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## 5.4 Farmland

The following substantive changes have been made to this section since the Draft Environmental Impact Statement (DEIS) was published:

- Calculations of Farmland Conversion Impact Rating in **Table 5.4-2** have been updated to include the Refined Preferred Alternative (RPA).
- Calculations of crop production loss in **Table 5.4-4** and **Table 5.4-5** have been updated to include the RPA.
- The Alternative C4 hay loss value in **Table 5.4-4** and **Table 5.4-5** has been corrected**.**
- Calculations of direct farmland impacts in **Table 5.4-6** have been updated to include the RPA.
- Summary impacts in **Table 5.4-7** have been updated to reflect changes in earlier tables.

The United States Department of Agriculture (USDA) oversees the administration of the Farmland Protection Policy Act (FPPA). The goal of the FPPA is to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to non-agricultural uses. The FPPA establishes protocol and criteria to be used by federal agencies to (a) identify and consider the adverse effects of their programs on the preservation of farmland, (b) consider alternative actions, as appropriate, that could lessen adverse effects, and (c) ensure that their programs are compatible with state and units of local government and private programs and policies to protect farmland. The FPPA does not provide authority to withhold federal assistance for projects that convert farmland to non-agricultural uses.

For the purposes of implementing the FPPA, farmland is defined as prime or unique farmland or farmland that is determined by the state or local government agency to be farmland of statewide or local importance (7 CFR § 658.2(a)). The Natural Resources Conservation Service (NRCS) defines prime farmland as:

> *Land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and that is available for these uses. It has the combination of soil properties, growing season, and moisture supply needed to produce sustained high yields of crops in an economic manner if it is treated and managed according to acceptable farming methods. In general, prime farmland has an adequate and dependable water supply from precipitation or irrigation, a favorable temperature and growing season, an acceptable level of acidity or alkalinity, an acceptable content of salt or sodium, and few or no rocks. Its soils are permeable to water and air. Prime farmland is not excessively eroded or saturated with water for long periods of time, and it*

*either does not flood frequently during the growing season or is protected from flooding* (*SSM, USDA Handbook No. 18*, October 1993).

The NRCS generally identifies prime farmland in terms of the soil series and phase depicted as map units in each of the county soil surveys. In some instances, the series or a phase of the series is considered to be conditionally prime farmland only if it is drained, irrigated, or protected from frequent flooding. Prime farmland does not include land already in or committed to urban development or water storage. Land utilized or designated for commercial, industrial, or residential purposes is, therefore, categorically excluded from consideration. Farmland already in urban development also includes lands within an urbanized area as defined on the Census Bureau Map. Indianapolis is identified as such an urbanized area (see **Figure 4.2-1**).

Farmland preservation and the conversion of prime and unique farmland to urban development are issues of concern in Indiana. Continued population growth, increases in transportation systems and efficiency, and communication flexibility are some of the factors which make it increasingly easier to live and work in widely-dispersed communities. The Hoosier Farmland Preservation Task Force[1] indicates that from 1978 to 1992, an average of 88,714 acres of farmland per year have been lost to other uses (Indiana Land Resources Council, 1999). Data from the 2012 National Resources Inventory indicates that from 2007 to 2012, approximately 52,100 acres of farmland in Indiana were converted to developed land. In light of this trend, the Agricultural Conservation Easement Program (ACEP) works cooperatively with state, Tribal, and local government entities and non-governmental organizations to help them preserve valuable farmland for future generations, protecting agricultural land use and related conservation values of the land.[2]

## 5.4.1 Methodology

Farmland impacts in this chapter include only those outside of existing rights of way of SR 37 and local roadways. Farmland impacts resulting from direct conversion to transportation use are assessed in three ways. First, the total number of converted farmland acres is identified and assessed using FPPA criteria. Second, the potential annual loss in crop production is estimated. Third, the severance of existing farm operations and the creation of point row tracts and other

[1] *The Task Force was commissioned by the Indiana Governor in 1997 to study farmland preservation issues. The group identified Indiana land use trends, causes of farmland loss, and consequences of farmland conversion; and made recommendations to the Governor and Legislature in 1999 that included requiring Farmland Impact Assessments from INDOT and establishing an Indiana Land Resources Council (ILRC). ILRC was established that same year. ILRC is charged with providing technical assistance and resources to local communities on land use tools and strategies.*

[2] *The Agricultural Act of 2014 (Act) establishes the Agricultural Conservation Easement Program (ACEP) and repeals the Farm and Ranch Lands Protection Program (FRPP). In accordance with the Act, land enrolled in the FRPP prior to February 7, 2014, is considered enrolled in the ACEP. ACEP combines the purposes of FRPP and the similarly repealed Grassland Reserve Program (GRP) into the new Agricultural Land Easements (ALE) that protect the agricultural use and conservation values of eligible farm and ranch land. USDA, "Agricultural Conservation Easement Program," NRCS, http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/easements/acep/?cid=stelprdb1242695 (accessed September 5, 2017).*

uneconomic remnants are assessed. Point rows are uneconomic remnants resulting from acute angles along the edges of fields that limit or restrict access by farm equipment. Uneconomic remnants include strips of land along an edge of a field that are too narrow to farm productively.

#### 5.4.1.1 Farmland Protection Policy Act Evaluation

The evaluation of compliance with the FPPA uses the Farmland Conversion Impact Rating for Corridor Type Projects form NRCS-CPA-106, as outlined in 7 CFR § 658.4. The NRCS is the USDA agency responsible for providing assistance in the evaluation. Regulation 7 CFR § 658.4(e) states that "[I]t is advisable that evaluations and analyses of prospective farmland conversion impacts be made early in the planning process before a site or design is selected, and that, where possible, agencies make the FPPA evaluations part of the NEPA process." For this project, the NRCS-CPA-106 form was prepared in two steps, as described below:

- Step 1. The total area of land required within the right of way lines of each alternative was calculated for Johnson, Marion, and Morgan counties. Estimated right of way includes all areas of the I-69 mainline, interchanges, and local service roads. The land area within the existing SR 37 and local road rights of way were removed from this total since these areas are already designated for transportation use.
- Step 2. The total area of land outside the right of way that would be left as uneconomic remnants (too small to productively farm) or that would be landlocked was calculated. Landlocked parcels are those parcels where road or driveway access has been terminated as a result of the project, and constructing new local service roads is not proposed.

The requisite sections (Parts I and III) of the NRCS-CPA-106 form were completed and submitted to the NRCS Indianapolis headquarters office for evaluation. As prescribed in Part III of the form, the following data were presented for each of the alternatives:

a. Total acres to be converted directly (from Step 1 above)

b. Total acres to be converted indirectly or to receive services (from Step 2 above)

c. Total acres in corridor (sum of Step 1 and Step 2 above)

The NRCS uses the Land Evaluation and Site Assessment (LESA) system for the assessment. As described on the NRCS website,[3] "In agricultural land evaluation, soils are rated and placed into groups ranging from the best [referred to as prime] to the least suited for a specific agricultural use, such as cropland, forestland, or rangeland. Then, a relative value is determined for each group. For example, the best group may be assigned a value of 100, while all other groups are assigned lower values." The NRCS evaluated the submitted data and identified the following information for each alternative:

[3] *USDA, NRCS Website, Land Evaluation and Site Assessment, http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/?cid=nrcs143_008438 (Accessed September 5, 2017).*

a. Total acres prime and unique farmland
b. Total acres statewide and local important farmland
c. Percentage of farmland in county or local government unit to be converted
d. Percentage of farmland in government jurisdiction with same or higher relative value

The returned forms included the NRCS-assigned relative value of the farmland to be converted (scale of 0 to 100) per alternative for Johnson, Marion, and Morgan counties (see NRCS forms in **Appendix J**). Ten corridor assessment criteria, listed in Part VI of NRCS-CPA-106, were applied to each alternative. The criteria have assigned values ranging from 0-5 to 0-25 points. The assessment criteria were scored according to the NRCS instructions and 7 CFR § 658.5. These scores were added to determine a corridor assessment score for each alternative. This score was added to relative value (Part V) points identified by the NRCS for the portion of each alternative within Johnson, Marion, and Morgan counties.

The corridor assessment score is used to review suitability for protection. In 7 CFR 658.4(c)(1), the USDA recommends that "sites with the highest combined scores be regarded as most suitable for protection under these criteria and sites with the lowest scores, as least suitable." In addition, USDA recommends in 7 CFR 658.4(c)(3) that "sites receiving scores totaling 160 or more be given increasingly higher levels of consideration for protection."

#### 5.4.1.2 Annual Crop Production Loss

The methodology for assessing crop production loss is provided in the INDOT Procedural Manual for Preparing Environmental Studies (2008). Production, cultivation, and commodity sales price by county are averaged and used to calculate an annual crop loss estimate for acreages of farmland within each alternative. Raw data were taken directly from the USDA 2012 Census of Agriculture or from the Indiana Agricultural Statistics Annual Summary. The latest three years of data available for acres of corn, soybean, wheat, and hay harvested in Johnson, Marion, and Morgan counties were used to estimate the most recent average of harvested land.

Next, the latest three years of production data for the four commodities was averaged for the three counties. Using the average acreage harvested and the average production, the average yield for each commodity was calculated. Average sale prices (dollars/bushel or dollars/ton) were determined by averaging three years of statewide annual averages for each commodity. **Table 5.4-1** shows the production averages for Johnson, Marion, and Morgan counties.

The lost farmland for each of the four principal commodities was estimated based on the proportion of that commodity harvested in each county (i.e., the three-year average harvest acreage for each crop divided by the total acreage for all four crops). The dollar loss for each commodity within an individual county based on a specific farmland acreage purchase was then computed using the following equation:

$CCL_{com} = CFA \times CPF_{com} \times CYR_{com} \times SAP_{com}$, *where*

| | |
|---|---|
| $CCL_{com}$ | is the county crop loss for a specific commodity (dollars) |
| CFA | is the county farmland area within the right of way (acres) |
| $CPF_{com}$ | is the county prorate factor for a specific commodity |
| $CYR_{com}$ | is the county yield rate for a specific commodity (bushels/acre or tons/acre) |
| $SAP_{com}$ | is the state average price for a specific commodity (dollars/bushel or dollars/ton) |

## Table 5.4-1: Production of Principal Crops, 2013-2015 Averages by County

| Principal Crop Averages | Johnson | Marion | Morgan |
|---|---|---|---|
| Corn (statewide average annual market price - $4.04) | | | |
| Harvested (acres) | 51,067 | 6,900 | 44,000 |
| Production[2] | 8,728,000 | 1,200,000 | 7,823,667 |
| Average yield (per acre) | 170.6 | 173.2 | 177.4 |
| Soybeans (statewide average annual market price - $11.70) | | | |
| Harvested (acres) | 47,650 | 8,250 | 41,900 |
| Production[2] | 2,692,500 | 443,500 | 2,248,667 |
| Average yield (per acre) | 56.5 | 52.2 | 53.5 |
| Wheat[1] (statewide average annual market price - $5.82) | | | |
| Harvested (acres) | 2,700 | no data available | 2,720 |
| Production[2] | 214,000 | no data available | 183,000 |
| Average yield (per acre) | 79.3 | no data available | 70.3 |
| Hay[3] (statewide average annual market price - $162.00) | | | |
| Harvested (acres) | 7,370 | 750 | 7,860 |
| Production[2] | 22,200 | 2,500 | 20,100 |
| Average yield (per acre) | 6.45 | 3.33 | 5.45 |
| **Total acres harvested – all principal crops** | **108,787** | **15,900** | **96,480** |

*Source: USDA, NASS, "Indiana Statistics http://www.nass.usda.gov/in. (accessed September 5, 2017).*

*[1] Three years of data for wheat is not available at the individual county level; average is based on available years.*
*[2] Corn, soybeans, and wheat (bushels) or hay (tons).*
*[3] Starting in 2009, reporting changed to alfalfa and other hay, which are combined to determine total hay for years 2013-2015.*

The total production loss in dollars for each alternative was calculated by adding the appropriate commodity subtotals from each county. The average annual crop cash receipts for the three counties were estimated using three years of recent data, and this was used to estimate the percent crop production loss for each county.

#### 5.4.1.3 Parcel Severance, Point Rows, and Landlocked Parcels

Property information was obtained in the form of GIS shapefiles from the county assessor in each county to determine ownership and property line locations of agricultural land within the study area. The property boundary lines were transcribed on aerial photographs. The right of way limits of each alternative were overlaid on these aerials to obtain the following information about potential farmland impacts:

- Number of parcels and number of acres per parcel within the right of way
- Number and size (acres) of parcels created as a result of the alternative's severing (splitting) of farmland, and
- Number and size of uneconomic remnants (i.e., point rows or strips of land too narrow or small to farm or have other productive uses)

Each parcel was examined to determine whether the property could be accessed via a local service road. Where the cost of constructing a local service road exceeded the value of the property served, the parcels were considered to be landlocked property.

### 5.4.2 Analysis

Direct impacts on farmland would result from the acquisition of farmland for additional right of way needed for construction of I-69 Section 6. The results of the assessment for the alternatives allow for general comparisons of prime farmland impacts, loss of crop production, parcel severance, and point row creation.

#### 5.4.2.1 Farmland Protection Policy Act Analysis

Formal consultation with the NRCS for compliance with the FPPA was initiated using the form NRCS-CPA-106 (see **Section 5.4.1.1**). The assessment criteria were scored according to the NRCS instructions and 7 CFR 658.5, and the results are shown in **Table 5.4-2**.

The impact ratings range from 118 to 119 in Johnson County, 113 to 119 in Marion County, and 112 to 116 in Morgan County. Since this project received less than 160 points in every county, it will receive no further consideration for farmland protection, and the project is considered to have no significant impact to farmland. No alternatives other than those discussed in this document will be considered without a re-evaluation of potential impacts on farmland. **Appendix J** contains the completed NRCS-CPA-106 forms and related NRCS correspondence.

**Table 5.4-2: Farmland Conversion Impact Rating for I-69 Section 6 Alternatives**

| From NRCS-CPA-106 | Alt C1 | Alt C2 | Alt C3 | Alt C4 | RPA |
|---|---|---|---|---|---|
| Total acres prime +unique farmland | | | | | |
| Johnson County | 104.6 | 122.1 | 101.0 | 120.5 | 157.8 |
| Marion County | 43.2 | 29.1 | 35.0 | 41.1 | 45.0 |
| Morgan County | 162.4 | 230.4 | 129.0 | 182.3 | 214.4 |
| Total acres statewide and local important farmland | | | | | |
| Johnson County | -- | -- | -- | -- | -- |
| Marion County | -- | -- | -- | -- | -- |
| Morgan County | -- | -- | -- | -- | -- |
| Percentage of farmland in county or local government unit to be converted | | | | | |
| Johnson County | 0.06% | 0.07% | 0.06% | 0.07% | 0.09% |
| Marion County | 0.03% | 0.02% | 0.02% | 0.03% | 0.03% |
| Morgan County | 0.14% | 0.18% | 0.09% | 0.16% | 0.00% |
| Total points: Relative value of farmland to be converted + corridor assessment | | | | | |
| Johnson County | 118 | 119 | 118 | 119 | 119 |
| Marion County | 113 | 118 | 119 | 115 | 119 |
| Morgan County | 112 | 113 | 112 | 112 | 116 |

*Source: Data from USDA-NRCS Form NRCS-CPA-106* in **Appendix J**.

### 5.4.2.2 Annual Crop Production Loss

**Table 5.4-1** compares the production of the main crops in the three counties over the most recent three-year period for which the data is recorded. **Table 5.4-3** summarizes agricultural production in Morgan, Johnson and Marion counties and includes state ranking according to the USDA NASS, Indiana 2014-2015. Morgan and Marion counties have a smaller percentage of land in farms than the state. Johnson County has a larger percentage of land in farms than the state. Johnson County has over seven times the amount of land in farms than Marion County and ranks the highest of the three counties for corn, soybeans, wheat, and hay (other).

**Table 5.4-4** summarizes estimated farm income losses by county for I-69 Section 6 alternatives. The estimated acres and losses are based on three-year averages (2010, 2011 and 2013).[4] The losses would be less than one percent (a maximum of 0.11 percent for Johnson County, 0.17 percent for Marion County, and 0.18 percent for Morgan County) of the overall receipts from crop production. **Table 5.4-5** summarizes this information for each of the alternatives.

[4] *Data not available for 2012.*

**Table 5.4-3: Agricultural Production by County**

| Description | Indiana | County | | |
|---|---|---|---|---|
| | | Johnson | Marion | Morgan |
| Total land area (acres) * | 22,928,756 | 205,075 | 253,647 | 258,531 |
| Land in farms (acres)<br>(Percent of total area) * | 14,720,396<br>(64.2%) | 144,646<br>(70.5%) | 20,075<br>(7.9%) | 137,189<br>(53.1%) |
| Harvested cropland (acres)* | 12,146,538 | 129,323 | 15,130 | 111,197 |
| State ranking for agricultural production (2010) ** | | | | |
| Corn | | 56 | 82 | 59 |
| Soybeans | | 52 | 84 | 57 |
| Wheat | | 30 | NA | 50 |
| Hay (Alfalfa/Other) | | NA / 28 | NA / 37 | 19 / 50 |

** USDA, Year 2012 Census of Agriculture. The census is taken every five years covering the years ending in "2" and "7."*

*** USDA, NASS, Indiana Agricultural Statistics Publication: 2014-2015 Edition, Annual Statistical Bulletin, https://www.nass.usda.gov/Statistics_by_State/Indiana/Publications/Annual_Statistical_Bulletin/1415/15index.php (Accessed September 5, 2017).*
*NA = Not Applicable*

### 5.4.2.3 Parcel Severance, Point Rows, and Landlocked Parcels

**Table 5.4-6** shows the direct impacts to farmland for right of way acquisition, including the creation of uneconomic remnants and landlocked parcels. Since I-69 Section 6 would follow the route of SR 37, no existing agricultural parcels would be bisected. The number of parcels remaining after severance includes 201 parcels for Alternative C1, 232 parcels for Alternative C2, 201 parcels for Alternative C3, 219 parcels for Alternative C4, and 234 parcels for the RPA, the majority of which would be less than five acres in size.

In assessing potential impacts, uneconomic remnants were categorized as potential full parcel acquisitions assuming they would lose all utility. In fact, it is unlikely that all of these parcels would have no productive use. Some are adjacent to other farm parcels owned either by the same individual or another landowner who might want to acquire or lease the farmland. INDOT could buy the uneconomic remnant to offer for resale. Also, depending on location, some parcels might be suitable for development. The disposition of landlocked parcels and uneconomic remnants will be addressed during final design.

## Table 5.4-4: Estimated Crop Production and Production Loss for Alternatives by County (2010-2011, 2013)

| Alt | Corn | | Soybeans | | Wheat | | Hay | | Total | | Receipts: County 3-Year $ Average | County 3-Year % Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Acres | $ Loss | Acres | $ Loss | Acres | $ Loss | Acres | $ Loss | Acres | $ Loss | | |
| Johnson County | | | | | | | | | | | | |
| Alt C1 | 38.1 | $26,248 | 35.6 | $23,511 | 2.0 | $937 | 5.5 | $5,770 | 81.2 | $56,465 | $77,912,667 | 0.07% |
| Alt C2 | 47.1 | $32,454 | 44.0 | $29,070 | 2.5 | $1,158 | 6.8 | $7,134 | 100.4 | $69,816 | $77,912,667 | 0.09% |
| Alt C3 | 37.5 | $25,860 | 35.0 | $23,163 | 2.0 | $923 | 5.4 | $5,684 | 80.0 | $55,630 | $77,912,667 | 0.07% |
| Alt C4 | 49.4 | $34,038 | 46.1 | $30,489 | 2.6 | $1,215 | 7.2 | $7,523 | 105.3 | $73,265 | $77,912,667 | 0.09% |
| RPA | 55.8 | $38,459 | 52.1 | $34,441 | 3.0 | $1,385 | 8.1 | $8,464 | 119.0 | $82,748 | $77,912,667 | 0.11% |
| Marion County | | | | | | | | | | | | |
| Alt C1 | 12.8 | $8,959 | 15.3 | $9,351 | NA | NA | 1.4 | $748 | 29.5 | $19,057 | $16,588,333 | 0.11% |
| Alt C2 | 17.6 | $12,299 | 21.0 | $12,837 | NA | NA | 1.9 | $1,027 | 40.5 | $26,163 | $16,588,333 | 0.16% |
| Alt C3 | 15.7 | $10,963 | 18.7 | $11,443 | NA | NA | 1.7 | $915 | 36.1 | $23,321 | $16,588,333 | 0.14% |
| Alt C4 | 15.8 | $11,024 | 18.8 | $11,506 | NA | NA | 1.7 | $920 | 36.3 | $23,450 | $16,588,333 | 0.14% |
| RPA | 18.5 | $12,945 | 22.2 | $13,558 | NA | NA | 2.0 | $1,079 | 42.7 | $27,582 | $16,588,333 | 0.17% |
| Morgan County | | | | | | | | | | | | |
| Alt C1 | 64.6 | $46,277 | 61.5 | $38,467 | 4.0 | $1,622 | 11.6 | $10,252 | 141.6 | $96,618 | $72,144,333 | 0.13% |
| Alt C2 | 92.4 | $66,245 | 88.0 | $55,066 | 5.7 | $2,322 | 16.6 | $14,675 | 202.7 | $138,308 | $72,144,333 | 0.19% |
| Alt C3 | 57.5 | $41,178 | 54.7 | $34,229 | 3.5 | $1,443 | 10.3 | $9,122 | 126.0 | $85,974 | $72,144,333 | 0.12% |
| Alt C4 | 80.0 | $57,356 | 76.2 | $47,677 | 4.9 | $2,011 | 14.4 | $12,706 | 175.5 | $119,749 | $72,144,333 | 0.17% |
| RPA | 86.5 | $61,994 | 82.3 | $51,516 | 5.3 | $2,168 | 15.4 | $13,597 | 189.5 | $129,275 | $72,144,333 | 0.18% |

*Acres = Estimated number of acres that would be converted from farmland as a result of the project. Acreages are prorated by percentages based on "harvested acres" of each crop averaged over a three-year period, as shown in **Table 5.4-1**. Acres and $ Loss per crop may not add up to the county total due to rounding.*
*Source: 2010, 2011, and 2013 data from USDA, NASS (2012 was not available). Indiana average prices from USDA, NASS, "Indiana Agricultural Bulletin: 2014-2015," Annual Statistical Bulletin, http://www.nass.usda.gov/Statistics_by_State/Indiana/Publications/Annual_Statistical_Bulletin/1415/15index.php (Accessed September 5, 2017).*
*NA: Data not available*

## Table 5.4-5: Estimated Annual Crop Production Loss for I-69 Section 6 Alternatives

| Alternative | Total Harvested Acres to Be Acquired | Total $ Loss (3-year Average) |
|---|---|---|
| Alt C1 | 252.3 | $172,140 |
| Alt C2 | 343.6 | $234,287 |
| Alt C3 | 242.1 | $164,925 |
| Alt C4 | 317.1 | $216,464 |
| RPA | 351.2 | $239,605 |

*Source: Based on 2010, 2011, and 2013 data from USDA, NASS (2012 was not available). Indiana average prices from USDA, NASS, "Indiana Agricultural Bulletin: 2014-2015," Annual Statistical Bulletin, http://www.nass.usda.gov/Statistics_by_State/Indiana/Publications/Annual_Statistical_Bulletin/1415/15index.php (Accessed September 5, 2017).*
*Acreages are prorated by percentage based on "Harvested Acres" (Table 5.4-1).*

## Table 5.4-6: Direct Farmland Impacts with I-69 Section 6 Alternatives

| Potential Impacts | Alt C1 | Alt C2 | Alt C3 | Alt C4 | RPA |
|---|---|---|---|---|---|
| **Total acres to be acquired for additional right of way*** | **994** | **1,168** | **947** | **1,126** | **1,024** |
| Total farmland acres to be acquired | 263 | 356 | 254 | 330 | 361 |
| Acres of cropland to be acquired | 252 | 344 | 242 | 317 | 351 |
| **Total number of farmland parcels in right of way **** | **171** | **188** | **165** | **182** | **191** |
| Total number of parcels after severance | 201 | 232 | 201 | 219 | 234 |
| 0 – 4.99 acres | 111 | 136 | 112 | 128 | 141 |
| 5 – 9.99 acres | 35 | 39 | 32 | 36 | 36 |
| 10 or more acres | 55 | 57 | 57 | 55 | 57 |
| Number of uneconomic remnants | 11 | 10 | 8 | 8 | 9 |
| Number of parcels landlocked | 23 | 16 | 35 | 23 | 29 |
| **Total acres prime + unique farmland***** | | | | | |
| Johnson County | 104.6 | 122.1 | 101.0 | 120.5 | 157.8 |
| Marion County | 43.2 | 29.1 | 35.0 | 41.1 | 45.0 |
| Morgan County | 162.4 | 230.4 | 129.0 | 182.3 | 214.4 |

*Notes:*

** Total acres to be acquired for additional right of way exclude existing right of way since it is already in transportation use. Farmland acreage includes total "agricultural land" from the GIS land use layer excluding agricultural land within the existing right of way. Cropland includes "pasture" and "row crops" from GIS land use layer excluding cropland that exists within the existing right of way.*

*** Farmland parcels in the right of way include the total number of unique Parcel IDs in the right of way that intersect with "agricultural land" from the GIS land use layer. Parcels after severance was calculated by intersecting the GIS parcel layer with the "agricultural" land use layer and removing the right of way. Uneconomic remnants and parcels landlocked were determined by review of GIS data overlaid on aerial images.*

**** USDA-NRCS Form NRCS-CPA-106, in Appendix J, NRCS Forms. These figures indicate the acres of prime + unique farmland that NRCS has determined will be converted to transportation use as a result of the project.*

### 5.4.3 Indirect Impacts

Indirect impacts to agricultural lands resulting from induced growth associated with the I-69 Section 6 project are addressed in detail in **Section 5.24**. For Johnson County, the predicted impact to agricultural lands from induced growth is 35 acres for each of the alternatives. For Marion County, the predicted impact to agricultural lands is 66 acres for each of the alternatives. For Morgan County, the predicted impact to agricultural lands is 81 acres (Alternative C2) or 83 acres (Alternatives C1, C3, C4, and the RPA).

### 5.4.4 Mitigation

Impacts in the form of permanent conversion of farmland to non-farmland use generally cannot be mitigated by the creation of new farmland elsewhere. Mitigation of farmland impacts tends to focus on avoiding and/or minimizing conversion, or designing alignments to minimize disruption to existing agricultural patterns. General practices that were used (where reasonable and feasible) in developing alternatives for I-69 Section 6 include the following:

- The mainline for I-69 Section 6 occurs on land already designated for transportation use (existing SR 37), thereby minimizing farmland impacts and disruption of existing agricultural patterns;
- Where reasonable, alignments for local service roads were developed to follow existing property lines to minimize dividing or splitting large tracts of farmland;
- Agricultural property lines were followed where practicable and feasible or fields were crossed at perpendicular angles to reduce the creation of point rows and other uneconomic remnants; and
- Where cost-effective, access would be provided to parcels that would otherwise be landlocked as a result of the project. Overpasses or underpasses were proposed at several locations to maintain the connectivity of county roads to facilitate access to farm fields.

### 5.4.5 Summary

Direct impacts to farmland anticipated to occur as a result of I-69 Section 6 alternatives are summarized in **Table 5.4-7**. Overall, Alternative C3 would have the least impact to farmland.

The project has been evaluated in compliance with the FPPA. Farmland Conversion Impact Rating forms for corridor type projects have been prepared in coordination with the NRCS. Based on this analysis, none of the alternatives would meet the NRCS threshold for "higher levels of consideration for protection" (7 CFR 658.4 (c) (3)).

The total acres of prime and unique farmland estimated by the NRCS to be converted in Johnson County would be 104.6 acres for Alternative C1, 122.1 acres for Alternative C2, 101.0 acres for C3, 120.5 acres for Alternative C4, and 157.8 acres for the RPA.

The total acres of prime and unique farmland for alternatives in Marion County would be 43.2 acres for Alternative C1, 29.1 acres for Alternative C2, 35.0 acres for Alternative C3, 41.1 acres for Alternative C4, and 45.0 acres for the RPA.

The total acres of prime and unique farmland for alternatives in Morgan County would be 162.4 acres for Alternative C1, 230.4 acres for Alternative C2, 129.0 acres for Alternative C3, 182.3 acres for Alternative C4, and 214.4 acres for the RPA.

Efforts to minimize impacts to farmland have been included in the development of each alternative where possible by following property lines to avoid/minimize severances, crossing fields at perpendicular angles to avoid/minimize point rows, providing access to parcels that would otherwise be landlocked, and maintaining the connectivity of county crossroads.

## Table 5.4-7: Summary of Direct Farmland Impacts with I-69 Section 6 Alternatives

| Potential Impacts | Alt C1 | Alt C2 | Alt C3 | Alt C4 | RPA |
|---|---|---|---|---|---|
| **Total acres to be acquired for additional right of way*** | **999** | **1,171** | **945** | **1,113** | **1,025** |
| Total farmland acres to be acquired | 263 | 356 | 254 | 330 | 361 |
| Acres of cropland to be acquired | 252 | 344 | 242 | 317 | 351 |
| **Total number of farmland parcels in right of way **** | **171** | **188** | **165** | **182** | **191** |
| Total number of parcels after severance | 201 | 232 | 201 | 219 | 234 |
| 0 – 4.99 acres | 111 | 136 | 112 | 128 | 141 |
| 5 – 9.99 acres | 35 | 39 | 32 | 36 | 36 |
| 10 or more acres | 55 | 57 | 57 | 55 | 57 |
| Number of uneconomic remnants | 11 | 10 | 8 | 8 | 9 |
| Number of parcels landlocked | 23 | 16 | 35 | 23 | 29 |
| **Annual receipt loss and % of loss compared with total county receipts** | | | | | |
| Johnson County | $56,465<br>0.07% | $69,816<br>0.09% | $55,630<br>0.07% | $73,265<br>0.09% | $82,748<br>0.11% |
| Marion County | $19,057<br>0.11% | $26,163<br>0.16% | $23,321<br>0.14% | $23,450<br>0.14% | $27,582<br>0.17% |
| Morgan County | $96,618<br>0.13% | $138,308<br>0.19% | $85,974<br>0.12% | $119,749<br>0.17% | $129,275<br>0.18% |
| **Total receipt loss** | **$172,140** | **$234,287** | **$164,925** | **$216,464** | **$239,605** |
| **Total prime + unique farmland*** (acres)** | | | | | |
| Johnson County | 104.6 | 122.1 | 101.0 | 120.5 | 157.8 |
| Marion County | 43.2 | 29.1 | 35.0 | 41.1 | 45.0 |
| Morgan County | 162.4 | 230.4 | 129.0 | 182.3 | 214.4 |

*Notes:*

** Total acres to be acquired for additional right of way exclude existing right of way since it is already in transportation use. Farmland acreage includes total "agricultural land" from the GIS land use layer excluding agricultural land that exists within the existing right of way. Cropland includes "pasture" and "row crops" from GIS land use layer excluding cropland that exists within the existing right of way.*

*** Farmland parcels in the right of way include the total number of unique Parcel IDs in the right of way that intersect with "agricultural land" from the GIS land use layer. Parcels after severance was calculated by intersecting the GIS parcel layer with the "agricultural" land use layer and removing the right of way. Uneconomic remnants and parcels landlocked were determined by review of GIS data overlaid on aerial images.*

**** USDA-NRCS Form NRCS-CPA-106, in Appendix J, NRCS Forms. These figures indicate the acres of prime + unique farmland that NRCS has determined will be converted to transportation use as a result of the project.*