

# Chapter 32: Response to Comments

<b>32.1</b>	<b>Chapter 1 – Purpose of and Need for Action.....</b>	<b>32-7</b>
32.1.1	Section 1.2 – Description of the Needs Assessment Study Area.....	32-7
32.1.2	Section 1.4 – Summary of Purpose and Need.....	32-12
<b>32.2</b>	<b>Chapter 2 – Alternatives.....</b>	<b>32-29</b>
32.2.1	Section 2.1 – Alternatives Development Process (Screening).....	32-29
32.2.2	Section 2.2 – Description of Alternatives Carried Forward for Detailed Study.....	32-46
32.2.3	Section 2.2.1 – No-Action Alternative.....	32-51
32.2.4	Section 2.2.2 – Alternative A1.....	32-51
32.2.5	Section 2.2.3 – Alternative A2.....	32-53
32.2.6	Section 2.2.4 – Alternative A3.....	32-53
32.2.7	Section 2.2.5 – Alternative A4.....	32-55
32.2.8	Section 2.2.6 – Alternative B1.....	32-55
32.2.9	Section 2.2.7 – Alternative B2.....	32-59
32.2.10	Section 2.2.8 – Alternative B3.....	32-59
32.2.11	Section 2.2.9 – Alternative B4.....	32-60
32.2.12	Section 2.3 – Summary Comparison of Alternatives (Cost, Daily Delay, Travel Time, and Environmental Impacts).....	32-60
32.2.13	Section 2.4 – Identification of UDOT’s Locally Preferred Alternative.....	32-60
<b>32.3</b>	<b>Chapter 3 – Land Use .....</b>	<b>32-79</b>
<b>32.4</b>	<b>Chapter 4 – Farmland.....</b>	<b>32-84</b>
<b>32.5</b>	<b>Chapter 5 – Community Impacts.....</b>	<b>32-87</b>
32.5.1	Section 5.4.1 – Community Cohesion and Quality of Life.....	32-87
32.5.2	Section 5.4.3 – Recreation Resources.....	32-89
32.5.3	Section 5.4.4 – Community Facilities.....	32-90
32.5.4	Section 5.4.5 – Public Health and Safety.....	32-91
32.5.5	Section 5.4.6 – Public Services and Utilities.....	32-91
32.5.6	Section 5.4.7 – Housing and Relocations.....	32-93
<b>32.6</b>	<b>Chapter 6 – Environmental Justice .....</b>	<b>32-97</b>
<b>32.7</b>	<b>Chapter 7 – Transportation.....</b>	<b>32-97</b>
<b>32.8</b>	<b>Chapter 8 – Economics .....</b>	<b>32-101</b>
<b>32.9</b>	<b>Chapter 9 – Joint Development.....</b>	<b>32-102</b>
<b>32.10</b>	<b>Chapter 10 – Considerations Related to Pedestrians and Bicyclists.....</b>	<b>32-103</b>

<b>32.11</b>	<b>Chapter 11 – Air Quality .....</b>	<b>32-108</b>
32.11.1	Section 11.4.2 – Effects on Regional Air Quality.....	32-108
32.11.2	Section 11.4.2.2 – Mobile-Source Air Toxics (MSATs) .....	32-114
32.11.3	Section 11.4.2.3 – Greenhouse Gases .....	32-119
32.11.4	Section 11.4.3 – Effects on Local Air Quality .....	32-120
<b>32.12</b>	<b>Chapter 12 – Noise .....</b>	<b>32-127</b>
<b>32.13</b>	<b>Chapter 13 – Water Quality .....</b>	<b>32-128</b>
<b>32.14</b>	<b>Chapter 14 – Ecosystem Resources .....</b>	<b>32-134</b>
32.14.1	Section 14.1 – General Ecosystems .....	32-134
32.14.2	Section 14.3.3 – Wildlife, Sensitive Species, and Migratory Birds ....	32-136
32.14.3	Section 14.3.4 – Wetlands and Waters of the U.S. ....	32-164
<b>32.15</b>	<b>Chapter 15 – Floodplains.....</b>	<b>32-177</b>
<b>32.16</b>	<b>Chapter 16 – Historic, Archaeological, and Paleontological Resources .....</b>	<b>32-179</b>
<b>32.17</b>	<b>Chapter 17 – Hazardous Waste Sites .....</b>	<b>32-180</b>
<b>32.18</b>	<b>Chapter 18 – Visual Resources.....</b>	<b>32-180</b>
<b>32.19</b>	<b>Chapter 29 – Energy Impacts.....</b>	<b>32-181</b>
<b>32.20</b>	<b>Chapter 20 – Construction Impacts.....</b>	<b>32-181</b>
<b>32.21</b>	<b>Chapter 21 – Short-Term Uses versus Long-Term Productivity.....</b>	<b>32-183</b>
<b>32.22</b>	<b>Chapter 22 – Irreversible and Irrecoverable Commitment of Resources .....</b>	<b>32-183</b>
<b>32.23</b>	<b>Chapter 23 – Indirect Effects .....</b>	<b>32-184</b>
<b>32.24</b>	<b>Chapter 24 – Cumulative Impacts .....</b>	<b>32-191</b>
<b>32.25</b>	<b>Chapter 25 – Permits, Reviews, and Approvals .....</b>	<b>32-199</b>
<b>32.26</b>	<b>Chapter 26 – Mitigation Summary .....</b>	<b>32-200</b>
<b>32.27</b>	<b>Chapter 27 – Section 4(f) Evaluation.....</b>	<b>32-200</b>
<b>32.28</b>	<b>Chapter 28 – List of Preparers.....</b>	<b>32-210</b>
<b>32.29</b>	<b>Chapter 29 – Distribution.....</b>	<b>32-210</b>
<b>32.30</b>	<b>Chapter 30 – Public and Agency Consultation and Coordination.....</b>	<b>32-211</b>
<b>32.31</b>	<b>Other Comments .....</b>	<b>32-214</b>
<b>32.32</b>	<b>References .....</b>	<b>32-220</b>

This chapter contains the responses to comments, both oral and written, that were received on the West Davis Corridor (WDC) Draft Environmental Impact Statement (EIS) from members of the public, government agencies, and nongovernmental organizations during the 106-day public comment period from May 24, 2013, to September 6, 2013. Individuals and agencies who commented on the Draft EIS are listed alphabetically in Appendix 32A, Commenter and Response Matrix, along with their associated comment number. To find the response to your comment, first find your name in Appendix 32A, then find the associated response section numbers, which indicate the sections of this chapter that address your comment.

Appendix 32B, Reproductions of Comments on the Draft EIS, presents reproductions of written comments and transcriptions of comments that were submitted orally. Each comment document is identified in Appendix 32B by its comment number, and each statement or question regarding a separate environmental issue is labeled with an associated response section in this chapter.

The sections below present the responses to comments that were received on the Draft EIS. The section numbers in this chapter correspond to the chapters and sections in the Draft EIS (for example, Section 32.12 in this chapter corresponds to Chapter 12 in the Draft EIS).

## Summary of Comments

About 1,618 comment submissions were received on the Draft EIS from individuals, organizations, and government agencies, which resulted in about 5,000 specific comments. The comment submissions took the form of letters, e-mails, phone messages, website submissions, and public hearing testimonies. The number of comments shows a strong interest by the public in the WDC Project.

It is important to note that the process established by the National Environmental Policy Act is not based on vote-counting. The public involvement efforts of the National Environmental Policy Act are intended to gather information and ideas from the public on the proposed action and alternatives, and on the impact assessment and other information in the Draft EIS, in order to ensure that the Final EIS is as accurate, informative, and useful as possible. Analysis of public comments and, as appropriate, modification of the EIS results in a better document and helps the decision-maker make better decisions, not simply count up pros and cons.

It is tempting for a proponent or opponent of a particular alternative to “stuff the ballot box” in support of their view. However, even though the decision-maker gathers quantitative information that is important in assessing attitudes and concerns about particular issues, this is only part of the information that the decision-maker analyzes. The *reasons* for people’s concerns, preferences, and criticisms are also sought in this process. Therefore, this chapter does not usually mention the total number of comments on a particular issue but instead focuses on more qualitative information that can include trends in public opinion.

The following sections summarize the main comments on the Draft EIS by topic.

***Purpose of and Need for Action (Section 32.1.2).*** The majority of comments on this topic questioned the need for the WDC Project, the travel demand model, or the land-use and population assumptions that went into the model, or stated that the WDC would not meet city or local transportation needs. Other comments suggested that the Utah Department of Transportation (UDOT) should have different goals such as reducing the use of personal vehicles, improving the use of existing transit infrastructure, reducing air pollution, supporting better health care, improving education, encouraging different land-use patterns, or protecting farmland.

#### What is the WDC team?

The WDC team consists of the lead agencies for the WDC Project (the Federal Highway Administration [FHWA] and UDOT).

***Alternatives-Development Process (Section 32.2.1).*** A number of comments questioned the results of the alternatives-screening process. Common questions included:

- Why didn't the EIS include alternatives that only widened or improved Interstate 15 (I-15) and/or east-west arterials?
- Why aren't there alternatives that connect to I-15 north of Farmington, or alternatives that include reversible lanes on I-15?
- Why aren't the WDC alternatives on the corridor identified in the 2001 *North Legacy Transportation Corridor Study* in some locations?
- Why weren't transit alternatives, alternatives that proposed reduced or free transit fares, or alternatives that promoted carpooling evaluated in the EIS?
- Why weren't the WDC alternatives designed with Legacy Parkway design features (lower speed limits, truck restriction, billboard restrictions, quiet pavement, etc.)?
- Why weren't more western alternatives farther away from development considered in the Draft EIS?
- Won't the WDC alternatives be underutilized in 2040?
- Won't the WDC cause an increase in vehicle-miles traveled, and doesn't this go against the governor's advice to drive less to reduce emissions?
- Why aren't there any interchanges or access in Farmington on the Glovers Lane alternatives?

***“Shared Solution” Alternative (Section 32.2.1G).*** Many commenters stated that the WDC Project should have considered a “Shared Solution” alternative, and that the Shared Solution Alternative should have been considered a reasonable alternative for the Draft EIS. The commenters stated that the Shared Solution Alternative would have better transportation performance and fewer impacts and would cost less than the WDC alternatives that were evaluated. As part of the development of this Final EIS, a Shared Solution Alternative was evaluated as part of a revised Level 1 screening process. For a detailed description of the Shared Solution evaluation process, see Section 2.2.3.2, Preliminary Alternatives Identified through Public and Agency Input, or the *Development and Evaluation of the Shared Solution Alternative* memorandum on the WDC Project website ([www.udot.utah.gov/westdavis/documentation#technical\\_memos](http://www.udot.utah.gov/westdavis/documentation#technical_memos)). The evaluation concluded that the Shared Solution

Alternative did not pass Level 1 screening and therefore was not a reasonable or practicable alternative.

***Alternatives Carried Forward for Detailed Study (Sections 32.2.2 to 32.2.12).*** A number of comments pertained to the alternatives considered in the EIS. Common comments included:

- Requests for shifts in the alignments or interchanges of the WDC alternatives to avoid wetland, residential, or community impacts
- Requests for additional interchanges on the WDC alternatives
- Requests for UDOT to reconsider the 2001 *North Legacy Transportation Corridor Study* corridor in certain locations
- Comments stating that UDOT should select the No-Action Alternative because the impacts of the WDC would outweigh the benefits
- Comments stating the relative impacts or benefits of the WDC alternatives

***Identification of UDOT's Locally Preferred Alternative (Section 32.2.13).*** A number of comments questioned UDOT's identification of the locally preferred alternative. Common comments included:

- Comments agreeing with UDOT's locally preferred alternative (including the Glovers Lane southern interchange option, the B Alternatives in Syracuse, and the 4100 West northern option).
- Comments disagreeing with UDOT's locally preferred alternative. Some comments disagreed with all segments, while others specifically disagreed with UDOT's identification of the Glovers Lane southern interchange option, the B Alternatives in Syracuse, or the 4100 West northern option as the preferred alternative.

***Land Use Impacts (Section 32.3).*** Commenters stated that the Glovers Lane alternatives would be inconsistent with Farmington City's land-use plans and conservation easements. Other commenters stated that there should not be any more development in western Davis or Weber Counties.

***Community Impacts (Section 32.5.1).*** Commenters stated that residents along the Shepard Lane alternative bought their homes knowing that they were on a future transportation corridor, so any community impacts in these neighborhoods should not be considered community impacts or that the community impacts should be discounted. Other comments stated that the action alternatives would divide communities, decrease the quality of life, and be a nuisance to the public.

***Relocations (Section 32.5.6).*** Commenters wanted information about how property would be acquired; specifically, does UDOT pay for only minor impacts to property, when will property be acquired, how much time would residents have to move out, and does UDOT compensate for a decrease in property value for homes that are left remaining near an alternative? Commenters also questioned the impacts to homes within 250 feet, 500 feet, or other distances from the WDC alternatives.

**Transportation (Section 32.7).** Commenters stated that the WDC alternatives would cause congestion on I-15, on Legacy Parkway, at the northern terminus of the WDC in Weber County, or at interchange locations. Other commenters stated that the WDC alternatives would cause the Utah Transit Authority’s (UTA) FrontRunner commuter-rail system to remain underutilized.

**Economics (Section 32.8).** Commenters stated that property values will decrease in areas near the action alternatives and that UDOT should provide compensation for decreased property values.

**Air Quality (Sections 32.11.1, 32.11.2, 32.11.3, and 32.11.4).** Commenters expressed concerns about the increase in air pollution from the action alternatives and the health effects of the pollutants, noting that Davis County already has bad winter inversions, and that a WDC would make the pollution levels and winter inversions worse. Other comments noted or referenced scientific studies that conclude that roads are correlated with, or could cause, various health problems. The commenters also stated that the proposed WDC would place several neighborhoods and schools in this “deadly zone” near the new freeway. The referenced studies found that some of the increased health risks include cancer (leukemia), asthma, autism, respiratory illness, premature and low-weight births, heart disease, and stroke. Other commenters stated concerns about the WDC alternatives’ greenhouse gas emissions and climate change impacts.

**Noise (Section 32.12).** Commenters stated concerns that there are no noise walls proposed as part of the WDC alternatives. Commenters stated that noise walls should be included as part of any approved WDC alternative.

**Water Quality (Section 32.13).** Commenters stated that the WDC alternatives would cause water quality impacts to the Great Salt Lake and streams due to stormwater runoff from the WDC alternatives.

**Ecosystems – Wildlife Habitat (Section 32.14.2).** Commenters stated concerns about the impacts of the WDC on the Great Salt Lake ecosystem, the Great Salt Lake Shorelands Preserve, and the Farmington Bay Waterfowl Management Area. Some commenters stated that all of these areas should be considered high-quality and irreplaceable, and no impacts should be tolerated. Other commenters questioned the mitigation plan for impacts to these resources. Other commenters stated that the WDC alternatives would have substantial direct and indirect impacts to wildlife habitat, impacts that would extend thousands of yards away from the WDC alternatives. Other commenters stated concerns about impacts to specific wildlife species, such as bald eagles.

**Ecosystems – Wetlands (Section 32.14.3).** Commenters stated concerns over wetland impacts and stated that the UDOT locally preferred alternative might not be the least environmentally damaging practicable alternative under the Clean Water Act. Other comments requested more detailed information about the type and locations of wetland mitigation areas for the WDC Project or included questions about areas that were identified as wetlands.

**Floodplains (Section 32.15).** Commenters stated concerns over the Glovers Lane alternatives being located in the Great Salt Lake floodplain. Commenters also stated that the Glovers Lane alternatives would cause flooding east of the roadway.

**Visual Resources (Section 32.18).** Commenters stated that there would be substantial visual impacts and light pollution from an elevated WDC.

**Indirect Effects (Section 32.23).** Commenters stated that the action alternatives would cause more urban sprawl and so would result in other resource-related indirect effects. Others commented that the WDC would change the nature of surrounding land uses. Farmington City commented that the Glovers Lane alternatives would affect future land uses around the WDC in Farmington.

**Cumulative Impacts (Section 32.24).** Commenters stated that the cost and impacts of the planned Shepard Lane local interchange should have been included with the Glovers Lane alternatives. Other comments stated that the cumulative impacts analysis should have included a broader area, included more transportation or other development projects, performed different types of ecosystem or air quality analyses, or used different assumptions in these analyses.

**Section 4(f) Evaluation (Section 32.27).** Commenters stated that the Farmington conservation easements should have been considered Section 4(f) resources. Other commenters stated that impacts to the Farmington Bay Waterfowl Management Area or the Great Salt Lake Shorelands Preserve should have been considered Section 4(f) uses.

## 32.1 Chapter 1 – Purpose of and Need for Action

### 32.1.1 Section 1.2 – Description of the Needs Assessment Study Area

- A.** *Commenters stated that the WDC should have gone farther north than 4000 South in Weber County and should have connected to I-15 or Interstate 84 [I-84] or extended north to Brigham City. Other commenters stated that UDOT should have used a date beyond 2040 or considered traffic demand beyond 2040 when developing the need for the project.*

Section 1.2, Description of the Needs Assessment Study Area, explains why the WDC study area was selected. For the WDC Project, the WDC team used the projected travel demand out to the year 2040, taking into account the other proposed planned transportation projects included in the Wasatch Front Regional Transportation Plan 2015–2040, to determine the need for the WDC.

Based on travel demand model maintained by the Wasatch Front Regional Council, there was no need in 2040 for the WDC to extend north of 4000 South in Weber County.

Planning for 2040 is consistent with Federal Highway Administration (FHWA) transportation planning guidelines. Year 2040 is considered the reasonably foreseeable planning year for the

#### What is travel demand?

*Travel demand* refers to the forecasted amount of travel on existing and future roads.

WDC Project since the most recent demographic projections, transportation plans, and land-use plans use this date as their planning horizon.

- B.** *Commenters questioned the travel demand model that was used for the project. Specifically, the commenters questioned the input and output data files that were used, how many significant digits were used with these files, the rounding that was used with these files, the uncertainty in the model, and the statistical accuracy of the data that were used in the model. The commenters also requested additional documentation that describes the accuracy of the model.*

The number of significant digits for all input data to the travel demand model used for the WDC EIS is consistent with data provided in the original Wasatch Front Regional Council model. Some of the socioeconomic data files provided in the original model had fractional values for households, population, and employment. These fractional values were rounded by the WDC team. No other attempt was made to vary or alter the number of digits used from those provided in the original model.

The number of significant digits used for output data varied depending on what the output was. The travel demand model is not a stochastic model (a model that allows for random variation in one or more inputs over time), so, with all input data being the same, the margin of error from those inputs should also be substantially the same for all alternatives. In this way, alternatives can reasonably be compared against each other.

The Wasatch Front Regional Council has performed model validation at all levels of the model including land use, trip generation, trip distribution, mode split, and assignment. Validation is an ongoing process as new data are collected, but the current model has been approved for regional planning and refined corridor analysis. The validation performed by the WDC team and described in travel demand technical reports (available on the WDC website at [www.udot.utah.gov/westdavis/documentation#technical\\_memos](http://www.udot.utah.gov/westdavis/documentation#technical_memos)) was to ensure that the modifications that were made to the travel demand model still provided results consistent with or better than those from the original Wasatch Front Regional Council model.

#### **What is a travel demand model?**

A travel demand model is a state-of-the-practice tool that allows transportation analysts to input various land-use and growth scenarios to predict the amount of traffic expected in the future and to test road and transit networks with this predicted traffic.

The travel demand model used for the WDC Project is maintained by the Wasatch Front Regional Council.



- C.** *Farmington City stated that the selected study area is improperly drawn in several respects. The first is the decision to use I-15 as a boundary. It is clear the purpose of the project is to find a solution to an alleged regional set of problems and need. Arbitrarily bisecting the region by a north-south line at I-15 forecloses the review of the entire regional need and the review of all reasonable alternatives. It is also the City’s belief that the logical terminus lies at I-15 somewhere north of 12th South in Ogden. As currently contemplated, the project basically ends in no man’s land and will not provide a complete future route through and around Ogden. To the south, even the 2040 traffic numbers show (at best) minimal need in Farmington and Kaysville, save on I-15 north of Shepard Lane. Simply widening I-15 in this area should solve that problem and that alternative must be studied. The improperly drawn study area has failed to capture all of the regional need and has resulted in the selection of a preferred alignment that creates severe, irreversible and unnecessary impacts, because all reasonable alternatives were not reviewed.*

Section 1.2, Description of the Needs Assessment Study Area, explains why the study area for the WDC Project was selected. A more-detailed description of the study area is also provided in *Technical Memorandum 3: EIS Transportation Need Study Area*. The limits of the study area for the needs assessment were developed using the projected travel demand in 2040. The travel demand in this area was developed initially for the Draft EIS using version 7.0 of the Wasatch Front Regional Council’s travel demand model and was verified with version 8.1 of the model for this Final EIS. The study area is based on the expected population, employment, household, and land-use conditions in 2040 as described in the Wasatch Front Regional Transportation Plan 2015–2040. Additionally, as discussed in response 32.1.2K, the WDC team also coordinated with Farmington City on inputs into the model.

#### What is the WDC study area?

The WDC study area, also called the needs assessment study area, is the area described in Section 1.2, Description of the Needs Assessment Study Area.

**Northern Boundary.** The WDC team established the northern boundary of the needs assessment study area based on the projections of population growth, development, and related travel in the region in 2040. The Wasatch Front Regional Council travel projections for 2040 indicate that, north of 4000 South in Hooper and West Haven, the travel demand on the road system will operate with an acceptable level of service of LOS D or better, and there will be no need for transportation improvements beyond the planned improvements north of 4000 South.

#### What is level of service?

Level of service is a measure of the operating conditions on a road or at an intersection. Level of service is represented by a letter “grade” ranging from A (free-flowing traffic and little delay) to F (extremely congested, stop-and-go traffic and excessive delay). LOS B through LOS E represent progressively worse operating conditions.

The initial northern boundary for the needs assessment study area—12th South in Weber County—was identified in the January 2010 Notice of Intent and the May 2010 release to the public of the project’s draft purpose and need statement. The WDC team developed this boundary using version 6.0 of the travel demand

model maintained by the Wasatch Front Regional Council. In June 2011, the Wasatch Front Regional Council released version 7.0 of the model and released a new Regional Transportation Plan that includes transportation-related improvements out to the year 2040.

UDOT used version 7.0 of the model for the Draft EIS to conduct a sensitivity analysis to determine whether the decisions about the boundaries of the needs assessment study area, which were made with version 6.0 of the model, were still valid with version 7.0 of the model. Based on the sensitivity analysis, the northern boundary of the study area was moved south from 12th South to about 4000 South. For more information, see the Summary section of *Technical Memorandum 15: Alternatives Screening Report*. For this Final EIS, UDOT conducted another sensitivity analysis using version 8.1 of the model and determined that the northern boundary used for the Draft EIS (4000 South) was still valid.

**Southern Boundary.** The WDC team established the southern boundary of the needs assessment study area using the Wasatch Front Regional Council’s travel projections for 2040, which show that transportation needs south of this boundary would be met by the planned improvements to the existing transportation system (I-15, Legacy Parkway, U.S. Highway 89 [US 89], and the FrontRunner commuter-rail system). Although the need for the WDC in Farmington and the southern extent of Kaysville is not substantial, the WDC needs to connect logically into the existing transportation system of I-15 and Legacy Parkway to meet the project’s purpose.

**Western Boundary.** The western boundary of the needs assessment study area is based on the location of the Great Salt Lake and the sensitive habitats associated with the lake.

**Eastern Boundary.** The eastern boundary of the needs assessment study area is the I-15 corridor (including I-15 and the FrontRunner commuter-rail line) and is based on the projected transportation system and travel demand in the region in 2040. It is clear that the majority of the future population growth will occur west of I-15. For example, west of I-15 the population is estimated to grow by 99,000 as compared to 23,000 east of I-15. This increased growth will bring with it increased travel demand. As shown in Table 32.1-1, most congestion in the study area for the Draft EIS in 2040 is projected to be west of I-15.

**Table 32.1-1. Locations of Projected Delay and Congestion in Davis and Weber Counties in 2040**

Traffic Parameter	West of I-15	East of I-15
Daily delay (hours)	6,060	2,790
Vehicle-miles traveled in congestion	98,600	26,400
Vehicle-hours traveled in congestion	6,140	1,650
East-west miles in congestion	25.8	4.6
North-south miles in congestion	18.5	6.7

The I-15 corridor is also the eastern boundary because transportation improvements east of this highway, such as on US 89, would have little effect on north-south or east-west travel west of I-15, and improvements to east-west arterials east of I-15 would have little benefit west of I-15. To demonstrate this point, the WDC team modeled a hypothetical four-lane

freeway on the east side of I-15 midway between I-15 and US 89. Despite the size and scale of this improvement, it had minor benefits to traffic conditions west of I-15, as shown in Table 32.1-2.

**Table 32.1-2. Projected Benefits in the WDC Study Area from Transportation Improvements West and East of I-15 in 2040**

Traffic Parameter	No Action	Improvements West of I-15	Improvements East of I-15
Daily delay (hours)	10,760	7,797 (-27.6%)	10,000 (-7.1%)
Vehicle-miles traveled in congestion	245,500	98,880 (-59%)	239,800 (-2.3%)
Vehicle-hours traveled in congestion	9,490	4,980 (-47%)	8,980 (-5.4%)
East-west miles in congestion	26.9	16 (-37%)	24.6 (-8.6%)
North-south miles in congestion	43.5	19 (-57%)	42.8 (-1.6%)

For more information about the boundaries of the needs assessment study area, see *Technical Memorandum 3: EIS Transportation Need Study Area*.

Finally, the WDC is a regional project and is not intended only to reduce congestion on I-15 through Farmington. If the need were only to reduce congestion on I-15 through this area, the purpose of the project would be substantially different. Also see responses 3.2.1Q and 3.2.1T.

- D.** *Commenters questioned the demographic data and projections for the project. Commenters questioned the source of the data, whether the projections assumed the construction of the WDC, and how a 63% increase in population results in a 90% increase in households.*

As described in Chapter 1, Purpose of and Need for Action, the predicted growth in the WDC study area is based on demographic data from the Utah Governor’s Office of Management and Budget. The demographic data are based on natural growth (number of births and deaths) and immigration or emigration (people moving into or out of the area). Roads, including the WDC, are not a variable in the demographic projections. The Wasatch Front Regional Council used the demographic data at the county level from the Office of Management and Budget to generate population, households, and employment projections in 2040 for the WDC study area based on local land-use and transportation plans. Based on this information, the Wasatch Front Regional Council determines which new projects, such as the WDC Project, should be included in the Regional Transportation Plan.

The future population and household projections from the Governor’s Office of Management and Budget and the Wasatch Front Regional Council assume that the average household size in the WDC study area will decrease in the future, which explains why the number of households increases faster than the increase in population. As stated on page 1-12 of the Draft EIS, population was expected to grow to 255,000 by 2040 (a 63% increase), and the number of households was expected to increase to 91,000 (90%) by 2040. There would be a greater increase in the number of households by 2040 because the average household size was expected to decrease from 3.25 in 2011 to 2.80 by 2040. The population and household

changes in this Final EIS are similar, with a 41% increase in population expected by 2040 and a 65% increase in the number of households (see Chapter 1, Purpose of and Need for Action).

### 32.1.2 Section 1.4 – Summary of Purpose and Need

**A. Commenters questioned why the WDC is needed or stated that the WDC is not needed.**

Section 1.4.2, Need for the Project, explains why the WDC is being proposed. The major transportation needs are a result of the rapidly growing population and employment projected for the needs assessment study area. The existing road network in the study area and the transportation network to the west of I-15 consist primarily of arterial streets that are not intended to accommodate a high volume of long-distance trips, freight movements, or efficient transit (bus) use. These conditions in the absence of the WDC (No-Action conditions) will result in the following deficiencies in the needs assessment study area in 2040:

- Decreased mobility and increased traffic congestion in the AM and PM peak-period travel period (inadequate roadway capacity).
- Lack of adequate north-south transportation capacity to serve the main travel direction (north to south) in the AM and PM peak-period travel period. This will lead to increased east-west congestion.
- Increased user delay and lost productivity.
- Inadequate interconnection of transportation modes.
- Lack of continuous pedestrian/bicycle facilities.

**What are peak periods?**

Peak periods are the periods of the day with the greatest amounts of traffic. The AM (morning) peak period is from 6 AM to 9 AM, and the PM (afternoon) peak period is from 3 PM to 6 PM. Peak periods are looked at by transportation officials when examining the need for a project.

As shown in Section 1.4.2, Need for the Project, without the WDC, the user delay by 2040 is expected to increase by 62% (from 11,320 hours in 2015 to 18,310 in 2040), and the total miles traveled in congestion are expected to increase by 50% (from 429,200 miles in 2015 to 642,000 in 2040), demonstrating a strong need for a transportation improvement.

**B. Commenters agreed with need for the WDC.**

Comments noted.

**C. Commenters stated that UDOT should have different goals (for example, reducing air pollution, encouraging better use of FrontRunner, reducing the use of personal vehicles, providing better healthcare, improving education, encouraging different land-use patterns, or preserving farmland) or that the WDC Project is not consistent with UDOT's mandate**

*(to preserve infrastructure, optimize mobility, improve safety, and strengthen the economy). Other commenters stated that the WDC Project was not consistent with the FHWA Livability Initiative. Other commenters stated that there is a requirement for highway projects to have intermodal components.*

The WDC Project was initiated to look at regional congestion in western Davis and Weber Counties. The WDC team performed an extensive evaluation as described in Chapter 1, Purpose of and Need for Action, to determine whether the project is needed. Based on the need, a project purpose of improving regional mobility was developed. The purpose does not describe modes that must be used to meet the purpose. The alternatives considered to meet the project purpose did include a transit alternative, which included increased use of FrontRunner and making transit more accessible by reducing walk-to-transit distance, reducing transit transfer times, and increasing transit ridership by looking at various options including locating stops near higher-household-density locations. Thus the transit analysis did include options to reduce vehicle use.

Additionally, UDOT evaluated a Shared Solution Alternative that included combining all of these elements plus innovative intersections, complete streets, and changes to land use. There are no requirements that projects must have intermodal connections or transit components. The Wasatch Front Regional Transportation Plan 2015–2040 identifies different modal projects (including road, transit, bicycle, and pedestrian projects) that are needed in the WDC study area.

The purpose of and need for the WDC are consistent with UDOT’s mandate to optimize mobility. As stated in UDOT’s 2013 Strategic Direction, optimizing mobility includes the need to add capacity to the roadway network. The WDC would help UDOT meet its mandate.

The FHWA Livability Initiative ([www.fhwa.dot.gov/livability](http://www.fhwa.dot.gov/livability)) does not prescribe or mandate particular projects, outcomes, modes, or solutions. The FHWA Livability Initiative is intended to direct FHWA to support sustainable communities in conjunction with other efforts undertaken by the U.S. Department of Housing and Urban Development and the U.S. Environmental Protection Agency.

Other goals such as reducing air quality, providing better health care, preserving farmland, and improving education are not goals that will help solve the transportation need. These goals were considered in alternatives development and analyzed as part of the impacts of the WDC. For example, as part of the alternatives-development process, the WDC team tried to avoid impacts to farmland.

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- D.** *Commenters stated that a need for the project or a secondary objective should be to provide an alternate route to I-15 for safety and security in emergency situations.*

Based on the needs assessment described in Chapter 1, Purpose of and Need for Action, the project purpose is to improve regional mobility. The purpose is based on an extensive evaluation of the transportation problems expected in the area by 2040. The WDC team considered an alternate-route criterion in comparing the Shepard Lane and Glovers Lane

interchanges, as documented in *Technical Memorandum 19: Traffic Performance and Engineering Design of Shepard Lane and Glovers Lane Area Alternatives*. This evaluation concluded that the Glovers Lane Option would provide an alternative route if an incident occurred on I-15.

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- E. *Commenters questioned whether there was enough space available to accommodate the predicted growth in the WDC study area.*

The predicted population growth in the WDC study area is based on data from the Utah Governor's Office of Management and Budget, which develops its forecasts based on local land-use plans and the amount of land available to accommodate the growth.

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- F. *Farmington City stated that there are also two levels of need—regional and local. By way of example, as to regional need, the 2040 employment numbers for Davis and Weber Counties are high (an increase of 42% and 66%, respectively). It would appear local employment opportunities are increasing and the anticipated use of I-15 for north-south commuter traffic may not come to pass. More work must be accomplished in this regard, together with a review of the preference of the younger workers in the area to work locally. Also, one of the articulated future needs is to facilitate freight trips, yet the Draft EIS states that trucks will account for only 6% of the trips on the WDC in 2040. This does not make sense from a logical or a planning perspective. An inconsistency appears to be created by some of the information in this chapter. At p. 8-2 it is noted that employment was up in Davis County by 61.8% and in Weber County by 41.9% from 1990–2011 and the 2040 numbers demonstrate an increase of 49% for both counties. With this significant increase in employment in the area it would appear the commuter-based need for north-south traffic has been and will continue to decline. It may be that a paradigm shift has begun to occur that will continue through 2040. The trend is toward more local employment and living, rather than a more traditional, commuter-based, suburban lifestyle. Additional work in this regard must be accomplished by the Wasatch Front Regional Council, FHWA, and UDOT to ensure that roads are not being built based on the old paradigm.*

The WDC team used the latest version of the Wasatch Front Regional Council's travel demand model. The needs assessment for 2040 included the proposed future land-use plans and population and employment projections provided by the local municipalities to the Wasatch Front Regional Council. These plans include more local employment opportunities for workers, including younger workers, such as the Falcon Hill development in Layton and commercial areas in Layton and Farmington. Although the percentage of north-south travel is expected to decrease from 2015 to 2040, the total number of trips and the total number of north-south trips in the WDC study area are still expected to increase from 2015 to 2040, and there is still an increased need to improve both east-west and north-south travel.

For the Final EIS, the WDC team updated the travel pattern analysis based on new socioeconomic data, which included substantial growth in employment in Farmington. The new analysis shows that, between 2015 and 2040, the north-south travel demand is expected

to increase by 2 percentage points, from 38% in 2015 to 40% in 2040. Some of this increase can be attributed to workers traveling north-south to the large employment center in Farmington.

The commenter is correct regarding the percentage of anticipated freight trips on the WDC for the Draft EIS; however, 6% is not an insubstantial number. Updated traffic modeling for the Final EIS anticipates a total of 8% truck traffic in 2040 (5% medium trucks and 3% heavy trucks). The Final EIS traffic analysis has been updated to reflect these anticipated truck percentages. Also, by improving north-south regional mobility, congestion on I-15, which has substantial freight traffic of over 15%, would be reduced. Thus, the WDC would facilitate regional freight trips.

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- G.** *Farmington City stated that updated employment data from the City will increase the 2040 projections more than shown in Chart 1-1. Farmington City also stated that Figure 1-5 significantly underestimates employment growth. West Farmington may experience employment totals up to 27,000 people.*

For the EIS, the WDC team used population and employment projections for 2040 provided by the Wasatch Front Regional Council, which used population projections provided by the Utah Governor’s Office of Management and Budget for 2040. The projections were then reviewed by each City and in coordination with the Wasatch Front Regional Council and were then allocated to specific zones (traffic analysis zones) within each city where the City expects future growth. The population and employment projections provided by the Governor’s Office of Management and Budget are considered the official source of such data and are the standard to use in transportation planning.

The WDC team worked with Farmington City in 2010 regarding population and employment numbers. The WDC team then worked with the Wasatch Front Regional Council to ensure that the totals were accurate and could be included in the travel demand model and used in the EIS. Farmington City worked with the Wasatch Front Regional Council on new population and employment numbers as part of the Wasatch Front Regional Transportation Plan 2015–2040, which was used in the development of this Final EIS.

The chart mentioned in the comment provides general growth for the WDC study area, not for each specific city. Increasing the employment numbers would slightly increase the need and thus would not change the reason why the project is being considered. Throughout the EIS process, UDOT has worked with both Farmington City and the Wasatch Front Regional Council regarding population and employment numbers to include in the EIS.

- H. *Commenters stated that, if gas prices increase, there will not be as much demand for driving, and there will not be a need for the WDC. Others commented that there has been a substantial reduction in vehicle-miles traveled since 2004, and this trend will continue as the younger population moves to other modes of transportation and shorter commute times.*

As stated in Chapter 1, Purpose of and Need for Action, in the Draft EIS, the WDC study area population and employment are expected to increase by 63% and 49%, respectively, by 2040, which would likely result in higher vehicle-miles traveled (VMT). The Wasatch Front Regional Council, not UDOT, is responsible for determining VMT, and the Wasatch Front Regional Council's VMT estimates are included in its travel demand model. The Wasatch Front Regional Council frequently updates its travel demand model and calibrates the data based on recent monitored traffic data. The most recent version of the Wasatch Front Regional Council's travel demand model was used for the WDC Project. For this Final EIS, UDOT used version 8.1 of the model, which was released in late 2015.

The U.S. economic slowdown that started in late 2007, along with higher gas prices, has resulted in a leveling off of VMT. The cumulative travel for 2011 showed that, during the economic recession from 2007 to 2011, there was a nationwide reduction in VMT of  $-2.8\%$ . However, data for Utah showed a  $4.5\%$  increase in VMT between 2005 and 2012 despite the economic recession and an increase in gas prices. The peak VMT in Utah occurred in 2007 at 26.82 billion VMT. Since the low of 25.88 billion VMT in Utah in 2008, VMT increased to near pre-recession levels at 26.70 billion VMT in 2013. Utah had the third-highest VMT growth rate in the United States from 2012 to 2013 ( $4.2\%$ ). These data suggest that Utah's VMT growth rates are different than the national trend, in which VMT decreased from 2013 to 2014 (by  $-1.1\%$ ).

Since 1970, there have been three periods (1974, 1979–1980, and 2007–2011) when VMT has declined as a result of spikes in gas prices, gas shortages, and economic recession (Polzin 2006). The first two declines were followed by subsequent years of increases in VMT. For example, since the decline in VMT in 1980, there was an increase in VMT until the recent economic recession. These historical data show that rising gas prices and/or economic recessions tend to encourage the use of more fuel-efficient vehicles or alternative-fuel vehicles, which over time would diminish the impact of higher gas prices on travel behavior. UDOT believes that recent data have shown that VMT is still increasing in Utah, and that this VMT trend is accurately and reasonably incorporated into the travel demand model used for the WDC Project. Also note that gas prices are difficult to predict, as shown by the substantial drop in prices in mid-2015.

In addition, many factors other than gas prices influence travel demand—for example, population growth, employment growth, and differences in the availability and cost of housing in different parts of a metropolitan area. Therefore, while rising gas prices and/or economic recessions might tend to reduce the growth in VMT, at least in the short term, it is likely that VMT will continue to increase, especially in rapidly growing regions such as the Wasatch Front.



Also, Utah has the fastest-growing population in the United States, the youngest age at marriage, and the largest family size. This makes Utah far different than the national average. A market study completed for the WDC EIS process predicts that there will continue to be a demand for predominantly single-family homes in the WDC study area. The market study concludes that the market demand for single-family homes will greatly exceed the demand for higher-density residential units, multi-family residential units, and residential units in mixed-use areas (RCLCO 2015). This trend is demonstrated by recent discussions with representatives from Syracuse and Layton Cities, both of whom stated that there is still a large demand in their cities for inexpensive single-family homes for younger couples.

The continued growth in the number of single-family homes after the recession is shown in Table 32.1-3. The continued growth in the number of single-family homes in western Davis County will likely result in an increase in overall VMT, even with a slight reduction in per-capita VMT.

**Table 32.1-3. Building Permits in the WDC Study Area**

Year	Housing Type		
	Single-Family Permits	Multi-Family Permits (Number of Units)	Total Permits (Number of Units)
2007	1,571	13 (44)	1,584 (1,615)
2008	758	15 (254)	773 (1,012)
2009	895	15 (73)	910 (968)
2010	871	14 (70)	885 (941)
2011	671	14 (388)	685 (1,059)
2012	1,065	34 (487)	1,099 (1,552)
2013	1,104	30 (168)	1,134 (1,272)
2014	954	27 (256)	981 (1,210)
2015	1,197	54 (245)	1,251 (1,442)

As shown in the most recent 2012 Wasatch Front Regional Council household survey, there was a slight drop in the number of daily household trips compared to the 1992 survey (from 4.72 to 4.67); however, even if this drop does relate to a slight drop in per-capita VMT in the future, this result does not mean that VMT overall will decrease. This conclusion is based on the fact that the WDC study area is projected to have about 75,000 more people by 2040. Even with a slight decrease in per-capita VMT overall, an increase in VMT will lead to increased congestion. This conclusion is further supported by Utah having the highest population growth rate in the country and the youngest population.

Given these factors, the changes in gas prices and the past economic recession do not warrant developing new traffic forecasts based on the assumption of lower VMT. Instead, this EIS continues to use traffic forecasts generated from the current, approved travel demand model from the Wasatch Front Regional Council for the WDC study area.

- I. *A commenter stated that there is not a need for the WDC because UDOT should have quantified the loss in productivity and reduction in travel time on a per-capita basis. The commenter stated that, if UDOT had quantified the loss in productivity and reduction in travel time on a per-capita basis, it would show less of a need for the WDC. The commenter stated that the WDC would take only 30% of the trips off I-15 and that differences in travel times between the 2040 No-Action Alternative and the action alternatives would not be very substantial. Other commenters stated that there should have been a threshold or feasibility/ reasonableness criteria for evaluating the user delay or lost productivity for the project.*

The commenters state that the purpose of and need for the WDC Project should be strictly focused on lost productivity and travel times and believe that these metrics should have been evaluated on a per-capita basis.

Although information on both lost productivity and travel times is provided in Chapter 1, Purpose of and Need for Action of the EIS, as stated in Chapter 1 of the EIS, the purpose of the WDC Project is to improve regional mobility and enhance peak-period mobility in the WDC study area. As described in *Technical Memorandum 15: Alternatives Screening Report*, when evaluating No-Action conditions and action alternatives, the WDC team used the following five measures of effectiveness to evaluate how well the alternatives met the purpose of the project: total daily delay, lane-miles of north-south roads in congestion, lane-miles of east-west roads in congestion, vehicle-miles traveled in congestion, and vehicle-hours traveled in congestion. The reductions in these five measures from the action alternatives compared to reductions with the 2040 No-Action Alternative were used to show how well the alternatives improved regional mobility and enhanced peak-period mobility.

Although the population in the WDC study area is an input into the travel demand model, it is not a specific goal or purpose of the WDC Project to achieve a certain level of transportation performance for each person. UDOT's focus is on improving the transportation network for the people using the network. Since many people in the WDC study area do not use the roads or do not use the roads during peak-period hours, there is no reason to evaluate these metrics on a per-capita basis. Doing so would not provide any useful information about the relative effectiveness of the alternatives to improve regional mobility or enhance peak-period mobility.

As described in *Technical Memorandum 15: Alternatives Screening Report*, and Chapter 2, Alternatives, of the Draft EIS, compared to the No-Action Alternative, the WDC alternatives (Alternatives A1, A2, B1, and B2) advanced for analysis in the EIS would, depending on the alternative, reduce daily total delay in the WDC study area by 27% to 28%, would reduce the lane-miles of north-south roads in congestion by 55% to 63%, would reduce the lane-miles of east-west roads in congestion by 35% to 37%, would reduce the vehicle-miles traveled in congestion by 58% to 60%, and would reduce the vehicle-hours traveled in congestion by 46% to 49%. Furthermore, as described in Chapter 8, Economics, of the Draft EIS, the WDC alternatives would result in annual congestion cost savings of \$27 million to \$28 million because of reductions in congestion. These data were updated for the Final EIS using version 8.1 of the travel demand model, which found similar reductions, with daily delay being reduced by 26% and east-west lane miles of congestion by 52%. Additionally, vehicle-

miles traveled in congestion would be reduced by 32% and vehicle-hours traveled in congestion by 35%.

It might be helpful to clarify that the purpose of the WDC Project is not to achieve a certain reduction (5%, 10%, etc.) in travel time for a specific person or for someone making a particular trip (for example, from Salt Lake City to Hooper), but rather to improve regional mobility and enhance peak-period mobility. Similarly, the purpose of the WDC Project is not to eliminate all congestion in 2040. As described in *Technical Memorandum 15: Alternatives Screening Report* and Chapter 2, Alternatives, of the EIS, there would still be some roadway congestion, and travel times for some motorists might be similar to current conditions or not much faster than conditions in 2040 with the No-Action Alternative. However, the results of the travel demand model show that implementing one of the WDC alternatives would substantially reduce daily total delay, lane-miles of north-south roads in congestion, lane-miles of east-west roads in congestion, vehicle-miles traveled in congestion, and vehicle-hours traveled in congestion on the transportation network in the WDC study area. See response 32.1.2J regarding the highway benefits to individual users.

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- J.** *The Western Resource Advocates commented that an independent review of the transportation model files shows: (1) most of the roadways in the study are forecast to be uncongested in 2040; (2) areas that are congested are far to the east of the WDC; (3) congestion is mostly during the PM peak hours; (4) the WDC does not remove all of this congestion; and, (5) the WDC increases congestion north of the WDC. Based on this review, most residents in existing housing would save little time in 2040 on an afternoon return trip from Salt Lake City, and the primary time savings would come from those living in future housing further west near the proposed WDC route. The Draft EIS analysis is biased towards exaggerating the amount of usage by these future residents, thereby exaggerating the benefits of the WDC. The transportation model used for the WDC analysis is based on a 1992 household survey and 2009 traffic volumes. In fact, per-capita VMT [vehicle-miles traveled] peaked in 2004 and has continued to decline since then, something not accounted for in the Draft EIS. There are a number of reasons for this decline, including the aging population, revitalization of urban cores, higher energy prices, and investments in alternate modes of transportation. There is a particularly large downward trend in VMT by young adults compared to past generations. Therefore, the uncertainty associated with the Wasatch Front Regional Council model is mostly in the direction of overestimating future traffic volumes, particularly during peak hours.*

See response 32.1.2H regarding VMT increase and changes in population and demand for travel modes. Chapter 28, List of Preparers, lists the traffic modeling experts on the project team who reviewed all traffic data to ensure its accuracy compared to actual conditions. In addition, UDOT experts verified all assumptions used in the Wasatch Front Regional Council's travel demand model.

The Wasatch Front Regional Council is the local government agency responsible for traffic forecasting along the Wasatch Front. The Wasatch Front Regional Council's travel demand model is a state-of-the-practice model that predicts travel demand and is used by the Wasatch

Front Regional Council, UDOT, UTA, FHWA, and the Federal Transit Administration (FTA) to determine the need for transportation projects. The model is calibrated to actual, observed traffic conditions and meets an advanced practice guideline by FHWA and FTA for similarly sized areas. Further, FHWA traffic experts and other independent consultant traffic experts reviewed the traffic analysis memoranda prepared for the WDC Project (technical memoranda 4, 6, and 7). The Wasatch Front Regional Council modeling was used to predict all related traffic congestion and VMT for the WDC No-Action and action alternatives. The WDC team reviewed the independent review document provided as part of the comment and has the following responses.

**Model Uncertainty.** As with any simulation model, there are uncertainties associated with forecasts, and any forecast is considered a snapshot in time based on the best available information at the time of the forecast. Uncertainties in model output can result from the input data such as the future (2040) population, employment, and household forecast as well as from the model's structure.

The Wasatch Front Regional Council's travel demand model was used to predict future (2040) traffic projections for the WDC Project. The Wasatch Front Regional Council states that the range of uncertainty for this model falls within the acceptable confidence intervals found in FHWA's *Travel Model Validation and Reasonableness Checking Manual* (FHWA 2010). This document was developed for travel demand forecasting staff to help validate model output.

Part of the model-validation process described in the document includes reasonableness and sensitivity testing for each model element. Although WFRC and FHWA agree that there is uncertainty in travel demand modeling, for environmental studies or alternatives analyses, they recommend using the travel model directly so that a comparison can be made among alternatives.

FHWA states that any technical limitations of travel models should not, in and of themselves, be sufficient cause to discredit the results of travel forecast for environmental decisions (FHWA 2010). Note that the uncertainties in travel demand forecasting could imply that the actual demand could be less than or greater than the model's predictions. By using WFRC's federally approved model, UDOT is able to rely on the best available estimates for travel demand and improved mobility measures for this EIS.

To address model uncertainties, the WDC team took measures to ensure that model version 8.1 reasonably predicted future travel conditions. The WDC team undertook an extensive data-collection effort to ensure the model's accuracy. This effort included using more-recent traffic volumes, modifying traffic analysis zones to better reflect land-use patterns in the WDC study area, and including recently completed projects.

The results of calibrating the model showed that the model refined for the WDC was within 3.9% of actual traffic count data compared to 8.1% from the non-calibrated WFRC model. In addition, the WDC team conducted a root-mean-squared-error analysis to determine how modifications to the model improved accuracy. This evaluation is used to calculate the effectiveness of general trip generation and distribution and assignment parameters. WFRC documentation notes that the percent of the travel demand evaluation should generally be less

than 40%. The results of the evaluation showed that the WDC calibration of version 8.1 of the travel demand model resulted in a 19% root-mean-squared error compared to 32% for the unmodified model. This shows a considerable improvement in the WDC modified model compared to the original unmodified model.

The WDC team believes that any modeling process would have some uncertainty; however, relying on the government entity (the Wasatch Front Regional Council) statutorily charged with developing state transportation plans based on projected need using a state-of-the-art travel demand model is currently the best available process to accurately reflect travel demand and to address uncertainty in future-year projections.

***Uncongested 2040 Roads.*** As described in Chapter 7, Transportation, of the Draft EIS, under the 2040 No-Action conditions, some of the roads in the WDC study area would be uncongested. However, the main through freeway (I-15) and many segments of the east-west arterials would operate at unacceptable levels of service. The WDC purpose and need in the Draft EIS show VMT in congestion in the WDC study area increasing by 378% between 2011 and 2040 and the lane-miles in congestion increasing by 229% over this same period. Despite some roads remaining uncongested, the data show that congestion will substantially increase in the future. These data were updated in this Final EIS with version 8.1 of the travel demand model, which shows a 50% increase in VMT in congestion and a 288% increase in east-west lane-miles in congestion.

***Congested Roads far to the East.*** The roads in the east part of the WDC study area, as noted in the comment, are included in the Wasatch Front Regional Council's travel demand model and the WDC study area. Under 2040 No-Action conditions, segments of these east-west roads, which provide the only access to I-15 from the western parts of the WDC study area, operate under congested conditions. The WDC traffic modeling showed that a four-lane highway located farther west in the WDC study area allowed many vehicles to access the WDC instead of traveling on the east-west arterials to I-15, thereby relieving congestion on these existing roads in the eastern part of the WDC study area.

Even though some roads would still operate under congested conditions with the WDC new highway alternatives, the Draft EIS alternatives would reduce hours of daily delay by about 27%, VMT in congestion by about 60%, and vehicle-hours traveled (VHT) in congestion by about 48%. This is a substantial regional mobility benefit from a single project. Furthermore, as described in Chapter 8, Economics, of the Draft EIS, the WDC new highway alternatives would result in annual user cost savings of \$27 million to \$28 million because of reductions in congestion. These data were updated for this Final EIS using version 8.1 of the travel demand model, which found similar reductions, with daily delay being reduced by 26% and east-west lane miles of congestion by 52%. Additionally, VMT in congestion would be reduced by 32% and VHT in congestion by 35%.

***Congestion Is in the PM Peak Period.*** Standard travel demand model practices used by UDOT and departments of transportation across the country, with FHWA approval, create solutions to provide capacity during the "peak period," or a period when traffic volumes are at their highest. Thus the commenter is correct that most congestion occurs in the PM peak period, with the second-highest period being the AM peak period.

***Remove All Congestion.*** The WDC was never intended to relieve all congestion in the WDC study area. As stated in Chapter 1, Purpose of and Need for Action, of the Draft EIS, the purpose of the project is to improve overall regional mobility. As shown in Chapter 2, Alternatives, of the Draft EIS, the WDC alternatives would reduce VMT in congestion by about 60% and VHT in congestion by about 48% compared to the No-Action Alternative. For the Final EIS based on version 8.1 of the Wasatch Front Regional Council's travel demand model, the WDC alternatives would reduce VMT in congestion by about 34% and VHT in congestion by about 39% compared to the No-Action Alternative. It would not be practical to develop an alternative that would eliminate all congestion on every road segment in the WDC study area. Even the Wasatch Front Regional Transportation Plan 2015–2040, which includes hundreds of projects, doesn't eliminate all congestion.

***Increase Congestion North of the WDC.*** The WDC team acknowledges that, as a result of the WDC new highway alternatives terminating at either 5500 South (Hooper) or 4000 South (West Haven), areas immediately north of this termination point would have more traffic. The increased traffic north of the WDC new highway alternatives is a result of motorists using the WDC instead of the east-west arterials and I-15, which helps to reduce congestion on those roads. UDOT is aware that, with the WDC preferred alternative, small, isolated segments of local city collector roads would operate at congested levels during the PM peak period on 5100 West (from 5100 South to 4800 South) in Hooper, 4700 West (just north of 4800 South) in West Haven, and 4300 West (5500 South to 5100 South) in West Haven. During the final design process for the WDC, which for the northern segment could be in 5 to 10 years, UDOT would review the traffic operations of these segments to determine what adjustments might help reduce congestion.

***1992 Utah Household Survey.*** For the Draft EIS, UDOT used version 7 of the Wasatch Front Regional Council's travel demand model, which is based on the 1992 Utah household survey. However, the household survey data were updated and refined by the Wasatch Front Regional Council using a 2001 national household survey, which was the most recent available at the time the model was updated. Typically, household surveys in Utah are conducted every 10 years. In 2001, a national household survey was completed. In lieu of conducting a 2002 Utah survey, the Wasatch Front Regional Council reviewed this national survey, adjusted it for local Utah conditions, and then adjusted its model to accurately reflect travel conditions along the Wasatch Front. This was the most current information at the time of the WDC modeling in 2011.

The latest Utah household survey was conducted in 2012. To further respond to the comment, information from the 2012 Utah household survey was compiled for the WDC study area and compared with the current model assumptions. The information in version 7 of the Wasatch Front Regional Council's travel demand model and in the 2012 Utah household survey is very similar, and using the information from the 2012 Utah household survey would not materially change the modeling results. For example, the number of daily per-person auto trips in the WDC study area is 4.72 in version 7 of the WDC travel demand model (1992 local/2001 national surveys) and 4.67 in the next version of the model (version 8.0) using the 2012 Utah household survey. However, for this Final EIS, UDOT decided to update the analysis with version 8.1 of the model, which includes the 2012 Utah household survey.

**Time Savings.** The need for the WDC is based on population and employment projections for 2040, so the commenter is correct that some of the benefit from the WDC would be to future as well as existing housing in the WDC study area, including future housing near the WDC. By placing the WDC where the future growth is expected, future as well as current residents can access the highway instead of using the congested east-west arterials and I-15. By designing for the expected growth in 2040, UDOT is conducting appropriate planning instead of being reactionary after the growth (and congestion) has occurred. The WDC action alternative land uses assumed planned growth as identified by the communities, including future roads as identified in the Wasatch Front Regional Transportation Plan 2015–2040.

The commenter’s report shows (in yellow) the area that would benefit from a time savings of “2 minutes or more” for vehicles traveling from the Salt Palace Convention Center in downtown Salt Lake City in the PM peak period. The area shown includes most of the WDC study area that would directly benefit from the WDC, including western Kaysville and Layton, Syracuse, West Point, West Haven, and Hooper. The commenter notes a time savings of 2 minutes or more per vehicle which, while technically correct, fails to recognize the actual time savings that would occur for many motorists. For example, the actual time savings for a driver traveling from downtown Salt Lake City to Syracuse (the intersection of Bluff Road and Antelope Drive) during the PM peak period would be 9.7 minutes. Looking at all of the travelers who would make the daily trip from Salt Lake City to the WDC study area during the 3-hour PM peak period, the total travel time benefit would be 1,100 hours per day. This is a substantial time savings for the evening commute. Even a 2-minute trip reduction, when multiplied by thousands of drivers for an extended period, adds up to a significant overall time savings and increase in economic efficiency. Here, the trip savings range from 2 minutes to almost 10 minutes, resulting in a significant overall benefit to the traveling public and the economy.

The WDC is not intended to provide a benefit to one driver but rather to improve overall regional mobility for all users of the transportation system in the WDC study area. If every road project were based on the improvement to one driver, very few projects would be built, since there would not be a large enough benefit. However, when considering projects, UDOT looks at all the users of the transportation system to determine whether the overall benefit is worth the transportation investment. In the case of the WDC, UDOT believes that a 25% reduction in overall user delay in the WDC study area from this one project is worth the transportation investment.

**Induced Growth.** The commenter assumes that the WDC new highway alternatives will partially induce growth in the WDC study area. However, the timing and types of development that would occur in any area are based on many variables, not just the presence or absence of a new highway. One must consider other factors such as projected population growth, available land, and the cost of housing compared to other areas of the region. Additionally, induced-growth effects from a new road would be most pronounced in an area that does not otherwise have any roadway access. In areas that already have transportation access, such as the WDC study area, the presence of a new highway or access to a new highway might contribute little if any to induced-growth effects.

In the case of western Davis and Weber Counties, an area that already has road access, a recently completed real estate market analysis (RCLCO 2015) concluded that the growth in single-family residences in these areas will occur independent of a new highway. The market analysis confirms what local planning officials expressed to UDOT during the initial EIS preparation process: that population, employment growth, and future land use in the WDC study area would generally be the same with or without the WDC. This conclusion has been validated in recent discussions (in 2015) with representatives from Kaysville City, Layton City, and Syracuse City, who stated that their cities continue to grow rapidly with single-family homes without the WDC and are expected to continue such growth in the future, even without the WDC.

A detailed discussion of induced growth and its effects is included in Chapter 23, Indirect Effects, of the Draft EIS. This analysis included methods recommended in National Cooperative Highway Research Program Report No. 466. UDOT believes that the induced-growth analysis in the Draft EIS is well-supported and reasonable.

***Induced Travel.*** UDOT believes that the travel demand model accurately estimates VMT and that there are no deficiencies. The Wasatch Front Regional Council’s travel demand model is a state-of-the-practice model that predicts traffic movement and is used by the Wasatch Front Regional Council and UDOT to determine the need for transportation projects. The model is the federally approved tool to determine air quality conformity along the Wasatch Front. The model is calibrated to actual, observed traffic conditions and meets an advanced practice guideline by FHWA and FTA for similarly sized areas. Also, the model is approved by FTA to predict transit ridership for future projects. The Wasatch Front Regional Council modeling was used to predict all related traffic congestion and VMT for the WDC No-Action and action alternatives.

As shown by the EIS analysis, VMT in 2040 is projected to be greater for the action alternatives than for the No-Action Alternative. The article “Empirical Evidence on Induced Traffic” (Goodwin 1996) states:

[A]n appropriate average value is given by an elasticity of traffic volume with respect to travel time of about  $-0.5$  in the short term, and up to  $-1.0$  in the long term.

This suggests that, in the long term, for every 1% decrease in travel time, the expected increase in traffic volume is 1% (that is, elasticity is 1.0). The WDC action alternatives would overall reduce VHT in the WDC study area by 3% and increase VMT by 3%. This is exactly the 1.0 elasticity expected by the research.

Note that FHWA recommends using VHT as the method to predict induced travel instead of changes in lane-miles, as suggested by a commenter on the EIS process. According to FHWA, by using changes in lane-miles, the importance of congestion is overlooked. This implies that additional traffic would be induced by the added capacity even if there were no congestion initially. This conclusion is contrary to well-established economic and travel behavior theory. In addition, despite the large number of empirical studies involving travel demand elasticities, there is very little agreement among researchers regarding acceptable



values of demand elasticities to use in estimating induced travel. Therefore, indiscriminate application of demand elasticities can substantially overestimate induced travel impacts.

To further evaluate induced growth based on a comment provided on the EIS, UDOT performed an evaluation for version 8.1 of the travel demand model that tested three projects: the WDC, improvements to US 89 in Davis and Weber Counties, and the Mountain View Corridor (MVC) freeway in Salt Lake County. The US 89 and MVC projects were chosen in an attempt to compare induced-travel-demand results with the results in the report *Wasatch Front Regional Council (WFRC) Model Sensitivity Testing and Training Study* (Cambridge report; Cambridge Systematics, Inc. 2003). UDOT’s methodology for evaluating induced demand was the same as that used for the Cambridge report, namely using the percent change in VMT and changes in lane-miles, although this is not the approach recommended by FHWA.

One purpose of the Cambridge report was to test the travel demand model’s ability to simulate induced travel. The report’s authors performed a literature review, which found that elasticities for all project types ranged from about 0.1 to 1.1 (Cambridge Systematics, Inc. 2003, Figures 2.1 and 2.2). The alternatives tested in the Cambridge report showed elasticities ranging from 0.08 to 1.23 based on percent changes in VMT and lane-miles in the travel demand model. The authors concluded that “the WFRC model is sensitive to changes in the highway network” and that “model elasticities fall within the expected range of acceptability based on comparisons with elasticities cited in a variety of research papers” (Cambridge Systematics, Inc. 2003, page 7-1).

The three projects tested for travel demand model versions 7.0 and 8.1 had elasticities ranging from 0.22 to 0.84. These results fall within the range of expected values based on the research of the Cambridge report and show that model versions 7.0 and 8.1 are able to simulate induced travel. Table 32.1-4 compares the elasticities generated by model versions 7.0 and 8.1 and the elasticities generated in the Cambridge report for the three projects mentioned above.

**Table 32.1-4. Comparison of Elasticities from Travel Demand Model Versions 7.0 and 8.1 and the Cambridge Report**

Project	Elasticity from Travel Demand Model Version 7.0	Elasticity from Travel Demand Model Version 8.1	Elasticity from Cambridge Report, Table 5.2
WDC Alternative B1	0.22	0.29	Not applicable
US 89 improvements	0.68	0.64	0.68
MVC freeway	0.77	0.84	1.23

The results for the MVC project using model versions 7.0 and 8.1 varied from those in the Cambridge report due to differences in the design year, project scope, and no-action assumptions. However, the results above show that model versions 7.0 and 8.1 are able to simulate induced travel within the expected range. These results demonstrate that the relatively low elasticity value for WDC Alternative B1 is not due to an error in the travel

demand model. Rather, it confirms that only a small overall increase in VMT would actually result from this alternative.

In the case of western Davis and Weber Counties, an area that already has roadway access, a recently completed real estate market analysis (RCLCO 2015) concluded that the growth in single-family residences in these areas will occur independent of a new highway. The market analysis confirms what local planning officials expressed to UDOT during the initial EIS preparation process—that population, employment growth, and future land use in the WDC study area would generally be the same with or without the WDC. The future growth has been validated in recent discussions (in 2015) with representatives from Kaysville City, Layton City, and Syracuse City, who stated that their cities continue to grow rapidly with single-family homes without the WDC and are expected to continue such growth in the future, even without the WDC.

Finally, the Cambridge report cited by the commenter concluded, “It is hoped that the findings of this study will add credence to the findings of recent and ongoing Environmental Impact Studies [*sic*] in showing that the Wasatch Front Regional Council’s travel demand model appears to provide logical results.”

In summary, the travel demand model is a good tool to use for an EIS process. For this Final EIS, UDOT used version 8.1 of the model, which is based on a similar format as version 7.0 but was updated to take into account many of the commenter’s concerns. Because the models are based on similar formats, the elasticity results would be similar.

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- K.** *Farmington City stated that UDOT did not obtain or incorporate the correct land-use assumptions for Farmington. As a result, all future traffic volume projections are significantly low and future traffic operation analyses are inaccurate. The City also stated that UDOT did not meet with the City to discuss or confirm the roadway network assumption in Chapter 1 of the Draft EIS and that many of the improvements shown in Table 1-2 of the Draft EIS are not correct. It also appears that many of the improvements in Figure 1-6 are not included in Table 1-2. Technical Memorandum 6 incorrectly shows Main Street, State Street, and 200 East as arterial roads, and Figure 10 in the memorandum shows the wrong number of lanes on several streets.*

The commenter is incorrect in stating that UDOT did not obtain or incorporate Farmington City’s land-use assumptions. The WDC team provided initial traffic data to Farmington City in December 2009 and requested that the City review the information and provide any comments. Farmington City provided information to UDOT in February 2010. UDOT met with Farmington City in July 2010 to go over the City’s comments on the project purpose and need and to discuss the socioeconomic data used in the Wasatch Front Regional Council’s travel demand model used for the WDC Project. In an email to UDOT dated July 29, 2010, the City Engineer stated that the Farmington City population and employment numbers used by the WDC team were more conservative than those proposed by the City and stated that the WDC team could use the numbers in the model. UDOT continued to meet with the City throughout the project.

In December 2012, Farmington City said that it had newer socioeconomic data than the information provided in February 2010 but did not provide those data until the City provided comments as part of its Draft EIS review. UDOT is now using version 8.1 of the Wasatch Front Regional Council’s travel demand model, which includes the latest projections for Farmington and incorporates the information provided by the City to the Wasatch Front Regional Council.

Table 32.1-3 summarizes the errors Farmington City found in Table 1-2, Transportation Project in the Needs Assessment Area, of the Draft EIS. The small network coding revisions would not change the results of the regional modeling conducted for the WDC Project.

**Table 32.1-5. Farmington City Comments on Specific Transportation Projects**

Farmington Comment	Response
<i>Widening Shepard Lane (Farmington): Frontage Road to 1875 West from two to four lanes. This represents new construction on a new alignment, not widening to four lanes.</i>	Table 1-2 has been revised to list Shepard Lane as a new alignment. The network coding used in the travel demand model for the WDC Project was correct and listed Shepard Lane as a new alignment.
<i>New construction 1100 West (Farmington): Shepard Lane to 100 North; two lanes. This future roadway will be at least four lanes, not two.</i>	The travel demand model network has 1100 West as four lanes from Burke Lane to 100 North [“Minor Arterial (100 feet)”] in the City Transportation Plan and two lanes between Shepard Lane and Burke Lane [“Major Collector (80 feet)”]. Other roads labeled “Major Collector” in the Farmington Transportation Plan are two lanes (or three including a median), so it was not clear that 1100 West north of Burke Lane should be four lanes. Table 1-2 has been revised based on the City’s comments.
<i>Widening Park Lane (Farmington): Main Street to 1100 West from two to four lanes. This roadway has been four lanes for some time with no planned improvement other than restriping.</i>	The assumed widening was from four to six lanes. The Farmington Transportation Plan shows this as an “Arterial (106’),” which is a six-lane width. However, the traffic volumes generated on Park Lane could be handled with a four-lane section and thus would not change the analysis presented in this EIS.
<i>Widening Clark Lane (Farmington): I-15 to 1100 West from two to four lanes. There are no plans for this roadway to be widened to four lanes.</i>	Clark Lane is shown in the Farmington Transportation Plan as a “Minor Arterial (100 feet),” which is a four-lane width like 1100 West in the comment above.

Farmington City also commented that Table 1-2 in the Draft EIS did not include a future 950 North or 1100 West interchange with the WDC. Table 1-2 is for the No-Action network (that is, the transportation network without the WDC), so there would be no connection to the WDC from 1100 West or 950 North listed in the table.

Farmington City commented that some of the road improvements in Figure 1-6, Future (2040) No-Action Transportation Network, in Volume IV of the Draft EIS are not included in Table 1-2 of the Draft EIS. Table 1-2 describes improvements to the transportation network within the needs assessment study area. Figure 1-6 shows some improvements outside the study area; the improvements outside the study area in the figure are not included in Table 1-2.

Farmington City also stated that some of the roadway classifications shown in Figure 1-7, Current (2011) Transportation Network, in Volume IV of the Draft EIS and Figure 9, Roadway Classifications, in *Technical Memorandum 6: Existing Conditions* are incorrect. All of the roads mentioned in the comment are streets that are mostly outside the needs assessment study area and were coded by the Wasatch Front Regional Council in the travel demand model. The functional roadway types used in the model do not always correspond to a city's definition and labeling of functional type. Coding might be appropriate for the travel demand model based on actual speeds and capacities of the roads. To be consistent with the road network modeled for the entire study area, UDOT used the classifications from the Wasatch Front Regional Council's travel demand model.

Farmington City commented that Figure 10, Number of Travel Lanes, in Technical Memorandum 6 incorrectly shows Shepard Lane as having two lanes rather than four lanes between US 89 and Main Street. This street is outside the needs assessment study area and was coded with only two lanes in the 2009 model, but all 2040 models used in the Draft EIS analysis assume a four-lane road.

Farmington City also commented that 200 West between 200 South and State Street is incorrectly shown as a two-lane road instead of a four-lane road. This street is outside the needs assessment study area; however, the network is coded correctly. This street is actually only a single lane in the northbound direction, and the two southbound lanes merge into a single lane. It is standard practice in a travel demand model to not code short acceleration lanes nor auxiliary lanes.

## 32.2 Chapter 2 – Alternatives

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- A. *Commenters stated that they supported UDOT’s process of identifying a project need and evaluating alternatives.*

Comment noted.

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- B. *Commenters stated that alternatives that propose new or expanded transit alternatives would not work or meet the need in the WDC study area. Commenters stated that most of the people who live in western Davis County and Weber County do not want transit alternatives. Commenters disagreed with proponents of the “Shared Solution” or people who disagreed with the needs for the project.*

Comment noted. See response 32.2.1A below for a discussion of alternatives that were considered during the EIS alternatives-development and screening process. See response 32.2.1G for a discussion of a “Shared Solution” alternative.

### 32.2.1 Section 2.1 – Alternatives Development Process (Screening)

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- A. *Commenters stated that the EIS should have considered the following alternatives: expanding I-15 by one or more lanes in each direction (up to six lanes in each direction), expanding east-west roads, expanding I-15 and east-west roads, increasing and improving transit facilities, and eliminating the high-occupancy vehicle lanes on I-15, as well as an alternative farther west in Hooper near 5900 West.*

All of the alternatives suggested in the comment were considered in the Draft and Final EISs (in Section 2.1, Alternatives-Development Process, in the Draft EIS and in Section 2.2, Alternatives-Development Process for the Final EIS, in this Final EIS). Expanding I-15 along with east-west arterials was considered as part of the EIS process (Alternative 05) as stated in Section 2.1.3, Level 1 Screening, in the Draft EIS and Section 2.2.4.1, Level 1 Screening, in this Final EIS. Alternative 05 passed Level 1 screening but was eliminated from detailed consideration as part of Level 2 screening because the alternative would have substantial impacts to existing residential and business properties (see the section titled Level 2 Screening Results in Chapter 2, Alternatives, of this Final EIS). Because of the substantial impacts, the alternative was considered not reasonable under the National Environmental Policy Act and not practicable under the Clean Water Act.

WDC traffic modeling showed that widening I-15 by one general-purpose lane in each direction along with widening east-west arterials would meet the purpose of the project. Widening I-15 by more than one general-purpose lane would not meet the purpose of the project without the addition of east-west arterial-widening projects. Therefore, an alternative that only widened I-15 by two or more general-purpose lanes in each direction would not meet the purpose of the project. The Alternative 05 that was considered in the WDC alternatives-screening process would be the least costly and least impactful alternative for the

WDC Project that would widen I-15 and existing roads. Because of the substantial impacts, the alternative was considered not reasonable under the National Environmental Policy Act and not practicable under the Clean Water Act. Notably, Alternative 05 was also very expensive, with an estimated cost that was 91%–108% more than the alternatives advanced to the Final EIS.

Alternatives located farther west (Alternatives 12A, 12B, and 12C) were also evaluated during the WDC alternatives-development and screening process and either did not meet the purpose of the project or had substantially more wetland impacts than alternatives that provided better transportation performance in western Davis and Weber Counties (alternatives such as Alternative 13A).

Eliminating the high-occupancy vehicle lanes on I-15 would not reduce the congestion on east-west arterial roads in the needs assessment study area and thus would not meet the purpose of the project.

The WDC team also evaluated several transit options as stand-alone alternatives (Alternatives 01 and 02; see Table 2-2, Preliminary Alternatives, in Chapter 2, Alternatives, of this Final EIS) and in combination with other roadway alternatives. Commenters suggested that higher-density land uses support transit use and cited many studies that support the idea that higher densities reduce vehicle-miles traveled and increase transit ridership. As part of the transit evaluation for the WDC (see Section 3.3.5, Transit-Only Alternatives, in *Technical Memorandum 15: Alternatives Screening Report*), the WDC team looked at a transit alternative that included developments located within a half mile of proposed light-rail stations on 4000 South (Weber County) and Antelope Drive in order to reduce walk-to-transit trips. The developments assumed 15 household units per acre and 1.3 people per household consistent with recommendations provided by Envision Utah (2002) in the *Wasatch Front Transit-Oriented Development Guidelines* and by the Transportation Research Board (2008) in *Transit Cooperative Research Program Report 128: Effects of TOD [Transit-Oriented Development] on Housing, Parking, and Travel*.

As stand-alone alternatives, none of the transit alternatives met the purpose of the project, and therefore they were eliminated from detailed study. The transit alternatives were also considered with roadway alternatives. However, when the transit alternatives were added to the roadway alternatives, none of the roadway alternatives eliminated under Level 1 screening (due to not meeting the project's purpose) would have met the screening criteria.

The transit alternatives were developed in coordination with UTA and look at several types of transit facilities (including commuter rail, light rail, and bus). However, none of the transit alternatives considered met UTA's criteria for implementing transit service. See *Technical Memorandum 26: West Davis Corridor Transit Study* (West Davis Corridor Team 2012) for more details.

Finally, UDOT has been working with UTA and the Wasatch Front Regional Council, and an enhanced bus system is planned in Phase 3 of the Wasatch Front Regional Transportation Plan 2015–2040 from 2000 West/Antelope Drive to Hill Field Road in Layton independent of the WDC Project.

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- B.** *Commenters stated that an alternative farther west along the shore of the Great Salt Lake should have been considered or an alignment across the Great Salt Lake. This request was made for various locations, including the Glovers Lane Option (requested to move the Glovers Lane Option west of the power lines or to move the Glovers Lane Option even farther west and south to connect in Centerville or Bountiful to Legacy Parkway), the Kaysville Equestrian Estates area (move the WDC west of the power lines), the Kaysville View Crest area (move the WDC farther west of the power lines), and the Layton and Syracuse area south of Gentile Street (move the WDC farther west into the Great Salt Lake Shorelands Preserve). The comments stated that an alignment farther west would avoid community impacts.*

An alternative farther west along the shore of the Great Salt Lake would not be possible. The alternative could not be permitted by the U.S. Army Corps of Engineers because it would have a much higher number of wetland impacts than other reasonable alternatives, it would affect both the Farmington Bay Waterfowl Management Area [a Section 4(f) property] and a greater number of acres of the Great Salt Lake Shorelands Preserve, and it would be placed in an area with frequent flooding from the Great Salt Lake.

UDOT evaluated an alternative farther west during the alternatives-screening process based on population projections for 2040. UDOT found that alternatives farther west did not meet the purpose of reducing regional congestion because they would require out-of-direction travel toward the west when travelers wanted to head east, resulting in little use of the WDC (see *Technical Memorandum 15: Alternatives Screening Report*).

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- C.** *Commenters stated that the WDC Project should have promoted the use of cleaner-burning fuels, carpooling, telecommuting, more-efficient vehicles, cleaner autos, hybrids, and electric cars.*

Requiring drivers to use cleaner-burning fuels, cleaner vehicles, hybrids, electric cars, or more fuel-efficient vehicles is outside the scope of this EIS and is a national policy issue that is continually being evaluated by the U.S. Environmental Protection Agency and the U.S. Department of Transportation. UDOT promotes carpooling through the addition of high-occupancy vehicle/high-occupancy toll (HOV/HOT) lanes on I-15 and the construction of carpool parking lots near interstate or state highway interchanges or intersections. UDOT also supports the use of telecommuting. Both telecommuting and carpooling in the WDC study area are considered in the travel demand model used for the WDC Project.

The WDC Project includes park-and-ride lots at all interchanges and intersections except for the 950 North interchange in Farmington to promote and accommodate use of the WDC by carpools.

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**D.** *Commenters stated that US 89 should be expanded instead of building the WDC.*

US 89 is east of the needs assessment study area, and any improvements would not reduce congestion in the study area and thus would not meet the project's purpose. Although the needs assessment study boundary on the east is I-15, the roads east of I-15 (US 89 and I-84) are in the regional travel demand model and were included as part of the overall evaluation. The Wasatch Front Regional Council model includes widening US 89 from four to six lanes by 2040 from Antelope Drive to I-15, and, even with this improvement, under the No-Action Alternative there is still a need for the WDC. Finally, as part of the alternatives-screening process, the WDC team evaluated an alternative that widened I-15 plus other north-south roads in the study area (Alternative 07), and it did not pass Level 1 screening.

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**E.** *Davis County Commissioners, Farmington City, and other commenters stated that, if the Glovers Lane Option is selected, it should include a connection to west Farmington including the Park Lane area.*

Chapter 1, Purpose of and Need for Action, identifies that the purpose of the WDC Project is to improve regional mobility. An interchange on the WDC in west Farmington is not needed to improve regional mobility. However, between the release of the Draft EIS and the Final EIS, Farmington City has planned for a major business park west of I-15 immediately south of Shepard Lane. This business park would become regionally significant to Davis County, so a future interchange on the WDC at 950 North has been considered in this Final EIS. This interchange would provide access to western Farmington and the business park. The interchange would be constructed once the local access road connecting to the interchange is completed by Farmington City and Kaysville City.

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**F.** *Commenters stated the original Bluff Alternative identified in the 2001 North Legacy Transportation Corridor Study should have been considered as an alternative in the EIS. Commenters stated that not having an alternative on this route betrays public trust for UDOT and the transportation-planning and corridor-preservation processes that Syracuse and West Point Cities have done. Not choosing the Bluff Road route encourages Cities to disregard planning studies.*

An alternative along the bluff as identified in the 2001 *North Legacy Transportation Corridor Study* was considered, but the alignment was refined to avoid impacts to wetlands, parks, and some residential properties. This refined alternative is now identified as Alternative B1. Most of the refinements to the bluff alternative were made to avoid wetland impacts as required by the Clean Water Act and Executive Order 11990, Protection of Wetlands. The Clean Water Act and Executive Order 11990 both require the avoidance of wetlands unless there is no practicable alternative to the avoidance. Along the bluff, minor alignment shifts could be made to avoid wetland areas, thus modifying the original 2001 preferred route along the bluff. In addition, after the completion of the corridor study, Jensen Park, a property protected by the U.S. Department of Transportation's Section 4(f) regulations, was developed within



the 2001 preferred route along the bluff. The location of this park required the WDC alignment to be moved west of this protected park resource.

In the environmental process, FHWA and UDOT must consider all reasonable alternatives. The final selection of a transportation corridor is not dictated by a preserved corridor but rather by considering which alternative best meets the transportation need while minimizing impacts. Any properties purchased for a corridor can be resold if they are not used, so this does not represent a loss of taxpayer funds.

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- G.** *Commenters stated that UDOT should consider the Utahns for Better Transportation’s (UBET) “Shared Solution.” Commenters asked whether new alternatives could still be considered in the EIS process. Commenters asked whether FHWA had ever approved or built Shared Solution alternatives. Other commenters wondered why UDOT did not consider the Shared Solution Alternative before the release of the Draft EIS if UDOT has been meeting with the Shared Solution group during the entire National Environmental Policy Act process. Other commenters stated that the Shared Solution Alternative would not work and would not meet the transportation needs in the study area.*

For clarification about the role of FHWA, FHWA’s primary role is to provide funding and technical assistance to state highway agencies. For the WDC Project, FHWA is a joint lead agency, so it is required to make a final determination on the preferred alternative. However, UDOT is currently providing all of the funding for the project and is proposing to own and maintain any WDC alternative constructed at the conclusion of the EIS process. With the exception of its Federal Land Highway Division, FHWA does not construct projects. FHWA and UDOT are not aware of any projects for which FHWA or another state highway agency has ever proposed or selected a “Shared Solution alternative.”

The WDC team began meeting with the proponents of the Shared Solution at the beginning of the project during the scoping phase. Although UBET provided no formal scoping comments for the WDC Project, UBET was part of the WDC Stakeholder Working Group (see Chapter 30, Public and Agency Consultation and Coordination), and the WDC team has met with UBET and other proponents of the Shared Solution.

In comments provided by the Shared Solution Coalition on the project’s purpose and need (June 7, 2010) and on alternatives screening (September 15, 2010), the Coalition did not mention a Shared Solution alternative, only that a balanced transportation system that focuses on pedestrian, bicycle, and transit trips should be included as an alternative and that any alternatives should optimize east-west access to I-15 and FrontRunner commuter rail. No other details were provided regarding this concept.

To understand this balanced transportation system concept, UDOT met with the Coalition on 10 occasions prior to the release of the Draft EIS. The initial discussions at these meetings regarded transit and pedestrian-only alternatives or such options combined with roadway alternatives.

In March 2011, UBET provided a comment letter regarding alternatives advanced to the EIS. This letter was the first to mention a Shared Solution, which was to provide a balanced

transportation system. Again, the only details given were that a balanced transportation system that focuses on pedestrian, bicycle, and transit trips should be included as an alternative and that any alternatives should optimize east-west access to I-15 and FrontRunner commuter rail. As explained in *Technical Memorandum 15: Alternatives Screening Report*, UDOT considered such an alternative. In the meetings with the Coalition, the discussion focused on providing the transit and pedestrian components of the balanced transportation system and also looked at improving east-west connections and improvements to I-15.

To help evaluate the Coalition's balanced transportation alternative, UDOT worked with the group on substantially improving transit and providing more pedestrian options in combination with roadway improvements (a balanced transportation alternative). As part of this process, the WDC team prepared the Draft WDC Transit Study in March 2012 (West Davis Corridor Team 2012). None of the transit options, when combined with the pedestrian and roadway improvements recommended by the Coalition, met the project's purpose, and thus they were not considered in detail (see *Technical Memorandum 15: Alternatives Screening Report*).

The current Coalition Shared Solution concept was provided to the WDC team on April 15, 2013, shortly before UDOT officially signed the Draft EIS for public release (on April 30, 2013). Thus, the current Shared Solution concept was suggested after the Draft EIS had been prepared and was ready for release. The Shared Solution concept that was submitted to the WDC team on April 15, 2013, differed from earlier concepts suggested by the Coalition in that it identified different transportation concepts (for example, boulevards and innovative intersections). The Shared Solution concept provided during scoping did not identify any specific improvements that could be evaluated by the WDC team. Therefore, the Shared Solution concept that initially was provided to the WDC team did not provide enough information to constitute an alternative that could be evaluated to see whether it met the purpose of the WDC Project.

After the release of the Draft EIS, the WDC team began working with the Coalition to develop the Shared Solution Alternative in enough detail that it could be formally evaluated as part of the EIS process. UDOT worked collaboratively with the Coalition to determine whether the Shared Solution Alternative meets the transportation needs in the needs assessment study area. The Coalition requested that UDOT formalize this process in a Memorandum of Agreement, which was signed in May 2014. This agreement included several workshops and meetings that would be held with the Cities, Counties, and agencies. In all, 30 technical coordination meetings, 6 stakeholder workshops, and 15 city land-use meetings were held to develop and evaluate this alternative. The workshops were held to receive and evaluate stakeholder feedback on roadway, transit, and land-use concepts.

In May 2016, UDOT and the Coalition finalized the Shared Solution Alternative's assumptions based on all the information gathered throughout the alternative-refinement process. The Shared Solution Alternative was then evaluated with 50 other alternatives using the Wasatch Front Regional Council's most recent travel demand model. This evaluation was conducted to determine whether the Shared Solution Alternative would meet the transportation need. This evaluation showed that the Shared Solution Alternative would not

meet the transportation need. The alternative would not improve regional mobility to a level that warrants additional study in the EIS process.

Elements of the Shared Solution Alternative, such as protected bikeways, preventative ramp metering, and strategically placed overpasses along I-15, have been incorporated into the WDC EIS alternatives or local and regional transportation plans. UDOT is also including in the WDC design some parkway features based on comments on the Draft EIS and during the Shared Solution process, features such as noise-reducing pavement, dark-sky lighting, additional trail connections, and other landscaping and aesthetic features. For more details regarding the Shared Solution Alternative process, see *Development and Evaluation of the Shared Solution Alternative*, May 19, 2016.

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- H. *Commenters stated that the WDC should have similar design features as Legacy Parkway (quiet pavement, speed limit restrictions, lower height of the road, truck restrictions, billboard restrictions, reduced lighting, trails, fencing, and landscaping). Other commenters suggested creating wetland areas along the WDC similar to the wetlands created along Legacy Parkway. Other commenters stated that there should not be access on the west side of the WDC and that interchanges should provide access to only the east side of the WDC.*

***Freeway vs. Parkway (Quiet Pavement, Speed Limit, and Truck and Billboard Restrictions).*** Many commenters suggested that the WDC would be a freeway with a speed limit of 65 miles per hour (mph), high truck traffic, and billboards. As an outcome of the Shared Solution process, UDOT has decided to use noise-reducing pavement and dark-sky lighting for the WDC to lessen impacts to the surrounding community.

The WDC divided highway would likely have a posted speed limit of 65 mph. As part of the alternatives-evaluation process, UDOT evaluated using a 55-mph speed limit on the WDC. However, with the reduced speed limits, the travel demand model showed that fewer drivers would use the WDC, instead opting for the higher-speed I-15. As a result, the WDC with a 55-mph speed limit would not meet the project purpose and thus was eliminated from detailed study.

For this Final EIS, the WDC team anticipates that about 92% of the WDC vehicles would be automobiles and 8% would be trucks. As a comparison, I-15 has about 85% automobiles and 15% trucks. The percentages and total number of trucks on the WDC would be much less than the percentages and number of trucks on I-15. The truck traffic on the WDC would likely be primarily servicing the local community and farmers in the WDC study area. By comparison, I-15 has a high percentage of interstate truck traffic. The main reason for this is that the WDC would not be a bypass to I-15 for interstate trucks since it would not connect back to I-15 on the north. Therefore, UDOT would not prohibit trucks on the WDC.

***Trails.*** All of the WDC action alternatives would include a Class 1 trail along the WDC starting at the Legacy Parkway Trail in Farmington and extending north to the southern terminus of the Old Emigration Trail in Syracuse. The proposed trail, combined with the Old Emigration Trail, would provide one large, regional north-south trail system.

**Fencing.** UDOT would include a standard right-of-way fence similar to the fence for the Legacy Parkway to keep pedestrians and some wildlife away from the highway.

**Wetlands.** UDOT will work with the U.S. Army Corps of Engineers to mitigate all affected wetlands. The mitigation could include the creation of new wetlands close to the WDC. The location of the wetland mitigation will not be determined until the Clean Water Act Section 404 permitting process is completed.

**Lower Height of Road.** During the final design phase of the project, UDOT will consider lowering the grade of the road in areas where the WDC can still meet roadway design and drainage requirements.

**Access on West Side.** Some interchanges would require access on both sides of the WDC. During the final design phase of the project, UDOT will consider interchange designs based on the amount of expected traffic at each interchange. The 200 North interchange in Kaysville and the proposed Layton interchange without the wetland avoidance option in Layton, both of which are along the Great Salt Lake Shorelands Preserve, would not provide access west of the WDC. However, if the wetland avoidance option were selected in Layton, there would be available land to develop west of the WDC. Layton City could propose zoning to develop this area between the WDC and the Great Salt Lake Shorelands Preserve.

**Landscaping.** During the final design phase of the project, UDOT will work in accordance with the UDOT Aesthetics Policy and with the local governments in the area to develop a landscaping plan for the WDC.

**Lighting.** See response 32.18B.

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- I. *Commenters stated that a smaller road should be built instead of a freeway.*

The WDC would be a four-lane highway similar in design to Legacy Parkway. As stated in Chapter 2, Alternatives, UDOT evaluated a two-lane highway and a five-lane arterial. Neither of these alternatives met the project's purpose of improving regional mobility.

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- J. *Commenters stated that free or reduced transit fares or tax incentives should be considered before a new highway.*

The WDC team evaluated reduced transit fares as part of the Shared Solution Alternative (see response 32.2.1G). For the Shared Solution Alternative, UDOT in cooperation with UTA looked at providing reduced-cost passes to residents of Davis and Weber Counties. However, providing the reduced transit fares along with the Shared Solution improvements to land use and regional transportation would not meet the project purpose, so this alternative was eliminated from detailed study. In addition, transit use is evaluated in the travel demand model, which considers the cost of the fare and the travel time to the destination. The transit-only options did not meet the project's purpose and thus were eliminated from detailed study.

UTA operates the transit system and controls the fares on the system. Currently, there are no plans to have free or reduced transit fares in the WDC study area.

Changing tax rates, implementing tax incentives, or increasing taxes on property or gasoline to pay for transportation operations are decisions that would be made by the state legislature and/or a local government (city or county), and those decisions are outside the scope of this EIS.

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- K.** *A commenter suggested a new alternative that would follow 2000 West in Syracuse south of Antelope Drive to Bluff Road. The alternative would widen and use Bluff Road south to Gentile Street (or construct a new road along Bluff Road), then widen and use Gentile Street and Flint or Angel Street in Layton, and then widen and use Sunset Drive, connecting to Shepard Lane in Farmington.*

In order for this alternative to meet the project purpose of improving regional mobility, it would need to extend north to at least 5500 South in Weber County. Since the suggested alternative ends at Antelope Drive in Syracuse, it would not go far enough north to meet regional mobility needs. In addition, there are a substantial number of homes along the recommended route that would need to be acquired if the suggested roads were widened or if a new road along Bluff Road were added.

The suggested alternative would result in more home acquisitions than from the current WDC alternatives.

Finally, with so many connecting roads, the route would have a substantial number of intersections that would reduce traffic flow, causing severe congestion, and thus it would not meet the project purpose of improving regional mobility. For example, the WDC team looked at an arterial option with signals at intersections as part of the alternatives-screening process. The arterial option resulted in heavy congestion (greater than the criterion of level of service D) and would not substantially reduce regional mobility; therefore, it would not meet the project purpose.

#### What is a relocation?

A relocation occurs when constructing an alternative would require purchasing an occupied structure, such as a home or business. The residents or business would need to relocate.

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- L.** *Commenters questioned whether the Glovers Lane Option could be redesigned to connect to Legacy Parkway only and not include a connection to I-15.*

In order for an alternative to meet the project purpose of improving regional mobility, it must connect to both I-15 and Legacy Parkway at the southern terminus.

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- M.** *Commenters stated that the southern terminus of the WDC should connect to I-15 north of Farmington.*

Connections of the WDC to I-15 north of Farmington were evaluated, including 200 North (Schick Lane) in Kaysville, Angel Street in Kaysville, and Layton Parkway in Layton. As described in Chapter 2, Alternatives, of this Final EIS, all of the connections to I-15 north of Farmington either failed to meet the project's purpose and need or were determined to not meet UDOT and FHWA regulations for signing and operations. Also see response 32.2.1Q.

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- N.** *Commenters suggested that the WDC is in direct conflict with Wasatch Choices 2040 or that UDOT should follow the approach described in Wasatch Choices 2040.*

*Wasatch Choices 2040* was developed assuming the road and transit improvements identified in the Wasatch Front Regional Transportation Plan 2015–2040 as the underlying background. The WDC is included in this Regional Transportation Plan. Thus, the WDC is not in conflict with *Wasatch Choices 2040*.

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- O.** *Commenters stated that the WDC should be placed on the alignment that was selected in the 2001 North Legacy Transportation Corridor Study in Syracuse and West Point and should be placed where parts of the corridor have been purchased for preservation.*

See response 32.2.1F.

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- P.** *Commenters stated that the WDC Project should include alternatives that use reversible lanes on I-15.*

Reversible lanes change the directional capacity of a freeway to accommodate peak directional traffic demands. As described in the FHWA *Freeway Management and Operations Handbook* (September 2003), to warrant reversible lanes, peak-period traffic volumes should exhibit or be anticipated to exhibit significant directional imbalance (for example, a 70%/30% directional split). The American Association of State Highway Transportation Officials (AASHTO) states that reversible-lane operations are justified when 65% or more of the traffic moves in one direction during the peak hours.

Based on the Wasatch Front Regional Council's travel demand model, the PM peak-hour direction split on I-15 is 55% northbound and 45% southbound north of Park Lane in Farmington and 53% northbound and 47% southbound south of 1800 North in Sunset. Given these directional splits, I-15 does not meet the FHWA or AASHTO criteria for reversible lanes.

Finally, as described in response 32.2.1A, improving only I-15 would not meet the project purpose, since east-west roads would still operate under congested conditions. UDOT evaluated an alternative that improved both east-west roads and I-15 (Alternative 05), but this alternative was eliminated from detailed consideration because of the high number of residential and business impacts and cost compared to other alternatives.

**Q.** *Farmington City stated that the improper selection of the boundaries of the study area foreclosed the review of all reasonable alternatives, so this effort must again be undertaken. US 89, I-84, and the east-west roadways east of I-15 might well contribute to a regional solution that does not require the WDC. In that the only need-based problem located south of 200 North in Kaysville in 2040 is on I-15, the focus should be on simply widening I-15 not on the Shepard Lane and Glovers Lane alternatives. If the need for the WDC proves real, then a new interchange must be explored near 200 North in Kaysville to connect to the undeveloped area to the north. That need must be demonstrated based on the enlarged study area and a full review of the potential contributions that may come from US 89, I-84, and all of the east-west roadways. The alternatives must be reviewed again with all of this in mind.*

I-15 is the eastern boundary of the needs assessment study area because transportation improvements east of this highway (such as improvements to US 89) would have little effect on north-south or east-west travel west of I-15. Although the study area boundary on the east is I-15, the roads east of I-15 (US 89 and I-84) are in the regional travel demand model and were included as part of the overall evaluation. The Wasatch Front Regional Council's travel demand model included widening US 89 between Antelope Drive and I-15 from four to six lanes by 2040, and, even with this improvement, there would still be a need for the WDC. For a more detailed discussion regarding the study area boundary, see response 32.1.1C.

As discussed in response 32.2.1M, connections of the WDC to I-15 north of Farmington were evaluated, including connections at the rest stop area on I-15, at 200 North in Kaysville, and at Layton Parkway. During the alternatives-screening process, these three southern options north of Farmington were eliminated as not reasonable because they either did not meet the purpose of and need for the WDC Project or failed to meet UDOT and FHWA signing regulations.

In response to Farmington City's comments, the WDC team reconsidered the three previously evaluated southern options north of Farmington to include widening I-15 between the I-15/Legacy Parkway/Park Lane system interchange and the location where the southern option would diverge from I-15. Specifically, the WDC team reconsidered the following southern options:

- Kaysville Rest Area Option with I-15 Widening
- Kaysville 200 North Option with I-15 Widening
- Layton Parkway Option with I-15 Widening

The information included below is also summarized in Section 2.2.4.3, Alternatives Eliminated after the Level 2 Screening Process, of this Final EIS.

In summary, the analysis of these three options showed that the Kaysville Rest Area Option with I-15 Widening would meet the purpose of and need for the WDC Project, and that the Kaysville 200 North Option with I-15 Widening and the Layton Parkway Option with I-15 Widening would not meet the purpose of and need for the WDC Project.

Although the Kaysville Rest Area Option with I-15 Widening would meet the purpose of and need for the WDC Project, the WDC team determined that it was not a reasonable option

because the option failed to meet UDOT and FHWA signing regulations, similar to the Shepard Lane Option, which was eliminated between the release of the Draft EIS and the Final EIS for not meeting UDOT and FHWA *Manual on Uniform Traffic Control Devices* regulations. Therefore, the Kaysville Rest Area Option with I-15 Widening was eliminated from detailed study.

After reconsidering the other southern options with I-15 widening, the WDC team determined that the Glovers Lane Option was still the southern option with the fewest impacts and greatest transportation benefit and was the only reasonable option that should be considered in the Final EIS.

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- R. *Farmington City wanted to know whether the Davis County major transportation facility for school buses for South Davis County located in Farmington was considered regarding a need to enhance travel patterns.*

As described in Chapter 1, Purpose of and Need for Action, the purpose of the project is to improve regional mobility, not local traffic patterns. However, the Glovers Lane Option considered this facility as part of the design. There would be no change to current travel patterns to or from this facility as a result of any WDC alternative.

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- S. *Commenters stated that UDOT should use a hyperloop instead of a new roadway for the WDC.*

From the WDC team's review of the information, a hyperloop is a form of transit in which a person rides in a personal capsule that is enclosed in an elevated, reduced-pressure tube that contains pressurized capsules driven within the tube by a number of linear electric motors. To accommodate the various origins and destinations, an extensive system of hyperloop lines and stops would be required, as well as terminals for major destinations. Functionally, a hyperloop would be very similar to other forms of transit in Utah, such as buses or rail. For this reason, the WDC team expects that hyperloop ridership would be similar to that with the Ultimate Transit Alternative (Alternative 01) that was developed and evaluated by UDOT as part of the Level 1 alternatives screening for the project.

For Level 1 screening, UDOT coordinated closely with UTA to develop an alternative that was a very ambitious application of transit. This Ultimate Transit System (Alternative 01) consisted of the transit projects in the Wasatch Front Regional Transportation Plan 2015–2040 with the addition of light-rail transit along 4000 South and Antelope Drive, bus rapid transit along 1800 North and in Layton (all lines would connect to existing FrontRunner stations), and FrontRunner headway times reduced to 30 minutes. This transit system was modeled to achieve the maximum ridership possible in order to determine whether such an alternative would meet the project purpose of improving regional mobility.

Based on the model results, the Ultimate Transit Alternative (Alternative 01) was eliminated in Level 1 screening from further consideration because it performed worse than the No-Action Alternative for one of the five measures of effectiveness used to determine whether an



alternative met the project’s purpose. It also performed worse than average on the other four measures of effectiveness (see *Technical Memorandum 15: Alternatives Screening Report*). This was due to a population density in the needs assessment study area that did not produce enough transit ridership to substantially improve regional mobility.

The WDC team does not expect that a hyperloop would provide any additional ridership or perform significantly better than the Ultimate Transit Alternative, which uses existing and planned transit infrastructure to distribute riders to their destinations. Therefore, the WDC team does not expect that the hyperloop concept would pass Level 1 screening.

As a transit option, a hyperloop would need to have appropriate infrastructure in place in order to provide a convenient option for commuters. For example, the current FrontRunner commuter-rail system provides stations in Weber and Davis Counties that allow commuters to board the system and arrive in Salt Lake City, where they can then transfer to other transit modes (bus and light rail) that take them within walking distance of work. For the hyperloop system to be effective, it would have to provide the same benefit, which would require a network of hyperloop lines in Davis and Weber Counties and in Salt Lake City. Therefore, a hyperloop alternative would need to include more infrastructure than just that within the needs assessment study area. The overall hyperloop system would need to be similar in scale to the current transit system. To fund and construct an entirely new transit system along the Wasatch Front is not feasible.

The WDC team has reviewed and evaluated the information that is available regarding a hyperloop. After evaluating this information, the WDC team determined that the hyperloop concept would not pass Level 1 screening, and there is no information that would support this type of concept being viable for meeting the purpose of a project the size and nature of the WDC. The concept appears to be in the prototype or pilot stage and appears to be intended for small, densely populated, heavily congested city center–type applications, not long-distance travel. The WDC team was unable to find any examples of a hyperloop system in use, since the technology has not been proven.

Overall, the WDC team does not believe that there is enough information or data to warrant a hyperloop system as a reasonable alternative for the WDC Project and, thus, a hyperloop system was not carried forward for further study in the EIS.

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- T.** *The Western Resource Advocates commented that, while UDOT considered such things as arterial widening as part of the Draft EIS process—and found that such widening would satisfy the purpose and need of the WDC—the agency found that the impacts of such widening would be overly destructive to both residential and business properties. However, UDOT took a broad-brush approach to the topic of widening existing roads, and modeled the widening of 6–10 times more roads than were necessary to achieve the desired results. Therefore, UDOT’s claim that such an alternative is too destructive is greatly exaggerated. The Shared Solution, on the other hand, offers a more nuanced approach to the issue of “arterial widening.” For instance, some locations require widening more than others, and strategies such as innovative intersections create similar congestion relief benefits as widening, but with much less destruction. Additional strategies, such as transit and*

*connectivity, are less disruptive and less expensive but could also have a strong aggregate effect providing congestion relief. The EIS also never considers the widening of east-west roads without I-15 and whether this would meet the purpose and need.*

**Non-freeway Alternatives 05 and 08 Widened Too Many Roads.** UDOT evaluated five alternatives that proposed widening existing roads. Two of these, Alternatives 05 and 08, met the purpose and need criteria and were advanced to Level 2 screening to measure their impacts. However, as stated in *Technical Memorandum 15: Alternatives Screening Report* (TM 15), Alternative 08 was eliminated from consideration in Level 2 screening because it would provide more widening than Alternative 05 (which passed screening), and it would be far more costly and impactful to the human environment than Alternative 05. Compared to Alternative 08, Alternative 05 would provide similar transportation benefits with less roadway widening. For this reason, Alternative 08 was dismissed, while Alternative 05 was further refined and evaluated during the Level 2 screening process.

The commenter also stated, “I-15 is not the only road that was unnecessarily included in Alternative 08. The extent of the widening included in those alternatives, particularly Alternative 08, is ambiguous in the Draft EIS because TM 15 defines it two different ways. There is one description in Table 2-2 (p. 15) and another description in Figure 4-3 (p. 58).” The above statement is correct; after the initial screening of alternatives in 2010 (Table 2-2, Preliminary Alternatives, in TM 15), UDOT conducted a refinement process to reduce the amount of widening (as shown in Figure 4-3, Alternative 08, in TM 15), which is explained on page 26 of TM 15 and is described in more detail in the paragraphs below.

For the initial alternatives-screening effort, the limits of widening for Alternative 05 were based on arterial classification and proposed improvements identified in the Wasatch Front Regional Transportation Plan 2015–2040. Typically, widening on east-west arterials occurred from I-15 to a state road or local north-south arterial in the western part of the WDC study area that the WDC team considered a major travel corridor. After Level 1 screening, UDOT refined Alternative 05 to limit the scope of widening to what was minimally necessary to meet the purpose of and need for the WDC Project and to provide adequate capacity. For Alternative 05, east-west roads were widened only to the extent needed to reduce congestion (typically segments with a 1-hour level of service of LOS E or F) on east-west arterials with interchanges to I-15 or major adjacent roads such as 4000 South in the WDC study area. Through this refinement process, UDOT substantially reduced the miles of roads that would be widened (and the associated impacts to homes and businesses) compared to the widening assumed during the initial screening process.

The commenter states that “[t]he Draft EIS assumes 5 to 10 times as much widening of local streets than would be necessary.” Note that, for this statement, the commenter used Alternative 08, which, as explained above, was dismissed due to its excessive scope and impacts. Alternative 05 would also meet the purpose of and need for the WDC Project with less roadway widening compared to Alternative 08. Also, the commenter uses a single criterion (miles of widening) to express the benefits of the alternative and the comment omits the screening criteria used in the EIS, which provide a much more robust approach to measuring the mobility benefits of any given alternative. These criteria include lane-miles in

the east-west and north-south directions, vehicle-miles traveled in congestion, vehicle-hours traveled in congestion, and daily delay. By using these criteria, UDOT can measure the benefits on nearby roads and throughout the WDC study area in terms of east-west and north-south mobility. Although Alternative 05 proposes only about 15 miles of east-west widening, it would reduce congested vehicle-miles traveled by over 150,000 miles during the peak period.

In addition, as explained in TM 15, in order to provide adequate capacity, an alternative needs to function at a LOS D or better at its termini. The widening of east-west roads with Alternative 05 needed to extend to a logical terminus that functioned at LOS D or better.

The Level 2 screening process demonstrated that, even after refinements, this alternative would have substantial costs and impacts to homes and businesses, and both UDOT and FHWA determined that the alternative was not reasonable under the National Environmental Policy Act and was not practicable under the Clean Water Act Section 404(b)(1) practicability evaluation.

***Alternative Combinations Not Evaluated.*** As shown in Chapter 2, Alternatives, of the Draft EIS, the WDC team evaluated two road-widening alternatives without improvements to I-15 (Alternatives 04 and 06). As discussed in TM 15, neither of these alternatives passed Level 1 screening. The results of widening only east-west roads (Alternative 04) were that north-south congestion reduction did not meet screening criteria without also widening I-15 (Alternative 05). Even if Alternative 04 (east-west widening without I-15 improvements) and Alternative 06 (north-south widening without I-15 improvements) were combined, the combined alternative would still not meet the Level 1 screening criteria. The main reason is that most of the north-south congestion in the WDC study area is on I-15, and both alternatives would need I-15 to be widened in order to meet the project purpose of improving regional mobility.

The modeling showed that, by building the WDC in the western part of the WDC study area, traffic in western Davis and Weber Counties would have an alternate highway for that north-south movement, thus reducing congestion on I-15. By using the WDC, traffic in the western part of the WDC study area would not need to use the existing east-west arterials to access I-15, thereby reducing congestion on these arterials as well. Therefore, the WDC would reduce both east-west travel on arterials and north-south congestion on I-15.

***Right-of-Way Widths Too Large.*** To determine the impacts of the widened arterials, the WDC team used UDOT's design standard for this type of arterial, which includes a center turn lane, curb and gutter, and shoulders that meet clear zone requirements and provide room for snow storage, disabled vehicles, emergency access, on-street parking, right-turn lanes, bus pullouts, and pedestrian and bicycle facilities. Increasing pedestrian and bicycle options is one of the secondary objectives of the WDC Project (see *Technical Memorandum 14: Level 2 Screening Process*). UDOT believes that this is a reasonable approach, as a narrower design would not meet applicable design and safety specifications and would not meet the project objectives.

As part of the Clean Water Act Section 404(b)(1) practicability evaluation, the WDC team worked with the resource agencies (the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, and the Utah Division of Wildlife

Resources) by shifting the arterial alignments along each road alignment to avoid as many home and business impacts as possible to ensure that Alternative 05 was developed with the fewest impacts to the human environment as possible. Even after this process to minimize impacts, Alternative 05 would have substantial impacts to homes and businesses, and both UDOT and FHWA determined that the alternative was not reasonable under the National Environmental Policy Act and was not practicable under the Section 404(b)(1) practicability evaluation.

As stated in response 32.2.1G, UDOT evaluated the Shared Solution Alternative as part of the Final EIS process. The alternative did not meet the purpose of and need for the WDC Project.

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- U.** *The Western Resource Advocates commented that in conducting the EIS, FHWA, as the lead federal agency, must create an administrative record that demonstrates that it followed National Environmental Policy Act procedures. As part of these procedures, FHWA is required to take a “hard look” at the direct, indirect, and cumulative environmental consequences of the WDC, including all actions connected to the proposal. 40 CFR [Code of Federal Regulations, Section] § 1508.25(a)(1). In this case, almost all aspects of transportation in the North Salt Lake, Davis and Weber County area must be considered. Therefore, FHWA must incorporate into the EIS a detailed analysis of all of the environmental impacts of regional transportation impacts and not just within the area directly impacted by the WDC. As discussed in detail below, this analysis must include impacts associated with air quality, water consumption, surface water quality, ground water quality, and land disturbance.*

The EIS process did take a “hard look” at the potential for impacts from the WDC for direct, indirect (Chapter 23), and cumulative (Chapter 24) environmental consequences. Chapter 7, Transportation, provides information regarding congestion on I-15 at Parrish Lane at the southern extent of the WDC study area. The WDC team reviewed the traffic volumes on Legacy Parkway and I-15 south of Farmington and found that traffic on these facilities with the action alternatives would increase by less than 3%, or by 3,500 vehicles, during the PM peak period. The reason for this minor increase in vehicle use as a result of building the WDC is that, without the WDC, the vehicles originating in the WDC study area would still need to travel to Salt Lake City and other locations using I-15 and/or Legacy Parkway.

This small increase in traffic as a result of the WDC spread over the large road network of Davis, Weber, and Salt Lake Counties would have little to no effect on air quality or traffic at any specific location. The Draft EIS did evaluate regional air quality in Chapter 11, Air Quality, and determined that the WDC would be in conformance with the State Implementation Plan and thus would meet regional air quality conformity requirements.

Finally, the National Environmental Policy Act does not require an evaluation of all projects in the Wasatch Front Regional Transportation Plan 2015–2040. The WDC Project has independent utility and thus does not need to be built in conjunction with the other projects. Each project identified in the Regional Transportation Plan that has independent utility will be considered under separate evaluations.

As stated throughout the EIS, the WDC is not expected to increase population growth beyond the projections provided by the Governor’s Office of Management and Budget, so there would be no additional water consumption as a result of the WDC in the region. Potential surface water quality and groundwater quality impacts would occur only from construction and operation of the WDC; these impacts are evaluated in Chapter 13, Water Quality. Chapter 23, Indirect Effects, evaluates the areas that could have indirect land disturbances from the WDC. Finally, for each resource evaluated in the EIS, an area of study was identified based on the area where likely impacts from the WDC would occur.

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- V. *The Western Resource Advocates commented that the U.S. Environmental Protection Agency also requires a complete analysis of the purpose and need for the proposed project, 40 CFR § 1502.13, along with a full and fair analysis of all reasonable project alternatives. 42 USC [United States Code, Section] § 4332(2)(C)(iii), (E); 40 CFR § 1502.1. In fact, the regulations implementing the National Environmental Policy Act refer to the comparison of alternatives as the “heart of the environmental impact statement.” 40 CFR § 1502.14. Agencies must “rigorously explore and objectively evaluate all reasonable alternatives,” then “[d]evote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits,” and explain why other alternatives were eliminated from detailed consideration. An EIS must provide detailed explanation and “rigorous analysis” of “all reasonable alternatives” and comparative analysis of the environmental impacts of all alternatives considered. 40 CFR § 1502.14. FHWA may not dismiss alternatives without the required rigorous analysis simply by saying that the proposals failed to “substantially reduce” congestion. FHWA must rigorously evaluate all reasonable alternatives.*

Certainly, a reasonable range of alternatives must be examined under the National Environmental Policy Act, but analyzing every possible alternative is not required. The National Environmental Policy Act requires that the EIS be sufficiently inclusive and informative in its description and discussion of alternatives to allow the decision-making agency to make an informed choice to proceed with the project or not. In the case of the WDC Project, the EIS evaluated a number of alternatives within a reasonable range. In general, over 50 alternatives were evaluated, including alternatives that proposed transit only, transit and land-use changes only, and widening I-15 and existing arterials. Chapter 2, Alternatives, provides a summary of the alternatives-evaluation process including those alternatives that were eliminated during the screening process.

It is standard National Environmental Policy Act practice to begin with a broad range of concepts or potential solutions (initial alternatives) and then apply a set of screening criteria to eliminate those that are not reasonable. One of the standard screening criteria for alternatives is whether an alternative would meet the stated project purpose. As shown in Chapter 2, Alternatives, of this EIS and as discussed in *Technical Memorandum 15: Alternatives Screening Report*, the WDC team used a systematic and repeatable process to evaluate alternatives against the project purpose. Each step of the process as described in *Technical Memorandum 15* and supporting technical memorandums explains the rigorous analysis of “all reasonable alternatives” and provides a comparative analysis of the

environmental impacts of all alternatives considered. The U.S. Environmental Protection Agency and the U.S. Army Corps of Engineers both agreed with the purpose and need and the alternatives-screening process conducted for the WDC Project.

### 32.2.2 Section 2.2 – Description of Alternatives Carried Forward for Detailed Study

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- A.** *Commenters wanted to know about the specific location of an alternative route, the termini of alternatives, where interchanges will be included, whether cross streets are underpasses or overpasses, the cost of alternatives, and where more-detailed information or maps can be found. Other commenters questioned whether there would be a stoplight at certain intersections, the types and locations of lights, the locations of signs, and whether there would be a rest area for the WDC.*

Maps of each alternative and profiles for each system interchange can be found on the WDC project website ([www.udot.utah.gov/westdavis/documentation#conceptual\\_drawings](http://www.udot.utah.gov/westdavis/documentation#conceptual_drawings)) and in this EIS. The website also includes an online map that provides a specific location of each alternative relative to community features, where interchanges are located, cross street underpasses or overpasses, proposed detention ponds, and park-and-ride lots. Chapter 2, Alternatives, also provides the costs for each alternative and specific details of proposed interchanges and cross street underpasses or overpasses for each alternative considered. Finally, detailed engineering drawings are included in Volume IV, Figures and Roadway Plans, of this Final EIS. The EIS cost estimate is included in Chapter 2, Alternatives, of this Final EIS.

Some details, such as stoplights for intersections, signing, and striping, would not be determined until the final design phase of the project. Stoplight evaluations are based on local traffic volumes and turning movements expected at the intersections. There are no plans for a rest area.

- B.** *Commenters wanted to know why the WDC alignment common to all of the alternatives near the Equestrian Center in Kaysville could not be moved to the west side of the power corridor farther south to avoid being near the center, established trails, homes, and the Jefferson Academy Elementary. Other commenters wanted to know the noise impacts to the Equestrian Center and nearby homes, and how close the alignment would be to Davis County parcel 08-484-0001.*

The WDC team evaluated an option of moving the alignment west of the power corridor farther south of the Equestrian Center, but this option was eliminated from detailed consideration because the alignment would result in 0.5 more acre of impacts to wetlands that are part of the Great Salt Lake Shorelands Preserve, 8 more acres of impacts to the Great Salt Lake Shorelands Preserve, and 13.6 more acres of floodplain impacts. The current alignment evaluated in the EIS would not directly affect any residential properties or any lots in the Equestrian Estates, would avoid impacts to the preserve, would not affect any trails, and

would affect one equestrian-related building of the Equestrian Center that was built between the release of the Draft EIS and the Final EIS.

Davis County parcel 08-484-0001 is listed as a partial impact in Appendix 5A, Relocations and Potential Relocations in the Community Impact Analysis Area, of this Final EIS. The WDC alternatives would require about 0.4 acre of right-of-way from the 19.6-acre parcel.

Chapter 12, Noise, provides details regarding the noise analysis. Based on the evaluation, no homes near the Equestrian Center meet UDOT's noise criteria as an impacted property (see Figure 12-10, Noise Receptor Impacts, in Volume IV of the Draft EIS). In addition, the WDC alignment would be about 900 feet from the Jefferson Academy, and noise levels would be below the impact criteria.

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**C.** *Commenters requested the highway be moved west of Jensen Park in Syracuse.*

All WDC alternatives evaluated in the EIS are west of Jensen Park.

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**D.** *Commenters stated that UDOT was building the highway to support business interests that are helping to pay for the WDC.*

See response 32.1.2A regarding the need for the project. Funding for the project would come from the state legislature and/or the federal government. No businesses have contributed or are planning to contribute funds toward the construction of the project.

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**E.** *Commenter stated that the road should be placed west of the sewer plant in Kaysville, since the location would decrease wetland impacts and increase freshwater wetlands.*

Wetlands along the Great Salt Lake are both freshwater and saltwater wetlands. Moving the alignment farther west around the sewer plant would increase wetland impacts and affect the Great Salt Lake Shorelands Preserve. In addition, the current alternative through this area does not directly affect any residential properties or businesses. For these reasons, an option farther west was not considered reasonable.

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**F.** *Davis County commissioners and other commenters requested that West Point should have an interchange at 300 North or the State Route 193 extension (200 South or 700 South). Other commenters stated that West Point does not have an interchange.*

All of the WDC alternatives include an interchange (Alternative A2) or intersection (Alternatives A1, B1, and B2) at 1800 North in West Point.

Additionally, an extension of State Route 193 from 3000 West to the WDC is in Phase 2 of the Wasatch Front Regional Transportation Plan 2015–2040. Until the study on the extension of State Route 193 to the WDC is completed, the location of the State Route 193 interchange on the WDC will not be known. The impacts of this interchange and this new extension would be evaluated in a separate study.

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- G.** *Commenters stated no one will use the WDC, and the highway will be underutilized. Other commenters stated that the WDC would not meet the purpose of and need for the project and would create another congested highway.*

As shown in Section 2.5, Summary Comparison of Alternatives, the WDC would reduce total daily delay in the needs assessment study area by up to 32%, which demonstrates that many motorists would use the WDC instead of local arterials and I-15.

V/C, or volume-to-capacity ratio, is an indicator of the amount of congestion on a road. When the capacity of a road is exceeded, the result is congestion, delay, and a poor level of service (LOS). The LOS relates to V/C as follows:

- LOS A = V/C of less than 0.30
- LOS B = V/C of 0.30 to 0.51
- LOS C = V/C of 0.52 to 0.71
- LOS D = V/C of 0.72 to 0.89
- LOS E = V/C of 0.90 to 0.99
- LOS F = V/C of 1.00 or greater

#### What is level of service?

Level of service is a measure of the operating conditions on a road or at an intersection. Level of service is represented by a letter “grade” ranging from A (free-flowing traffic and little delay) to F (extremely congested, stop-and-go traffic and excessive delay). LOS B through LOS E represent progressively worse operating conditions.

In transportation planning, for the planning horizon year (2040 for the WDC), UDOT’s standard is to achieve a level of service of LOS D or better (V/C of 0.89 or less) during the peak travel period so that the road has a long operating lifespan and does not need further widening shortly after construction and/or the design year. This is the same criterion used by UDOT on the Mountain View Corridor Project and other urban projects.

For the 2040 planning year, the WDC alternatives have a maximum V/C of 0.88 (LOS D) during the peak period, which is at the upper end of UDOT’s goal of LOS D. For just the highway portion of the WDC (not including the arterial), the maximum V/C would be at or near 0.88 between the Farmington 950 North interchange and the Layton interchange in the PM peak hour. These data show that the highway would not be underutilized. The team did evaluate alternatives that proposed a smaller two-lane highway or five-lane arterial, both of which did not meet the project purpose.

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- H.** *Commenters stated that the WDC build alternatives go against the governor’s recommendation to drive less, since this increases VMT [vehicle-miles traveled].*

The governor has many broad goals related to air quality, including a broad recommendation for residents to try to drive less along with encouraging the use of cleaner vehicles and fuels. None of these recommendations are state policy or require that there would be a reduction in overall VMT or VMT per capita. Even if VMT per capita decreases, there would still be an increase in VMT with the anticipated population growth in most areas of Utah.



In 2040, the WDC would result in about a 3% increase in VMT in the WDC study area compared to the No-Action Alternative. One of the primary project purposes is to improve regional mobility by reducing congestion. This purpose does not require that an alternative reduce VMT. In addition, population in the WDC study area is expected to grow by 41% by 2040, and VMT from the WDC action alternatives would increase by about 50% (the No-Action Alternative showed a 46% increase in VMT). Thus, VMT growth would be only slightly higher than population growth, which is consistent with the Wasatch Front Regional Council's goal of not having the growth rate of VMT exceed population growth.

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- I. *A commenter requested detailed engineering design data and more information about the analysis and decision process for the Shepard Lane and Glovers Lane interchanges. The commenter also requested that UDOT take another look at the interchanges and evaluate any new interchange suggestions from the public.*

The WDC team provided the commenter with engineering design files per the request. *Technical Memorandum 19: Traffic Performance and Engineering Design of Shepard Lane and Glovers Lane Area Alternatives, Technical Memorandum 23: Glovers Interchange Design Selection, and Technical Memorandum 24: Shepard Lane Interchange Design Selection* describe and summarize the development, evaluation, selection, and traffic analysis of the Shepard Lane and Glovers Lane interchanges.

In addition, between the release of the Draft EIS and the Final EIS, UDOT prepared an Interstate Access Change Request for FHWA's review. This request provides a detailed analysis of the Shepard Lane and Glovers Lane Options. The request is posted on the project website ([www.udot.utah.gov/westdavis/documentation](http://www.udot.utah.gov/westdavis/documentation)).

UDOT identified the best versions of each interchange based on preliminary engineering. During the EIS process, UDOT evaluated all of the interchange options provided by the public, including several that were suggested during the Draft EIS public comment period. Finally, the decision regarding the preferred alternative and associated interchanges will not be made until the Record of Decision is issued.

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- J. *A commenter suggested putting the entire WDC on structures to avoid impacts to wetlands and homes.*

The cost of constructing either elevated highways or tunnels is substantially more than constructing at grade. During the development process for the WDC alternatives, the WDC team determined that building the highway on structures would not be cost-effective and that placing the WDC entirely on structures would not be a reasonable or practicable option for any of the WDC alternatives. In addition, elevated structures tend to develop ice during the winter, causing unnecessary safety issues. For distinct wetland and water areas, the WDC alternatives do propose some structures to avoid and minimize impacts to wetlands where such structures are reasonable and practicable.

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- K.** *Commenters requested changing the Roueche Lane underpass to make Roueche Lane the overpass for the WDC alternatives.*

Because the Rocky Mountain Power lines are located immediately west of the WDC alternatives at this location, it would not be possible to make Roueche Lane go over the WDC. Having Roueche Lane go over the WDC would not meet vertical clearance safety standards with the Rocky Mountain Power lines (that is, the road would be too close to the power lines). Relocating the power lines in this area would result in substantial additional costs and impacts to the wetlands west of the current power lines.

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- L.** *Commenters questioned why Syracuse has two interchanges.*

The WDC interchange on Antelope Drive is required to meet the project purpose of improving regional mobility, since Antelope Drive is a major east-west arterial that has access to I-15. If an interchange is provided at this location, traffic would use the WDC instead of traveling east to I-15.

The second interchange in Syracuse at 2000 West is required to reduce future congestion in this growing area of Syracuse. If this interchange is provided, residents in southern Syracuse would access the WDC to go south instead of using east-west arterials such as Gentile Street to access I-15 to go south.

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- M.** *Commenters requested that the 2700 West interchange in Layton be moved to 2200 West in Layton.*

The WDC interchange is located on the future 2700 West in Layton based on comments provided by Layton City and based on the Layton City Master Street Plan, which identifies 2700 West as an arterial road. Additionally, the 2700 West interchange would be close to the Layton arterial interchange at 2700 West and Layton Parkway. 2200 West in Layton is a collector road that would not provide close access to Layton Parkway. The location of the 2700 West interchange in Layton was not changed in this Final EIS.

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- N.** *A commenter questioned where the future WDC interchanges would be located and the impacts of these future interchanges. Commenters questioned what process would be used for future interchanges.*

Chapter 2, Alternatives, of the EIS lists the proposed interchanges for the WDC alternatives. The locations of these interchanges were based on the projected travel demand and city, county, and regional transportation plans. Any interchanges that are not listed in Chapter 2 would need to have a separate environmental study completed by UDOT or the City or County proposing the project before an interchange is constructed. These environmental studies would consider the need for the interchange and the impacts of building an interchange.

### 32.2.3 Section 2.2.1 – No-Action Alternative

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- A.** *Commenters stated that the WDC should not be built.*

The No-Action Alternative is evaluated in the EIS and will be considered by FHWA in making a final decision on the WDC Project.

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- B.** *Commenters stated that the No-Action Alternative would eliminate bicycle, pedestrian, and trail paths. A commenter suggested that the No-Action Alternative should include paths at the Great Salt Lake Shorelands Preserve and the Farmington Bay Waterfowl Management Area.*

The No-Action Alternative would not eliminate any existing trail or prohibit the construction of planned future trails. The new trail proposed as part of the WDC action alternatives is the only trail that would not be constructed if the No-Action Alternative is selected.

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- C.** *The U.S. Environmental Protection Agency commented that the Final EIS should be clarified on the benchmark for comparison whenever the Final EIS describes impacts. Please include the No-Action Alternative (and existing conditions if applicable) when presenting impacts analysis.*

When it was possible to calculate No-Action impacts, such as air quality and transportation impacts, the information has been included in the EIS; otherwise, qualitative data are provided. City plans and Wasatch Front Regional Council land-use information provide general information and categories for future land uses in the WDC study area. For example, city land-use plans will identify that an area currently used for agricultural use will be converted to residential use in the future. However, until a development plan and plat maps are created, any attempts to quantify the specific impacts of this future development to wetlands, farmland, or other resources would be a speculative effort because the development could occur in a variety of ways. Therefore, for most resources, it is not possible to quantify or predict the impacts with the No-Action Alternative (that is, without the WDC). The EIS does provide the expected impacts that are likely to occur to each resource with the No-Action Alternative based on the city land-use plans and the Wasatch Front Regional Council's projections.

### 32.2.4 Section 2.2.2 – Alternative A1

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- A.** *A commenter suggested that the WDC connect to 4000 South in Weber County, since this would provide better connections to 12th Street and 31st Street and would have a better connection to I-15.*

For this Final EIS, the WDC team used version 8.1 of the Wasatch Front Regional Council's travel demand model instead of version 7.0, which was used for the Draft EIS. Modeling results using version 8.1 showed that Alternative A1 would need to go only as far north as

5500 South in Hooper to meet the project's purpose and need. None of the WDC action alternatives would connect to 4000 South.

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- B.** *A commenter suggested that Alternative A should be moved closer to 3700 South in Syracuse and that 3700 South should be made a frontage road.*

Alternatives A1 and A2 are located north of 3700 South to minimize impacts to wetlands between 3700 South and 2700 South in Syracuse. Moving the alignment farther south would increase wetland impacts.

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- C.** *Farmington City commented that access to the Davis County "Sheep Road" is blocked by the Glovers Lane Option. Although access is provided farther south via a proposed local road, it appears that the Glovers Lane Option will forever preclude the county road as a viable north-south corridor in the future. Blocking the road will be detrimental to the growth of Farmington.*

Although Alternatives A1, A2, B1, and B2 would block direct access to Sheep Road, UDOT would provide access to Sheep Road south of the WDC via Tippetts Lane. With the existing businesses south of the WDC being located on Tippetts Lane, and since there are no home or business accesses on Sheep Road south of the WDC, UDOT believes that it makes more sense for Tippetts Lane to be the through road with access under the WDC. Also, blocking access to Tippetts Lane at the WDC could require residential relocations.

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- D.** *UTA commented that the Glovers Lane alternatives have a southbound-WDC-to-southbound-I-15 ramp that appears to occupy space needed for a future double-tracking of FrontRunner. UTA needs to maintain this space for the future double-tracking.*

The Glovers Lane alternatives' ramps would not affect any UTA right-of-way. If UTA decides to construct a future double-track for FrontRunner, UDOT will work with UTA to identify options for acquiring the additional right-of-way.

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- E.** *UTA requested that the Glovers Lane alternatives include a structure over the D&RGW [Denver & Rio Grande Western Railroad] trail/corridor that would maintain the full horizontal width and 23.5 feet of vertical clearance.*

The current Glovers Lane alternatives' crossing over the D&RGW corridor does not accommodate the recommended transit clearances. The Wasatch Front Regional Transportation Plan 2015–2040 does not include a commuter-rail or freight-rail project on the D&RGW corridor. During the final design phase of the project, UDOT would coordinate with UTA regarding the final structure size, taking into account the timing of the future use of the D&RGW corridor as a transit facility.

### 32.2.5 Section 2.2.3 – Alternative A2

See the responses in Section 32.2.4 of this chapter.

### 32.2.6 Section 2.2.4 – Alternative A3

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- A. *Commenters stated that the Shepard Lane Option of Alternative A3 (the Shepard Lane Option is part of Alternatives A3, A4, B3, and B4) would create a bottleneck whenever there is heavy traffic or an incident on I-15. Commenters also stated that the Shepard Lane Option would have a substantial impact on the community and would affect more homes, would cause a safety issue for homes close to the road because of vehicles coming out of the right-of-way, would affect the existing UTA FrontRunner commuter-rail and Union Pacific rail lines, would cause Shepard Lane to be widened by the Oakridge Country Club golf course, would have more noise impacts, would have more wildlife impacts, would cost more, would have more construction impacts to I-15, and would have more impacts to wetlands or more impacts to higher-quality wetlands.*

Alternatives A3, A4, B3, and B4 (the alternatives with the Shepard Lane Option) were eliminated as a reasonable and practicable alternative between the release of the Draft EIS and the Final EIS. After the Draft EIS was published in May 2013 and after the Final EIS screening process, UDOT began a more detailed evaluation of the Shepard Lane and Glover Lane interchange options to meet FHWA’s process for modifying access to an interstate. This process, which requires FHWA to approve a new interchange design before the interstate can be modified, ensures that FHWA provides the highest level of service in terms of safety and mobility on the National Interstate Highway System. UDOT’s analysis of the Shepard Lane and Glovers Lane interchange options also included updated traffic data from the Wasatch Front Regional Transportation Plan 2015–2040, which was adopted after the Draft EIS was published in 2013.

UDOT submitted for FHWA’s review an Interstate Access Change Request report, which discussed the Glovers Lane and Shepard Lane Options’ compliance with all eight FHWA interstate access modification policy points and state and federal design standards. The report concluded that the proposed Glovers Lane Option complied with all eight FHWA policy points and met state and federal design standards. The proposed Shepard Lane Option did not comply with Policy Points 3 (Operational Safety) and 4 (Full Access/Standards Compliance) because it would adversely affect the safety and operations of I-15 and does not meet design standards.

The main noncompliance of the Shepard Lane Option was that it did not meet the *Manual on Uniform Traffic Control Devices*, or *MUTCD*, standards, which govern the installation and maintenance of traffic-control devices on all public streets, highways, bikeways, and private roads open to public travel. The *MUTCD* is the law governing all traffic-control devices. The U.S. Secretary of Transportation, under authority granted by the Highway Safety Act of 1966, decreed that traffic-control devices on all streets and highways open to public travel in each state shall be in substantial conformance with the standards issued or endorsed by FHWA.

Noncompliance with the *MUTCD* ultimately can result in loss of federal-aid funds and would be in violation of Utah code and standards.

The UDOT Traffic and Safety Division reviewed the Shepard Lane interchange option and found that the interchange would be in violation of Utah's version of the *MUTCD* standards. The signing standards could not be met because of the close proximity of the I-15, US 89, Legacy Parkway, and Park Lane interchanges to the proposed WDC Shepard Lane interchange. No other viable options to this interchange that would meet the signing standards are available except the Glovers Lane interchange option.

FHWA's review of the UDOT Interstate Access Change Request for the Glovers Lane and Shepard Lane Options concluded that the Shepard Lane interchange option does not meet safety and design standards and thus could not be approved, and the Glovers Lane interchange option meets all safety and design standards and is approved for access to the interstate. Therefore, FHWA concluded that the Shepard Lane Option could not be built and therefore was not a reasonable or practicable option.

The U.S. Army Corps of Engineers reviewed FHWA's findings and determined that, because the Shepard Lane Option did not meet *MUTCD* standards and thus was not available to FHWA to consider, the Shepard Lane Option was not a practicable option under the Clean Water Act Section 404(b)(1) guidelines.

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- B.** *Commenters questioned whether UDOT would work with Farmington City to build the local transportation infrastructure at the new intersection of 950 North if the Shepard Lane Option is selected.*

See response 32.2.6A.

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- C.** *For the Shepard Lane Option, commenters questioned whether it was possible to make the rerouted road entering the Hunters Creek subdivision a different shape or design, since the design appeared to be oddly shaped.*

See response 32.2.6A.

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- D.** *Commenters questioned whether the pedestrian overpass included with the Shepard Lane Option would be safe for children, bicyclists, and pedestrians.*

See response 32.2.6A.

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- E.** *Commenters questioned why the Shepard Lane alternatives could not be narrowed to fit into the corridor between the Quail Crossing and Hunters Creek subdivisions.*

See response 32.2.6A.

- 
- F.** *UTA commented that the Shepard Lane alternatives have a conflict with the FrontRunner commuter-rail line between Station Park and Shepard Lane. UTA stated that significant track relocation would be required in this area (as shown on the proposed design), and that this would need to accommodate the future double-tracking of FrontRunner.*

See response 32.2.6A.

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- G.** *UTA commented that the Shepard Lane alternatives would adversely affect the D&RGW [Denver & Rio Grande Western Railroad] trail/transit corridor. UTA stated that, in order to meet its legal obligation with respect to the D&RGW corridor, it would require an alignment of the D&RGW rail corridor that meets the horizontal and vertical requirements for freight rail operation.*

See response 32.2.6A.

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- H.** *A commenter provided a new design concept for the Shepard Lane interchange, stating that it would improve the traffic flow by elevating and adding some bridges after Park Lane.*

UDOT evaluated the proposed design changes. Based on a review of the design, UDOT found that, similar to the Shepard Lane Option evaluated in the Draft EIS, the proposed design concept would not meet UDOT and FHWA signing standards. Also see response 32.2.6A.

### **32.2.7 Section 2.2.5 – Alternative A4**

See the responses in Section 32.2.6 of this chapter.

### **32.2.8 Section 2.2.6 – Alternative B1**

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- A.** *Commenters stated that UDOT should have considered a B Alternative that stayed on the bluff and affected Jensen Park in Syracuse.*

Jensen Park is a public recreation area protected as a Section 4(f) resource. See Chapter 27, Section 4(f)/6(f) Evaluation, for more details. As a Section 4(f) resource, the park must be avoided unless there are no prudent or feasible alternatives to the use of this resource. In the case of the B Alternatives, an alignment to the west is prudent and feasible. Although Jensen Park was built after a corridor along the bluff was identified in 2001, it is still a protected resource under the regulations and must be avoided.

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- B.** *A commenter stated that the B Alternatives would block all east-west roads in West Point.*

Table 2-17, Alternative B1 Cross Streets, Interchanges, and Park-and-Ride Lots, of the Draft EIS shows all of the local roads that would be affected by the WDC. No east-west roads in West Point would be blocked by the WDC. UDOT would maintain connectivity by providing underpasses or overpasses with the WDC.

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- C.** *A commenter stated that the route of Alternative B1 was moved between 1300 North and 1800 North in West Point between September 2011 and September 2012 and that the route had previously been located farther west, close to the Hooper Canal. The commenter stated that he preferred the alignment of Alternative B1 to be west to avoid impacts to houses in this area. The commenter wondered why wetland mitigation was not considered for this area instead of affecting six houses.*

The alignment of Alternative B1 did not change between 1300 North and 1800 North between September 2011 and September 2012. The wetlands east of the Layton Canal are protected by the Clean Water Act, which requires avoidance before any mitigation. During the alternatives-development and screening process, UDOT evaluated an alignment for the B Alternatives that was farther west, close to the Layton Canal, but determined that the large increase in wetland impacts with this option would make it not permissible under the Clean Water Act. This process and evaluation are described on pages 77 to 81 of *Technical Memorandum 15: Alternatives Screening Report*.

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- D.** *Commenters wanted to know why the alignment in west Farmington bends to the east near Loveland Lane.*

Alternatives A1, A2, B1, and B2 bend to the east in west Farmington to avoid wetlands. As required by the Clean Water Act, wetlands must first be avoided if practicable. In this area, wetlands can be avoided without any additional direct residential impacts.

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- E.** *Commenters wanted to know why the B Alternatives could not be shifted a little farther west near the Hamblin Dairy and through the Cook property or switch back to the previous version (fall 2011 version) of the B Alternatives that had gone through the Cook property.*

An alternative farther west (Alternative B, fall 2011 version) was evaluated as part of the alternatives-development process. As described in Chapter 2, Alternatives, and shown in Figure 2-14, Alternative B Syracuse Options January 2012, in Volume IV of the Draft EIS, the west alternative had similar wetland impacts and home relocations but would affect two additional Agriculture Protection Areas and 36.7 additional acres of farmland. Because of these additional farmland impacts, the fall 2011 version was eliminated from detailed consideration.



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- F.** *Commenters questioned whether the cul-de-sac on the north side of the Antelope Drive interchange for the B Alternatives was legal. Commenters stated that, even if it were legal, there should be some sort of emergency access. Commenters also proposed a new design of the interchange for the B Alternatives that would include a frontage road that would affect four houses (two on Bluff Road, two on 2625 South). Other commenters suggested having 2750 West on Syracuse connect to Antelope Drive for Alternative B1. Other commenters suggested that Antelope Drive should go over the WDC instead of the WDC going over Antelope Drive for the B Alternatives.*

Syracuse City has reviewed the cul-de-sacs proposed as part of the interchange for the B Alternatives at Antelope Drive and has determined that the cul-de-sac design would meet city code in this location. UDOT did evaluate other design options brought forward by commenters, but these options would result in more residential acquisitions or did not meet design standards. UDOT evaluated taking Antelope Drive over the WDC. This would result in at least seven more residential impacts to Antelope Drive and would also restrict access to Antelope Drive west of the WDC near 3000 West, the Syracuse Arts Academy, and Glen Eagle Golf Course. UDOT will continue to propose that the B Alternatives go over Antelope Drive but will continue to look for ways to lower the elevation of the WDC through Syracuse during the final design phase of the project.

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- G.** *A commenter (in comment 286) questioned whether the location of the park-and-ride lot at the Alternative B1 Antelope Drive interchange could be moved off commercial property. The commenter also stated that the proposed relocation of the Layton Canal pipeline by the Glen Eagle Golf Course would affect a wetland mitigation site.*

UDOT was able to move the park-and-ride lot at this location. This change has been updated in this Final EIS. UDOT is aware of the wetlands by Glen Eagle Golf Course and will work with the U.S. Army Corps of Engineers to mitigate any impacts to wetlands from the selected alternative. It is likely that the pipeline would be placed underground, and, following construction, the wetland would be restored.

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- H.** *A commenter (in comment 316) provided design requests for the 4100 West Option in West Point. The commenter requested unlighted signs for the 1800 North interchange and requested exit signs placed on the side of the road instead of overhead. Commenters (in comments 316 and 710) also requested a shift in the alignment to the west to be closer to the Hooper Canal and to move the detention basin closer to the houses instead of the highway.*

The WDC team evaluated these proposals, but the current alignments in the EIS would have the least impact to the human and natural environment including wetlands and residential relocations. No changes were made to the alignment in this area. Note that, between the release of the Draft EIS and the Final EIS, UDOT changed the design such that there would be no interchange at 1800 North, only an at-grade intersection with a traffic signal. Other details, such as signing, would not be determined until the final design phase of the project.

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- I. *A commenter suggested using the existing or previously existing Bluff Road for Alternative B1 in Syracuse and West Point, stating that this would be less impactful, would improve safety at the Bluff Road and Antelope Drive intersection, and would be more beneficial to residents.*

The WDC team designed Alternative B1 so that the existing sections of Bluff Road would remain open to local traffic. Putting Alternative B1 on the existing Bluff Road would require more home relocations, since the homes that have access on Bluff Road would not have access on the WDC highway. The design of Alternative B1 does require that the existing Bluff Road and Antelope Drive intersection be rerouted or end in a cul-de-sac, so this would improve safety in this area.

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- J. *A commenter suggested connecting the northern terminus of Alternative B1 to the west gate of Hill Air Force Base (approximately 1700 West 5600 South in Roy).*

In Phase 2 of the Wasatch Front Regional Transportation Plan 2015–2040, 5600 West is planned to be widened from two to four lanes between 1900 West and 5900 West. It would not be necessary to include this widening as part of the WDC Project, and connecting WDC directly to the west gate would cause substantial community impacts as the area is fully developed with homes and businesses. Alternative 05 included widening the existing east-west roads including 5600 West, but this alternative was eliminated from detailed study because of its high community impacts.

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- K. *A commenter suggested moving the Glovers Lane interchange farther south on I-15 and Legacy Parkway and using Tippetts Lane and the D&RGW [Denver & Rio Grande Western Railroad] trail for the road to minimize impacts to the businesses on Tippetts Lane in Farmington. Other commenters suggested moving the Glovers Lane alternatives south of Glovers Lane between 1325 West and Tippetts Lane to minimize or avoid impacts to farms and houses on Shirley Rae Drive and areas between Shirley Rae Drive and 1525 West.*

The Glovers Lane Option system-to-system interchange with I-15 and Legacy Parkway is located in its current location in order to minimize impacts to wetlands. A connection farther south would substantially increase the amount of wetland impacts, even if it used Tippetts Lane and the D&RGW rail corridor, since both of these would need to be widened to accommodate the WDC cross-section. Putting the roadway in this area would also further separate two large wetland areas, thereby causing more indirect wetland impacts. As required by the Clean Water Act, wetlands must first be avoided if practicable.

Similarly, the alignment of the Glovers Lane Option between Tippetts Lane and 1525 West is in its current location in order to avoid and minimize impacts to wetlands and residences. Although putting the Glovers Lane Option south of Glovers Lane would move the Glovers Lane Option farther away from houses and farms around Shirley Rae Drive, it would increase direct wetland impacts. As required by the Clean Water Act, wetlands must first be avoided if practicable.

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- L.** *A commenter suggested moving the alignment of Alternative B1 to the west at 700 South in Syracuse to minimize impacts to houses and farmland on the north side of 700 South. The commenter suggested that any additional wetland impacts from doing this could be mitigated somewhere else.*

Shifting the alignment of Alternative B1 west at 700 South would result in more wetland impacts north of 700 South, more impacts to houses on St. Andrews Drive south of 700 South, and impacts to Rock Creek Park, a Section 4(f) property. The wetlands north of 700 South in Syracuse are protected by the Clean Water Act, which requires avoidance of wetlands before any mitigation. Similarly, Section 4(f) requires avoidance of Section 4(f) properties unless there is no feasible and prudent alternative to doing so.

During the alternatives-development and screening process, UDOT evaluated an alignment for the B Alternatives that was farther west at 700 South but determined that the large increase in wetland impacts, residential impacts, and the Section 4(f) impact to Rock Creek Park with this option would make it not practicable under the Clean Water Act and not feasible or prudent under Section 4(f).

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- M.** *Commenters requested that the Glovers Lane Option (Alternatives A1, A2, B1, or B2) include another project that would construct the local I-15 interchange at Shepard Lane, a new connection from the I-15 Shepard Lane interchange to the WDC, and an interchange on the WDC.*

A local interchange at Shepard Lane and I-15 is identified in Phase 1 (2015 to 2024) of the Wasatch Front Regional Transportation Plan 2015–2040. The scope of that project as planned would be a new bridge with on and off ramps.

With the Glovers Lane Option, the Shepard Lane local interchange would not be built as part of the WDC Project but as a separate project. The Glovers Lane Option meets the purpose of the WDC Project without constructing the Shepard Lane local interchange project and the connection to the WDC. Adding the Shepard Lane local interchange project to the Glovers Lane Option is not necessary to meet the purpose of the WDC Project and would increase the cost and impacts of the Glovers Lane Option.

For more information, see responses 32.24A and 32.2.6A.

### **32.2.9 Section 2.2.7 – Alternative B2**

See the responses in Section 32.2.8 of this chapter.

### **32.2.10 Section 2.2.8 – Alternative B3**

No comments were provided.

### 32.2.11 Section 2.2.9 – Alternative B4

No comments were provided.

### 32.2.12 Section 2.3 – Summary Comparison of Alternatives (Cost, Daily Delay, Travel Time, and Environmental Impacts)

No comments were provided.

### 32.2.13 Section 2.4 – Identification of UDOT’s Locally Preferred Alternative

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**A.** *Commenters stated that they agreed with UDOT’s identification of Alternative B1 as the locally preferred alternative or supported the WDC process. Commenters felt that the Glovers Lane Option would cost less, would affect fewer wetlands, would affect fewer homes, is a less complicated interchange, and would improve travel time. Other commenters stated that, overall, Alternative B1 would provide the best traffic performance, would avoid dividing the Bridgeway Island development, would overall not divide communities or subdivisions, would avoid the Farmington Bay Waterfowl Management Area, would have less impact to farmland and prime soil, and would affect lower-quality wetlands.*

Comments noted.

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**B.** *Commenters felt that the Glovers Lane Option was a better option than the Shepard Lane Option because it would cost less, would affect fewer wetlands, would affect fewer homes, and would have a less complicated interchange.*

The Draft EIS includes a detailed comparison of the Shepard Lane and Glovers Lane Options. Between the release of the Draft EIS and the Final EIS, the Shepard Lane Option was eliminated as a reasonable and practicable alternative (see response 32.2.6A) and was not carried forward for detailed analysis in this Final EIS. Therefore, comments related to the Shepard Lane Option are no longer applicable to the alternatives being considered in this Final EIS.

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**C.** *Commenters stated that they disagree with the selection of the Glovers Lane Option and that the option would be affected by fluctuating water levels; would affect the Farmington Bay Waterfowl Management Area; would affect Farmington City’s conservation easements; would substantially reduce home values; would cost more given the longer length; would affect the community and the peaceful nature of the area; would have more air pollution and health impacts; would have noise impacts and should have sound walls; would affect the frontage road and Skater Park (South Park) on the east side of I-15; is designed to be a freeway instead of a parkway; would be elevated and cause visual impacts including from the lighting; would be located in an area with a high number of days of fog, causing safety*

*concerns; would have an area of limited access for emergency vehicles between 200 North in Kaysville and Centerville on I-15; would not be consistent with the Farmington City Transportation Plan, which shows the WDC on Shepard Lane; would provide no benefit to Farmington; would affect proposed schools in Farmington; would have more bugs that would make people not want to use the Glovers Lane alternatives; would be more susceptible to lake-effect snow; would have more wind; would have no connection to the northern terminus of Legacy Parkway; would have no connection to Station Park; would have light pollution effects on residents and birds; and would be more susceptible to earthquake and liquefaction impacts. In addition, commenters stated that the selection of the Glovers Lane Option was driven by politicians or business interests.*

The Draft EIS includes a detailed comparison of the Shepard Lane and Glovers Lane Options. Between the release of the Draft EIS and the Final EIS, the Shepard Lane Option was eliminated as a reasonable and practicable alternative (see response 32.2.6A) and was not carried forward for detailed analysis in this Final EIS. Therefore, comments related to the Shepard Lane Option are no longer applicable to the alternatives being considered in this Final EIS.

***Freeway vs. Parkway (Quiet Pavement, Speed Limit, and Truck and Billboard Restrictions).*** See response 32.2.1H.

***Elevated Roadway.*** Based on comments from the public, UDOT has evaluated the height of the WDC roadway. The final height would be determined during the final design phase of the project after taking into account roadway drainage and water quality requirements. Because of the flat topography in the area, the need to allow water to drain from the highway, and the need to allow creeks and other water to flow under the highway, it is not possible to have a roadway elevation that is near current ground levels. Based on additional engineering evaluation, UDOT expects the final roadway elevation to be reduced from the initial 14 feet to about 5 to 6 feet.

***Water Levels.*** See responses 32.13A and 32.15A.

***Home Values.*** See response 32.8A.

***Farmington Bay Waterfowl Management Area, the Great Salt Lake Nature Center at the Farmington Bay Waterfowl Management Area, and The Nature Conservancy's Great Salt Lake Shorelands Preserve.*** The Glovers Lane Option would not directly affect the Farmington Bay Waterfowl Management Area. The option is about 0.5 mile from the Nature Center building and at its closest point is about 500 feet from the man-made bird observation ponds on the northern extent of the property. Modeled noise levels at the Nature Center building were similar to monitored background conditions (see Section 3.4.3.1, Alternative A1 – Glovers Lane and 4100 West/1800 North, Farmington Bay Waterfowl Management Area, of this Final EIS for more details). Similarly, the WDC would be 0.6 mile or 3,400 feet from The Nature Conservancy's Visitor Center in the Great Salt Lake Shorelands Preserve, and the WDC team expects that noise levels would also be at background levels.

***Cost.*** Between the release of the Draft EIS and the Final EIS, the Shepard Lane Option was eliminated because it did not meet UDOT and FHWA signing standards (see response

32.2.6A). Because the Shepard Lane Option was eliminated as a reasonable and practicable alternative, an updated cost estimate was not provided in this Final EIS.

**Community Impacts (Rural Lifestyle).** Chapter 5, Community Impacts, states that the Glovers Lane Option would change the rural nature of the area to a more urban environment.

**Homes.** The preferred alternative would result in two homes being acquired in Farmington.

**Air Pollution and Health Impacts.** See responses 32.11.1A and 32.11.2A.

**Wildlife and Wetland Impacts.** See the responses in Section 32.14 of this chapter. A full evaluation of wildlife and wildlife impacts, including impacts to bald eagles, is presented in Chapter 14, Ecosystem Resources, of the Draft EIS. This chapter states that the WDC would have both direct and indirect impacts to wildlife. The impacts from the Glovers Lane Option are discussed in Chapter 14, Ecosystem Resources, which states that there would be some impacts to wetlands in Farmington and impacts to wildlife and associated wildlife habitat.

**Noise Impacts.** Chapter 12, Noise, discusses the noise evaluation conducted for the WDC Project. Also see the responses in Section 32.12 of this chapter. The noise evaluation included the entire Glovers Lane alignment including impacts to properties east of I-15 (see Figure 12-1, Noise Receptor Impacts, in Volume IV of this Final EIS). The evaluation found that 46 residential receptors would have impacts above the noise criteria. Seven of those receptors would be east of I-15.

For this Final EIS, noise walls were evaluated based on a updated UDOT noise policy in this area. Based on the analysis, one noise barrier is feasible west of the Hunter Creek subdivision. The residents would be able to vote on approval of the noise barrier. Currently, noise barriers are in place along I-15 to reduce noise impacts east of I-15 near Glovers Lane. Finally, noise barriers cannot be constructed on system-to-system interchange overpasses because they would not be effective at reducing noise levels. UDOT is planning to use pavement designs that could reduce noise levels.

**Impacts East of I-15 (Frontage Road, South [Skater] Park, Visual Impacts, and Noise and Light Pollution).** An evaluation of impacts east of I-15 for the Glovers Lane Option was included in the Draft EIS. The proposed Glovers Lane Option would realign a short segment of the frontage road east of I-15 but would maintain the current traffic flow. The realigned frontage road would use about 0.08 acre of South Park (which would affect the park sign, which would be replaced) of this Section 4(f) resource.

Noise impacts were evaluated in Chapter 12, Noise, and are discussed immediately above in the section titled Noise Impacts.

The current design for the realigned frontage road does not require the relocation of any homes east of I-15. Design speeds on the ramps between I-15/Legacy Parkway and the WDC have not been determined but would likely be about 50 mph. The ramp structures would likely be concrete, similar to all other structures in the state, and would be designed to meet safety standards.

Additional information regarding the visual impacts of lights from the system-to-system interchange with I-15/Legacy Parkway has been added to Chapter 18, Visual Resources, of this Final EIS.

**Fog.** Additional information about the safety impacts from fog have been added to Chapter 5, Community Impacts, of this Final EIS. There are no specific fog data for the Farmington area west of I-15. The National Oceanic and Atmospheric Administration (NOAA) National Weather Service Weather Forecast Office near the Salt Lake City International Airport keeps quantitative data for the airport, which is in a similar geographic setting as Glovers Lane in Farmington with similar nearby wetlands and saturated soils. Both locations are adjacent to the Great Salt Lake.

According to the National Weather Service, the mean number of days with heavy fog (visibility is less than or equal to 0.25 mile) in Salt Lake City (the airport/NOAA station) is 11.8 days per year. The foggiest months are December through February. The other months have little to no fog. Other major highways in Utah, including Legacy Parkway, Interstate 80 (I-80), and Interstate 215 (I-215) west of the Salt Lake City International Airport, and I-15 near Willard Bay, are located in similar areas. Therefore, the WDC team does not expect that fog along the Glovers Lane Option would pose a higher safety risk compared to the risks on other highways in similar settings in Utah. In addition, UDOT currently has fog-notification signs in high-fog areas on I-80 and I-215, and this system could be used on the WDC in Farmington.

**Wind.** Many commenters stated that the wind in Farmington would be a safety issue for the Glovers Lane Option. Although there are occasionally strong winds in Farmington, there would be no greater wind risk for any of the WDC alternatives than the wind risk for I-15, US 89, Legacy Parkway, and all other roads in Farmington.

**Lake-Effect Snow.** Some commenters stated that the Glovers Lane Option would be subject to intense lake-effect snow and would require more snow removal and maintenance. Given the wide variance in winter snowfall, it is possible that, with some storms, the Glovers Lane Option could receive heavy snowfall. However, other storms could produce more snow in areas located farther east, closer to the mountains. Other major highways in Utah, including Legacy Parkway, I-80 and I-215 west of the Salt Lake City International Airport, and I-15 near Willard Bay in Utah, are located in similar areas. Therefore, the WDC team does not expect that the possibility of lake-effect snow along the Glovers Lane Option poses an increased safety risk or maintenance consideration compared to other highways in similar settings in Utah.

**Earthquakes and Liquefaction.** Commenters stated that placing the WDC in the Great Salt Lake floodplain with its poorly drained soils would make the highway more susceptible to liquefaction impacts caused by earthquakes. UDOT has constructed numerous roads, including I-80, I-15, and Legacy Parkway, in areas susceptible to liquefaction. The geologic conditions underlying roads are taken into account as part of the design process to minimize these potential types of impacts.

***No Access to Farmington and Park Lane Transit Station; No Transportation Benefit to Farmington from Glovers Lane Option.*** At a regional level, there is no need for a local access in Farmington on the Glovers Lane Option. However, between the release of the Draft EIS and the Final EIS, Farmington City has planned for a major business park west of I-15 immediately south of Shepard Lane. This business park would become regionally significant to Davis County, so a future interchange on the WDC at 950 North was considered in this Final EIS. This interchange would provide access to western Farmington and the business park. The interchange would be constructed once the local access road connecting to the interchange is completed by Farmington City and Kaysville City. See response 32.2.130 for more information about access to Farmington.

***Emergency Vehicle Access.*** If an incident occurs on the WDC, interchanges that provide access to the highway would provide access for most emergency vehicles. The spacing between most interchanges is about 2 miles. However, some commenters stated that the segment of the WDC between 200 North in Kaysville and the next exit to the south in Centerville on I-15 or Legacy Parkway for the Draft EIS Glovers Lane Option was about 10 miles. After the Draft EIS was released, an interchange was added to the WDC at 950 North in Farmington, making the longest segment without access in Farmington about 6.5 miles (from 950 North to Centerville on I-15). UDOT would work with local emergency service providers to provide appropriate access to the WDC in this segment to ensure that response times required by the local municipality are met. The Glovers Lane Option would accommodate all existing Farmington roads that are crossed by the Glovers Lane Option and would not affect emergency access to residential areas in western Farmington.

***City Transportation Plans.*** The Farmington City Master Transportation Plan Addendum (Farmington City 2009) shows a “North Legacy Connector” basically following the current Glovers Lane Option. Although this is the WDC route currently shown in Farmington’s Master Transportation Plan, the City has passed a resolution supporting a WDC alternative that would connect directly to I-15 at Shepard Lane.

The Kaysville Transportation and Traffic Circulation Plan (Kaysville City 2016) shows the WDC alignment following the Glovers Lane Option in Farmington. This is a change to the City’s 2010 transportation plan, which showed the WDC as a principal arterial following the Shepard Lane Option.

***Legacy Parkway Northern Terminus.*** Commenters stated that, with the Glovers Lane Option, the north end of Legacy Parkway would not be used and would represent a worthless investment. With the Glovers Lane Option, all of Legacy Parkway would still be used and needed. The northern section of Legacy Parkway would still provide access to US 89, I-15, and Park Lane in Farmington.

***Impacts to Existing and Proposed Schools.*** Some commenters stated that the Glovers Lane Option would have impacts to Eagle Bay Elementary School on Clark Lane and proposed elementary and high schools on Glovers Lane (the elementary school was opened in the fall of 2016). The Glovers Lane Option would be about 2,000 feet away from Eagle Bay Elementary and would not affect any access to the school. As described in Chapter 11, Air





Quality, and Chapter 12, Noise, of this Final EIS, there would not be any air quality or noise impacts to Eagle Bay Elementary from the Glovers Lane Option.

The WDC team has met with the Davis County School District and is aware of the proposed high schools in south Farmington west of I-15. Additional information has been added to Chapter 5, Community Impacts, of this Final EIS. Based on coordination with the Davis County School District, the Glovers Lane Option would not directly affect the high school. However, the relocation of 1100 West around the WDC could require the acquisition of about 50 square feet of the southwest corner of the 3.5-acre school playing field, but this acquisition would not affect the use of the field. None of the school's access points would be affected. The WDC alignment would be about 450 feet from the nearest school building.

***Interchange at 1100 West or Other West Farmington Roads.*** As part of the WDC Project, there is no regional need for a local interchange at 1100 West in Farmington or at any other locations in west Farmington. The Farmington City Transportation Master Plan, which shows the Glovers Lane Option, does identify a local interchange at 1100 West that is independent of the WDC. If the Glovers Lane Option is selected and the City determines a need for the interchange at a future date, a separate environmental process would likely need to be conducted as well as funding identified.

***Litigation Risk.*** See response 32.31B.

***Shared Solution Alternative.*** See response 32.2.1G.

***Politicians, Businesses, and/or Developers Influencing the Decision.*** Many commenters stated that local politicians, businesses (such as Oakridge Country Club), or real estate developers were behind UDOT's decision to identify the Glovers Lane Option as the preferred alternative. Throughout the process, UDOT has consistently provided updates to all of the state and local politicians who serve the WDC study area but did not make the decision based on direction from state or local legislators. Similarly, UDOT has met with local businesses and land developers who own property or have expressed an interest in the project, as it did with any other stakeholder who expressed an interest. UDOT did not make a decision based on direction from businesses or real estate developers. UDOT does consider impacts to businesses and other development in making its decisions, as those are among the many legitimate factors that by law must be taken into account. UDOT's rationale for identifying its preferred alternative is described in Section 2.6, Identification of the Preferred Alternative, of this Final EIS. A final decision regarding the WDC alternatives will be made by FHWA in the Record of Decision.

***Unfair Evaluation of Glovers Lane Alternatives, Including Wildlife Impacts.*** UDOT identified its locally preferred alternative based on the alternatives' transportation performance, cost, and impacts to the natural and human environment. Public and agency input during scoping and the alternatives-development, screening, and refinement process was reviewed as part of identifying the preferred alternative. There are strengths and weaknesses for each alternative. No alternative had the best transportation performance, had the lowest cost, and minimized impacts to all resources. All alternatives would affect communities, Section 4(f) resources, wetlands, and farmland and would result in residential and business relocations.

In making its decision, UDOT considered all factors including the context and intensity of the impacts. UDOT’s rationale for identifying the preferred alternative is described in Section 2.6, Identification of the Preferred Alternative, of this Final EIS. UDOT considered all alternatives equally and fairly in the EIS.

Finally, although all of the alternatives would have impacts to wetland and wildlife habitat near Farmington Bay and along the Great Salt Lake shorelands, these impacts are not the only factor UDOT had to consider in making its decision. Many factors, including impacts to the human environment, were also considered. A final decision regarding the WDC alternatives will be made by FHWA in the Record of Decision.

**Oakridge Country Club.** Commenters questioned why UDOT considered impacts to the Oakridge Country Club in the evaluation of the preferred alternative. Between the release of the Draft EIS and the Final EIS, the Shepard Lane Option was eliminated for not meeting safety and design standards, and therefore there would be no impacts to the Oakridge Country Club.

**Visual Impacts.** This Final EIS has been revised to include more information on the impacts to the Farmington area including the Farmington conservation easements. Many commenters stated that there would be a visual impact due to the elevated highway being located west of the Buffalo Ranches, Farmington Ranches, and Farmington Meadows subdivisions and within the Farmington City conservation easements. The impacts to visual resources are described in Chapter 18, Visual Resources. This Final EIS concludes that all of the proposed action alternatives would produce mostly high visual quality impacts to viewers in the viewshed, with some areas having moderate visual impacts. A photosimulation for the Glovers Lane Option is Photo Location 1 in Appendix 18A, Photosimulations, of this Final EIS.

#### What is a viewshed?

A viewshed is all areas where physical changes associated with the WDC alternatives could be seen.

**Impacts to Open Space, Conservation Easements, Great Salt Lake Shoreline Trail, and Buffalo Ranch Trail.** Many commenters expressed concerns about the impacts to the Farmington Ranches and Farmington Meadows conservation easements and trails located on the west side of Farmington. Commenters said that the Glovers Lane Option would affect recreational trail use and recreational bird watching, hunting, or fishing use of the easements or areas west of the easements. Chapter 3, Land Use, of this Final EIS describes the conservation easements and impacts to the conservation easements. Chapter 3 also concludes that the Glovers Lane alternatives would not be consistent with the purpose of the conservation easement.

As described in Chapter 10, Considerations Related to Pedestrians and Bicyclists, and Chapter 27, Section 4(f)/6(f) Evaluation, all trail connectivity would be maintained for all of the WDC alternatives. The Glovers Lane Option would have grade-separated crossings where it crosses the Legacy Parkway Trail, the Denver & Rio Grande Western Trail, the Buffalo Ranch Trail, and the Great Salt Lake Shoreline Trail. All current bird watching, hunting, or fishing accesses that use these trails would be maintained. In addition, between the release of

the Draft EIS and the Final EIS, UDOT added a continuous trail along the WDC from the Legacy Parkway Trail in Farmington to the Old Emigration Trail in Syracuse.

**Insects.** Some commenters stated that millions of flying insects along the eastern Great Salt Lake shoreline, smashing into and dirtying windshields, would deter motorists from using the WDC freeway. UDOT does not have any data that support the assertion that the presence of insects would be more pronounced on the Glovers Lane alternatives, or any of the WDC alternatives, compared to any other road in the state, and does not have any data or studies that conclude that insects on any roads would deter motorists from using a facility. Legacy Parkway travels through an area similar to the Glovers Lane Option, and UDOT has no information suggesting that bugs caused a reduction in the use of that facility or other problems.

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- D.** *Commenters stated that the Shepard Lane Option should have been selected because it would provide access to the Park Lane FrontRunner transit station; it would allow traffic to flow into the Park Station commercial area, thereby increasing tax revenue; Utah air quality regulations require that access to transit be provided; and the Shepard Lane area has a preserved corridor for a road that will be built anyway, so there is no reason to build two roads in Farmington (as would occur with the Glovers Lane Option).*

The Draft EIS includes a detailed comparison of the Shepard Lane and Glovers Lane Options. Between the release of the Draft EIS and the Final EIS, the Shepard Lane Option was eliminated as a reasonable and practicable alternative (see response 32.2.6A) and was not carried forward for detailed analysis in this Final EIS. Therefore, comments related to the Shepard Lane Option are no longer applicable to the alternatives being considered in this Final EIS.

**Access to Park Lane Transit Station.** Between the release of the Draft EIS and the Final EIS, Farmington City has planned for a major business park west of I-15 immediately south of Shepard Lane. This business park would become regionally significant to Davis County, so a future interchange on the WDC at 950 North was considered in this Final EIS. This interchange would provide access to western Farmington and the business park. The interchange would be constructed once the local access road connecting to the interchange is completed by Farmington City and Kaysville City.

Utah air quality regulations do not require the WDC to connect to any existing transit systems. As discussed in Chapter 11, Air Quality, of this Final EIS, none of the alternatives would exceed air quality standards, and the WDC Project would conform to regional air quality requirements.

**Economic Impacts to Farmington Station Park.** As stated in the paragraphs above, UDOT would include an interchange at 950 North on the WDC. Once 950 North is completed by Farmington City and Kaysville City, the interchange would provide a connection to the Station Park development in Farmington. The interchange would provide an economic benefit to Station Park. The Station Park development is considered a destination commercial area. Unlike gas stations or convenience stores at which drivers stop based on easy

accessibility, Station Park is more of a destination location because of the movie theaters, restaurants, and other destination businesses. Most patrons of destination businesses plan to visit the location. Most patrons of convenience businesses stop on impulse or make unplanned stops.

***Local Shepard Lane Interchange and Road.*** A local interchange at Shepard Lane and I-15 is identified in Phase 1 (2015 to 2024) of the Wasatch Front Regional Transportation Plan 2015–2040. The scope of that project as planned would be a new bridge with on and off ramps. The project might also require the construction of a new road in the area currently preserved for a corridor at the Farmington–Kaysville city boundary. The project would have to go through a similar environmental process before construction could begin. Currently, no funding has been identified for the environmental phase or construction.

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- E.** *Commenters stated that some resources should have been given greater weight in making the decision over others, specifically that impacts to schools or residents should have been considered in the decision more than impacts to wildlife, wetlands, or farmland.*

UDOT identified its locally preferred alternative based on the alternatives’ transportation performance, cost, and impacts to the natural and human environment. Public and agency input during scoping and the alternatives-development, screening, and refinement process was reviewed as part of identifying the locally preferred alternative. There are strengths and weaknesses for each alternative. No alternative had the best transportation performance, had the lowest cost, and minimized impacts to all resources. All alternatives would affect communities, Section 4(f) resources, wetlands, and farmland and would result in residential and business relocations.

In making its decision, UDOT considered all factors including the context and intensity of the impacts. However, certain regulations such as those for wetlands impose substantive requirements in order to select an alternative that can be constructed.

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- F.** *Commenters stated they preferred the identification of Alternative B1 north of Gentile Street and said the alternative would be more convenient for residents, would improve travel times, would be more consistent with the 2001 North Legacy Transportation Corridor Study corridor, would have fewer community impacts, would be more consistent with city plans, would have less impact to Great Salt Lake wetlands, would have fewer impacts to the Great Salt Lake Shorelands Preserve, and would have less impacts to farmlands.*

Comments noted.

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- G.** *Commenters stated that Alternative B1 would cause impacts to traffic at the Syracuse Arts Academy; would cause the Syracuse Arts Academy to close; would cause air quality impacts to students and residents; would affect the Syracuse City Fire Station; would have more residential impacts, Section 4(f) impacts, and noise impacts than other alternatives; would have a high speed limit; would increase crime; would affect views; would have a*

*nonstandard interchange; would have to be built up because of the high water table; would cause substantial congestion on Antelope Drive if the initial WDC construction ends at this road; would cause congestion where the WDC ends at 5500 South and 5100 West in Weber County; and would be dangerous because of heavy fog in the area.*

**Access to Syracuse Arts Academy.** The site for the Syracuse Arts Academy was selected taking into account the proposed WDC and thus was moved slightly farther to the west. However, the school is still near the proposed corridor. As part of the EIS process, the WDC team extensively evaluated traffic to and from the Syracuse Arts Academy, including traffic counts and pedestrian counts during the morning and afternoon student drop-off and pick-up periods. The information is presented in *Technical Memorandum 22: Syracuse Arts Academy Traffic Study* (see [www.udot.utah.gov/westdavis/documentation#technical\\_memos](http://www.udot.utah.gov/westdavis/documentation#technical_memos)). As part of the design process, the WDC team worked with staff at the school and developed a traffic-flow pattern that would reduce congestion compared to the current conditions. In addition, the design of the highway and connecting roads to the school would meet safety standards and would ensure that safe walking access to the school is provided from all directions, including a trail connection under the WDC connecting to the Old Emigration Trail on the east side of the highway.

**Syracuse Arts Academy Closure.** Commenters stated that they thought having Alternative B1 close to the Syracuse Arts Academy would cause the academy to close due to a lack of demand from students. As described in Section 5.5.3.1, Alternative B1 – Glovers Lane and 4100 West, of the Draft EIS, “... the WDC team could not find anecdotal evidence to support the assertion that perceived nuisance effects from the WDC would cause parents to transfer their students to other schools.” Since the Syracuse Arts Academy is a charter school that does not operate school buses, a better transportation network could potentially make the school more attractive for prospective students.

**Air Quality and Health Impacts to Syracuse Arts Academy and Residents.** Chapter 11, Air Quality, provides an evaluation of air quality impacts from the WDC. As part of the evaluation, the WDC team modeled air quality at the Antelope Drive/WDC interchange adjacent to the Syracuse Arts Academy. The modeling showed that no U.S. Environmental Protection Agency air quality standards would be exceeded. See response 32.11.2A for more information about health-related impacts due to air quality.

**Syracuse Fire Station.** The Antelope Drive interchange for the B Alternatives would not change the access for the Syracuse fire station on 3000 West. Antelope Drive and 3000 West would both have grade-separated crossings of the WDC in Syracuse, so the WDC would not affect fire station response to properties east or north of the WDC.

**Transportation Performance.** The B Alternatives are about 1.2 to 3.1 miles shorter than the A Alternatives. However, the B Alternatives would carry about 10,600 more vehicles per day in Syracuse (78% more than the A Alternatives) and about 1,500 more vehicles in West Point (17% more than the A Alternatives). The B Alternatives would get more use because they are more centrally located in the WDC study area and in 2040 would be able to draw from denser developments both west and east of the alternatives. With the A Alternatives being farther west, there would be little development west of the highway (toward the Great Salt Lake).

According to the travel demand model, traveling from developments east of the A Alternatives to the alternatives would still require more travel time than using I-15, so many motorists would still use I-15.

**Interchange Design.** Some commenters stated that the Alternative B1 Antelope Drive interchange is unorthodox and questioned whether it would need to be rebuilt shortly after it was constructed. The interchange design for the Alternative B1 Antelope Drive interchange would meet all traffic demand through 2040, and the WDC team does not expect that it would need to be rebuilt before 2040. Although the proposed design is not a diamond interchange, it meets all UDOT design standards.

**Property Impacts.** The B Alternatives would require 7 to 11 fewer residential relocations and potential relocations than the A Alternatives. See response 32.5.6A regarding compensation for property impacts as a result of the WDC.

**Impacts to Section 4(f) Resources.** North of Gentile Street, the B Alternatives would use two Section 4(f) resources and would have *de minimis* uses of five to six Section 4(f) resources, while the A Alternatives would use no Section 4(f) resources and would have *de minimis* uses of five to eight Section 4(f) resources. Although the B Alternatives would have one more use of Section 4(f) resources, the evaluation of least overall harm determined that the B Alternatives would have least overall harm of the alternatives.

**Trail Impacts.** Alternative B1 would affect the Old Emigration Trail in Syracuse. As described in Chapter 10, Considerations Related to Pedestrians and Bicyclists, the Old Emigration Trail would be realigned east of the WDC, and access from the trail to Fremont Park would be provided over the WDC. In addition, a pedestrian underpass at Antelope Drive would be provided. The trail would still provide direct access to Jensen Park and would be expanded to connect to the Legacy Parkway Trail.

**Noise Impacts.** Chapter 12, Noise, describes the noise evaluation conducted for the WDC Project. Also see the responses in Section 32.12 of this chapter. The evaluation found that the B Alternatives north of Gentile Street in Syracuse would affect about 519 to 570 residential properties compared to 241 to 318 for the A Alternatives. In Syracuse, 13 noise walls were evaluated; 3 met UDOT's noise-abatement criteria for implementation (2 on the B Alternatives and 1 on the A Alternatives). UDOT is also evaluating the potential to use pavement designs that could reduce noise levels.

**Roadway Design (Legacy Parkway Design Considerations).** See the section titled Freeway vs. Parkway (Quiet Pavement, Speed Limit, and Truck, and Billboard Restrictions) under response 32.2.1H.

**Visual Impacts.** Chapter 18, Visual Resources, of this Final EIS provides an evaluation of the visual change as a result of Alternative B1 on the Syracuse community along with visual renderings of the change. The evaluation states that the visual impact would be high. Other commenters stated that houses on Bluff Road should be relocated if a wall was not built to separate them from the WDC. As mentioned in response 32.5.6A, per the UDOT right-of-way process, UDOT can generally acquire only property that it needs for a project. Therefore, UDOT generally does not purchase properties not directly affected by a project unless the

project causes the property to have no value or be unusable (for example, the project eliminates access).

***Crime/Degrade Neighborhoods.*** The WDC would be a limited-access highway intended mostly to serve traffic from the surrounding communities and thus would not create the ability for non-residents to freely get access to neighborhoods along the WDC. The highway would not increase traffic on local neighborhoods streets and would not disrupt the ability of local law enforcement to patrol area roads or respond to emergencies.

***Community Impacts (Rural Lifestyle and Community Division).*** Chapter 5, Community Impacts, of this Final EIS states that Alternative B1 would change the rural nature of the area to more of an urban environment. However, the WDC would not affect the existing golf course in Syracuse and would allow the parks and trails in the area to continue to be used by the public. See Chapter 5, Community Impacts, and Chapter 27, Section 4(f)/6(f) Evaluation, of this Final EIS for more information about the impacts to and use of these resources.

***Fog.*** Additional information about the safety impacts from fog have been added to Chapter 5, Community Impacts, of this Final EIS. There are no specific fog data for the Syracuse area. The National Oceanic and Atmospheric Administration (NOAA) National Weather Service Weather Forecast Office near the Salt Lake City International Airport keeps quantitative data for the Salt Lake City International Airport, which is in a similar geographic setting as Syracuse with similar nearby wetlands and saturated soils. Both locations are close to the Great Salt Lake.

According to the National Weather Service, the mean number of days with heavy fog (visibility is less than or equal to 0.25 mile) in Salt Lake City (the airport/NOAA station) is 11.8 days per year. The foggiest months are December through February. The other months have little to no fog events. Other major highways in Utah, including Legacy Parkway, I-80 and I-215 west of the Salt Lake City International Airport, and I-15 near Willard Bay, are located in similar areas. Therefore, the WDC team does not expect that fog along the alignment of Alternative B1 in Syracuse would pose a higher safety risk compared to the risks on other highways in similar settings in Utah. In addition, UDOT currently has fog-notification signs in high-fog areas on I-80 and I-215, and this system could be used on the WDC in Syracuse.

***Neighborhood and Community Cohesion.*** Some commenters wondered why UDOT would divide Syracuse with a highway. As stated in Chapter 5, Community Impacts, of the Draft EIS, it would not be possible to avoid dividing some neighborhoods with the WDC alternatives. In Syracuse, Alternative B would split the Bailie Acres subdivision and would border several other subdivisions including Fremont Estates, Outwest, Myrtlewood, Hunters Crossing, West Sunset View, Stone Haven, and Muirfield. However, because the alternative would follow Bluff Road, none of the neighborhoods would be bisected. Because of the space between the neighborhoods, it is reasonable to assume that Bluff Road, coupled with the large swath of open space preserved as the Bluff Road roadway corridor, currently acts as a natural divider of neighborhoods (such as between Fremont Estates to the southwest and Myrtlewood and Hunter's Crossing to the northeast) on either side of the road and that the neighborhoods on either side are currently cohesive within themselves. However, residents of these

communities have said that these subdivisions are also cohesive with the neighborhoods across Bluff Road and that Alternative B1 would create a new edge and would affect their relationships with neighbors. The A Alternatives would also divide neighborhoods in Syracuse.

***Elevated Roadway and Water Levels.*** Based on comments from the public, UDOT is evaluating the height of the roadway. The final height would be determined during the final design phase of the project after taking into account roadway drainage and water quality requirements. Because of the flat topography in the area, the need to allow water to drain from the highway, and the need to allow creeks and other water to flow under the highway, it is not possible to have a roadway elevation that is near current ground levels. Based on additional engineering evaluation, UDOT expects the final roadway elevation to be reduced from the initial 14 feet to about 5 to 6 feet.

***Traffic Impacts of Phasing the Roadway on Antelope Drive.*** Commenters were concerned that, if WDC is built in phases as stated in the Wasatch Front Regional Transportation Plan 2015–2040, the first phase would end at Antelope Drive and cause substantial congestion in Syracuse on Antelope Drive. If the project is phased to end at Antelope Drive, UDOT would design the connecting roads to ensure that Antelope Drive operates at an appropriate level of service. In addition, the WDC would not likely “T” into Antelope Drive but might continue farther north to at least 700 South to help improve traffic flow.

***Traffic Impacts to 5500 South and 5100 West.*** Commenters were concerned that Alternative B1 would cause substantial traffic congestion on 5100 West and 5500 South in Weber County; this intersection was the northern terminus for this alternative in the Draft EIS. For this Final EIS, the alternative terminates at 1800 North in West Point and would not affect 5500 South. To ensure that 1800 North is not congested, UDOT would design the connecting roads so that 1800 North operates at acceptable levels of service. As part of the evaluation of travel demand in 2040 at this intersection and adjacent roads, the WDC team conducted additional travel demand modeling. The modeling showed that 1800 North would operate at acceptable levels of service.

***Impacts to Farmland.*** Commenters stated that farmland in Syracuse will be developed in the future, and that farmland should not be given special treatment in the analysis and decision process. See response 32.4C.

***Impacts to Fremont Park, Jensen Park, and Open Space South of Antelope Drive.***

Commenters were concerned about the impacts to Fremont Park and the Syracuse City–owned open space south of Antelope Drive, stating that this area was at one time planned to be a soccer facility. Chapter 5, Community Impacts, and Chapter 27, Section 4(f)/6(f) Evaluation, of the Draft EIS describe the impacts of Alternative B1 on Fremont Park, Jensen Park, and the open space. Syracuse City is not currently planning to turn Fremont Park or the open space south of Antelope Drive into a soccer complex. Alternative B1 would not affect any of the existing developed portions of Fremont Park.

Other commenters were concerned about noise or visual impacts at Jensen Park. Although both the A and B Alternatives would be adjacent to Jensen Park, there would be no direct impacts to the park. According to UDOT’s noise policy, both the A and B Alternatives would



have a noise impact at Jensen Park because noise levels would increase by 10 dBA (decibels on the A-weighted scale). The noise abatement-criterion of 66 dBA would not be exceeded with either the A or B Alternatives.

**Impacts to Wetlands and Wildlife Habitat.** A full evaluation of wildlife and wildlife impacts was presented in Chapter 14, Ecosystem Resources, of the Draft EIS. The evaluation showed that the WDC would have both direct and indirect impacts to wildlife habitat. As discussed in Chapter 14, some areas of medium-, medium-high-, and high-quality habitats would be affected by Alternative B1, but these impacts would occur in a more urban environment and would have less effect overall on wetland and wildlife habitat.

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- H.** *Commenters stated that it was not fair to compare the A Alternatives, which go to 4000 South in Weber County, to the B Alternatives, which only go to 5500 South in Weber County.*

Chapter 2, Alternatives, of this Final EIS describes the screening process for the WDC alternatives. As part of the Final EIS evaluation, UDOT used the Wasatch Front Regional Council's 2015–2040 travel demand model, which was updated as part of the release of the Wasatch Front Regional Transportation Plan 2015–2040. Based on the 2015–2040 travel demand model, Alternatives A1, B1, and B2 terminate at 1800 North, and Alternative A2 terminates at 5500 South. As described in Chapter 2, Alternatives, of this Final EIS, Alternative A2 needs to go to 5500 South in Weber County in order to meet the purpose of the WDC Project. Alternatives A1, B1, and B2 need to go to only 1800 North in Davis County in order to meet the purpose of the WDC Project. If the WDC team were to look at an Alternative A2 that goes only as far north as 1800 North, similar to Alternatives A1, B1, and B2, they would be evaluating an alternative that does not meet the purpose of the project. One of the purposes of the EIS is to compare and contrast the reasonable alternatives. For this reason, UDOT and FHWA must compare all of the alternatives in making a final decision.

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- I.** *Commenters stated that the locally preferred alternative should be changed to the UDOT recommended alternative, since the “locally preferred alternative” is not preferred by all of the locals.*

The designation “locally preferred alternative” indicates that UDOT is the local lead agency for the WDC Project. As stated in Section 2.4, Identification of UDOT's Locally Preferred Alternative, of the Draft EIS, the locally preferred alternative is described as UDOT's recommendation, not the recommendation or preference of the local communities.

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- J.** *Commenters preferred the 4800 West Option (Alternatives B2 and B4) instead of the 4100 West Option (Alternatives B1 and B3) for the preferred alternative. Commenters stated that the 4800 West Option would have fewer impacts to homes and that the 4100 West Option would have more impacts to wetlands and wildlife habitat.*

**Property Impacts.** The 4800 West Option would directly impact one fewer home than the 4100 West Option.

**Wetland Impacts.** The 4800 West Option would directly impact 1.3 fewer acres of wetlands than the 4100 West Option.

**Wildlife Habitat Impacts.** The 4800 West Option would directly affect 3.6 fewer acres of high-quality wildlife habitat than the 4100 West Option.

As described in Section 2.4.4, UDOT's Evaluation of Northern Options for the B Alternatives, of the Draft EIS, UDOT identified the 4100 West Option as its preferred northern option because the 4100 West Option had the best regional and local transportation performance, the fewest uses of Section 4(f) resources, the lowest amount of impacts to Agriculture Protection Areas, the most consistency with local land-use and transportation plans, and the lowest cost.

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**K.** *Commenters stated a preference for Alternative A1 or A3 in Hooper and West Haven.*

Comment noted. In this Final EIS, the northern termini of the alternatives were revised based on updated traffic information. As a result, only Alternative A2 terminates in Hooper at 5500 South. No WDC alternatives are within the West Haven city limits.

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**L.** *Commenters asked whether the decision process could be a vote or a democratic process. Other commenters stated that only people who live in the study area or who would use the WDC should be allowed to provide comments on the process.*

FHWA makes the final decision in the EIS process. The decision is not a vote. The public and any interested agencies or other stakeholders are given opportunities throughout the process to provide input and comments. Comments from any interested people or agencies are reviewed. The public and agency input and comments are considered by FHWA before making a final decision.

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**M.** *Commenters stated that the sewer pipe from the North Davis Sewer District (NDSD) had already gone in near the alignment of the preferred alternative and stated that this was influencing the decision about the preferred alternative.*

The WDC team is aware that NDSD constructed a new sewer line in Syracuse and Layton and received information from NDSD showing the location of this sewer line. The WDC team has designed all of the WDC alternatives to avoid or minimize impacts to the new sewer line and all NDSD facilities. The sewer line is an independent project from the WDC and did not influence the proposed alignment or the identification of the UDOT locally preferred alternative. The NDSD pipeline and the WDC are both located in the same area in Layton in order to avoid residential impacts to the east and wetland impacts to the west, thus making the proposed alignment the most reasonable location.

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- N.** *Commenters disagreed with UDOT’s identification of Alternatives B1 and B3 as the UDOT preferred alternative in West Point and Hooper and stated that the alternatives would affect an elementary school on 5600 South in Weber County and affect communities. Commenters stated that the A Alternatives would have less community impacts since they are located in more rural, agricultural areas.*

As evaluated in this Final EIS, the B Alternatives terminate at 1800 North in West Point in Davis County and are no longer near Freedom Elementary School. The WDC team considered the impacts to residences and farmland when identifying its preferred alternative in West Point. All of the WDC alternatives would affect residences in West Point and Hooper. However, the A Alternatives would affect more residences than the B Alternatives. The A Alternatives also would have more impacts to farmland.

As described in Chapter 2, Alternatives, of this Final EIS, UDOT identified the 4100 West Option as its preferred northern option because the 4100 West Option had the best regional and local transportation performance, the fewest uses of Section 4(f) resources, the lowest amount of impacts to Agriculture Protection Areas, the most consistency with local land-use and transportation plans, and the lowest cost.

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- O.** *Farmington City stated that the Farmington City Master Transportation Plan (MTP), back when the City supported the WDC, recommended interchanges on the WDC at 950 North and 1100 West near Glovers Lane. Alternative B1 does not. Section 1.6.2 discusses local transportation planning and delineates where local jurisdictions show elements of the Regional Transportation Plan in their respective plans. Sub-section 1.6.2.1 discusses conditions in Farmington but fails to mention that the City’s MTP shows local connection(s)/interchanges consistent with the “Corridor Connection” area set forth on the Regional Transportation Plan. The Farmington City General Land Use Plan and Zoning Ordinances, and local RDA [redevelopment agency] plans supported by the County, School District, and other entities, show a major 500-acre employment/mixed-use center between I-15 and the UTA tracks, north of Clark Lane, and south of Shepard Lane. The Draft EIS incorporates old 2009 demographic data for this area (see Section 1.5, p. 1-11 to 1-12). In the intervening 4 years, the General Plan and Zoning Ordinances have changed. Market and demographic projections for this area have and will increase dramatically over the 2009 figures. Nevertheless, Alternative B1 shows no opportunity for access to this 500 acres even though the west edge of this area is only 3/4 mile away from the B1 alignment and the City has already provided most of the right-of-way necessary to make connection happen by carefully preserving corridors consistent with its Transportation Plan. The WDC Project does not improve regional mobility in Farmington without a local-access interchange.*

Although the Farmington City plans might show connections to the WDC at 950 North and 1100 West, these are connections that are included in the Farmington Transportation Plan; they are not required in order for the WDC to meet regional mobility needs. Adding these connections to Farmington would provide local access to the city, but they would not improve regional mobility. However, between the release of the Draft EIS and the Final EIS,

Farmington City has planned for a major business park west of I-15 immediately south of Shepard Lane, which was accounted for in the updated socioeconomic data used in version 8.1 of the travel demand model. This business park would become regionally significant to Davis County, so a future interchange on the WDC at 950 North was considered in this Final EIS. This interchange would provide access to western Farmington and the business park. The interchange would be constructed once the local access road connecting to the interchange is completed by Farmington City and Kaysville City.

In the future, if the City feels it has a local need for access to the WDC at 1100 West, it can identify funding and conduct the appropriate environmental analysis for such a connection. To evaluate the need for an interchange that would improve regional mobility and include a local interchange to serve Farmington, the WDC team used the latest available travel demand model maintained by the Wasatch Front Regional Council, and this model included demographic inputs provided by Farmington City.

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- P.** *Great Salt Lake Audubon commented that, clearly, the UDOT/FHWA preferred “local” alternative is not a “viable” alternative, as the Shepard Lane alignment appears to have been routed longitudinally through the Haight Creek channel for a significant length of stream corridor (Haight Creek is protected under the Clean Water Act as a “water of the U.S.”), other jurisdictional wetlands, “sensitive” community properties, and a new golf course to perhaps increase the amount of wetland, open water, and sensitive land impact acreage important to locals’ “quality of life.” UDOT’s Shepard Lane “highest impact” alternative is not viable or realistic and, as such, does not make the “Glovers Lane” alignment the “least environmentally damaging” alternative as compared to a “non-viable” alternative possibly routed in a manner to maximize impacts. Even if a “viable” Shepard Lane alternative were to be proposed in terms of fewer direct impacts to total wetland “acreage,” the Glovers Lane proposal would still result in far greater significant direct, indirect, and cumulative impacts to jurisdictional and non-jurisdictional wetlands.*

The Draft EIS presents a detailed comparison of the Shepard Lane and Glovers Lane Options. Between the release of the Draft EIS and the Final EIS, the Shepard Lane Option was eliminated as a reasonable and practicable alternative (see response 32.2.6A) and was not carried forward for detailed analysis in this Final EIS. Therefore, comments related to the Shepard Lane Option are no longer applicable to the alternatives being considered in this Final EIS.

The wetland and wildlife impacts from an alignment on Glovers Lane are discussed in Chapter 14, Ecosystem Resources. The chapter states that, in Farmington, the WDC alternatives would affect wetlands and wildlife habitat, including habitat near the Great Salt Lake.

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- Q.** *The U.S. Environmental Protection Agency felt that the impact information in Section 2.4, Locally Preferred Alternative, of the Draft EIS was not consistently applied in the environmental impact discussion of the locally preferred alternative. The U.S. Environmental Protection Agency recommended that the Final EIS analyze and present all direct and*

*indirect impacts to aquatic resources and aquatic wildlife habitats consistently throughout the document for all segments of the project.*

Chapter 14, Ecosystem Resources, provides consistent segment-by-segment and alternative-by-alternative impact information regarding direct and indirect impacts to the aquatic ecosystem. In Section 2.4, Identification of UDOT’s Locally Preferred Alternative, of the Draft EIS, UDOT used a consistent approach in evaluating the alternatives by looking at the impacts to all resources and weighing the context and intensity of the impacts to all resources when making a decision. Section 2.4 of the Draft EIS provides the rationale for UDOT in making its decision and what factors it considered in making that decision. The section provides only a summary of the information in the EIS; however, UDOT reviewed all of the information in the EIS, not just information related to wildlife, in making its decision in the Draft EIS regarding a locally preferred alternative. Section 2.6, Identification of the Preferred Alternative, has been updated in this Final EIS to include FHWA’s preferred alternative. A final decision will be made in the Record of Decision, which will be issued after this Final EIS is released.

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- R.** *Farmington City commented that having higher speeds as a criterion for the Shepard Lane and Glovers Lane interchange evaluation is misleading because it assumes that the primary function of the WDC is to move vehicles past Farmington. The lengths of several bridge structures in the Glovers Lane Option are clearly greater than in the Shepard Lane Option, but the increased maintenance cost and motorists exposed to ice/snow are not considered in Table 3 of Technical Memorandum 19. Table 3 also shows a criterion of providing an independent bypass route when it is not necessary, since there are roads all over the country without an independent bypass route. Table 3 shows a criterion of “Provides Local Interchange Access” and states that the Shepard Lane Option provides local access. The Glovers Lane Option provides actually NO local-access options. The statement that an “interchange is not precluded but would remain as a planned future project” is misleading.*

The Draft EIS presents a detailed comparison of the Shepard Lane and Glovers Lane Options. Between the release of the Draft EIS and the Final EIS, the Shepard Lane Option was eliminated as a reasonable and practicable alternative (see response 32.2.6A) and was not carried forward for detailed analysis in this Final EIS. Therefore, comments related to the Shepard Lane Option are no longer applicable to the alternatives being considered in this Final EIS.

The WDC is a regional project and is not designed to reduce congestion in Farmington only. The evaluation of speed as a criterion for the interchanges shows which interchange provides better traffic flow and thus was used in considering traffic performance between the interchanges. However, as shown in Table 1, Traffic Performance, in *Technical Memorandum 19: Traffic Performance and Engineering Design of Shepard Lane and Glovers Lane Area Alternatives*, the analysis showed the speed evaluation criteria to be comparable between the Shepard Lane and Glovers Lane Options; thus, no advantage was given to either option. The criteria in Table 3, Other Factors, in *Technical Memorandum 19* under Number and Size of Structures state, “more structure means increased long-term

maintenance and increased safety concerns due to snow removal and icing.” As shown in the table, the Shepard Lane Option has six bridge structures totaling about 177,000 square feet, and the Glovers Lane Option has six bridge structures totaling about 100,000 square feet. Because the Glovers Lane Option has less overall structure, it was considered an advantage regarding maintenance and snow and ice.

The commenter is correct that not all highways have a separate, independent route in case of a major incident on that highway. The criteria in Table 3 state, “In the event of a major incident on an existing north-south route (I-15 or Legacy Parkway), an independent alternate route becomes essential to allowing regional traffic flow and also provides an emergency route if needed.” Although such a criterion is not necessary, the WDC team felt that they should consider how each option handles such an event. The advantage was given to the Glovers Lane Option since it provides more independence from I-15 and Legacy Parkway traffic operations.

Table 3 shows that the Shepard Lane Option provides an advantage over the Glovers Lane Option because it provides a local-access interchange at Shepard Lane. The statement regarding how the Glovers Lane Option could accommodate future local access is not misleading. The WDC team has stated many times that additional connections to the WDC in Farmington could be implemented in the future, but such connections are not required to meet the purpose of the WDC. However, between the release of the Draft EIS and the Final EIS, UDOT has included an interchange at 950 North that would provide access to Farmington. This interchange was added because of the increase in commercial and residential development in Farmington.

## 32.3 Chapter 3 – Land Use

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- A.** *Commenters stated that a road cannot be located in an area not zoned for a road.*

Chapter 3, Land Use, explains whether each potential alternative is consistent with local planning. There is no requirement that an area must be zoned for a state road in order for a road to be constructed in that area.

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- B.** *A commenter stated that area cities should develop to be more community-centered in a way that does not require the use of commuting but allows homes, businesses, and jobs to be located in close proximity. Other commenters stated that UDOT or the local Cities should encourage infill development and denser land-use development.*

UDOT and FHWA do not control regional or local planning; this is the responsibility of the Cities and Counties according to the Utah state constitution. Between the release of the Draft EIS and the Final EIS, UDOT evaluated the Shared Solution Alternative, which considered community-oriented developments that reduced the need for commuting and encouraged infill development. For more information, see response 32.2.1G. The Shared Solution Alternative did not meet the project's purpose and was eliminated from detailed consideration.

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- C.** *Commenters had questions about the impacts to the Farmington Ranches and Farmington Meadows conservation easements, or stated that the impacts to these conservation easements should not be allowed. Farmington City and some residents commented that putting the Glovers Lane alternatives through the conservation easements penalizes Farmington City for their planning efforts. When Farmington City permitted the construction of the Farmington Meadows and Farmington Ranches subdivisions, it did not allow development in the conservation easements, and, if it had not done this, the Glovers Lane alternatives would have more residential impacts. Some residents stated that they bought houses in Farmington Ranches or Farmington Meadows because of the conservation easements located to the west of the subdivisions, and that the impact to the conservation easements should not be allowed. Farmington City and some residents stated that the Farmington Ranches and Farmington Meadows conservation easements should be considered Section 4(f) resources.*

A description of the conservation easements and impacts to the conservation easements is provided in Chapter 3, Land Use, of this Final EIS. Chapter 3 states that the Glovers Lane alternatives would require 51 acres of the 311-acre Farmington Ranches conservation easement, 10 acres of the 48-acre Farmington Meadows conservation easement, and 16 acres of the Hunters Creek conservation easement. Chapter 3 also concludes that the Glovers Lane alternatives would not be consistent with the purpose of the conservation easement. This alignment was placed in the conservation easements to avoid residential relocations that would occur with a more easterly alignment. Note that the Shepard Lane Option was the option to avoid the impacts; this option is no longer being considered.

Chapter 27, Section 4(f)/6(f) Evaluation, of this Final EIS states that FHWA determined that only the Buffalo Ranch Trail and the Great Salt Lake Shoreline Trail are considered Section 4(f) resources on the Farmington City conservation easements, and that the rest of the Farmington Ranches and Farmington Meadows conservation easements are not considered Section 4(f) resources. See response 32.27A for more information about Section 4(f) applicability for these resources and response 32.27F for more information about how the impacts to the conservation easements were evaluated in this Final EIS.

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- D.** *Commenters stated that no development should be allowed in Davis or Weber Counties and that they should remain rural and agricultural.*

UDOT and FHWA do not control regional or local planning; this is the responsibility of the Cities and Counties according to the Utah state constitution. The EIS takes the land-use plans from the Wasatch Front Regional Council and the local Cities and Counties as the basis for the land-use assumptions for the WDC study area.

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- E.** *Farmington City stated that the authors of the Draft EIS consistently mention the importance of city governments as part of the National Environmental Policy Act process (Section S.4, p. S-6) and state that great deference is given to locally adopted General Plans and Transportation Plans. These plans constitute one of the primary reasons the WDC Project was initiated (Section S.1, p. S-1; Section S.1.2, p. S-5). Notwithstanding, UDOT's preferred alignment is B1, and that alternative is not consistent with the purpose and need for the WDC in Farmington. The B1 alignment is not compatible with the Farmington City General Plan, nor its Master Transportation Plan; it does not improve mobility (or safety) in this area, nor does it enhance peak-period mobility over the No-Action Alternative. The Draft EIS states that east-west congestion will continue to increase in the study area, which includes Farmington.*

The WDC Project is a regional project that evaluates improvements to regional and peak-period mobility in western Davis and Weber Counties. It is not meant to be a local project specific to the needs of each individual city, such as Farmington. Although regional mobility (congestion) would be improved on I-15 through Farmington with Alternative B1 (compared to the No-Action Alternative), none of the local roads in Farmington showed a need for east-west improvement, so there was no requirement for the WDC Project to address this issue by providing access to the WDC. As shown in Chapter 2, Alternatives, the WDC alternatives would reduce vehicle-miles traveled in congestion by about 34% and vehicle-hours traveled in congestion by about 39% compared to the No-Action Alternative and thus would improve overall mobility.

Chapter 3, Land Use, of this Final EIS provides an evaluation of Farmington City's land-use and transportation master plan and states, "The Farmington City land-use plan considers the proposed Glovers Lane alignment in the land-use planning. However, city officials have passed a resolution supporting a WDC alignment on Shepard Lane, which conflicts with the



adopted plans. So while Alternative A1 is consistent with the adopted plans, it is inconsistent with the City's resolution."

Therefore the EIS is consistent with the commenters' statement regarding local plans. Also, although consistency with local plans was considered during screening, the criterion regarding local plans states, "This criterion will not be used to determine whether an alternative is reasonable or practicable but will be used to make minor shifts to alignments."

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- F.** *Farmington stated that the value of the conservation easements to Farmington City is irreplaceable and that there will be serious detrimental impacts to the easement which qualifies for Section 4(f) status from the WDC Glovers Lane Option. There is no mention of how or what must be paid to the City in the Glover's Lane cost figures, nor is the cost of mitigation included, should these conservation easements be taken. It is Farmington City's opinion that these losses cannot be mitigated. Putting that issue aside for the moment, there is no review of the impacts of the preferred alignment on the values and purposes for which these conservation easements have been perpetually preserved. These values include open space, wetlands, wildlife habitat and refuge, farmland, parks, community cohesion, viewshed, and others. One reason the conservation easements were acquired in concert with the adjacent and nearby approved development was to provide a buffer from development, and the Draft EIS has selected a route for the project that will cannibalize them. It may be that the road will ultimately destroy all of the conservation values and purposes of the Farmington City conservation easements, yet there is little or no review of such impacts, much less mitigation or recompense provided.*

The values of the Farmington conservation easements and potential impacts are discussed in Chapter 3, Land Use, of this Final EIS, and the trail impacts are discussed in Chapter 10, Considerations Related to Pedestrians and Bicyclists, of this Final EIS (see response 32.10H). Chapter 3 states the purpose of the easements mentioned in the comment. The chapter states that the alternatives (A1, A2, B1, and B2) would not be consistent with the purpose of the conservation easements because they would directly convert the land dedicated to conservation uses to a highway use and because indirect noise and visual impacts from the alternatives would change the value of the remaining land. The impacts to the easements are considered in the analysis, but the WDC team determined that the impacts to the easements do not make an alternative unreasonable under the National Environmental Policy Act. The impacts are one of many factors that UDOT considered in making a decision about a locally preferred alternative.

Section 3.4.6, Mitigation Measures, of this Final EIS states that, if Alternative A1, A2, B1, or B2 is selected, UDOT will provide compensation in accordance with state and federal property acquisition laws for right-of-way impacts to land that is included in the Farmington Ranches and Farmington Meadows conservation easements. *Technical Memorandum 20: Cost Estimates for the WDC Alternatives in the Draft EIS* shows that right-of-way costs were included in the estimate for each WDC action alternative. UDOT had an experienced right-of-way agent develop the right-of-way cost for each alternative, which included the conservation easements. Therefore the costs of the easements have been taken into account in



the EIS. Additional text has been added to Chapter 3, Land Use, of this Final EIS to state that Farmington City believes it might not be able to maintain the use of the conservation easements and that the easements could be developed. For any wetland and wildlife impacts that occur on the easements as a result of the WDC, UDOT is providing the appropriate mitigation as described in Chapter 14, Ecosystems.

Finally, in reviewing Farmington City's comments on the Draft EIS, there seems to be some contradiction as to the intended use of the conservation easements. The Farmington City comments state that the conservation easements were designed to perpetually protect certain farmland operations and that the farmland protected by the Farmington City conservation easements is ignored in the Draft EIS (see response 32.4F). Similarly, comments provided by the Farmington Ranches Homeowners Association also state that the easements are currently used for agricultural uses and equestrian purposes. In other locations in the Farmington City comments, wildlife values are mentioned, and in others, the recreational value.

Farmland is not a protected use under Section 4(f). Furthermore, using a conservation easement as farmland is contradictory to its use as a wildlife or recreation resource, as stated in other comments provided by Farmington City. If the easements are used for farming, this would limit their recreational use and would not be consistent with their use as a wildlife refuge, as was the intent of the Section 4(f) regulations. The WDC team has found that the conservation easements are used as pasture and for equestrian activities, neither of which is consistent with managing the area as a wildlife refuge. We found during site visits to the conservation easements that public access to the easements was prohibited except for use of the trails. Therefore, it would seem the only active recreation resources on the easements are the developed trails. UDOT has recognized that the trails within the easements that allow open public access are a Section 4(f) resource. UDOT would maintain the function of the trails on the easements with all of the WDC action alternatives.

It should also be noted that a September 17, 2010, letter from Farmington City to UDOT regarding the WDC alternatives and screening criteria stated that the City preferred the A1 (Glovers Lane) alignment, that wetland and residential impacts would be minimal, and that the alternative would not divide the city. Although Alternative A1 crossed the conservation easements in Farmington, there was no mention of impacts to the conservation easements in the letter. The importance of the conservation easements was brought up by the City after it decided it supported another alternative than Alternative A1 (the Shepard Lane Alternative).

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- G.** *Farmington City commented that Figure 3-2 should be updated to show the Station Park development. The City also noted that the Draft EIS states that the land-use impact analysis area encompasses existing and planned land-use patterns but it did not accurately do so in Farmington.*

Figure 3-2, Existing Land Use, in Volume IV of this Final EIS has been updated. Chapter 3, Land Use, describes existing land uses and patterns in the WDC study area. The commenter did not provide any specific details regarding what is missing or inaccurate in the EIS regarding planned land-use patterns in Farmington. The WDC team used all current land-use plans from Farmington City for the EIS analysis.

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- H.** *Farmington City commented that the EIS does not consider the existing or soon-to-be-recorded Hunters Creek conservation easement.*

The Hunters Creek conservation easement was proposed when the Draft EIS was being prepared. The conservation easement was approved by Farmington City in November 2013 and is included in this Final EIS.

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- I.** *A commenter stated that WDC alternatives violated the Legacy Parkway promises that there would not be development west of Legacy Parkway to prevent sprawl and protect habitat for birds.*

None of the WDC alternatives violate the Legacy Parkway settlement agreement. The Legacy Parkway development restrictions are applicable only to areas south of the WDC study area.

## 32.4 Chapter 4 – Farmland

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- A.** *Commenters stated concerns about farmland impacts and questioned whether the WDC alternatives would result in a loss of local food production.*

Chapter 4, Farmland, describes the farmland impacts of the WDC alternatives. None of the WDC alternatives are anticipated to remove all farmland or substantially reduce the local food production.

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- B.** *A commenter stated that Black Island Farms and Hamblin Dairy are going out of business and thus should not be counted as an impact.*

It is not possible to predict what will happen to specific parcels of farmland in the future. The evaluation in the EIS is based on current land actively being farmed. Black Island Farms and Hamblin Dairy are actively being farmed.

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- C.** *Commenters stated that most farmers will sell their farmland for development, and that farmland should not be protected or given special consideration in the analysis and decision process. Other commenters stated that the Utah Agriculture Protection Areas were being abused by farmers since the law does not have a minimum time requirement that they have to keep their lands in agricultural use and that these laws should be changed to require that farmland remain agricultural for a specific period.*

It is not possible to predict what will happen to farmland in the future. The evaluation in the EIS is based on current land actively being farmed. As described in Chapter 4, Farmland, some farmland is in agricultural protection. Utah law also allows the formation of Agriculture Protection Areas (APAs), which are geographic areas where agricultural activities are given special protections. APAs are not federally regulated, but they are protected from state and local laws that would restrict farm practices, unless the laws are required for public safety or are required by federal law. APAs cannot be condemned for highway purposes unless (1) the landowner requests the removal of the designation or (2) the applicable legislative body (that is, the legislative body of the county, city, or town in which the APA is located) and the APA advisory board approve the condemnation, provided that “there is no reasonable and prudent alternative to the use of the land within the Agriculture Protection Area for the project” [Utah Administrative Code, Section 17-41-405(4)(a)]. Any changes to this code would need to be approved by the Utah legislature.

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- D.** *Commenters stated a fact about specific farmland parcels such as acreage and use or the need to protect farmland in the future.*

Chapter 4, Farmland, provides a detailed analysis for the farmland in the farmland impact analysis area and the impact to that farmland from the WDC. The WDC team met with farm

owners during the EIS process to ensure the accuracy of the analysis and to verify the importance of farmland in the area.

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- E.** *The Utah Department of Agriculture and Food (UDAF) provided comments stating that the vegetable-growing capacity of farmland in Davis County is among the best in the state, and stated that the western alternatives (A Alternatives and Alternatives B2 and B4) would affect more agricultural land and prime soils. UDAF also commented that impacts to access, irrigation, safety issues with farm equipment, and fragmented parcels would also be greater with the western alternatives. UDAF commented that the farmlands add value to wetlands west of the study area along the Great Salt Lake by adding tail-water from irrigation return flows and providing a buffer zone between human development and wildlife areas. UDAF stated that many acres of farmland have been protected through conservation easements and in state Agriculture Protection Areas.*

Comments noted. Chapter 4, Farmland, which uses information provided by UDAF and the Natural Resources Conservation Service, describes the farmland, prime soil, and Agriculture Protection Areas in the WDC study area and the WDC alternatives' impacts to these resources. The EIS concludes that Alternative B1 would have the fewest overall impacts to cropland and Agriculture Protection Areas. The conservation easements and impacts to conservation easements are described in Chapter 3, Land Use.

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- F.** *Farmington City stated that Alternatives B1 and B3 would have the least impacts to Agriculture Protection Areas (4 or 22). The Draft EIS states UDOT will not relocate these alternatives away from the farmland protected by this Utah statute, because that would move the alternatives into developed areas. The Draft EIS states that this result would render the alternatives unreasonable and imprudent, so they may not be utilized. The alternatives analysis here should be analogous to the one performed under Section 4(f)—of course avoiding protected farmland will require additional relocations of developed property. The whole point is to protect farmland from these types of projects because it is usually the most attractive for transportation agencies. Just because a different alternative requires more taking of developed property does not necessarily mean that the alternative is unacceptable. Also, the Farmington City conservation easements were designed to perpetually protect certain farmland operations. These are Section 4(f) properties and must be avoided in favor of the use of developed property. Lastly, the farmland protected by the Farmington City conservation easements is ignored in the analysis, as are the impacts.*

See response 32.27A regarding Section 4(f) use of the conservation easements. Farmland is not a protected use under Section 4(f) and is somewhat a contradiction to the use of the conservation easements as a wildlife area as stated in other comments provided by Farmington City. The Agriculture Protection Area (APA) statute states that the APA advisory board can approve the condemnation of an APA, provided "there is no reasonable and prudent alternative to the use of the land within the Agriculture Protection Area for the project." The decision on condemnation is made by the Advisory Board. Chapter 4, Farmland, states that, based on the number of APAs and the developed nature of the farmland

impact analysis area, the only way to avoid APAs completely would be to move the alignments into developed areas, which would require substantial residential relocations. The WDC team had to balance farmland impacts against residential acquisitions when developing alternatives, but in many cases it was not possible to avoid both.

Therefore, there is no reasonable or prudent alternative to the use of the land within the APAs for the project. When similar alternatives had similar transportation benefits, but one would affect farmland and the other would affect a substantial number of residents, the WDC team felt that it was not prudent to consider the alternative with the substantial home impacts. This consideration is allowed under the APA statutes.

Finally, the land in the conservation easements is not actively farmed but is used for grazing. This use is shown in Figure 4-4, Croplands, in Volume IV as pasture land, so it is accounted for in the analysis in Chapter 4.

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**G.** *Farmington City commented that impacts to the Bangerter Farm were not adequately addressed.*

The comment is not clear regarding what was not adequately addressed. The Bangerter Farm was included in the farmland analysis in Chapter 4, Farmland, of the EIS. Not all individual farms were evaluated by name in Chapter 4. If the commenter is referring to impacts from fragmented farm parcels, the methodology to evaluate this impact is described in Section 4.4.1.1, Methodology for Determining Direct Impacts. UDOT will mitigate fragmented farm parcels as required under the Uniform Relocation Assistance and Real Property Acquisition Policies Act.

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**H.** *Farmington City commented that Figure 4-4 (Croplands) is not completely accurate.*

The commenter is not clear regarding what is not accurate about the figure. The WDC team used that latest official cropland information provided by the Utah Division of Water Resources and the Utah Department of Agriculture and Food. Since cropland data change from season to season, using the official source is the best way to evaluate impacts. Between the release of the Draft EIS and the Final EIS, the Utah Division of Water Resources published the 2013 version of the cropland data. The Final EIS cropland analysis has been updated to use the 2013 data.

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**I.** *Farmington City commented that the Glovers Lane alignment makes Buffalo Ranch difficult to operate as agricultural or ranch property.*

Chapter 4, Farmland, evaluates the impacts to farmland in the WDC study area. As stated in the chapter, UDOT will work with property owners per the Uniform Relocation Assistance and Real Property Acquisition Policies Act to determine the future viability of a farm business based on the impacts from the WDC. Buffalo Ranch has been out of business since 2012 and is not currently an operational agricultural business.

## 32.5 Chapter 5 – Community Impacts

### 32.5.1 Section 5.4.1 – Community Cohesion and Quality of Life

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- A.** *Commenters stated that a proposed corridor had been preserved along Shepard Lane, and the residents in these subdivisions (Hunters Creek and Quail Crossing) were aware of the corridor when they purchased their homes. Other commenters stated that they were the second or third purchasers of the properties, and they did not receive a disclosure. Other commenters stated that they received a disclosure that a road would be a collector facility, not a freeway.*

The Draft EIS includes a detailed comparison of the Shepard Lane and Glovers Lane Options. Between the release of the Draft EIS and the Final EIS, the Shepard Lane Option was eliminated as a reasonable and practicable alternative (see response 32.2.6A) and was not carried forward for detailed analysis in this Final EIS. Therefore, comments related to the Shepard Lane Option are no longer applicable to the alternatives being considered in this Final EIS.

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- B.** *Commenters stated that Alternatives A2 and A4 would cut through retirement communities in West Haven.*

After the Draft EIS was released, the WDC alternatives were modified and no longer extend into West Haven.

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- C.** *Commenters stated that the WDC alternatives would divide Hooper and reduce the quality of life for residents in Hooper.*

This information has been added to Chapter 5, Community Impacts, of this Final EIS. After the Draft EIS was released, the alternatives' northern termini were revised for this Final EIS. Only one alternative (Alternative A2) now enters the southern end of Hooper (it terminates at 5500 South and 5400 West), and the eastern extent does not go through any large residential areas. Therefore, Alternative A2 does not divide any established communities in Hooper.

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- D.** *Commenters stated that the WDC would divide neighborhoods or have impacts to neighborhoods and communities.*

Chapter 5, Community Impacts, describes the community cohesion and neighborhood impacts from the WDC alternatives. Chapter 5 acknowledges that there would be some impacts to neighborhoods and community cohesion from the WDC alternatives.

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- E. *Farmington City stated that at page 5-21 that park and recreational opportunities are a benchmark and priority for the quality of life in Farmington City. At page 5-24 it is stated that recreation, city parks, and open space are important to the community. As previously mentioned, the only reason the development was approved in the vicinity of the conservation easements was because the conservation easements were required to be transferred to Farmington City to facilitate preservation of each of these community resources and to perpetuate the conservation values protected under the conservation easements. In addition to avoiding the designation of these obvious Section 4(f) resources as Section 4(f) properties, there is little or no discussion in this chapter of the impacts to these conservation easements by the road, to the resources protected by these conservation easements from the road, nor to the impact the loss of these resources will [have] on the remainder of the Farmington community. That impact will be felt all the way to the east benches due to the impact on the viewshed, and the members of the community will no longer be able to enjoy the resources they present. It is unacceptable to not include these conservation easements in the tables relating directly to recreational facilities (pages 5-25 and 5-26). Farmington City also commented that the cumulative impacts (page 5-67) were not addressed and the analysis contradicts the purpose of the easements.*

The values of the conservation easements and impacts are discussed in Chapter 3, Land Use (see response 32.3F), and the trail impacts are discussed in Chapter 10, Considerations Related to Pedestrians and Bicyclists (see response 32.10H). Chapter 5, Community Impacts, in the various recreation resources sections, evaluates impacts to land identified as parks in community plans. At the time the Draft EIS was released, the conservation easements were not listed as parks in Farmington City's plans nor on its website on Farmington City's parks map. However, additional text has been added to the quality of life sections of Chapter 5 regarding the loss of the conservation easements with Alternatives A1, A2, B1, and B2 and the potential reduction in quality of life.

The cumulative impacts analysis mentioned in the comment (page 5-67 of the Draft EIS) evaluates the impacts of the WDC in combination with the impacts of other projects. The WDC team does not know of other projects that would affect the conservation easements or cause the loss of recreation resources in the WDC study area. The analysis states that the WDC would affect the conservation easements and their attributes, and mitigation for this impact is included in Chapter 3, Land Use. Additional text has been added to Chapter 3 that Farmington City feels it might not be able to maintain the use of the conservation easements and that the easements could be developed with the Glovers Lane Option.



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- F.** *Farmington City commented that Figure 5-2, Subdivisions and Neighborhoods, is out of date; that Figure 5-5 does not show the county fairgrounds or justice complex; and that Figure 5-6 shows an extra school that does not exist in the city.*

The commenter did not provide any information about what is out of date in Figure 5-2, Non-School Community Facilities, or which is the extra school in Figure 5-6, Schools. Figure 5-5 is meant to show community facilities. UDOT does not consider the justice complex (Davis County Jail) a community facility since it is not a general public gathering place or recreational facility. The Davis County Fairgrounds are shown in Figure 5-4, Recreation, as a recreational facility. Figure 5-6 is accurate since it shows Eagle Bay Elementary and the Farmington Bay Youth Center.

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- G.** *Commenters stated that the Glovers Lane alternatives would divide Farmington and the Ranches HOA [homeowners association] community.*

As described in Chapter 5, Community Impacts, of the EIS, the Glovers Lane alternatives would have community impacts to the Farmington Ranches and Farmington Meadows subdivisions. However, since the Glovers Lane alternatives are west of the subdivisions, they would not separate subdivisions, nor would they separate the community of Farmington from the subdivisions.

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- H.** *Commenters requested an objective analysis for the determination that the Shepard Lane Option would divide close-knit communities.*

The Draft EIS included a detailed comparison of the Shepard Lane and Glovers Lane Options. Between the release of the Draft EIS and the Final EIS, the Shepard Lane Option was eliminated as a reasonable and practicable alternative (see response 32.2.6A) and was not carried forward for detailed analysis in this Final EIS. Therefore, comments related to the Shepard Lane Option are no longer applicable to the alternatives being considered in this Final EIS.

## **32.5.2 Section 5.4.3 – Recreation Resources**

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- A.** *Commenters questioned the loss of revenue to Oakridge Country Club if the golf course loses its PGA [Professional Golfers' Association] rating because of the Shepard Lane Option. Commenters also requested that the amount of lost revenue from special events be separated from lost revenues due to decreased membership.*

The Draft EIS included a detailed comparison of the Shepard Lane and Glovers Lane Options. Between the release of the Draft EIS and the Final EIS, the Shepard Lane Option was eliminated as a reasonable and practicable alternative (see response 32.2.6A) and was not carried forward for detailed analysis in this Final EIS. Therefore, comments related to the

Shepard Lane Option are no longer applicable to the alternatives being considered in this Final EIS. Thus, there would be no impacts to the Oakridge Country Club.

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- B.** *Commenters stated that the Glovers Lane Option would take out South Park (Skater Park) in Farmington. Other commenters requested that a bicycle path/sidewalk be added along the frontage road.*

The Glovers Lane Option would require less than 0.1% of South Park for right-of-way. This small impact would not affect any park amenities or the operation of the park.

If there are any impacts from the Glovers Lane alternatives on the existing bicycle path or sidewalks along the frontage road, these would be moved to a new location. UDOT is not proposing to add any new bicycle paths or sidewalks to the frontage road as part of the Glovers Lane alternatives.

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- C.** *Commenters stated that the WDC alternatives would affect the bird-watching, hunting, or fishing access or use of the Great Salt Lake shorelands areas, Farmington conservation easements, Farmington Bay Waterfowl Management Area, Great Salt Lake Shorelands Preserve, Utah Division of Wildlife Resources property, or other shorelands areas.*

Public access would be maintained to all areas currently open to bird-watching, hunting, or fishing. The WDC Project would maintain the current public access to the Farmington conservation easements, would provide grade-separated crossings for the Great Salt Lake Shoreline Trail and Buffalo Ranch Trail in Farmington, and would not affect access to the Farmington Bay Waterfowl Management Area. All of the WDC alternatives would provide a grade-separated crossing at Roueche Lane in Kaysville to the Utah Division of Wildlife Resources property and hunting access. Similarly, all access points to the Great Salt Lake Shorelands Preserve would be maintained, and there would be no impact to the public access for the visitor's center at the Great Salt Lake Shorelands Preserve on 3200 West in Layton.

### **32.5.3 Section 5.4.4 – Community Facilities**

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- A.** *A commenter stated concerns about the traffic around two schools, Country View Elementary and Rocky Mountain Junior High on 4800 South, and the surrounding neighborhoods caused by Alternatives A1 and A3. The commenter suggested that Alternatives A1 and A3 would cause traffic impacts on 4800 South in West Haven and the surrounding neighborhoods.*

After the Draft EIS was released, the northern limits of the A Alternatives were moved south and no longer cross 4800 South in West Haven. Therefore, there would be no impacts to the two schools.

### 32.5.4 Section 5.4.5 – Public Health and Safety

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- A. *Commenters stated that placing the WDC close to schools or houses could increase the risk to students or residents if a driver loses control and the vehicle leaves the freeway and enters the school grounds or private property. Other commenters wanted to know whether the highway would be fenced.*

The WDC action alternatives would be designed to meet safety standards. There would be appropriate safety distances between the travel lanes and the end of the right-of-way to minimize the risk of errant vehicles leaving the freeway clear zone. This zone is typically 30 feet for a highway such as the WDC. In addition, the WDC right-of-way would be fenced to keep pedestrians from entering the roadway.

- B. *Commenters stated safety concerns about the arterial section of the WDC. Commenters also stated concerns that there would be an increase in litter.*

The WDC action alternatives would be designed to meet safety standards. After the Draft EIS was released, the arterial sections were eliminated, and now all of the WDC alternatives would be limited-access facilities. The potential for litter would be the same as for any road in the surrounding area and could increase with the additional WDC traffic.

### 32.5.5 Section 5.4.6 – Public Services and Utilities

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- A. *Commenters questioned how many power lines would need to be relocated near Buffalo Ranch with the Glovers Lane alternatives.*

The Glovers Lane Option would require all four of the power lines to be relocated where the Glovers Lane Option crosses the power lines west of Buffalo Ranch/Farmington Ranches. For the WDC cost estimates, the WDC team assumed that eight power poles would need to be relocated at this location.

- B. *Commenters requested that the costs to relocate utilities such as the Hooper Canal, the Hooper Municipal Water Canal, and the Layton Canal be included in the cost estimates.*

The costs of utility relocations, including the relocation costs of the canals mentioned in the comments, have been included as part of the estimates for all of the WDC alternatives evaluated in the EIS. *Technical Memorandum 20: Cost Estimates for WDC Alternatives in the Draft EIS* describes and lists all items included in the cost estimates.

- C. *A commenter stated that the Draft EIS did not adequately address impacts to the Central Davis Sewer District (CDS) facility in Kaysville from the WDC alternatives. Specifically, the commenter stated that (1) the proximity of the WDC alternatives to the CDS facility's composting operations could result in further odor controls, equipment, or processes;*

*(2) the impacts to CDSO properties remove areas currently used for Class B biosolid applications that would have to be replaced or moved to a new location; and (3) there would be a loss of flexibility for siting future treatment works due to the loss of CDSO property in areas planned for future treatment sites. The comment also included a letter that was submitted on February 7, 2011, during the WDC alternatives-screening process.*

Additional information about the specific impacts to the CDSO facilities from the WDC alternatives has been added to Chapter 5, Community Impacts, of this Final EIS based on the comments provided by CDSO. As part of the right-of-way acquisition process, UDOT will continue to coordinate with CDSO for mitigation for impacts to CDSO properties.

The comments in the February 7, 2011, letter were in reference to previous versions of the WDC alternatives that were located on different alignments in the area of the CDSO facility. These comments are not addressed in this Final EIS since they pertain to previous versions of the WDC alternatives that are no longer being considered.

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- D.** *Commenters stated that there would be utility impacts in West Point and Clinton, that canals and other utilities would need to be piped or rerouted, and that these impacts and costs should be considered.*

All major utility crossings (power lines, canals, sewers, gas lines, etc.) have been identified for all of the WDC alternatives evaluated in the Draft EIS. The impacts to utilities are listed in Section 5.5, Environmental Consequences, of the Draft EIS, for each of the WDC alternatives. The costs of utility relocations have been included as part of the estimates for all of the WDC alternatives evaluated in the EIS. *Technical Memorandum 20: Cost Estimates for WDC Alternatives in the Draft EIS* describes and lists all items included in the cost estimates.

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- E.** *Davis County Public Works provided comments and maps showing areas where the WDC alternatives cross, overlap, or parallel parts of the Davis County designated storm drainage system.*

Thank you for the comments and information. This information has been updated with the updated WDC engineering design files in Volume IV of this Final EIS. UDOT will coordinate with Davis County Public Works and any applicable city officials to make sure that either the final design for the selected WDC alternative accommodates the Davis County designated storm drainage system or any impacts are mitigated.

## 32.5.6 Section 5.4.7 – Housing and Relocations

- A. *Commenters wanted information about whether their property would be affected, what methodology was used in the EIS to determine impacts, and how property would be acquired—specifically, does UDOT pay for only minor impacts to property, when will property be acquired, how much time would residents have to move out, can irrigation water be maintained for property, and does UDOT compensate for a decrease in property value for homes that are left remaining near an alternative? Other commenters questioned whether they would have access to their property, whether the WDC alternatives would restrict access to their property, or whether their irrigation water would be relocated. Some commenters also asked UDOT to buy their properties if the properties are not directly impacted but are located close to the road.*

Information about property impacts is included in Chapter 5, Community Impacts, and the actual properties affected are listed in Appendix 5A, Relocations and Potential Relocations in the Community Impact Analysis Area. In addition, an online map on the project website ([www.udot.utah.gov/westdavis/maps](http://www.udot.utah.gov/westdavis/maps)) shows the locations of the alternatives in relation to properties. Relocations of residents and businesses would be determined during the right-of-way acquisition process, which would occur shortly before construction. The WDC team made reasonable efforts to avoid affecting residential and business properties, but in some areas this was not possible because of design and environmental constraints.

There is no specific distance for determining full relocations, and each case is unique. Issues such as access to the property and the ability to maintain access and irrigation water for agricultural properties are also considered when determining whether a property is a full relocation. Since final design has not been completed for the WDC, it is too early to look at each specific circumstance; therefore, UDOT uses a standard distance to ensure an equal comparison of alternatives. For the EIS process, a *relocation* is considered only when a structure would be directly affected by the WDC (that is, the WDC right-of-way would overlap the structure). If a structure would be within 15 feet of the WDC right-of-way, or if the current access could be cut off, this was identified in the Draft EIS as a *potential relocation*.

When property acquisitions are necessary, UDOT must comply with the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (42 USC 4601 and subsequent sections, amended 1989) and the State of Utah Relocation Program (part of the Utah Relocation Assistance Act, Section 57-12 of the Utah Administrative Code). To ensure just compensation for any property acquisition, these laws provide for uniform and equitable treatment of all persons displaced from their homes, businesses, and farms without discrimination on any basis.

### What is a relocation?

A relocation occurs when constructing an alternative would require purchasing an occupied structure, such as a home or business. The residents or business would need to relocate.

UDOT will provide just compensation for the acquisition of any private property, including strip take impacts to the property when no structures are taken. A UDOT property acquisition specialist will work with each property owner and consider items such as existing mortgage rates, relocation fees, and any property disputes. UDOT does not compensate for any decrease in property values as a result of a project if no property is acquired.

#### What is a strip take?

A strip take is the acquisition of a strip of land on the edge of a parcel.

Per the UDOT right-of-way process, UDOT can generally acquire only property that it needs for a project. Therefore, UDOT generally does not purchase properties not directly affected by a project unless the project causes the property to have no value or not be usable (for example, the project eliminates access to the property).

If FHWA decides to build the WDC, the location and timing of construction would be based on available funding. Currently, there is not enough funding to construct the entire WDC. If funding is made available, the earliest that construction could occur is 2019, with property acquisition starting in 2018. At a minimum, residents would have 90 days to relocate once a property is purchased by UDOT. If the property is not immediately needed for construction, that period could be extended.

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**B.** *A commenter stated that an impact to 820 South Mare Circle was omitted from the EIS.*

The impact to this property is listed on page 5A-20 of Appendix 5A, Relocations and Potential Relocations in the Community Impact Analysis Area, of the Draft EIS.

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**C.** *Commenters stated that there were new houses built in some areas (on the east side of I-15 in Farmington by the Glovers Lane Option, in the Bridgeway Island subdivision, in the Farmington Ranches subdivision, in the Farmington Meadows subdivision, and in other areas) and that these should have been included in the relocation analysis.*

WDC team members conducted field visits in 2012 and visited all residential areas adjacent to the WDC alternatives to identify all constructed and platted houses for the WDC EIS analysis. The WDC team has updated this analysis in 2016 for this Final EIS.

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**D.** *A commenter stated that open space or agricultural land should be valued and compensated for what the land could be (for example, residential or commercial property).*

When property acquisitions are necessary, UDOT must comply with the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (42 USC 4601 and subsequent sections, amended 1989) and the State of Utah Relocation Program (part of the Utah Relocation Assistance Act, Section 57-12 of the Utah Administrative Code). These laws provide for uniform and equitable treatment of all persons displaced from their homes, businesses, and farms without discrimination on any basis. UDOT will provide compensation for the acquisition of any private property including minor impacts (strip takes) to the

property when no structures are taken. A UDOT property acquisition specialist will work with each property owner and consider items such as existing mortgage rates and relocation fees.

If open space or agricultural land is planned for development, this is considered in the property acquisition process.

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**E.** *A commenter questioned what data source was used for Appendix 5A.*

The addresses and parcel numbers used for Table 5A-1, Relocations and Potential Relocations, and Table 5A-2, Partial Property Impacts (Strip Takes), in Appendix 5A, Relocations and Potential Relocations in the Community Impact Analysis Area, came from parcel information provided by the Davis County Assessor's Office and the Weber County Assessor's Office.

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**F.** *A commenter asked: if they were selling their house, and their house would be relocated by one of the WDC alternatives, are they legally required to disclose this to potential buyers?*

UDOT and FHWA cannot give legal advice to homeowners. Individuals should contact an attorney or real estate agent with any questions regarding the responsibility to disclose information about the WDC EIS.

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**G.** *Commenters stated that their properties would be affected by a WDC alternative or the WDC preferred alternative, stated that they needed to sell the house, and asked UDOT to purchase their property.*

UDOT has a hardship acquisition program that can be used to purchase properties for future transportation projects if they meet certain eligibility requirements. Information about the UDOT hardship acquisition program is available at [www.udot.utah.gov/main/f?p=100:pg:0:::1:T,V:451](http://www.udot.utah.gov/main/f?p=100:pg:0:::1:T,V:451).

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**H.** *Commenters stated that UDOT's calculations of homes within 250 feet or 500 feet of the WDC alternatives are outdated or inaccurate. Other commenters stated that UDOT should have counted homes within 200 feet, 500 feet, or a half mile from the WDC. Other commenters stated that UDOT should have counted the number of parks, churches, and other community facilities within a half mile of the WDC.*

Because each situation is different and depends on many variables, there are no formulas that can quantify the specific distance at which a new transportation facility would affect adjacent properties. The EIS does not count the number of homes within 250 feet, 500 feet, or a half mile of the WDC alternatives since there is no generally accepted criterion that homes within a specific distance would be affected.

For those resources (such as noise) for which a set criterion indicates impacts to homes within a certain distance, the number of homes with such an impact was counted. The air quality analysis also counted homes adjacent to the WDC when identifying potential impacts. See response 32.8A regarding the impact to property values adjacent to the highway.

The methodology used to determine relocations and potential relocations is described in Chapter 5, Community Impacts, of the Draft EIS. Chapter 5 includes a list of parks, community facilities, schools, and law enforcement/fire protection facilities within 0.5 mile of the WDC and evaluates the impacts to those facilities.

For the Draft EIS, the WDC team did not rely on aerial images. WDC team members conducted field visits in 2012 and visited all residential areas adjacent to the WDC alternatives to identify all constructed and platted houses for the WDC EIS analysis. The WDC team has updated this analysis in 2016 for this Final EIS.

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- I. Commenters stated that UDOT did not accurately count the number of relocations, specifically in the Farmington area. Commenters stated that the Glovers Lane alternatives would affect more houses than those listed in the Draft EIS. The commenters provided maps showing homes that they thought would be relocations. Other commenters stated that the Glovers Lane alternatives would affect more homes in the future, once all of the planned or platted future homes are developed.*

As described in Chapter 5, Community Impacts, for the WDC relocations analysis, the WDC team assumed that any structure directly affected by the WDC would be a relocation, and any structure within 15 feet of the WDC alternatives' right-of-way would be a potential relocation. Any approved plat that was directly affected or within 15 feet of an alternative was also considered a plat relocation or a potential plat relocation. See response 32.5.6A for detailed information regarding the distances used in the EIS to determine relocation impacts.

Given the uncertain nature of future development, the WDC team did not try to predict the future number or locations of residences or platted developments if they were not approved by the local municipalities or land-use authorities. If residences or commercial areas are constructed after the completion of the Final EIS or after construction of the WDC, they will have been constructed with the property owners knowing that the WDC is planned, and the property owners should be aware of any impacts before they buy or build a home.

One of the houses identified by the commenters was considered a potential relocation in the Draft EIS. The other four houses identified by the commenters are all farther than 15 feet away from the WDC alternatives and are not considered potential relocations. As stated in Chapter 5, the final number of relocations would not be determined until the right-of-way acquisition phase, which would occur after the final design phase. The number of relocations and potential relocations changed for this Final EIS. The one potential relocation mentioned in this response is now more than 15 feet from the WDC and is no longer a potential relocation.



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- J.** *A commenter stated that the EIS should disclose that the predicted impacts to development in Farmington would be to future development, and that impacts to development in Kaysville would be to existing development.*

The impacts of the WDC alternatives to houses, neighborhoods, and city land-use plans were assessed consistently for all WDC alternatives. As described in Chapter 5, Community Impacts, for the relocations analysis, the WDC team analyzed the impacts to only structures that were constructed or platted at the time of the EIS. Chapter 3, Land Use, describes the impacts of the WDC alternatives and the degree to which they would be consistent with city land-use plans.

## **32.6 Chapter 6 – Environmental Justice**

No comments to this chapter were provided.

## **32.7 Chapter 7 – Transportation**

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- A.** *Hooper City and other commenters stated that one or both of the roads at the northern terminus of the B Alternatives (Alternatives B1–B4)—5100 West and 5500 South in Weber County—will become congested once the WDC is built. Hooper City requested that the WDC alternatives widen or improve 5100 West between 5500 South and 4000 South instead of terminating at 5500 South/5100 West.*

Chapter 7, Transportation, evaluates how local roads would function in 2040 after the WDC is constructed. This comment was based on the Draft EIS B Alternatives, which ended at 5100 West and 5500 South. For this Final EIS, Alternatives B1 and B2 end at 1800 North about 1 mile south of 5500 South. As shown in Table 7-14, Future (2040) PM Peak-Period Congestion Levels for Key Road Segments with Alternatives B1–B2, 5600/5500 South would operate at acceptable levels of service.

Additionally, traffic modeling performed for the B Alternatives showed that 5100 West between 5500 South and 4000 South would operate at acceptable levels of service. Since 5100 West would operate at an acceptable level of service between 5500 South and 4000 South, UDOT is not proposing to include additional roadway improvements to this section of 5100 West, since doing so would cause additional impacts and would be an additional expenditure of public funds that is not needed or forecasted to be needed before 2040.

- B.** *A commenter questioned the modeled percentage increase in traffic flow under the Park Lane bridge from today to 2040. The commenter also requested the traffic counts and segments of infrastructure that the traffic would be located on.*

The WDC team assumes that the commenter is asking for the current and 2040 traffic on I-15 and Legacy Parkway going underneath the Park Lane structure in Farmington for the WDC alternatives. This information is provided in Table 32.7-1.

**Table 32.7-1. Daily Traffic Volumes on I-15 and Legacy Parkway**

	2011		2040		
	AWDT	AWDT	No-Action Alternative	Alternatives A1, A2, B1, and B2	
			Percentage Increase from 2011	AWDT	Percentage Increase from 2011
Legacy Parkway	23,600	33,000	39%	25,500	8%
I-15	71,300	86,400	21%	98,000	37%

Source: Wasatch Front Regional Council travel demand model, version 8.1

AWDT = average weekday daily traffic

- C.** *A commenter questioned the traffic count and associated percentage increase that would occur on 1875 West (in Farmington) if no new local road extends from the freeway near 950 North.*

Because the road mentioned in the comment is adjacent to the Shepard Lane Option, the WDC team assumes it refers to the alternatives that use the Shepard Lane interchange (Alternatives A3, A4, B3, and B4). These alternatives have been eliminated from this Final EIS.

- D.** *A commenter asked how many cars would be using the intersection off the overpass coming into Hunters Creek on a normal day and normal week.*

Because the road mentioned in the comment is adjacent to the Shepard Lane Option, the WDC team assumes that this comment applies to the Shepard Lane Option. For this Final EIS, the Shepard Lane Option was determined not to meet FHWA's design standards and was eliminated as a reasonable alternative. The WDC would not provide access into this neighborhood.

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- E.** *A commenter asked whether the WDC alternatives would cause a bottleneck on I-15 in Centerville or congestion on I-15 south of the system-to-system interchange. Other commenters stated that the WDC alternatives would result in additional congestion on Legacy Parkway south of the WDC/Legacy Parkway system-to-system interchange.*

The WDC team's review of the traffic data shows that both I-15 and Legacy Parkway south of the system-to-system interchange with the WDC would have heavy congestion and poor operating conditions with the No-Action Alternative and the WDC action alternatives. The WDC would not change the level of service on I-15 or Legacy Parkway in 2040 compared to the No-Action Alternative.

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- F.** *Farmington City stated that the existing Park Lane/I-15/US 89/Legacy Highway interchange is one of the largest regional transportation hubs on the entire UDOT system. Nevertheless, UDOT's preferred alignment curtails the regional movement of automobile traffic from the WDC to this hub. For instance, for automobiles traveling southbound from Kaysville, one must travel approximately 9 miles to access this interchange, even though the interchange is physically less than 2 miles from the WDC. Such movements do not reduce user delay or enhance peak-period mobility. Alignment B1 does not reduce or mitigate the ever-increasing congestion from the growing areas of west Kaysville and west Farmington east to I-15, because alignment B1 does not provide a second option for access to these areas.*

After the Draft EIS was released, and based on a likely increase in traffic generated by proposed developments in Farmington, UDOT added an interchange at 950 North in Farmington, which would provide access to the interchange mentioned in the comment. The 950 North interchange would also provide access into the Farmington Station Park development.

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- G.** *Commenters stated that the WDC would reduce ridership on FrontRunner.*

It is speculative to state that there would be any reduction in ridership on FrontRunner due to the WDC. Ridership on FrontRunner is based on many different factors, including the cost of a fare, a rider's origin and destination, and the existing transit network. Based on the 2040 Wasatch Front Regional Council's travel demand model results, transit use as a percentage of total trips would not change between the No-Action and WDC action alternatives. The travel demand model shows that transit mode share would increase by 150% in the WDC study area between 2015 and 2040, with or without the WDC.

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- H.** *Commenters stated that the WDC would cause congestion on the underpasses (local streets that go under the WDC) or on the local streets where there would be a WDC interchange.*

All of the WDC action alternatives would have interchanges designed to handle projected traffic on the local roads at the interchanges. In some cases, this could require adding traffic-control measures (such as stoplights) or turn lanes to ensure efficient traffic movement. These details would not be known until the final design phase of the project.

Where the WDC alternatives cross local roads without an interchange or access, there would not be any increase or decrease in congestion on the local road due to the WDC.

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- I.** *Farmington City commented that Tables 7-4 and 7-5 indicate that the No-Action Alternative for Farmington shows acceptable traffic operations in 2040, and this is an error as the 2013 peak-hour operating conditions are already below what is being projected in 2040 with the No-Action Alternative. Based on the transportation analysis, there is no advantage to any of the A or B Alternatives in comparison to the No-Action Alternative in 2040 within the Farmington city area.*

Table 7-4, Future (2040) PM Peak-Period Congestion Levels on Key Road Segments with the No-Action Alternative, shows heavy congestion in 2040 northbound on I-15 through Farmington. Table 7-5, Future (2040) Average PM Peak-Period Intersection Delay and Levels of Service with the No-Action Alternative, indicates acceptable operating conditions in 2040 on the Park Lane ramps with I-15 and US 89. The conditions in 2040 assume that the Shepard Lane interchange has been built on I-15, which would substantially reduce traffic on the Park Lane ramps, so traffic would likely be improved compared to the conditions in 2013. This is one of the reasons the Shepard Lane interchange is in Phase 1 of the Wasatch Front Regional Transportation Plan 2015–2040.

Farmington City is incorrect that the transportation analysis shows no advantage from the WDC action alternatives compared to the No-Action Alternative in Farmington. Traffic congestion on I-15 during the PM peak period would decrease with the WDC action alternatives.

## 32.8 Chapter 8 – Economics

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- A. *Commenters stated that property values will decrease in areas near the WDC action alternatives. Commenters stated that this could cause reduced property taxes due to lower property values.*

Chapter 8, Economics, provides an overview of literature on the effects of a new highway on adjacent residential areas. To summarize, there are no formulas that can quantify the effects of a new transportation facility on property values, because each situation is different and property values are dependent on many variables. In general, an improved transportation network increases all property values in an area. However, as suggested by previous studies, residential properties adjacent to the WDC alternatives could have lower property values or have a lower rate of appreciation than similar properties located farther from the WDC, if all other variables are similar. If some areas have lower property values, the local taxing entities would receive less in property taxes. However, if other areas have increased property values, local taxing entities would also receive more in property taxes for these properties.

- B. *Commenters stated that their home would be affected by a WDC alternative and that, since they run a business out of their home, their home business should be counted as a business impact in the EIS analysis.*

Home-based businesses were not identified as part of the WDC economics analysis. The WDC team acknowledges that home-based businesses could be affected by the WDC. However, if the homes that the home-based businesses are located in are acquired, the home-based businesses would also have to be relocated along with the home as part of the UDOT right-of-way process. Therefore, trying to count home-based businesses would result in double counting, since the number of homes that would be acquired is already identified.

Additionally, it is not possible to identify all home-based businesses, since there is not a central data resource that lists the locations of all home-based businesses. The only businesses identified specifically in the WDC economics analysis are commercial properties that would be acquired due to impacts from the WDC alternatives.

### What is a relocation?

A relocation occurs when constructing an alternative would require purchasing an occupied structure, such as a home or business. The residents or business would need to relocate.

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- C.** *Commenters stated that the WDC alternatives would have visual impacts or wildlife impacts that would affect tourism at the Great Salt Lake, the Farmington Bay Waterfowl Management Area, the Great Salt Lake Shorelands Preserve, or Antelope Island.*

The WDC alternatives would not prohibit or restrict access to the Great Salt Lake, the Farmington Bay Waterfowl Management Area, the Great Salt Lake Shorelands Preserve, or Antelope Island. Conversely, access to these areas could be enhanced by the WDC alternatives, so the WDC is not expected to decrease tourism.

Impacts to the Great Salt Lake ecosystem, the Farmington Bay Waterfowl Management Area, and the Great Salt Lake Shorelands Preserve are described in Chapter 14, Ecosystem Resources. Although there would be some direct and potential indirect impacts to wildlife habitat in these areas, the affected habitat would be a small percentage of the overall wildlife habitat in the Great Salt Lake ecosystem and the Great Salt Lake Shorelands Preserve, and the WDC is not expected to substantially reduce wildlife habitat, wildlife populations, or ecosystem functions. Therefore, any changes to tourism related to the Great Salt Lake ecosystem from the WDC alternatives are not anticipated to be substantial.

As described in Chapter 14, Ecosystem Resources, UDOT first tries to avoid impacts to wetlands and wildlife by shifting the alignment away from these resources. For the resources that would be affected by the WDC alternatives, UDOT will mitigate for impacts to wetlands and wildlife, including replacing the functional value of affected wetlands, as required by the Clean Water Act Section 404 permitting process.

## **32.9 Chapter 9 – Joint Development**

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- A.** *Farmington City stated that the entire Joint Development chapter fails due to the fact that impacts to the Farmington City trail system are basically ignored, as are the conservation easements that provide most of the destinations for the use of these trails.*

As stated in Chapter 9, Joint Development, the intent of the chapter is to discuss proposed recreation and public works projects that might be developed jointly with the proposed WDC Project. The intent is not to discuss the impacts to a specific resource. Impacts to conservation easements and trails are discussed in Chapter 3, Land Use, and Chapter 10, Considerations Related to Pedestrians and Bicyclists. See responses 32.3F and 32.10H regarding impacts to conservation easements and the Farmington trail system.

## 32.10 Chapter 10 – Considerations Related to Pedestrians and Bicyclists

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- A.** *Commenters asked how high trail underpasses would be and how high the WDC alternatives would be at trail underpass locations.*

The exact height of the selected WDC alternative would not be determined until the final design phase of the project. All trail underpasses would need to be designed to meet minimum requirements for the expected users. Equestrian trails require a minimum of 10 feet of vertical clearance. Vertical clearance for bicycle or pedestrian trails is usually 10 feet or less. The exact height of the selected WDC alternative would be based on the required vertical clearance, the drainage design of the roadway, and the surrounding topography and water table.

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- B.** *Commenters stated that the Glovers Lane Option would destroy the “Eagle Bay Trail” and cause it to be cut off from Farmington.*

There is not a trail named “Eagle Bay Trail” on the Farmington City trail maps. All trail crossings and impacts are described in Chapter 10, Considerations Related to Pedestrians and Bicyclists, and Chapter 27, Section 4(f)/6(f) Evaluation, of the Draft EIS. All trails would be maintained for any of the WDC alternatives, and no trails would be cut off by any of the WDC alternatives.

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- C.** *Commenters asked whether the Old Emigration Trail could be moved from the east side of Alternative B to the west side of Alternative B in Syracuse.*

The Old Emigration Trail needs to stay on the east side of the B Alternatives since it is located on the east side of the B Alternatives north of 700 South and south of 2000 South in Syracuse. Putting the trail on the west side in this area would require two additional structures (either overpasses or underpasses) and additional costs.

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- D.** *Commenters stated concerns about the impacts of Alternative B1 on the Old Emigration Trail loop by Jensen Park and questioned whether this would still be a continuous loop trail.*

As described in Chapter 27, Section 4(f)/6(f) Evaluation, of this Final EIS, for any of the WDC action alternatives, the Old Emigration Trail south of Jensen Park in Syracuse would have grade-separated crossings of the WDC near 1500 West and 1000 West to maintain the connection of the loop trail south of Jensen Park. With any of the WDC action alternatives, the Old Emigration Trail would also be extended to connect with the Kays Creek Trail in Layton. The Old Emigration Trail would remain a continuous facility with any of the WDC action alternatives.

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- E.** *Commenters in Farmington asked why there was not a trail being proposed as part of the Glovers Lane alternatives.*

In the Draft EIS, UDOT was proposing a new trail between Weaver Lane in Layton and Gentile Street in Syracuse to connect the regional Denver & Rio Grande Western Trail and the Old Emigration Trail. In this Final EIS, UDOT is now proposing a trail adjacent to the WDC starting at the Legacy Parkway Trail in Farmington and terminating at the south end of the Old Emigration Trail in Syracuse, and a trail connection between the north end of the Old Emigration Trail and the south end of the Weber County 5500 West Trail.

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- F.** *Commenters questioned whether the Glovers Lane Option would relocate the Great Salt Lake Shoreline and Buffalo Ranches equestrian trails and whether these trails would still be designed for equestrians. Other commenters stated that the Glovers Lane alternatives would destroy or remove these trails.*

As described in Chapter 10, Considerations Related to Pedestrians and Bicyclists, of the Draft EIS, the WDC Project would provide a crossing or relocate all trails affected by any of the WDC action alternatives. Equestrian trail crossings or relocations would be designed to maintain equestrian use and designed with equestrian trail design standards. The Great Salt Lake Shoreline and Buffalo Ranches Trails would have a grade-separated crossing over any of the WDC action alternatives and would be designed for equestrian use.

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- G.** *Syracuse City requested that a new 0.3-mile trail connection between 1000 West/Bluff Road and Bluff Road/Gentile Street be included with the WDC alternatives. Syracuse City stated that this trail connection would make it easier for trail users to access the eastern and southern portions of the trail without having to go out of direction to Jensen Park first.*

The design of the WDC action alternatives has been updated in this Final EIS to include a trail underpass at about 1000 West in Syracuse on the current Old Emigration Trail alignment. This trail underpass would maintain the current function of the Old Emigration Trail loop south of Jensen Park, and the addition of a new trail segment on Bluff Road between Jensen Park and Gentile Street would not be necessary since anyone from the 1000 West/Bluff Road area could use the Old Emigration Trail to access the WDC trail with no out-of-direction travel.

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- H.** *Farmington City stated that the Farmington TMP [Transportation Master Plan] shows a shoreline trail running the full length of the city with the intent to extend to points north and south, and with the potential for a multitude of access points to this trail (especially near the Farmington Bay Waterfowl Management Area). Alignment B1 reduces the number of access possibilities to these options. Farmington has the highest number of developed trail-miles per resident in the state. The preferred alignment limits trail opportunities under the City Master Plan and detrimentally impacts current and future trails. In the case of the conservation easements, it will destroy the destinations for a number of trails. The EIS does not adequately*



*discern and discuss the nature of the trail resources, the reason why these resources exist, the purposes they are trying to meet, nor the impacts on not only the trails, but the areas they access (the conservation easements). Rather than speaking in terms of impacts to these resources, the Draft EIS simply discusses the ability to relocate the trails. Maps showing the existing and future trails within Farmington are attached hereto as Exhibit B with the Glover's Lane and Shepard Lane alternatives juxtaposed upon them. This section needs to be entirely redone with this in mind.*

*The City also stated that Figure 2-16 does not show connections to sidewalks and the roads on the trails and that the Shepard Lane Alternative design will help with a transition to the Haight Creek Trail across the WDC.*

Farmington City has developed an extensive trail network, which is described in Chapter 10, Considerations Related to Pedestrians and Bicyclists, of this Final EIS. The trail network was developed by the City to provide a benefit to local residents and visitors of the area to allow them to bicycle adjacent to the natural and quiet settings of the Farmington Bay Waterfowl Management Area and the conservation easements. The WDC Project would provide the appropriate grade-separated crossings of the WDC so as not to interfere with the use of the trails. Because the trails would be west of the WDC, trail users could still enjoy the natural settings of the Farmington Bay Waterfowl Management Area and the Great Salt Lake, which would also be west of the WDC. UDOT acknowledges that the WDC would introduce a highway into this natural setting, which could decrease the natural quality of the area. To reduce the impacts, UDOT will use noise-reducing pavement and will work with Farmington City during the final design phase of the project to develop aesthetic treatments such as vegetation to further reduce the impacts of the WDC.

As described in Chapter 10, Considerations Related to Pedestrians and Bicyclists, of this Final EIS, UDOT in coordination with Farmington City is now including a trail adjacent to the WDC through Farmington; this addresses the concern in the comment. This trail would improve overall connectivity in western Farmington in accordance with the trail master plan. In addition, UDOT would provide an additional trail crossing over I-15 on Park Lane in Farmington so that residents have safe access to the UTA FrontRunner station and the Station Park retail development.

Chapter 10, Considerations Related to Pedestrians and Bicyclists, discusses the trails described in the comment and the value of the trails. Figure 10-4, Proposed Pedestrian and Bicycle Facilities, in Volume IV shows these proposed trails and connections in relationship to the proposed WDC alternatives, which shows how these trails would be potentially affected by the alternatives. Based on the trails master plan, the City could still construct the shoreline trail west of WDC as currently planned or could use the trail that would be constructed as part of the WDC Project.

As stated in Section 10.4.6, Mitigation Measures, of this Final EIS, prior to the final design phase of the project, UDOT will coordinate with local municipalities, the Wasatch Front Regional Council, and the Trails Advisory Board to ensure that all existing and planned facilities identified in the local and regional plans and existing and proposed connections to such facilities are accommodated. Options for accommodations could include either

constructing and routing the facility under the WDC or routing the facility over the WDC. Therefore, the project would not relocate any trail in Farmington City or limit the trail opportunities identified in the City Master Plan.

Figure 2-18, Trail Improvements, in Volume IV of the Draft EIS shows the new trail elements that are proposed as part of the WDC and is not meant to show modifications as a result of the WDC crossing an existing trail. This is described in Chapter 10, Considerations Related to Pedestrians and Bicyclists. As stated, UDOT will work with local municipalities to ensure that existing trail connections are maintained as part of the project.

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- I. *Farmington City commented that they did not understand the intent of the statement in Section 2.1.6.2 that “UDOT would consider implementing the trail improvements listed below only if there is coordination and support from the local governments. The following trail improvements would be implemented by local governments and UDOT.”*

Section 2.3.7, Trail Considerations, of this Final EIS has been updated regarding trail connections. UDOT would construct a trail along the WDC in Farmington. As stated in Section 2.3.7.2, Trail Improvements Constructed If There Is Local Government Support and Funding, of this Final EIS, some trail improvements along the Denver & Rio Grande Western Trail would require local government funding and support of maintenance.

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- J. *Farmington City commented that both unpaved and paved trails show up under the moniker of “Class 1,” and some side paths along the right-of-way are erroneously identified as Class 1 facilities. The City also commented that Section 10.1 states that both Class 2 and 3 facilities are typically considered bicycle routes, when this is usually reserved for Class 3 facilities.*

Most of the trail classifications in Chapter 10, Considerations Related to Pedestrians and Bicyclists, were provided in the Wasatch Front Regional Transportation Plan 2015–2040 or were identified by a city or county trail plan. The WDC team did not classify the trails. As the chapter notes, and as stated in the comment, Class 2 and 3 facilities are “typically” considered bicycle routes, but this is not true in every case. The classifications used in the Draft EIS were shown in regional and local trail maps and were not made by the WDC team.

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- K.** *Farmington City commented that Figure 2-16 show the Kays Creek Trail between the D&RGW [Denver & Rio Grande Western] Trail and the WDC alignment without a gap, while other figures (Figure 10-2) show a gap west of the D&RGW Trail. The EIS highlights that the WDC will provide a connection from the D&RGW Trail and the Old Emigration Trail.*

Figure 2-18, Trail Improvements, in Volume IV is meant to show future conditions in 2040 for the trail system and the regional connectivity with the WDC. Figure 10-2, Existing Pedestrian and Bicycle Facilities, in Volume IV shows the current conditions. Currently, the Kays Creek Trail does have a gap; however, in discussions with Layton City, the City stated that this part of the trail should be completed in the next few years as part of recently approved developments.

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- L.** *Farmington City commented that Table 10-1 shows all three classes of trail facilities, while Table 10-2 shows only Class 1 facilities, but it is not obvious that Table 10-2 shows only the Class 1 facilities.*

Between the release of the Draft EIS and the Final EIS, the Wasatch Front Regional Council completed the Wasatch Front Regional Transportation Plan 2015–2040. The 2015–2040 Regional Transportation Plan no longer identifies planned or proposed classes for pedestrian and bicyclist facilities. Table 10-1, Existing Pedestrian and Bicyclist Facilities in the WDC Study Area, of this Final EIS was revised to list only the Class 1 pedestrian and bicyclist facilities in the WDC study area. Table 10-2, Proposed Pedestrian or Bicyclist Facilities in the WDC Study Area, of the Draft EIS was removed because the data were no longer available and consistent with the 2015–2040 Regional Transportation Plan.

For this Final EIS, Figures 10-1 and 10-2, Existing Pedestrian and Bicyclist Facilities, in Volume IV show the existing Class 1, 2, and 3 pedestrian facilities in the WDC study area, and Figures 10-3 and 10-4, Proposed Pedestrian and Bicyclist Facilities, in Volume IV show the planned priority bicycle routes in the WDC study area. All of the figures were updated with the pedestrian and bicyclist data from the Wasatch Front Regional Transportation Plan 2015–2040.

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- M.** *Commenters stated that creating an overpass on 1525 West in Farmington would result in a recreational impact, since their children would not be able to ride their bicycles over a hill.*

Any local roads that would be placed on an overpass to go over the WDC would be designed to meet minimum roadway vertical design and slope requirements. Although an overpass would change the grade on 1525 West, the design would accommodate bicycle use.

## 32.11 Chapter 11 – Air Quality

### 32.11.1 Section 11.4.2 – Effects on Regional Air Quality

- A. *Commenters expressed concerns about the increase in air pollution from the WDC alternatives or stated that the WDC would have impacts on air quality.*

The expected impacts to air quality are analyzed in Chapter 11, Air Quality. As stated in Chapter 11, the WDC study area is an attainment area for carbon monoxide and PM<sub>10</sub> (particulate matter 10 microns in diameter or less), and none of the WDC action alternatives would result in any federal or state air quality standard for these pollutants being exceeded.

#### What is an attainment area?

An attainment area is an area that meets (or “attains”) the National Ambient Air Quality Standard for a given air pollutant.

The WDC Project is included in the conforming *Conformity Analysis for the Amended WFRC 2015–2040 Regional Transportation Plan* (WFRC 2017), and the design concept and scope of the project are consistent with the project evaluated as part of the regional emissions analysis for the plan’s conformity determination. This regional emissions analysis found that all of the regionally significant transportation projects included in the Wasatch Front Regional Transportation Plan 2015–2040, including the WDC Project, would conform to the carbon monoxide and PM<sub>10</sub> emission budgets in the State Implementation Plan as well as to the applicable PM<sub>2.5</sub> (particulate matter 2.5 microns in diameter or less) regulatory requirements that were in place at the time of the analysis.

As stated in Section 11.4.3.2, Project-Level Quantitative Analyses for PM<sub>10</sub> and PM<sub>2.5</sub>, of this Final EIS, because the WDC Project is not a project of air quality concern under 40 CFR 93.123(b), no hot-spot analysis is required for PM<sub>2.5</sub>. Since there is no approved State Implementation Plan for PM<sub>2.5</sub>, 40 CFR 93.117 (compliance with PM<sub>2.5</sub> control measures in the State Implementation Plan) does not apply. Thus, the WDC Project complies with all applicable conformity requirements of 40 CFR 93.

As shown in Table 11-8, Emissions Inventory of Criteria Pollutants with Alternatives A1 and B1 in the WDC Study Area, of this Final EIS, UDOT expects that, with the WDC, regional carbon monoxide emissions in 2040 would be about 3% to 4% higher than with the No-Action Alternative, and regional PM<sub>10</sub> and PM<sub>2.5</sub> emissions would be about 2% and 1.3% higher, respectively, than with the No-Action Alternative.

- B. *Farmington City commented that the Draft EIS recognizes that the State of Utah is currently finalizing the PM<sub>2.5</sub> [particulate matter 2.5 microns in diameter or less] State Implementation Plan for the region where the WDC would be located. This State Implementation Plan is expected to be completed in 2013. Section 11.4.2 of the Draft EIS fails to review the Technical Support Document or TSD for the proposed PM<sub>2.5</sub> State Implementation Plan. This document provides the technical basis for the decisions made in the proposed PM<sub>2.5</sub> State Implementation Plan for this area, including the emissions inventories, modeling, and control*

*strategies. Because it is likely this project will not be constructed until after the proposed State Implementation Plan is adopted, the Draft EIS should have studied whether the project will comply with the proposed PM<sub>2.5</sub> emissions limitations in this area.*

The WDC study area is in a non-attainment area for PM<sub>2.5</sub>. This non-attainment status for PM<sub>2.5</sub> was formalized by the U.S. Environmental Protection Agency in December 2009. At that time, the State was given 3 years to develop a new section of the State Implementation Plan demonstrating how the region would attain the 24-hour PM<sub>2.5</sub> standard of 35 µg/m<sup>3</sup> (micrograms per cubic meter).

#### **What is a non-attainment area?**

A non-attainment area is an area that does not meet (or “attain”) the National Ambient Air Quality Standard for a given air pollutant.

Because the State failed to meet statutory deadlines for demonstrating compliance with the 24-hour PM<sub>2.5</sub> standard, the U.S. Environmental Protection Agency has proposed to redesignate the region as a “serious” non-attainment area for PM<sub>2.5</sub> (Federal Register, Volume 81, No. 242, December 16, 2016). Within 18 months to 2 years of the effective date of the reclassification, the State will be required to submit State Implementation Plan revisions that comply with the statutory and regulatory requirements for serious PM<sub>2.5</sub> non-attainment areas.

Until motor vehicle emissions budgets for PM<sub>2.5</sub> and any precursors have been found adequate or the State Implementation Plan has been approved by the U.S. Environmental Protection Agency, the Wasatch Front Regional Council uses the interim emissions tests to demonstrate the conformity of its Regional Transportation Plan and Transportation Improvement Program to the transportation conformity regulations.

The Wasatch Front Regional Council most recently documented the conformity of the amended 2015–2040 Regional Transportation Plan in November 2016, meaning that the amended 2015–2040 Regional Transportation Plan has been analyzed for emissions of controlled air pollutants and been found to be within emission limits established in the State Implementation Plan or within guidelines established by the U.S. Environmental Protection Agency until the State Implementation Plan is approved. The amended 2015–2040 Regional Transportation Plan includes the WDC Project along with many other projects in Weber, Davis, and Salt Lake Counties.

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- C.** *The U.S. Environmental Protection Agency commented that the Draft EIS concludes that the project would not impact current and future air quality conditions, but lacks documentation to support this conclusion. The project would be located in part of the Salt Lake City–Ogden–Clearfield Combined Statistical Area (CSA), which the U.S. Environmental Protection Agency designated as non-attainment for the 2006 24-hour 35-ug/m<sup>3</sup> [micrograms per cubic meter] PM<sub>2.5</sub> [particulate matter 2.5 microns in diameter or less] National Ambient Air Quality Standard (see 74 Federal Register 58688, November 13, 2009). The U.S. Environmental Protection Agency has evaluated current, certified PM<sub>2.5</sub> data for 2010 through 2012, and these data confirm that the Salt Lake City–Ogden–Clearfield CSA area continues to be in non-attainment for the 24-hour PM<sub>2.5</sub> National Ambient Air Quality*

*Standard. We note that the U.S. Environmental Protection Agency has been working with the Utah Division of Air Quality as they are addressing a number of challenging issues in developing a State Implementation Plan revision that will be able to demonstrate that the Salt Lake City–Ogden–Clearfield CSA area can eventually meet the 2006 24-hour PM<sub>2.5</sub> National Ambient Air Quality Standard.*

- *EPA Recommendation:* *We recommend that the Final EIS include documentation to support the no-impact finding for the PM<sub>2.5</sub> non-attainment area.*

The air quality modeling prepared for the Draft EIS was based on the best information available at that time.

The WDC study area is in a non-attainment area for PM<sub>2.5</sub>. This non-attainment status for PM<sub>2.5</sub> was formalized by the U.S. Environmental Protection Agency in December 2009. At that time, the State was given 3 years to develop a new section of the State Implementation Plan demonstrating how the region would attain the 24-hour PM<sub>2.5</sub> standard of 35 µg/m<sup>3</sup> (micrograms per cubic meter). Because the State failed to meet statutory deadlines for demonstrating compliance with the 24-hour PM<sub>2.5</sub> standard, the U.S. Environmental Protection Agency has proposed to redesignate the region as a “serious” non-attainment area for PM<sub>2.5</sub> (Federal Register, Volume 81, No. 242, December 16, 2016). Within 18 months to 2 years of the effective date of the reclassification, the State will be required to submit State Implementation Plan revisions that comply with the statutory and regulatory requirements for serious PM<sub>2.5</sub> non-attainment areas.

The Final EIS air quality data and analysis are consistent with the *Conformity Analysis for the Amended WFRC 2015–2040 Regional Transportation Plan, Report No. 35* (WFRC 2017). The Wasatch Front Regional Transportation Plan 2015–2040 and the Transportation Improvement Program comply with the applicable regional emissions analysis requirements for PM<sub>2.5</sub>, and PM<sub>2.5</sub>. The hot-spot analyses conducted for this Final EIS determined that none of the WDC action alternatives would result in modeled PM<sub>10</sub> or PM<sub>2.5</sub> concentrations that would exceed the National Ambient Air Quality Standards.

The WDC *Air Quality Technical Memorandum* (Appendix 11A, Air Quality Technical Report) provides more information about the air quality modeling done for the WDC Project.

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- D.** *The Western Resource Advocates commented that, although vehicle use is a significant source of NO<sub>2</sub> [nitrogen dioxide], FHWA failed to examine the cumulative and individual, local and regional impacts of the project on the 1-hour NO<sub>2</sub> National Ambient Air Quality Standard. As a result, the Draft EIS is fatally flawed.*

The WDC study area is an attainment area for NO<sub>2</sub>, so a quantitative analysis of NO<sub>2</sub> was not required. NO<sub>2</sub> is measured at a monitoring station in Bountiful, and there has been no exceedance of the National Ambient Air Quality Standard for NO<sub>2</sub> at this station (based on 98th-percentile values averaged over 3 years). Table 11-6, Summary of NO<sub>2</sub> Monitoring Data for Davis and Weber Counties, showing monitored values for NO<sub>2</sub>, has been added to Chapter 11, Air Quality, of this Final EIS.

In addition, the U.S. Environmental Protection Agency expects that NO<sub>2</sub> concentrations will continue to decrease in the future as a result of a number of mobile-source regulations that are taking effect. Tier 2 standards for light-duty vehicles began phasing in during 2004, and new nitrogen oxide (NO<sub>x</sub>) standards for heavy-duty engines were phased in from model years 2007 to 2010. Current air quality monitoring data reflect the fact that vehicles that meet these stricter NO<sub>x</sub> standards have been on the roads for only a few years. The recently approved Tier 3 standards will result in an additional 10% reduction of NO<sub>x</sub> emissions by 2018.

The most recent Wasatch Front Regional Transportation Plan 2015–2040 conformity analysis shows that NO<sub>x</sub> emissions will continue to decline over the life of the transportation plan, even with expected increases in vehicle-miles traveled, and that emission levels in 2040 are expected to be about one-sixth of the emission levels in 2008.

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- E.** *The Western Resource Advocates stated, in Section III(A) of their comments, that the proposed freeway-based alternatives will increase traffic volume above and beyond the volume that would occur without the construction of a freeway. In contrast, the Shared Solution and no-action alternatives will reduce traffic volume on a regional and local basis. Plainly, to the extent that traffic volume is reduced, it is probable that air quality impacts will be reduced proportionally. In any case, any air quality benefits from the Shared Solution must be put before the decision-maker before any decision on the freeway is made.*

Chapter 11, Air Quality, provides an analysis of the air pollutant emissions with the No-Action Alternative. As stated in the chapter, regional emissions of criteria pollutants would be less with the No-Action Alternative because vehicle-miles traveled would be less compared to the vehicle-miles traveled with the WDC action alternatives. Overall, the WDC alternatives would increase vehicle-miles traveled by about 3% compared to the No-Action Alternative, which would result in a similar increase in vehicle emissions.

For this Final EIS, the Shared Solution Alternative was evaluated with 50 other alternatives using the Wasatch Front Regional Council's most recent travel demand model. This evaluation was conducted to determine whether the Shared Solution Alternative would meet the transportation need. This evaluation showed that the Shared Solution Alternative would not meet the transportation need. The alternative would not improve regional mobility to a level that warrants additional study in the EIS process. Since the Shared Solution Alternative would not meet the transportation need, it was not evaluated for air quality impacts. See response 32.2.1G.

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- F.** *The Western Resource Advocates commented that, unlike the proposed freeway, the Shared Solution Alternative does not entail high-speed travel and therefore is unlikely to result in an increase of MSATs [mobile-source air toxics] associated with freeway use. In any case, any air quality benefits relating to reduced MSATs that would result from the Shared Solution must be put before the decision-maker before any decision on the freeway is made. The proposed freeway and its alternatives will bring the air pollution created by high-speed freeway traffic to an area characterized by relatively clean air that is currently not subject to this type of pollution. The Shared Solution Alternative avoids this impact, and it is exactly*

*these types of differences in air quality impacts that must be fully addressed and considered by FHWA before the agency reaches any conclusions concerning the planned freeway project.*

Since the Shared Solution Alternative would not meet the transportation need, it was not evaluated for air quality impacts. See responses 32.11.1E and 32.2.1G for additional information about the Shared Solution Alternative.

MSATs are emitted by running vehicles and other sources such as refineries. Vehicle emissions are emitted whether vehicles are on a highway like the WDC, on an arterial waiting at a stoplight, idling in parking lots or schools, or in off-road areas (for example, mines, gravel quarries, or construction sites). Emission rates are higher during stop-and-go, congested traffic conditions than during free-flow conditions in which vehicles operate at the same average speed.

Emission rates vary based on the speed a vehicle is traveling. The U.S. Environmental Protection Agency's model for highway vehicle emissions, MOVES, shows how speed affects emissions rates. Emission rates for volatile organic compounds and carbon monoxide typically drop as speed increases. Thus, highway traffic in free-flow conditions would likely produce less vehicle emissions than traffic on an arterial street that would have to stop at traffic signals.

As stated in Chapter 11, Air Quality, despite an increase of nearly 46% in vehicle-miles traveled between existing conditions and the No-Action Alternative, all MSAT emissions would decrease by a range of about 50% to more than 90% depending on the individual air toxic as a result of future emission controls on vehicles.

Finally, the WDC study area and the area around the WDC alternatives currently experience vehicle emissions that could create MSAT emissions, since there are numerous arterial and local streets with stop-and-go traffic. Some examples of emission sources are vehicles lining up to pick up students at schools with their engines idling or intersections on state and local roads such as Antelope Drive and Bluff Road. Thus, MSAT emissions are currently being generated, and these emissions will continue even with the No-Action Alternative.

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- G.** *The Western Resource Advocates stated that the air quality analysis is based on unsupportable assumptions. The comparison in the Draft EIS between the build and no-build options is deeply flawed. The Draft EIS improperly assumes that, if the no-build option is adopted, there will be no change in future transportation choices by consumers in response to congestion. For example, no more use of mass transportation, carpooling, and other alternative means of transportation, and that there will be no future change in public policy regarding mass transit, such as fare subsidy and broad expansion of service and infrastructure. Similarly, in analyzing the freeway- and non-freeway-based alternatives, the Draft EIS fails to address the severe air pollution problems existing along the Wasatch Front; the overwhelming scientific consensus on the existence of a global greenhouse gas, human-caused climate crisis; the rising rate of poverty nationwide; and the evidence that younger drivers are more inclined to reject the personal automobile as their priority means*



*of transportation. The Draft EIS also fails to address telecommuting options, the shift in urban planning away from long commutes and urban sprawl, and even the way young people seek entertainment, all of which are starting to affect automobile use. Nationwide, vehicle-miles traveled per person have dropped 8 years in a row, and are now at 7.5% below their peak in 2004.*

The data on vehicle-miles traveled used in the air quality analysis came from the Wasatch Front Regional Council's regional travel demand model. This is a state-of-the-art model approved for use by FHWA. The model is based on approved future 2040 population and employment projections provided by the Governor's Office of Management and Budget and future land-use, roadway, and transit improvements provided by local municipalities and UTA. The process of predicting future conditions is based on inputs from the local agencies that understand the area and have jurisdiction for implementing zoning and planning to shape future growth. This process is used throughout the United States by metropolitan planning organizations in predicting future travel demand.

For this Final EIS, the air quality analysis has been updated to use the current Wasatch Front Regional Transportation Plan 2015–2040, which takes into account *Wasatch Choices 2040* and an updated 2012 mode choice survey. The survey takes into account telecommuting and people's choices based on their age on the type of transportation they seek. The 2015–2040 Regional Transportation Plan and *Wasatch Choices 2040* assume there will be a shift to more transit, changes in land use, and less reliance on vehicles in the future. Thus, the air quality analysis did account for more future transportation choices. There has been no indication from UTA that fares would be subsidized in the future, so it would be speculative to assume that such options will occur.

Chapter 11, Air Quality, of the Draft EIS describes the existing air quality problems in Davis and Weber Counties by stating that the region is a non-attainment area for  $PM_{2.5}$  and Ogden is a maintenance area for carbon monoxide. The WDC study area is within the  $PM_{2.5}$  non-attainment area only. The Draft EIS also states that there is a general agreement that the earth's climate is changing at an accelerated rate and will continue to do so for the foreseeable future, and that greenhouse gases contribute to this change. See responses 32.1.2F and 32.1.2H regarding vehicle-miles traveled and the use of automobiles.

Finally, the land-use and demographic projections that are used in the Wasatch Front Regional Council's travel demand model and air quality conformity analysis are based on information provided by experts from the local municipalities and on statewide projections. The WDC Project is included in the conforming *Conformity Analysis for the Amended WFRC 2015–2040 Regional Transportation Plan* (WFRC 2017), and the design concept and scope of the project are consistent with the project evaluated as part of the regional emissions analysis for the plan's conformity determination. This regional emissions analysis found that all of the regionally significant transportation projects included in the Wasatch Front Regional Transportation Plan 2015–2040, including the WDC Project, would conform to the carbon monoxide and  $PM_{10}$  emission budgets in the State Implementation Plan as well as to the applicable  $PM_{2.5}$  regulatory requirements that were in place at the time of the analysis.

## 32.11.2 Section 11.4.2.2 – Mobile-Source Air Toxics (MSATs)

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- A.** *Commenters expressed concerns about the increase in air pollution from the WDC alternatives and the health effects of the pollutants. Specifically, one comment stated that “scientific studies have shown that children living near freeways are at extreme risk for severe health problems. For instance, children living within 250 yards from a freeway are 8 times more likely to develop leukemia and 6 times more likely to develop other cancers. In addition, children living within 500 meters from a freeway are at the highest risk for permanent lung deformities.”*

*The Western Resource Advocates commented that living near major roads is hazardous to your health, period, and that that lung function is about 10% lower in kids who grow up near the freeways, where there are high levels of ultra-fine particles. They also mentioned other severe health-based impacts, and numerous peer-reviewed studies on the health effects of roads on nearby populations were referenced.*

The U.S. Environmental Protection Agency is the lead federal agency for administering the Clean Air Act and has specific responsibilities for determining the health effects of MSATs. A discussion of health-related impacts from vehicle emissions is included in Chapter 11, Air Quality. As stated in the chapter, all of the WDC alternatives meet U.S. Environmental Protection Agency air quality regulations and all regional and project-level air quality conformity requirements. The WDC Project was included in a conforming plan (the Wasatch Front Regional Transportation Plan 2015–2040) and the Transportation Improvement Program, and the carbon monoxide, PM<sub>10</sub> (particulate matter 10 microns in diameter or less), and PM<sub>2.5</sub> (particulate matter 2.5 microns in diameter or less) hot-spot analyses performed for the EIS did not show any exceedance of the National Ambient Air Quality Standard for any of these pollutants. The National Ambient Air Quality Standards are health-based standards.

Section 11.4.2.2, Emissions Inventory for Mobile-Source Air Toxics (MSATs), of the Draft EIS summarizes the research FHWA has participated in for near-road health impacts. The MSAT analysis conducted for the WDC Project shows that total MSAT emissions would decline by 65% to 68% between the base year and the design year depending on the alternative chosen; no alternatives would increase emissions in the WDC study area compared to current levels.

- B.** *The MSAT analysis modeled only Alternatives A3 and B1. Both of these alternatives showed an increase in MSATs from 3.79 in 2009 to 6.14 and 6.16 respectively. However, the other alternatives were not modeled, and the reader is unable to compare or determine if other alternatives would have less of an impact from MSATs. The same is true for the Draft EIS’s review of greenhouse gas emissions.*

As stated in Chapter 11, Air Quality, Alternatives A3 and B1 were selected for analysis in the Draft EIS because they would have the highest vehicle-miles traveled of the action alternatives and would represent the worst-case scenario for the action alternatives. For this Final EIS, this analysis was updated to include only Alternatives A1 and B1, since

Alternative A3 is no longer an alternative evaluated in this Final EIS. The other alternatives would have less emissions. The EIS also states that, because the estimated vehicle-miles traveled with Alternative A2 are very similar to those for Alternative A1 (less than a 1% difference) and because the estimated vehicle-miles traveled with Alternative B2 are very similar to those for Alternative B1 (less than a 1% difference), the WDC team expects no appreciable difference in overall MSAT or greenhouse gas emissions among the action alternatives.

Finally, while it does not change the substance of the comment, the numbers cited in the comment refer to daily millions of vehicle-miles traveled, not MSAT emissions.

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- C.** *The U.S. Environmental Protection Agency commented that the Draft EIS references the FHWA MSAT guidance document of December 2012 on page 11-17. Please note that FHWA did not seek concurrence from the U.S. Environmental Protection Agency's Office of Transportation and Air Quality in development of this interim guidance document, and the U.S. Environmental Protection Agency does not endorse FHWA's 2006, 2009, and 2012 MSAT National Environmental Policy Act guidance documents. This guidance does not discuss epidemiological studies on near-road health effects of MSATs, although the December 6, 2012, document reflects the transition from MOBILE6.2 to MOVES as a preferred model for MSAT emissions analyses in the National Environmental Policy Act process and updates some of its language on recent studies on near-roadway air quality and health. This revised document maintains the focus of earlier FHWA interim guidance documents in avoiding any analyses beyond emissions analysis. The U.S. Environmental Protection Agency anticipates that the language in this document will continue to be the basis of future National Environmental Policy Act analyses conducted by state departments of transportation.*

*EPA Recommendation: We recommend that the Final EIS include a discussion regarding these policy differences (as FHWA has done in previous EISs) to reflect that the U.S. Environmental Protection Agency is not recommending or endorsing the new interim guidance.*

While the U.S. Environmental Protection Agency and FHWA both agree on the usefulness of addressing MSATs in National Environmental Policy Act documents for highway projects, the agencies disagree about the value of health risk assessments as a method for doing so. Because these differences are not specific to the WDC Project, a discussion regarding the policy differences was not added to Chapter 11, Air Quality.

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- D.** *The Western Resource Advocates commented that, rather than acknowledging that its MSAT policy is just that—a policy—that may or may not be applicable to a particular situation, FHWA follows this guidance blindly and without support in the record. As a result, the decision to truncate its MSAT analysis is unlawful. Initially, the MSAT policy suggests and the Draft EIS contends that there is little discernible difference in the impact of MSATs on public health and the environment among freeway alternatives. In the present context, this*

*position cannot be defended. First, the proposed freeway will bring significant adverse air quality impacts to a new, distinct area characterized by relatively good air quality, particularly in the spring and the fall, when neither ozone nor PM<sub>2.5</sub> [particulate matter 2.5 microns in diameter or less] concentrations in the region are as problematic. FHWA policy and the Draft EIS seem to be based on two ill-founded assumptions—assumptions that are not supported by the record. The first is that MSATs and other highly harmful air pollutants that result from highway use are at issue only when traffic volume reaches 140,000 to 150,000 average annual daily traffic. Therefore, FHWA’s failure to take a hard look at MSATs and other pollutants associated with freeway use is not justified by reference to mere predicted average daily use. Rather, proper analysis must address peak, short-term use of the highway, particularly when weather patterns favor the formation and persistence of harmful air pollution on a local level.*

Even though the WDC Project does not meet FHWA’s suggested guideline for a quantitative MSAT analysis, the WDC team used the MOVES2014a model to quantitatively estimate annual MSAT emissions in the WDC study area and differentiate between existing conditions in 2015, conditions in 2040 with the No-Action Alternative, and conditions in 2040 with the action alternatives.

The Draft EIS does not state that there are no discernible *impacts* from MSAT emissions among the alternatives but rather that there is no discernible *difference* in MSAT emissions among the alternatives (see page 11-14). In FHWA’s view, information is incomplete or unavailable to credibly predict the project-specific health impacts due to changes in MSAT emissions associated with a proposed set of highway alternatives (for example, the WDC action alternatives). The outcome of such an assessment, adverse or not, would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual health impacts directly attributable to MSAT exposure associated with a proposed action.

There is not a dispersion model that can predict local MSAT concentrations and predict changes due to weather patterns or traffic volumes. The available dispersion model (CAL3QHCR) for estimating local concentrations is used for estimating carbon monoxide, PM<sub>10</sub>, and PM<sub>2.5</sub> concentrations but is not capable of estimating MSAT concentrations. The WDC air quality analysis used the CAL3QHCR for estimating carbon monoxide, PM<sub>10</sub>, and PM<sub>2.5</sub> concentrations, and the results of this analysis are included in Section 11.4.3, Effects on Local Air Quality, of this Final EIS.

As shown in Table 11-9, Emissions of Mobile-Source Air Toxics with Alternatives A1 and B1 in the WDC Study Area, of this Final EIS, there is little difference in MSAT emissions among the No-Action and action alternatives. In addition, the MSAT emissions from the WDC action alternatives would be similar. The updated Final EIS analysis for Alternatives A1 and B1 reached a similar conclusion.

The commenter states that the WDC would bring significant adverse air quality impacts to an area that has relatively good air quality. As shown by the results from the air quality modeling, the WDC would not cause any U.S. Environmental Protection Agency health-based standards to be exceeded, and the areas around the WDC alignments have current

networks of local and arterial streets used by vehicles that produce emissions, and travel on those streets will increase over time, particularly under the No-Action conditions. The MSAT analysis shows that total MSAT emissions would decline by 65% to 68% between the base year and the design year depending on the alternative chosen; the WDC Project would not create a “significant adverse air quality impact” with respect to MSAT emissions. No alternatives would increase emissions in the WDC study area compared to current levels.

The commenter also asserts that new development will cluster around the WDC and will expose the new developments to higher amounts of pollutants. As stated in Chapter 23, Indirect Effects, development in the area will happen with or without the WDC, and little induced development would occur. Between the release of the Draft EIS and the Final EIS, development has continued to occur in the WDC study area without the WDC.

As shown by the results from the air quality modeling, the WDC would not cause any U.S. Environmental Protection Agency health-based standards to be exceeded in the WDC study area or along any of the WDC action alternatives. As shown in Chapter 1, Purpose of and Need for Action, by 2040, congestion levels in the WDC study area will increase substantially. MSAT emissions would be higher from vehicles in congested conditions than on a free-flowing highway. Thus, with or without the WDC action alternatives, new or existing developments that would be adjacent to congested arterial streets would still be exposed to vehicle emissions.

Chapter 11, Air Quality, states that roads with less than 140,000 vehicles per day have a low potential for MSAT effects and that, for such roads, a quantitative MSAT analysis is not recommended. This traffic volume is not an “assumption,” as stated in the comment, but is based on analysis by FHWA to identify what size of roadway project would be roughly equivalent to a major source of hazardous air pollutants as defined in the Clean Air Act. FHWA has conducted MSAT emissions analyses of projects this size and larger under its 2006, 2009, and 2012 guidance. However, the WDC team decided to conduct a quantitative MSAT analysis to help readers understand the difference in emissions among the alternatives. In addition, some of the potential effects of vehicle emissions cited in the literature are documented in the Draft EIS.

For this Final EIS, the WDC team used the U.S. Environmental Protection Agency’s MOVES 2014a model to conduct the quantitative MSAT emissions analysis. Details regarding the inputs to the MOVES model are included in Appendix 11A, Air Quality Technical Report. As stated in Chapter 11, Air Quality, despite an increase of nearly 46% in vehicle-miles traveled between existing conditions and the No-Action Alternative, all MSAT emissions would decrease by a range of about 50% to more than 90%, depending on the individual air toxic, by 2040.

As described in Appendix 11A, Air Quality Technical Report, of this Final EIS, the Final EIS analysis used 2040 traffic volumes in the MOVES 2014a model to account for the highest traffic volumes on the WDC. The MOVES 2014a inputs also included quarterly weather data that accounted for seasonal variations in weather conditions. The CAL3QHCR dispersion model used 1-hour meteorological concentrations and 2040 traffic volumes to predict local air quality conditions at receptors around the proposed interchange.

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- E.** *The Western Resource Advocates commented that the record is not clear on the extent to which FHWA relies on the proposed Tier 3 motor vehicle emission and fuel standards to suggest that future air quality impacts from the freeway-based alternatives will be minimal. Similarly, it is unclear, for example where future baseline conditions, such as the 2019 concentration of PM<sub>2.5</sub> [particulate matter 2.5 microns in diameter or less] assume that the Tier 3 regulations will be adopted. While we support the Tier 3 standards, it is premature to base any analysis on the promulgation of these standards or based on the current proposal regarding the phasing in of these standards—it is just too soon to rely on these regulations as they may be modified, rejected, or delayed. Because of the proposed freeway project, the local and regional citizenry will be robbed of the health benefits Tier 3, or any other new standards designed to reduce air pollution. As a result, FHWA’s failure to characterize the air quality benefits of the No-Action Alternative or the Shared Solution Alternative, even in the context of improving air quality on a regional level, is inappropriate.*

The WDC team used the U.S. Environmental Protection Agency’s MOVES model to conduct the air quality analysis, which is the preferred model for MSAT analysis as stated in the U.S. Environmental Protection Agency’s comments. The version that was used for the Final EIS air quality analysis was the MOVES 2014a model. The U.S. Environmental Protection Agency’s MOVES model is the state-of-the-practice tool for estimating vehicle emissions. This model was developed by the U.S. Environmental Protection Agency, the agency responsible for air quality standards, and is designed to be used in conducting air quality analysis for projects like the WDC. Details regarding the inputs to MOVES used for the WDC EIS analysis are included in Appendix 11A, Air Quality Technical Report.

This emission modeling system estimates emissions for mobile sources covering a broad range of pollutants and allows multiple-scale analyses. MOVES currently estimates emissions from cars, trucks, and motorcycles. Changes in fuel consumption affect emissions of volatile organic compounds by reducing refueling vapor losses and spillage. Other emissions (such as sulfates) are also affected by fuel consumption. MOVES 2014a, which was used for the Final EIS air quality analysis, incorporates changes due to fuel economy requirements and other regulations, including the Tier 3 rules that were finalized in April 2016. Concerns regarding future emission rates used in the MOVES model should be directed to the U.S. Environmental Protection Agency. The air quality analysis did include emissions from the No-Action Alternative so that the readers can compare the benefits of this alternative with those of the WDC action alternatives.

The Shared Solution Alternative was not evaluated for MSAT emissions because the alternative did not meet the project purpose. It was eliminated during the EIS screening process because it was determined to not be a reasonable alternative.

### 32.11.3 Section 11.4.2.3 – Greenhouse Gases

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- A. *Commenters stated that the WDC will increase greenhouse gases. Other commenters stated that the National Environmental Policy Act requires a discussion of climate change. Some commenters stated that the Draft EIS did not adequately address greenhouse gases. Other reviewers stated that the Draft EIS trivializes the contribution of the WDC to planet-wide atmospheric greenhouse gases and, by the logic presented in the Draft EIS, no entity, be it an individual, city, state, or country, should do anything to reduce greenhouse gas emissions.*

Chapter 11, Air Quality, provides an analysis of greenhouse gases (GHG). To date, no national standards have been established regarding GHG, and the U.S. Environmental Protection Agency has not established criteria or thresholds for assessing the potential impact of GHG emissions. The climate impacts of carbon dioxide (CO<sub>2</sub>) emissions are global in nature, and analyzing how alternatives evaluated in an EIS might vary in their relatively small contribution to a global problem will not better inform decisions regarding the WDC Project.

Further, due to the interactions between elements of the transportation system as a whole, project-level emission analyses would be less informative than ones conducted at regional, state, or national levels. Nonetheless, for informational purposes, CO<sub>2</sub> emissions from the WDC alternatives have been included in the Draft and Final EISs. The CO<sub>2</sub> emission estimates in this Final EIS are based on results from the U.S. Environmental Protection Agency's MOVES2014a model, which reflects the most recent fuel economy standards. This analysis has been updated for this Final EIS.

As shown in Table 11-10, Emissions of Greenhouse Gases with Alternatives A1 and B1 in the WDC Study Area in 2040, of this Final EIS, GHG emissions would decrease in 2040 due to improvements in vehicle emission rates, even with increased vehicle-miles traveled in 2040. There are minor increases in the modeled GHG emissions for the alternatives compared to the No-Action Alternative. When comparing the 2040 No-Action and action alternatives, the GHG emissions would increase by about 1.5% to 2.5% depending on the GHG.

Even though the GHG emissions from individual roads can be very low, as documented for this project, FHWA is actively engaged in many activities with the U.S. Department of Transportation's Center for Climate Change and Environmental Forecasting to develop strategies to reduce the contribution of GHG from transportation projects, especially CO<sub>2</sub> emissions, and to assess the risks to transportation systems and services from climate change. FHWA will continue to pursue these efforts to address this issue. FHWA will review and update its approach to climate change at both the project and policy levels as more information emerges and as policies and legal requirements evolve.

### 32.11.4 Section 11.4.3 – Effects on Local Air Quality

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- A. *Farmington City and the Western Resource Advocates stated that the Draft EIS relies on the example in the preamble to the March 10, 2006, U.S. Environmental Protection Agency rule (71 Federal Register 12491) requiring project-level quantitative analyses for projects in non-attainment areas that will have more traffic than “125,000 [annual] average daily traffic (AADT) and 8% or more such AADT is diesel truck traffic.” The Draft EIS goes on to conclude that, because the WDC’s projected traffic numbers are far below this example, the local conformity analyses are not required. The Draft EIS ignores the other factors in the regulations that require local conformity analyses, including: (i) new highway projects that have a significant number of diesel vehicles, and expanded highway projects that have a significant increase in the number of diesel vehicles; (ii) projects affecting intersections that are at level of service D, E, or F with a significant number of diesel vehicles, or those that will change to level of service D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project;... [and] (v) projects in or affecting locations, areas, or categories of sites which are identified in the PM<sub>10</sub> or PM<sub>2.5</sub> [particulate matter] applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation. 40 CFR § 193.23(b)(1). Here, there is a proposed PM<sub>2.5</sub> State Implementation Plan for the area that could very well require the quantitative local analyses for PM<sub>2.5</sub> that the Draft EIS has completely ignored.*

As stated in Chapter 11, Air Quality, a hot-spot analysis was not required as part of project-level conformity for the WDC Project as part of the Draft EIS. For the Final EIS air quality analysis in Chapter 11, Air Quality, the WDC team used the MOVES2014a and CAL3QHCR models to prepare project-level quantitative analyses for carbon monoxide, PM<sub>10</sub>, and PM<sub>2.5</sub>. These analyses were not required for conformity but were included for National Environmental Policy Act disclosure purposes. The results of the project-level quantitative analyses are included in Section 11.4.3, Effects on Local Air Quality, of this Final EIS.

- B. *The U.S. Environmental Protection Agency commented that the WDC is not in a carbon monoxide non-attainment or maintenance area, and the Draft EIS indicates that the project is not considered a project of air quality concern for purposes of hot-spot emissions modeling. We appreciate that the Draft EIS includes both carbon monoxide and PM<sub>2.5</sub> and PM<sub>10</sub> hot-spot modeling information. To further inform the public, it would be helpful to include additional documentation and some additional detail on the modeling description with the tables of results.*

EPA Recommendation: *The U.S. Environmental Protection Agency recommends that a combination carbon monoxide hot-spot and PM [particulate matter] hot-spot technical appendix be provided as part of the Final EIS, detailing how the hot-spot modeling was performed that resulted in the final concentration figures presented in Table 11-11 on page 11-26 and in Table 11-12 on page 11-28 of the Draft EIS. We recommend this appendix include but not be limited to: the intersection analysis selection (LOS [level of service]); criteria for siting intersection receptor locations; a map depicting the intersection (its*



*geometry) with the receptor locations and the maximum concentration receptor stated (e.g., located on a Google Earth™ photo); discussion on how the background carbon monoxide and PM concentrations were derived (especially with relevance to footnote “b” of Table 11-12) from the relevant years of monitoring data; expanded discussion on the methodology for developing and selecting meteorology data (min/max temperatures, wind direction data, etc.) (see Draft EIS page 11-28); the date and version of CAL3QHCR that was utilized; and full information on how the MOVES modeling was performed to generate the required vehicle emission factors that were used in the hot-spot modeling.*

*For a good example of how a project-level PM quantitative analysis has been documented, we recommend a review of Appendix I (“Air Quality Technical Report”) of the Elgin-O’Hare West Bypass Final EIS in Illinois.*

The WDC team prepared an air quality technical report that is included as Appendix 11A, Air Quality Technical Report, of this Final EIS. All of the proposed WDC interchanges would operate at a level of service of LOS C or better.

As stated in Chapter 11, Air Quality, the PM<sub>2.5</sub> hot-spot analysis was conducted for the interchange with the greatest number of residential receptors adjacent to the interchange. CAL3QHCR was used for the analysis. UDOT followed all U.S. Environmental Protection Agency guidelines in conducting the analysis. As the analysis predicts, no National Ambient Air Quality Standard for carbon monoxide, PM<sub>10</sub>, or PM<sub>2.5</sub> would be exceeded.

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- C.** *The U.S. Environmental Protection Agency and others commented that the emissions inventory for criteria pollutants, along with Table 11-7, show that emissions were evaluated for 2009 and 2040. The U.S. Environmental Protection Agency and other commenters are concerned that interim-year emissions that were not evaluated might show higher emissions levels than 2040. For example, the Wasatch Front Regional Council air quality conformity analysis indicates that NO<sub>x</sub> [nitrogen oxide] and PM<sub>2.5</sub> [particulate matter 2.5 microns in diameter or less] precursor emissions would be considerably higher in both 2015 and 2020 than in 2040.*

*EPA Recommendation: The U.S. Environmental Protection Agency recommends that the Final EIS analyze interim-year emissions to ensure that the timing and significance of impacts are understood through the full analysis period. With respect to information for predicted future-year interim emissions, we have provided a weblink to the Wasatch Front Regional Council’s air quality conformity analysis, “Air Quality Memorandum 28,” at: [www.wfrc.org/air\\_quality/AQ%20memo28 RTP2040 FINAL.pdf](http://www.wfrc.org/air_quality/AQ%20memo28_RTP2040_FINAL.pdf). In addition, when reviewing the Wasatch Front Regional Council’s Air Quality Memorandum 28, please be aware that the Wasatch Front Regional Council updated that document on September 25, 2012, to reflect the revisions to Tables 12a and 12b (that address minor clerical errors).*

As stated in Chapter 11, Air Quality, project-level transportation conformity, which is not required for the WDC Project, requires that project-level quantitative analyses evaluate emissions associated with the year of expected peak emissions from a project. Section 11.4.5, Transportation Conformity, and Section 11A.2.1, Transportation Conformity Requirements

and Need for Hot-Spot Analyses, of this Final EIS describe the reasons why transportation conformity is not required for the WDC Project.

For carbon monoxide, PM<sub>10</sub>, and PM<sub>2.5</sub>, the peak year of emissions at the project level for the WDC Project would be after the WDC is completed in 2040 and the maximum number of vehicles are using the facility on a daily basis. Although vehicle emission rates are expected to be lower in 2040 than they are today (thereby improving regional air quality), vehicle-miles traveled on the WDC would be at its highest; therefore, the highest project-level carbon monoxide, PM<sub>10</sub>, and PM<sub>2.5</sub>, emissions would be in 2040.

The WDC team reviewed the September 25, 2012, Wasatch Front Regional Council memorandum and used it in the analysis in the Draft EIS. Since the Draft EIS was released, the Wasatch Front Regional Council has updated the conformity analysis in the *Conformity Analysis for the Amended WFRC 2015–2040 Regional Transportation Plan, Report No. 35 (Air Quality Memorandum 35; WFRC 2017)*. *Air Quality Memorandum 35* does include interim-year analyses of 2019, 2024, 2034, and 2040. However, 2040 was used for the WDC Final EIS air quality analysis because it is uncertain whether and how much of the WDC would be constructed before 2040, and the project traffic modeling has indicated that the highest traffic volumes from the WDC would occur in 2040. Using 2040 is also consistent with the other analyses in this Final EIS that use 2040 for their impact analyses. This Final EIS has been updated to reflect the latest information in *Air Quality Memorandum 35*.

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- D.** *The U.S. Environmental Protection Agency commented that footnote “a” of Table 11-12 indicates that background concentrations used for PM hot-spot modeling were derived from 2009–2011 ambient monitoring. The Draft EIS is not clear about whether the meteorological conditions associated with these ambient monitored values correlate with the conditions used from 1995 through 1999. This lack of clear correlation for the selection of meteorological data also applies to footnote “c” of this table. A meteorological modeling data set from 1995–1999 is identified as representative of typical conditions along the Wasatch Front; however, the Draft EIS does not include further discussion as to how this conclusion was reached. Also, the Draft EIS does not discuss if the Utah Division of Air Quality concurred with this conclusion for the use of the 1995–1999 meteorology data set with respect to the background concentrations used in the hot-spot modeling. The U.S. Environmental Protection Agency appreciates the commitment to updated modeling as appropriate in the Final EIS with regard to the background data used in footnote “b” and the ongoing development by the State of the Salt Lake area’s 2006 24-hour PM<sub>2.5</sub> [particulate matter 2.5 microns in diameter or less] National Ambient Air Quality Standard State Implementation Plan element.*

*EPA Recommendation: We recommend that discussion be included in the air quality modeling technical appendix as part of the Final EIS to provide clarity regarding the selection of meteorological data. We recommend that additional supporting documentation be added to the air quality modeling technical appendix to further detail the State’s potential control strategies and implementation schedule that would lead to the lower modeled PM<sub>2.5</sub> values in 2019.*

The 1995–1999 meteorological data file used for the CAL3QHCR modeling was provided by the Utah Division of Air Quality and was the most readily available information to use for the WDC air quality analysis when the Draft EIS was being prepared.

For this Final EIS, the CAL3QHCR air quality analysis used a 5-year meteorological data set (2011 to 2015) from the Ogden-Hinckley Municipal Airport as an input file. This is the most current meteorological data set available that is closest to the WDC study area.

The Utah Division of Air Quality has not provided formal concurrence with the meteorological data in this Final EIS. The WDC team requested any newer meteorological data from the Wasatch Front Regional Council and the Division of Air Quality when this Final EIS was being developed. Neither organization had any newer data, and they suggested options for UDOT to purchase newer data if it chose to do so. UDOT purchased the more-recent data set from a vendor. As stated above, this data set is the most current meteorological data set available that is closest to the WDC study area.

The background data for the  $PM_{2.5}$  analysis in this Final EIS was revised and used the weighted 3-year average annual  $PM_{2.5}$  concentrations (from 2013 to 2015) at the Ogden monitor instead of the 2019 values that were shown in the Draft EIS analysis. Chapter 11, Air Quality, and Appendix 11A, Air Quality Technical Report, of this Final EIS have been updated to be consistent with the U.S. Environmental Protection Agency’s 2016 redesignation of the area as a serious non-attainment area for the  $PM_{2.5}$  24-hour standard and state that the State of Utah is currently preparing State Implementation Plan revisions based on this redesignation.

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- E.** *The U.S. Environmental Protection Agency commented that the Draft EIS does not indicate whether re-entrained road dust was included for the  $PM_{10}$  [particulate matter 10 microns in diameter or less] project-level quantitative analysis. Consideration of road dust from current and projected vehicle-miles traveled increases is a required component for a  $PM_{10}$  analysis and could be a significant factor in the modeling input and results.*

*EPA Recommendation: The U.S. Environmental Protection Agency recommends that the project-level quantitative analyses for  $PM_{10}$  and  $PM_{2.5}$  in the Final EIS and the recommended air quality technical appendix indicate if re-entrained road dust was included in the modeling. Assuming that re-entrained road dust was included in the analysis, as is required for  $PM_{10}$ , please include a discussion of how the road dust emissions were calculated along with appropriate references.*

As stated in footnote a in Table 11-7, Emission Inventory of Criteria Pollutants with Alternatives A3 and B1 in the WDC Study Area, of the Draft EIS, the  $PM_{10}$  emissions analysis included road dust emissions using rates from the Wasatch Front Regional Council’s air quality conformity analysis.

This footnote is now included in Table 11-8, Emission Inventory of Criteria Pollutants with Alternatives A1 and B1 in the WDC Study Area, in Chapter 11, Air Quality, of this Final EIS.

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**F.** *The U.S. Environmental Protection Agency commented that the air quality mitigation for construction emissions has a general lack of consideration for air quality monitoring.*

- *EPA Recommendation: The U.S. Environmental Protection Agency recommends that UDOT consider potential monitoring for air quality during construction activities, as appropriate. Factors to consider include the immediate proximity of a highway project to homes, schools, businesses, and other sensitive populations. Although best management practices will be utilized during construction, potential localized impacts from PM<sub>2.5</sub> and PM<sub>10</sub> [particulate matter] emissions could occur. We also recommend that a monitoring plan be designed to demonstrate how well the preferred alternative resolves the identified issues and concerns by measuring the effectiveness of the mitigation measures in controlling or minimizing adverse effects.*

As stated in Section 20.3.3.1, Mitigation Measures for Construction-Related Impacts to Air Quality, of this Final EIS, in accordance with UDOT specifications, the construction contractor will submit a fugitive dust emission-control plan to the Utah Department of Environmental Quality. The plan will describe project-specific activities for emission control and monitoring throughout construction in accordance with state and federal requirements. No additional voluntary air quality monitoring is currently being proposed for the WDC Project.

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**G.** *The Western Resource Advocates commented that the FHWA dismissal of emission increases of criteria pollutants of 1.8% and 4.5% fails to acknowledge that, during inversions, even the small increases in PM<sub>2.5</sub> [particulate matter 2.5 microns in diameter or less] and its precursors can have a significant adverse impact on air quality and can cause or contribute to violations of the National Ambient Air Quality Standards both regionally and locally. This is because, as the U.S. Environmental Protection Agency recognized, during inversions, it takes considerably less air pollution in the Salt Lake Valley to create harmful conditions than it does elsewhere in the nation. Because FHWA does not acknowledge this reality, it has not accurately examined or characterized the public health and environmental impacts of the proposed project and its freeway-based alternatives and therefore has failed its duties under the National Environmental Policy Act.*

Quantitative modeling of PM<sub>2.5</sub> emissions in the WDC study area included wintertime conditions when inversions are more frequent along the Wasatch Front. The modeling protocol followed guidelines established by the U.S. Environmental Protection Agency for such analyses. The WDC team is also aware of the challenging issues in developing a State Implementation Plan revision that will demonstrate compliance with the PM<sub>2.5</sub> National Ambient Air Quality Standards. The WDC Project meets all project-level requirements, is included in a conforming Regional Transportation Plan and Transportation Improvement Program that has complied with all statutory and regulatory requirements, and would not cause or contribute to any exceedances of the National Ambient Air Quality Standards.

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- H.** *The Western Resource Advocates commented that the Draft EIS asserts that “none of the WDC action alternatives would produce carbon monoxide levels that would exceed the National Ambient Air Quality Standards,” Draft EIS at page 11-26, and that “the modeling did not predict that PM<sub>10</sub> and PM<sub>2.5</sub> levels would exceed the National Ambient Air Quality Standards.” However, simply because these pollutants do not exceed the National Ambient Air Quality Standards in no way means that public health would not be adversely affected. In Section 11.4.5, the Draft EIS claims that “[p]opulation growth in the WDC study area has had little effect on overall air quality, as demonstrated by the continuing improvement in air quality throughout the region,” Draft EIS at page 11-30. Such an assertion defies the facts. While the national average levels of PM<sub>2.5</sub> [particulate matter 2.5 microns in diameter or less] have dropped 27% during the decade from 2000 to 2010, the Salt Lake/Ogden area has seen virtually no decrease. The Draft EIS also states that “[t]he increase in emissions [from the WDC] would be somewhat offset by lower MSAT emission rates due to the increased speeds of vehicles on the WDC,” Draft EIS at pages 11-30 to 11-31. Fuel efficiency drops precipitously after 40–60 mph depending on the type and size of vehicle. Therefore, there is no justification within the Draft EIS for the claim that MSATs decrease with increased speeds.*

The expected impacts to air quality are analyzed in Chapter 11, Air Quality. As stated in Chapter 11, none of the WDC alternatives would result in any federal or state air quality standard being exceeded, and all of the WDC alternatives would be in compliance with emission budgets in the State Implementation Plan or the U.S. Environmental Protection Agency interim conformity guidelines for all pollutants in applicable non-attainment or maintenance areas. The air quality standards are those established by the U.S. Environmental Protection Agency, the agency responsible for establishing the health-based air quality standards.

Air quality monitoring data provided by the Utah Department of Environmental Quality, as shown in Chapter 24, Cumulative Impacts, show a trend of overall improvement in air quality based on the monitoring data. The WDC would reduce congestion and increase vehicle speeds in the WDC study area, which would result in lower emissions per vehicle compared to the same vehicle being in congestion on an arterial street. The text in this Final EIS has been revised to clarify this fact.

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- I.** *The Western Resource Advocates commented that FHWA did not adequately address ozone pollution.*

The WDC team used air quality models approved by the U.S. Environmental Protection Agency. The WDC study area is in attainment for ozone, so there is no requirement under transportation conformity to analyze ozone. Likewise, since ozone is a regional-scale pollutant, the U.S. Environmental Protection Agency’s conformity rules do not require project-level analysis of ozone even for projects located in ozone non-attainment areas. Nitrogen oxide (NO<sub>x</sub>) is an ozone precursor, and the trend in NO<sub>x</sub> emissions is presented in Table 11-8, Emissions Inventory of Criteria Pollutants with Alternatives A1 and B1 in the

WDC Study Area, of this Final EIS. NO<sub>x</sub> emissions in 2040 with any alternative would be about one-quarter of the emissions in 2015.

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- J.** *The Western Resource Advocates stated that the Draft EIS does not properly model the contributions of emissions from the proposed highway to regional concentrations of PM<sub>2.5</sub>. This is because the agency uses predicted baseline emissions at the Bountiful monitor and focuses on emissions at one particular interchange. This analysis is necessarily incomplete. Rather, the Utah Division of Air Quality and the U.S. Environmental Protection Agency have determined that emissions throughout the Salt Lake City non-attainment area—the area that includes the proposed project—all contribute to violations in that non-attainment area. This is the basis for including the entire area in a single airshed for the purposes of the non-attainment designation. Therefore, FHWA may not limit its review to the impact on or addition to baseline concentrations at the Bountiful monitor but must undertake modeling based on concentrations at all the monitors in the non-attainment area. This modeling must properly account for the long-term and stagnant conditions that are present during winter inversions. In addition, such analysis is particularly warranted because the freeway project will increase, or has the potential to increase, traffic volumes in and around those other monitors throughout the Salt Lake City non-attainment Area.*

The conformity regulations and U.S. Environmental Protection Agency guidance do not require a PM<sub>2.5</sub> (particulate matter 2.5 microns in diameter or less) hot-spot analysis for this project due to its low traffic and diesel traffic volumes. However, the WDC team did follow the U.S. Environmental Protection Agency's PM hot-spot guidance in the PM<sub>2.5</sub> analysis, including the U.S. Environmental Protection Agency's recommendations for choosing background concentrations and locations for modeling. The U.S. Environmental Protection Agency does not require background concentrations from all monitors in a non-attainment area as part of hot-spot analysis.

The region-wide impacts of individual highway projects are accounted for as part of the regional emissions analysis for the Regional Transportation Plan and Transportation Improvement Program conformity, where emissions from all future proposed projects (along with existing highways) are compared to the emissions budget in the State Implementation Plan, or comply with interim emissions test in areas where an emissions budget is not yet available. The results of this analysis have most recently been updated by the Wasatch Front Regional Council in the conformity analysis for the 2015–2040 Regional Transportation Plan in the *Conformity Analysis for the Amended WFRC 2015–2040 Regional Transportation Plan, Report No. 35* (WFRC 2017).

As stated in Chapter 11, Air Quality, the PM<sub>2.5</sub> hot-spot (localized) analysis was conducted for the interchange with the greatest number of receptors adjacent to the interchange. As the analysis shows, none of the WDC action alternatives would result in modeled PM<sub>10</sub> or PM<sub>2.5</sub> concentrations that would exceed the National Ambient Air Quality Standards.

This Final EIS used the Ogden monitoring station because it is the air quality monitoring station closest to the Antelope Drive interchange. Using the Ogden monitoring station results in a more conservative analysis, since the station is located near a more urban environment

than is the Antelope Drive interchange location. The modeling conducted in this EIS assumes winter conditions with no wind or stagnant conditions. Details about the inputs to MOVES used for the WDC EIS analysis are included in Appendix 11A, Air Quality Technical Report.

## 32.12 Chapter 12 – Noise

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- A.** *Commenters stated that noise levels will increase and that noise barriers should be considered to reduce noise levels. Other commenters wanted to know what is the process for considering noise mitigation and where noise walls would be located. Other commenters questioned what the projected future noise levels are, and what levels are required for noise walls or other noise-abatement measures. Other commenters asked how topography was taken into account in the modeling process. Some commenters wondered whether additional homes built prior to the highway being constructed would be considered.*

Chapter 12, Noise, includes an evaluation of potential noise barriers for the WDC action alternatives and includes the locations where noise walls were evaluated. The UDOT noise-abatement criteria are described in Table 12-2, UDOT’s Noise-Abatement Criteria, of Chapter 12. The methodology that was used to determine future noise levels is described in Section 12.4.1, Methodology. The receptors that exceeded the UDOT noise criteria are shown as red dots in Figure 12-1 to Figure 12-36, Noise Receptor Impacts, in Volume IV. The noise-abatement methodology is described in Section 12.4.5, Mitigation Measures.

As stated in Chapter 12, noise levels would increase in areas adjacent to the WDC action alternatives. According to UDOT’s Noise-Abatement Policy (UDOT Policy 08A2-1), noise abatement will be considered for new highway construction where noise impacts are identified. The two relevant criteria to consider when identifying and evaluating noise-abatement measures are feasibility and reasonableness. Noise abatement will be provided by UDOT only if UDOT determines that noise-abatement measures are both feasible and reasonable according to UDOT’s noise-abatement policy. None of the noise walls evaluated in the Draft EIS met UDOT’s noise-abatement criteria.

Four of the 31 noise walls evaluated in this Final EIS met UDOT’s noise-abatement criteria. Prior to highway construction, UDOT will conduct a final noise analysis that accounts for the final design of the WDC, including any changes to the horizontal or vertical alignment of the WDC. Additionally, any new residential developments that received a final building permit prior to the approval of the project’s Record of Decision will be included in this final noise analysis.

- B.** *Farmington City stated that the impacts analysis area used to study noise impacts is vague. The analysis states that this area was the land adjacent to the proposed alternatives that could be affected by changes in noise levels. The boundaries of this area are never defined, and it is therefore unclear which areas were studied for noise impacts. Also, the impacts of noise on the purposes of and values preserved by the Farmington City conservation easements were never discussed and they could be severe, especially as to wildlife. Likewise,*

*there is insufficient discussion of noise impacts on the nearby residential and other users. If the impacts to the resources that are protected by the Farmington City conservation easements were fairly considered from a noise standpoint, it is unlikely the Glover's Lane Option could have been advanced.*

As stated in Chapter 12, Noise, of the EIS, the noise impact analysis area is the land adjacent to the proposed alternatives that could be affected by changes in noise levels due to construction and operation of the project alternatives.

Noise impacts to residents are described in detail in Chapter 12, Noise. Figure 12-1 through 12-36 in Volume IV show which homes along the WDC action alternatives would exceed the noise criteria, thus giving a sufficient discussion of the impacts.

Chapter 3, Land Use, describes the impacts to the conservation easements and states that the Glovers Lane Option is not consistent with the easements. Wildlife noise impacts are described in Chapter 14, Ecosystem Resources, which states that the WDC would cause noise impacts to wildlife and describes mitigation for those impacts.

Finally, noise was one of many factors considered by UDOT in making its recommendation and was not the sole reason for selecting a preferred alternative.

## 32.13 Chapter 13 – Water Quality

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- A. *Commenters stated that the WDC would impact groundwater levels and cause flooding adjacent to the highway, impact wetlands by reducing groundwater flows or groundwater quantity to wetlands, and impact wetlands by reducing surface water flows or quantity to wetlands.*

Chapter 13, Water Quality, documents the evaluation and analysis of groundwater levels and impacts to adjacent properties and wetlands from the WDC. The analysis included computer modeling to determine the effects of all alternatives considered on shallow groundwater flow that was monitored from 1997 to 2006 as part of the Legacy Parkway Project and a more recent study conducted by Utah Geological Survey in 2009 regarding groundwater effects on wetlands in Farmington Bay.

Similar to Legacy Parkway, the WDC road base for the highway would not be in the water table but would be raised on fill above the current ground elevation and therefore would not impede the groundwater. The computer simulations for the Legacy Parkway predicted a 0.15-to-0.25-foot rise in the water table up-gradient of the roadway embankment and a corresponding 0.15-to-0.25-foot drop in the water table down-gradient of the roadway embankment. Actual field monitoring results indicate that the shallow groundwater is fed from the deeper aquifers, and that this supply of groundwater, which provides a water supply for the wetlands, would not be affected by the Legacy Parkway. The 2009 U.S. Geological Survey study regarding wetlands in Farmington Bay confirmed that wetlands are located primarily in groundwater discharge areas for the principal deeper aquifers versus shallow surface flows from east to west. Therefore, the WDC team does not expect that the WDC



would substantially affect groundwater flows. In addition, appropriate stormwater drainage as part of a stormwater best management practice system would be provided along the WDC to avoid flooding adjacent properties.

Similarly, any of the WDC action alternatives would maintain the hydrology of all surface water flows by using culverts or other structures for all of the streams or other surface water bodies that cross the WDC alternatives. The WDC alternatives would not negatively affect the hydrology of any surface water flows or quantity. Additionally, none of the WDC alternatives would substantially affect surface water quality. All stormwater runoff would be mitigated by discharging stormwater runoff into stormwater best management practices (detention basins or vegetated filter strips) before it is released into receiving waters.

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**B.** *Commenters stated that the WDC would cause detrimental impacts to the Great Salt Lake, Farmington Bay, or other surface waters as a result of roadway stormwater runoff.*

The water quality impacts from all alternatives are documented in Chapter 13, Water Quality. The analysis showed that none of the WDC action alternatives would substantially affect surface water quality. All stormwater runoff would be mitigated by discharging stormwater runoff into stormwater best management practice systems (detention basins or vegetated filter strips) before it is released into receiving waters.

As part of the water quality evaluation, the WDC team conducted water quality modeling, as stated in Chapter 13 of the Draft EIS. The results of the modeling showed that stormwater from the WDC would not contribute to a major degradation of adjacent waters. The Draft EIS states that the main pollutants of concern for the Great Salt Lake including Farmington Bay are selenium and mercury. These pollutants are not commonly detected in highway stormwater runoff (FHWA 1981).

Given that WDC alternatives would create up to an additional 262 acres of impervious area within the Great Salt Lake watershed of 21,000 square miles (13,440,000 acres), the impacts of typical roadway pollutants from the WDC to the water quality of the Great Salt Lake would be negligible. In addition, the best management practices proposed as part of the WDC Project (including detention basins or vegetated filter strips) would further reduce the concentrations of any heavy-metal pollutants that do run off the roadway. Similarly, the effects of total dissolved solids from UDOT's winter de-icing activities on the water quality of the Great Salt Lake including Farmington Bay would be negligible.

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**C.** *Farmington City stated that the Draft EIS completely fails to identify impacts to water quality that will be caused by construction of the project and, specifically, seven new stream crossings in the study area. The project will impact these streams if petroleum products or other construction-related wastes, such as cement, solvents, and/or disturbed and eroded soil, are discharged into stormwater runoff and/or groundwater during construction and operation. Chapter 20, Construction Impacts, Section 20.3.4 refers the reader to the mitigation measures in Chapter 13, Section 13.4.5. This section fails to describe any mitigation measures that will be used during construction other than acquiring a Storm*

*Water General Permit for construction activities and the requirement to adopt a Stormwater Pollution Prevention Plan.*

*The Draft EIS also contains no specifics as to where runoff is expected from the proposed WDC and where specific design features for stormwater management will be placed (revegetation, erosion-control measures, etc.) and, more importantly, why. These features are identified in the roadway plan drawings in the appendices to the Draft EIS, but the water quality analysis fails to inform the public of the logic behind the decisions to locate these features where they are shown on the drawings. The Draft EIS should have included an estimate of potential increases in stormwater runoff at these locations, the volume, and rationale for the specific design features that would minimize the discharges.*

*Farmington City also stated that Figure 13-1 is missing some creeks within the city.*

Measures for mitigating all construction impacts to water quality will be taken according to stormwater permit requirements. These temporary measures are described in Section 20.3.4, Water Quality Construction Impacts, and will include best management practices specified in the Stormwater Pollution Prevention Plan. This plan is a required element of the Project's Utah Department of Environmental Quality construction stormwater permit and is specifically designed to ensure that water quality is protected.

Additional text was added to Chapter 13, Water Quality, to state that the locations of the water-treatment facilities were based on topography and the proximity of receiving waters to ensure that pollutants are not directly discharged into streams or other water bodies. As stated in the chapter, the detention ponds were designed to reduce flow into receiving water bodies to a discharge rate of 0.2 cubic feet per second per acre for the 10-year, 24-hour storm.

#### **What is a 10-year storm?**

A 10-year storm is a storm that has a 10% chance of occurring in a given location during a given year, or, in other words, a storm that occurs at that location once every 10 years *on average*.

Chapter 13 provides a detailed analysis of the potential increase in pollutants for all streams crossed by the WDC action alternatives, and Section 13.4.1, Methodology, describes in detail the methods used to determine the water quality impacts. This methodology included the size of impervious surfaces, specific rain and snow events, typical pollutants expected from a roadway, and the number of vehicles that would use the roadway.

Finally, the comment did not state the names of the creeks that are missing from Figure 13-1, Water Bodies and Watersheds. The figure shows all creeks that would be crossed or could be affected by the WDC. Other creeks that would not be affected by the alternatives are not included in the figure.

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- D.** *The Nature Conservancy commented that the EIS should provide a detailed response on the measures taken to respond to chemical or other accidental contamination spills that will end up in the stormwater system.*

A major spill is unlikely since the WDC would not be a major truck route. UDOT designs highways for safe operations to minimize the potential for accidents. UDOT also maintains an incident monitoring and response team so that it can rapidly respond to any accident on its road system. This is part of UDOT's standard procedures and would not be any different for the WDC. In addition, hazardous materials spills are handled through the local emergency responders such as fire departments.

Though an accident on the WDC involving a spill of hazardous material could affect surface water quality, those impacts are difficult to quantify because their location, severity, and conditions are not known in advance. However, immediate action by the party responsible and spill response teams would minimize adverse impacts. If a spill of hazardous waste or other chemicals were to occur in wetland habitats, it could adversely affect wildlife, particularly if water levels are high. The existing UDOT and FHWA/U.S. Environmental Protection Agency requirements for safe transport of these materials and emergency spill containment programs would minimize these effects under most conditions.

Though unavoidable accidents could occur, most spills would be local in nature and would therefore vary in effect, but the effects would be worst in aquatic habitats. This analysis has been added to Chapter 13, Water Quality, of this Final EIS.

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- E.** *The U.S. Environmental Protection Agency commented that the maximum loading of total dissolved solids (TDS) projected in Table 13-8 appears to underestimate loading to receiving waters. Loading from a 6-inch storm would result in three total applications of salt as opposed to the two salt applications referenced in the table, based on the new UDOT practice of applying salt at the beginning of a storm with subsequent applications after each 3 inches of snow. This 150-inch increase in salt loading would result in 1,165 mg/L [milligrams per liter] of TDS loading. While this increase would not exceed the agricultural use in-stream standard of 1,200 mg/L, it is important to accurately project TDS loading for agricultural uses given the agrarian nature of the project area.*

*EPA Recommendation:* *The U.S. Environmental Protection Agency recommends revising the TDS loading projections in the Final EIS as described above.*

The note in Table 13-8, Approximate TDS in Snowmelt Runoff due to Anti-icing Operations, means that, for a 6-inch snowstorm, salt is applied at the beginning of the storm and at 3 inches of snow accumulation. An additional application would not occur until the accumulation is greater than 6 inches. Thus there are only two salt applications for snowstorms of 6 inches or less. The text has been revised to state there are only two salt applications per 6-inch snowstorm.

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- F.** *A commenter stated that the WDC would drop the lake level of the Great Salt Lake and stated that a lower Great Salt Lake water level would cause mercury and other toxins to be released over the Wasatch Front, since there would be more storms that would increase the PM<sub>10</sub> [particulate matter 10 microns in diameter or less] from the lake.*

The WDC action alternatives would have no effect on the Great Salt Lake's lake level fluctuations. None of the WDC action alternatives would divert any water from the Great Salt Lake, so they would not have any effect on the water levels of the Great Salt Lake. The water levels of the Great Salt Lake are influenced by rainfall, snowfall, groundwater, and diversions for irrigation in the surrounding areas. Since the WDC action alternatives would allow all streams, ditches, and canals to pass under the WDC and since the highway would not substantially restrict lower aquifer groundwater flow, there would be no reduction in water flow to the Great Salt Lake caused by the WDC alternatives.

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- G.** *The Western Resource Advocates commented that the Draft EIS is deficient because it does not contain a section related to hydrology. The document is content to speak in generalities with regard to water quality, water rights, and drinking water sources throughout the project area, but any data needed to make a determination of the impacts on these subjects is missing. Although in Section 13.3.2.4 the Draft EIS discusses a drinking water source within 0.25 mile of the preferred alternative, the inclusion of this source in the document is without meaning. In order to make an informed decision regarding the impacts of the WDC on local water quality and flow systems, a formal hydrology section must be included. In addition, impacts to water flow into Farmington Bay may occur as a result of the WDC including allowing seasonal flooding which may impact the WDC. Road base mass and/or compaction may cause a change in the dynamics of ground and surface water.*

Chapter 13, Water Quality, provides a discussion of both surface water and groundwater. The chapter states that both surface water and groundwater flow generally toward the Great Salt Lake to the west. Additional text has been added to this Final EIS regarding the depth of the shallow aquifer and referencing an additional study regarding groundwater flow in the water quality impact analysis area.

The Draft EIS includes sufficient information to evaluate the impacts from a highway. These impacts could include surface water and groundwater contamination and the potential to impede surface and groundwater flows. Additional data regarding transmissivity and type and flow of existing groundwater contamination is not necessary to evaluate the impacts from the WDC. For this Final EIS, an additional study of groundwater flow at Farmington Bay was included in the analysis.

As stated in the Draft EIS, modeling shows that the WDC would not substantially affect surface water quality and that groundwater quality would not be affected. As shown in the Draft EIS, some stormwater runoff could infiltrate into the shallow groundwater. However, because the storage time would be short (usually less than 24 hours) and because the quality of the stormwater from WDC would not exceed surface water standards, it is unlikely that stormwater would reduce groundwater quality. In addition, the WDC action alternatives are

not expected to affect the deeper and confined aquifer, which has a recharge area located up-gradient and several miles from the WDC action alternatives. Since that deep and confined aquifer is under pressure, water in the aquifer moves toward the ground surface.

The WDC would also not affect surface water flows. As stated in Chapter 13, the WDC would be designed to allow surface water from canals, creeks, and streams to flow under the highway, and UDOT would not allow water to pond to the up-gradient side of the highway, since this would flood homes. Therefore, water that flows to the Farmington Bay Waterfowl Management Area would not be impeded. In addition, in the WDC team's discussions with Utah Division of Water Resources personnel who manage the waterfowl management area, the potential for flooding operations to affect the highway was never raised. If these activities did occur in the vicinity of the WDC, they would flood private property including farmland, businesses, and homes and existing roads such as Glovers Lane and Tippets Lane.

Finally, the EIS evaluated the potential for the WDC to affect groundwater flows. As stated in Chapter 13, the Legacy Parkway hydrologic studies (Forster 2006) concluded that, although the lateral flow of groundwater could be disturbed, this disturbance would be limited to the Legacy Parkway right-of-way and would have a negligible effect on the water supplied to the wetlands by shallow groundwater. This conclusion is further supported by the fact that the road base for the WDC would not be in the water table but would be raised on fill above the current ground elevation, similar to Legacy Parkway. Since the groundwater flow and depth along Legacy Parkway are similar to those along the WDC, and since the highway designs are similar, the WDC team expects that impacts to groundwater from the WDC would be similar to those from Legacy Parkway. This Final EIS has been updated with additional studies regarding groundwater flow along the WDC and the potential indirect impacts to wetlands adjacent to the highway.

## 32.14 Chapter 14 – Ecosystem Resources

### 32.14.1 Section 14.1 – General Ecosystems

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- A. *Farmington City stated that there are significant problems in this area, and the major one is the scope and extent of the study area. At page 14-12 it is telling that there is no mention of the Farmington City conservation easements in the conservation areas, wildlife habitats, wetlands and water and uplands sections. This is unacceptable. At page 14-17, there is no discussion of the impact the road will have on habitat fragmentation, or on any related wildlife issues should the Great Salt Lake level rise and force wildlife inland. This would appear to be a significant wildlife mobility and fragmentation issue, yet it is not sufficiently discussed. Likewise, the other buffer areas may change and the impacts in that regard must be reviewed and discussed.*

The EIS analysis in Chapter 14, Ecosystem Resources, includes all wetlands, water bodies, and habitat within the conservation easements in the analysis along with all habitats in the WDC study area. No areas were excluded, even if they were not mentioned specifically. As shown in Figure 14-7, Wildlife by Habitat Quality Ranking, in Volume IV of the Draft EIS, much of the conservation easements were given a medium to medium-high pasture habitat value. The evaluation in the EIS with respect to wildlife, fragmentation, buffer zones, noise impacts, and lighting includes the land within the easements.

Finally, page 14-17 of the Draft EIS describes the affected environment, not impacts from the WDC. The impact analysis is included in Section 14.4, Environmental Consequences, beginning on page 14-28 of the Draft EIS.

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- B. *The 300-foot buffer from right-of-way adopted for noise is not acceptable for the purposes of wildlife and, again, should the Great Salt Lake increase in elevation there is no discussion of what impacts will occur. The future changes in the Great Salt Lake's elevation are also problematic for the wildlife habitat and fragmentation discussion, and it is clear that no conclusive information was gathered as to the actual impact on all aspects of wildlife including invertebrates, reptiles, amphibians, fish, birds, and mammals. Until these impacts are better understood, no aspect of this project that may affect them may be undertaken. Likewise, the impacts of lighting are not well understood with respect to the status quo, nor as to impacts that may arise as the elevation of the Great Salt Lake changes.*

*Other commenters had similar comments that the impacts of the WDC in combination with flooding or drought would have a substantial impact on the Great Salt Lake ecosystem.*

As stated in responses 32.14.2C and 32.14.2H, the evaluation of wildlife impacts looks at a distance much greater than 300 feet. The WDC team is not sure where the commenter got the 300-foot value, since the EIS clearly describes impacts that could occur at greater distances (out to 3,900 feet).

Regarding the Great Salt Lake elevation, page 14-48 of the Draft EIS goes into detail about the impacts to habitat and wildlife species from potential natural changes in lake elevation depending on weather cycles such as flooding and drought. The Draft EIS on page 14-37 has an entire section (Section 14.4.3.1, Wildlife Habitat and Fragmentation) evaluating habitat fragmentation, and light disturbance is addressed on page 14-47 in Section 14.4.3.5, Artificial Light Disturbance.

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- C.** *A commenter stated that the EIS should have evaluated the impact of the WDC on birds, suggesting that the WDC would affect bird habitat and push the birds farther west where they are more likely to get hit by airplanes coming into the Salt Lake City International Airport.*

The WDC study area is located at least 11 miles away from Salt Lake City International Airport, and birds already use the areas underneath the flight paths. An increase in bird strikes from aircraft is not expected as a result of the WDC, since there is no reason to believe that the highway would cause birds to fly substantially higher as a result of a 5-foot right-of-way fence or closer to the airport than under current conditions. The WDC team contacted staff with the Salt Lake City International Airport, who said that the location of the WDC would not cause a change of bird behavior that was of concern in terms of the airport flight paths.

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- D.** *A commenter stated that, in addition to the analysis of wetlands and wildlife habitat impacts of a higher Great Salt Lake elevation, the ecosystems analysis should have also included an analysis of the impacts to wetlands and wildlife habitat from a decreased water level of the Great Salt Lake. The commenter stated that, in the future, lower Great Salt Lake levels are more likely than higher Great Salt Lake levels.*

As shown in Section 14.4.3.6, Changes in Lake Level and Habitat Availability, of the Draft EIS, at lower lake elevations for the Great Salt Lake there are more acres of available, non-inundated wildlife habitat around the lake. The WDC team did not analyze lake elevations lower than 4,202 feet because lower lake levels would further increase the number of acres of wildlife habitat and wetlands, and any percentage impact from the WDC action alternatives on the amount of non-inundated habitat would be less at lower Great Salt Lake levels. Although lower lake levels could result less habitat for water-dependent species, these lower lake levels are not the result of the WDC but rather of greater changes in climate. The analysis in Chapter 14, Ecosystem Resources, provides an analysis of higher lake levels, including the highest levels recorded.

### 32.14.2 Section 14.3.3 – Wildlife, Sensitive Species, and Migratory Birds

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- A.** *Commenters stated that the WDC would affect the Great Salt Lake ecosystem, which is an important international migratory bird and wildlife area. Some commenters stated that the wildlife impacts would be severe or would decimate specific species of birds or bird populations. Other commenters stated that there should be a professional census of wildlife to determine what species are in the area. Some commenters provided lists of birds that they had observed in the WDC study area. Some commenters stated that there would be impacts to barn owls. Other commenters stated that the WDC action alternatives would affect the Great Salt Lake Bird Festival or other wildlife tourism at the Great Salt Lake.*

As described in Chapter 14, Ecosystem Resources, when identifying the wildlife habitat and species in the area, the WDC team coordinated with and used data from the U.S. Fish and Wildlife Service; the Utah Division of Wildlife Resources; the Utah Reclamation, Mitigation, and Conservation Commission; The Nature Conservancy; and the Utah Natural Heritage Program. A list of potential migratory and resident birds in the WDC study area is provided in Table 14-6, Potential Migratory and Resident Birds in the Ecosystem Impact Analysis Area by Habitat Type, of the Draft EIS. The impacts to migratory birds and wildlife that use the Great Salt Lake ecosystem are addressed in Chapter 14. The analysis does state that the WDC would have direct and indirect effects on migratory birds and wildlife and their associated habitat.

Chapter 24, Cumulative Impacts, describes the cumulative impacts to wetlands and wildlife habitat from the WDC and other projects and states that the WDC impacts would affect less than 1% of the existing wetlands and wildlife habitat in the Ogden Hydrologic Unit of the Great Salt Lake and the impact analysis area for cumulative impacts to ecosystem resources.

See response 32.14.2I regarding bird survey and census information. See responses 32.14.2H, I, J, K, M, and N for other responses related to impacts to wildlife habitat, the Great Salt Lake ecosystem, the Great Salt Lake Shorelands Preserve, and migratory birds. See response 32.8C regarding tourism impacts to the Great Salt Lake.

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- B.** *Commenters stated that the WDC would affect eagles and wanted to know what studies have been done. Other commenters stated that the habitat was not accurately addressed. Other commenters stated that bald eagles are endangered species or used to be endangered species and should be avoided per the terms of the Endangered Species Act.*

Bald eagles are not officially designated as threatened or endangered species subject to the provisions of the Endangered Species Act, since they were officially delisted on June 28, 2007. Bald eagles are protected under the Bald and Golden Eagle Protection Act (16 USC 668–668d). Chapter 14, Ecosystem Resources, provides an overview of impacts to eagles, and specific information is provided on page 14-23 of the Draft EIS.



The WDC team coordinated with the U.S. Fish and Wildlife Service and the Utah Division of Wildlife Resources regarding eagle sightings along the WDC action alternatives including the Farmington area (Farmington Bay and Farmington Creek), the Weber River, and Ogden Bay. The analysis in Chapter 14 of this Final EIS shows that some impacts to bald eagles would occur, but most impacts would occur within the highway footprint and immediately adjacent to the roadway, and therefore could affect individual birds but would not likely affect bird populations. Long-term noise effects could reduce eagles' use of habitat near the roadway if eagles are sensitive to noise.

To address construction-related impacts, winter roosting surveys would need to be conducted for the selected alternative before construction in areas where taller trees or snags (upright dead trees) are present along the Great Salt Lake shorelands area. If an alternative that uses Glovers Lane is selected, the area around Glovers Lane would also need winter roosting surveys. If winter roosting is observed within 0.5 mile of potential construction areas, UDOT would coordinate with the U.S. Fish and Wildlife Service and/or the Utah Division of Wildlife Resources to determine what mitigation measures, if any, would be necessary.

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- C.** *Commenters stated that the Legacy Parkway Avian Noise Research Program Final Report (September 2011) should not be used as a referenced study in the EIS because it is not a peer-reviewed study, and that the EIS does not consider wildlife impacts beyond 1,000 feet.*

Chapter 14, Ecosystem Resources, provides an analysis of the impacts to wildlife from the WDC. The Legacy Parkway Avian Noise Research Program Study (Legacy Parkway Avian Study) is cited in the Draft EIS along with many other studies researching the impacts of roads on wildlife. The Legacy Parkway Avian Study is relevant to the WDC because of Legacy Parkway's proximity to similar wildlife habitat and because its roadway design and anticipated traffic volumes are similar to those for the WDC.

The Legacy Parkway Avian Study was one of many studies used to evaluate impacts in the Draft EIS. The Draft EIS included other studies that considered impacts out to 3,500 feet, not 1,000 feet as suggested in the comment. Other studies considered in the EIS (such as Forman and others 2003; Kuitunen and others 2003; and Halfwerk and others 2011) looked at different species in different locations and concluded that noise from highways could affect some bird species at various distances from the highway, and that roadway noise could change habitat quality and consequently change the abundance and distribution of some species. These studies concluded that the distance at which a species could be affected by noise can extend from less than 125 feet to greater than 3,500 feet from the highway (Benitez-Lopez and others 2010). The analysis in the EIS used these studies that showed impacts as far as 3,500 feet from the highway as part of the impact evaluation.

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- D.** *Commenters including the Utah Reclamation, Mitigation, and Conservation Commission stated that the Great Salt Lake Shorelands Preserve would have devastating impacts from the WDC alternatives.*

Impacts to the Great Salt Lake Shorelands Preserve are discussed in Chapter 14, Ecosystem Resources, including cumulative and indirect effects. All of the WDC action alternatives would directly affect 72 acres, or 1.6%, of the preserve. In addition, the analysis includes the amount of habitat in the preserve out to 3,900 feet from the highway where some studies suggest there could be indirect impacts to wildlife species. The cumulative impact analysis states that the WDC and the related potential indirect impacts, along with past projects that have reduced available habitat, would increase the overall cumulative impact to available wildlife and wetland habitat near the highway, including the preserve. Additionally, a description of the Great Salt Lake Shorelands Preserve land use and conservation easements and impacts to the conservation easements is presented in Chapter 3, Land Use. Chapter 3 states that the WDC action alternatives would be consistent with the 1996 Wetland Conservation Plan and the 2001 Davis County Shorelands Master Plan, which identify the WDC on the eastern boundary of the Great Salt Lake Shorelands Preserve.

UDOT has been working with The Nature Conservancy and the Utah Reclamation, Mitigation, and Conservation Commission to minimize and mitigate the impacts to the preserve from the WDC. Responses 32.14.2H, I, J, K, and M also address concerns about impacts to the preserve, wildlife, or wildlife habitat in the Great Salt Lake ecosystem.

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- E.** *Commenters stated that the Legacy Parkway Project increased the number of nesting birds and migratory birds at Farmington Bay.*

Comment noted.

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- F.** *Commenters stated that WDC alternatives would destroy nesting areas of bobolink birds that are known to nest near 1750 West in Kaysville (comment 653).*

The WDC team assumes that the commenter is referring to bobolink, not babalu. The WDC team evaluated impacts to bobolinks as part of the Draft EIS. As described in Chapter 14, Ecosystem Resources, the WDC wildlife surveys observed a bobolink in western Farmington in 2011. The WDC team also received other records of bobolinks in Farmington and Kaysville in other years. Table 14-5, Federal and State-Listed Species for Davis and Weber Counties, of the Draft EIS lists the bobolink as a State of Utah species of concern, and Table 14-11, State of Utah Listed Sensitive Species Addressed and Evaluation of Effects from the WDC Action Alternatives, states that the WDC action alternatives “may impact [bobolinks] but not adversely.” The WDC action alternatives could affect nesting or foraging habitat for bobolinks. For more information, see Chapter 14, Ecosystem Resources, of this Final EIS.

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- G.** *Commenters stated concerns about impacts to wildlife or wildlife habitat in other areas around the WDC action alternatives (not specific to the Great Lake Shorelands Preserve or the Farmington Bay Waterfowl Management Area).*

Chapter 14, Ecosystem Resources, provides an analysis of the impacts to wildlife from the WDC. The analysis states that the WDC would have direct and indirect impacts to migratory birds and wildlife and their associated habitat.

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- H.** *The U.S. Fish and Wildlife Service provided the following specific comments on the Draft EIS. A response is provided following each comment. Similar comments were received from Great Salt Lake Audubon, The Nature Conservancy, Western Resource Advocates, Friends of the Great Salt Lake, the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, and Farmington City.*

*[1] The U.S. Fish and Wildlife Service commented that the proposed WDC alternatives traverse or border some of the last important undeveloped and unprotected habitats on the eastern shore of the Great Salt Lake. These areas would be impacted by the roadway and would be vulnerable to future development. It is critical that UDOT and FHWA recognize the irreplaceable resource of the Great Salt Lake ecosystem; select the least damaging alternative; design, construct, and operate the facility such that the impacts are minimized; and fully mitigate the direct, indirect, and cumulative impacts of this project.*

The Great Salt Lake ecosystem and the impacts of the WDC action alternatives on the ecosystem are described in Chapter 14, Ecosystem Resources, of the Draft EIS. UDOT and FHWA recognize the importance of the Great Salt Lake ecosystem, and Section 14.3.2.1, Great Salt Lake, describes the Great Salt Lake ecosystem much as the U.S. Fish and Wildlife Service does in its comment. Chapter 14, Ecosystem Resources, of this Final EIS includes the mitigation proposed by UDOT for the direct and indirect impacts related to the WDC. UDOT believes that the mitigation proposed addresses the impacts from the project and has worked extensively with The Nature Conservancy; the Utah Reclamation, Mitigation, and Conservation Commission; and other resource agencies to develop the mitigation.

Chapter 23, Indirect Effects, evaluates the potential for future development as a result of the WDC. The chapter states that the proposed highway would not result in any indirect effects from development in areas west of the WDC from Farmington to Gentile Street in Syracuse and thus would not result in development-related impacts to areas adjacent to the Great Salt Lake Shorelands Preserve or the eastern shore of the Great Salt Lake. The reason the WDC would not cause development in this segment is that the land is within the Great Salt Lake Shorelands Preserve and UDOT would not provide access west of the highway in this area. As stated in Chapter 23, most development would occur with or without the WDC. Also, UDOT and FHWA do not have any control over local land-use and private property rights.

In its comment, the U.S. Fish and Wildlife Service requests that the least damaging alternative be selected based on the analysis of impacts. UDOT and FHWA based the selection of the preferred alternative on the least damaging alternative considering both the

human and natural environment and the alternative's ability to meet the project's purpose and need. UDOT and FHWA will continue to work with the resource agencies in further refining alternatives to minimize impacts and to appropriately mitigate impacts in consultation with the resource agencies.

*[2] The U.S. Fish and Wildlife Service commented that any of the WDC action alternatives would cause significant, permanent impacts to the wetland and wildlife resources associated with the Great Salt Lake ecosystem. Our greatest concern with this project regards the indirect impacts to the wetland and upland wildlife habitats of the Great Salt Lake shorelands. The Draft EIS describes some of these impacts, leaves some unaddressed, and abstains from making any substantive conclusions regarding permanent degradation of the habitat or effects to the wildlife community structure that will likely result from this project. Moreover, the Draft EIS does not provide any commitment to mitigate for the impacts to this unique resource. We recommend the Final EIS contain a more comprehensive analysis of the indirect effects, discussing all potential factors, evaluating their effects both individually and cumulatively, and drawing conclusions based on the best available science. The U.S. Fish and Wildlife Service has conducted a review of road ecology literature and extracted the most applicable studies to the WDC and submitted the information to UDOT and FHWA. These studies strongly support the conclusion that roads have indirect effects on wildlife.*

This Final EIS has been updated with a new Section 14.4.3.9, Summary of General Direct and Indirect Wildlife Habitat Impacts from the Action Alternatives, to include more information on the potential indirect effects from the WDC; the section references many of the studies provided by the U.S. Fish and Wildlife Service and how these studies show an effect on the wildlife community. The studies cited are based on the overall potential impacts to wildlife species from highways and are not related to one cause of the impact, such as noise. Based on a review of the information in the EIS, UDOT and FHWA agree that there would be permanent direct and indirect impacts from the WDC on wetlands and wildlife habitats in the Great Salt Lake ecosystem.

The WDC action alternatives would be located on the edge of larger pieces of contiguous wildlife habitat and would not bisect or isolate any large pieces of wildlife habitat. The U.S. Fish and Wildlife Service stated that the indirect effects on this large wildlife habitat area are strongly supported by the conclusions in the scientific studies regarding indirect road effects. However, the best available science, including studies provided by the U.S. Fish and Wildlife Service, shows mixed results. Some studies demonstrate that some (although not all) species of small breeding birds in grassland habitats appear to avoid areas in proportion to traffic noise and volume, some at distances up to 9,800 feet depending on the type of road. Other studies that reviewed an extensive number of species found some to be negatively affected, some to experience neutral effects, and others to increase in numbers (FHWA 2004).

Overall, Chapter 14, Ecosystem Resources, provides a comprehensive analysis of impacts including fragmentation and edge effects, changes in habitat quality, visual disturbance from lights, disturbance from noise, on-road mortality, and water pollution impacts. As stated in Chapter 14, based on the referenced studies, the WDC would affect wetlands and wildlife resources associated with the Great Salt Lake ecosystem, including the Great Salt Lake

Shorelands Preserve. To address the U.S. Fish and Wildlife Service’s comment, additional analysis of edge effects, visual disturbance, on-road mortality, and invasive species was added to this Final EIS.

UDOT and FHWA have been working with the U.S. Fish and Wildlife Service and other agencies to develop appropriate mitigation for impacts from the WDC. Additional information regarding mitigation is provided in Chapter 14, Ecosystem Resources, of this Final EIS.

*[3] We note that a local coalition has proposed another alternative, which has been termed the “Shared Solution.” We encourage UDOT to fully vet this alternative as it did with all 23 preliminary alternatives. Should this Shared Solution alternative be viable and meet the project purpose and need, it would broaden the range of alternatives and could provide an alternative with fewer impacts to wetland and wildlife resources. We support further development of this alternative.*

See response 32.2.1G.

*[4] The alternatives proposed in the Draft EIS all share the alignment in Layton and Kaysville where the corridor traverses immediately adjacent to important shoreline habitats including the Great Salt Lake Shorelands Preserve; there is no alternative alignment presented for this shared segment that may be less environmentally damaging. If a new corridor is determined necessary, it is imperative to analyze all direct, indirect, and cumulative impacts of the alternatives, select the least damaging alternative, and fully mitigate all unavoidable impacts.*

As discussed in *Technical Memorandum 15: Alternatives Screening Report*, when developing the WDC action alternatives, the WDC team evaluated different potential alignments for the WDC alternatives in Layton and Kaysville, including an alternative suggested by the U.S. Fish and Wildlife Service (Alternatives 10 and 10A Modified) that would avoid placing the WDC adjacent to the Great Salt Lake Shorelands Preserve. However, the WDC team determined and the U.S. Army Corps of Engineers concurred that the alternative was not reasonable under the National Environmental Policy Act or practicable under the Clean Water Act because of impacts to a main electric substation in Syracuse, impacts to the Utility Trailer manufacturing site, and relocations of over 250 homes and several parks. The resource agencies including the U.S. Fish and Wildlife Service agreed to these findings, as stated in the Draft EIS on page 2-26.

However, after release of the Draft EIS, UDOT worked with the resource agencies to develop wetland avoidance options in both Farmington and Layton that would reduce impacts to wetlands but increase home impacts. These wetland avoidance options are evaluated in detail in this Final EIS. UDOT and FHWA have been working with the U.S. Fish and Wildlife Service and other agencies to develop appropriate mitigation for impacts from the WDC. Additional information on mitigation is provided in Chapter 14, Ecosystem Resources, of this Final EIS.

*[5] The U.S. Fish and Wildlife Service and the Utah Reclamation, Mitigation, and Conservation Commission commented that, based on the analysis in the Draft EIS, they feel that north of Gentile [Street] they support Alternative B1 or B3. They commented that even though these alternatives have 4 more acres of direct wetland impacts (14.7 versus 10.4), the wetland habitats lie in a more fragmented and suburbanizing environment. Because the shorelands of the Great Salt Lake are a unique and irreplaceable resource, we recommend prioritizing the protection of these habitats and selecting the alignment that is farthest from the Great Salt Lake shoreline.*

See response 32.2.13F for the WDC team's similar preference for the B Alternatives north of Gentile Street in Syracuse.

*[6] Of the southern options for Alternative B, the U.S. Fish and Wildlife Service and the U.S. Environmental Protection Agency believe the Glovers Lane alignment (Alternatives B1/B2) would cause greater impacts than Shepard Lane (Alternatives B3/B4) due to indirect impacts to the high-value shoreland habitats of Farmington Bay west of the Glovers Lane. The U.S. Fish and Wildlife Service and the U.S. Environmental Protection Agency concluded that the Glovers Lane Option would be significantly more damaging to Great Salt Lake shoreland wetland and wildlife habitats than the Shepard Lane Option. The U.S. Fish and Wildlife Service and the U.S. Environmental Protection Agency concluded that Glovers Lane would result in the construction of a four-lane freeway adjacent to the lake shore which would permanently and irreparably degrade the wildlife values of the shoreland habitats, including those of the Farmington Bay Waterfowl Management Area and habitats to the north of the Farmington Bay Waterfowl Management Area and west of the alignment.*

*The U.S. Fish and Wildlife Service compared the Glovers Lane and Shepard Lane Options using Tables 14-31 and 14-37; habitat values for the southern segment ("S. Terminus to Central Davis Sewer Treatment Plant") are identified as low, medium, and high quality. These tables show the Shepard Lane alignment to have 323 acres of medium- and high-value habitats within 393 meters (1,300 feet), while the Glovers Lane alignment, adjacent to Farmington Bay, has 830 acres of medium- and high-value habitats within 393 meters (1,300 feet). The U.S. Fish and Wildlife Service commented that, if the buffer zone analysis were extended to 1,200 meters (3,937 feet), the U.S. Fish and Wildlife Service believes the difference between the two options would be even clearer. The Farmington Bay Waterfowl Management Area lies within 140 meters at its closest point to the Glovers Lane alternatives, while the Shepard Lane alignment is over 3,000 meters from the Farmington Bay Waterfowl Management Area.*

*The U.S. Fish and Wildlife Service commented that the shoreland habitats north of the Farmington Bay Waterfowl Management Area and west of and immediately adjacent to the Glovers Lane alignment are primarily high value and would incur substantial impacts from a new road corridor. The U.S. Fish and Wildlife Service stated that the floodplain impacts similarly show a large difference (201.2 acres for Glovers Lane and 61.8 acres for Shepard Lane), illustrating the proximity to the lake shore of the Glovers Lane alternatives.*

Chapter 14, Ecosystem Resources, provides information regarding the direct and potential indirect impacts from the WDC and states that some impacts could be greater than 1 mile away. It also includes information regarding the amount of habitat of the Farmington Bay Waterfowl Management Area that is within buffer distances out to 3,900 feet (about 405 acres out of the 18,000-acre waterfowl management area). The habitat mentioned by the U.S. Fish and Wildlife Service in the comment is not all adjacent to the Farmington Bay Waterfowl Management Area. Habitat near the Central Davis Sewer Treatment Plant is more than 2 miles from the waterfowl management area.

Overall, UDOT and FHWA agree that there would be indirect effects on habitat along the Great Salt Lake shorelands but disagree with the U.S. Fish and Wildlife Service's assertion that the Glovers Lane Option would "permanently and irreparably degrade the wildlife values of the shoreland habitats, including those of the Farmington Bay Waterfowl Management Area and habitats to the north of the Farmington Bay Waterfowl Management Area and west of the alignment." At its closest point, the Glovers Lane Option is about 465 feet away from the northern corner of the Farmington Bay Waterfowl Management Area.

As described in the Draft EIS, neither the Shepard Lane alternatives nor the Glovers Lane alternatives would minimize impacts to all resources. UDOT and FHWA acknowledge that, compared to the Shepard Lane alternatives, the Glovers Lane Option would have 0.5 acre more impact to wetlands, 2 more acres of direct impacts to high-quality wildlife habitat, more wetlands within 300 feet, and more high-quality wildlife habitat within different buffer distances. After the Draft EIS was released, UDOT conducted an additional evaluation of the Shepard Lane Option. Based on that evaluation, FHWA determined that the option does not meet design standards and is not a reasonable option, and therefore the option was eliminated from consideration in this Final EIS.

As stated in the Draft EIS in Section 2.4.2, UDOT's Evaluation of Southern Options, the Glovers Lane Option would have better regional and local transportation performance, avoid the use of Section 4(f) resources, avoid floodplain impacts to the Haight Creek riparian floodplain corridor, avoid relocating the Union Pacific Railroad and UTA FrontRunner rail lines, have no residential relocations, have 60 fewer noise impacts, have fewer impacts to community cohesion, and avoid affecting the Oakridge Country Club. UDOT identified the Glovers Lane Option as the preferred southern option when considering the transportation performance, cost, and all of the benefits and impacts for both options, including wildlife and wetland impacts.

*[7] The U.S. Fish and Wildlife Service and the Utah Reclamation, Mitigation, and Conservation Commission recommend that the Final EIS extend the wildlife buffer zone analysis to a fourth zone extending 1,200 meters from the roadway edge. The U.S. Fish and Wildlife Service initially agreed with the WDC team to limit the buffer zones analysis to 393 meters (1,300 feet) on the premise that a greater distance would create overlapping zones between the alternatives, "washing out" the differences and making a comparison of alternatives less clear. This agreement was made despite the evidence in the road ecology literature that indicates wildlife impacts occur to a much further distance. However, now that they have reviewed the analysis based on 393 meters (1,300 feet), the U.S. Fish and Wildlife*

*Service concludes that it does not provide a satisfactory evaluation of habitat impacts, and thus recommend a larger fourth zone be incorporated to more clearly depict and compare the indirect effects to wildlife associated with each alternative. We recommend a fourth zone extend to 1,200 meters because many studies (Van der Zande et al. 1980, Findlay and Houlahan 1997, Green et al. 2000, Milsom et al. 2000, Forman et al. 2002, Eigenbrod et al. 2009) conclude that highways impact wildlife at that distance or beyond.*

UDOT and FHWA acknowledge in Chapter 14, Ecosystem Resources, the potential for indirect effects on wildlife habitat from the WDC action alternatives and have provided the buffer zones to provide information about what type and quality of wildlife habitat are included in different buffer zones. Based on the differing results from the studies on highway effects on wildlife, there is no set guidance from the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, FHWA, or UDOT to measure the indirect effects on wildlife or the amount of wildlife habitat indirectly affected by a specific project.

Causal variables, such as noise or distance to a road, have never been established for specific effects (such as species richness, abundance, nest success, and so on). Variables such as road type, traffic volumes, topography, bird species, and surrounding vegetation all play an important factor in determining the distance at which an indirect effect could occur, and no one study can be applied to reasonably or accurately predict the effects of a project such as the WDC.

However, some studies demonstrate that some (although not all) species of small birds that breed in in grassland habitats appear to avoid areas in proportion to traffic noise and volume, some at distances up to 9,800 feet, depending on the type of road. This Final EIS has been updated to include more information regarding the potential indirect effects on wildlife habitat from highways.

In the absence of any sort of policy on quantifying indirect effects on wildlife habitat from roads, it is not possible to conclude with any level of certainty or reasonable predictability how far the indirect wildlife habitat effects from the WDC would extend, and what the nature or significance of these indirect effects would be to the wildlife habitat adjacent to the WDC.

At the request of the U.S. Fish and Wildlife Service, UDOT has added a 1,200-meter buffer to the analysis in this this Final EIS so that readers can understand the habitat within this area to better compare alternatives. The inclusion of this buffer does not mean that UDOT or FHWA believe that indirect effects occur out to this distance, based on their review of the scientific literature.

*[8] The U.S. Fish and Wildlife Service commented that the Draft EIS does not conclude there would be significant impacts to wildlife. The Draft EIS describes several indirect effect factors, including fragmentation, collision mortality, noise disturbance, water pollution, and artificial light disturbance. It does not, however, address many other important factors including weed introduction, movement barriers, visual disturbance, roadway avoidance, or edge effects. All direct and indirect effects should be included and evaluated in the Final EIS and appropriate minimization and mitigation measures incorporated as feasible into*



*roadway design, construction, and operation. The U.S. Fish and Wildlife Service offers their continued assistance in developing these measures.*

The Draft EIS does address the factors listed in the comment. Movement barriers and edge effects are addressed in Section 14.4.3.1, Wildlife and Habitat Fragmentation, and visual disturbance is addressed in Section 14.4.3.5, Artificial Light Disturbance. The section titled Vegetation (page 14-108) in Section 14.4.6, Mitigation Measures, lists several standard operating procedures used by UDOT to ensure that invasive species are not brought onto the construction site. The section also proposes monitoring the site after construction to ensure that invasive species are not introduced into wetland or upland habitats. Although the Draft EIS includes much of the concerns raised in the comment, this Final EIS includes additional analysis on barriers and edge effects, habitat fragmentation, visual and light disturbance, and invasive species.

Finally, a new Section 14.4.3.9, Summary of General Direct and Indirect Wildlife Habitat Impacts from the Action Alternatives, has been added to this Final EIS. This section provides information from scientific studies recommended by the U.S. Fish and Wildlife Service that takes into account all of the expected types of impacts from a highway such as the WDC.

*[9] The Draft EIS provides a substantial discussion of the impacts of noise on wildlife, relying largely on the Legacy Avian Noise Research Program (LANRP) findings. We have several concerns regarding the extent to which UDOT bases its conclusions on the LANRP findings and reference The Nature Conservancy's report (Review of the "Legacy Avian Noise Research Program: Final Report" [Cavitt 2013]) for details of the study's limitations, difficulty in controlling variables, and inconclusive findings. Further, the LANRP Final Report was never published and thus never went through the rigorous peer-review process required of all scientific journal publications. We therefore conclude the indirect effects analysis relative to noise should not be based on the LANRP but instead on the existing body of peer-reviewed, published science. We recommend the Final EIS accordingly reduce its discussion of the LANRP, particularly relative to substantive conclusions on the effects of noise based on the LANRP Final Report.*

*The U.S. Army Corps of Engineers had a similar comment as the U.S. Fish and Wildlife Service.*

The Draft EIS references many scientific studies including the Legacy Parkway Avian Study. In addition, this Final EIS includes a new Section 14.4.3.9, Summary of General Direct and Indirect Wildlife Habitat Impacts from the Action Alternatives, that includes many of the studies recommended by the U.S. Fish and Wildlife Service.

The Legacy Parkway Avian Study was developed as part of the Legacy Parkway Project, and Legacy Parkway is located in a similar environment and has similar traffic volumes as the WDC. The study was requested by nongovernmental organizational and resource agencies including the U.S. Fish and Wildlife Service. The purpose of the study was to determine the potential indirect wildlife effects from Legacy Parkway so that the findings could be used for other projects such as the WDC. The U.S. Fish and Wildlife Service, along with other

resource agencies and wildlife experts, developed the methodology for the study and reviewed the draft and final reports. In other words, the U.S. Fish and Wildlife Service was actively involved in the development and findings of the study.

In addition to the eight peer-reviewed studies suggested by the U.S. Fish and Wildlife Service that were included as part of the EIS analysis, it was also appropriate to consider the Legacy Parkway Avian Study because of the similarities in location, design, and traffic volumes between Legacy Parkway and the WDC.

*[10] The U.S. Fish and Wildlife Service is working with UDOT to address these concerns through efforts of the WDC Wildlife Working Group, comprising UDOT; the Utah Division of Wildlife Resources; the Utah Reclamation, Mitigation, and Conservation Commission; the U.S. Environmental Protection Agency; and the U.S. Army Corps of Engineers. This group seeks common ground regarding the analysis of indirect impacts to wildlife habitats and the mitigation of those impacts. We continue to encourage UDOT to understand the irreplaceable value of the Great Salt Lake ecosystem and to ensure that all impacts to this unique resource will be fully mitigated. Should the group successfully define an approach to indirect effect analysis and mitigation that is acceptable to the participating agencies, we recommend UDOT and FHWA incorporate these findings into the Final EIS.*

UDOT and FHWA continued to work with the resource agencies, The Nature Conservancy, and the Utah Reclamation, Mitigation, and Conservation Commission after the Draft EIS was released to develop appropriate mitigation for impacts to wetlands and wildlife. UDOT and FHWA believe that the mitigation described in this Final EIS provides appropriate mitigation for wildlife habitat and wetland impacts to the Great Salt Lake ecosystem.

*[11] Sec. 14.3.1.1, Methodology for Assessing Wildlife and Habitat, p. 14-7 – As the U.S. Fish and Wildlife Service has commented previously, the western yellow-billed cuckoo requires large tracts of riparian habitat, creating an unusually high standard for the habitat assessment. While a tract of riparian habitat may not be of suitable extent or quality for the cuckoo, it may provide good lowland riparian habitat for a suite of other avian species. Riparian habitats support a greater variety of wildlife than any other habitat type, provide critical nesting and foraging habitat for migratory birds, and yet comprise the smallest percent of habitat type in Utah. We are concerned that this may have resulted in riparian habitat being under-ranked and therefore undervalued within the study area. We recommend that all riparian areas, regardless of their score in the habitat assessment, be avoided to the extent possible, and unavoidable impacts be replaced or restored with an equivalent or greater acreage.*

Riparian areas were identified and quality was assessed based on methodology developed in coordination with the U.S. Fish and Wildlife Service and the Utah Division of Wildlife Resources. The affected riparian areas were mainly associated with Farmington Creek, Haight Creek, and a few other small, fragmented corridors surrounded by agricultural or suburban environments. The few riparian corridors that would be affected by the WDC have been disturbed by past activities. After years of channelization and human encroachment,

most are little more than incised, slightly meandering ditches either with occasional scatter trees (many of which are Russian olive) or with one thin row of trees on either side of the incised banks. These riparian areas were ranked mostly as medium-quality habitats. Therefore, the WDC team does not believe that any riparian corridors were under-ranked. Impacts to riparian areas would range from 2 to 12 acres depending on the WDC alternative.

Finally, it was not possible to avoid the riparian corridors because they were all associated with linear north-south or east-west drainages that crossed the WDC study area. Impacts were minimized by having perpendicular crossings of the riparian areas. UDOT will mitigate impacts to the riparian areas.

*[12] Sec. 14.3.1.1, Methodology for Assessing Wildlife and Habitat, p. 14-8 – As the U.S. Fish and Wildlife Service has commented previously, we question the merits of averaging the habitat assessment scores within a given parcel rather than using the highest single-species score. Essentially, if the parcel provides excellent habitat for a particular species, then it is excellent habitat and should be scored accordingly.*

The WDC team reviewed the habitat quality rankings with the U.S. Fish and Wildlife Service during the EIS process to ensure that the overall habitat rankings made sense based on aerial images and follow-up field observations. A review of the habitat quality shows that the areas along the east shore of the Great Salt Lake (west of the WDC alternatives) and the Farmington Bay Waterfowl Management Area were rated as mostly high-quality habitat, with only a few parcels that are actively used for pasture rated as medium quality. In addition, the wetland areas along the bluff received high- or medium-quality ratings. The remainder of the WDC study area received low- to medium-quality ratings since most of these habitats were in urban areas or were actively used for farming or grazing.

As previously stated in a response to a similar comment from the U.S. Fish and Wildlife Service, to calculate the mean habitat quality rank, the WDC team averaged the ranks of different species, with some ranks of species for any particular parcels possibly being higher or lower than ranks for other species in that same parcel. This method is a useful measure of multiple species' use of habitat parcels. If only the highest species' rank were used, then it could bias the data toward the more generalist or tolerant species (such as mule deer compared to the more sensitive bobolink) that were used as representative species. Ideally, all of the eight representative species should be similar in their variability or breadth of habitat use.

*[13] Sec. 14.3.1.2, Threatened, Endangered, and Sensitive Species, p. 14-20 – The Draft EIS narrowed the geographic scope of analysis for potential threatened/endangered/sensitive species to the WDC study area; previously, the U.S. Fish and Wildlife Service understood the analysis area to be the ecosystem impact analysis area (EIAA). The WDC study area is too narrow a focus for determining potential for T/E/S species occurrence within the study area based on Natural Heritage data elemental occurrences. Because birds and many mammals are sufficiently mobile, the WDC study area has not previously been extensively surveyed, and the WDC team did not conduct surveys within the study area for this project, we believe the Final EIS should re-broaden its scope to the EIAA to determine the potential for T/E/S*

*species occurrence. We believe this was what was originally intended but for some reason did not occur.*

The WDC team performed extensive wildlife habitat and wetland surveys in the WDC study area in 2010, 2011, 2012, 2013, and 2016. During those surveys, wildlife species were observed and documented. As part of those surveys, habitat that could support threatened and endangered species within the WDC study area was documented. As shown in Appendix 14B, Ecosystems Correspondence, the U.S. Fish and Wildlife Service concurred with UDOT's no-effect determination on threatened and endangered species on January 14, 2013 (as indicated in the letter to Larry Crist dated December 13, 2012).

The ecosystem impact analysis area is the area bounded by the southern extent of the Great Salt Lake on the south, Willard Bay on the north, the Great Salt Lake on the west, and the lowest benches of the Wasatch Mountains on the east. Many bird species that use this area travel great distances to feed and rest at the Great Salt Lake and its adjacent habitats. This area was used to provide a context for the habitat and wildlife in the region; however, given the size of this area and its distance from any of the WDC action alternatives, the areas outside the WDC study area but within the ecosystem impact analysis area would not be affected by any of the WDC alternatives. The impact analysis area between the WDC study area and the impact analysis area boundary was used to identify mobile species that could enter the WDC study area as a transient visitor and then could be affected by the WDC.

In order to provide specific information about habitats that are likely to be affected by the WDC, both the existing conditions and evaluation of impacts in the Draft EIS focused on the areas surrounding the project alternatives—such as the Great Salt Lake Shorelands Preserve, the Farmington Bay Waterfowl Management Area, the east shore of the Great Salt Lake, and riparian areas—that would likely contain habitat used by sensitive species whether they are nesting in or migrating through the area. In addition, as stated in the Draft EIS, the analysis for sensitive species did not look at only nesting habitat but also included foraging habitat for the species, meaning areas used by mobile species. This Final EIS includes additional text regarding mobile species that could migrate into the WDC study area from the greater ecosystem impact analysis area and potential habitat that these species could use. Based on this information, the impact to some species changed from “no impact” to “may impact, but not adversely.”

The search for potential threatened or endangered species included all of Davis and Weber Counties. Table 14-5, Federal and State-Listed Species for Davis and Weber Counties, of the Draft EIS lists all federal and state-listed species for Davis and Weber Counties and their potential for occurrence in the WDC study area. The WDC study area includes a very large area that is greater than the area of likely or potential impacts from WDC. Finally, additional information has been added to this Final EIS about the locations where impacts to wildlife, including sensitive species, could occur from the WDC. The only two listed species (Canada lynx and June sucker) for Davis and Weber Counties are not present near the study area, and the candidate and sensitive species with potential habitat in the study area are evaluated in the Draft EIS. Additional text regarding these species has been added to this Final EIS.

Finally, when considering federal threatened and endangered species in the adjacent counties (Box Elder and Salt Lake Counties), the only mobile species that could be present in the WDC study area is the yellow-billed cuckoo, which is evaluated in detail in the Draft EIS and for which four surveys were conducted in 2013.

*[14] Sec. 14.4.1, Habitat Degradation, p. 41-31 – Much of the available scientific literature is focused on noise impacts of highways to wildlife. However, there are an increasing number of studies that identify other causes for wildlife road avoidance such as lights, vehicle movements, pollution, and mortality (Green et al. 2000, Mumme et al. 2000, Ingelfinger and Anderson 2004, Coffin 2007, Kociolek et al. 2011, Summers et al. 2011, Dietz et al. 2013). We recommend the Final EIS take a more comprehensive view toward discussion of the factors that lead to habitat impacts adjacent to roads. In addition, the Draft EIS (last paragraph of this section) states: “... species’ responses to the potential degradation factors appear to vary widely ...” This is quite inconclusive and noncommittal; we recommend the Final EIS include a more definitive statement: “there is substantial scientific evidence to show that negative effects from roadways extend to many species well beyond the roadway itself.”*

*The Draft EIS does not properly evaluate the combined effects of the indirect effect factors. The Draft EIS discussion addresses indirect effect factors individually, describing impacts and identifying measures by which the impacts of each could be reduced. Fragmentation, collision mortality, noise disturbance, water pollution, and artificial light disturbance are each specifically discussed. Ultimately the Draft EIS discounts any overall negative impact on wildlife communities by addressing each factor only individually, describing its effects, how they would be mitigated, and concluding its impacts are insignificant.*

The Draft EIS does not conclude that the indirect effects on wildlife would be insignificant. The Draft EIS states the results from the different scientific studies on the effects from a road. Like the Draft EIS, the studies don’t conclude whether the impacts are significant or insignificant; they simply provide the range of possible effects from a road. However, a new Section 14.4.3.9, Summary of General Direct and Indirect Wildlife Habitat Impacts from the Action Alternatives, has been added to this Final EIS. This section takes into account all of the factors stated in the comment to disclose the potential for combined indirect effects based on the numerous scientific studies provided by the U.S. Fish and Wildlife Service.

UDOT and FHWA acknowledge the importance of the Great Salt Lake ecosystem and the potential for impacts from the WDC. The text from the Draft EIS quoted in the comment has been revised to remove the phrase “vary widely.” The Draft EIS does state that there is the potential for substantial impacts from the WDC.

*[15] Sec. 14.4.3.3, Legacy Parkway Avian Study, p. 14-42 – The title of this section is somewhat misleading, as it was not limited to the Legacy Parkway area and it was not a broad avian study but was focused only on the effects of noise. We recommend the section be re-titled.*

The section is based on the Legacy Parkway Avian Study, so the section has not been re-titled.

*[16] Sec. 14.4.3.3, Legacy Parkway Avian Study, p. 14-43 – The Legacy Avian Noise Research Program report does not conclude a “very weak” relationship (the p-value is actually cited as being 0.000), as the Draft EIS states. Rather, the report says, “... the relationship between species diversity and highway noise was significant ... as was the relationship between species richness and noise.” The report actually does not discuss whether the relationship was positive (greater diversity and richness with higher noise levels) or negative (lower diversity and richness with higher noise). We recommend the Final EIS more accurately report the conclusion of the Legacy noise study.*

The text has been revised to more closely follow the Legacy Parkway Avian Study report.

*[17] Sec. 14.4.3.3, Comparison of Noise Data between the WDC and Legacy Parkway, p. 14-43 – The Draft EIS states that noise levels from the WDC would be similar to those of Legacy Parkway; however, Legacy Parkway was constructed with quieting pavement, trucks and trailers are not allowed to use the Parkway, and the speed limit is reduced to 55 miles per hour. The Final EIS should identify these differences. We also recommend UDOT commit to a similar construction material that would similarly reduce the WDC noise levels.*

After release of the Draft EIS, UDOT decided to use similar noise-reducing pavement material for the WDC as was used for Legacy Parkway. Additional text has been added to Chapter 14, Ecosystem Resources, of this Final EIS clarifying noise levels and the similarity to Legacy Parkway. The clarification includes additional noise monitoring and modeling to verify that WDC noise levels would be similar to those from Legacy Parkway. Chapter 14 provides more details regarding the noise monitoring and modeling processes.

Based on the results of the additional noise analysis, the WDC team anticipates that the WDC would have a 24-hour average of 1-hour  $L_{eq}$  (equivalent noise level) noise levels of 47.3 dBA (decibels on the A-weighted scale) at 600 feet from the WDC right-of-way. The FHWA traffic noise model predicted a 50.3-dBA noise level at 300 feet and a 47.3-dBA noise level at 600 feet. These noise levels are similar to those in the *Legacy Avian Noise Research Program Report* (Bio-West 2011), which reported recorded average noise levels of 43.5 to 48 dBA about 800 feet west of the operational Legacy Parkway and noise levels of 48 to 53.5 dBA about 400 feet from Legacy Parkway.

*[18] Sec. 14.4.3.3, Comparison of Noise Data between the WDC and Legacy Parkway, pp. 14-44 and 14-45 – It cannot be said that the Legacy Report found that Legacy Parkway “... caused only one instance of negative noise effects and caused many neutral or positive noise effects on wildlife in the areas adjacent to Legacy Parkway.” The report itself warned that the “analyses ... are inconclusive” and that “inferences about highway noise on the effects (sic) of both avian abundance and nesting success should be treated cautiously ...” We recommend that statements regarding the Legacy study’s conclusions be more carefully reported.*

The text has been updated with language from the Legacy Parkway Avian Study report.

*[19] Sec. 14.4.3.3, Summary of WDC Noise Levels and Potential Effects, p. 14-45 – The Legacy Avian Noise Research Program report does not conclude a “very weak” relationship (the p-value is actually cited as being 0.000), as the Draft EIS states. Rather, the report says, “... the relationship between species diversity and highway noise was significant ... as was the relationship between species richness and noise.” The report does not discuss whether the relationship was positive (greater diversity and richness with higher noise levels) or negative (lower diversity and richness with higher noise). We recommend the Final EIS more accurately state this conclusion of the Legacy noise study.*

The text has been revised to more closely follow the Legacy Parkway Avian Study report.

*[20] Sec. 14.4.3.7, State of Utah Sensitive Species, Table 14-11, pp. 14-52 and 14-53 – The geographic scope of analysis is too narrow and should include past observances of species within the broader ecosystem impact analysis area. In addition, it is unclear why the table indicates “no impact” for bald eagle when the species is seasonally prevalent within the study area and a nest exists in the Ogden Bay Waterfowl Management Area. We recommend the footnote be removed and the table be adjusted to show that impacts to bald eagles are likely to occur.*

See the response to U.S. Fish and Wildlife Service comment 13 above regarding the geographic scope of analysis. The Ogden Bay Waterfowl Management Area is about 3 miles from the nearest WDC alternative, so no impacts to nesting at the Ogden Bay Waterfowl Management Area are expected. However, as stated in Chapter 14, Ecosystem Resources, of this Final EIS, bald eagles that use this area could be adversely disturbed during construction activity and highway operations, but the WDC would not adversely affect the greater species population. The footnote has been removed from the table and the text changed to state that bald eagles may be affected but not adversely based on foraging and roosting that could occur in the WDC study area.

*[21] Sec. 14.4.3.7, General Discussion of Impacts to Sensitive Species, p. 14-54 – We recommend UDOT determine if the bald eagle nest site in the Ogden Bay Waterfowl Management Area is within 1 mile of any construction activities. Construction activities should occur outside of the 1-mile protective buffer or avoid the bald eagle nesting season (January 1–August 31). In addition, if the nest is within 1 mile, the Final EIS should discuss the potential impacts to this nest site, including the potential for nest abandonment, loss of foraging resources, and highway mortality of fledgling eagles.*

None of the WDC action alternatives are within 3 miles of the Ogden Bay Waterfowl Management Area. No additional information was added to this Final EIS.

*[22] Sec. 14.4.3.7, General Discussion of Impacts to Sensitive Species, pp. 14-54 and 14-55 – This section contains many references to a “WDC wildlife survey crew,” a misleading title given that there were not any wildlife surveys conducted. We are guessing this crew might have been the “WDC wildlife habitat assessment crew.” Also several of these species have had species occurrences within the EIAA [ecosystem impact analysis area], a more*

*appropriate geographic scope to consider when evaluating the potential for occurrences within the project area. As commented previously, we recommend the scope be broadened to include the entire EIAA.*

See the response to U.S. Fish and Wildlife Service comment 13 above.

*[23] Sec. 14.4.3.8, Impacts to Conservation Areas, p. 14-57 – The Draft EIS conclusion regarding noise levels and the associated impacts to avian species should not be based entirely on the inconclusive results of the Legacy Avian Noise Research Program, given the body of peer-reviewed science available on the subject. Further, the Legacy report does not conclude a “very weak” relationship (the p-value is actually cited as being 0.000), as the Draft EIS states. Rather, the report says, “... the relationship between species diversity and highway noise was significant ... as was the relationship between species richness and noise.” The report does not discuss whether the relationship was positive (greater diversity and richness with higher noise levels) or negative (lower diversity and richness with higher noise). We recommend the Final EIS more accurately state this conclusion of the Legacy noise study and re-evaluate the applicability of the study’s results to the WDC Project.*

The text in this Final EIS has been revised to state that impacts to conservation areas would be similar to those described in Section 14.4.3.3, Wildlife Noise Impacts. A new Section 14.4.3.9, Summary of General Direct and Indirect Wildlife Habitat Impacts from the Action Alternatives, has been added to this Final EIS.

In addition to the eight peer-reviewed studies suggested by the U.S. Fish and Wildlife Service that were included as part of the EIS analysis, it was also appropriate to consider the Legacy Parkway Avian Study because of the similarities in location, design, and traffic volumes between Legacy Parkway and the WDC.

*[24] Sec. 14.4.4.1, Alternative A1, Wildlife, Habitat Loss, p. 14-60 – It is unclear why the Draft EIS focuses on the value of habitats only for nesting or “other reproductive uses” when the Great Salt Lake ecosystem habitats are of equal, if not greater, value for migratory stopover (feeding and resting) habitat. We recommend the Final EIS broaden the discussion here and in each of the corresponding alternatives’ Habitat Loss sections.*

The text in the Final EIS has been revised to broaden the discussion with a new Section 14.4.3.9, Summary of General Direct and Indirect Wildlife Habitat Impacts from the Action Alternatives. In addition, the text on the page referenced in the comment has been revised. The analysis included all low-, medium-, and high-quality habitat regardless of whether the habitat is used for nesting, reproductive uses, or migratory stopovers. Only very-low-quality habitat (urban or extensively used cropland adjacent to an urban boundary) was not included in the analysis.

*[25] Sec. 14.4.4.1, Alternative A1, Migratory Birds, p. 14-65 – Noise is but one of a variety of factors which could cause a reduction in habitat quality near the roadway; it is unclear why only noise is mentioned here. We recommend the Final EIS also identify and evaluate the other potential factors that diminish habitat quality near roads, including on-road mortality,*



*light and other visual disturbance, and habitat degradation from pollution, invasive plant species, decreased water quality, and edge effects. In addition, the document incorrectly states impacts “... would affect individual birds but not affect bird populations.” Bird populations (defined as a group of individuals of a given species using the same area of habitat) in fact would be affected by the WDC roadway disturbance if they abandon use of an area. We recommend the text in the Final EIS be modified to reflect this population-level effect. These comments apply to each of the corresponding alternatives’ Migratory Birds sections.*

The Draft EIS includes a discussion on mortality, light disturbance (a visual impact), water quality pollution, and edge effects (see the section titled Habitat Fragmentation) in Section 14.4.3, General Impact Information for the WDC Action Alternatives. These impacts would be similar for all WDC action alternatives. Noise was specifically discussed for each alternative since it would likely have the greatest effect as stated in the scientific studies provided by the U.S. Fish and Wildlife Service. The Final EIS text has been revised to add a reference to the general impact information (Section 14.4.3), which includes a new section summarizing the potential for diminished habitat quality.

As mentioned in Section 14.4.7, Mitigation Measures, UDOT has a policy in place to avoid bringing invasive species to a project site. The reference to migratory bird populations was specifically related to the direct impacts from construction, which could affect individuals but would not affect overall populations. To address indirect effects, the text has been revised as follows: “Long-term noise, visual, fragmentation, and mortality effects could reduce the use of habitat near the roadway, which could result in impacts to some bird populations if they abandoned the area. These impacts would be the same as those described in Section 14.4.3, General Impact Information for the WDC Action Alternatives.”

**[26] Sec. 14.4.7, Recommendations to Minimize Growth Impacts to the Ecosystem, p. 14-110** – *The purpose of this section is unclear, as UDOT is not proposing or recommending any action but merely providing information. We support the dissemination of this information; however, this section is insufficient. We recommend UDOT take a more active role toward guiding the future growth that will be induced by the construction of the WDC. By creating the infrastructure for growth (i.e., the WDC), UDOT takes a large amount of responsibility for where and how quickly that growth will occur. We recommend UDOT take an active role in facilitating “smart growth” principles; partnering on “smart growth” conversations, workshops, and planning efforts; and incorporating “smart growth” components into the road design (e.g., locating interchanges and designing access to direct intelligent development and promote natural area protection).*

This section was included based on previous requests from FHWA and the U.S. Environmental Protection Agency to provide information to local communities on the benefits of sustainable growth principles. The potential indirect effects of the WDC are described in Chapter 23, Indirect Effects. UDOT does not have any control over local land use, private property rights, or development on private land, and it is not in UDOT’s authority or mission to encourage specific development types, since that is the responsibility of the

local municipality. UDOT appropriately defers to the Wasatch Front Regional Council, the Cities and Counties, and other land-use planning agencies and entities with respect to such issues. However, UDOT does work with local jurisdictions during the development of long-range transportation plans as an implementing agency for projects such as the WDC.

***Sec. 14.4.6.1, Mitigation Measures for Impacts to Wildlife and Wildlife Habitat*** – *We have several comments in this section:*

***[27] Impacts to Nesting Birds, p. 14-106*** – *We recommend UDOT determine whether the bald eagle nest site in the Ogden Bay Waterfowl Management Area is within 1 mile of any construction activities. Construction activities should occur outside of the 1-mile protective buffer or avoid the bald eagle nesting season (January 1–August 31). In addition, if the nest is within 1 mile, the Final EIS should adequately discuss the potential impacts to this nest site, including the potential for nest abandonment, loss of foraging resources, and highway mortality of fledgling eagles.*

None of the WDC action alternatives are within 3 miles of the Ogden Bay Waterfowl Management Area. No additional information was added to this Final EIS.

***[28] Noise Impacts, p. 14-107*** – *Noise impacts to habitat will not be limited to the [Great Salt Lake Shorelands] Preserve, as indicated in the Draft EIS. Other noise-affected areas would include the shoreland habitats to the south and west of the Glovers Lane alignment, northwest of the Central Davis Sewage Treatment Plant, and east of Howard Slough Waterfowl Management Area. The statement “... other land ... is either suburban land or farmland that has marginal or no wildlife habitat” is inaccurate. These areas were mostly assessed as high-quality habitat with some medium- and medium-high-quality parcels. The Final EIS should identify and evaluate all areas affected by noise from the WDC.*

The text of this Final EIS has been revised to state that the main high-quality wildlife habitat areas affected by the WDC action alternatives would be the habitat set aside for wildlife protection in the Great Salt Lake Shorelands Preserve west of all of the WDC action alternatives from Kaysville to Syracuse. The U.S. Fish and Wildlife Service is incorrect in its assertion that suburban and farmland habitat to the east should be assessed as high-quality habitat. Most of the land east of the WDC alternatives from Farmington to Syracuse was urban or farmland and rated as low to medium quality, as was much of the habitat north of Gentile Street, since most of this area is farmed or urban. A few pockets within this area along the bluff in Syracuse and West Point are medium- to high-quality habitat. The Howard Slough Waterfowl Management Area is considered high-quality habitat but is over a mile away from any of the WDC action alternatives.

***[29] Vegetation, p. 14-108, 6th bullet*** – *We recommend UDOT commit to mitigating all impacts to lowland riparian habitats, a rare and important habitat type for a diversity of wildlife. Where losses are permanent, riparian habitat should be re-established elsewhere at a minimum 1:1 ratio or enhanced at a minimum 3:1 ratio.*

UDOT has agreed to add mitigation for direct impacts to riparian habitat at a 1:1 ratio.

- I. *The Nature Conservancy commented that the WDC will result in substantial impacts to the Great Salt Lake Shorelands Preserve and that the Draft EIS fails to evaluate the potential direct, indirect, and cumulative impacts. The Conservancy also commented that the Draft EIS lacks the scientific data to determine impacts to wildlife, which undermines the Draft EIS as a basis for informed decision-making which are the basic goals of the National Environmental Policy Act. The Conservancy commented that UDOT should have conducted detailed avian baseline data surveys in order to provide an appropriate evaluation of the potential impacts and necessary mitigation. The Conservancy also commented that based on their 2013 bird survey data and a report from Forman et al. that 12 of the 16 sites with Bobolink, Grasshopper sparrow, or Western meadowlark species are expected to be abandoned.*

Most of The Nature Conservancy's comments are similar to those provided by the U.S. Fish and Wildlife Service and are addressed in response 32.14.2H.

The WDC team reviewed an extensive amount of scientific literature and data regarding the wildlife and habitat of the Great Salt Lake ecosystem. Although specific bird count surveys were not conducted, the WDC team worked with the Conservancy to understand the value of the Great Salt Lake Shorelands Preserve, the habitat in the area, and the birds that use the area. The WDC team reviewed the bird survey information provided by the Conservancy for the 2013 survey of the Great Salt Lake Shorelands Preserve. Most of the 139 migratory species and all 6 of the identified sensitive species are acknowledged in the Draft EIS.

Although the WDC team did not conduct specific bird surveys, the Draft EIS assumed, based on the type and quality of wildlife habitat in the WDC study area, that the species were present in the WDC study area, and thus the species were evaluated in the Draft EIS. Section 14.3.2.1, Great Salt Lake, states that an estimated 5 million birds representing 257 species rely on the lake for resident feeding and sanctuary, breeding, or migratory stopovers. The WDC team understands the importance of the Great Salt Lake ecosystem and the Great Salt Lake Shorelands Preserve. The information provided by the Conservancy regarding the 2013 survey of the Great Salt Lake Shorelands Preserve has been included and used to update this Final EIS.

The Nature Conservancy states that the species identified in the 2013 survey are within the area that would be affected by the WDC. However, as shown in several of the maps in the Conservancy's comments, three of the Conservancy's survey sites were outside the 3,200-foot impact area identified by the Conservancy as the farthest impact zone. For the EIS, the WDC team did use the Forman and others (2003) study that was mentioned in the comment. Although similar species to the species studied in the Forman study are found in the WDC study area, other variables such as habitat type, surrounding development, and roadway noise might not be similar to those for the WDC, so it would be difficult to apply the results from the Forman study to the WDC Project. The Forman study provides no indication of any actual noise levels measured at each site. Also, 58% of the area along the road in the study that had similar traffic volumes as the predicted WDC traffic volumes also had commercial strip mall development, which is not the case in the WDC study area in the areas around the preserve.

The Draft EIS concludes that there would be indirect impacts from the WDC but states that it would be difficult to conclude or predict that the species mentioned in the comment would abandon the area within 700 meters of the WDC based on one study that was conducted in a different geographic area with different development and land-use variables that are not found in the WDC area.

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- J.** *The Nature Conservancy and the Utah Reclamation, Mitigation, and Conservation Commission stated that portions of the Great Salt Lake Shorelands Preserve (771 acres) were purchased with federal North American Wetland Conservation Act (NAWCA) funds administered by the U.S. Fish and Wildlife Service and Ducks Unlimited. Both direct and indirect impacts from the WDC would affect these lands. The NAWCA funding agreement contains language prohibiting uses other than for conservation. An additional 106-acre parcel was purchased with Environmental Protection Agency settlement funds, provided pursuant to a court-order consent decree and disbursed by the National Fish and Wildlife Foundation. The agreement with the Foundation states we must manage the property for conservation purposes with no latitude to allow degradation of habitat. The Conservancy also acquired and then transferred over 1,316 acres to the Commission. Based on the substantial public and private financial investment and associated management restrictions imposed on these properties, UDOT must conduct a thorough analysis for potential direct/indirect impacts and the legal ramifications of converting their status away from conservation to transportation purposes. The Conservancy also stated that the EIS remains silent on UDOT's plans to mitigate indirect wildlife impacts and lacks commitment to provide such mitigation. The Conservancy recommends a detailed plan be developed.*

UDOT has reviewed the information provided by The Nature Conservancy regarding the NAWCA funds. Based on a review of the information, the properties can be conveyed in coordination with and subject to written approvals by the NAWCA Grant Administrator(s). The Nature Conservancy agreed with this finding in an email on June 9, 2017.

See response 32.14.2H regarding potential indirect and direct impacts to wildlife habitat adjacent to the WDC. The Draft EIS states that the WDC would directly affect about 72 acres of the 4,400-acre Great Salt Lake Shorelands Preserve. The Preserve was established in 1984 with the Utah Reclamation, Mitigation, and Conservation Commission's involvement starting in 1994. These dates are after some of the initial planning for the WDC, which dates back to the 1960s. Although the WDC would affect parts of the preserve, the WDC Project is consistent with the 1996 Wetland Conservation Plan and the 2001 Davis County Shorelands Master Plan. Both plans identify the WDC as the eastern boundary of the preserve and state that mitigation for wetland impacts from the WDC could be used to purchase higher-value wetlands on private land within the preserve. Both plans state that there should be coordination among UDOT; the Utah Reclamation, Mitigation, and Conservation Commission; and The Nature Conservancy during the planning phase of the WDC Project.

UDOT has been working with the Conservancy throughout the EIS process to develop suitable mitigation, which is included in Chapter 14, Ecosystem Resources, of this Final EIS. UDOT will work with the Conservancy during the right-of-way acquisition process regarding

the purchase of property directly affected. The Draft EIS is not silent on potential mitigation and states, “UDOT, in coordination with the resource agencies, is developing a methodology to quantify appropriate mitigation for the indirect impacts to wildlife. More information on this analysis will be included in the Final EIS.” UDOT has been working with the Conservancy and the Utah Reclamation, Mitigation, and Conservation Commission since the start of the EIS process to discuss impacts to the preserve and potential mitigation measures. This has been an ongoing process as the alternative alignments have been finalized.

Chapter 3, Land Use, discusses the direct impacts to the preserve; the WDC would not be consistent with the establishment of the preserve, but it would be consistent with the 1996 Wetland Conservation Plan and the 2001 Davis County Shorelands Master Plan. The Nature Conservancy was a committee member for both plans.

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- K.** *The Nature Conservancy commented that page 14-33 of the Draft EIS states, “Any noise interference or other effects on wildlife should be within these buffer distances” (0 to 800 feet). Page 14-42, UDOT also states that “The distance at which a species could be affected by noise can extend from 125 feet to much greater than 3,500 feet from the highway.” The Conservancy feels impacts may occur at distances up to 1,200 meters.*

This Final EIS has been revised based on some of the comments provided by The Nature Conservancy. The scientific studies found varying results regarding the potential for indirect effects from highways. Some studies show that effects are limited to distances as small as 125 feet and others at distances up to 1,200 meters (3,937 feet) or greater. Other studies show that some species would experience no effect or positive effects.

The Draft EIS does not conclude that the indirect effects on wildlife would be insignificant. The Draft EIS states the results from the different scientific studies regarding the effects from a road. Like the Draft EIS, the studies do not conclude whether the impacts are significant or insignificant; they simply provide the range of potential effects from a road. However, a new Section 14.4.3.9, Summary of General Direct and Indirect Wildlife Habitat Impacts from the Action Alternatives, was added to this Final EIS. This section takes into account all of the factors stated in the comment to disclose the potential for indirect effects based on the numerous scientific studies provided by the U.S. Fish and Wildlife Service.

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- L.** *The Nature Conservancy commented that the Draft EIS states that “a few studies have been conducted regarding the numbers of shorebirds that use the Great Salt Lake (Paul and Manning).” The Conservancy stated that the waterbird survey omitted was in fact an extensive survey conducted over 5 years (1997 to 2001) by the Utah Division of Wildlife Resources.*

The Paul and Manning reference is included in Section 14.5, References, as *Great Salt Lake Waterbird Survey Five-Year Report (1997–2001)*. Thus the waterbird survey was not omitted and in fact was used as part of the Draft EIS evaluation.

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- M.** *Commenters stated that the wildlife habitat assessment underestimated the habitat values of the Great Salt Lake shoreland and the Great Salt Lake Shorelands Preserve and that they should not be considered intensively altered or degraded by human activities. Other commenters stated that all wetlands or habitat in the Great Salt Lake shorelands or Great Salt Lake Shorelands Preserve should be considered invaluable or the highest quality, and no impacts should be tolerated or be considered acceptable. Other commenters stated that different representative species should have been used in the analysis and that cropland and some urban habitat do provide value and should not have been given a low score.*

As described in Chapter 14, Ecosystem Resources, the WDC team evaluated wildlife habitat for type and quality using a methodology developed with input and feedback from the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, and the Utah Division of Wildlife Resources. Most of the areas in the Great Salt Lake Shorelands Preserve are considered high quality. However, some areas in the preserve or the Great Salt Lake shorelands area are grazed, farmed, or otherwise altered by agricultural or human uses and were not considered high quality in the wildlife habitat assessment.

It is also true that all lands in this area have been subject to human disturbances and alterations, including lands in the preserve. However, all lands in the WDC wildlife habitat assessment, both in the preserve and in other areas, were evaluated fairly and equally as to their level of disturbance and quality and value of habitat. Although pasture land is heavily altered, most of this land within the preserve was given a medium- or medium-high-quality rating. Although cropland can be used by some wildlife, it was given a low habitat quality ranking because it is continually altered and managed for agricultural purposes, not as wildlife habitat. Cropland disturbances include the use of fertilizers and weed-control chemicals in some cases. Compared to the natural habitat along the shorelands of the Great Salt Lake, pastures and croplands are not high-quality habitats.

The habitat quality assessment was based on representative species that are listed as sensitive or whose necessary habitat would likely be affected by the WDC. Not all taxonomic groups of organisms that exist in Utah could be represented in the assessment, but the WDC team believes that, by focusing on the chosen representative species, they in effect become umbrella species; habitats that are of high value to these sensitive species are likely also of value to other, more-common species. So, if a parcel is recorded and treated in the analysis as high value to the representative sensitive species, it in effect becomes high value for all species that might use that parcel.

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- N.** *Great Salt Lake Audubon commented that the WDC Project will impose vehicular bird mortality and unprecedented loss of life through nesting habitat destruction and daily vehicular mortality of a large number of migratory birds. This conscious “taking” and “killing” of migratory birds is a violation of the Migratory Bird Treaty Act.*

The potential impacts of the WDC on migratory birds are evaluated in Chapter 14, Ecosystem Resources. A “take” under the Migratory Bird Treaty Act is defined as “to pursue, hunt,

shoot, wound, kill, trap, capture, or collect [a bird], or any attempt to carry out these activities.” A take does not include habitat destruction or alteration, as long as there is not a direct taking of birds, nests, eggs, or parts thereof.

The activities associated with highway projects that are most likely to result in take of migratory birds include, but are not limited to, clearing or grubbing of migratory bird nesting habitat during the nesting season when eggs or young are likely to be present, bridge cleaning, painting, demolition, or reconstruction where bird nests (for example, swallow nests) are present. For the WDC Project, these activities would occur during construction.

The WDC Project includes mitigation for construction impacts. This mitigation includes scheduling clearing and grubbing of vegetation to occur outside the migratory bird nesting season to make the area unattractive to nesting during nesting season. If clearing and grubbing of vegetation of any kind will occur during the migratory bird nesting season (March 15 through August 1), UDOT or its contractor will conduct preconstruction nesting surveys of the area that would be disturbed no more than 10 days before ground-disturbing activities to determine whether active bird nests are present. If active nests are found, the construction contractor will leave them untouched and will implement a 50-foot buffer of no disturbance until the young have fledged. Vegetation clearing or disturbance outside of the migratory bird nesting season (August 2 through March 14) can occur without preconstruction surveys if no raptor nests or nest buffers are within the area to be cleared. UDOT and its contractor will coordinate with the U.S. Fish and Wildlife Service and the Utah Division of Wildlife Resources during the construction period.

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- O.** *Great Salt Lake Audubon commented that all remaining wetlands, playas, and associated upland mound habitat whether classified as “jurisdictional” or not provides extremely high wildlife functional value, and this should not be considered low- or very-low-quality habitat for migratory birds.*

FHWA follows Executive Order 11990, Protection of Wetlands, which requires mitigation for impacts to all wetland areas, including those that are nonjurisdictional, and bases mitigation on the function and value of the wetlands. None of the habitats described in the comment were rated as low- or very-low-quality habitat. These ratings were given only to actively managed croplands, hayfields, and alfalfa fields or pasture land that is heavily or frequently disturbed by current agricultural activities. Most of the land within the Great Salt Lake Shorelands Preserve, within the Farmington Bay Waterfowl Management Area, and along the Great Salt Lake shore was given a high-quality habitat rating.

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- P.** *Great Salt Lake Audubon finds that the UDOT/FHWA statement “These effects could cause a minor, detectable change in wildlife, but the change would not affect the viability of any species in the ecosystem impact analysis area” (page 14-40) is not accurate and is not supported by peer-reviewed research. Great Salt Lake Audubon believes, based on peer-reviewed research, that the population viability of some migratory and resident bird species may be significantly adversely affected by road mortality, especially when considered cumulatively along with other recent transportation projects constructed within the Great*

*Salt Lake shoreline ecosystem wetland and upland habitat (i.e., Legacy Highway). Numerous studies have found that roads/freeways significantly affect local populations of wildlife (Lode 2000, Puglisi et al. 1974, Maehr et al. 1991, and many others). Of specific concern to the Great Salt Lake ecosystem impact analysis area is owl species, including owls that are listed as state sensitive (i.e., burrowing owl and low-flying short-eared owls) (Moore and Mangel 1996, Catlin and Rosenberg 2006, Kociolek et al. 2011, and Boves and Belthoff 2012). Great Salt Lake Audubon requests the text in this section of the Draft EIS be revised to include these reference sources and a discussion of these significant adverse impacts.*

Section 14.4.3.2, Highway Mortality, evaluates the potential for impacts to wildlife from vehicle collisions. The text on page 14-40 has been revised to delete the word *minor*. The WDC team reviewed an extensive amount of scientific literature and, based on this literature, does not believe that the viability of any species would be affected by the WDC based on the information in the studies.

Both owl species mentioned in the comment were evaluated in the Draft EIS in Section 14.4.3.7, Threatened, Endangered, and Sensitive Species. Regarding the burrowing owl, no recent records (since 1984) were located, nor were any burrowing owls observed by the WDC wildlife survey crew. Little potential habitat exists because of the disruptive land uses in the area, such as tilled croplands and residential development. The area could also be less desirable because of the number of pets (cats and dogs) from the area's farms and housing developments and other predatory species such as red foxes and raccoons in the area.

The short-eared owl species has been observed in the 1980s and 1990s in some of the Great Salt Lake wildlife management areas such as Howard Slough Waterfowl Management Area and Bear River Waterfowl Management Area. Additionally, seven short-eared owls were identified in the Great Salt Lake Shorelands Preserve during the 2013 Nature Conservancy bird surveys. The WDC team does not anticipate that the WDC would directly affect any short-eared owl nesting habitat since it is outside the proposed right-of-way. However, the indirect wildlife effects from the WDC action alternatives on individual owls could result from habitat fragmentation and associated edge effects, mortality to owls from vehicles, noise, pollution, and visual disturbances (lights and vehicles). It is likely that individual owls could be affected by the WDC, but the WDC would not adversely affect the greater species population.

Finally, the WDC team reviewed the studies referenced in Great Salt Lake Audubon's comments and has updated this Final EIS based on some of the studies provided. The study "The Effects of Road Networks on Bird Populations" (see comment 906 in Appendix 32B, Reproductions of Comments on the Draft EIS, of this Final EIS) states that, of the many effects of roads, it appears that road mortality and traffic noise have the most substantial effects on birds relative to other effects and taxonomic groups.

Chapter 14, Ecosystem Resources, of the Draft EIS provides separate sections that address these issues at length. All of the other potential effects on wildlife stated in the studies provided by Great Salt Lake Audubon were also considered in the Draft EIS. A new Section 14.4.3.9, Summary of General Direct and Indirect Wildlife Habitat Impacts from the Action



Alternatives, has been added to this Final EIS to evaluate the combined direct and indirect impacts of highways on wildlife.

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- Q.** *Great Salt Lake Audubon commented that UDOT/FHWA’s proposed high-speed freeway alignment along Glovers Lane will be constructed a few hundred feet south of the highly successful Great Salt Nature Center Boy Scouts of America Great Blue Heron Rookery Project. This ingenious children’s project produces numerous great blue heron fledglings every year. If the freeway is built along Glovers Lane, many fledglings may be killed by fast-moving vehicles and large semi-trucks while taking their first northward flight stretching their broad wings across the large pond just feet from the proposed freeway route. Loss of fledgling herons will be traumatic for the children involved in this special project and also for the thousands of nature center visitors who closely follow the growth and development of these young birds from hatchlings to adults.*

The WDC roadway would be about 600 feet north of the northeast corner of the large pond mentioned in the comment. Given the distance of the roadway from the project and pond, no loss of fledglings from the WDC is expected.

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- R.** *Western Resource Advocates commented that the statement that higher lake levels would make shoreline habitat unavailable—regardless of whether or not one of the alternatives is constructed—does not take into account the fact that the lake does not have a major land barrier west of Bluff Road. Large areas of wildlife habitat that characterize the impact analysis area are not found throughout the Great Salt Lake ecosystem during higher lake elevation periods. At high lake levels of 4,207–4,208 feet, most waterfowl management area dikes and privately operated managed wetland systems are at or under salt or brackish water. The analyzed project wetlands do not properly characterize other Great Salt Lake wetlands, especially at high lake levels. When the lake is that high, wetland shoreline characteristics are the wetland types being affected, and this is the major wetland type that characterizes the impact analysis area. Low-gradient shoreline is a critical habitat component at any lake level, and at high lake levels it is scarce around the lake. Therefore, during times of rising levels, the “wider availability of habitats” conditions considered in the Draft EIS do not exist.*

Section 14.4.3.6, Changes in Lake Level and Habitat Availability, in the Draft EIS evaluates how the WDC in combination with changed lake levels would affect the availability of habitat. As stated in the Draft EIS, the overall carrying capacity for wildlife species using the various habitats found around the WDC could decrease proportionally with the decrease in resource availability as the lake level rises. The commenter is correct that the Draft EIS states that the wider availability of habitats makes the impact analysis area less important on a regional scale. With the B Alternatives, most of the affected habitat would be either cropland or pasture land. With rising lake levels, species would be pushed into the area used as either cropland or urban, whether the WDC is built or not. The small amount of habitat affected by the WDC would not represent a substantial reduction in overall habitat availability from the segment from Farmington to Gentile Street in Syracuse. North of Gentile Street, the UDOT

locally preferred alternative would be up against the bluff in a semi-suburban area and would have little impact to the habitat adjacent to the Great Salt Lake. This is one of the primary reasons why the U.S. Fish and Wildlife Service favors this alternative.

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- S.** *Western Resource Advocates commented that, although the Draft EIS properly considers Utah sensitive species, the Great Salt Lake ecosystem warrants a priority list of sensitive species that is much more robust than what the State can bring to bear with its limited resources. For this reason, species with continental and hemispheric importance at the Great Salt Lake are left off the sensitive species list as an artifact of the prioritization process. This should be accounted for in the EIS process.*

UDOT and FHWA have no control over how species are prioritized on these lists, and the agencies evaluated the potential federal and state-listed species as stated in the comment. The species identified in the comment were included in Chapter 14, Ecosystem Resources, and in part of the analysis on the direct and indirect impacts of the WDC. The species' status would not change the results of the evaluation, since the impacts would be same. A new Section 14.4.3.9, Summary of General Direct and Indirect Wildlife Habitat Impacts from the Action Alternatives, has been added to this Final EIS evaluating the combined direct and indirect impacts of highways on wildlife species, including bird species around the lake.

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- T.** *Western Resource Advocates commented to please be more specific about a revegetation and weed management timeline. Draft EIS at 14-108. Identifying it as "immediate" is not sufficient.*

The term *immediate* means once construction is complete and no further disturbance in the area is anticipated. The text has been revised.

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- U.** *Western Resource Advocates commented that the WDC Project should include curbing to prevent wildlife and bird-vehicle collisions from surface travel of birds, geese, and goslings. For example, some birds like Canada geese often nest along the sides of highways, or graze along the sides of highways, and they will walk into oncoming traffic.*

The WDC right-of-way would be fenced; however, as stated by the commenter, this might not stop nesting. Providing curbs on the WDC would present safety issues by placing a small barrier that could be hit by errant vehicles at highway speeds, which would increase the severity of accidents. UDOT's design standards do not allow such barriers in the clear zone of highways such as the WDC. Concrete barriers are used on highways only in areas where, if a vehicle were to leave the highway, the impact of hitting the concrete barrier would be less damaging than the impact of hitting the area protected by the barrier, such as a bridge support, ditch, or stream crossing.

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- V.** *Western Resource Advocates commented that another road effect that is not addressed in the Draft EIS is the impact on migration. Terrestrial animals such as deer, rodents, weasels, reptiles, and amphibians are especially vulnerable to highway barriers when their migratory corridor intersects a road. The intersection of roadways and migratory corridors is a significant cause of mortality for deer (Kassar and Bisonette 2005) and snakes (Shine and Mason 2004).*

Section 14.4.3.1, Wildlife Habitat and Fragmentation, describes the impacts of the WDC on wildlife migration. The section states that the highway would create a physical barrier to some species. Section 14.4.3.2, Highway Mortality, states that the highway would also result in deaths of some wildlife.

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- W.** *Western Resource Advocates commented that lake level dynamics is the major reason not to support the B2 alternative. This route potentially truncates the option to allow the Great Salt Lake to expand naturally. For all practical purposes, if a road is built within the 4,217-foot floodplain, the State will do what is necessary to protect the road in the event of flooding. Avoiding this scenario by planning for a functional ecosystem by protecting Great Salt Lake resources up front will better ensure long-term sustainability.*

In the Draft EIS, Section 14.4.3.6, Changes in Lake Level and Habitat Availability, states that the B Alternatives would have a greater impact to wildlife habitat as a result of rising lake levels. However, it should be noted that all of the A Alternatives would be near the north end of the Great Salt Lake Shorelands Preserve immediately north of Gentile Street in Davis County, where existing noise levels are some of the lowest in the WDC study area. This segment would have greater potential for noise impacts to the preserve property and would bisect farmland and a conservation easement that provide a buffer between the preserve and suburban development. The B Alternatives, which are north and east of this area, would have less noise and no fragmentation impacts to this part of the preserve.

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- X.** *Commenters stated that the WDC alternatives should include culverts and wildlife crossings to prevent wildlife-vehicle collisions.*

Culverts or pipes for all water body crossings (streams, canals, and ditches) would be provided for any of the WDC action alternatives including providing natural bottom drainages. Given the suburban and agricultural land uses east of the WDC alternatives, the WDC team is not aware of any substantial terrestrial migration issue that would warrant including a wildlife overpass or underpass. No wildlife underpasses or overpasses are proposed as part of the WDC alternatives. However, as described in Chapter 2, Alternatives, any of the WDC alternatives would have multiple grade-separated crossings of local roads and trails.

### 32.14.3 Section 14.3.4 – Wetlands and Waters of the U.S.

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- A. *Commenters stated they were concerned about wetland impacts and wondered whether any plans had been developed to replace the wetlands.*

Potential wetland impacts and mitigation options to replace the wetlands are discussed in Chapter 14, Ecosystem Resources. The WDC alternatives would fill between 20 acres and 48 acres depending on the alternative selected. The locally preferred alternative, Alternative B1, would have 48 acres of wetland impacts without the wetland avoidance options and 41 acres with the wetland avoidance options. The wetland mitigation would be determined by the U.S. Army Corps of Engineers once a Clean Water Act Section 404 permit is submitted. Wetland mitigation and mitigation ratios will be based on the U.S. Army Corps of Engineers document *Standard Operating Procedure for Determination of Mitigation Ratios* (USACE 2012) or the current process at the time the permit application is submitted.

Before constructing the selected alternative, UDOT would submit a formal wetland delineation for the selected alternative in compliance with Section 404 of the Clean Water Act and would assess the functional value of the affected wetlands. The total acreage of jurisdictional wetlands identified during this process and the results of the functional assessment would determine the type and amount of mitigation required to offset impacts to waters of the U.S. For example, mitigation could include creating new wetlands from uplands, restoring wetlands in areas that have become uplands, and enhancing and/or preserving existing wetlands.

- B. *Syracuse City requested from the U.S. Army Corps of Engineers that they work together in resolving an alleged unauthorized fill of wetlands at 1700 South now that a locally preferred alternative has been selected in the location of the affected wetland.*

The U.S. Army Corps of Engineers responded on June 4, 2013, to the request from Syracuse City, stating that no final decision on the WDC had been made and that the City should restore the affected wetland.

- C. *Commenters questioned areas identified as wetlands as part of the WDC process. Some commenters stated that areas identified as wetlands would not be wetlands if irrigation water were turned off. Other commenters stated that areas not identified as wetlands by the WDC team should be identified as wetlands.*

Section 14.3.1.3, Methodology for Identifying Wetland and Waters of the U.S., provides an overview of how wetlands were determined during the EIS process. To ensure that wetland boundaries were accurate, UDOT conducted wetland studies in 2010, 2011, and 2012 and again in 2016. The 2010 and 2011 preliminary wetland inventories were developed in consultation with the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, and the U.S. Fish and Wildlife Service and are described in detail in *Technical Memorandum 8: Wetland Assessment Methodology* (West Davis Corridor Team 2010a) and

*Preliminary Wetland Study Results* (West Davis Corridor Team 2010b). In 2012, the WDC team used the *1987 Corps of Engineers Wetlands Delineation Manual* and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (Environmental Laboratory 1987, 2008) to identify and map the wetlands in the wetlands impact analysis area. During this process, UDOT dug about 500 shovel test pits to verify wetland soils. In 2016, the WDC team conducted a wetland functional assessment of wetlands within the WDC study area; this assessment included a re-evaluation of the 2012 study.

Wetland inventories can consider only the conditions that are present when the surveys are conducted. UDOT and FHWA cannot control factors such as irrigation water. Artificially irrigated areas generally are not considered waters of the U.S.

The maps in the WDC Draft EIS and on the WDC website show the areas identified as wetlands in the WDC study area.

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- D.** *Farmington City, Great Salt Lake Audubon, and others stated that Alternative B1 has the largest number of impacts to wetlands compared to the other alternatives. The Clean Water Act guidelines specifically require that “no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences.” 40 CFR 230.10(a). Based on this provision, the applicant is required in every case (irrespective of whether the discharge site is a special aquatic site or whether the activity associated with the discharge is water dependent) to evaluate opportunities for use of non-aquatic areas and other aquatic sites that would result in less adverse impact on the aquatic ecosystem. A permit cannot be issued, therefore, in circumstances where a less environmentally damaging practicable alternative for the proposed discharge exists [except as provided for under [Clean Water Act] Section 404(b)(2)]. Here, the agency did not do a complete wetlands delineation for the Draft EIS and is saving that for the Section 404 permitting process. The agency also appears to be relying on the other B Alternatives’ direct impacts to Section 4(f) properties as justification that this is the only practicable alternative, because the other alternatives have significant adverse environmental consequences.*

*Great Salt Lake Audubon also commented that the alternative violates federal “no net loss of wetlands” policy and Executive Order 11990, Protection of Wetlands.*

As stated in the Draft EIS, the WDC team is aware of the requirements of the Clean Water Act and will submit a permit application to the U.S. Army Corps of Engineers, which will evaluate the alternatives in making a permit decision based on the information in the EIS. The WDC team’s coordination with the U.S. Army Corps of Engineers includes determining which alternative meets the intent of the Clean Water Act. It should be noted that the U.S. Army Corps of Engineers has stated that, although the A Alternatives would fill fewer acres of wetlands, they would have a greater impact than the B Alternatives as a result of being closer to important wetland and wildlife habitat adjacent to the Great Salt Lake.

The WDC Project is not in violation of the “no net loss of wetlands” policy, since appropriate wetland mitigation will be undertaken to ensure that there is no overall net loss. Finally, Executive Order 11990 requires avoidance of construction in wetlands unless there is no practicable alternative to construction in the wetland, and the proposed action includes all practicable measures to minimize harm. In the case of the WDC Project, there are no practicable alternatives that avoid impacts to wetlands, and UDOT has taken measures to minimize the impacts to the wetlands. See response 32.14.3C regarding the wetland delineations conducted as part of the WDC Project.

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- E.** *The U.S. Army Corps of Engineers commented that, once a permit application is received, its evaluation of the WDC Project under the Clean Water Act Guidelines will reflect the severity of the potential for significant adverse impacts on the Great Salt Lake ecosystem. The Corps also commented that Section 2.4 of the Draft EIS identifies Alternative B1 as UDOT’s “Locally Preferred Alternative” for the WDC Project. We note that Alternative B1 has the most acres of direct and indirect impacts to jurisdictional waters of all the B Alternatives. The Guidelines restrict the issuance of a permit for a discharge if there is a practicable alternative to the proposed discharge that would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences. Based on the rationale provided in Section 2.4, we believe that other alternatives presented in the Draft EIS could be permitted that would have less impact to the aquatic ecosystem. Most importantly, there are alternatives presented that would have less impact, both direct and indirect, on waters adjacent to the Great Salt Lake. Based on available information, we believe the Locally Preferred Alternative does not represent the least environmentally damaging practicable alternative.*

The EIS states that, as part of the Clean Water Act permitting process, the U.S. Army Corps of Engineers will decide which alternative satisfies the guidelines in Section 404(b)(1) of the Clean Water Act. The WDC team will continue working with the U.S. Army Corps of Engineers in identifying the least damaging practicable alternative.

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- F.** *The U.S. Army Corps of Engineers commented that there is the potential for additional modifications to the alternatives that would further avoid and minimize impacts to the aquatic environment.*

Based on input provided by the U.S. Army Corps of Engineers; the U.S. Environmental Protection Agency; the Utah Reclamation, Mitigation, and Conservation Commission; the U.S. Fish and Wildlife Service; and The Nature Conservancy, eastern options in Farmington and in Layton around 2200 West/1000 South have been added to this Final EIS as wetland avoidance options.

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- G.** *The U.S. Army Corps of Engineers commented the EIS should include Executive Order 11990, Protection of Wetlands, under Section 14.2, Regulatory Setting.*

Section 14.2.4, Clean Water Act, of this Final EIS has been updated to state that FHWA must comply with Executive Order 11990.

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- H.** *The U.S. Army Corps of Engineers stated they are very supportive of the joint lead agencies' decision to identify and map potentially jurisdictional waters using the 1987 Corps of Engineers Wetlands Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). Although the effort required to delineate wetlands within the 8,265-acre wetlands impact analysis area involved a substantial commitment of resources, we believe that the accuracy and the level of detail gained provides a solid basis for calculating acreages of impacts between alternative alignments. The Methodology for Determining Wetland Quality subheading in Section 14.3.1.3 describes the checklist method used to generate an overall quality rating for each wetland. This facilitated methodology was used to save time and resources while evaluating the potential alternatives impacts at the planning level. This section does not mention whether or not the joint lead agencies would complete a more thorough functional assessment using the more extensively tested and accepted UDOT Wetland Functional Assessment Method for all alternatives carried forward for detailed analysis at a later date. We note that Technical Memorandum 8 states that this full UDOT method would be used to assess wetlands for the Preferred Alternative; however, it is our opinion that all alignments should be assessed at the same level and with the same methods. The joint lead agencies should now complete the more thorough functional assessment for each build alternative in order to produce a consistent level of information with which to compare the alternatives' functional impacts to waters.*

*In addition, the U.S. Environmental Protection Agency commented that the methods used do not properly quantify Category II wetlands and the current analysis reduces their value. The U.S. Environmental Protection Agency also commented that they did not provide concurrence on this approach and expressed uncertainties. They recommended that, for the Final EIS, UDOT's Functional Assessment Method definition for the importance of Category II wetlands be applied to medium-quality wetlands in the Draft EIS because they provide important function and might be misinterpreted when given a medium-quality ranking.*

The WDC team thought it was important to conduct a complete wetland delineation for all of the reasonable alternatives considered in the EIS given the scrutiny of and importance of wetlands in the WDC study area. In addition, at the request of the resource agencies and to address the comments provided above, UDOT conducted a full functional assessment in 2016 using the UDOT methods on all wetlands within the ecosystem resources impact analysis area and on proposed mitigation properties.

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- I.** *The U.S. Army Corps of Engineers commented that Section 14.3.2.2 of the Draft EIS states that springs would be identified later as part of the [Clean Water Act] Section 404 permitting process. The locations of springs should have been mapped during the 2012 delineation of the wetland impact analysis area. This information would assist in the avoidance and minimization of impacts to wetland hydrology and to these irreplaceable aquatic resources. Since springs are often a hydrology source for wetlands downstream, the impact to a spring or other groundwater discharge point may also indirectly impact wetlands a significant distance away from the spring. This seems to contradict statements in Section 14.3.1.3. Please clarify.*

This Final EIS has been revised. During the 2012 wetland delineation surveys, springs were considered as part of the survey effort. However, no springs were found during the survey.

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- J.** *The U.S. Army Corps of Engineers stated that Section 14.3.2.3 describes the conservation areas within and adjacent to the project area. When evaluating potential impacts from a proposed project, any waters, including streams and ponds within areas that meet this definition, should be quantified as a special aquatic sites in the affected environment and environmental consequences sections of the Draft EIS since this designation is important to the [Clean Water Act Section] 404(b)(1) analysis.*

Waters, streams, and ponds within the conservation areas are included in the EIS ecosystem analysis as part of the aquatic environment. Table 14-12, Impacts to the Great Salt Lake Shorelands Preserve from All Alternatives, of this Final EIS shows the wetland within this area that would be affected. None of the other conservation areas would be directly affected by or within 300 feet of the WDC.

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- K.** *The U.S. Army Corps of Engineers commented that Section 14.3.4 includes a statement that the Corps has identified the ordinary high-water mark of the Great Salt Lake as 4,217 feet above mean sea level (MSL). This is incorrect; the Utah Regulatory Office has a policy of using 4,205 feet MSL as the ordinary high-water mark of the Great Salt Lake. The 4,217 feet MSL water elevation is the 100-year floodplain along the east shore of the Lake.*

The text has been revised to state that the 4,217-foot elevation is associated with the 100-year floodplain.



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- L.** *The U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency stated that, after reviewing the information provided in the Draft EIS, they are supportive of the Bluff Road alignment of the B Alternatives since this alignment would locate the WDC farther from the wetlands adjacent to the Great Salt Lake. Although the B Alternatives have higher direct and indirect (within 300 feet) wetland impacts than the A Alternatives, we believe that this would be environmentally preferable to impacting wetlands adjacent the Great Salt Lake because of their substantially higher wildlife functions and services. In the southern portion of the WDC Project, the Draft EIS identifies two alignments, one that follows Glovers Lane in Farmington (Alternatives A1, A2, B1, and B2) and another near Shepard Lane along the Farmington–Kaysville border (Alternatives A3, A4, B3, and B4). We believe that the wetlands along Glovers Lane have substantially higher functions for water quality and wildlife than the wetlands along Shepard Lane. There are two potential alignments in the northern section of the B Alternatives: one east of 4500 West (Alternatives B1 and B3) and one west of 4500 West (Alternatives B2 and B4). The eastern alignment would result in more direct wetland impacts (approximately 4.5 acres) and substantially more indirect wetland impacts within 300 feet of the right-of-way. Although we highly encourage the joint lead agencies to locate the alignment away from wetlands adjacent to the Great Salt Lake, the U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency believe that the western alignment may have less overall impacts to jurisdictional waters under these two options. We note that the Draft EIS does not break down the indirect wetland impacts per segment. We recommend that this should be corrected to allow for more detailed comparisons.*

The WDC team acknowledges the U.S. Army Corps of Engineers and U.S. Environmental Protection Agency comments regarding the B Alternatives as having the least impacts to the aquatic ecosystem with the easterly alignment in Syracuse. The WDC team will continue to work with the U.S. Army Corps of Engineers regarding the southern and northern options of the B Alternatives as part of the permitting process. Section 2.4, Identification of the Preferred Alternative, of the Draft EIS provides a segment-by-segment breakdown of the direct and indirect impacts to wetlands. Additionally, UDOT has developed two wetland avoidance options to further minimize wetland impacts.

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- M.** *The U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency stated that, north of Shepard Lane, all eight build alternatives follow a “shared” alignment in West Kaysville until it crosses Gentile Street. Throughout this alignment, the WDC would have direct and indirect impacts to wetlands adjacent to the Great Salt Lake. Although we agree that some of these impacts are unavoidable, we believe that there are areas where the WDC alignment could be modified to further distance it from the Great Salt Lake. The U.S. Environmental Protection Agency further commented the Final EIS should identify how potential impacts will be mitigated.*

Based on input provided by the U.S. Army Corps of Engineers; the U.S. Environmental Protection Agency; the Utah Reclamation, Mitigation, and Conservation Commission; the U.S. Fish and Wildlife Service; and The Nature Conservancy, eastern options in Farmington and in Layton around 2200 West/1000 South have been added to this Final EIS as wetland

avoidance options. Chapter 14, Ecosystem Resources, of this Final EIS has been revised to provide more details regarding the wetland and wildlife mitigation proposed for the WDC Project.

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- N.** *The U.S. Army Corps of Engineers stated that another of their concerns in the northern segment pertains to the A Alternatives along 5100 West in Hooper (Alternatives A2 and A4) that would terminate the roadway close to aquatic resources along the Weber River. This would likely promote development in this area that would constitute a cumulative impact to waters. Additionally, it is highly probable that the terminus would serve as a connection point for future expansion of the WDC. Due to its proximity to the Weber River, future expansion of the WDC from this terminus would have more wetland impacts than an alternative to the east. The current termini of the A Alternatives would predetermine the locations of a future northern expansion of this corridor and limit the potential for avoidance and minimization of aquatic resource impacts. Choosing the east or west B Alternative alignments in the northern segment would allow more flexibility in avoiding and minimizing impacts to waters with future expansion of this corridor to the north.*

The section titled Potential Indirect Effects from a Future Transportation Corridor in Weber County on page 23-22 of Chapter 23, Indirect Effects, of the Draft EIS states that, if the WDC is built, this would increase the probability that a future road north would be constructed, assuming that a need for the road is identified beyond 2040. Note that indirect effects are caused by the proposed action and are later in time or farther removed in distance, but are still reasonably foreseeable. Because the North Legacy Highway is not identified in any long-range plans at this time and no funding has been allocated, it is not reasonably foreseeable.

If a need for a North Legacy Highway is identified in the future, the highway would have to go through a similar environmental process as the WDC. That process would identify a logical terminus for the highway, the alternatives to be considered, and the impacts of those alternatives. It is not possible at this time to predict the outcome of the alternatives analysis of that EIS given the numerous variables that each reasonable alternative would bring. However, the WDC team expects that, given the wetlands, wildlife habitat, and agricultural land that would likely be crossed by the North Legacy Highway, the impacts would be similar to those of the WDC.

Finally, the WDC Project has logical termini and has independent utility, and would not preclude consideration of alternatives for reasonably foreseeable transportation improvements in the WDC study area.

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- O.** *Farmington City stated that the wetlands depicted in Farmington's office park are not as widespread as shown in Figure 14-2.*

Figure 14-2, Wetlands by Overall Quality Rating, in Volume IV of the Draft EIS shows the boundary of the 2012 wetland delineation boundary (green dashed line), which did not include the area of the Farmington office park. As shown in Figure 14-2, the data outside the

2012 survey were based on National Wetlands Inventory data, which were the best available information for this area. Because the wetlands in the office park area are outside the direct and indirect wetland impact analysis area, there was no reason to do a detailed inventory, and the National Wetlands Inventory data were used. Updating information in this area would not change the wetland evaluation in the EIS.

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- P.** *Great Salt Lake Audubon finds that the UDOT/FHWA Draft EIS does not address the fact that there will be not opportunity for a buffer zone between the UDOT/FHWA preferred alternative freeway and critical Great Salt Lake shoreline habitat. Buffer zones are required under Clean Water Act Section 404(b)(1) guidelines for a U.S. Environmental Protection Agency– and U.S. Army Corps of Engineers–approved permit. Additionally, during high lake levels, when the exposed shoreline width is constricted and wetland habitat acreage is significantly decreased, wildlife and birds will be forced to move east toward the high-speed freeway or across the freeway to drier land, increasing their risk of vehicular mortality. Great Salt Lake Audubon also commented that appropriate mitigation be applied to wetland impacts and that there should be no net loss of wetlands.*

As stated in the Draft EIS, the WDC team is aware of the requirements of the Clean Water Act and will submit a permit application to the U.S. Army Corps of Engineers, which will evaluate the alternatives in making a Clean Water Act Section 404 permit decision. The permit decision will include appropriate mitigation for wetland impacts as required under the Clean Water Act. The U.S. Army Corps of Engineers is the responsible agency for identifying wetland mitigation and will provide the WDC team with the amount and type of wetland mitigation required based on the project impacts once a permit is approved. This decision would not occur until the U.S. Army Corps of Engineers makes a permit decision. Section 14.4.6.2, Mitigation Measures for Impacts to Wetlands, of the Draft EIS mentions the workshop held with the resources agencies on November 1, 2012, to discuss potential wetland mitigation areas and the types of mitigation. The Draft EIS includes potential wetland mitigation sites discussed at the meeting to give the public and agencies a concept of the mitigation proposed for the project. This Final EIS includes a more detailed discussion of wildlife habitat and wetland mitigation.

The buffer zone rule referred to in the comment requires a buffer of 100 feet from mining activities and streams and does not apply to the WDC Project.

The Draft EIS provides an evaluation under Section 14.4.3.6, Changes in Lake Levels and Habitat Availability, of the impact of varying lake levels and wildlife habitat in relation to the WDC Project.

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- Q.** *Great Salt Lake Audubon [GSLA] commented that, according to the federal Clean Water Act Section 404(b)(1) Guidelines – U.S. Environmental Protection Agency/Corps permit application Alternatives Analysis “practicability presumption,” the Corps will presume that practicable alternatives exist where a project is non–water dependent and will cause discharge into a “special aquatic site.” GSLA finds that the UDOT/FHWA preferred alternative will result in significant adverse impacts to federally protected Great Salt Lake*

*“special aquatic sites,” “Waters of the U.S.,” non-jurisdictional wetlands, uplands, agricultural lands, and prime farmlands. GSLA finds that the UDOT/FHWA Draft EIS is insufficient in recognizing that their entire proposed freeway project is “non–water dependent,” and the Corps must deny a Clean Water Act Section 404 permit based upon the “practicability presumption” that the Corps must presume that practicable alternatives exist where a project is non–water dependent and will cause discharge into a “special aquatic site.” The “Shared Solution” and simple road improvements within west Davis County both pose practicable alternatives to continued destruction of globally important Great Salt Lake shoreline and associated upland wildlife habitat. GSLA finds that the UDOT/FHWA WDC freeway alternatives are not “water-dependent” and will result in permanent, significant adverse impacts to globally unique, irreplaceable environmental resources which cannot be mitigated.*

*The Western Resource Advocates stated that FHWA failed to merge the National Environmental Policy Act /[Section] 404 process as required by policy.*

The U.S. Department of Transportation, the U.S. Environmental Protection Agency, and the U.S. Army Corps of Engineers have established initiatives to improve the Clean Water Act processes and reduce inefficiencies under Section 404 of the Clean Water Act without diminishing protection of the nation’s valuable aquatic resources. The WDC Project followed this process from the start by involving the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, and the U.S. Fish and Wildlife Service and other agencies in the development of the purpose and need, alternatives, and impact evaluation.

First, all agencies agreed with the purpose of and need for the WDC Project. Second, the WDC team worked with the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, and the U.S. Fish and Wildlife Service regarding practicable alternatives. As stated in Section 2.1.5, Consideration of Clean Water Act Section 404(b)(1) during Alternatives Development, both agencies agreed that the alternatives considered in the Draft EIS were the only practicable alternatives that met the project’s purpose.

UDOT did evaluate the other road improvements in west Davis County (including the Shared Solution) that would have less impact to wetlands, but those alternatives either did not meet the project purpose or were not practicable (see Chapter 2, Alternatives, for more information). Thus the WDC process met the intent of the National Environmental Policy Act/Section 404 merger process.

The WDC team will continue to work with the U.S. Army Corps of Engineers regarding the final Clean Water Act permit decision and ways to further minimize impacts. See response 32.2.1G regarding the Shared Solution Alternative.

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- R.** *The U.S. Environmental Protection Agency commented that the Final EIS should include information on the amount, type, and potential locations of mitigation of unavoidable aquatic resource and other environmental impacts to help inform FHWA’s forthcoming selection of a Preferred Alternative. The U.S. Environmental Protection Agency also recommends alignment changes and design features to further minimize aquatic resource impacts. The*

*U.S. Environmental Protection Agency recommends that a more specific commitment to mitigation be included in the Final EIS and provided specific recommendations for mitigation site commitments.*

The WDC team has committed to mitigate direct and indirect wetland impacts and impacts to the Great Salt Lake Shorelands Preserve. The Draft EIS includes information about the potential location and type of mitigation for impacts to the aquatic environment. This Final EIS has been updated with more information about wildlife habitat and wetland mitigation (see Chapter 14, Ecosystem Resources), including which property will be used for mitigation, the type of mitigation, and draft amount of wetland mitigation, including ratios. Section 14.4.7.2, Mitigation Measures for Impacts to Wetlands, of the Draft EIS mentions the workshop held with the U.S. Environmental Protection Agency on November 1, 2012, to discuss potential wetland mitigation areas and the types of mitigation. The Draft EIS includes the potential wetland mitigation sites discussed at the meeting.

However, as the U.S. Environmental Protection Agency understands and as stated in the Draft EIS, the U.S. Army Corps of Engineers is responsible for determining direct and indirect wetland mitigation, and, since a Clean Water Act permit decision has not been made, it is not possible to provide specific information on unavoidable wetland impacts from the WDC. The EIS includes general concepts at this time. The WDC team added some of the U.S. Environmental Protection Agency's recommendations regarding wetland mitigation into this Final EIS; however, the recommendations to provide higher mitigation ratios based on the type of mitigation and the locations of the wetland impacts were not included since this will be decided during the permitting process.

As the U.S. Environmental Protection Agency understands, wetland mitigation ratios will be determined by the U.S. Army Corps of Engineers during the permitting process, and neither UDOT nor FHWA can establish those ratios. UDOT and FHWA will continue to follow the guidance established under Executive Order 11990, Protection of Wetlands, and will apply design modifications and minimization actions to minimize impacts in sensitive, higher-quality wetland areas that support aquatic-dependent wildlife species.

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- S.** *The U.S. Environmental Protection Agency and other commenters recommend that the Final EIS clarify the Clean Water Act implementing regulations requirements to sequence avoidance, minimization, and mitigation activities for a project, and clarify what activities minimize impacts versus mitigate for unavoidable adverse impacts.*

Chapter 14, Ecosystem Resources, of this Final EIS has been updated to include information regarding how the WDC team avoided and minimized wetland impacts through design and alignment modifications. Many of these measures were used to develop the detailed mitigation plan included in this Final EIS.

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- T.** *The U.S. Environmental Protection Agency commented that the Draft EIS incorrectly states that the U.S. Army Corps of Engineers will conduct a Clean Water Act alternatives analysis and select a LEDPA [least environmentally damaging practicable alternative]. This statement incorrectly assigns the role of identifying the LEDPA to the Corps. The applicant must provide sufficient information to show there is no other less damaging practicable alternative to the proposed action.*

The WDC team has revised the text to state that the U.S. Army Corps of Engineers will use the information in this Final EIS in making a Clean Water Act Section 404 permitting decision. The WDC team will provide the appropriate information regarding the LEDPA to the U.S. Army Corps of Engineers in its Clean Water Act Section 404 permit application. The U.S. Army Corps of Engineers will determine whether the preferred alternative is the LEDPA.

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- U.** *Commenters stated that wetlands should be described as special aquatic sites in Section 14.4.1.2, since the Clean Water Act Section 404 regulations apply to special aquatic sites, not just wetlands.*

Wetlands are described as special aquatic sites in Section 14.2.4, Clean Water Act, of the Draft EIS. It is not necessary to repeat this in Section 14.4.1.2, Methodology for Identifying Impacts to Wetlands and Waters of the U.S.

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- V.** *Commenters stated that the Clean Water Act regulations do not use the term “environmentally” in the least environmentally damaging practicable alternative (LEDPA). Commenters stated that the Clean Water Act regulations describe only a least damaging practicable alternative.*

The term *LEDPA* is commonly used by the U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency in describing how the Clean Water Act is used in evaluating project alternatives. The regulation at 40 CFR 230.10(a) states that no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact to the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences.

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- W.** *A commenter requested information about what percentage of wetlands in Utah would be affected by the WDC alternatives.*

As described in Section 24.4.1.3, Contribution of the WDC to Cumulative Impacts, of the Draft EIS, the total direct and indirect loss of wetlands from the WDC would be less than 1% of the remaining wetlands in either the impact analysis area for cumulative impacts to ecosystem resources or the Ogden hydrologic unit of the Great Salt Lake and thus would be much less than 1% of the wetlands in Utah.

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- X.** *Western Resource Advocates commented that the quantity of wetlands designated in the Draft EIS is inconsistent with its source documents. In the Wetland Assessment Methodology 2010 report, the wetland study area is delineated as 15,646 acres. In the 2011 Supplement to the Preliminary Wetland Study Results Report, the wetland study area is delineated as 33,700 acres. The Supplement also states that the 33,700 acres is 4,700 acres larger than in the 2010 report. In the Draft EIS, the wetland study area is delineated as 8,265 acres. What is the actual size of the wetland study area, and what percentage is it of the size of the actual project study area? The Draft EIS cites the use of National Wetlands Inventory (NWI), Legacy [Parkway], and recon[naissance]-level field surveys to identify potential wetland areas. Draft EIS at [page] 14-9. Why wasn't National Agricultural Imagery Program imagery used as stated in the Wetland Assessment Methodology 2010 report? This would have been second best to the multispectral imagery.*

When the initial wetland methodology report was prepared in 2010, a smaller wetland survey area was initially proposed, but, as a result of public comments and changes to alternatives after the report was prepared, the actual survey area in 2010 was expanded to 29,000 acres. In 2011, a supplemental survey was conducted, and the wetland study area was expanded again (to 33,700 acres) to account for additional areas in Farmington. After the alternatives-screening process and the identification of the reasonable alternatives for the Draft EIS, the WDC team conducted a more focused wetland delineation in 2012 around the reasonable alternatives (in a survey area of 8,265 acres). The impact analysis in the Draft EIS used the information from the 2012 delineated wetlands for direct and indirect impacts to wetlands and waters of the U.S.

Finally, the aerial photographs that were used for the Draft EIS and used to identify potential wetland areas came from the National Agricultural Imagery Program. The WDC team continued to use the latest available aerial images for the WDC study area. For the delineation of wetlands in 2012, the field survey team used the latest available images and delineated wetlands based on field visits.

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- Y.** *Western Resource Advocates commented that the altered wetlands along the eastern shore of the Great Salt Lake discussed in this section provide a buffer between developed areas and higher-quality wetlands. Draft EIS at [page] 14-11. These should not be looked at as low-quality wetlands that serve very little function. Additional development in this area will push the buffer even farther west, destroying or diminishing existing high-quality wetlands.*

The discussion on page 14-11 is regarding general information around the Great Salt Lake and states that the area along the east shore has been altered by past human activities. This does not mean that wetlands in this area were given a low-quality rating. The WDC team developed a wetland quality methodology in conjunction with the resource agencies (see response 32.14.3H) that was based on an individual evaluation of each wetland. Based on the methodology, many wetlands along the east shore of the Great Salt Lake and some wetlands along the bluff were rated as high quality.

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- Z.** *Western Resource Advocates commented that the EIS should state the source of the “previously surveyed wetlands” outlined in Figure 14-1. Use a different color from that assigned to the NWI [National Wetlands Inventory]. This information would be more effective in a series of four maps zoomed in so the wetlands are actually visible in relation to the proposed alternatives. It is likely that the shape and size of wetlands identified in 2010, 2011, and 2012 will have changed by the time construction begins on this project. How will the project address the dynamic nature of wetlands in the survey area?*

As stated on the figure, most of the “previously identified wetlands” are from the National Wetlands Inventory. Some of the “previously identified wetlands” in the Farmington area are from the wetland studies conducted as part of the Legacy Parkway Project. None of these wetlands would be directly or indirectly affected by the WDC, so detailed surveys of these areas were not conducted. The purpose of including these wetlands was to inform the public that these areas had wetlands and so would not be potential locations for avoidance alternatives. The WDC team will coordinate with the U.S. Army Corps of Engineers regarding when wetland survey data would need to be updated. Typically, the U.S. Army Corps of Engineers considers wetland delineations to be valid for about 5 years. If 5 years have passed, the U.S. Army Corps of Engineers could require a supplemental survey to make sure the original delineation is still accurate.



## 32.15 Chapter 15 – Floodplains

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- A. *Commenters stated that the highway would be affected by fluctuating lake levels, would cause flooding east of the highway, and would act as a berm, and that the WDC should be protected by a berm similar to I-15.*

Chapter 15, Floodplains, provides an evaluation of the WDC’s impacts to floodplains and floodplain impacts to the WDC. Chapter 13, Water Quality, discusses the WDC’s impacts to groundwater. Adherence to appropriate design standards and criteria would reduce surface water impacts to adjoining properties and risks to the highway infrastructure and the traveling public. The roadway is designed with elevations above adjacent floodplain elevations; therefore, flooding would not interfere with the functional use of a transportation facility needed for emergency vehicles or evacuation. Culverts and bridges in regulatory floodplains would be designed to pass the 100-year flood in accordance with FEMA and local floodplain ordinance criteria.

### What is a 100-year flood?

A 100-year flood is a level of flood water that has a 1% chance of occurring in a given location in any given year.

Furthermore, the impacts to natural and beneficial floodplain values would not be significant, because floodplain connectivity would be maintained to reduce these impacts. Maintaining floodplain connectivity under the WDC would allow both passage of flood waters conveyed by tributary streams to the Great Salt Lake and conveyance from the lake to the adjacent floodplain during periods of high water. This connectivity would allow floodplain inundation, establishment of vegetation and habitat, and groundwater recharge to occur similar to current conditions around the roadway facility, thereby maintaining the natural and beneficial floodplain values. Similar to the Legacy Parkway, there is no need to build a berm to protect the WDC from a flood.

- B. *Commenters asked whether rerouting the Haight Creek floodplain with the Shepard Lane alternatives would cause changes to the groundwater and affect houses along the Shepard Lane alternatives.*

After the Draft EIS was released, an evaluation of the Shepard Lane Option determined that the option does not meet FHWA design standards, and therefore the option was determined not to be reasonable and was eliminated from this Final EIS.

The results of the floodplain and water quality analyses documented in Chapter 15, Floodplains, and Chapter 13, Water Quality, respectively, do not anticipate any changes to groundwater or water tables resulting from any of the WDC action alternatives. In-depth, detailed groundwater and floodplain analysis would be conducted for the preferred alternative during the final design phase of the project. Any impact to adjacent properties that is revealed by detailed analysis would be addressed as part of the right-of-way process.

- C. *Farmington City stated that the floodplain analysis is far too conclusory and fails to explore the impacts in detail. All the issues related to habitat and habitat fragmentation mentioned above apply here, yet the floodplains preserved in the Farmington City conservation easements are nowhere mentioned, nor are the impacts thereon. It should be noted that in a summary contained at page 15-21 the transverse crossings are the same for the alternatives utilizing Shepard Lane and Glovers Lane, yet the longitudinal crossings required by the Glovers Lane alternatives are over three times larger than those required by Shepard [Lane] (201.2 vs. 61.8 [acres]). The habitat and other wildlife related issues also require additional inquiry and more-detailed discussion in the cumulative impact section.*

*Farmington City further commented that the EIS erroneously demonstrates that the Glovers Lane Option impact is less than the Shepard Lane Option and that it appears from the information that 100% of the Haight Creek FEMA [Federal Emergency Management Agency] floodplain may be impacted but not 100% of the overall floodplain.*

*Farmington City also commented that it appears that the floodplain impact on the Shepard Lane alignment is less than the 34 acres stated in the analysis.*

Chapter 15, Floodplains, provides a level of floodplain analysis that is proportionate to the level of engineering design available for the EIS. As described in Section 15.4.6, Mitigation Measures, of the Draft EIS // of this Final EIS, more-detailed hydrologic and hydraulic analyses would be performed as needed for the preferred alternative, and the preferred alternative would be designed to meet all applicable FEMA requirements and local floodplain ordinances. Also note that, after the Draft EIS was released, an evaluation of the Shepard Lane Option determined that the option does not meet FHWA design standards, and therefore the option was determined not to be reasonable and was eliminated from this Final EIS. Therefore, no response is provided regarding the Shepard Lane Option.

Chapter 15, Floodplains, states that the ecosystem value of the floodplains is evaluated in Chapter 14, Ecosystem Resources. Therefore the information was not repeated again in the floodplains chapter. The floodplain evaluation included all floodplains in the WDC study area including those within the Farmington conservation easements.

Chapter 24, Cumulative Impacts, provides a detailed analysis of both the impacts to the ecosystem and floodplain values in the WDC study area. Chapter 24 states that the WDC alternatives would not result in a significant adverse impact to natural and beneficial floodplain values and therefore would not contribute to a cumulative floodplain impact.

## 32.16 Chapter 16 – Historic, Archaeological, and Paleontological Resources

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- A.** *The Hopi Tribe responded to the request for comments on the Draft EIS by providing previous coordination letters stating that they look forward to continued coordination with FHWA and UDOT and that all survey reports should be provided to the tribe.*

The WDC team will continue to coordinate with the Hopi Tribe throughout the WDC EIS process. UDOT provided the Hopi Tribe with copies of the archaeological and historic building survey reports.

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- B.** *Commenters questioned why only a 30% archaeological survey was done for the Draft EIS and stated that they thought a 100% archaeological survey should be done.*

As described in Chapter 16, Historic, Archaeological, and Paleontological Resources, of the Draft EIS, the methodology that was used to identify archaeological resources was developed and approved by the Utah State Historic Preservation Officer. In addition to the minimum 30% archaeological survey, the WDC team also conducted literature reviews and consulted with the Utah Division of State History, local governments, historical societies, and Native American tribes to identify any known archaeological sites in the WDC study area. For this Final EIS, a 100% archaeological survey was conducted for all alternatives.

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- C.** *UTA agrees with the D&RGW [Denver & Rio Grande Western Railroad corridor] being a linear historic site and agrees with the adverse effect finding for the Shepard Lane alternatives. UTA stated that they would agree with the No Adverse Effect finding for the Glovers Lane alternatives on the D&RGW corridor if the crossing provided meets horizontal and vertical clearance requirements.*

Comments noted. For historic resources, the Utah State Historic Preservation Officer is the official with jurisdiction for determining the level of effect under Section 106 of the National Historic Preservation Act and has agreed with the finding of “No Adverse Effect” for the Glovers Lane Option.

## 32.17 Chapter 17 – Hazardous Waste Sites

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- A. *The Utah Department of Environmental Quality encouraged UDOT to review the Utah Division of Environmental Response and Remediation’s interactive map to find any areas of potential contamination from the WDC alternatives, and requested that UDOT contact the Utah Department of Environmental Quality if there are any hazardous substances encountered during construction.*

As summarized in Chapter 17, Hazardous Waste Sites, of the EIS, UDOT reviewed all available hazardous waste databases, including the Utah Division of Environmental Response and Remediation’s interactive map. None of the WDC alternatives would affect any known hazardous waste sites. As stated in Section 17.4.5, Mitigation Measures, of the Draft EIS, UDOT and its contractors would follow UDOT’s Standard Specifications and all U.S. Environmental Protection Agency and Utah Department of Environmental Quality regulations for any discovery of hazardous materials during the construction process.

## 32.18 Chapter 18 – Visual Resources

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- A. *Commenters stated that they would experience visual impacts from one of the WDC alternatives, or that the WDC would affect their views.*

Impacts to visual resources are described in Chapter 18, Visual Resources, of the EIS. The EIS concludes that all of the proposed WDC action alternatives would produce mostly high visual quality impacts to viewers in the viewshed, with some areas having moderate visual impacts.

### What is a viewshed?

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A viewshed is all areas where physical changes associated with the WDC alternatives could be seen.

- B. *Commenters stated that the WDC alternatives would cause light pollution. Commenters stated that light pollution can cause health concerns such as sleep issues or cancer.*

New artificial lighting with the WDC alternatives would include street lamps at on ramps and off ramps, luminaries (lighting for highway signs), and traffic headlights. UDOT will use directional, downward-facing lights on poles higher than 25 feet high to minimize any impacts from lights, if the lights meet operational safety requirements. No other lights are currently planned for the mainline of the WDC alternatives. Since traffic headlights are pointed downward to the road, any traffic headlight impacts to areas outside the footprint of the WDC alternatives are expected to be minor.

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- C.** *Commenters stated that they wanted an impact analysis of the Glovers Lane interchange on neighborhoods located east of the interchange in Farmington and Centerville. Commenters asked whether any other options than high-mast lighting would be feasible, and, if so, what the impact of the high-mast lighting would be on nearby neighborhoods.*

Chapter 18, Visual Resources, of this Final EIS has been revised to state that, although the WDC design would include fixtures that shield sideways glare and minimize lighting, the areas of the WDC study area that are near WDC interchanges would have increased illumination. For the Glovers Lane Option, the system-to-system interchange with I-15 and Legacy Parkway would substantially increase the light impact to homes in the surrounding areas, especially the homes to the east that have a view to the west toward the Great Salt Lake. The interchange lighting would add a new element that would obstruct their nighttime views.

## 32.19 Chapter 29 – Energy Impacts

No comments were received on this resource during the Draft EIS public comment period.

## 32.20 Chapter 20 – Construction Impacts

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- A.** *Commenters wanted to know how the project would be constructed once funding is identified.*

See Section 20.3.2, Construction Phasing, of the Draft EIS for information about construction of the WDC. According to the Wasatch Front Regional Transportation Plan 2015–2040, the initial portion of the WDC (I-15/Legacy Parkway to Antelope Drive) would be constructed during Phase 1 of the plan (2015–2024) with all other segments completed by 2034. The actual timing of construction would be based on the availability of funding, the consideration of safety factors, and the need for the roadway improvement.

If FHWA selects a WDC action alternative, funding for the project will be identified in the Record of Decision for the project. If only partial funding is allocated for construction, UDOT would construct portions of the selected alternative based on the amount of the funding while considering safety and operational benefits. Any implemented portion of the selected alternative would need to operate in an independent and acceptable manner with appropriate and functional project limits.

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- B.** *Commenters wanted to know where construction materials such as roadway fill would come from.*

The sources of construction materials would not be determined until a contractor is hired for construction. The procurement of construction materials is usually determined by the contractor.

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- C.** *Commenters questioned the impacts from bringing in fill and construction materials and wanted to know whether the Utah Department of Environmental Quality has a role when UDOT constructs highways.*

As stated in Chapter 20, Construction Impacts, of the EIS, the construction contractor must submit a fugitive-dust emission-control plan to the Utah Department of Environmental Quality before beginning construction. Chapter 20 also describes the air quality construction impacts and impacts from sand and gravel sources and truck hauling during construction.

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- D.** *A commenter stated that constructing the WDC only to Antelope Drive in the first phase of the Regional Transportation Plan (by 2024) would not have a need or purpose, would cause traffic impacts to Syracuse, and would not have a logical connection to other roads.*

As stated in response 32.20A, according to the Wasatch Front Regional Transportation Plan 2015–2040, the initial portion of the WDC (I-15/Legacy Parkway to Antelope Drive) would be constructed during Phase 1 of the plan (2015–2024) with all other segments completed by 2034. The actual timing of construction would be based on the availability of funding and the consideration of safety factors and the need for the roadway improvement.

Since the first phase of the project would connect at Antelope Drive, it would provide a connection to an east-west arterial and would reduce delay and congestion in the WDC study area between Syracuse and Farmington. The construction of the WDC to Antelope Drive, and the WDC likely having a temporary northern terminus north of Antelope Drive, is not anticipated to cause any local congestion on roads in Syracuse.

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- E.** *Western Resource Advocates stated that the Draft EIS failed to consider the individual and cumulative, local and regional air quality impacts from the construction of the proposed project and its alternatives, and concluded that FHWA has failed its National Environmental Policy Act duties.*

Section 20.3.3, Construction Air Quality Impacts, evaluates the potential for construction-related air quality impacts. Because the WDC would be constructed as funding becomes available, it is difficult to determine the emissions associated with construction. The proposed improvements would occur over an extended period, and construction would be local and short term. Thus, any impacts to individual air quality receptors would also be short term. In addition, the construction contractor would be required to follow measures to reduce construction-related air emissions as part of the Emission Control Plan submitted to the State of Utah.

## 32.21 Chapter 21 – Short-Term Uses versus Long-Term Productivity

No comments were received on this chapter during the Draft EIS public comment period.

## 32.22 Chapter 22 – Irreversible and Irretrievable Commitment of Resources

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- A. *Farmington City stated that the EIS acknowledged that there will be irreversible and irretrievable commitments of wetlands, farmland, and wildlife habitat, together with historic, archaeological, and paleontological resources, but the comparative scope of these sorts of impacts between the various alternatives is not discussed. Of greater importance is the failure to discuss the impact on the Farmington City conservation easements. Farmington City is legally obligated to perpetually protect all of the conservation values and purposes articulated therein, yet the preferred alignment will destroy them. Farmington City is obligated to resist this alternative by all means at its disposal, and it may be that UDOT's power of eminent domain is not sufficient to allow a taking of these public interests, even if they were correctly valued.*

Chapter 22, Irreversible and Irretrievable Commitment of Resources, provides a reference to the other chapters of the EIS that discuss the differences in impacts to these resources from the different WDC alternatives. The specific resource chapters provide a more comparative scope of the impacts from each of the WDC alternatives to these resources. See response 32.3F regarding impacts to the Farmington City conservation easements.

## 32.23 Chapter 23 – Indirect Effects

- A. *A commenter wanted to know the difference between homes built with and without the WDC or the difference in land development with and without the project. Other commenters felt that the WDC would encourage urban sprawl.*

An evaluation of the indirect effects of the WDC is provided in Chapter 23, Indirect Effects. As stated in the chapter, the rapid population growth is expected to continue through 2040 with population in Davis and Weber Counties increasing by 28% and 43%, respectively. The past development trends in the indirect effects impact analysis area have led to current land uses of low-density residential (41%), commercial (2%), and industrial (3%).

### What are indirect effects?

Indirect effects are effects that are caused by the proposed project but are later in time or farther removed in distance.

The WDC by itself is not expected to cause more population growth and associated suburban development than what is already projected by the Governor’s Office of Management and Budget. Rather, the WDC would shift and affect the pace and type of some of the projected development planned by the Cities in certain locations along existing roads, particularly in Layton, Syracuse, and West Point. Particular land areas would become more accessible due to the improved regional mobility provided by the WDC and would likely be developed or redeveloped.

As stated in the chapter, the WDC is expected to cause some additional development-related impacts compared to the No-Action Alternative at the proposed 200 North interchange in Kaysville, the 2000 West interchange in Syracuse, and the 1800 North interchange/ intersection in West Point with Alternatives A2 and B2. However, this development would be minor compared to the 66,000 acres of new development expected in Davis and Weber Counties with or without the WDC.

Finally, as part of evaluating the proposed Shared Solution Alternative, a market study of development in the WDC study area was conducted (RCLCO 2015). The study evaluated the potential for residential, commercial, and industrial development that would likely occur by 2040 based on market factors. The study report concluded the following: “It is important to add, finally, that this suggests, as well, that construction of the West Davis Corridor would likely have little impact to broad development trends within west Davis and Weber Counties. Evidence in the Wasatch Front and elsewhere suggests that low-density single-family development likely occurs whether or not the transportation improvements are there to accommodate it, unless more powerful forces (the land runs out, the government steps in, or the economy collapses) constrain development.” The report states that the inexpensive land in the WDC study area will be used to meet the strong demand for single-family homes and that the WDC is unlikely to change development patterns substantially, but could facilitate more-ordered development of the area.



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- B.** *The Utah Division of Water Quality commented that potential indirect effects should not exclude water quality, especially in wetland areas.*

Chapter 13, Water Quality, evaluates the indirect effects on water quality from the WDC, including stormwater runoff and changes to water chemistry. Chapter 14, Ecosystem Resources, provides a detailed evaluation of the indirect effects on wetlands adjacent to the WDC. The WDC team has coordinated with the Division of Water Quality after the release of the Draft EIS and has revised Chapters 13 and 14 of this Final EIS to provide more information about indirect impacts to water quality and wetlands.

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- C.** *Farmington City stated that the fundamental problem with this analysis in the southern portion of the project is that it ignores the planning of Farmington City as discussed in Section IV(A). The main conclusion of this chapter, which is restated throughout, is that growth will occur with or without the WDC, and, because of that, there is a minimal review of the actual induced growth impacts created by the WDC. As a result, the Draft EIS contains a limited review and discussions of the actual indirect effects and cumulative impacts, despite the fact that the Draft EIS also concludes “[t]he WDC would shift and affect the pace and type of some of the projected development planned by the Cities in certain locations” ([page] 3-16). This change in type and pace of growth that will be induced by the WDC must be analyzed in detail for the public in the Draft EIS, so the citizens may understand the future impacts of this road and because such an approach is required by law.*

See response 32.23A regarding indirect effects and induced growth. Chapter 23, Indirect Effects, provides an evaluation of the indirect effects for each city affected by a WDC action alternative, including Farmington. The chapter states that most development would occur in Farmington with or without the WDC. However, some differences are stated near Glovers Lane, since the WDC would affect the planned industrial development south of Glovers Lane. The chapter has been revised to include more information regarding indirect effects in Farmington. In addition, the pace and type of development are evaluated in the analysis by stating areas that will develop faster and with different land uses around the WDC interchanges in Syracuse and West Point.

The evaluation in the chapter also states that Farmington City feels that the Glovers Lane Option would affect the use of the Station Park development and the proposed commercial development adjacent to this area. The WDC team conducted additional travel demand modeling at the request of the City, which showed that the number of vehicles that would access Station Park would be about 5,470 with the Glovers Lane Option and 5,480 with the Shepard Lane Option, a difference of 10 vehicles per day. This is further supported by traffic modeling for the No-Action Alternative in 2040, which shows that about 5,450 vehicles a day would use Station Park, which is a decrease of between 20 to 30 vehicles a day compared to WDC action alternatives.

Between the release of the Draft EIS and the Final EIS, an evaluation of the Shepard Lane Option determined that the option does not meet FHWA design standards and therefore was not a reasonable option and was eliminated from consideration in this Final EIS. UDOT also

included an interchange at 950 North in Farmington as part of the WDC alternatives; this interchange would provide access to Station Park, thus eliminating the concerns of Farmington City that the WDC would bypass the commercial district.

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- D.** *Farmington City stated that there is no comparative alternative-by-alternative analysis for the indirect effects on land use. The Draft EIS generally states the indirect effects for all of the action alternatives as a whole. The Council on Environmental Quality regulations, however, require the Draft EIS to study all indirect effects including “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.” 40 CFR 1508.8(b). The Draft EIS failed to do this by generalizing the analysis of some of these categories of impacts, many of which will have different impacts on the rate of change of land use in the area. For instance, the impacts to the Farmington City conservation easement land from Alternative B1 will hasten changes to the area that will not happen as quickly under other alternatives, yet there is no analysis of the indirect effects thereon as a parcel of property, much less as property protected under [Section] 4(f). Also, if the purposes of these conservation easements are frustrated by this road, which is likely, what will the ultimate use be and how will it be developed? These issues may not be ignored.*

Chapter 23, Indirect Effects, discusses how each alternative would change land uses and potentially induce growth in Farmington. The section specifically mentions that Farmington City planners stated that, if the WDC alternatives bisect the conservation easements, this could make it more difficult for the City to uphold the easements east of the WDC and potentially allow development between the existing developments and the WDC. This chapter has been revised to include more information regarding indirect effects in Farmington.

The Farmington City Master Plan states that the Great Salt Lake is a source of hazard to development and recommends that no significant development should be permitted below an elevation of 4,218 feet (within the Great Salt Lake floodplain). The only recommended uses are agriculture and open space. Therefore, the Farmington City Master Plan states that the City should discourage development within the easements in accordance with their plan.

Finally, the Glovers Lane Option is close to the eastern boundary of the conservation easements, leaving little available land for development between the existing homes and the WDC right-of-way. Development west of the WDC is highly unlikely because these lands are within the floodplain and would have no roadway access. Additionally, the City stated on April 23, 2012, that no development would occur west of the WDC and that currently no sewer or water systems are provided. Farmington City’s General Plan also recommends that no development occur within the Great Salt Lake floodplain because of the potential hazard that flooding would present to development.

In its comments on the Draft EIS, the City has also stated that the Glovers Lane Option provides no access to Farmington, which could slow growth in Farmington (see Comment 869 in Appendix 32B, Reproductions of Comments on the Draft EIS, of this Final EIS). Between the release of the Draft EIS and the Final EIS, UDOT included an interchange at

950 North in Farmington as part of the WDC alternatives. This interchange would provide access to Farmington, thus eliminating the concerns of Farmington City that the WDC would bypass the commercial district. The potential indirect effects of the 950 North interchange are included in Chapter 23, Indirect Effects, of this Final EIS. The analysis determined that the area around the interchange is already developed and thus would not contribute to indirect effects.

Table 23-1, Summary of Indirect Effects of the WDC by City, provides a comparative analysis of the indirect effects by alternative and on each specific city, listing which resources would be affected. Since many of the alignments are similar and the impacts would be similar, some of the analysis provides a general overview of the impacts. Where there would be differences between alternatives, they are listed in the table.

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- E.** *Farmington City stated that the Draft EIS does contain an alternative-by-alternative analysis for indirect impacts to ecosystem resources and wildlife, then returns to a conclusory analysis for farmlands and land use without an alternative-by-alternative analysis. The same is true for economics, community [impacts], and noise. Remarkably, no induced-growth issues are shown to exist until near 200 North in Kaysville (see Figure 23-1). This is simply impossible and underscores the inadequate examination of all aspects of the indirect effects that was undertaken.*

See response 32.23D regarding the alternative-by-alternative analysis and response 32.23C regarding induced-growth issues in Farmington. Regarding 200 North in Kaysville, the analysis concludes that development would be similar to the No-Action Alternative conditions, since the area around the proposed 200 North interchange has been developed with a school and residential areas. Thus, the area has developed without the WDC.

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- F.** *Farmington City stated that it is not simply about induced growth and land development, as the Draft EIS chapter would have the reader believe; there are as many other elements to the inquiry as there are under direct impacts. It is also improper to eliminate the review of indirect effects east of I-15, and the lack of access into Farmington will create significant indirect effects as well by inhibiting growth. There will also be significant, yet undisclosed, indirect effects to social resources, recreation resources, community facilities, public safety and security, public facilities and services, transportation, bicyclist and pedestrian resources, and visual resources.*

Chapter 23, Indirect Effects, states that, for the indirect effects impact analysis area, the WDC is not expected to induce the population growth and associated development projected by the Governor's Office of Management and Budget (GOMB 2008). Instead, the WDC is expected to change the timing or type of development and the location of this development planned by the Cities. Indirect effects not related to induced growth potentially related to the WDC but to construction and operation of the WDC are evaluated under each specific resource chapter in the EIS. As stated in Chapter 23 of this Final EIS, the area east of I-15 is already developed and thus would not likely experience induced-growth impacts. The lack of access and the

potential for indirect effects are discussed under the Farmington heading in Chapter 23 (page 23-9 of the Draft EIS).

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- G.** *Farmington City stated that Figure 23-5, Developed Land Map (2005), and Figure 23-3, Developed Land Map (2030), are not correct. It still shows, among other things, the Station Park area as agricultural.*

Comment noted. As stated in the chapter, the information in these figures was provided by the Governor's Office of Management and Budget to show its assumptions for conditions in 2005 and 2030 in Davis and Weber Counties. The purpose of the figures is to show general development trends, not specific developments, and the figures are not used for detailed city-by-city analysis. The data are reference material that cannot be revised. The EIS land-use figures that are used for detailed city-by-city analysis have been updated to include the Station Park development.

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- H.** *Farmington City stated that the overview information is not correct in that it states that 1100 West will eventually connect to the WDC Glovers Lane Option. The City commented that it appears this may not happen.*

The Farmington City Transportation Master Plan which shows the Glovers Lane Option does identify a local interchange at 1100 West which is independent of the WDC. If the Glovers Lane Option is selected and a need for the interchange is determined at a future date by the City, a separate environmental process would likely need to be conducted and funding would need to be identified. The Glovers Lane Option does not preclude the City from eventually connecting to the WDC at 1100 West.

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- I.** *Farmington City commented that, in Section 23.5.2, the potential indirect effects of farmland in west Farmington related to the Glovers Lane alignment are not discussed.*

Table 23-1, Summary of Indirect Effects of the WDC by City, lists the potential changes to agricultural land from the WDC. It states that, along the WDC in Farmington, more open agricultural land might be available near I-15 and Legacy Parkway, since the City has stated that the Glovers Lane Option could slow some industrial growth in this area. Impacts from farmland fragmentation are discussed in Chapter 4, Farmland.

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- J.** *The U.S. Environmental Protection Agency recommends that Chapter 14, Ecosystem Resources, be cross-referenced in Chapter 23, Indirect Effects. We are also concerned that the indirect effects due to induced growth are underestimated in the Draft EIS. It is unclear what baseline was used to compare WDC-induced growth effects. It was also unclear how the study team was able to differentiate between induced-growth effects from the WDC and anticipated growth in the area without the WDC, especially considering that a variation of the WDC is incorporated into the Cities' land-use and transportation plans. The U.S. Environmental Protection Agency recommends that more information on the potential*

*development east of the WDC on the conservation easements be provided in the Final EIS. Finally, we recommend that the EIS identify mitigation for impacts to areas that will potentially lose protective status.*

Chapter 14, Ecosystem Resources, is cross-referenced in Chapter 23, Indirect Effects, under the discussion of ecosystem resources (page 23-19 of the Draft EIS). An additional cross-reference has been added. The baseline for the resources that were evaluated for impacts was the current conditions. This Final EIS has been updated to clarify the baseline.

Chapter 23, Indirect Effects, has a detailed discussion of how WDC-induced growth impacts were determined. The WDC team held a workshop and then had follow-up meetings with the Cities asking how the WDC study area would develop without the WDC and with the WDC. As described in the Draft EIS, in the workshop, UDOT and the Cities looked at maps without land-use data, and UDOT asked the Cities to draw on the maps how the WDC study area would develop if there were no WDC. Most Cities concluded that, given the good existing transportation infrastructure and the expected growth, the development would likely be similar with or without the WDC.

In addition, as part of evaluating the proposed Shared Solution Alternative, a market study of development in the WDC study area was conducted (RCLCO 2015). The study evaluated the potential for residential, commercial, and industrial development that would likely occur by 2040 based on market factors. The study report concluded the following: “It is important to add, finally, that this suggests, as well, that construction of the West Davis Corridor would likely have little impact to broad development trends within west Davis and Weber Counties. Evidence in the Wasatch Front and elsewhere suggests that low-density single-family development likely occurs whether or not the transportation improvements are there to accommodate it, unless more powerful forces (the land runs out, the government steps in, or the economy collapses) constrain development.”

The report states that the inexpensive land in the WDC study area will be used to meet the strong demand for single-family homes and that the WDC is unlikely to change development patterns substantially, but could facilitate more-ordered development of the area. The fact that many of the Cities included the WDC in their plans does not change the fact that the area has been rapidly developing without the WDC and is expected to do so in the future based on the existing transportation network and low-cost available land.

Finally, more information has been included in this Final EIS regarding the conservation easements. Given that the WDC would be on the eastern edge of the easements and would not provide any access to this area or areas to the west of the WDC, the WDC would not change or cause any induced growth in this area. The protective status of the easements would transfer to UDOT if the property is purchased as part of the project, and therefore no mitigation is provided.

Farmington City commented on the Draft EIS that the Glovers Lane Option could slow growth in Farmington, which would reduce indirect effects on natural resources from growth. Also, the conservation easements are in the Great Salt Lake floodplain and would be difficult to develop.

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- K.** *The U.S. Environmental Protection Agency commented that the Draft EIS does not identify mitigation measures for indirect and secondary [that is, indirect] impacts of the WDC. We understand that FHWA is not necessarily able to require these mitigation measures pursuant to its authorities, and that mitigation for the WDC would largely be implemented through agreements, zoning plans and ordinances, and easements. Nevertheless, a discussion of planned and proposed mitigation measures is important to include in the EIS. We recommend the Final EIS include a comprehensive mitigation plan to address the indirect impacts of the WDC. Please identify the roles of the local communities and other land managers in implementing these measures.*

As discussed in Chapter 23, Indirect Effects, neither the Council on Environmental Quality regulations nor FHWA's environmental guidance documents implementing the National Environmental Policy Act specifically mention mitigating indirect effects associated with highway projects. FHWA policy, as stated in 23 CFR 771.105, discusses mitigation in Sections (d)(1) and (2) for adverse impacts that directly (not indirectly) result from a project; the policy states that mitigation must represent a reasonable public expenditure. The permitting requirements associated with Clean Water Act Section 404(b)(1) guidelines governing the U.S. Army Corps of Engineers permit are limited to requiring mitigation for indirect effects that are specific and predictable in terms of location and degree. More-generalized indirect effects such as those associated with possible future development in a region do not require mitigation.

For a discussion regarding how the Cities could implement ways to minimize indirect effects on ecosystem resources, see Section 14.4.8 Recommendations to Minimize Growth Impacts to the Ecosystem, of this Final EIS.

## 32.24 Chapter 24 – Cumulative Impacts

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- A.** *Commenters questioned the differences in assumptions for the Shepard Lane local interchange between the Shepard Lane Option and the Glovers Lane Option, and questioned why the impacts and costs of the local Shepard Lane interchange were not included with the Glovers Lane Option.*

Between the release of the Draft EIS and the Final EIS, an evaluation of the Shepard Lane Option determined that the option does not meet FHWA design standards and therefore was not a reasonable option and was eliminated from consideration. Therefore, this option is not being considered in this Final EIS.

A local interchange at Shepard Lane and I-15 is identified in Phase 1 (2015 to 2024) of the Wasatch Front Regional Transportation Plan 2015–2040. The scope of that project as planned would be a new bridge with on and off ramps, much smaller than the Shepard Lane Option being considered for the WDC.

With the Glovers Lane Option, the Shepard Lane local interchange would not be built as part of the WDC Project but as a separate project. The Shepard Lane local interchange project could require the construction of a new road in the area currently preserved for a corridor between the Farmington and Kaysville city boundaries. The exact location, design, and impacts of this project are not known until there is additional study and engineering design. The project would likely be a much smaller roadway that would fit within the existing right-of-way without directly affecting any homes. That project would have to go through a separate environmental process before construction could begin. Currently, no funding has been identified for the environmental phase or construction.

### What are cumulative impacts?

Cumulative impacts are the resulting impacts from the proposed action combined with impacts from other past, present, and reasonably foreseeable future actions.

- B.** *The Utah Division of Water Quality requested that references in Chapter 24 be changed to “Division of Water Quality” instead of “Division of Water Resources.”*

The references and citations were updated in this Final EIS.

- C.** *Farmington City stated that cumulative impacts include the direct and indirect impacts to the area combined with reasonable foreseeable future actions. 40 CFR 1508.7. Since the indirect impacts analysis is incomplete, the cumulative impacts analysis is also distorted. This review is inadequate.*

See responses 32.23C–I regarding the indirect effects analysis. The cumulative impacts analysis in Chapter 24, Cumulative Impacts, analyzed all direct and indirect impacts from the WDC as well as past, present, and reasonably foreseeable future actions.

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- D.** *Farmington City stated that Table 24-1 on page 24-10 does not include the South Davis Corridor Transit Study.*

The information in the table includes all reasonably foreseeable projects. These include projects in the Wasatch Front Regional Transportation Plan 2015–2040. Any improvements identified in the South Corridor Davis Transit Study that would be reasonable are included in the Regional Transportation Plan. Finally, Table 24-2, Present and Reasonably Foreseeable Development Actions, of the Draft EIS lists the general amount of development that is likely to occur in the WDC study area, which would include any transit improvements.

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- E.** *Farmington City stated that Table 24-2 should note that the new school in the table should be shown as a “high” school. The table also describes specific number of dwelling units for some cities, but not in Farmington. It is anticipated that Farmington will add 3,430 dwelling units.*

Table 24-2, Present and Reasonably Foreseeable Development Actions, in this Final EIS has been updated with some of the information in the comment. The dwelling units listed in the table are for specific developments that have been platted and had specific information available at the time the Draft EIS was issued. At the time the Draft EIS was issued, there was no specific plat information for the Farmington subdivisions listed in Table 24-2. The 3,430 dwelling units in Farmington are included in Table 24-2 as part of the expected 41,000 new units that will be added to Davis County.



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- F.** *Great Salt Lake Audubon contends that construction of a freeway along the eastern Great Salt Lake shoreline will result in significant, indirect secondary impacts to wildlife and wetland habitat. Additionally, the cumulative impacts of the proposed UDOT/FHWA freeway project, in conjunction with numerous other large-scale ongoing development and minerals-extraction proposals which will affect the Great Salt Lake ecosystem and are pending U.S. Army Corps of Engineers' permit approval, will result in unacceptable and significant cumulative impacts to migratory bird habitat and federally protected wetlands, "special aquatic sites," and "Waters of the U.S." These other large-scale development projects pending U.S. Army Corps of Engineers' permit approval or which will formally apply for a Corps permit in the near future are located within very close proximity of the proposed WDC freeway and within the same geographic area of the Great Salt Lake. These large-scale development proposals are all located along the Great Salt Lake's east and southeast shorelines. Individually and cumulatively, these projects will cause irreparable, significant adverse impacts to globally important Great Salt Lake migratory shorebird breeding, nesting, and rearing habitat.*

The projects mentioned in the comment have been added to the cumulative impacts analysis. The 91,000-acre Great Salt Lake Mineral Company Expansion Project has been reduced to 52,000 acres. Other projects mentioned in the comment, such as the Northwest Quadrant Master Plan, have not been platted and thus are not reasonably foreseeable. That project also assumes that half of the proposed development would include restoring natural habitats and protecting sensitive wetland areas, conservation easements, and open space. As stated in Chapter 24, Cumulative Impacts, with the U.S. Army Corps of Engineers' regulatory program in place, any loss of wetlands from other projects would be mitigated. Finally, the cumulative impacts analysis states that, with the other proposed projects in the area of the WDC Project, there would be a continued trend of substantial loss of wetlands and wildlife habitat.

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- G.** *The U.S. Environmental Protection Agency commented that Section 24.4.1 documents the extent of wetlands and wildlife habitats in the impact analysis area. It is unclear from the Draft EIS how wildlife habitats were estimated. It is also unclear how much of the 45,000 acres of wetland and wildlife habitat referenced is actually wetland habitats, as opposed to wildlife habitat. We recommend the Final EIS clarify the methodology for estimating wildlife habitat in the impact analysis area and the Final EIS differentiate between aquatic wildlife habitat and upland wildlife habitat acreage. The cumulative analysis should also focus on the eastern shore of the Great Salt Lake. Similarly, long-term transportation plans have the WDC extending farther north into Weber County. We also recommend that, for floodplain impacts, the Final EIS analyze the potential for the highway design to alter the way flooding occurs and the influence on development patterns in floodplain areas. It also appears that the WDC could act as a dam affecting future and existing development. We recommend analyzing the potential for localized flooding in the Final EIS.*

As stated in Chapter 24, Cumulative Impacts, the 45,000 acres mentioned in the comment are the wetland and wildlife habitat that has been preserved by the Great Salt Lake Shorelands

Preserve and the Farmington Bay, Howard Slough, and Ogden Bay Waterfowl Management Areas. No information was available for these preserved areas that differentiates between wetland and wildlife habitat in these areas, and it would not be possible to gather this information without detailed surveys, which would not be possible given the large size of the impact analysis area. Such surveys of the 45,000 acres are not necessary to evaluate the cumulative impacts from the WDC since these areas are preserved and wetlands presumably would not be affected by the WDC. Therefore, there would be no impacts to these areas from the WDC that would contribute to cumulative impacts in combination with other projects.

Regarding the remaining wetland and wildlife habitat in the area evaluated for cumulative impacts, it is again difficult to separate the aquatic habitat from the upland habitat with any accuracy, and the data do not currently exist. As stated in Chapter 24, the change from historic to current wetlands and habitat availability was estimated using regional-scale land cover data (Jones & Stokes 2005). The baseline year for the analysis (2003) was selected based on the availability of land cover data from 2003. The cumulative impacts analysis focuses on the eastern shore of the Great Salt Lake. The area of the eastern shore is within the Ogden hydrologic unit, which was used to evaluate the cumulative impacts in the smaller area around the WDC. The Ogden hydrologic unit includes the small area of Davis and Weber Counties that includes the eastern shore of the Great Salt Lake. This is stated in the chapter.

Although a corridor study identified a highway continuing north of the WDC, through the 2040 planning period used in this EIS, there are no plans to extend a highway north of the WDC into Weber County. Chapter 23, Indirect Effects, provides a discussion of this extension and states that, if and when a study is done for this highway, a separate environmental document would have to be developed. It would be speculative to guess at this time how such a highway would be built, since development patterns and natural resources would substantially change between now and 2040.

The cumulative impacts evaluation for floodplains states that UDOT would follow appropriate design standards, including allowing water to pass under the WDC using equalization culverts, which would reduce floodplain impacts. Therefore, the WDC would have a negligible impact to the 100-year floodplain of the Great Salt Lake and would not alter the way flooding occurs. Culverts would also allow water flowing from the north or east to pass under the WDC and avoid any potential for the WDC to function as a dam.

#### **What is a 100-year floodplain?**

A 100-year floodplain is the area that would be flooded by a water body during a 100-year flood.

A 100-year flood is a level of flood water that has a 1% chance of occurring in a given location in any given year.

The potential for causing flooding would be further addressed during the final design phase of the project. The final design would include further evaluation to ensure that there is no flooding on the east side of the WDC. Further, with current city and county ordinances and regulations in place to limit any development in floodplains, no future urban developments are expected to occur within the floodplain.

Finally, the WDC Project does not propose to allow access into floodplain areas west of the highway and thus would likely reduce the potential for development to occur in floodplains.

H. *The U.S. Environmental Protection Agency commented that, in the portion of the cumulative impacts section of the Draft EIS that addresses air quality, there is no chart that displays PM<sub>2.5</sub> [particulate matter 2.5 microns in diameter or less] 24-hour values with respect to the 2006 24-hour PM<sub>2.5</sub> National Ambient Air Quality Standard. We note that the Salt Lake PM<sub>2.5</sub> 2006 24-hour National Ambient Air Quality Standard non-attainment area includes both Davis and Weber Counties.*

- *Recommendation: We recommend that the Final EIS include a chart that displays PM<sub>2.5</sub> 24-hour values with respect to the 2006 24-hour PM<sub>2.5</sub> National Ambient Air Quality Standard. Also, 2012 verified ambient air quality data are available from the Utah Division of Air Quality, and we recommend this information be included in the Final EIS. In the portion of the cumulative impacts section that addresses future trends in air quality, the Draft EIS states: “Regional air quality modeling conducted by the Wasatch Front Regional Council for the 2040 transportation conformity determination demonstrated that all regionally significant transportation projects would be in compliance with the National Ambient Air Quality Standards.” This statement is not entirely correct and mischaracterizes the most recent conformity determination that the Wasatch Front Regional Council performed.*

*Recommendations: We recommend that the Final EIS include referenced relevant information from the latest conformity determination performed by the Wasatch Front Regional Council (see: [www.wfrc.org/air quality/AQ%20memo28 RTP2040 FINAL.pdf](http://www.wfrc.org/air_quality/AQ%20memo28 RTP2040 FINAL.pdf)) and the Wasatch Front Regional Council’s regional emissions analysis that evaluated future predicted emissions of both PM<sub>10</sub> (and its NO<sub>x</sub> [nitrogen oxides] precursor emissions) and carbon monoxide. These emission analyses compared predicted future emissions (using the U.S. Environmental Protection Agency’s MOVES model and appropriate emission factors from the U.S. Environmental Protection Agency’s AP-42 document) to the established motor vehicle emissions budgets (MVEB) in the State Implementation Plan for the applicable non-attainment or maintenance area. Since the State has not finalized the State Implementation Plan revision attainment demonstration for the Salt Lake 2006 PM 24-hour National Ambient Air Quality Standard non-attainment area, there are no established MVEBs for PM<sub>2.5</sub> and NO<sub>x</sub> with which the Wasatch Front Regional Council could demonstrate conformity. Therefore, as per 40 CFR 93.119, the Wasatch Front Regional Council elected to prepare an emissions analysis that compared predicted future-year emissions to 2008 base-year emission levels for PM<sub>2.5</sub> and NO<sub>x</sub>. We also recommend incorporating into the Final EIS the ambient air quality monitoring data for 2012 that have been verified by the Utah Division of Air Quality.*

*With respect to Table 11-12, we note that the PM<sub>2.5</sub> annual National Ambient Air Quality Standard is 15 µg/m<sup>3</sup> [micrograms per cubic meter] and not 12. Also, it is unclear what the values in parentheses represent in this table. Please clarify in the Final EIS if these values relate to the modeling receptor coordinates.*

The tables in this Final EIS have been updated with 2015 data from the Utah Division of Air Quality and include the PM<sub>2.5</sub> 24-hour data from the 2015 report. The text regarding future-

year trends has been updated to match the language from the Wasatch Front Regional Council's most recent conformity determination. As stated in the title block of Table 11-7, Emissions Inventory of Criteria Pollutants with Alternatives A3 and B1 in the WDC Study Area, in the Draft EIS, the parenthetical value represents the highest modeled PM<sub>2.5</sub> concentration at the interchange.

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- I. *A commenter asked how the Davis-Weber East-West Transportation Study from 2008 was included in the WDC EIS. The commenter stated that this study should have formed the basis for the cumulative effects analysis. The commenter stated that the impacts of the other road-widening projects and I-15 interchanges have been disclosed in a Programmatic EIS. The commenter questioned whether these other projects would be completed prior to construction of the WDC.*

The results of the Davis-Weber East-West Transportation Study were incorporated into the Wasatch Front Regional Transportation Plan 2015–2040. The 2015–2040 Regional Transportation Plan was used as the basis for the Final EIS travel modeling assumptions, the project purpose and need, and the cumulative impacts analysis. Table 24-1, Present and Reasonably Foreseeable Transit and Roadway Actions, of the Draft EIS lists the other transportation projects from the Regional Transportation Plan that are planned for construction by 2040 in the WDC study area. Each of the projects in the Regional Transportation Plan would have independent utility and would have separate environmental studies prior to its construction.

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- J. *Western Resource Advocates commented that, given the no-action scenario of a bleak outlook for the future of farms and wildlife habitat, an appropriate question is what will be done to conserve open space values of farms and wetlands should the freeway be built. This is especially important to the white-faced ibis within the greater Weber/Davis/Box Elder County area. Assumptions that the amount of any habitat and habitat quality lost will be very small do not consider the fact that the size of the Great Salt Lake ecosystem, and its capacity to persist through time, is why it is so important. Each proposal makes the same assumption relative to the Lake—that it is large and is able to absorb the punishment.*

Chapter 24, Cumulative Impacts, discusses the potential for reduced wetland and wildlife habitat as a result of the WDC and other reasonably foreseeable future projects. The analysis states that the continued development in the WDC study area would continue the trend of substantial loss of wetlands and wildlife habitat, much of which would be from the conversion of farmland. All farmland in the WDC study area is in private ownership; UDOT and FHWA cannot control whether owners decide to develop their properties.

The analysis does not ignore the fact that the Great Salt Lake ecosystem has been affected by past, current, and future projects. As stated in Chapter 24, Cumulative Impacts, “The location of the WDC and the related potential indirect impacts along with past projects that have reduced available habitat would increase the overall cumulative impact to available wildlife and wetland habitat.”

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- K.** *Western Resource Advocates commented that, contrary to the position taken in the Draft EIS, these past, present, and future actions must include both transportation and other actions that have impacts on the resources that will be affected by the WDC. Instead, the Draft EIS focuses only on the past, present, and future actions within the confines of the WDC study area. For instance, rather than acknowledging that the WDC is part of a much larger, interconnected transportation system, the Draft EIS states that “[f]or this project, an example of a past action in the WDC study area is the historic farming operations.” As justification for this approach, the Draft EIS states that “[t]he geographic scope of the cumulative impacts analysis was determined by establishing the area of project impacts and determining the geographic areas occupied by each affected resource.” The importance of addressing cumulative impacts fully, along with detailed methods for doing so, are discussed in a Council on Environmental Quality document entitled “Considering Cumulative Effects under the National Environmental Policy Act” (1997).*

As stated in Chapter 24, Cumulative Impacts, a geographic scope of analysis was developed for each resource; most of these scopes were larger than the needs assessment study area. For example, the impact analysis area for cumulative impacts to ecosystem resources included the area around the Great Salt Lake and the Ogden, Salt Lake, Utah, and Tooele Valleys, and the impact analysis areas for cumulative impacts to farmland included all of Davis and Weber Counties.

Finally, as stated in Chapter 24, the methodology for determining the cumulative impacts of the proposed WDC alternatives is based on the Council on Environmental Quality guidance *Considering Cumulative Effects under the National Environmental Policy Act* (CEQ 1997) and the FHWA position paper *Secondary and Cumulative Impact Assessment in the Highway Development Process* (FHWA 1992).

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- L.** *Western Resource Advocates stated that the cumulative impacts analysis in the Draft EIS is deficient in two ways. First, the Draft EIS ignores the cumulative negative impacts on the Great Salt Lake ecosystem as a whole and focuses instead only on individual factors as a justification for the conclusion that the impacts for the project are insignificant. Second, the Draft EIS has limited its cumulative impacts analysis to this single road segment and makes no attempt to study cumulative impacts of transportation systems outside the study area. Instead, consistent with the requirement to address cumulative impacts at the watershed, airshed, or ecosystem scale, the analysis should have addressed the cumulative effects of past, present, and future transportation projects along the Wasatch Front, including any future segments of the freeway to the north. The cumulative impacts analysis should also analyze the impacts of other forms of growth that have accompanied or that are likely to accompany these transportation developments, especially on the wetlands and associated hydrological and ecological resources along the fringes of the Great Salt Lake. Such an analysis will require a baseline identification and description of those resources, an attempt to identify a threshold of impacts beyond which the resource will degrade to the point where it is no longer sustainable, a quantitative analysis of the magnitude of impacts that will occur as a result of each of the identified projects, including the proposed project, and an objective*

*analysis of the magnitude and nature of growth that is likely to occur both with and without the proposed project.*

Chapter 24, Cumulative Impacts, describes how the geographic scope of analysis was identified for all resources evaluated for cumulative impacts. Chapter 24 provides a comprehensive evaluation of the cumulative impacts to the ecosystem. As stated in Chapter 24, the geographic scope of the analysis includes the Great Salt Lake and the Ogden, Salt Lake, Utah, and Tooele Valleys, which includes the area mentioned in the comment regarding the interconnected transportation system. The cumulative impacts analysis also focuses on the Great Salt Lake ecosystem, noting that much of the habitat has been affected by past human activity and that only 30% of the wetland and wildlife habitat remains.

The air quality analysis geographic scope also includes all of Salt Lake, Weber, and Davis Counties, which again includes the area of the transportation network mentioned in the comment and is not focused on a single road segment.

The geographic scope for the water quality cumulative impacts analysis includes the Weber River, Bear River, and Utah Lake/Jordan River Watershed Management Units, which are in north-central Utah, and the streams that drain into the Great Salt Lake. Again, this is a much larger area than the needs assessment study area.

The cumulative impact analysis does not say that the WDC would have an insignificant impact to the ecosystem, just that it would contribute less than 1% to the impact to the remaining wetland and wildlife habitat. The analysis states that further development in the WDC study area would continue the trend of substantial loss of wetlands and wildlife habitat, much of which would be from the conversion of farmland.

Finally, the Draft EIS does quantify the amount of future development, stating that the urbanized area is expected to increase from 119,000 acres in 2005 to about 185,000 acres in 2040. This urban expansion includes all future development, including roadway improvements, and therefore includes each future development including transportation projects. Based on these calculations, the cumulative wetland impacts are quantified in Table 24-4, Cumulative Wetland Impacts. Where possible, all cumulative impacts were quantified. As stated in Chapter 23, Indirect Effects, the population growth in the area will occur with or without the WDC.

## 32.25 Chapter 25 – Permits, Reviews, and Approvals

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- A.** *The Utah Division of Water Quality suggested moving the Water Quality Certification section from the federal section to the state section of Chapter 25.*

The section has been moved as suggested.

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- B.** *The Utah Division of Water Quality suggested changing the text in the Water Quality Certification section to clarify that the applicant, not the U.S. Army Corps of Engineers, must obtain and apply for the Section 401 certification.*

The text has been updated to state that UDOT must obtain or apply for a Section 401 certification.

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- C.** *The Utah Division of Water Quality suggested that UDOT may need to obtain a Utah Pollutant Discharge Elimination System (UPDES) General Permit for Construction Dewatering.*

Section 25.3.2, Utah Pollutant Discharge Elimination System Permit under Section 402 of the Clean Water Act, states that UDOT will need to obtain a UPDES permit. A paragraph has been added to Section 25.3.2 to state that UDOT might also be required to obtain a UPDES General Permit for Construction Dewatering.

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- D.** *The U.S. Environmental Protection Agency commented that, in Section 25.3, the state permits section does not include the Municipal Separate Storm Sewer System (MS4) general permit (UTR090000) administered through the Utah Department of Environmental Quality. While not a requirement for construction, coordination will need to occur between UDOT and the various municipalities covered under the MS4 general permit so that maintenance requirements under that permit for stormwater facilities (e.g., ponds, swales, etc.) can be met. This would include transfer of as-built specifications and maintenance requirements for best management practices to each of the affected municipalities. It is unclear if the Project's stormwater retention ponds are sized to meet a specific storm event (e.g., the 2-year, 24-hour event).*

*Recommendation: The U.S. Environmental Protection Agency recommends including a discussion in the Final EIS regarding the MS4 general permit. The U.S. Environmental Protection Agency also recommends including clarifying information in the Final EIS to demonstrate that the detention and retention ponds are sufficient to meet their intended purpose and that they meet municipal design requirements administered through the MS4 permit.*

Chapter 13, Water Quality, describes UDOT's MS4 permit and lists the permit in Table 13-2, Water Quality Regulations. The Draft EIS states that UDOT has been issued a statewide MS4

permit (UTS 000003) that allows UDOT to discharge stormwater runoff from transportation facilities to waters of the state. UDOT must address post-construction stormwater runoff from new and redeveloped roadways in accordance with permit conditions. For the new WDC roadway discharges, UDOT must apply stormwater best management practices to minimize impacts to water quality to the maximum extent practicable. Chapter 13 states that the detention basins considered in the EIS use a 0.2-cubic-foot-per-second-per-acre discharge rate for the 10-year, 24-hour storm. UDOT will ensure that all final design requirements will meet design requirements administered through its MS4 permit.

## 32.26 Chapter 26 – Mitigation Summary

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- A. *Commenters asked where the Legacy Parkway mitigation site is located.*

The Legacy Nature Preserve is located west of Legacy Parkway near 500 South in Bountiful.

## 32.27 Chapter 27 – Section 4(f) Evaluation

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- A. *Farmington City and other commenters stated that the Buffalo Ranch Trail, the Great Salt Lake Shoreline Trail, and conservation easements in Farmington (all of which would be affected by the Glovers Lane alternatives) should be considered Section 4(f) resources, and impacts to these resources should have been considered Section 4(f) impacts in the WDC Section 4(f) evaluation. Farmington City also stated that the Section 4(f) avoidance requirements should have been applied to the Farmington conservation easements. Farmington City stated that the protected functions of the conservation easements (recreational, park, open space, farmland, and wildlife, waterfowl, and wetland habitat functions) should make the conservation easements Section 4(f) resources. Farmington City and other commenters said that the Farmington conservation easements were not adequately included in the Section 4(f) least-harm analysis. Other commenters questioned whether these impacts would be legal and stated that Farmington City would have to concur with the proposed de minimis impacts.*

FHWA thoroughly reviewed the conservation easements prior to the release of the Draft EIS and Section 4(f) evaluation. FHWA guidance states that, if a governmental body has a permanent proprietary interest in the land (such as a permanent easement, or, in some circumstances, a long-term lease), FHWA will determine on a case-by-case basis whether the particular property should be considered publicly owned and whether Section 4(f) applies.

As described in Section 27.4.4.2, Conservation Easements, of the Draft EIS, after a thorough review of the documents establishing the conservation easements provided by Farmington City, FHWA determined that the conservation easements in Farmington were not considered

### What is a *de minimis* impact?

*De minimis* impact means there would be no adverse effect to the features, attributes, or activities that qualify the property for protection under Section 4(f).



Section 4(f) resources, with the exception of the trail facilities that are located on the conservation easements.

After the Draft EIS was released and after FHWA prepared its memorandum on December 16, 2013, Farmington City took additional actions to address the reasons why FHWA determined the conservation easements not to be Section 4(f) properties. The additional actions included:

- City ordinance passed on June 17, 2014, declaring the City's desire and intent to designate the conservation easements collectively as the Farmington City Conservation, Recreation, Wildlife and Waterfowl Refuge and Park; providing for ongoing management; and providing notice of pending amendments to the City's general plan, zoning ordinance, and subdivision ordinance.
- Approval of the Hunters Creek conservation easement, which would be directly affected by WDC Alternatives A1, A2, B1, and B2.

Between the release of the Draft EIS and the Final EIS, FHWA responded to Farmington City's request that FHWA revisit its decision regarding the Section 4(f) status of the conservation easements. FHWA's response considered Farmington City's comments about the Draft EIS Section 4(f) analysis and took into consideration the actions the City had taken after the release of the Draft EIS to make the conservation easements Section 4(f) properties. In a letter from FHWA to Mr. Jeffrey Appel dated December 3, 2014 [see Appendix 27A, Section 4(f) Correspondence], FHWA provided Farmington City with the reasons why FHWA determined that the conservation easements were not Section 4(f) resources.

For the conservation easements, FHWA determined that the Farmington City Conservation, Recreation, Wildlife and Waterfowl Refuge and Park is not a Section 4(f) resource due to discrepancies in its primary purpose, ownership, public access, and formal designation [see Appendix 27A, Section 4(f) Correspondence].

Since the Farmington conservation easements are not considered Section 4(f) resources, the Section 4(f) avoidance requirements are not applicable. See response 32.3F for more information about how the impacts of the WDC alternatives on the Farmington conservation easements were considered in the Draft EIS. The impacts to the Farmington conservation easements are considered in the least-harm analysis in Section 27.6.7, Least Overall Harm.

As described in Chapter 27, Section 4(f)/6(f) Evaluation, the Great Salt Lake Shoreline Trail and the Buffalo Ranch Trail were considered Section 4(f) resources and were evaluated in the Draft EIS Section 4(f) evaluation. The Draft EIS and Section 4(f) evaluation proposes that there would be a Section 4(f) *de minimis* impact to these two trails from the Glovers Lane Option, since the Glovers Lane Option would provide grade-separated crossings for the trails and would maintain all trail connectivity and function.

The official with jurisdiction over the trails, which is Farmington City, must concur with the *de minimis* finding. Farmington City concurred with the *de minimis* finding, and this Final EIS has been revised to state this concurrence.

- B.** *The U.S. Department of the Interior commented that the Great Salt Lake Shorelands Preserve would be impacted, directly and indirectly, by all action alternatives, more so by Alternative A, which traverses a greater extent of the preserve boundary. The draft Section 4(f) evaluation proposes a de minimis [impact] determination for the preserve, with compensation proposed only for the 17–18 acres of Utah Reclamation, Mitigation, and Conservation Commission–owned parcels that would be directly impacted by the roadway. A de minimis determination can be made only if, after minimization and mitigation measures are employed, there are no adverse impacts to the features, attributes, or activities of the preserve.*

*The proposed mitigation is inadequate to compensate for the impacts of the WDC Project for two reasons. First, the preserve lands were acquired by the Commission in conjunction with The Nature Conservancy to ensure an ecologically whole unit and should not be treated separately; impacts to or fragmentation of the Nature Conservancy portions impact the function of the preserve unit as a whole. We recommend that FHWA and UDOT consider the entire Preserve property, not just the publicly owned parcels, when determining measures to minimize harm.*

*Second, UDOT and FHWA propose to compensate only the direct impacts of the roadway without considering the substantial permanent indirect impacts to habitat quality that result from a new freeway on the preserve’s northern boundary. We refer to our comments in the Indirect Effects to Wildlife Habitat section earlier in this letter. Thus, the wildlife habitat values would need to remain the same as the current baseline. We recommend that UDOT and FHWA consider both direct and indirect impacts to the preserve when determining measures to minimize harm in order to achieve a de minimis determination.*

*The Nature Conservancy, the Utah Reclamation, Mitigation, and Conservation Commission, Farmington City, and others also provided similar comments stating that they thought the Nature Conservancy parcels in the preserve should also be considered a Section 4(f) resource.*

FHWA and UDOT acknowledge the larger preserve, which consists of properties owned by both The Nature Conservancy and the Utah Reclamation, Mitigation, and Conservation Commission, and will provide mitigation to both the Commission and the Conservancy for impacts to the preserve.

However, as defined in 23 CFR 774, Section 4(f) applies only to the publicly owned parts of the preserve. Since The Nature Conservancy is a private organization, its properties are not considered to be publicly owned. Therefore, a *de minimis* impact determination or determination of Section 4(f) use is made for only the impacts to the publicly owned parts of the preserve, not the preserve as a whole.

FHWA and UDOT considered the direct and indirect impacts to the preserve when developing the mitigation described in this Final EIS. As stated in response 32.14.2H, there is not a reasonably predictable method to quantify the indirect effects on the preserve with any level of certainty. In addition to mitigation for the direct impacts to the preserve, FHWA and UDOT, in coordination with the Utah Reclamation, Mitigation, and Conservation

Commission and the U.S. Army Corps of Engineers, are proposing to provide mitigation for wetland impacts to privately owned in-holding parcels that are currently surrounded by the preserve and would ultimately become part of the preserve.

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- C.** *The U.S. Department of the Interior and others commented that the Farmington Bay Waterfowl Management Area would be impacted by the action alternatives utilizing the Glovers Lane Option (A1, A2, B1, and B2). The alignments would lie approximately 465 feet from the northern edge of the Farmington Bay Waterfowl Management Area at the closest point. The impacts to wildlife habitat would be indirect, and would affect the features, attributes, or activities of the Farmington Bay Waterfowl Management Area. We refer to our comments in the Indirect Effects to Wildlife Habitat section earlier in this letter.*

*FHWA and UDOT made the preliminary determination that the WDC would not adversely affect the Farmington Bay Waterfowl Management Area. This determination was based on the presence of Glovers Lane and a transmission line between the Glovers Lane alignment and the Farmington Bay Waterfowl Management Area, and that there would be no direct use of the property. The size and traffic volume of the proposed WDC facility, however, far exceed that of the existing Glovers Lane, with impacts to the Farmington Bay Waterfowl Management Area's habitat values correspondingly much greater. In addition, a new freeway facility in such proximity to the Farmington Bay Waterfowl Management Area would introduce a suite of impacts very different from that of a transmission line, including: noise, light, and visual disturbance; habitat degradation from pollution, invasive plant species, and decreased water quality from winter salting operations, contaminants, and trash; on-road mortality; and barriers to movement. These impacts would cumulatively lead to the loss of habitat value on the Farmington Bay Waterfowl Management Area.*

*We recommend that UDOT and FHWA consider the indirect impacts and the loss of habitat value to the Farmington Bay Waterfowl Management Area in the Section 4(f) evaluation. The proposed Glovers Lane alignment would adversely affect the activities, features, or attributes of the Farmington Bay Waterfowl Management Area. A de minimis [impact] determination could likely be made with appropriate mitigation.*

Consistent with 23 CFR 774.15, FHWA has determined that there would be no Section 4(f) constructive use of the Farmington Bay Waterfowl Management Area from the Glovers Lane alternatives. As stated in the FHWA *Section 4(f) Policy Paper* (July 2012) and 23 CFR 774.15, a project's proximity to a Section 4(f) property is not in itself an impact that results in constructive use. A constructive use occurs when the transportation project does not incorporate land from a Section 4(f) property, but the project's proximity impacts are so severe that the protected activities, features, or attributes that qualify the property for protection under Section 4(f) are substantially impaired. In a letter dated May 1, 2014, the Utah Division of Wildlife Resources, the entity with jurisdiction over the Farmington Bay Waterfowl Management Area, agreed with FHWA's determination of no constructive use and concluded that the WDC Project "would not threaten the underlying purposes of our lands."

The Glovers Lane Option is at least 465 feet, and on average over 900 feet, from the northern boundary of the Farmington Bay Waterfowl Management Area, which is currently a road (Glovers Lane). The Glovers Lane Option would not change or otherwise reduce visitor access to the Farmington Bay Waterfowl Management Area, would not result in reduced or diminished human or visitor use of the Farmington Bay Waterfowl Management Area, would not result in noise levels that exceed the FHWA or UDOT noise-abatement criteria, would not substantially diminish the value of wildlife habitat adjacent to the Farmington Bay Waterfowl Management Area, would not substantially interfere with wildlife access to the Farmington Bay Waterfowl Management Area, and would not substantially reduce wildlife use of the Farmington Bay Waterfowl Management Area. Additionally, because the WDC alternatives would be 465 feet away or farther, noise levels at the Farmington Bay Waterfowl Management Area are not expected to be noticeably louder than current ambient noise levels.

Between the Glovers Lane Option and Glovers Lane, there is also a strip of private land, which is currently farmed and includes some residential development. The lands closest to the Farmington Bay Waterfowl Management Area that would be affected by the Glovers Lane Option is either crop land or low-quality pastures. None of this property is part of the Farmington Bay Waterfowl Management Area nor is it owned or managed for wildlife habitat, so it can be developed in the future.

As stated in response 32.14.2H, there is no guidance, policy, or method to reasonably predict with any level of certainty what, if any, indirect effect or loss of habitat value would occur at the Farmington Bay Waterfowl Management Area from the WDC alternatives. Although many studies report effects on some wildlife species at various distances from roadways, these are correlative studies, meaning they are not causal or predictive studies, and cannot be used to reasonably predict indirect effects on the Farmington Bay Waterfowl Management Area from the WDC alternatives.

Given the distance between the Glovers Lane Option and the Farmington Bay Waterfowl Management Area, no invasive plant species, decreased water quality, contaminants, trash, on-road mortality, or barriers to movement in the Farmington Bay Waterfowl Management Area are reasonably expected to result from the Glovers Lane alternatives. All stormwater from the WDC alternatives would be treated within the right-of-way and would not flow into the Farmington Bay Waterfowl Management Area. Any invasive species, contaminants, or trash from the Glovers Lane Option would first have to cross private property and the existing Glovers Lane before getting to the Farmington Bay Waterfowl Management Area. Similarly, any migrating animals coming from the Farmington Bay Waterfowl Management Area would first have to cross Glovers Lane and then private property before they would reach the Glovers Lane Option.

Additionally, the WDC noise modeling indicates that there would not be any noise impacts (noise levels that exceed FHWA or UDOT noise-abatement criteria) at the Farmington Bay Waterfowl Management Area from the Glovers Lane Option. The Glovers Lane Option would not be visible from any of the Farmington Bay Waterfowl Management Area trails or the Great Salt Lake Nature Center and would not affect any primary views from the Farmington Bay Waterfowl Management Area. For these reasons, FWHA has made a determination that the addition of the WDC within several hundred feet of the boundary

would not adversely affect the activities, features, or attributes of the waterfowl management area and that there would be no constructive use of the Farmington Bay Waterfowl Management Area.

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- D.** *The U.S. Department of the Interior commented that they concur that there is no feasible or prudent alternative to the use of wildlife/waterfowl areas under the Preferred Alternative selected in the document. While a variety of mitigation measures are included in the [Section] 4(f) evaluation, there is no documentation that the “officials with jurisdiction” concur with them or the proposed de minimis findings. In addition, we note (Section 27.7) that additional consultation and coordination with these officials is ongoing. Accordingly, we cannot at this time concur that all measures to minimize harm to wildlife/waterfowl resources have been incorporated into the project. We would be willing to reconsider this position at such time as the officials’ concurrences in both proposed mitigation and de minimis findings have been obtained.*

Comment noted. Additional information regarding the comments from the officials with jurisdiction has been received and added to Chapter 27, Section 4(f)/6(f) Evaluation, of this Final EIS. For this Final EIS, all officials with jurisdiction have concurred with the de minimis findings identified in Chapter 27, Section 4(f)/6(f) Evaluation.

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- E.** *The U.S. Department of the Interior acknowledges that this project will have adverse effects to historic properties. Further, we understand that UDOT is preparing a Programmatic Agreement or a Memorandum of Agreement in consultation with the Utah State Historic Preservation Office and is consulting to minimize these adverse effects. Although the document does not contain a draft Memorandum of Agreement, measures to minimize harm are identified elsewhere in the document. These measures, as well as any other measures as needed, should be incorporated into the Memorandum of Agreement.*

The draft Programmatic Agreement is included in Appendix 27A, Section 4(f) Correspondence, of this Final EIS.

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- F.** *The U.S. Department of the Interior commented that, following our review of the Section 4(f) evaluation, we concur that there is no feasible or prudent alternative to the use of historic properties under the Preferred Alternative selected in the document. Contingent upon execution of the Memorandum of Agreement amongst the consulting parties, we would also concur that all measures have been taken to minimize harm to these resources.*

Comment noted.

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- G.** *The U.S. Department of the Interior concurs that there is no feasible or prudent alternative to the use of park and recreation areas under the Preferred Alternative selected in the document. While a variety of mitigation measures are included in the [Section] 4(f) evaluation, there is no documentation that the “officials with jurisdiction” concur with them*

*or (with one exception) the proposed de minimis findings. In addition, we note (Section 27.7) that additional consultation and coordination with these officials is ongoing. Accordingly, we cannot at this time concur that all measures to minimize harm to park and recreation resources have been incorporated into the project. We would be willing to reconsider this position at such time as the officials' concurrences in both proposed mitigation and de minimis findings have been obtained.*

Comment noted. Additional information on the comments from the officials with jurisdiction has been received and added to Chapter 27, Section 4(f)/6(f) Evaluation, of this Final EIS. For this Final EIS, all officials with jurisdiction have concurred with the *de minimis* findings identified in Chapter 27, Section 4(f)/6(f) Evaluation.

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- H.** *The Utah Reclamation, Mitigation, and Conservation Commission provided comments stating that they would concur with a finding of de minimis impact only if the mitigation measures identified by the Commission are implemented by UDOT. The Commission commented that mitigation for impacts to the Great Salt Lake Shorelands Preserve should include mitigation for the entire ecosystem and not just wetlands. The Commission commented that the Commission, not the Department of Transportation, should determine what mitigation is necessary for minimal impact to the Great Salt Lake Shorelands Preserve, and that any mitigation for impacts to the Great Salt Lake Shorelands Preserve should be in addition to any regulatory requirements under the Clean Water Act or any other federal law or regulation. The Commission requested that legal counsels and staffs from the Commission, The Nature Conservancy, and UDOT meet to discuss the mitigation for WDC impacts to the preserve.*

UDOT has met with and will continue to meet with the Utah Reclamation, Mitigation, and Conservation Commission and The Nature Conservancy to develop and finalize mitigation for impacts to the preserve. UDOT recognizes the importance of the preserve and has developed a proposal for mitigation that is intended to enhance the preserve. UDOT's intent is to try to accommodate all mitigation for impacts to the preserve and mitigation for wetland impacts in areas that would benefit and enhance the preserve. Additional information about the proposed mitigation has been included in this Final EIS in Chapter 27, Section 4(f)/6(f) Evaluation.

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- I.** *UTA commented that they agreed that the D&RGW [Denver & Rio Grande Western Railroad] corridor is a linear historic site, but that the D&RGW railroad [corridor] should not be considered a Section 4(f) recreational resource per 23 CFR 774.11(h) because it is only an interim trail use and a planned future transportation facility.*

The Section 4(f) analysis has been updated to remove the Denver & Rio Grande Western Trail as a Section 4(f) resource per 23 CFR 774.11(h). The recreational Denver & Rio Grande Western Trail is no longer considered a Section 4(f) resource.

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- J.** *Commenters stated that the Utah Division of Wildlife Resources, in a letter dated April 26, 2011, declared that the Glovers Lane alternatives would have severe impacts on the Farmington Bay Waterfowl Management Area, and that this should be considered a Section 4(f) use.*

The April 26, 2011, letter from the Utah Division of Wildlife Resources referenced in the comment was in response to the 2011 versions of the WDC alternatives that were on a different alignment than the current Glovers Lane Option. Since that time, the Glovers Lane Option has been moved farther north away from the Farmington Bay Waterfowl Management Area. The current Glovers Lane Option is no closer than 465 feet from any part of the Farmington Bay Waterfowl Management Area. Therefore, the April 26, 2011, letter is not relevant to the Final EIS alternatives. The Division of Wildlife Resources did not submit any comments on the Draft EIS.

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- K.** *Commenters stated that the Shepard Lane alternatives would minimize impacts to Section 4(f) resources compared to the Glovers Lane alternatives. The commenters suggested that the Farmington conservation easements should have been considered Section 4(f) resources and that the Farmington Bay Waterfowl Management Area should have been considered to have a Section 4(f) impact from the Glovers Lane alternatives.*

Between the release of the Draft EIS and the Final EIS, the Shepard Lane Option was eliminated as a reasonable and practicable (see response 32.2.6A) and was not carried forward for detailed analysis in this Final EIS. Therefore, comments related to the Shepard Lane Option are no longer applicable to the alternatives being considered in this Final EIS.

See response 32.27A for the questions about the Section 4(f) applicability for the Farmington conservation easements. See response 32.27C for the Section 4(f) impact to the Farmington Bay Waterfowl Management Area.

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- L.** *Western Resource Advocates commented that the B1 route, selected by UDOT as its preferred local alternative, impacts more Section 4(f) wetlands than any other route. See Table 27-18 at Draft EIS [page] 27-45. As a result, selection of this alternative is illegal under [Section] 4(f). Moreover, during the past few years, UDOT worked to reclassify certain properties on the B1 route which were formerly classified as wetlands. See UDOT Wetland Update Summary, October 2012, attached as Exhibit G. By systematically reclassifying property to remove it from wetland classification, UDOT has eliminated even more acres of wetlands from consideration than is portrayed in the Draft EIS. As a result, if those declassified wetlands were included, the acreage of wetland impacts resulting from the B1 alignment would far exceed all other proposed routes. UDOT already has some past legal experience with determining impacts on wetlands along the eastern shore of the Great Salt Lake, in the context of the global importance of this area for migratory birds.*

Wetlands and wildlife habitat are not Section 4(f) resources by themselves. Wetlands and wildlife habitat could be present within an area considered a Section 4(f) resource, such as a

public park or wildlife refuge. The only wetlands within a Section 4(f) resource were a few acres within property owned by the Utah Reclamation, Mitigation, and Conservation Commission near the corner of Bluff Road and Gentile Street. UDOT has worked extensively with this agency to address those wetland impacts. No wetlands were declassified.

UDOT conducted a more general wetland evaluation in 2010 for the screening process that looked at hydrology and vegetation. As agreed to in coordination with the U.S. Army Corps of Engineers in 2012, the WDC team performed actual wetland delineations that included hydrology, vegetation, and soil testing. As a result of soil testing, some of the areas previously identified as wetlands were determined not to meet the criteria established by the U.S. Army Corps of Engineers. The WDC team went in the field several times with the U.S. Army Corps of Engineers to look at the wetland results and updated the wetland analysis in 2016 to include a functional assessment.

Finally, although the B Alternatives would have more wetland impacts than the A Alternatives, the resource agencies felt that the A Alternatives' close proximity to wetlands associated with the Great Salt Lake would be more damaging than the fill to more urban wetlands along the B Alternatives. The wetland impacts were considered in the Section 4(f) least overall harm analysis.

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- M.** *Western Resource Advocates commented that UDOT identifies these impacted areas and states a preliminary finding that there is only “de minimis impact” to these properties. According to the Draft EIS, “[f]or parks, recreation areas, and wildlife/waterfowl refuges, a de minimis impact is one that would not adversely affect the features, attributes, or activities that qualify the property for protection under Section 4(f).” Draft EIS at [page] 27-46. The Draft EIS states further, “[a] final finding will appear in the final Section 4(f) evaluation after the public and agencies have an opportunity to review and comment on the Draft EIS and Section 4(f) evaluation. Officials with jurisdiction must concur in writing with FHWA’s intent to make a de minimis impact finding [23 CFR 774.5(b)].” Draft EIS at [page] 27-46. By itself, this approach violates both [Section] 4(f) and the National Environmental Policy Act by preventing the public from participating fully in the review processes by denying citizens access to the information they need in order to make meaningful comments on the [Section] 4(f) implications of the proposal and its alternatives. In any case, it is clear that the relevant agencies and entities with jurisdiction over the lands at issue do not concur with UDOT’s de minimis determination and therefore that the de minimis finding must be rejected.*

It is common practice for FHWA to make preliminary Section 4(f) determinations for a project in the draft Section 4(f) evaluation and the Draft EIS. Final Section 4(f) determinations are normally made in a Final EIS. The reason for this process is to allow the public to comment on FHWA’s initial determinations and to take into account any changes between the release of the Draft EIS and the Final EIS. Therefore the approach does not violate Section 4(f) or the National Environmental Policy Act, since it provides FHWA’s initial determination and provides the opportunity for the public and officials with jurisdiction to comment on the findings. A *de minimis* determination must be concurred with in writing



by the official(s) with jurisdiction, and this requirement must be satisfied before a final determination can be made in the Final EIS.

In addition, 23 CFR 774.5(b)(2)(i) requires FHWA to inform the official(s) with jurisdiction of its intent to make a *de minimis* impact finding. Following an opportunity for public review and comment, the official(s) with jurisdiction over the Section 4(f) resource must concur in writing that the project would not adversely affect the activities, features, or attributes that make the property eligible for Section 4(f) protection.

Copies of the *de minimis* impact concurrence letters are provided in Appendix 27A, Section 4(f) Correspondence, of this Final EIS.

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- N.** *A commenter stated that, for the Shepard Lane alternatives, the D&RGW [Denver & Rio Grande Western] Trail should be put in a tunnel on its current alignment instead of being rerouted. The commenter stated that doing this would result in a de minimis use of the D&RGW Trail and railroad by the Shepard Lane alternatives. The commenter also requested objective analysis and criteria for determining that there would be additional noise and visual impacts from a structure at this location.*

Between the release of the Draft EIS and the Final EIS, the Shepard Lane Option was eliminated as a reasonable and practicable option (see response 32.2.6A) and was not carried forward for detailed analysis in this Final EIS. Therefore, comments related to the Shepard Lane Option are no longer applicable to the alternatives being considered in this Final EIS.

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- O.** *A commenter stated that the Section 4(f) impact to South (Skater) Park should have been considered a Section 4(f) use, not a Section 4(f) de minimis impact, stating that there would be impacts to the spectator seating area at the park.*

As described in Chapter 27, Section 4(f)/6(f) Evaluation of this Final EIS, the Glovers Lane Option would affect 135 square feet of South Park (0.04% of the total acreage). The only affected areas of the park would be the park sign and a grassy area between the playing fields and the frontage road. FHWA determined that the Glovers Lane Option impacts to South Park would not adversely affect any of the park's activities, features, or attributes.

Note that, in addition to the impacts described above, any of the WDC alternatives would also require the acquisition of about 0.07 acre of the grass strip on the west edge of the park that is owned by UDOT and is part of the right-of-way for the frontage road. Because this part of the property is owned by UDOT for transportation use, it is not considered part of the Section 4(f) property.

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- P.** *Commenters stated that the Frontage Road trail in Farmington by the Glovers Lane alternatives should have been considered a Section 4(f) resource and that impacts to this trail should have been mitigated.*

As described in Table 27-6, Section 4(f) Recreation Areas Associated with the WDC, and Section 27.4.3.3, South Frontage Road Trail, of the Draft EIS, FHWA evaluated the South Frontage Road Trail in Farmington to determine whether it was a Section 4(f) resource. As described in Section 27.4.3.3, the South Frontage Road Trail was determined to function as part of the transportation facility (the frontage road) and was not considered a Section 4(f) resource.

The Glovers Lane Option would not affect the South Frontage Road Trail on its current alignment.

## **32.28 Chapter 28 – List of Preparers**

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- A.** *Commenters questioned what companies were involved in preparing the WDC EIS.*

The list of preparers of the WDC EIS is in Chapter 28, List of Preparers, of the EIS.

## **32.29 Chapter 29 – Distribution**

No comments were received on this chapter during the Draft EIS public comment period.

## 32.30 Chapter 30 – Public and Agency Consultation and Coordination

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- A.** *Commenters stated that public comments are not considered in making a decision and that they don't get to provide input into the process, and others commented that affected property owners should have been met with in person to discuss potential options. Other commenters questioned why UDOT and FHWA cannot respond to commenters prior to the Final EIS.*

As described in Chapter 30, Public and Agency Consultation and Coordination, the WDC team implemented an extensive public process that included public meetings, Resident Working Group meetings, Stakeholder Working Group meetings, and agency meetings. A full list of the meetings is provided in Chapter 30. All comments provided during the EIS process are part of the project file and were considered in the development of the EIS.

Numerous suggestions for alternative refinements were made during the alternatives-development phase, and the WDC team made refinements to the alternatives based on the comments. For example, commenters suggested that earlier versions of the Glovers Lane Option were too close to the Farmington Bay Waterfowl Management Area, and thus later versions of the Glovers Lane Option were moved north. *Technical Memorandum 15: Alternatives Screening Report* explains how many of the alignment comments were considered.

Comments provided on the Draft EIS are included in this Final EIS with a response to each comment. FHWA reviews the project file and the comments on the Draft and Final EISs when making a final selection of an alternative in its Record of Decision for the project.

Numerous meetings were held throughout the EIS process (see Chapter 30). Flyers and mailers for public meetings were sent to property owners and residents along the WDC action alternatives to give the public an opportunity to discuss potential alternatives with the WDC team. At those meetings, the public had the opportunity to review the alternatives and discuss how an alternative would affect their property. Given the size of the WDC and the number of property owners that would be affected, the public-meeting format was considered the best way to meet with the public and discuss potential project alternatives.

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- B.** *Commenters thought UDOT and the WDC team had done a good job of soliciting public comments and feedback and incorporating this information into the WDC EIS.*

Thank you for the comment.

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- C.** *Commenters questioned why UDOT used maps from 2008 at the public hearings and stated that these maps did not show all of the recent development in Farmington Meadows and Farmington Ranches.*

During the Draft EIS analysis, UDOT used aerial images from 2011 and field-verified all residential and commercial property locations close to the WDC alternatives in 2012 before

completing the EIS analysis. All analysis in the Draft EIS included all development in Farmington Meadows and Farmington Ranches that was built in 2012. For the Final EIS analysis, aerial images from 2016 were used.

The images from 2008 were used on the maps at the public hearings because they were the only images available that were tied into a coordinate system that could be used by the WDC team's engineering software to provide an exact alignment. As stated in the paragraph above, UDOT used images from 2011 in conducting the analysis with geographic information systems (GIS) software to determine impacts, and those impacts were field-verified in 2012 to ensure that the information in the EIS was accurate.

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**D.** *Commenters thanked WDC team members for help at the public open houses.*

Thank you for the comment.

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**E.** *Commenters stated that UDOT should have given a presentation at the public open houses before the public hearings so that UDOT could explain the project, the need for the project, the alternatives, and the decision process.*

Presentations are not required at public hearings. The National Environmental Policy Act process requires public hearings and the opportunity for the public to provide comments on the Draft EIS. All of the information requested by the commenter (project description, maps, purpose and need, alternatives, impacts, the rationale for the decision, etc.) was included in the Draft EIS, which was made available to the public 3 weeks in advance of the public hearings. This information was also summarized on posters, boards, and maps at the WDC public hearings and open houses.

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**F.** *Commenters stated that UDOT did not have open and honest public involvement and stated that UDOT changed information that was given to the public. Commenters stated that UDOT did not follow the National Environmental Policy Act process or did not follow the process correctly. Commenters stated that UDOT rushed the National Environmental Policy Act process.*

For the WDC Project, UDOT has consistently solicited and used public input above and beyond what is required by the National Environmental Policy Act process. Information about the impacts and costs of the WDC alternatives has changed during the National Environmental Policy Act process due to new resource information, refinements to the alternatives, and additional engineering design for the alternatives becoming available. Updating and revising information before the Draft EIS and Final EIS is a common part of any National Environmental Policy Act process as new information is provided. When the information has changed, the WDC team has provided the public and agencies with this information as required by the National Environmental Policy Act. The public hearings and public and agency review of the Draft EIS are procedural requirements of the National

Environmental Policy Act. The WDC team has attempted to meet with as many interested individuals and groups as possible.

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**G.** *Farmington City requested an extension of the comment deadline until September 4, 2013.*

The WDC team granted Farmington City's request and extended the comment deadline until Friday, September 6, 2013.

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**H.** *A commenter requested that UDOT release more information regarding the interplay of options and matrix of possibilities for the different options. The commenter suggested that this could be done by providing summary files or output files from the models. The commenter stated that they had previously requested this information and had been denied access.*

All of the files relevant to the decisions and analysis of the EIS have been provided in the EIS files and technical memoranda files on the project website ([www.udot.utah.gov/westdavis/documentation](http://www.udot.utah.gov/westdavis/documentation)), or are available on request from the WDC team. The travel demand model files were provided to another commenter who requested them and are available on CD or DVD on request. The commenter was unclear about what specific additional files were being requested. *Technical Memorandum 15: Alternatives Screening Report* (also available on the project website) describes all of the alternatives evaluated during the EIS process, including the interplay of how alternatives were mixed and matched to make sure all alternative combinations were evaluated.

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**I.** *A commenter stated that UDOT surveys are skewed and biased. The commenter asked to receive copies of any surveys conducted by UDOT or its contractors.*

All of the survey files are available on the project's public website ([www.udot.utah.gov/westdavis/documentation](http://www.udot.utah.gov/westdavis/documentation)). Additional data can be provided on request by the WDC team.

## 32.31 Other Comments

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- A.** *Commenters wanted to know where copies of the EIS could be reviewed and when the public meetings would be held.*

Flyers, mailers, newspaper ads, and the project website all provided the locations where copies of the EIS could be viewed and the dates and times of the public meetings.

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- B.** *Commenters stated that there will likely be lawsuits if one alternative is selected over another and this should be factored into the decision and cost.*

The National Environmental Policy Act is a procedural law that requires federal agencies to follow a process in making an informed decision about a project. The WDC team has a proactive public involvement program to make sure stakeholders' concerns are considered and conducted a comprehensive evaluation to ensure that an informed decision is made. The decision process would be flawed if federal agencies were making a decision not based on the evaluation of the information in the EIS but instead on whether one option might have a greater chance of legal action over another. Finally, because it is not possible to know whether legal action would be taken by a concerned stakeholder, this cannot be factored into the cost of an alternative.

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- C.** *Commenters stated that, to reduce impacts, the corridor should have been planned and built before houses and businesses were constructed.*

Currently, the local metropolitan planning organization (the Wasatch Front Regional Council) for the WDC study area develops regional transportation plans that look 20 years or more into the future. Although the plans might identify a need for a project, funding might not be available to purchase property before it is developed, and UDOT and the Cities cannot legally stop private landowners from developing their properties unless the Cities purchase the properties. In these cases, it would not be possible to build the project without affecting some properties.

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- D.** *Commenters stated a fact about roadway infrastructure, made a statement about other projects, expressed an opinion about the project (for example, I like it, I don't like it, etc.), directed the comment to another agency (for example, the Davis County Commission, Syracuse City, Farmington City, or Kaysville City), or made a comment that was not clear.*

Thank you for the comment.

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- E.** *Commenters stated that new development in the area of the proposed WDC alternatives should be stopped until a decision on the project is made.*

UDOT cannot stop private land from being platted or developed without purchasing the property. Cities can try to work with developers during the platting process to preserve private land for future transportation needs.

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- F.** *Commenters wanted a final decision to be made. Other commenters questioned when a final decision will be made.*

Section 2.4, Identification of UDOT's Locally Preferred Alternative, of the Draft EIS identifies UDOT's choice of Alternative B1 as the locally preferred alternative. UDOT's identification of a preferred alternative at the Draft EIS stage does not ensure that UDOT will select the same alternative in the Final EIS. A final decision on a selected alternative will not be made until the Record of Decision is issued, which is planned for late in 2017. The final selection of an alternative in the Record of Decision will be made by UDOT and FHWA.

As part of the Clean Water Act permitting process, the U.S. Army Corps of Engineers will decide which alternative satisfies the Clean Water Act Section 404(b)(1) guidelines. Neither of these agencies (FHWA or the U.S. Army Corps of Engineers) identified a preferred alternative in the Draft EIS. The UDOT and FHWA preferred alternative is identified in Section 2.6, Identification of the Preferred Alternative, of this Final EIS.

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- G.** *Commenters stated that they should have been informed about the WDC prior to buying their properties.*

Prior to the start of the Draft EIS, several planning studies had been conducted identifying several potential alignments for the WDC in western Davis and Weber Counties. However, a final alignment is not approved for construction until the completion of the EIS process. Therefore, there are no specific alignments until this EIS process is complete and appropriate permits are in place. Thus it might not be possible for property owners selling their homes to disclose to potential buyers whether the alternative near their home will be selected, and it is not the responsibility of UDOT to ensure that sellers inform buyers. Finally, most of the Cities in the WDC study area have identified a proposed route for the WDC in their respective city transportation plans prior to the start of the EIS process. The transportation plans were available for review by potential homeowners.

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- H.** *Commenters questioned the cost methodology that was used for the Draft EIS and how the costs had changed between screening-level cost estimates and Draft EIS cost estimates. Similarly, commenters questioned why the Draft EIS impact numbers were different from previous maps and reports on the WDC Project website.*

The Draft EIS cost estimate methodology for the WDC alternatives is described in *Technical Memorandum 20: Cost Estimates for WDC Alternatives in the Draft EIS*. Cost estimates at

each stage of the project were updated based on the increasing detail of engineering design for the alternatives. The Draft EIS cost estimates are more detailed than the alternatives-screening cost estimates.

Similarly, the Draft EIS impacts were calculated using updated engineering design for all of the alternatives and updated environmental data produced by the WDC team. The impact numbers in the Draft EIS might vary from previously released information based on updated engineering design for the alternatives and updated resource layers (for example, wetlands, houses, etc.). All cost estimates were updated for this Final EIS.

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- I.** *Commenters wanted to know whether UDOT would need to build an interchange at Clark Lane with the Glovers Lane Option. Other commenters referred to a comment from the Davis County Commissioners that stated that UDOT should consider an access on the Glovers Lane Option at Clark Lane, and stated that UDOT had been deceptive by not including the impacts and costs of the Clark Lane interchange with the Glovers Lane Option.*

There are no plans to construct an interchange at Clark Lane to access Station Park, since this access is currently provided by Park Lane from I-15 or Legacy Parkway.

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- J.** *Commenters questioned why Section 4(f) wetlands are more important than other wetlands.*

As described in Chapter 27, Section 4(f)/6(f) Evaluation, of the Draft EIS, Section 4(f) resources include public parks, recreation areas, wildlife refuges, and public or private historic resources. Wetlands are not considered Section 4(f) resources unless they are part of one of these resources. Wetlands within a Section 4(f) property are no more important than wetlands outside the Section 4(f) property, but they are analyzed under the substantive requirements of Section 4(f) in addition to the Clean Water Act. See response 32.27L for more information.

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- K.** *Commenters stated that they would be affected by the preferred alternative and requested that funding be provided quickly so that they can move and be compensated. Commenters requested that UDOT quickly preserve the corridor before more development is constructed.*

There is not currently any money allocated for the WDC Project construction and right-of-way acquisition. However, UDOT, Davis County, and the Cities have purchased some properties with state or local funds in the WDC study area. If funds are available, UDOT could begin purchasing additional property near the WDC alternatives in cases where (1) owners said that they couldn't sell their property because of the proposed project, and this was causing them economic hardship, or (2) a property was about to be developed, which would increase the number of residential or business relocations due to the project. If the land is along alternatives that are ultimately not selected or built, UDOT would be able to sell the land at a future date. These state-funded advance acquisitions are permissible under FHWA right-of-way acquisition and National Environmental Policy Act regulations and do not affect the alternatives analysis or decisions made in the National Environmental Policy Act process.



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- L.** *Commenters questioned where the sources of funding would come from to fund the project. Commenters stated that their taxes would increase to pay for the WDC Project or that the WDC should be a toll facility. Other commenters stated that UDOT should have other funding priorities (for example, road maintenance or other roadway projects) or that the State should spend its money on transit or other projects instead of the WDC Project.*

There is not currently any money allocated for the WDC Project construction and right-of-way acquisition. It is likely that any funding for the WDC Project would come from existing federal, state, or local funding sources. There are not any plans to raise taxes to pay for the WDC Project. There are not any plans to make the WDC a toll road. Any decisions to raise taxes would be made by the Utah legislature or local officials. Any decisions to make the WDC a toll road would be made by the Utah legislature.

UDOT is given a budget every year from the State of Utah for various new projects, maintenance projects, safety projects, and improvement projects. It is beyond the scope of the WDC Project to determine the spending priorities or budget for UDOT. Similarly, it is beyond the scope of this project to determine the spending priorities among UDOT and other agencies or other state-funded projects. State funding decisions are made by the Utah legislature.

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- M.** *Commenters requested that Layton Parkway should be included on the maps.*

Layton Parkway was constructed only to Angel Street at the time of the Draft EIS analysis. At the time of the Final EIS analysis, Layton Parkway has been constructed to just west of 1700 West, and the WDC maps have been updated to reflect this. The WDC team is aware that Layton City plans to extend the Layton Parkway west.

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- N.** *Commenters asked who is paying for the EIS study and how much the study has cost.*

The WDC EIS process is currently funded by the State of Utah. The WDC EIS has cost around \$12 million as of the fall of 2016.

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- O.** *Commenters stated that UDOT predetermined the outcome of the process, or that the process was driven by politicians or business groups. Commenters stated that UDOT made the Shepard Lane Option intentionally bad by going through Haight Creek so that they could pick Glovers Lane. Other commenters stated that UDOT should not have been leading the EIS study.*

UDOT has followed the National Environmental Policy Act process using the best available information while considering all input provided by the resource agencies and the public. UDOT has designed all alternatives in the Draft EIS to meet engineering standards, to accommodate expected traffic demand to a standard level of service, and to try to minimize impacts to all resources. The location of the Shepard Lane Option (eliminated as a reasonable option between the release of the Draft EIS and the Final EIS) at Haight Creek was based on

the connection of the WDC to I-15 and the need for the Shepard Lane Option to provide enough distance for traffic-weaving movements before connecting to Park Lane and Legacy Parkway. To ensure the appropriate safe distance for weaving movements, the WDC connection had to be placed as far north as possible, which resulted in impacts to Haight Creek.

UDOT did not make a decision on a preferred alternative based on direction from politicians, businesses, or real estate developers. The basis for UDOT's identification of a preferred alternative is described in Section 2.4, Identification of UDOT's Locally Preferred Alternative, of the Draft EIS. For the comment stating that UDOT should not lead the EIS process, see response 32.31T.

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- P.** *Commenters asked how many people making the final decision would be personally affected by the preferred alternative.*

As described in the EIS, FHWA will make the final decision on the selected alternative after reviewing all of the public and agency comments on the Draft EIS, which will include comments from Cities, Counties, and citizens in the WDC study area. The FHWA decision-makers might or might not live in Davis or Weber Counties and might or might not be personally affected by the selected alternative, but will review all local comments before making a final decision.

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- Q.** *Farmington City requested that, in their view of the many problems and issues set forth in detail herein and summarized in the General Comments in Section I, the Draft EIS be revised in accordance with these comments and then reissued. First, however, all of the relevant information must be assembled and analyzed.*

The Farmington City comments are addressed in other responses in this chapter. FHWA does not believe that the extent of the comments requires reissuing a Draft EIS and believes that the comments provided by Farmington City have been adequately addressed in this Final EIS.

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- R.** *Commenters agreed with comments provided by the U.S. Department of the Interior, Farmington City, or The Nature Conservancy.*

Comments noted. The responses to the Department of the Interior comments are responses 32.14.2H and 32.27B–G. The responses to the Farmington City comments are included in the appropriate chapters depending on the comment. The responses to The Nature Conservancy's comments are responses 32.14.2I–L and 32.27B.

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**S.** *Commenters disagreed with comments provided by the U.S. Department of the Interior or Farmington City.*

Comments noted. The responses to the Department of the Interior comments are 32.14.2H and 32.27B–G. The responses to the Farmington City comments are included in the appropriate chapters depending on the comment.

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**T.** *Commenter stated that an independent body of scientists, not UDOT, should have prepared the Draft EIS.*

The regulation at 23 CFR 771.109 allows state agencies to serve as joint lead agencies and to prepare an EIS if FHWA furnishes guidance, participates in preparation, and independently evaluates the EIS. In the case of the WDC Project, FHWA has provided guidance, has participated in the preparation, and has independently reviewed the EIS. Also, the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, and the U.S. Environmental Protection Agency are all cooperating agencies for the WDC Project. These agencies and their scientists have been involved from project initiation and have been providing independent reviews of the methodologies used to evaluate impacts and the analyses in the EIS. UDOT and FHWA have met with these agencies over 60 times throughout the process to review and resolve their comments on the EIS.



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