the species. A candidate Conservation Agreement with Assurance has been developed with landowners to conserve the species without the need for listing. Also, arrangements have been made with private land owners to allow squirrel-friendly plants to be planted on their land, allowing the squirrels to thrive there.



Packard's Milkvetch

The Packard's milkvetch is a candidate species in Idaho. Packard's milkvetch (*Astragalus cusickii* var. *packardiae*) is considered one of the rarest plants in Idaho. This plant was designated a candidate species in 2010 with a Listing Priority Number of 3, a subspecies facing high-magnitude, imminent threat, as published in Federal Register Volume 76, Number 207 (USDI-FWS, 2010). The species known range is 12 square miles in the northeastern corner of Payette County.

This species, from the legume family, is an erect, multi-stemmed, perennial forb. Mature plants are 25 to 50 cm tall. Leaves are pinnately compound with 2 to 9 broadly spaced leaflets, upper leaves reduced to a stem with no leaflets. Leaflets are approximately 7 mm long and 1 mm wide (USDA, Tilley et al., 2011). Flowers are creamy white with purple tinge and the fruit is yellow-green seedpods. Found only in approximately 12 square miles in southwestern Idaho, this species is threatened by wildfire, non-native invasive plant species, and off-road vehicles (Mancuso 2009).

State Sensitive Species

Section 06D of the ESA defines State Sensitive Species as those species that could become endangered or extinct within the state. The network of Natural Heritage Programs and Conservation Data Center (CDC) ranks the range-wide and state status of plants, animals and plant communities. The Idaho Fish and Game maintains a database of species that are considered to have the greatest conservation need in Idaho. The database may be accessed at <https://fishandgame.idaho.gov/ifwis/portal/page/species-status-lists>.

The CDC database ranks species based on risk. Within the ES area, Owyhee, Canyon, and Payette counties species range from critically imperiled (S1) status to secure, abundant (S5). In Owyhee County, there are 34 species listed as S1 (critically imperiled), and 62 as S2 (imperiled, at risk) out of 133 species listed. In Canyon County, there are nine species listed as S1 and 34 as S2 out of 76 species listed. In Payette County, there are eight species listed as S1 and 19 as S2 out of 40 species listed. In these three counties, there are no species listed as extinct or extirpated.

See **Appendix F** for information from the CDC database for State Sensitive Species and associated habitats for Owyhee, Canyon, and Payette counties. These lists provide baseline data and are not a substitute for onsite survey. A biological survey and agency consultation would be warranted during the project development process for all projects occurring in the ES area.

Wildlife and Fish Resources

Multiple types of wildlife and fish resource information for Owyhee, Canyon, and Payette counties can be found by accessing the IFWIS Portal at the websites below.

<https://fishandgame.idaho.gov/ifwis/portal/wildlife>

<https://fishandgame.idaho.gov/ifwis/portal/page/stream-survey>

These sites provide information on multiple topics concerning wildlife and fish. This information is not a substitute for onsite survey or research during the project development process.





Human Environment

The human environment involves components that are strongly influenced by or are related directly to humans including demographics, environmental justice, cultural resources, visual impacts, section 4(f) and 6(f) resources, land use, and noise.

Demographic Information

Data from the 2010 U.S. Census and the 5-year 2007-2011 American Community Survey (ACS) presented in **Tables 7** and **8** provides information in which to evaluate social impacts and characteristics of the existing population.

The comparison of counties and cities indicates the City of Wilder has the highest percentage of population below the poverty level and lowest median household income within the ES area. All jurisdictions within the U.S. 95 South ES area have a higher percentage of the population that is below the poverty level and lower median household income than the entire State of Idaho. Canyon County has the largest population and the City of Wilder has the smallest population within the ES area.

The comparison of the corridor planning boundary (clipped ES area) indicates that Owyhee County has the highest percentage of population below the poverty level and the lowest median household income. Canyon County has the largest population and Payette County has the smallest population within the clipped ES area.

Table 7 lists demographic information including population, median household income and population below the poverty level within the ES area.

Table 7 – Demographic Information

Area	*2010 Population	2011 Estimated Median Household Income	2011 Estimated Population Below the Poverty Level
State of Idaho	1,567,582	\$46,890	14.3%
Owyhee County	11,526	\$32,169	24.8%
Owyhee County Corridor Planning Boundary	2,865	\$34,941	20.9%
Canyon County	188,923	\$42,943	18.1%
Canyon County Corridor Planning Boundary	5,184	\$37,590	15.8%
Payette County	22,623	\$44,943	16.5%
Payette County Corridor Planning Boundary	125	\$56,384	5.7%
City of Homedale	2,633	\$27,969	24.1%
City of Wilder	1,533	\$27,708	30.8%
City of Parma	1,983	\$31,551	21.7%

**Data is from the 2010 U.S. Census Bureau. All other data is from the 5-year 2007-2011 ACS.*





See **Figure 13** and **Appendix A.7** – Median Income by Block Group, and **Figure 14** and **Appendix A.8** – Percent Below Poverty Level by Block Group.

The comparison of counties and cities indicates the City of Wilder has the highest percentage of minority population within the ES area, and all jurisdictions within the ES area have higher percentages of minority populations than the State of Idaho.

The comparison of the corridor planning boundary (clipped ES area) indicates that Owyhee County has the highest percentage of minority population and Payette County has the lowest percentage of minority population. Within the clipped ES area, all jurisdictions have a higher percentage of minority population than the State of Idaho.

Table 8 lists population race/origin information within the ES area.

Table 8 – Population Race/Origin

Area	White	African American	American Indian/ Alaska Native	Asian	Hispanic/ Latino	Native Hawaiian/ Pacific Islander	Two or more races
State of Idaho	93.9%	0.8%	1.7%	1.3%	11.5%	0.2%	2.1%
Owyhee County	76.0%	0.2%	4.3%	0.5%	25.8%	0.2%	2.4%
Owyhee County Corridor Planning Boundary	66.9%	0.2%	1.1%	1.0%	37.7%	0.0%	3.4%
Canyon County	83.0%	0.6%	1.1%	0.8%	23.9%	0.2%	3.0%
Canyon County Corridor Planning Boundary	69.8%	0.3%	1.2%	0.8%	38.8%	0.0%	2.2%
Payette County	88.6%	0.2%	1.1%	0.8%	14.9%	0.1%	1.9%
Payette County Corridor Planning Boundary	90.5%	0.0%	0.0%	1.6%	7.2%	0.0%	2.3%
City of Homedale	63.1%	0.2%	1.3%	1.0%	43.0%	0.1%	1.7%
City of Wilder	44.6%	0.2%	1.8%	0.4%	75.9%	0.0%	1.9%
City of Parma	75.4%	0.4%	1.2%	0.7%	31.0%	0.0%	2.4%

Source: 2010 U.S. Census Bureau – <http://factfinder2.census.gov>



Figure 13 – Median Income by Block Group

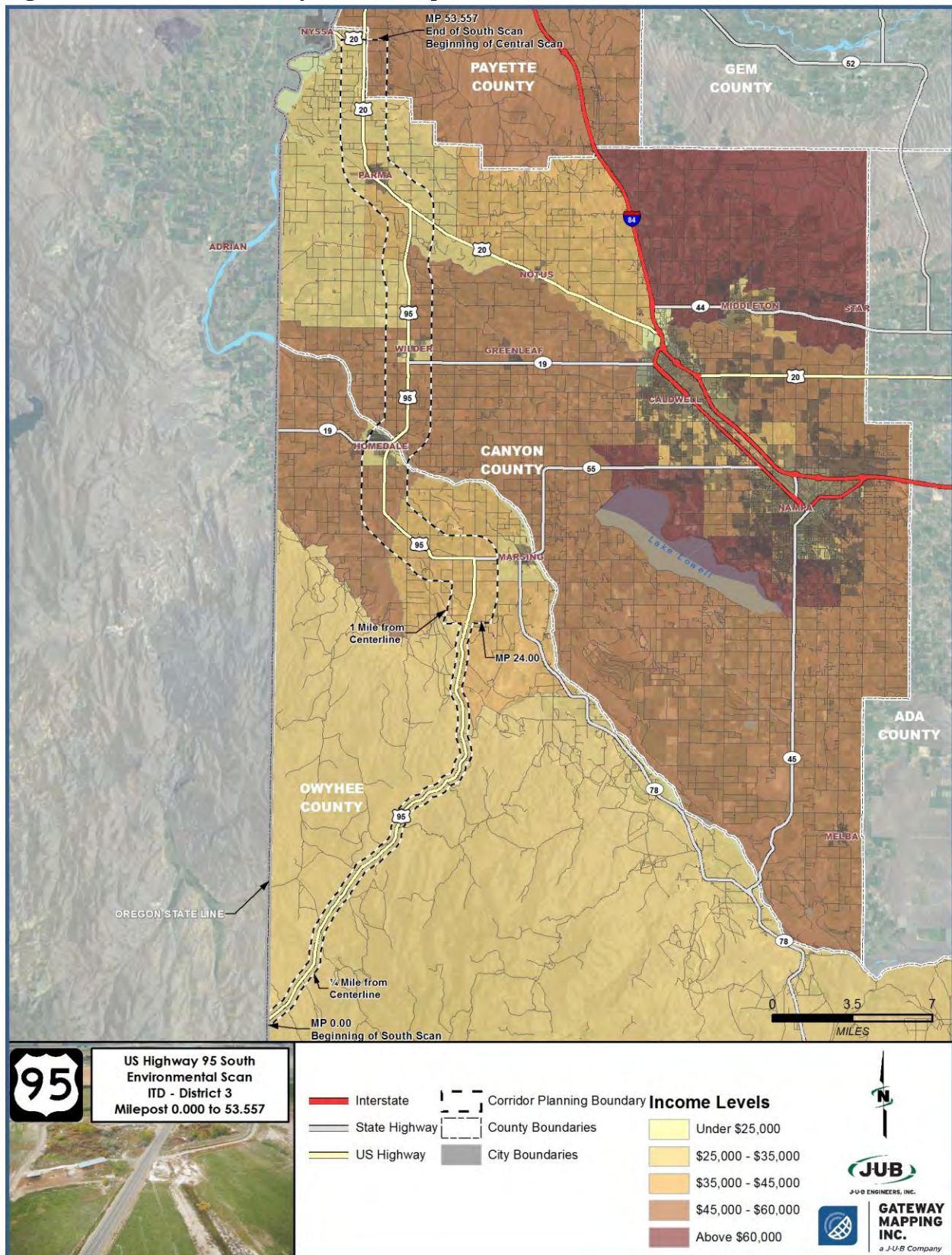
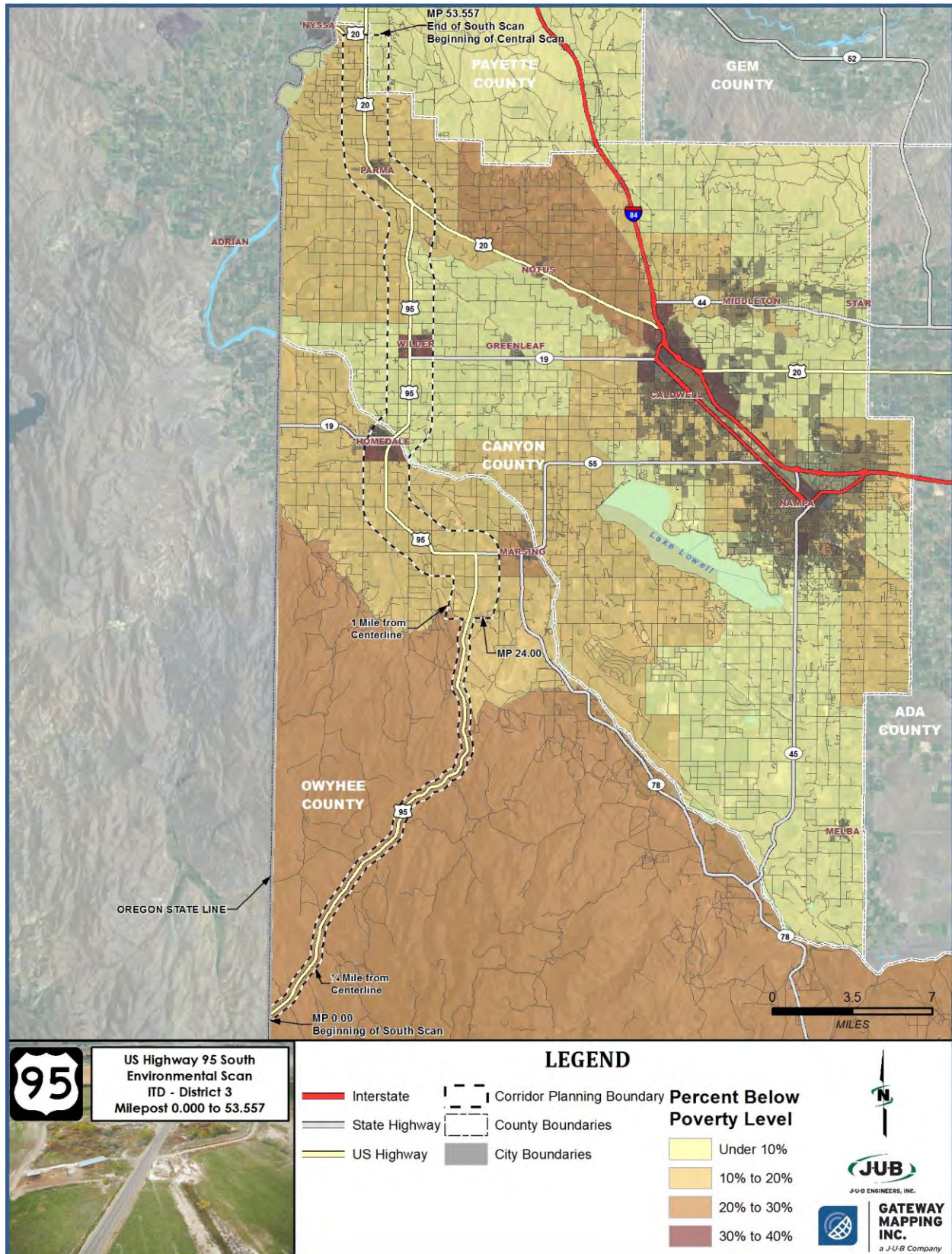




Figure 14 – Percent Below Poverty Level by Block Group





Environmental Justice

Title VI of the U.S. Civil Rights Act of 1964, as amended (Title 42 United States Code, Chapter 21) and EO 12898 require that no minority or low-income person shall be disproportionately adversely impacted by any project receiving federal funds. For transportation projects, this means that no particular minority or low-income person or population may be disproportionately isolated, displaced, or otherwise subjected to adverse effects. An environmental justice evaluation would need to be completed during the project development process if a future project were to proceed in the study area.

Cultural Resources

Section 106 of the National Historic Preservation Act (16 United States Code 470 et. seq.), requires federal agencies to “take into account” the effect a project may have on historic properties. The purpose of the Section 106 process is to identify historic properties that could be affected by the undertaking, assess the effects of the project, and investigate methods to avoid, minimize, or mitigate any adverse effects on historic properties.

Cultural resources are defined as the expressions of human culture and history in the physical environment including culturally significant landscapes, historic, and archaeological sites, Native American and other sacred places, and artifacts and documents of cultural and historical significance.

The National Register of Historic Places (NRHP) database website was accessed to research historic properties in the ES area (NHRP, 2014, <http://www.nationalregisterofhistoricplaces.com/id/state.html>). The Fort Boise and Riverside Ferry site in Parma (Figure 15) is the only site listed within 100 feet of the centerline of U.S. 95 (National Park Service, 2014, <http://www.cr.nps.gov/nr/research/>). Table 9 lists the NRHP sites in the study area and Figure 16 and Appendix A.9 show the locations of the sites.

Figure 15 – Fort Boise Site, U.S. 95 at Milepost 46.85



**Table 9 – NRHP Listings**

ID	National Register Listing Name	Address	City	Milepost ¹
82000389	Peckham Barn	N of Wilder on U.S. 95, Penny Lane	Wilder	39.50
99001278	Obendorf, George, Gothic Arch Truss Barn	24047 Batt Corner Road	Wilder	42.08
74000736	Fort Boise and Riverside Ferry Site ²	NW of Parma on Snake River	Parma	46.85
82000334	Sacred Hearts of Jesus and Mary Church	608 7 th Street	Parma	47.30
79000786	Stewart, A. H., House	3 rd Street and Bates Avenue	Parma	47.45

Source: <http://www.nationalregisterofhistoricplaces.com/id/canyon/state.html>

¹ Milepost locations are approximate

² NRHP site listed is located within 100 feet of the U.S. 95 centerline

A windshield survey was conducted to identify additional properties that are potentially eligible for listing on the NRHP. Properties eligible for the National Register are at least 50 years old (unless they are exceptional) and must meet at least one of the four National Register main criteria

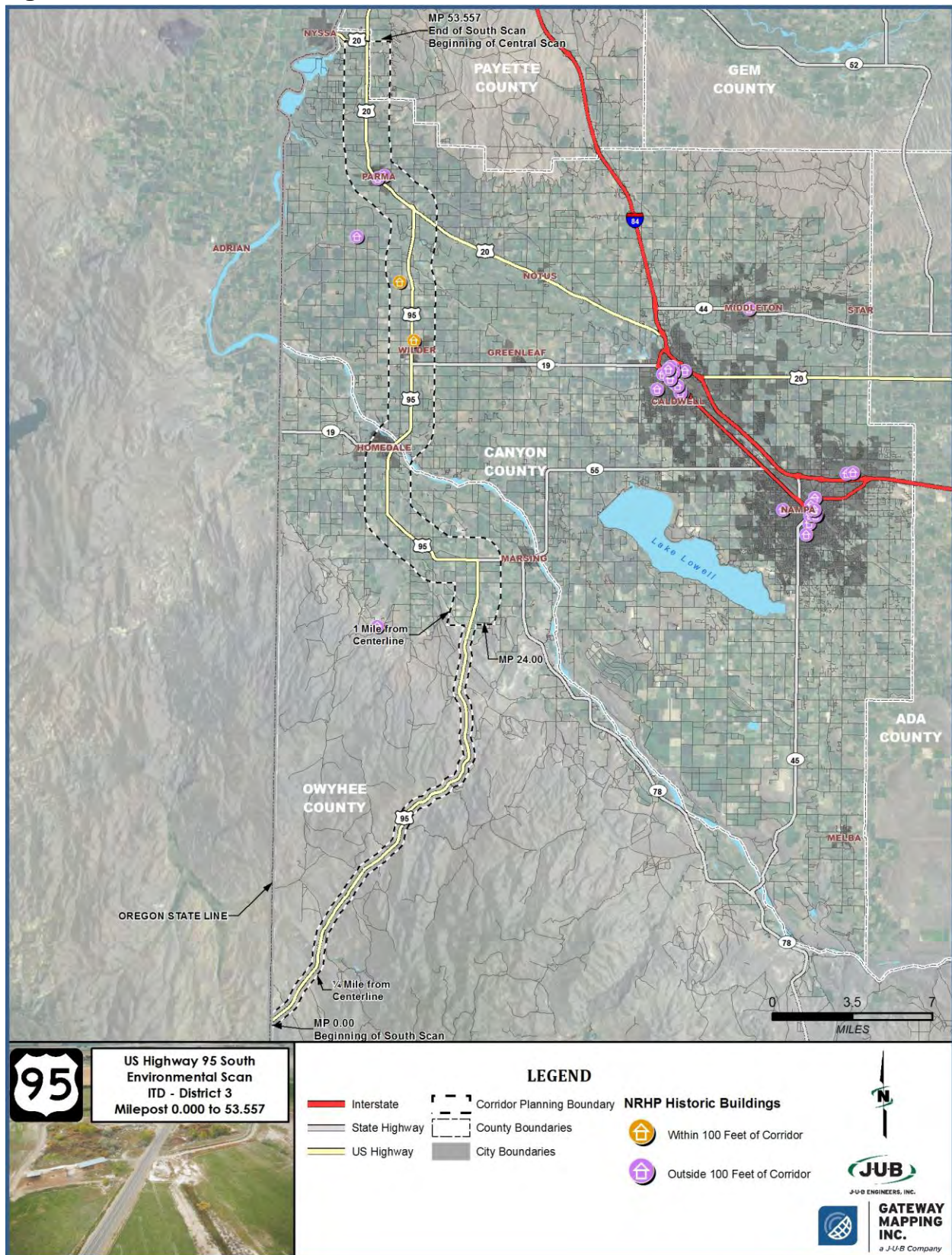
(<http://www.achp.gov/nrcriteria.html>):

- A. The property must contribute to the major pattern of American history – an event
- B. The property is associated with significant people of the American past – a person
- C. The property has distinctive characteristics of the building by its architecture and construction, including having a great artistic value or being the work of a master – design/construction
- D. The property has yielded or may be likely to yield information important to prehistory or history – Information potential

From the windshield survey, a few additional buildings were noted, primarily in Homedale and north of Homedale, which may meet the age criteria for NRHP eligibility. A cultural resource survey, including consultation with the Idaho State Historic Preservation Office (SHPO), and ITD's Environmental Department would be necessary for future projects to identify potential impacts to cultural resources within the project area.



Figure 16 – Cultural Resources





Visual Impacts

The National Environmental Policy Act (NEPA), 42 USC Section 4231, requires that all actions sponsored, funded, permitted, or approved by federal agencies undergo planning to ensure that environmental considerations such as impacts related to aesthetics and visual quality are given due weight in project decision-making. NEPA Section 101(b)(2) states that it is the “continuous responsibility” of the federal government to “use all practicable means” to “assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings” (NEPA, <http://www.epa.gov/compliance/nepa/>).

Under Council on Environmental Quality (CEQ) implementing regulations, environmental analysis is to consider impacts on urban quality, historic and cultural resources, and the design of the built environment” (Section 1502.6). Agencies shall “identify methods and procedures to insure that presently unquantified environmental amenities and values may be given appropriate consideration” (Section 1507.2). Federal implementing regulations are at 23 CFR 771 (FHWA) and 40 CFR 1500-1508 (CEQ).

ITD policy (2110) requires that during project development, visual impacts, including aesthetics, light, and glare, are considered by evaluating the view from the road as well as the view of the road. There are two ways in which visual impacts can be evaluated:

1. Visual Quality Assessment – a description and assessment of the view of the road, using federal criteria.
2. Visual Element Study – a graphic and narrative analysis that identifies the visual impacts of the project on the view from the road and the view of the road. It identifies significant adverse impacts and mitigation through design or other design elements.

Not all ITD projects will have a visual impact sufficient to require extensive review and commentary. Typically a Categorical Exclusion will not require visual impact review. Environmental Assessments and Environmental Impact Statements typically require more detailed visual quality analysis.

There are no known projects anticipated along U.S. 95 that would result in visual impacts. As such, a visual assessment was not included as part of this ES. A windshield survey was conducted and no potential visual impacts were noted.

Section 4(f) Resources

Section 4(f) refers to the original section within the Department of Transportation Act of 1966 (23 CFR 774), which set the requirement for consideration of publicly owned park, recreational area, wildlife and waterfowl refuges, and any publicly or privately owned historic sites in projects that receive federal funding. “Use” may mean either a direct use or constructive use. A direct use occurs when land that is permanently incorporated into a transportation facility or temporarily occupies the land has an adverse effect on a 4(f) resource. Constructive “use” occurs when a project’s proximity impacts are so severe that the protected activities, features, or attributes that qualify a resource for protection under 4(f) are substantially impaired. Use is determined by FHWA, including measure(s) to minimize harm that will have a *de minimis* impact.





Prior to approving the use of Section 4(f) resources, FHWA must determine that there is no prudent or feasible alternative and the selected alternative minimizes harm to the resource. If there is a prudent and feasible alternative that completely avoids 4(f) resources, it must be selected.

Table 10 lists the public parks, recreational areas, and wildlife and waterfowl refuge sites within the ES area that are potentially 4(f) resources. There are mid-river islands within the Snake River that are part of the Deer Flat National Wildlife Refuge. Two islands fall within the ES area: Rabbit Island and Homedale Island. Boat ramps to access these islands are located upstream of the islands. Of the 13 boat ramps on the Snake River, one falls within the ES area in Homedale. Locations of potential 4(f) resources are mapped in **Figure 17** and **Appendix A.10**.

Table 10 – Potential 4(f) Public Parks, Schools, and Wildlife and Waterfowl Refuges

Name	Type of 4(f) Resource	Location	City	Milepost
Rabbit Island	Wildlife and waterfowl refuge	Snake River	Homedale	33.10
Homedale Island	Wildlife and waterfowl refuge	Snake River	Homedale	33.58
Boat Ramp Access – Homedale Island	Wildlife and waterfowl refuge	Snake River	Homedale	34.28
Homedale Tennis Courts	Public tennis courts	T2N R5W S10	Homedale	34.17
Homedale City Park	Public park	T2N R5W S10	Homedale	34.17
Homedale Elementary School	Public school with recreation area	420 W Washington Avenue	Homedale	34.30
Homedale Middle School	Public school with recreation area	3437 Johnston Road	Homedale	34.31
Homedale High School	Public school with recreation area	203 E Idaho Avenue	Homedale	34.33
Wilder Middle/High School	Public school with recreation area	210 A Avenue E	Wilder	39.05
Wilder Elementary School	Public school with recreation area	210 A Avenue E	Wilder	39.05
Canyon-Owyhee School Service Agency	Public school with recreation area	109 Penny Lane	Wilder	39.44
Old Fort Boise Park	Public park	E Stockton Road	Parma	46.62
America's Park	Public park	E Starcher Avenue	Parma	47.37
Parma High School	Public school with recreation area	137 Panther Way	Parma	47.87
Parma Middle School	Public school with recreation area	905 E McConnell Avenue	Parma	47.76
Maxine Johnson Elementary School	Public school with recreation area	607 E McConnell Avenue	Parma	47.76

Source: <http://www.idaho.gov/education/k12.html>

Source: <http://www.fws.gov/deerflat/map.html>



A cultural resource survey, including consultation with ITD's Environmental Department would be necessary for future projects to identify potential impacts to 4(f) resources within the project area.

Section 6(f) Resources

Section 6(f) of the Land and Water Conservation Act (LWCA) requires that the conversion of lands or facilities acquired with LWCA funds (CFR Title 36, Chapter 1) be coordinated with the U.S. Department of the Interior (DOI). The DOI must approve and ensure any replacement lands are of equal value, location and usefulness.

The LWFC database was accessed to identify LWCF properties within the ES area. As shown in **Table 11**, there are four 6(f) sites listed within the ES area.

Conversions of Section 6(f) lands for highway projects require replacement lands. If a future project cannot avoid these properties, then coordination with ITD and consultation with the DOI would be necessary. Locations of 6(f) resources are mapped in **Figure 17** and **Appendix A.10**.

Table 11 – LWCF 6(f) Resources

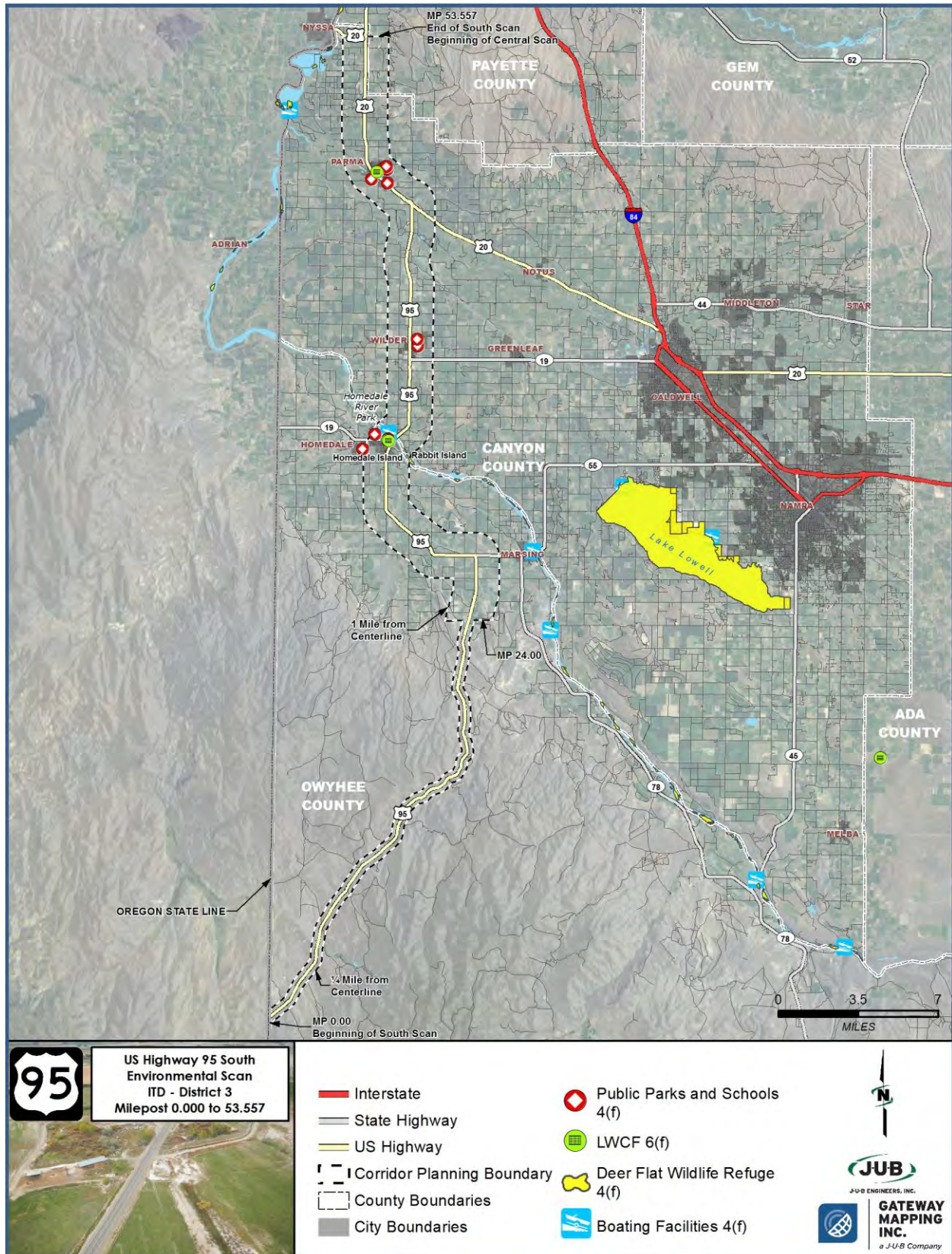
Grant ID	LWCF Grant Name	Sponsor	County	Year Completed	Milepost
16-0083/61	Homedale City Parks	City of Homedale	Owyhee	1972/1975	34.17
16-00402	Homedale Tennis Courts	City of Homedale	Owyhee	1986	34.17
16-00059	Parma City Park Project	City of Parma	Canyon	1975	47.36
16-00545	Parma Cub's Park	City of Parma	Canyon	2009	47.39

Source: <http://www.invw.org/data/lwcf/grants-id.html>





Figure 17 – Section 4(f)/6(f) Properties





Land Use and Zoning

Zoning and comprehensive future land use maps were obtained and reviewed for Owyhee, Canyon and Payette counties, and the cities of Homedale, Wilder, and Parma. Future potential projects must take into consideration if they are consistent with local land use and zoning plans. **Table 12** summarizes the land use and zoning classifications in the ES area. For additional details about land use and zoning, see **Appendix G**.

Table 12 – Land Use and Zoning in the U.S. 95 South ES Area

Local Jurisdiction/Source	Name/Date Adopted	Zoning (current)	Future Land Use (future)
Owyhee County County staff provided zoning information http://owyheecounty.net/docs/adminforms/Proportionate%20ownership%20and%20uses%20doc.pdf http://www.owyheecounty.net/docs/adminforms/Owyhee%20County%20Comp%20Plan%20080910.pdf	Owyhee County Zoning and Herd Districts/2009; Owyhee County Comprehensive Plan/ August 9, 2010	Multi-use, residential, and agricultural	Same as zoning – Comprehensive plan contains text only and does not include a future land use map
Canyon County http://www.canyonco.org/Elected-Officials/Commissioners/Departments/Development-Services/Quick-Links.aspx	Canyon County, Idaho Zoning/June 22, 2012; Canyon County 2020 Comprehensive Plan/ July 17, 2013	Primarily agriculture, small areas showing rural residential, single family residential, service commercial, and light industrial zoning	Residential, industrial near the cities of Homedale, Wilder and Parma
Payette County http://www.payettecounty.org/index.php/county-maps/10-county-category/75-maps	Payette County Comprehensive Plan/May 2006	Primarily agriculture, small area showing light industrial zoning on east side of U.S. 95 corridor	Agriculture 1, agriculture mixed/animal feeding operation east of U.S. 95
City of Homedale City staff provided information	City of Homedale Local Address & Zoning Map/ December 31, 2007; Comprehensive Plan City of Homedale/ October 12, 2000	Industrial, commercial, and residential zoning	Same as zoning – the comprehensive plan contains text only and no future land use map
City of Wilder http://www.cityofwilder.org/ZoningMap.pdf http://www.cityofwilder.org/CompPlan.pdf	City of Wilder Local Zoning Map/August 2012; Wilder Future Land Use Map/July 14, 2009	Commercial, public (Wilder Housing Authority), commercial/industrial, and residential (single family and multi-family) zoning	Agricultural, commercial, mixed use, central business district, public, residential (low, medium and high density), and commercial/ industrial





Local Jurisdiction/Source	Name/Date Adopted	Zoning (current)	Future Land Use (future)
City of Parma City staff provided a copy of their zoning map http://www.compassidaho.org/documents/planning/studies/CityofParma.PDF	City of Parma Local Address Map (with zoning)/January 23, 2008; City of Parma Comprehensive Plan Map/May 10, 2004	Light industrial, community commercial, single-family residential, multi-family residential, combined residential, and neighborhood commercial zoning	Industrial, residential (low and medium) density, commercial (office/multi-family/neighborhood commercial/general commercial/highway commercial), and public

Noise

If a future project is to proceed to the project development phase, the type of project as defined by the ITD Environmental Process Manual Section 1300 Traffic Noise must be determined. This manual identifies the level of noise evaluation that must be performed for a project. For Type I projects, the consideration of noise abatement as part of the highway construction project is mandatory if federal-aid funds are to be used and if a traffic noise impact is expected to occur.

A noise analysis was conducted to evaluate existing noise conditions along the U.S. 95 corridor. The FHWA Traffic Noise Model (TNM) 2.5 software was used to evaluate noise generated from the existing traffic traveling at the existing speed limit along similar segments of U.S. 95. No inputs were made with regards to the topographic, vegetative, or built environment. This noise analysis does not include any identification of sensitive noise receptors along this corridor. The assumptions associated with this noise analysis include:

1. The P.M. peak hour traffic counts were calculated by taking 10 percent of the Annual Average of Daily Traffic (AADT) counts.
2. A total of 13 segments were identified along the U.S. 95 South corridor. These segments were selected based on the existing speed limit and similar traffic counts.
3. The highest AADT for each segment was used in the noise modeling.
4. The AADT counts were broken into PAADT (passenger cars) and CAADT (commercial vehicles). Since the CAADT classification (i.e. "medium truck", "heavy truck", "motorcycle", or "bus") was not known, the worst-case scenario ("heavy truck" traffic) was assumed for 100 percent of the CAADT.

Table 13 lists the noise abatement criteria by category type and activity.

**Table 13 – FHWA Noise Abatement Criteria**

Activity Category	L _{eq} (dBA) FHWA	Evaluation Location	Description of Activity Category
Category A	57	Exterior	Land on which serenity and quiet are of extraordinary significance and serve an important need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose
Category B	67	Exterior	Residential
Category C	67	Exterior	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings
Category D	52	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios
Category E	72	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F
Category F	--	--	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing
Category G	--	--	Undeveloped lands that are not permitted
Substantial Increase	15		A substantial increase of 15 dBA over the existing noise levels

Source: 23 CFR and ITD Noise Policy

Segment Analysis

The U.S. 95 South ES project area was divided into 13 segments based on similar traffic volumes and speeds. The Ten-point Transect analysis was conducted on these 13 segments to predict what distance from centerline of the existing U.S. 95 roadway the FHWA Noise Abatement Criteria (NAC) standards would be approached or exceeded. The 13 segments are identified and results are summarized in **Tables 14 and 15**.

Segments 1-7:

- **Segment 1:** Milepost 48.2 – 53.5 (Parma to Nyssa); 65 mph
- **Segment 2:** Milepost 48 – 48.2; 45 mph
- **Segment 3:** Milepost 47.4 – 48; 35 mph
- **Segment 4:** Milepost 46.8 – 47.4; 25 mph
- **Segment 5:** Milepost 46.6 – 46.8; 35 mph





- **Segment 6:** Milepost 46.5 – 46.6; 45 mph
- **Segment 7:** Milepost 45.3 – 46.5 (just southeast of Parma); 55 mph

The results of the TNM transect analysis for segments 1-7 are depicted in **Table 14**.

Table 14 – dBA Levels for Ten-point Transect Segments 1-7 along U.S. 95 South ES Corridor

Distance from Centerline (ft.)	Segment						
	1	2	3	4	5	6	7
50	70.8	69.2	67.6	66.8	67.2	68.2	69.1
75	67.0	65.6	64.4	63.7	63.9	64.6	65.3
100	64.2	63.2	62.2	61.6	61.8	62.2	62.6
125	62.2	61.4	60.6	60.2	60.2	60.5	60.7
150	60.5	59.9	59.4	58.9	58.9	59.0	59.2
200	58.0	57.6	57.3	56.9	56.8	56.9	56.9
250	56.0	55.7	55.5	55.3	55.1	55.1	55.1
300	54.3	54.2	54.0	53.8	53.7	53.6	53.6
400	51.6	51.6	51.5	51.4	51.3	51.2	51.2
800	44.2	44.3	44.2	44.2	44.1	44.1	44.0

Setback constraints according to the TNM transects analysis are discussed below. Category D receptors pertain to interior noise levels and thus did not apply to this analysis because only exterior noise levels were assessed. Categories F and G receptors have no noise abatement criteria; therefore, these receptors have no setback constraints.

Segment 1:

These results indicate a 250-foot setback would be appropriate for Category A, a 100-foot setback would be appropriate for categories B and C, and a 50-foot setback is appropriate for Category E.

Segment 2:

These results indicate a 250-foot setback would be appropriate for Category A, a 75-foot setback would be appropriate for categories B and C, and a 50-foot setback is appropriate for Category E.

Segment 3:

These results indicate a 250-foot setback would be appropriate for Category A, a 75-foot setback would be appropriate for categories B and C, and a 50-foot setback would be appropriate for Category E.

Segment 4:

These results indicate a 200-foot setback would be appropriate for Category A, and the 50-foot setback would be appropriate for categories B, C, and E.

Segment 5:

These results indicate a 200-foot setback would be appropriate for Category A, a 75-foot setback would be appropriate for categories B and C, and a 50-foot setback would be appropriate for Category E.



**Segment 6:**

These results indicate a 200-foot setback would be appropriate for Category A, a 75-foot setback would be appropriate for categories B and C, and a 50-foot setback would be appropriate for Category E.

Segment 7:

These results indicate a 200-foot setback would be appropriate for Category A, a 75-foot setback would be appropriate for categories B and C, and a 50-foot setback would be appropriate for Category E.

Segments 8-13:

- **Segment 8:** Milepost 39.5 – 45.3 (between Parma and Wilder); 65 mph
- **Segment 9:** Milepost 39.3 – 39.5; 45 mph
- **Segment 10:** Milepost 38.5 – 39.3; 35 mph
- **Segment 11:** Milepost 34.8 – 38.5; 65 mph
- **Segment 12:** Milepost 33.3 – 34.8; 65 mph
- **Segment 13:** Milepost 0 – 33.3 (from the ID-OR state line to just south of Homedale); 65 mph

The results of the TNM transect analysis for Segments 8-13 are depicted in **Table 15**.

Table 15 – dBA Levels for Ten-point Transect Segments 8-13 along U.S. 95 South ES Corridor

Distance from Centerline (ft.)	Segment					
	8	9	10	11	12	13
50	69.0	67.9	68.1	70.7	70.6	69.2
75	65.2	64.4	64.8	66.5	66.5	65.2
100	62.5	62.1	62.5	63.6	63.6	62.3
125	60.6	60.5	60.7	61.3	61.4	60.3
150	59.2	59.0	59.2	59.6	59.5	58.6
200	56.8	56.8	56.9	57.0	56.8	55.9
250	55.0	55.0	54.9	54.9	54.6	53.9
300	53.5	53.4	53.3	53.2	52.9	52.2
400	51.1	50.9	50.7	50.5	50.1	49.5
800	43.8	43.7	43.4	43.2	42.9	42.5

Setback constraints according to the TNM transects analysis are discussed below. Category D receptors pertain to interior noise levels and thus do not apply to this analysis in which only exterior noise levels were assessed. Categories F and G receptors have no noise abatement criteria; therefore, these receptors have no setback constraints.

Segment 8:

These results indicate a 200-foot setback would be appropriate for Category A, a 75-foot setback would be appropriate for categories B and C, and a 50-foot setback would be appropriate for Category E.





Segment 9:

These results indicate a 200-foot setback would be appropriate for Category A, a 75-foot setback would be appropriate for categories B and C, and a 50-foot setback would be appropriate for Category E.

Segment 10:

These results indicate a 200-foot setback would be appropriate for Category A, a 75-foot setback would be appropriate for categories B and C, and a 50-foot setback would be appropriate for Category E.

Segment 11:

These results indicate a 250-foot setback would be appropriate for Category A, a 75-foot setback would be appropriate for categories B and C, and a 50-foot setback would be appropriate for Category E.

Segment 12:

These results indicate a 200-foot setback would be appropriate for Category A, a 75-foot setback would be appropriate for categories B and C, and a 50-foot setback would be appropriate for Category E.

Segment 13:

These results indicate a 200-foot setback would be appropriate for Category A, a 75-foot setback would be appropriate for categories B and C, and a 50-foot setback would be appropriate for Category E.

Federal Aeronautics Administration (FAA) Airspace Intrusion

Federal Aviation Administration (FAA) maps and databases and local zoning and comprehensive plans were reviewed to identify aviation facilities and FAA airspace within the vicinity of the U.S. 95 South ES corridor (AirNav, <https://www.airnav.com/airports/us/ID>). Within the ES area, there are two local airports: Homedale Municipal Airport and Parma Airport.

Homedale Municipal Airport

As shown in **Figure 18**, Homedale Municipal Airport (S66) is located within and on the edge of Homedale City limits, along the south side of the Snake River at the junction of Idaho 19 and U.S. 95.

Figure 18 – Homedale Municipal Airport, FAA Sectional Chart Map



Parma Airport

Figure 19 – Parma Airport, FAA Sectional Chart

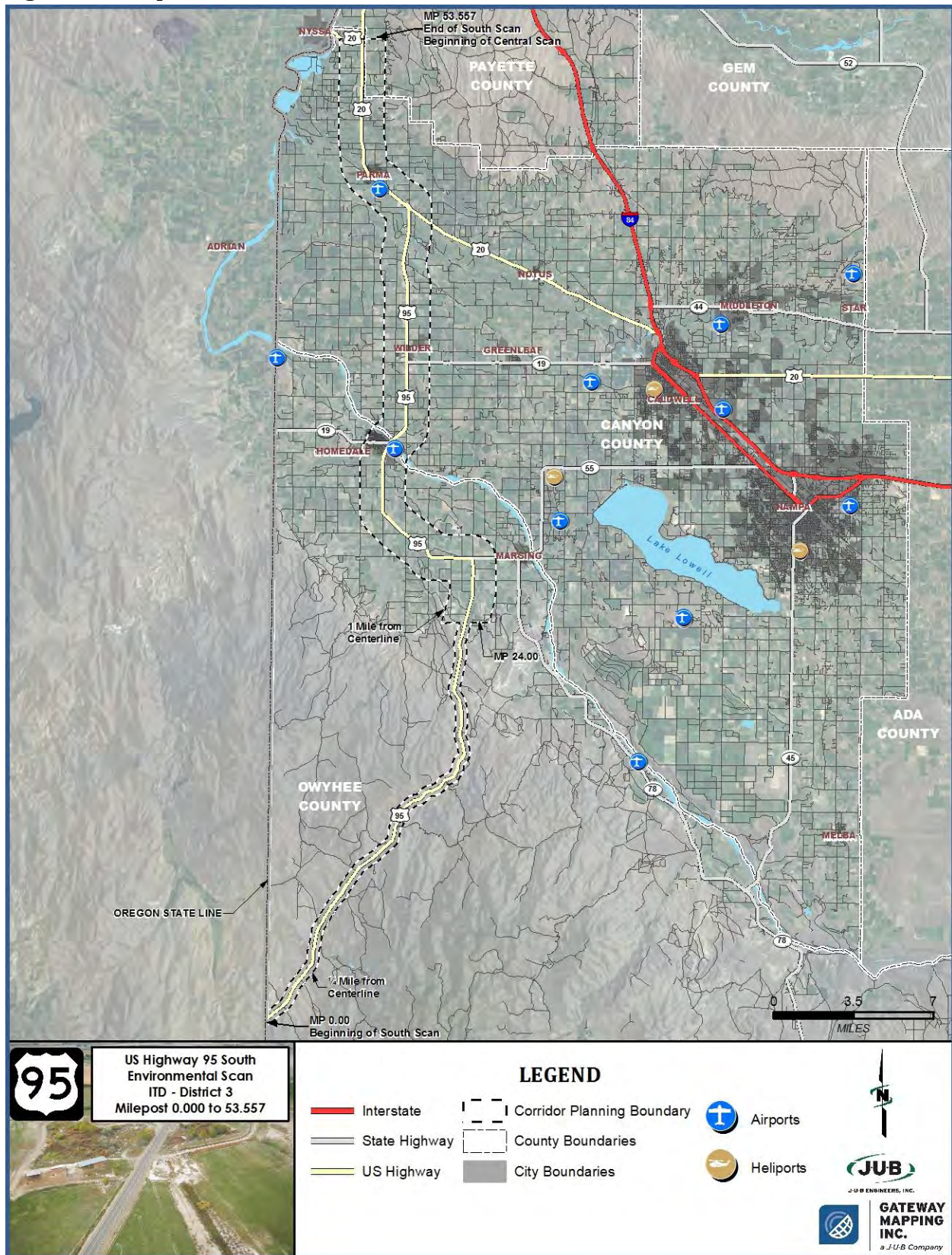


Coordination with the cities of Homedale and Parma, and the FAA must occur during the project development phase to determine if future potential projects are compatible with local comprehensive and airport master plans.

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Figure 20 – Airports





Environmental Scan Findings – Potential Affected Resources

The proposed location, scope, and intensity of future projects within the U.S. 95 South corridor area will determine which environmental resources have the potential to be affected. The need for further evaluation and/or mitigation of each resource depends on the location and scope of the project.

Table 16 lists locations and resources that could potentially be affected by future projects. This information is based on data obtained using the methodology described in the “Methodology and Data Sources” section of this ES. **Figure 21** and **Appendix A.12** show geographic locations of the potential affected resources.

Table 16 – U.S. 95 South Environmental Scan Locations of Potentially Affected Resources

Milepost	Roadway(s)	City or County	Prime Farmland	Air Quality	Hydrology/Floodplains	Wetlands	Hazardous Material	Threatened and Endangered Species	Sensitive Species	Demographic Information	Cultural Resources	Section 4(f)/6(f) Properties	Noise ²	FAA Airspace Intrusion
0.000	Oregon/Idaho State Line	Owyhee	X ₁			X		X	X	X			*	
18.396	Sommercamp Road	Owyhee	X			X		X	X	X			*	
24.775	Robinson Road	Owyhee	X			X		X	X	X			*	
26.266	JCT SH-55 and Buntrock Road	Owyhee	X			X		X	X	X			*	
28.433	Hogg Road	Owyhee	X			X		X	X	X			*	
31.699	Taxidermy Lane	Canyon	X			X	X	X	X	X			*	
33.587	S Main Street	City of Homedale	X	X		X	X	X	X	X			*	
35.050	Reed Road	Canyon	X	X		X	X	X	X	X		X	*	X
38.952	Golden Gate Avenue (Peckham Road)	City of Wilder	X	X		X	X	X	X	X			*	
42.697	Bluff Lane and Matthew Road	Canyon	X	X	X	X	X	X	X	X	X	X	*	
45.509	JCT US-95 and US-20/26	Canyon	X	X	X	X		X	X	X			*	
47.654	E Grove Avenue and E McConnell Avenue	City of Parma	X	X	X	X	X	X	X	X	X	X	*	X
49.654	Beginning North Bound Passing Lane	Canyon	X	X		X	X	X	X	X			*	





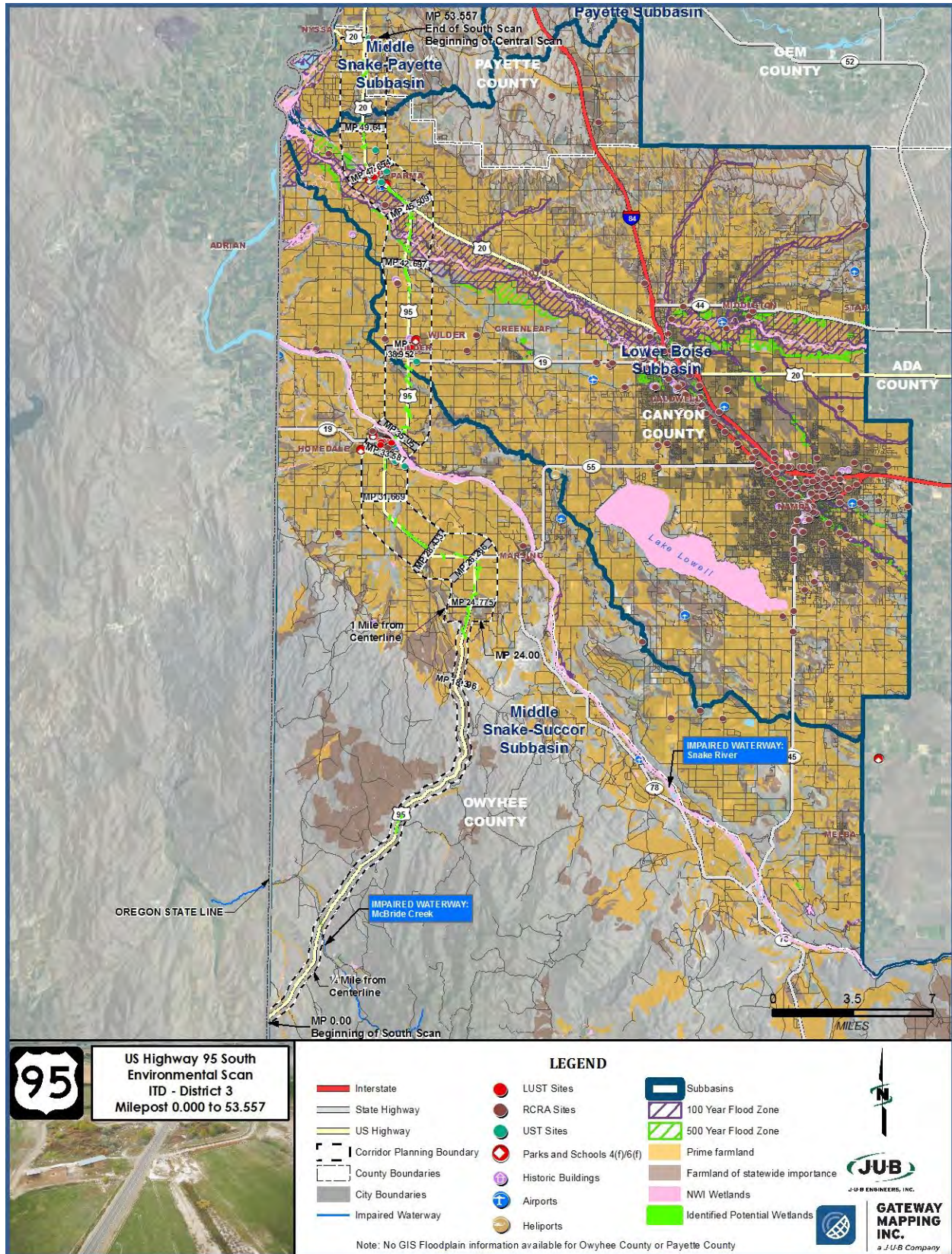
Milepost	Roadway(s)	City or County	Prime Farmland	Air Quality	Hydrology/Floodplains	Wetlands	Hazardous Material	Threatened and Endangered Species	Sensitive Species	Demographic Information	Cultural Resources	Section 4(f)/6(f) Properties	Noise ²	FAA Airspace Intrusion
53.557	Anderson Corner Road and US-20/26	Canyon/Payette	X	X		X	X	X		X			*	

¹ Resources marked with an "X" are present within approximately one-mile on either side of the U.S. 95 South centerline

² Resources marked with an "*" indicate that potential affects depend on the project scope rather than the built environment



Figure 21 – Potential Affected Resources





Data Sources for Tables and Map Figures

Table 3 – Corridor Land Cover within the U.S. 95 South ES Area

http://www.nass.usda.gov/research/Cropland/metadata/metadata_id12.htm

Table 4 – NRCS Prime Farmland

<http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>

Table 5 – Identified Potential Wetlands NWI Wetlands

Existing NWI maps

Table 6 – Hazardous Materials Summary

<http://www.deq.idaho.gov/applications/ust-lust/>

<http://www.epa.gov/enviro/facts/rcrainfo/search.html>

Table 7 – Demographic Information

<http://www.census.gov>

Table 8 – Population Race/Origin

<http://factfinder2.census.gov>

Table 9 – NRHP Listings

<http://www.nationalregisterofhistoricplaces.com/id/canyon/state.html>

Table 10 – Potential 4(f) Public Parks, Schools, Wildlife and Waterfowl Refuges

<http://www.idaho.gov/education/k12.html>

<http://www.fws.gov/deerflat/map.html>

Table 11 – LWCF 6(f) Resources

<http://www.invw.org/data/lwcf/grants-id.html>

Table 12 – Land Use and Zoning in the U.S. 95 South ES Area

<http://www.owyheecounty.net/index1.php?home>

<http://www.canyoncounty.org/>

<http://payettecounty.org/>

Table 13 – FHWA Noise Abatement Criteria

<http://www.fhwa.dot.gov/environment/noise/>

Table 14 – dBA Levels for Ten-point Transect Segments 1-7 along U.S. 95 South ES Corridor

TNM transect analysis for segments 1-7

Table 15 – dBA Levels for Ten-point Transect Segments 8-13 along U.S. 95 South ES Corridor

TNM transect analysis for Segments 8-13

Figure 4 – Administrative Boundaries for Areas with Sensitive Air Quality

http://www.deq.state.id.us/media/662796-nonattainment_map.pdf





Figure 11 – Sole Source Aquifers

http://www.deq.idaho.gov/media/462639-sole_source_aquifers_west_map.pdf





Appendix A – 11” x 17” Figure Maps

- A.1—Corridor Study Area
- A.2—Prime Farmland
- A.3— Surface Waters
- A.4— Floodplains
- A.5— Potential Wetlands
- A.6— Hazardous Materials
- A.7— Median Income by Block Group
- A.8— Percent Below Poverty Level by Block Group
- A.9— Cultural Resources
- A.10— Section 4(f)/6(f) Properties
- A.11— Airports
- A.12— Potential Affected Resources



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Appendix B – 2010 Waterbody Report

- McBride Creek – 1st and 2nd order, and McBride Creek – 3rd order
- Snake River – Marsing (RM425) to State Line



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Appendix C – FEMA Floodplain Map Panels

- Canyon County FEMA Map Index Numbers
 - 16027C0200F
 - 16027C0181F
 - 16027C0064F
 - 16027C0062F
- 16027C0068F Payette County FEMA Map Index Numbers
 - 1601980375B



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Appendix D – Potential Wetlands

- D.1 – Potential Wetlands Information
- D.2 – Wetlands Map Book



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Appendix E – Idaho Species List

- Idaho Species List, dated December 16, 2013



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Appendix F – CDC Database Information, Idaho’s Sensitive Species of Vertebrates and Invertebrates

- CDC Database Information
- Idaho’s Special Status of Vascular and Nonvascular Plants
- Idaho’s Sensitive Species of Vertebrates and Invertebrates



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Appendix G – Land Use and Zoning Information

- Owyhee County
 - Owyhee County Zoning and Herd Districts/2009
 - Owyhee County Planning & Zoning Base Map/2010
 - Owyhee County Comprehensive Plan/August 9, 2010
- Canyon County
 - Canyon County, Idaho Zoning/June 22, 2012
 - Canyon County, Idaho Future Land Use/July 17, 2013
- Payette County
 - Payette County, Idaho Zoning Map/January 2009
 - Payette County, Idaho Comprehensive Plan Map/January 2011
- City of Homedale
 - City of Homedale Local Address & Zoning Map/December 31, 2007
 - City of Homedale Comprehensive Plan/October 12, 2000
- City of Wilder
 - City of Wilder Local Zoning Map/August 2012
 - Wilder Future Land Use Map/July 14, 2009
- City of Parma
 - City of Parma Local Address Map (with zoning)/January 23, 2008
 - City of Parma Comprehensive Plan Map/May 10, 2004



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U.S. 95 SOUTH ENVIRONMENTAL SCAN OREGON STATE LINE TO NYSAA JUNCTION with U.S. 20/26



JUNE 2014



PINEHURST

NEW MEADOWS

COUNCIL

CAMBRIDGE



MIDVALE

WEISER

PAYETTE

FRUITLAND

PARMA

WILDER

HOMEDALE



For more information about the U.S. 95 Corridor Study, visit itd.idaho.gov and select *Projects, Southwest Idaho* and *U.S. 95 Corridor Study*, or contact:

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