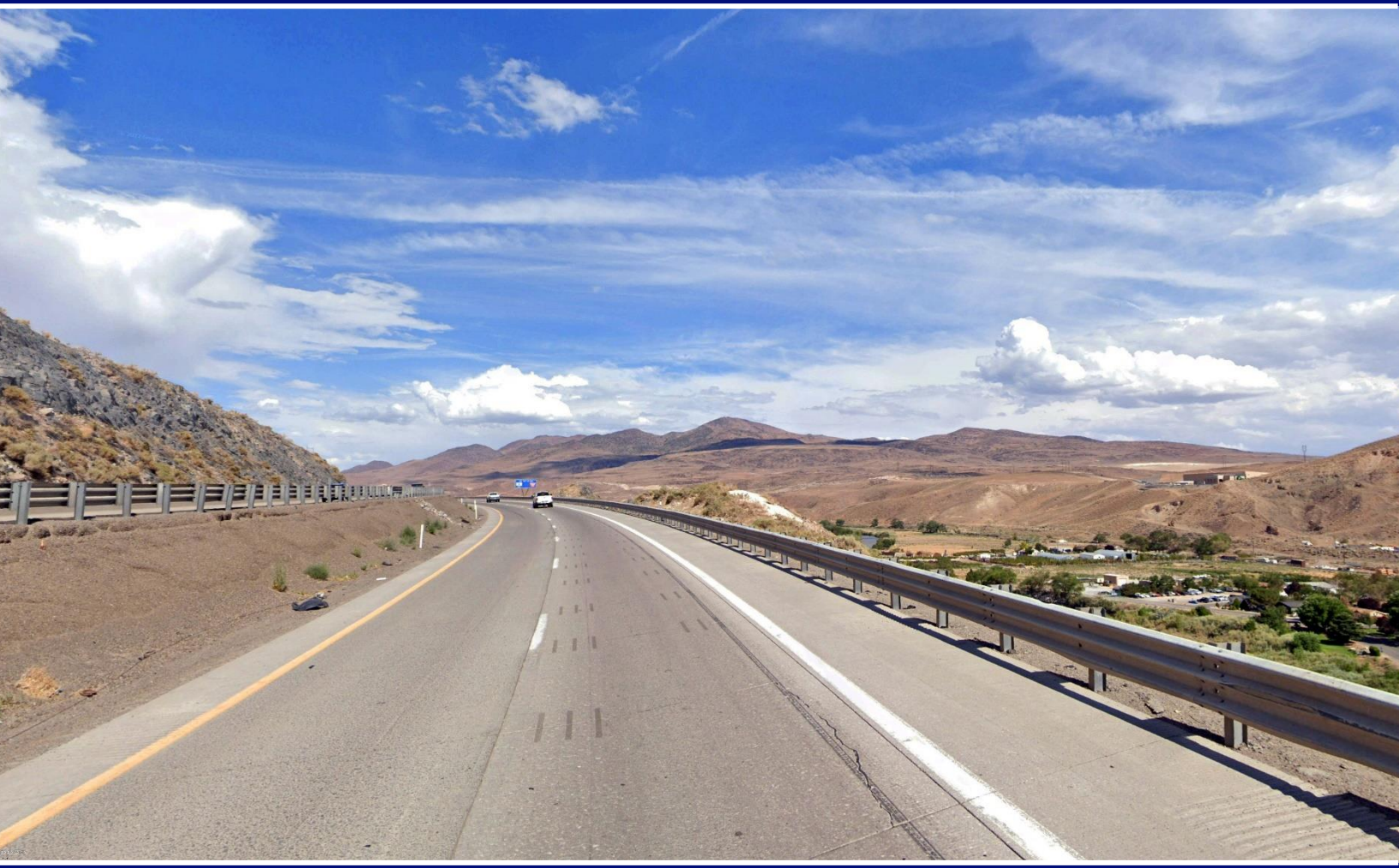

Nevada Department of Transportation

I-80 East Widening NEPA

Indirect and Cumulative Impacts Technical Report

April 2025

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Appendix A Expert Panel Meeting Summaries

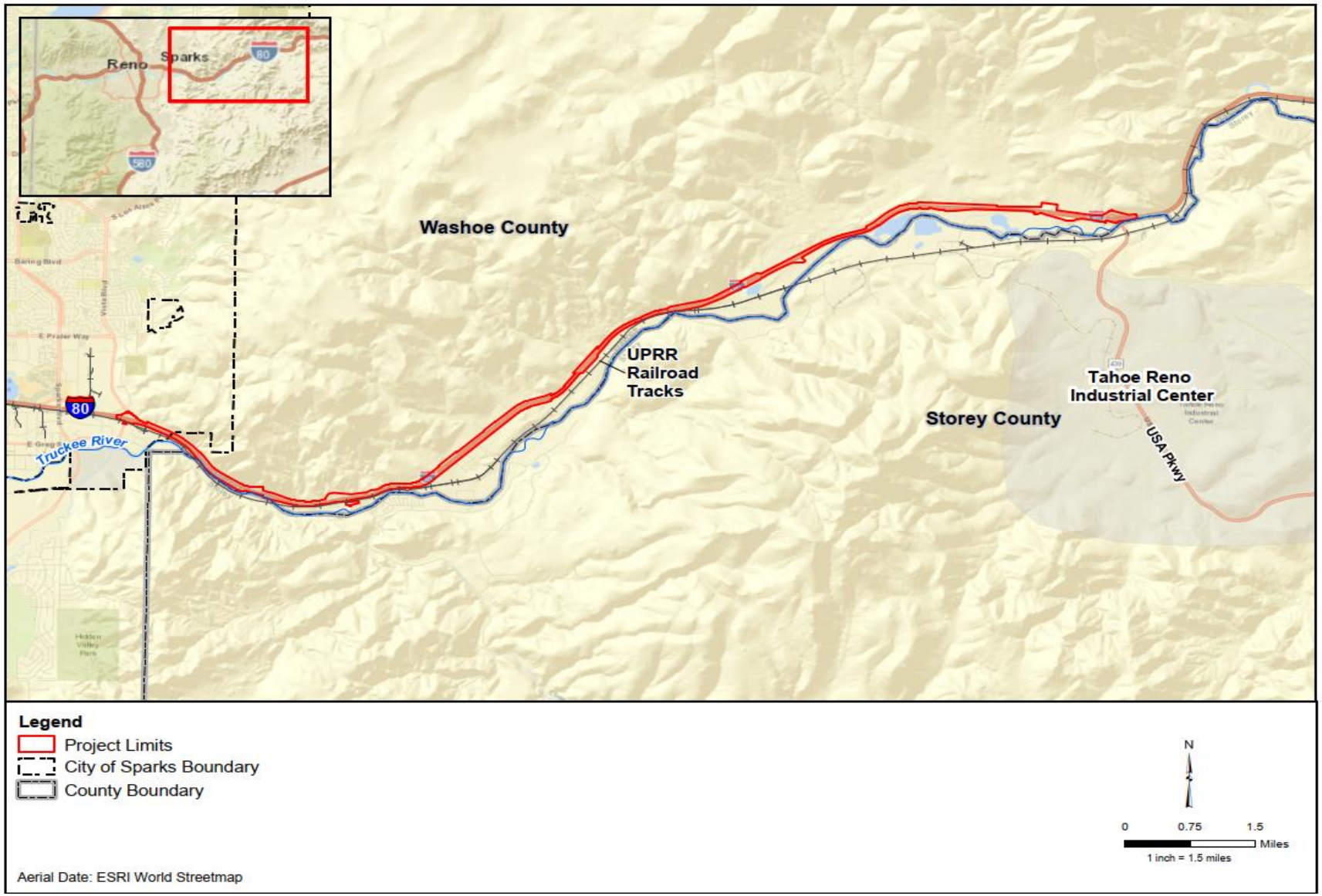
Introduction and Purpose

Project Overview

The Nevada Department of Transportation (NDOT) and the Federal Highway Administration (FHWA) are preparing an Environmental Assessment (EA) to evaluate potential alternatives to improve safety and reduce travel delay on Interstate 80 (I-80) between Vista Boulevard and USA Parkway (State Route 439). The study area is in the City of Sparks and unincorporated Washoe County and Storey County, Nevada (Figure 1). This 13-mile segment of I-80 between Vista Boulevard and USA Parkway is in a canyon adjacent to the Truckee River and Union Pacific Railroad (UPRR) tracks. The growth of the Tahoe-Reno Industrial Center (TRIC), the largest industrial park in the United States, along with the increase in single-occupancy vehicles from commuters traveling to and from the TRIC, has led to increased traffic along this segment of I-80.

The purpose of this report is to describe the potential indirect and cumulative environmental impacts that could result from implementation of the I-80 East Widening Project, as required by the National Environmental Policy Act (NEPA).

Figure 1. Project Location



Purpose and Need for the Project

The purpose of the project is to reduce travel delay, improve safety, and address freeway design deficiencies along I-80 between Vista Boulevard and USA Parkway.

The project is needed to reduce travel delays, accommodate traffic associated with past and planned growth in the region, and provide enhanced safety such as wider shoulders, truck parking, and wrong-way driver detection.

The need to improve this segment of I-80 is demonstrated by the following:

- Projected future travel delays caused by high traffic volumes from the proximity of the TRIC.
- Crash rates are higher than in other urban and rural interstates in Nevada.
- Importance of I-80 in the regional transportation system.

Proposed Action and Alternatives

Build Alternative

The proposed action would construct an additional 12-foot travel lane in each direction, 12-foot outside shoulders, and 10-foot inside shoulders along I-80 between Vista Boulevard and USA Parkway. The proposed action would also reconfigure interchanges to increase the length of acceleration and deceleration lanes, as well as construct additional truck parking.

No Build Alternative

The No Build Alternative would make no changes to I-80 and only routine maintenance would continue. This would eliminate the cost of improving I-80 but would not address the project's purpose and need. Other planned transportation improvement projects in the area could still move forward.

Indirect Impacts Analysis

The Council on Environmental Quality (CEQ) defines indirect effects as project impacts "… caused by the action and are later in time or farther removed in distance but are still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems" (*Code of Federal Regulations* [CFR] Title 40, Section 1508.1(g)).[1]

[1] Effects and impacts are used interchangeably. This technical memorandum uses the term "effects" only when indicated by the guidance that is cited.

The analysis was conducted using the following guidance:

- American Association of State Highway and Transportation Officials (AASHTO), *Practitioner's Handbook 12: Assessing Indirect Effects and Cumulative Impacts Under NEPA* (2016)
- FHWA, "Secondary and Cumulative Impact Assessment in the Highway Development Process" (1992)
- National Cooperative Highway Research Program (NCHRP), Report 466, *Desk Reference for Estimating the Indirect Effects of Proposed Transportation Projects* (2002)

AASHTO's Practitioner's Handbook 12 (2016) describes two broad categories of indirect effects, as follows:

- Effects caused by the proposed project or plan that are separated from direct effects by time and/or distance (sometimes referred to as encroachment-alteration effects)—One example is a long-term decline in the viability of a population of a particular species as a result of habitat fragmentation caused by the project.
- Effects from project-influenced development and related environmental impacts (sometimes referred to as induced-growth effects)—Project-influenced development refers to improved accessibility to an area, which may change land use, promote development, or increase the rate of development. One example of an induced-growth impact identified is commercial development around a new freeway interchange and the environmental effects associated with this development.

Methodology

There is no single, standard method for analyzing indirect impacts. NDOT considered the magnitude of potential induced-growth impacts and the data and tools available. A combination of "collaborative judgment" and "planning judgment" provided the most appropriate methodology for analyzing indirect impacts. These terms are defined as follows:

- The NCHRP *Desk Reference for Estimating the Indirect Effects of Proposed Transportation Projects* (2002) identifies "collaborative judgment" or the "expert panel technique" as one method to assess indirect effects. This technique helps assess indirect effects by providing local insight from experts on regional development. Local perspective that relates to the growth potential within the area of potential effect (hereafter referred to as the study area), both with and without the project, is invaluable. In addition, these experts provide a regional understanding of general strategies that have worked for managing growth and development. An expert panel allows for input outside of the study team, which helps improve the quality of the analysis.

- The “planning judgment” method relies on the experience of the practitioner, the relevant planning literature, and an assessment of local trends and forecasts to assess indirect land use impacts.

NDOT assessed indirect impacts using the following six steps:

- Step 1: Perform scoping to identify the study area and the analysis timeframe.
- Step 2: Identify the goals for the study area as described in local and regional plans.
- Step 3: Inventory notable features in the study area.
- Step 4: Identify impact-causing activities.
- Step 5: Assess potentially substantial indirect impacts.
- Step 6: Assess potential minimization and mitigation measures.

The following sections describe the six steps in more detail.

Step 1: Perform Scoping to Identify the Study Area and Analysis Timeframe

The first step of the analysis had three goals, as follows:

- Gather information on the issues to evaluate in the analysis.
- Determine the location and extent of the indirect impacts study area.
- Determine the time horizon for the analysis.

Gathering Information from Scoping and Expert Panel Interviews

At an agency scoping meeting held on March 20, 2024, NDOT reviewed the following elements:

- Study area
- Traffic needs
- Safety needs
- Alternatives development
- NEPA status
- Transit and rideshare considerations
- Project schedule
- Opportunities for involvement

No agency scoping comments on indirect impacts were received.

NDOT assembled an expert panel of local and regional planners in May 2024 who are knowledgeable of growth and development in the region. The panel represented the following organizations:

- Truckee Meadows Regional Planning Agency (TMRPA)
- Regional Transportation Commission of Washoe County (RTC)
- Washoe County

- Storey County
- City of Sparks

NDOT interviewed the expert panel members separately and used their input to identify available information and data, as well as major indirect impacts issues (refer to Attachment A).

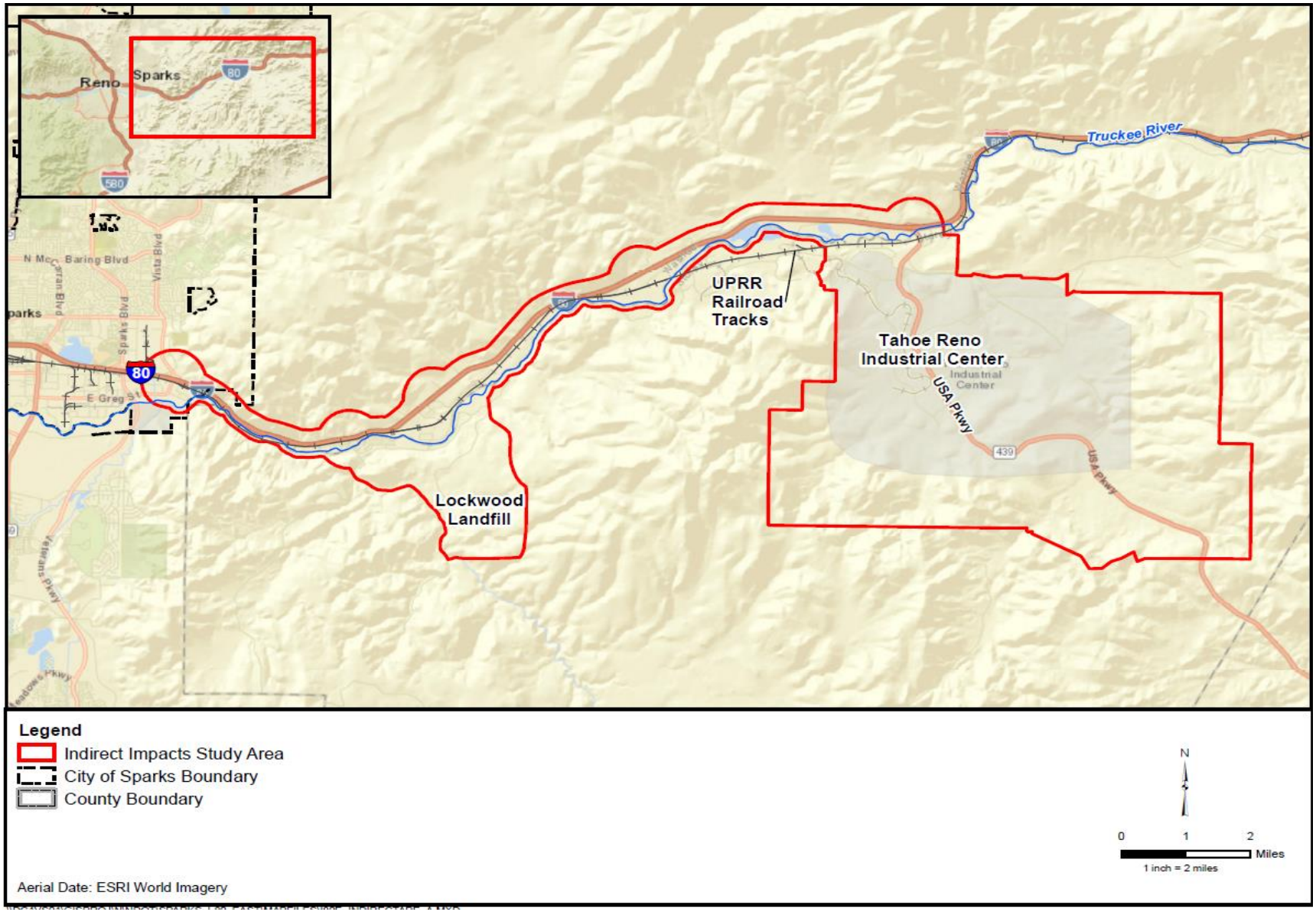
Determining the Indirect Impacts Study Area

The study area is the geographic area that may experience indirect impacts from the proposed project. The boundaries for the analysis need to extend beyond the construction footprint of the improvements, because indirect impacts can occur at some distance from a proposed project. NDOT considered a combination of accepted approaches for delineating the indirect impacts study area, including political boundaries, resource boundaries, stakeholder input, professional judgment, and data collection.

The study area, shown on Figure 2, has the greatest likelihood for indirect impacts that occur later in time or farther away than direct impacts. The study area is 0.25-mile north of I-80, 0.5-mile from the interchanges, follows the Truckee River south of I-80, and encompasses the Lockwood Landfill and the TRIC [2]. Interviewees reviewed the map and agreed with the study area (refer to Attachment A).

[2] The Lockwood Landfill is included in the indirect impacts study area based on input received from Storey County during the expert panel interviews. Storey County indicated that the landfill is a large generator of truck traffic along I-80.

Figure 2. Indirect Impacts Study Area



Establishing the Analysis Timeframe

Determining a timeframe for the analysis is important because land use and economic impacts of transportation projects can occur over time, and those impacts can appear at different times. According to NCHRP, the timeframe for an indirect effect analysis should be short enough in duration to anticipate reasonably foreseeable events but also long enough to capture changes that may occur over several business cycles (NCHRP 2002). The NCHRP *Desk Reference for Estimating the Indirect Effects of Proposed Transportation Projects* states that most indirect effects assessments set a time horizon equal to the typical transportation planning horizon of about 20 to 25 years (NCHRP 2002). Based on the guidance and information collected during the scoping process, the timeframe for the indirect impacts analysis is 2050, which is consistent with the planning horizon used for transportation planning in this NEPA study.

The relevant regional documents and plans used to anticipate conditions in 2050 include the following:

- RTC *2050 Regional Transportation Plan* (RTP)
- *2019 Truckee Meadows Regional Plan*
- Washoe County, *Master Plan: Land Use and Transportation Element*
- Washoe County, *Master Plan: Truckee Canyon Area Plan*
- *Storey County Master Plan*

Step 2: Identify the Goals for the Study Area as Described in Local and Regional Plans

Comprehensive regional and local plans provide insight to the social, economic, ecological, and growth-related aspirations of a community. Understanding community goals and aspirations within the study area, particularly those that guide or restrict future development, provides a basis for assessing project compatibility and potential indirect impacts.

Regional Transportation Commission of Washoe County

The RTC aims to improve the region's quality of life by achieving clean air, making roads accessible to all regardless of age or ability, and providing transportation options. The 2050 RTP, adopted in March 2021, established the following goals (RTC 2021):

- Improve and promote safety.
- Integrate all types of transportation.
- Promote healthy communities and sustainability.
- Promote and foster equity and environmental justice.
- Integrate land use and economic development.
- Manage existing systems efficiently.
- Enhance regional connectivity.
- Improve freight and goods movement.

- Invest strategically.
- Engage the public and encourage community involvement.

The 2050 RTP identifies the I-80 widening between Sparks and USA Parkway as a project that could improve connectivity between Washoe and Storey counties, and link major concentrations of employment and housing across the Truckee Meadows.

2019 Truckee Meadows Regional Plan

The *2019 Truckee Meadows Regional Plan*, amended in December 2023, provides a blueprint for development in Washoe County. The document prescribes where growth will occur and where growth will be limited. The Truckee Meadows Service Area (TMSA) is the defined area within which services and infrastructure are anticipated to be provided. The TMSA is also a tool to limit premature expansion, avoid environmental degradation, optimize infrastructure, and maintain a compact form while providing for a variety of living and working situations. The City of Sparks, at the west end of the indirect impacts study area, is within the TMSA. The *2019 Truckee Meadows Regional Plan* identifies the areas along I-80 east of the City of Sparks as "Development Constraints Areas" because of steep slopes and public ownership (TMRPA 2023).

Washoe County Master Plan, Land Use and Transportation Element

The purpose of the Land Use and Transportation Element, amended in November 2020, is to set goals, policies, and action items that will shape communities throughout Washoe County through the year 2025 (Washoe County 2020). Washoe County supports the following land use and transportation strategies:

- Mixed-use development
- Infill development, where infrastructure is available
- A range of housing choices
- Interconnected, walkable streets
- Conservation of natural resources and public lands, as well as access to open space

The Land Use and Transportation Element identifies I-80 as one of Washoe County's two major freeways.

Washoe County Master Plan, Truckee Canyon Area Plan

The purpose of the Truckee Canyon Area Plan, amended in September 2012, is to guide growth and development within the Truckee Canyon planning area (Washoe County 2012). In the indirect impacts study area, Truckee Canyon includes the portion of Washoe County along I-80, east of the City of Sparks. The majority of land within the indirect impacts study area is not suitable for development because of steep slopes or public ownership.

Ignite Sparks: City of Sparks Comprehensive Plan

Ignite Sparks, adopted in 2016 and amended in 2020, serves as the policy document to guide land use decisions in the City of Sparks through 2030. It encourages efficient use of land and

resources, infill and redevelopment, strategies to support economic vitality, and multimodal transportation between land uses (City of Sparks 2020). The City of Sparks is at the west end of the indirect impacts study area. The portion of the City of Sparks within the indirect impacts study area is already developed or is not suitable for development because of steep slopes.

Storey County Master Plan

The *Storey County Master Plan*, adopted in August 2016, provides a comprehensive, long-term plan for the physical development of the county (Storey County 2016). Within the indirect impacts study area, the area south of I-80 is in Storey County and includes the Lockwood-Mustang Planning Area and McCarran Planning Area.

The Lockwood-Mustang Planning Area consists of mixed-use with single-family residences, supporting commercial and public uses, and an industrial center. Commercial and industrial uses are expected to continue in the future but development is constrained by steep topography and the Truckee River.

The McCarran Planning Area is home to the TRIC, heavy industrial uses outside of the industrial park, and commercial uses. Commercial and industrial uses are expected to continue in the future but development is constrained by steep topography and the Truckee River.

Bureau of Land Management

The Bureau of Land Management manages nearly 48 million acres of public land for multiple uses in Nevada, which accounts for about 63% of the state's land. In Nevada, the Bureau of Land Management ensures that grazing, mining, and energy development on public land are sustainable and compatible with other land uses. The Bureau of Land Management also manages wildland fire, wild horse and burro populations, recreation, and National Conservation Lands. Other programs include Special Recreation Permits to facilitate unique land uses, such as commercial, competitive, and organized group events. The Bureau of Land Management also has a land and realty program that manages leases, sales, and exchanges of public land (Bureau of Land Management n.d.).

Bureau of Land Management lands are along I-80 within the indirect impacts study area and are undevelopable because of federal land designation or steep slopes.

The Truckee Meadows Public Lands Management Act, a bill proposed in January 2024, would allow for some federal land to be made eligible for disposal, which may expand economic development and affordable housing opportunities in Washoe County. It would also convey land to local governments for recreation and public purposes. The indirect impacts study area includes lands proposed for disposal and conveyance to local governments. This legislation is eligible to be considered for a hearing by the U.S. Senate Energy and Natural Resources Committee. Following a hearing and depending on the testimony and feedback the Committee receives from stakeholders and the federal agencies, the legislation may be amended and voted

on by the Committee. If approved by the Committee, it will be eligible to be considered and voted on by the U.S. Senate (LandsBill.org 2024).

Step 3: Inventory Notable Features in the Study Area

This section provides an overview of the general trends associated with social, economic, natural, and historic resources within the indirect impacts study area, and identifies features that could be affected by indirect impacts.

Socioeconomic Data and Trends

Population

Between 2000 and 2022, population increased in the City of Sparks, Storey County, Washoe County, and the State of Nevada, and is expected to continue growing (Table 1).

Between 2020 and 2045, the population In the indirect impacts study area is forecasted to increase from 1,391 to 1,457 people, an average annual growth rate of 0.2%.[3]

Table 1. Population

Area	2000	2010	2020	2022	2042	Average Annual Growth Rate (2000–2022)	Forecast Average Annual Growth Rate (2022–2042)
Sparks	66,346	90,264	108,445	109,226	132,271	2.3%	1.0%
Storey County	3,399	4,010	4,104	4,170	8,715	0.9%	3.8%
Washoe County	339,486	421,407	486,492	496,745	587,479	1.7%	0.8%
Nevada	1,998,257	2,700,551	3,104,614	3,177,772	3,932,039	2.1%	1.1%

Sources: U.S. Census Bureau 2000; U.S. Census Bureau 2010; U.S. Census Bureau 2020; U.S. Census Bureau 2023 (ACS 5-year estimate 2018-2022); TMRPA 2022; Nevada Department of Taxation 2023.

Employment

Between 2018 and 2022, employment increased in Storey County and Washoe County, and is expected to continue growing (Table 2).

Between 2020 and 2045, employment in the indirect impacts study area is forecasted to increase from 4,943 to 6,478 employees, an average annual growth rate of 1.1%.

[3] Study area population and employment forecasts were calculated from TMRPA Traffic Analysis Zone data (RTC 2021). There are 25 Traffic Analysis Zones in the indirect impacts study area. TMPRA uses current and future land use development patterns to forecast population and employment in each Traffic Analysis Zone. Refer to Appendix E of the 2050 RTP (RTC 2021) for more information on the process.

Table 2. Employment

Area	2018	2022	2028	Average Annual Growth Rate (2018–2022)	Forecast Average Annual Growth Rate (2022–2028)
Storey County	4,027	4,170	4,485	0.9%	1.2%
Washoe County	244,172	257,860	274,464	1.4%	1.0%

Sources: Nevada GOED 2024a, 2024b.

The businesses within the TRIC are the main employers in the study area. The TRIC is about 107,000 acres with 100 businesses and approximately 25,000 employees (TRIC 2023). Businesses in the TRIC include Walmart, PetSmart, Home Depot, Tesla Motors Gigafactory, Switch (the largest data center campus in the world), and a Google data center.

Minority and Low-Income Populations

Minority and low-income populations are present in the study area (refer to the *Community Impacts, Land Use, and Socioeconomics Technical Report*).

Land Use Patterns and Development Trends

Most of the study area is undeveloped. Other land uses are industrial with some residential, commercial, and recreational areas. The westernmost limits of the study area are within the City of Sparks, and the remaining portion of the study area is in unincorporated Storey County and Washoe County. The study area includes Bureau of Land Management land (Washoe County 2023). The Truckee River meanders south of I-80 throughout the study area. The Truckee River Trail is a pedestrian and bicyclist path that crosses into the western portion of the study area. In addition, Lockwood Park is south of I-80 near the intersection of I-80 and Canyon Way, which includes two hiking trails, picnic areas, and boat access to the Truckee River. The Rainbow Bend neighborhood is the largest residential area within the study area and consists of single-family homes just east of Lockwood Park. Some industrial properties are interspersed along the length of I-80 within the study area but most are south of I-80 in the TRIC. UPRR tracks parallel I-80 to the south.

New development in the indirect impacts study area is limited because of the topography and federally owned Bureau of Land Management land. Expert panel interviewees identified the following key projects:

- Copper Canyon. This Planned Unit Development at the northwest end of the indirect impacts study area would allow for approximately 2,000 residences; however, development has been stalled for decades because of infrastructure issues.
- Painted Rock. Located approximately 5 miles east of the indirect impacts study area, Painted Rock is mostly agricultural. Expert panel interviewees identified this as a

potential future planned residential and mixed-use community to serve the housing needs of nearby businesses in and near the TRIC.

Natural and Historic Resources

This section describes the notable natural and historic resources that may be subject to indirect impacts based on site visits, resource studies, and expert panel interviews conducted in May 2024.

Water Resources

The Truckee River is the only Lake Tahoe outlet and empties into Pyramid Lake about 60 miles east of Sparks. The Truckee River in the study area is classified by Nevada and the U.S. Environmental Protection Agency (EPA) as an impaired water. Impaired waters do not meet state water quality standards or for which designated uses are not being achieved.[4] The Truckee River is considered an impaired water because its water temperature regularly exceeds levels that are beneficial for native fish species and snails, worms, mollusks, and similar species that provide food for fish.

The Truckee River is considered a traditionally navigable water (TNW) by the U.S Army Corps of Engineers. Because it is a TNW, the Truckee River is considered a Water of the U.S. and is assumed to be subject to Sections 404 and 401 of the Clean Water Act. The *Aquatic Resources Delineation Report* identifies eight unnamed, ephemeral streams in the study area, none of which are tributaries to the Truckee River and do not meet the current definition of a Water of the U.S.

Currently, stormwater from I-80 and local streets in the study area discharges to the Truckee River through culverts and storm sewers without treatment. The untreated stormwater that enters the Truckee River contributes to its water quality problems.

Threatened and Endangered Species

NDOT determined that the Lahontan cutthroat trout, western pond turtle, monarch butterfly, migratory birds, chukar, short-eared owl, mule deer, desert bighorn sheep, pronghorn antelope, bald eagle, and golden eagle have the potential to occur in the study area.

Cultural Resources

There are two archaeological sites and four historic period-built environment resources in the indirect impacts study area that have been determined as eligible for listing in the National Register of Historic Places (NRHP). There are six historic period-built environment resources in the indirect impacts study area that are unevaluated.

[4] The Clean Water Act envisions that all waters be able to provide for designated uses that include recreation and the protection and propagation of aquatic life. Additional designated uses described in the Clean Water Act that can be adopted in standards by states and tribes include drinking water supply and fish consumption.

Step 4: Identify Impact-Causing Activities

Step 4 of the analysis examines the No Build Alternative and the Build Alternative and identifies potential indirect-impact-causing activities that may be associated with the project from its construction, operation, and maintenance. Impact-causing activities have the potential to be substantial and could affect resources in the indirect impacts study area.

No Build Alternative

The impact-causing activities of the No Build Alternative relate to its lack of action. It does not address the purpose of and need for the project to reduce travel delay, improve safety, and address freeway design deficiencies along I-80 between Vista Boulevard and USA Parkway.

Build Alternative

The components of the project that may have identifiable indirect impacts are as follows:

- Constructing an additional travel lane in each direction.

The proposed action would also reconfigure the existing interchanges along I-80; however, this would not open up new land for development.

Step 5: Assess Potentially Substantial Indirect Impacts

Step 5 identifies and analyzes the potential for project-influenced development (that is, induced growth) and project encroachment (that is, encroachment-alteration) impacts.

Induced Growth

Transportation improvements can potentially induce growth in an urban area where there is vacant, undeveloped, or underused land. However, the availability of land alone is not enough to cause land use change. AASHTO's *Practitioner's Handbook 12: Assessing Indirect Effects and Cumulative Impacts Under NEPA* identifies the following factors to consider in analyzing growth-related indirect impacts.

1. Does the project have an economic development purpose?
   According to the project's purpose and need statement, the I-80 East Widening Project does not have an explicit economic development purpose (refer to Section 1, Purpose and Need).

2. Does the project have the potential to increase mobility or accessibility?

   The I-80 East Widening Project would add a lane in each direction and reconfigure existing interchanges, which would improve mobility by improving traffic flow and safety.

   Research indicates that the potential for land use change ranges from none to very weak for travel time savings less than 2 minutes. Based on VISSIM traffic microsimulation

software, travel time savings for an average trip through the corridor with the Build Alternative in 2050 would be about 1 minute.[5]

3. Is the increased accessibility likely to cause changes in development patterns (that is, timing, type, locations, or amount)?

   The proposed project would improve mobility, but it is unlikely to substantially change development patterns. During the expert panel interviews, local and regional planners indicated that that development would occur in the area without the project.

   Interviewees noted that the Build Alternative could support continued development in and around the TRIC. However, all land in the TRIC has been sold, and the expert panel interviewees noted that future development is anticipated to be large data centers that do not have many employees.

   The TMRPA noted that the Build Alternative could improve access to Fernley, more than 10 miles east of the I-80 East Widening Project, potentially making it more attractive for future development. However, as previously noted, research indicates that the potential for land use change ranges from none to very weak for travel time savings (less than 2 minutes) (NCHRP 2007). Travel time savings for an average trip through the corridor with the Build Alternative in 2050 would be 1 minute. Therefore, the Build Alternative is unlikely to substantially change development patterns in Fernley.

   If the Truckee Meadows Public Land Management Act is passed by Congress and signed into law, some of the federal lands in the indirect impacts study area would be made eligible for disposal. Washoe County noted that the lands that are for sale could be developed, but those lands identified for the Reno-Sparks Indian Colony would likely remain as open space. For those lands that are for sale, development likely would not occur for at least 10 years because of lack of infrastructure. In addition, future development in most of the indirect impacts study area is constrained because of topography and is cost-prohibitive. If the Truckee Meadows Land Management Act passes and those lands for sale are developed, NDOT anticipates that development would occur beyond the analysis timeframe of this project.

4. What impacts are likely to result from changes in development patterns that are caused by the project?

[5] This assumes a typical peak period with no crashes. It does not account for improved emergency response and crash clearance times, which will minimize delays and the potential for secondary crashes. While travel time savings could be greater than 1 minute when considering improved emergency response and crash clearance times, it would remain unlikely that the project would cause land use changes due to the other factors discussed in this section.

The Build Alternative is unlikely to substantially change development patterns, as described in Question 3.

5. What are the growth trends in the absence of the project?

   Based on input received during the expert panel interviews, growth trends would remain similar with the No Build Alternative and the Build Alternative.

6. Are there constraints on potential growth?

   Steep slopes and Bureau of Land Management land in the indirect impacts study area constrain future development. Development on steep slopes poses a risk for increased erosion, landslides, and sedimentation (STC 2012). The TMRPA identifies areas with slopes greater than 30 percent as "Development Constraints Areas" and limits the type and intensity of development on these lands (TMRPA 2023).

Induced Growth Conclusion

Land use patterns are not expected to change substantially if the project is built. The project is not likely to contribute to induced growth because of the following key reasons:

- The project does not have an explicit economic development purpose.
- Growth trends are similar under the Build Alternative and the No Build Alternative.
- There are development constraints that hinder future growth.

Project Encroachment-Alteration Impacts

This section examines project encroachment-alteration impacts (that is, impacts caused by the proposed action but that are separated from direct impacts by time or distance). No resources were identified with the potential for an indirect impact. Table 3 identifies the rationale for determining whether there would be an indirect impact.

Table 3. Resources Analyzed for Indirect Impacts

Resource	Would this Resource be Directly Affected?	Would this Resource Experience Encroachment-Alteration Impacts?
Air Quality	*Transportation Conformity*: The project is in the conforming Regional Transportation Plan and Transportation Improvement Program and meets regional conformity requirements. *PM_{10} Hot-Spot Analysis*: The project is unlikely to cause new violations of NAAQS for particulate matter equal	No. Encroachment-alteration impacts are not expected to occur. The project is not anticipated to violate NAAQS, and MSAT emissions are expected to be lower than today.

Resource	Would this Resource be Directly Affected?	Would this Resource Experience Encroachment-Alteration Impacts?
	to or less than 10 micrometers in diameter (PM_{10}). *Carbon Monoxide (CO) Hot-Spot Analysis*: The project is not expected to cause new violations of the NAAQS. *Mobile Source Air Toxics*: MSAT emissions are anticipated to be similar to the No Build Alternative and lower than today.	
Community (Residences and Businesses, Community Resources, Socioeconomics)	*Residences and Businesses*: No. The Build Alternative would not displace any residences or businesses. Access to and from businesses or residences using I-80 would remain the same as today. *Community Resources*: No. The Build Alternative would not displace any community resources. Access to and from community resources using I-80 would remain the same as today. *Socioeconomics*: No. The Build Alternative would not divide any neighborhoods or displace any residences or businesses.	No. Encroachment-alteration impacts are not expected to occur.
Cultural Resources	No. It is anticipated there will be No Adverse Effect to the two archaeological sites and the 10 historic period-built environment resources.	No. Indirect impacts to cultural resources are addressed as part of the Section 106 consultation process as direct impacts and are analyzed and mitigated, if necessary, as a direct impact.
Traffic Noise	Yes. The project would increase noise levels for some receivers. Installation of noise barriers will be evaluated to mitigate increases in noise.	The noise analysis considers future traffic volumes. Therefore, the noise levels predicted by traffic modeling already incorporate encroachment-

Resource	Would this Resource be Directly Affected?	Would this Resource Experience Encroachment-Alteration Impacts?
		alteration impacts and are analyzed and mitigated for as a direct impact.
Water Resources	No. Impacts to water resources (notably the Truckee River) would only occur during construction and be short-term.	No. Encroachment-alteration impacts are not expected to occur.
Threatened and Endangered Species	The project may affect, but is not likely to adversely affect, the Lahontan cutthroat trout, monarch butterfly, and northwestern pond turtle.	No. Encroachment-alteration impacts are not expected to occur. The project involves improvements to an existing freeway. Even though additional capacity will be provided, the project footprint is generally similar to the existing footprint (that is, widening to the inside of the existing travel lanes toward the center median) and is not expected to infringe on existing habitats.
Visual Resources	Yes. The project would alter existing views by widening I-80, reconfiguring the interchanges, and installing retaining walls, new lighting, and new signage.	No. Encroachment-alteration impacts to visual quality are typically associated with growth. Limited growth is anticipated as a result of the Build Alternative. Strong regional and local land use controls and regulatory constraints direct new development in the study area to locations consistent with regional and local plans.
Hazardous Materials	Yes. Four Recognized Environmental Conditions were identified in the study area and warrant additional investigation to determine if contamination exists within the soil before starting work.	No. The project would not cause encroachment-alteration impacts because it would not disturb contaminated parcels beyond the construction footprint.

MSAT = Mobile Source Air Toxics
NAAQS = National Ambient Air Quality Standards

Step 6: Assess Potential Minimization and Mitigation Measures

No encroachment-alteration impacts are anticipated; therefore, no minimization or mitigation measures are needed.

Cumulative Impacts

Cumulative effects result from the incremental effect of an action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative effects can result from individually minor, but collectively significant, actions taking place over a period (40 CFR 1508.1(g)).

The following guidance documents were used for this analysis:

- AASHTO *Practitioner's Handbook 12: Assessing Indirect Effects and Cumulative Impacts Under NEPA* (2016)
- CEQ, *Considering Cumulative Effects Under the National Environmental Policy Act* (1997)
- FHWA, "Secondary and Cumulative Impact Assessment in the Highway Development Process" (1992)

The analysis involved a two-tiered process, as follows:

- Identification of the potential combined direct and indirect impacts of the proposed project and other past, present, and reasonably foreseeable future public and private activities with or without the proposed action taking place within the cumulative impacts study area
- An assessment of the potential for the project-related impacts to have a cumulative impact on socioeconomic and natural resources after mitigation

Scoping Cumulative Impacts

As indicated in AASHTO's *Practitioner's Handbook 12: Assessing the Indirect Effects and Cumulative Impacts Under NEPA* (2016), the resources assessed for cumulative impacts "… are typically a subset of the range of environmental resources considered in the assessment of direct and indirect effects—in many cases, just two or three topics are chosen for analysis." Resources on which the proposed project would not have an impact, or those for which impacts could be mitigated, are not included in the cumulative impacts analysis.

CEQ's document *Considering Cumulative Effects Under the National Environmental Policy Act* (1997) was used to determine which resource topics to analyze for cumulative impacts. The document notes the following about cumulative impacts: "In a broad sense, all the impacts on affected resources are probably cumulative; however, the role of the analyst is to narrow the focus of the cumulative effects analysis to important issues of national, regional, or local significance…. Not all potential cumulative effect issues identified during scoping need to be included in an EA [environmental assessment] or an EIS [environmental impact statement]. Some may be irrelevant or inconsequential to decisions about the proposed action and alternatives.

Cumulative effects analysis should count what counts, not produce superficial analysis of a long laundry list of issues that have little relevance to the effects of the proposed action or eventual decisions."

Cumulative Impacts Issues

NDOT reviewed direct and indirect impacts, assessed stakeholder input, and considered demographics, land use, and natural, recreational, and historic resources and identified two resources for cumulative impacts analysis: air quality and fish.

Cumulative Impacts Study Area

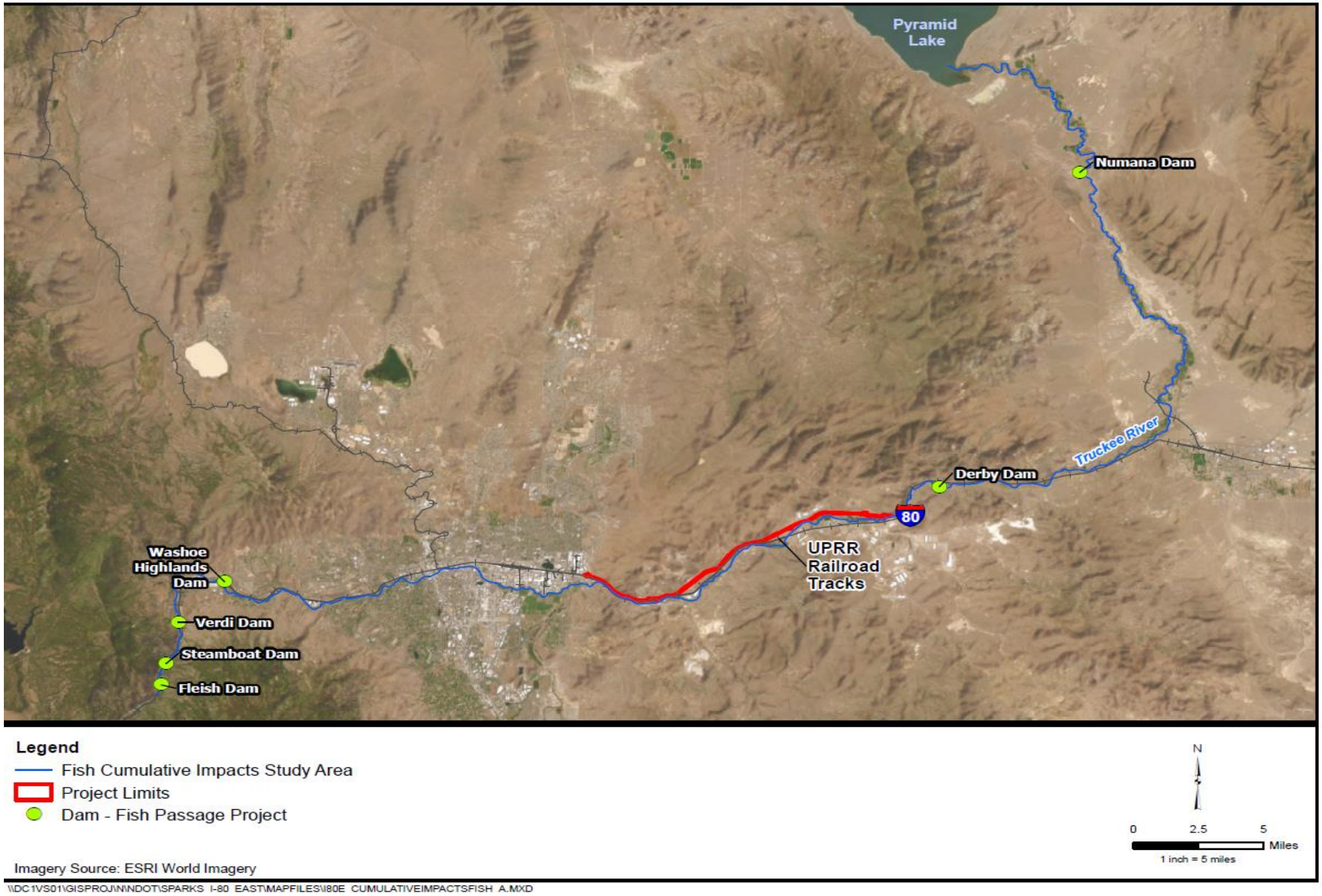
The study area for the cumulative impacts analysis varies based on the resources that have been selected for analysis. NDOT employed the following strategies in determining the study area:

- Input from the NEPA scoping process
- Expert panel interviews
- Review of boundaries that were established for a resource in the project-specific analysis

The study area for each resource is large enough to encompass the direct and indirect impacts of other past, present, and reasonably foreseeable future projects and reflects the scale of the project.

- Air Quality—Hydrographic Area 87 (that is, the Truckee Meadows Valley)
- Fish (Lahontan cutthroat trout)—Truckee River, beginning at Fleish Diversion Dam and continuing downstream to Pyramid Lake (Figure 3)

Figure 3. Fish Cumulative Impacts Study Area



Timeframe for the Analysis

One of the goals of scoping is to determine a timeframe for the analysis. The timeframe for the analysis generally coincides with the design year but also reflects the availability of data. This timeframe typically is consistent with the planning horizons used for regional land use and transportation planning purposes. In addition, this timeframe is long enough for cumulative impacts to unfold, but it is not so far into the future that the impacts become too difficult to reasonably anticipate. The analysis timeframe for cumulative impacts is 2050. No specific period for considering past actions is required; however, NDOT considered actions over the past 10 years in the analysis.[6]

Identify Past, Present, and Reasonably Foreseeable Future Actions

Table 4 lists past, present, and reasonably foreseeable future actions that may contribute to cumulative impacts within the cumulative impacts study areas, and Figure 4 illustrates the locations of these projects.

Table 4. List of Past, Present, and Reasonably Foreseeable Future Actions

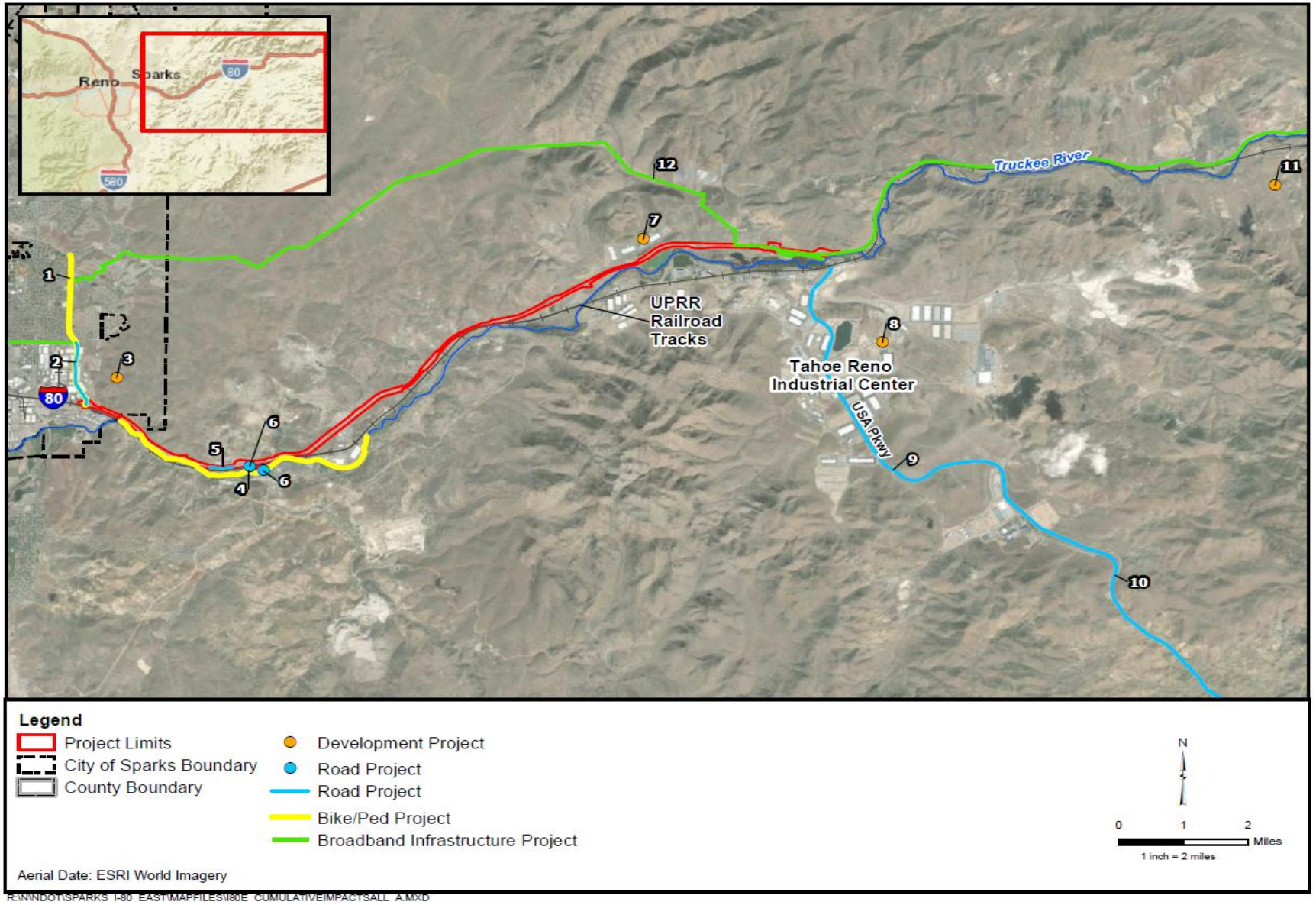
Project	Status	Label on Figure 4
Road Projects		
USA Parkway Extension. This project extended USA Parkway from the TRIC to US 50.	Past (2017)	10
I-80 Westbound On-Ramp Widening. This project is widening the I-80 westbound ramp from Canyon Way in Lockwood to lengthen the acceleration lane.	Current	5
Canyon Way Bridges Replacement. This project would replace the Canyon Way bridges over the UPRR and Truckee River in Lockwood.	Future (2025)	6
Vista Boulevard Widening. This project would widen Vista Boulevard from four to six lanes between I-80 and Prater Way.	Future (2026–2030)	2
USA Parkway Preservation. This project would resurface USA Parkway between I-80 and Innovation Way. It will also include hydraulic, safety, and lighting improvements.	Future (2027)	9
TRIC Northern Connection. This project would construct a new arterial to connect northeast Sparks near La Posada Drive to the TRIC. The route has not been established yet and is therefore not shown on Figure 4.	Future (2031–2050)	-
TRIC Southern Connection. This project would construct a new arterial to connect southeast Reno near	Future (2031–2050)	-

[6] A period of 10 years is appropriate (NCHRP 2008).

Project	Status	Label on Figure 4
South Meadows Parkway to the TRIC. The route is not established yet and is therefore not shown on Figure 4.		
Bicycle and Pedestrian Projects		
Tahoe-Pyramid Trail. This project will complete the existing gap in the Tahoe-Pyramid Trail along the Truckee River from near Vista Boulevard to Mustang Road.	Ongoing (2021–2025)	4
Vista Boulevard Sidewalks and Bike Lanes. This project would construct sidewalks and bike lanes along Vista Boulevard from Greg Street to S. Los Altos Parkway.	Future (2031–2050)	1
Land Use and Development		
Apple Data Center Expansion. Apple invested $1 billion to double the size of its facility.	Past (2019)	7
Tahoe-Reno Industrial Center. A 107,000-acre park that encompasses a developable 30,000-acre industrial complex. Notable tenants include Tesla, Google, Switch, and Walmart.	Ongoing	8
Copper Canyon. This Planned Unit Development would allow for approximately 2,000 residential units. Although Copper Canyon is an existing entitlement, development has been stalled for decades due to infrastructure issues.	Future (to be determined)	3
Painted Rock. A potential future planned residential and mixed-use community to serve the housing needs of nearby businesses in and near the TRIC.	Future (to be determined)	11
Flood Management and Fish Passage Projects		
UFWS Fish Passage Projects. The U.S. Fish and Wildlife Service rehabilitated five dams to facilitate within-stream movement and upstream movement from Pyramid Lake. The Numana Dam is currently being rehabilitated to include an underwater ramp to help fish move across the dam.	Ongoing	Refer to Figure 3
Truckee River Flood Management Project. This project is reducing flood damage by replacing bridges to increase Truckee River channel capacity, excavating floodplain terraces to improve floodwater storage, and restoring ecosystem functions and creating habitat for native species.	Ongoing	Various locations from downtown Reno to Wadsworth (near Pyramid Lake)
Broadband Infrastructure Projects		
Nevada Middle Mile Network. This project will install a 2,500-mile open access, fiber optic network to expand	Current and Future	12

Project	Status	Label on Figure 4
network capacity between urban areas of Nevada and throughout rural regions across the state, greatly enhancing the capacity of last-mile networks to deliver affordable, high-speed Internet access to over 40,000 locations that are unserved or underserved today. The fiber optic network will go through the City of Sparks and Washoe County.		

Figure 4. Cumulative Impacts Projects



Describe the Affected Environment and Determine the Environmental Consequences and Potential Mitigation Measures

This section describes the resources that could experience cumulative impacts as a result of the Build Alternative and other past, present, and reasonably foreseeable future actions listed in Table 4. For each resource, the affected environment is summarized to establish the baseline condition and the resource's capacity to withstand stress in relation to regulatory thresholds, if applicable. Where possible, a quantitative assessment of the current health or condition of the resource and the trend it is experiencing are provided. When quantitative data were not available, a qualitative discussion of the resource's health or condition and trend are presented. Then, an evaluation of the environmental consequences is conducted for each resource. This includes examining the cause-and-effect relationship between human activities and affected resources and determining the magnitude and significance of the cumulative impacts. The evaluation also considers avoidance, minimization, and mitigation measures NDOT could undertake for the Build Alternative to minimize cumulative impacts to the greatest extent practical. It also considers other local, state, and federal ordinances and laws that can further manage cumulative impacts resulting from the project's potential direct and indirect impacts.

The following resources were assessed for potential cumulative impacts:

- Air Quality
- Fish (Lahontan cutthroat trout)

Air Quality

Affected Environment

Resource Condition and Trends

The project is in the City of Sparks and unincorporated Washoe County within the Truckee Meadows Valley (Hydrographic Area 87). EPA is the federal agency responsible for establishing air quality standards. These federal standards, known as the NAAQS, were developed for criteria pollutants, including ozone, NO_2, CO, PM_{10}, $PM_{2.5}$, sulfur dioxide, and lead. The air quality standards protect public health and welfare with an adequate margin of safety. Currently, Hydrographic Area 87 is classified as in maintenance for PM_{10} and CO. It is unclassifiable/attainment for other pollutants under NAAQS (EPA 2024).

Mobile Source Air Toxics

Transportation projects may affect the regional or local air toxics concentrations because of the MSAT emissions from vehicles. MSAT emissions are expected to be lower than current levels in future years nationwide because of EPA's vehicle and fuel regulations, and fleet turnover.

FHWA estimates that even if vehicle miles traveled increases nationwide by 31% from 2020 to 2060, a reduction of 76% in the total annual emissions for the priority MSATs is projected for the same period (EPA 2021).

FHWA and EPA conducted a research study from December 2008 to December 2009 to characterize the impacts and behavior of $PM_{2.5}$ and MSATs near highways (FHWA and EPA 2011). The objective of this research study was to determine MSAT concentrations and variations in concentrations as a function of distance from the highway and to establish relationships between MSAT concentrations as related to highway traffic flows, including traffic count, vehicle types and speeds, and meteorological conditions such as wind speed and wind direction. The study provided indications that highway vehicle emissions impact near-road air quality. MSATs and other pollutants had elevated concentrations in a near-road environment but decreased with distance away from the road. This study also found that concentrations could be affected by other mobile sources beyond the highway of interest, including a major arterial road, a large commercial airport, or a nearby parking lot.

Sensitive Receptors

Sensitive air quality receptors include residences, schools, daycare centers, nursing homes, and hospitals. These are areas where the occupants are more susceptible to the adverse effects of exposure to air pollutants. The project is in the City of Sparks and unincorporated Washoe County. The area near the Vista Boulevard/I-80 interchange in Sparks has mixed commercial and industrial land use. The closest residential areas are approximately 0.6-mile northwest of the interchange. The closest schools are the Lincoln Park Elementary School, approximately 1.7 miles northwest of the interchange, and the Katherine Dunn Elementary School, approximately 2 miles northwest of the interchange. The majority of the project is in unincorporated Washoe County, surrounded by open spaces and scattered industrial facilities without sensitive receptors.

Other Future Actions

Other future transportation projects and developments are identified in Table 4. Other future transportation projects and traffic resulting from new developments have been included in the modeling of potential future air quality impacts.

Regulatory Framework

Federal air quality policies are regulated through the federal Clean Air Act (CAA). The U.S. Congress passed the CAA in 1970 and its amendments in 1977 and 1990. Pursuant to the CAA, EPA has established NAAQS to protect public health and welfare with an adequate margin of safety. The *Air Quality Technical Report* provides more information on the NAAQS, the transportation conformity requirement of the CAA, and air toxic emissions of the CAA that EPA regulates.

Northern Nevada Public Health Air Quality Management Division is the air pollution control agency for Washoe County, Nevada. It administers the permitting of stationary sources, and oversees regulatory compliance, air quality monitoring, and the air pollution control program for

Washoe County. The agency is responsible for preparing a State Implementation Plan (SIP) for nonattainment and maintenance areas of Washoe County. The SIP outlines goals and strategies that would lead the area into compliance with NAAQS.

In 2019, Nevada Senate Bill 254 was signed into law setting statewide GHG emission reduction goals of 28% by 2025 and 45% by 2030 relative to 2005 emissions. Senate Bill 254 requires Nevada Division of Environmental Protection to develop an annual GHG inventory, projections of GHG emissions, and statement of policies for consideration in addressing GHG emissions in Nevada.

Several state, regional, and local plans also exist that establish GHG goals and priorities.

Environmental Consequences

Cumulative impacts result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of the proposed project. Cumulative regional air quality impacts from transportation projects in Washoe County were reviewed by RTC in the air conformity analysis for the region's RTP, the 2050 RTP (RTC 2021). The conformity analysis of the RTP included the I-80 East Widening Project and other reasonably foreseeable future transportation projects in Washoe County and demonstrated that the cumulative impacts of the projects in the RTP conform to the SIP. At the project level, the operational impact analysis of CO, PM_{10}, and MSATs was evaluated based on projected future traffic conditions that incorporated anticipated traffic growth from planned development in the project area and in the region. Therefore, the project-level air quality analysis of the project includes the cumulative impacts from other transportation projects and regional traffic growth on the project corridor in the study area. As such, cumulative impact conclusions of project operation would be consistent with the project's direct impact conclusions. The project would not cause new air quality violations, worsen existing violations, or delay timely attainment of the NAAQS.

Potential Mitigation

The project would comply with applicable Northern Nevada Public Health Air Quality Management Division regulations to minimize fugitive dust emissions by implementing the best management practice program and would comply with the requirements of the Standard Specifications for Road and Bridge Construction (NDOT 2014). Additional mitigation measures are required only for projects that are determined to have substantial adverse impacts. Therefore, additional mitigation measures beyond what are included in the best management practices and what are required by state and regional regulatory requirements are not required.

Fish – Lahontan Cutthroat Trout

Affected Environment

Resource Condition and Trends

The Lahontan cutthroat trout is native to the Lahontan Basin of northern Nevada, northeastern California, and southeastern Oregon. They are found in a wide variety of cold-water habitats

including large terminal alkaline lakes, alpine lakes, slow meandering rivers, montane rivers, and small headwater tributary streams. Lahontan cutthroat trout currently occupy approximately 482 miles of stream habitat. The species is also found in five lakes. Self-sustaining populations of the species occur in 10.7% of the historic stream habitats and 0.4% of the historic lake habitats (Nevada Department of Wildlife 2024). The stretch of the Truckee River in the I-80 East Widening Project corridor is an occupied stream because of an extensive stocking campaign to re-establish the species in its historic range.

One of the leading causes of cutthroat trout population declines in the western United States is habitat fragmentation, which reduces the total habitat available, reduces habitat complexity, and prevents gene flow. Fragmentation has occurred in the Truckee River basin and as a result Lahontan cutthroat trout in Pyramid Lake can no longer migrate into the Upper Truckee River or Lake Tahoe for spawning because of irrigation diversions and other human-made river obstructions (USFWS 2009).

Nonnative fish, especially trout, which compete and hybridize with Lahontan cutthroat trout, are the greatest threat to Lahontan cutthroat trout throughout their range. Introduction of nonnative trout has caused most of the decline, and in places elimination, of the Lahontan cutthroat trout population since the mid-1990s. Brook trout are the predominant competitor with Lahontan cutthroat trout (USFWS 2009). Aquatic invasive species such as Mysis shrimp, New Zealand mud snails, and quagga mussels also threaten Lahontan cutthroat trout recovery. Mysis shrimp have been particularly harmful in lakes in the Lake Tahoe basin. None of these are a problem yet in the study area, but the New Zealand mud snails in the Truckee River could become more of a threat (USFWS 2009; Crookshanks 2014).

Other Future Actions

Projects that have the potential to affect the Lahontan cutthroat trout are summarized further in this section. These projects could have short-term construction impacts on the Lahontan cutthroat trout but would have long-term advantages.

Truckee River Flood Management Project. The Truckee River Flood Management Authority is implementing the Truckee River Flood Management Project to reduce flood damage. Recreational and ecosystem restoration features will be incorporated in the footprint of the flood protection infrastructure. Environmental enhancement elements include the following:

- Replacing bridges to increase Truckee River channel capacity.
- Excavating floodplain terraces to improve floodwater storage.
- Restoring ecosystem functions and creating habitat for native species.

U.S. Fish and Wildlife Service Fish Passage Projects. The U.S. Fish and Wildlife Service (USFWS), with the Truckee Meadows Water Authority, rehabilitated five dams to improve fish movement (Fleish Dam, Steamboat Dam, Verdi Dam, Washoe Highlands Dam, and Derby Dam). The Numana Dam is currently being rehabilitated to include an underwater ramp to help fish move across the dam.

Resource Management

To address threats to Truckee River and Pyramid Lake Lahontan cutthroat trout, USFWS developed a Lahontan Cutthroat Trout Recovery Plan in 1995. The plan identified habitat fragmentation as one of four major threats to the species. It recommended that the long-range options for water and other uses in the Truckee River basin should be determined by developing a Truckee River basin ecosystem plan. (USFWS 1995)

Another important recovery effort that is ongoing and will improve Lahontan cutthroat trout movement in the Truckee River is adding fish passage at the dams mentioned earlier.

Environmental Consequences

The I-80 East Widening Project, in combination with the projects discussed earlier, would have beneficial cumulative impacts on the Lahontan cutthroat trout. The I-80 East Widening Project would benefit the Lahontan cutthroat trout by improving Truckee River water quality by building stormwater quality basins and underground structural treatments, such as hydrodynamic separators.[7] These measures would treat stormwater runoff from the freeway before it enters the river. The fish passage projects will allow native Lahontan cutthroat trout to enter the study area through migration from upstream or downstream native populations. The ability of the Lahontan cutthroat trout to expand its range has the potential to reverse the habitat fragmentation it has experienced. The Truckee River Flood Management Project's efforts to improve habitat adjacent to the Truckee River may have water quality benefits for the river that could benefit the Lahontan cutthroat trout.

Potential Mitigation

Beneficial cumulative impacts are anticipated; no mitigation is needed.

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Appendix A
Expert Panel Meeting Summaries

Jacobs

Meeting Minutes

Subject	**Expert Panel Interview, RTC of Washoe County**
Project	I-80 East Widening Project
Date	May 17, 2024
Mtg Location	MS Teams
Participants	RTC: Dale Keller, Xuan Wang
	Jacobs: Carly Paluszek

1. In addition to the major employers identified on Figure 1, are you aware of any other major employers, land development, or building activity in the area of potential effect?
    - Storey County would be in a good position to provide information on major employers in the study area.
2. Are you aware of any infrastructure improvements in the area of potential effect?
    - There are two projects in the long-range transportation plan that should be included as future improvements in the area.
        - TRI Center northern connection originating near La Posada Drive (#38 in the LRTP) and TRI Center southern connection (#39 in the LRTP).
3. Do you think the development would have occurred along this corridor without plans to widen I-80?
    - Yes.
4. Do you think the project would influence development patterns in the future?
    - The project will address the reliability, congestion and safety issues along the corridor which may make the area more attractive for future development.

Jacobs

Meeting Minutes

Subject	**Expert Panel Interview, City of Sparks**
Project	I-80 East Widening Project
Date	May 23, 2024
Mtg Location	MS Teams
Participants	City of Sparks: Sienna Reid
	Jacobs: Carly Paluszek

1. In addition to the major employers identified on Figure 1, are you aware of any other major employers, land development, or building activity in the area of potential effect?
    - There is a desire for a second phase of the TRI Center. Sienna attended a Nevada EPA conference in October 2023 where she recalls seeing a map of potential expansion of the TRI Center to the east.
    - Federal lands bill calls for disposal of land east of Sparks for employment and housing.
    - There is a substantial amount of potential residential and business development in Copper Canyon, but this area is topographically constrained.
    - Potential for development in northeast sparks near La Posada Drive. The northern TRI Center connection (proposed roadway) could make this area more desirable.
2. Are there any development constraints (environmental or man-made), development policies, or growth management strategies that would affect the location of development?
    - Land is topographically constrained but there are some less constrained areas.
    - The annexation process to annex federal lands that are disposed (if the bill passes) is a lengthy process.
    - Infrastructure constraints—there is a large sewer interceptor along Pyramid Way, but it has capacity constraints and would need further investigation if it could serve new development.
3. Do you think the development would have occurred along this corridor without plans to widen I-80?
    - Yes.
    - The TRI Center spurred some development in Sparks.
4. Do you think the project would influence development patterns in the future?
    - It would make transportation to the TRI Center faster and safer
    - It could make residential development in Sparks more attractive since Storey County has little residential development.
5. Do you think the indirect effects APE, as drawn, appropriately encompasses development patterns that the project could affect?
    - Defer to Storey County for input as most areas are in Storey County.

Jacobs

Meeting Minutes

Subject	**Expert Panel Interview, Storey County**
Project	I-80 East Widening Project
Date	May 16, 2024
Mtg Location	MS Teams
Participants	Storey County: Kathy Canfield
	Jacobs: Jill Kramer, Carly Paluszek, Sabra McNeish

1. In addition to the major employers identified on Figure 1, are you aware of any other major employers, land development, or building activity in the area of potential effect?
    - South of FedEx is Lockwood landfill – the landfill itself doesn't have many employees, but they have trucks entering and exiting every 10-15 minutes.
    - There is a rock quarry near the landfill - not many employers but lots of truck traffic from there.
    - Chewy Warehouse moved to North Valleys in Washoe County
    - Zulily went out of business
    - Panasonic is in same campus as TeslaGiga
    - There are not many employees at Google because it's a data center campus
    - Redwood Materials which does battery recycling is across from Google
    - Storey County has been receiving grading applications for data centers within the TRI Center, but there are not many employees associated with them.
    - There is land for sale in Lockwood with light industrial zoning, and there is potential for some additional housing (~20 homes).
2. Are there any development constraints (environmental or man-made), development policies, or growth management strategies that would affect the location of development?
    - Mostly topography is the precluding factor to more development. If a developer has deep pockets, they could develop, but it's too prohibitive for housing.
    - I-80 exits have many have small underpasses and tight turns - would need a lot of infrastructure improvements for it to be more accessible for future development.
    - Painted Rock has the potential for 4,000-6,000 homes and commercial development, but there are some significant hurdles. Although there has been some interest, it may not be realistic.
3. Are you aware of any infrastructure improvements (including transportation and utilities such as water and wastewater) that are occurring or proposed?
    - Greenlink West Project - new electric transmission facilities that would run from North Las Vegas to Reno through Clark, Nye, Esmeralda, Mineral, Lyon, Storey and Washoe counties.
    - Effluent line from wastewater treatment plant in Sparks near Vista Boulevard that transports treated wastewater to man-made pond near PPG. There are agreements with some landowners in the TRI Center for cooling systems. Not up and running yet.
4. Do you think the development would have occurred along this corridor without plans to widen I-80?
    - Yes
5. Do you think the project would influence development patterns in the future?

- It will help alleviate problems on the roadway (e.g., emergency access) because there is currently no shoulder to pull over on. The additional lane and shoulders will really help maintain traffic flow, which would make land in this area more attractive.
- The TRI Center overall has more benefits than the roadway.
- Storey County has 50-year development agreement with a master developer, so there is consistency and assurance for developers on what to expect (e.g., no political changes that could influence future development).
- Storey County is business-friendly. They approve construction permits quickly and there is less "red tape".
- County is mostly zoned industrial - no residential areas nearby because it wouldn't be an appropriate land use adjacent to heavy industrial uses.

6. Do you think the indirect effects APE, as drawn, appropriately encompasses development patterns that the project could affect?
    - Yes, but suggest including the landfill.
    - Don't anticipate much growth in Lockwood because there isn't much more available land and there are topographic restrictions that make development cost-prohibitive.
7. How would the proposed project affect residents?
    - The project will make traveling easier for residents. With no shoulders currently, large trucks detour through the Lockwood neighborhood. Trucks can't fit beneath underpasses and can block traffic on these side roads.

Jacobs

Meeting Minutes

Subject	**Expert Panel Interview, Truckee Meadows Regional Planning Agency**
Project	I-80 East Widening Project
Date	May 16, 2024
Mtg Location	MS Teams
Participants	TMRPA: Jeremy Smith
	Jacobs: Jill Kramer, Carly Paluszek, Sabra McNeish

1. In addition to the major employers identified on Figure 1, are you aware of any other major employers, land development, or building activity in the area of potential effect?
    - TMRPA is helping RTC with an update to the Regional Transportation Plan with input from Storey County's Planning Department. This will have employment counts and include a growth forecast that is used in the underlying travel demand model. Jeremy will share this information with the project team.
    - TRI Center is the largest land development.
    - Just east and to the north of Vista Boulevard is Copper Canyon, an existing entitlement slated for 2,000 residential units. It has been stalled for ~20 years because of infrastructure details.
    - East of Copper Canyon are federal land parcels being considered by the Truckee Meadows Lands Bill (landsbill.org). This bill preemptively identifies federal land parcels for disposal. If the bill passes then these lands could be developed by a private developer.
        - Development on these lands would be far out. It would likely be at least 2 years from the disposal to even put the lands up for sale, but this doesn't include the time to actually develop the properties. Development is not likely to happen until after a new connector road is built by NDOT to improve access from the North Valley to the TRI Center. There is no existing infrastructure to support development on the "disposal" properties.
    - RTC is considering a new connector road north of I-80 that would tie into the TRI Center and coincide with the disposal areas.
    - Painted Rock is a planned unit development east of the project
2. Are you aware of any infrastructure improvements in this area that could facilitate development?
    - None other than the I-80 widening project
    - There is some terracing occurring east of Vista Boulevard in the Truckee narrows for floodplain management.
    - There is an effluent pipe from the Truckee Meadows water reclamation facility near Vista Boulevard that serves the TRI Center for cooling at data center
    - Tahoe-Pyramid Lake trail - looking to connect portion between Vista Boulevard and Mustang Road
3. Do you think the development would have occurred along this corridor without plans to widen I-80?
    - Yes
4. Do you think the project would influence development patterns in the future?
    - It will somewhat because it'll be easier to build out the TRI Center and develop federal lands. It will strengthen the appeal of the TRI Center and Fernley.

5. Do you think the indirect effects APE, as drawn, appropriately encompasses development patterns that the project could affect?
    - Yes, it seems appropriate, but would want to see parcel/slope data to understand how the boundary was delineated and suggest incorporating the Lands Bill information. There is a decent amount of private land but the terrain poses a challenge and they're landlocked by federal lands – the Lands Bill has potential to free up federal lands.

Jacobs

Meeting Minutes

Subject	**Expert Panel Interview, Washoe County Parks and Open Space**
Project	I-80 East Widening Project
Date	May 20, 2024
Mtg Location	MS Teams
Participants	Washoe County: Joanne Lowden, Faye-Marie Pekar
	Jacobs: Jill Kramer, Carly Paluszek, Sabra McNeish

1. In addition to the major employers identified on Figure 1, are you aware of any other major employers, land development, or building activity in the area of potential effect?
    - Trevor Lloyd (tlloyd@washoecounty.gov, 775-328-3617) may be the best person for this discussion. Joanne and Faye-Marie are focused on parks and open space.
    - Suggest reviewing the lands bill to determine which parcels are proposed for development. Any lands shown as for sale will likely be developed. Any lands identified as RSIC will likely remain as open space.
    - Link to Washoe County web map showing the locations of parks and open space: https://gis.washoecounty.us/wrms/?auth=1&lat=39.51562354063226&lon=-119.67603012328689&scale=18055.954822&showmarker=false
    - Many trucks enter I-80 from Granite Construction Company
    - There are no plans for development on Washoe County open space parcels – no plans to develop for at least 20 years. There are deed restrictions on open space parcels; there are ways to remove deed restrictions but it's not a straightforward process. If development did occur on open space parcels, it would likely be passive recreation (trails and trailheads).
2. Do you think the indirect effects APE, as drawn, appropriately encompasses development patterns that the project could affect?
    - This is a question better for the Planning Department.
    - There are not many opportunities to cross Truckee River and few services, housing, or development in the Washoe County segment of the project.

Jacobs

Meeting Minutes

Subject	**Expert Panel Interview, Washoe County Planning Department**
Project	I-80 East Widening Project
Date	May 24, 2024
Mtg Location	MS Teams
Participants	Washoe County: Trevor Lloyd
	Jacobs: Carly Paluszek

1. In addition to the major employers identified on Figure 1, are you aware of any other major employers, land development, or building activity in the area of potential effect?
   - There is a cluster of smaller employers near FedEx; together they are significant.
   - There are some minor, small scale development inquiries (e.g., zoning changes)
   - Anticipate that Apple will expand in the future
2. Are there any development constraints (environmental or man-made) that would affect the location of development?
   - There are floodplain projects being conducted by an independent agency that falls under the Truckee River Flood Management Authority, which could affect the location of future development.
   - Small-scale river restoration projects.
3. Are you aware of any infrastructure improvements in the area of potential effect?
   - There are some solar projects closer to Wadsworth
4. Do you think the development would have occurred along this corridor without plans to widen I-80?
   - Yes.
5. Do you think the project would influence development patterns in the future?
   - It would make access to lands adjacent to I-80 better
   - There are limitations to development (checkerboard pattern with public vs. private land and sewer and water constraints).
6. Do you think the indirect effects APE, as drawn, appropriately encompasses development patterns that the project could affect?
   - This is the boundary that is expected.