

3.20 FARMLANDS

Under the Federal Farmland Protection Policy Act of 1981, the U.S. Department of Agriculture, Natural Resource Conservation Service (USDA-NRCS) defines farmlands, as follows:

- ▶ **Prime Farmland.** Land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops. It can economically produce sustained high yields of these crops when treated and managed according to acceptable farming practices.
- ▶ **Unique Farmland.** Land other than prime farmland that is used to produce specific high-value food and fiber crops. It can economically produce sustained high yields of these specialized crops when treated and managed according to acceptable farming practices.
- ▶ **Farmland of Statewide Importance.** Land that has been identified by criteria determined by the Colorado State Experiment Station, the Colorado State Department of Agriculture, and the Colorado State Soil Conservation Board.
- ▶ **Farmland of Local Importance.** Land that has not been identified as having national or statewide importance yet may have local significance based on the goals of the community and of the various agricultural enterprises that maintain a viable agricultural community.

Lands that are currently located within 2000 census “urbanized areas” are not included in the calculation of existing prime and unique farmlands or farmland of statewide importance. Urbanized areas are generally developed with impermeable (paved) surfaces that are not available for agricultural production. Lands that are committed to urban development are also not considered farmland.

3.20.1 Affected Environment

To determine whether any prime or unique farmland soils or farmland soils of statewide or local importance are present in the North I-25 regional study area, data were downloaded from the 2009 NRCS Soil Data Mart database. The Brighton, Longmont, Fort Collins, and Greeley offices of the NRCS also were contacted. The NRCS identified seven categories of soil types that are protected in the regional study area. Five of these categories were grouped together because all five represent prime farmland only if certain conditions are met. The resulting three categories are listed by county in **Table 3.20-1** and their locations are shown in **Figure 3.20-1**.

What's in Section 3.20?

3.20 Farmlands

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1 **Table 3.20-1 Farmlands in the Regional Study Area**

Study Area Counties	Farmland of Local Importance (acres)	Farmland of Statewide Importance (acres)	Prime Farmland If Certain Conditions Are Present* (acres)
Adams County	0	1,288	27,010
Boulder County	0	10,016	36,898
Broomfield County	0	488	7,034
Denver County	0	0	0
Jefferson County	0	0	0
Larimer County	3,544	6,760	76,817
Weld County	29,401	58,819	248,297
Regional Study Area Total:	32,945	78,371	396,056

*Land would be considered prime farmland if it were:

- (a) irrigated
- (b) protected from flooding or not frequently flooded during the growing season
- (c) drained and either protected from flooding or not frequently flooded during the growing season
- (d) irrigated and reclaimed of excess salts and sodium
- (e) prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60

Source: NRCS, 2009.

2 According to the most recent Census of Agriculture (2007), there are 37,054 farms in
3 Colorado. Twenty-one percent of these farms are located in the seven counties that make up
4 the regional study area. This represents over 3.5 million acres of land devoted to agricultural
5 activities. Primary crops produced in the regional study area include wheat, corn, hay, and
6 sugar beets. Land in the regional study area is also used to raise livestock and poultry.

7 Between 2002 and 2007 the number of farms and acreage of farmland increased in every
8 county in the regional study area except Larimer (2007 Census of Agriculture, Table 8: Farms,
9 Land in Farms, Value of Land and Buildings, and Land Use: 2007 and 2002). A farm is defined
10 as property that produces or can produce \$1,000 worth of agricultural product in a year
11 (Meyers, B., 2010). Therefore, a property owner that owns more than one head of livestock
12 (i.e., cattle, horses) could be considered a farm. According to Bill Meyers of the USDA
13 Colorado Agricultural Statistics Service, one reason for the recent increase in the number and
14 acreage of farms within the area correlates with a concerted NRCS effort in the most current
15 Agricultural Census to find those farms that, while smaller in size, fit this definition. The
16 inclusion of these smaller farms contributes to the increase in farms and farmland acreage
17 between 2002 and 2007.

18 Additionally, the NRCS has been re-assessing and re-calculating farmland statistics to
19 eradicate inconsistencies on how different counties classify prime and important farmlands
20 (Steiner, A., 2010). For those Soil Data Mart data (used to compute the farmland acreages in
21 **Table 3-21**) that were released in the last few years, the following statement was included to
22 justify the drastic changes in farmland acreages: "Prime and other important farmland
23 classification ratings were reviewed and, where necessary, edited to be more consistent in
24 accordance with National Soil Survey Handbook standards." This statement also lends
25 explanation to the substantial increase in acreages of farmland.

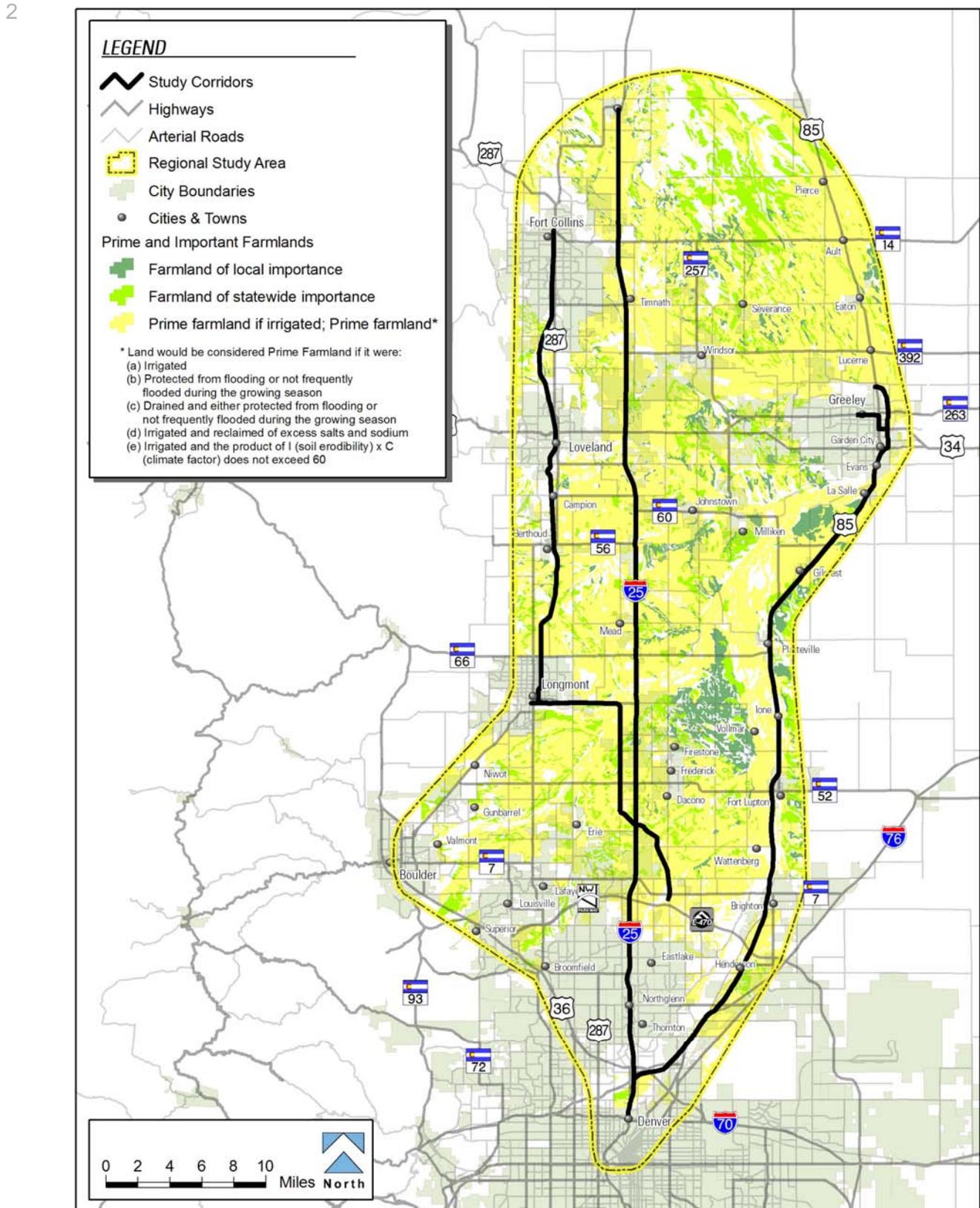
26 Of the counties in the regional study area, Larimer and Weld counties contain the largest
27 number of farms with 1,757 and 3,921 farms, respectively. In 2007, 61 percent of all farms in
28 Larimer County were less than 50 acres. Farms of 500 acres or more represented just under

1 ten percent of all farms in the county. Many of these farms are located in the rapidly growing
2 North I-25 corridor, where much of the existing land is being re-zoned and converted for
3 residential and commercial development.

4 In Weld County, 34 percent of all farms were less than 50 acres in 2007. Farms of 500 acres
5 or more represented less than 18 percent of all farms in the county. Further, Weld County was
6 the only county in 2007 to have more than 400 farms greater than 1,000 acres in size. Most of
7 these larger farms are located outside the North I-25 corridor.

8

1 **Figure 3.20-1 Farmlands in the Regional Study Area**



3.20.2 Environmental Consequences

Direct impacts to farmland occur when cultivated lands are converted to impervious surface or acquired for transportation right-of-way. Acres of important farmland lost as a result of the implementation of any of the build packages were calculated for each alternative using GIS and the limits of construction as defined through project design.

Indirect impacts to farmland occur when a farm is severed or access is limited in such a way that it prohibits continued agricultural use. For example, if a feature such as a canal, access road, or ditch is impacted, the productivity of the farm could be indirectly impacted. Indirect effects also include farmland that would likely be converted as a result of accessibility to new or improved transportation facilities. For this analysis, indirect impacts were evaluated qualitatively and based upon the findings contained in **Section 3.1 Land Use** as they pertain to the potential for indirect, induced growth effects.

3.20.2.1 NO-ACTION ALTERNATIVE

The No-Action Alternative would not directly impact Prime Farmland, Farmland of Statewide Importance, or Farmland of Local Importance. As discussed in **Section 3.1 Land Use**, growth would continue to occur largely on undeveloped agricultural land at the fringe of the study area's urbanized areas in accordance with municipal and county comprehensive plans. As major roadways such as I-25 become more congested, development would likely be pushed towards outlying areas to avoid this congestion. This would hasten the conversion of agricultural land as market forces push towards the path of least resistance. This may also be the case for many of the east-west and alternate corridors (e.g., US 34, SH 7, SH 52, SH 402) in the regional study area.

The more dispersed development pattern that would occur in response to the No-Action Alternative would result in greater land consumption. The continuation of leap-frog type growth practices in southern portions of the regional study area east of I-25 would further fragment remaining agricultural lands, reducing the long-term viability of the remaining lands. The extent of this impact would depend upon existing policies and regulations pertaining to the protection of environmental resources, which vary from community to community and from county to county.

3.20.2.2 PACKAGE A

As shown in **Table 3.20-2**, Package A would result in the direct conversion of 1.80 acres of Farmland of Local Importance, 44.52 acres of Farmland of Statewide Importance, and 930.81 acres of farmland that is considered prime only if certain conditions are present. Because Package A improvements occur primarily along existing transportation corridors, no farms would be severed or lose access. Impacts are a result of the acquisition of right-of-way immediately adjacent to the existing I-25 and BNSF corridors and the development of parking lots, transit stations, and water quality detention ponds. As shown in **Table 3.20-2**, most of the farmland impact is associated with Component A-H2, which consists of widening to accommodate six general purpose lanes in each direction between SH 14 and SH 60, plus auxiliary lanes between Harmony Road and SH 60.

1 **Table 3.20-2 Package A - Direct Impacts to Farmlands by Component**

Component	Impacts (Acres)			Total
	Farmland of Local Importance	Farmland of Statewide Importance	Prime Farmland if Certain Conditions are Present*	
A-H1	0.29	0.57	73.67	74.53
A-H2	1.05	8.62	384.19	393.86
A-H3	0.0	14.21	192.87	207.08
A-H4	0.0	0	2.39	2.39
A-T1	0.46	5.14	146.12	151.72
A-T2	0.0	15.98	131.57	147.55
A-T3	0.0	0.0	0.0	0.0
A-T4	0.0	0.0	0.0	0.0
Total Package A	1.80	44.52	930.81	977.13

*Land would be considered prime farmland if it were:

- (a) irrigated
- (b) protected from flooding or not frequently flooded during the growing season
- (c) drained and either protected from flooding or not frequently flooded during the growing season
- (d) irrigated and reclaimed of excess salts and sodium
- (e) prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60

2 Ongoing conversion of agricultural land to residential and urbanized land uses would continue
 3 throughout the regional study area, particularly along I-25. As discussed in **Section 3.1 Land**
 4 **Use**, the provision of commuter rail would likely facilitate a shift in growth towards urban
 5 centers within the regional study area (e.g., Fort Collins, Loveland, and Longmont). As a result,
 6 the rate at which environmental resources (including farmlands) would be affected in
 7 undeveloped and suburban areas within the regional study area would likely be slowed. This
 8 would be the case along the I-25 corridor in particular where substantial agricultural lands
 9 exist.

10 **Indirect Impacts**

11 Outside of established urban centers, farmland would likely be converted to residential and
 12 commercial development around transit stations and along feeder bus routes. In some cases,
 13 this development is already planned. For example, the City of Longmont has plans for TOD
 14 along the proposed alignment at SH 66. However, without commuter rail as a catalyst, this
 15 area would likely develop at typical suburban densities and would consume more land.

16 **3.20.2.3 PACKAGE B**

17 As shown in **Table 3.20-3**, Package B would result in the direct conversion of 1.66 acres of
 18 Farmland of Local Importance, 35.39 acres of Farmland of Statewide Importance, and
 19 888.31 acres of farmland that is considered prime only if certain conditions are present (e.g., if
 20 the land is irrigated, protected from flooding, drained, and reclaimed of excess salts). Because
 21 Package B improvements occur primarily along existing transportation corridors, no farms
 22 would be severed or lose access. Impacts are a result of the acquisition of right-of-way
 23 immediately adjacent to the existing I-25 corridor and the development of parking lots, transit
 24 stations, and water quality detention ponds. As shown in **Table 3.20-3**, most of the farmland
 25 impact is associated with Components B-H2 and B-H3, which consist of widening to
 26 accommodate additional buffer or barrier separated tolled express lanes in each direction.

1 **Table 3.20-3 Package B - Direct Impacts to Farmlands by Component**

Component	Impacts (Acres)			Total
	Farmland of Local Importance	Farmland of Statewide Importance	Prime Farmland if Certain Conditions are Present*	
B-H1	0.26	0.34	73.66	74.26
B-H2	1.29	10.28	443.93	455.50
B-H3	0	24.77	331.11	355.88
B-H4	0	0	37.41	37.41
B-T1	0.11	0	2.20	2.31
B-T2	0	0	0	0
Total Package B	1.66	35.39	888.31	925.36

*Land would be considered prime farmland if it were:

- (a) irrigated
- (b) protected from flooding or not frequently flooded during the growing season
- (c) drained and either protected from flooding or not frequently flooded during the growing season
- (d) irrigated and reclaimed of excess salts and sodium
- (e) prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60

2 Ongoing conversion of agricultural land to residential and urbanized land uses would continue
 3 throughout the regional study area, particularly along I-25. As discussed in **Section 3.1 Land**
 4 **Use**, the introduction of bus rapid transit along the I-25 corridor would represent a more
 5 modest improvement in transit than commuter rail and as a result would provide less incentive
 6 for transit oriented development. As a result, growth would continue to be market-driven and
 7 would continue to expand towards the east, spreading—rather than shifting—in its
 8 concentration.

9 **Indirect Impacts**

10 The more dispersed development pattern that could occur in response to Package B would
 11 result in greater land consumption and a broader potential impact to the regional study area's
 12 environmental resources. The continuation of non-contiguous growth practices in southern
 13 portions of the study area east of I-25 would further fragment remaining agricultural lands,
 14 reducing the long-term viability of the remaining lands. The extent of this impact would be
 15 dependent upon existing policies and regulations pertaining to the protection of environmental
 16 resources, which vary from community to community and from county to county.

17 **3.20.2.4 PREFERRED ALTERNATIVE**

18 As shown in **Table 3.20-4**, the Preferred Alternative would result in the direct conversion of
 19 5.05 acres of Farmland of Local Importance, 46.61 acres of Farmland of Statewide
 20 Importance, and 925.50 acres of farmland that is considered prime only if certain conditions
 21 are present. The Preferred Alternative includes commuter rail, highway, express bus, and
 22 commuter bus components. Because the Preferred Alternative occurs primarily along existing
 23 transportation corridors, no farms would be severed or lose access. Impacts are a result of the
 24 acquisition of right-of-way immediately adjacent to the existing I-25 corridor and BNSF
 25 corridors and the development of parking lots, transit stations, and water quality detention
 26 ponds. As shown in **Table 3.20-4**, most of the farmland impacts are associated with the
 27 highway component, which consists of widening to accommodate general purpose lanes and
 28 buffer separated tolled express lanes in each direction.

1 **Table 3.20-4 Preferred Alternative - Direct Impacts to Farmlands by Component**

Component	Impact Areas			Total
	Farmland of Local Importance	Farmland of Statewide Importance	Prime Farmland if Certain Conditions are Present*	
Commuter Rail	0.23	11.39	162.82	174.44
Highway	4.09	30.38	730.04	764.51
Express Bus	0.73	4.84	32.64	38.21
Commuter Bus	0.0	0.0	0.0	0.0
Total Preferred Alternative	5.05	46.61	925.50	977.16

*Land would be considered prime farmland if it were:

- (a) irrigated
- (b) protected from flooding or not frequently flooded during the growing season
- (c) drained and either protected from flooding or not frequently flooded during the growing season
- (d) irrigated and reclaimed of excess salts and sodium
- (e) prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60

2 Ongoing conversion of agricultural land to residential and urbanized land uses would continue
 3 throughout the regional study area, particularly along I-25. As discussed in **Section 3.1 Land**
 4 **Use**, the provision of commuter rail would likely facilitate a shift in growth towards urban
 5 centers within the regional study area (e.g., Fort Collins, Loveland, and Longmont). As a result,
 6 the rate at which environmental resources (including farmlands) would be affected in
 7 undeveloped and suburban areas within the regional study area would likely be slowed. This
 8 would be the case along the I-25 corridor in particular where substantial agricultural lands
 9 exist.

10 The introduction of express bus transit along the I-25 corridor would represent a more modest
 11 improvement in transit than commuter rail and as a result would provide less incentive for
 12 TOD. As a result, growth would continue to be market-driven and would continue to expand
 13 towards the east, spreading—rather than shifting—in its concentration.

14 ***Indirect Impacts***

15 The more dispersed development pattern that could occur in response to the highway
 16 component of the Preferred Alternative would result in greater land consumption and a broader
 17 potential impact to the regional study area's environmental resources. The continuation of
 18 non-contiguous growth practices in southern portions of the study area east of I-25 would
 19 further fragment remaining agricultural lands, reducing the long-term viability of the remaining
 20 lands. The extent of this impact would be dependent upon existing policies and regulations
 21 pertaining to the protection of environmental resources, which vary from community to
 22 community and from county to county.

23 With regard to the commuter rail component, farmland adjacent to the BNSF railroad corridor
 24 would likely be converted to residential and commercial development around transit stations
 25 and along feeder bus routes. In some cases, this development is already planned. For
 26 example, the City of Longmont has plans for transit oriented development along the proposed
 27 alignment at SH 66. However, without commuter rail as a catalyst, this area would likely
 28 develop at typical suburban densities and would consume more land.

3.20.3 Mitigation Measures

Coordination with the NRCS was conducted throughout the planning process and is contained in Appendix B. Form NRCS-CPA-106, *Farmland Conversion Impact Rating Form for Corridor Type Projects*, was submitted to the Brighton, Longmont, Fort Collins, and Greeley service centers in September 2007, and again in December 2010 when the Preferred Alternative was finalized. This form calculates the relative impacts of Package A, and Package B, and the Preferred Alternative on farmlands within the regional study area under two methods. The first method identifies the total amount of both Prime Farmland and Farmland of Statewide and Local Importance present within the regional study area and weighs them against the converted amount of farmland by each build package within the regional study area.

The second method, which addresses impacts to specific types of farmland involves a Site Assessment evaluation conducted by local NRCS representatives. The Site Assessment evaluation is based on criteria such as the percent of a site being farmed, protection provided by the state and local governments, and the availability of agricultural support services nearby. Site Assessment scores are used to estimate the value of the impacted farmland and can add up to a maximum of 260 points. If the score is less than 160, no further action is required. The scores assigned to each package by the NRCS service centers are provided in **Table 3.20-5**.

Table 3.20-5 NRCS Site Assessment Scores

Service Center	NRCS Site Assessment Score		
	Package A	Package B	Preferred Alternative
Brighton	132.7	127.7	187
Longmont	138.7	169.7	133
Fort Collins	175.0	186.0	204
Greeley	164.0	167.0	202

Total acreage impacts for Package A, Package B, and the Preferred Alternative are approximately 977, 925, and 977 acres, respectively. Site Assessment scores for the Preferred Alternative are the highest of all the alternatives. Therefore, it can be concluded that because the Preferred Alternative is tied for the greatest acreage of impacts with Package A, and has the highest Site Assessment scores in general, the Preferred Alternative would result in greater impacts to farmlands than Package A or Package B.

For scores above 160, there is the potential for an adverse impact. Therefore, coordination with the local NRCS office was conducted to determine whether avoidance and/or mitigation measures are required for those areas with Site Assessment scores exceeding 160. Representatives from the Adams County, Boulder County, Larimer County, and Weld County NRCS offices were contacted to discuss mitigation measures. All representatives recommended keeping construction materials, tools, and vehicles within proposed ROW for the project. The less encroachment onto agricultural land will result in less impact to farmlands. During final design of the project, the conversion of non-prime farmland will be considered before converting prime farmland to minimize overall impacts to prime farmland.

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