



5.4 *Farmland Impacts*

5.4.1 Introduction

Since early settlement, agricultural land in Indiana has been, and continues to be, one of the most valuable natural resources within the state. Farmland, specifically prime farmland, continues to be lost as cities expand and development for industry and housing becomes more attractive in rural areas. Data from the 2002 Census of Agriculture indicated that just over 15.1 million acres or 66 percent of Indiana's 22.9 million acres was farmland (National Agricultural Statistics Service, 2002). The state's cropland and pastureland (including wooded pastureland) accounted for 12.5 million (56 percent) and 1.1 million (five percent) acres, respectively. The remaining 1.5 million acres exists as miscellaneous agricultural property including non-pasture woodland.

Some 12.9 million acres of Indiana was considered rural prime farmland in 1997, placing it eighth in the country in total acreage of this resource (United States Department of Agriculture, 1997). Only three states have more than 50 percent of their land area classified as prime farmland: Indiana, Illinois, and Iowa (Indiana Land Resources Council, 1999). In fact, at 58 percent, Indiana ranks second only to Illinois in the percent of its land that is considered prime farmland. However, with 124,200 acres of prime farmland converted to developed land between 1992 and 1997, Indiana ranks second highest in the percentage of prime farmland conversion in the nation. It ranks seventh in the average annual rate (24,800 acres/year) of prime farmland converted to developed land (United States Department of Agriculture, 1997). Eighty-four percent of Indiana's prime farmland in 1997 was utilized for cropland, six percent was devoted to pastureland, and the remaining 10 percent was in the form of forestland, Conservation Reserve Program (CRP) land, or miscellaneous rural land.

Farmland preservation and the conversion of prime and unique farmland for development are serious issues in Indiana. Continued population growth, increases in transportation systems and efficiency, and communication flexibility are some of the factors that make it increasingly easier to live and work in widely dispersed communities today. The Hoosier Farmland Preservation Task Force indicates that from 1978 to 1992, an average of 88,714 acres of farmland per year were lost to other uses (Indiana Land Resources Council, 1999). The Natural Resource Conservation Service (NRCS) estimates that prime and important agricultural soils are being converted at a rate three to four times that of less productive non-prime farmland (United States Department of Agriculture, 2002). In light of this trend, one of the goals of the Farmland Protection Program is to protect farmland and slow its loss. The concern is not so much the overall acreage of cropland converted to urban development, as it is the quality and pattern of cropland conversion. Preservation strategies are not intended to be anti-development or anti-growth, but instead concentrate efforts on directing industrial, residential and commercial growth to areas that are less suitable for farming, thus preserving more valuable prime farmland and ultimately achieving a balanced utilization of rural, suburban, and urban land resources (Indiana Land Resources Council, 1999).

The U.S. Department of Agriculture oversees the Farmland Protection Policy Act (FPPA). The Act's ultimate goal is to minimize the extent to which federal programs contribute to the

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unnecessary and irreversible conversion of farmland to non-agricultural uses. The FPPA establishes the protocol and criteria that federal agencies are to use to (a) identify and take into account 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, 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 farmlands or farmland that the state or unit of local government determines to be farmland of statewide or local importance (7 CFR 658.2(a)). The 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 used or designated for commercial, industrial, or residential purposes, is therefore, categorically excluded from consideration.

5.4.2 Methodology

The conversion of farmland to transportation use was assessed using three separate methods. The first takes into consideration farmland acreage loss and the production potential of that farmland loss for the three Section 2 counties. The second analyzes the potential economic loss resulting from the conversion. The third addresses the severance of existing farm operations and the creation of point row tracts.

5.4.2.1 Farmland Protection Policy Act

The project is being developed in compliance with the *Farmland Protection Policy Act of 1981* and in accordance with the state and federal regulations concerning farmland protection. The guidelines for evaluation of program or project compliance with the FPPA using the Farmland



Conversion Impact Rating for Corridor Type Projects form NRCS-CPA-106 system are outlined in 7 CFR 658.4. The NRCS is the USDA agency responsible for providing assistance in the evaluation. 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 National Environmental Policy Act (NEPA) process.” To facilitate the analysis, each alternative was superimposed onto the project aerial photography. The following steps were taken in preparation for the submittal of the NRCS-CPA-106 form:

Step 1. The total area of all land within the right-of-way of both alternatives under consideration was calculated for Gibson, Pike, and Daviess counties separately based on the right-of-way shown on the aerial photography. The calculations included both the mainline right-of-way and that of all proposed interchanges and frontage/service roads.

Step 2. The total area of all land outside the right-of-way that would be left as uneconomic remnants (too small to productively farm) or would be landlocked was calculated. 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 was presented for each of the eight alternatives:

- A. *Total Acres To Be Converted* [to transportation use] *Directly*. This data was obtained from the Step 1 calculations, referenced above.
- B. *Total Acres To Be Converted Indirectly¹, Or To Receive Services*. This data was obtained from the Step 2 calculations, referenced above.
- C. *Total Acres In Corridor*. This is the sum of the Step 1 and Step 2 data.

The NRCS used the Land Evaluation and Site Assessment (LESA) system for the assessment. As described on the NRCS website (<http://www.nrcs.usda.gov/programs/lesa/>), “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 returned the forms with the following information identified for each alternative:

- A. *Total Acres Prime And Unique Farmland*.
- B. *Total Acres Statewide And Local Important Farmland*.
- C. *Percentage Of Farmland In County Or Local Gov[ernmen]t. Unit To Be Converted*.
- D. *Percentage Of Farmland In Gov[ernmen]t. 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 – 100), per alternative for Gibson, Pike, and Daviess counties. Ten corridor

¹ NRCS defines indirect impacts as acres not being converted but that would no longer be capable of being farmed after the conversion, because the conversion would restrict access.

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assessment criteria, listed in Part VI of NRCS-CPA-106, were then 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. The points identified for each criterion were then added to determine the Corridor Assessment score for each alternative. This score was then added to Relative Value (Part V) points identified by the NRCS for the portion of each alternative within Gibson, Pike, and Daviess counties. 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.”

5.4.2.2 Annual Crop Production Loss

Multiple GIS layers were created and used to identify the total number of farmland acres that would be directly converted to transportation use in Section 2. The layers were developed using the same method as used for the Tier 1 Final Environmental Impact Statement (FEIS). The working alternatives were superimposed onto the land use layer representing the distribution and location of farmland. This information permits calculating the total acres of directly converted farmland given in the tables to be able to assess the total economic effect of the conversion.

The method employed to assess the impact of each alternative on agricultural production follows the general outline provided in INDOT’s *Procedural Manual for Preparing Environmental Studies* (1996). This approach looks at each county as an agricultural unit for which statistical data for production, cultivation, and commodity sales price can be averaged and used to calculate an annual crop loss estimate for acreages of farmland within each working alignment. All raw data used in this analysis was taken directly from the USDA 2002 Census of Agriculture or from the most recent three issues of the Indiana Agricultural Statistics’ Annual Summary (2004, 2005, and 2006). The latest three years of data available for acres of corn, soybean, wheat, and hay harvested in the three counties traversed by the study alternatives was used to determine the most recent average of harvested land. Next, the latest three years of production data for these 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 Daviess, Gibson and Pike counties.



Table 5.4-1: Production of Principal Crops—Averages for Years 2004 – 2006, Daviess, Gibson and Pike Counties

Years 2004-2006 Average	Corn			Soybeans			Wheat			Hay			Total		
	Daviess	Gibson	Pike	Daviess	Gibson	Pike	Daviess	Gibson	Pike	Daviess	Gibson	Pike	Daviess	Gibson	Pike
Harvested Acres	90,230	103,830	32,600	60,600	89,930	34,830	5,630	22,600	0.0	11,900	4,370	2,570	168,360	220,730	70,000
Production (thousands, 000)	Bushels			Bushels			Bushels			Tons					
	14,371.9	17,452.1	4,897.5	3,092.2	4,068.7	1,696.0	357.7	1,517.1	0.0	37.4	12.5	6.1			
Average Yield (per acre)	159.3	168.1	150.2	51.0	48.5	48.7	63.5	67.1	0.0	3.1	2.9	2.4			
Statewide Average Annual* Market Price	Per Bushel			Per Bushel			Per Bushel			Per Ton					
	\$2.45			\$5.91			\$3.23			\$98.17					

Sources: USDA, National Agricultural Statistics Service: <http://www.nass.usda.gov/in/index.htm>.
 * Data not available in all categories for years 2004-2005-2006; therefore, prices are for years 2003-2004-2005.

Because a certain percentage of farmland in a county is harvested as corn, a certain percentage is harvested as soybean and so on for wheat and hay, these percentages for each county were applied to the farmland within each alternative to reflect a proportional impact to each of the four principal farmland commodities. The four prorated percentages were calculated by taking the three-year average harvest acreage for each crop commodity and dividing it by the total three-year average harvest acreage for all four crops. Added together, the four prorated percentages for these crops within each county equal 100%. Calculating the dollar loss for each commodity within an individual county based on a specific farmland acreage purchase can then be achieved through 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 of tons/acre)
- SAP_{com} is the state average price for a specific commodity (dollars/bushel or dollars/ton)



Finally, the total production loss in dollars for each alternative was achieved by adding the appropriate commodity subtotals for each county and then adding the county subtotals. To determine the annual percent loss in crop cash receipts for each affected county, it was necessary to determine the average annual crop cash receipts for both counties crossed by the alternatives, using three years of recent data. Using this county average data, the loss of crop cash receipts resulting from the direct purchase of farmland by each alternative can be translated into a percent loss for each county (See Section 5.4.3.2).

5.4.2.3 Parcel Severance and Point Rows

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

- Number of parcels within the proposed right-of-way
- Number of acres, per parcel, within the proposed right-of-way
- Number and size (acres) of parcels created as a result of the alternative's severing (splitting) of farmland
- 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)

In addition, each severed parcel was examined to determine whether the property could be accessed via a frontage road. Where the cost of constructing a frontage road exceeded the value of the property served, the parcels were considered to be landlocked property and included in the total of farmland acreage impacted by the project.

5.4.3 Analysis

Direct impacts on farmland will result from the acquisition of farmland for additional right-of-way needed for construction of Section 2 of I-69. 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.

5.4.3.1 Farmland Protection Policy Act

Formal consultation with the U.S. Department of Agriculture, Natural Resources Conservation Service for compliance with the *Farmland Protection Policy Act* was initiated using the Farmland Conversion Impact Rating for Corridor Type Projects form NRCS-CPA-106 to assess this project's effect on farmland. The assessment criteria included on the NRCS-CPA-106 form were scored according to the NRCS instructions and 7 CFR 658.5. NRCS provided its assessment of impacts to farmland and the total point values determined for each build alternative. The NRCS assessment data is shown in Table 5.4-2.



Table 5.4-2: Farmland Conversion Impact Rating for Section 2 Build Alternatives

From NRCS-CPA-106	Build Alternatives	
	Alternative A*	Alternative B
Total acres prime + unique farmland		
Gibson County	167.8	155.9
Pike County	509.7	530.6
Daviess County	531.9	509.7
Total acres statewide and local important farmland		
Gibson, Pike and Daviess Counties	0	0
Percentage of farmland in county or local government unit to be converted		
Gibson County	0.0810	0.0770
Pike County	0.5010	0.5190
Daviess County	0.2870	0.2640
Total Points: Relative value of farmland to be converted + corridor assessment		
Gibson County	154	152
Pike County	143	132
Daviess County	150	151

** Alternative A is the preferred alternative in eight of the nine subsections. In Subsection 7, the one subsection where Alternative B is preferred, the farmland impacts are very similar (within less than 10 acres) and Alternative B has lower impact totals, so the overall preferred alternative will have slightly less farmland impact than Alternative A.*

The total points calculated ranged from 152 to 154 in Gibson, 132 to 143 in Pike County, and 150 to 151 in Daviess County. Since this project received total point values of less than 160 points, it will receive no further consideration for farmland protection, as the project will have no significant impact to farmland. No alternatives other than those discussed in this document will be considered without a re-evaluation of the project’s potential impacts upon farmland. Appendix B, *Agency Coordination*, contains the completed NRCS-CPA-106 forms and related NRCS correspondence.

5.4.3.2 Annual Crop Production Loss

Table 5.4-1 (Section 5.4.2.2) compares the production of the main crops in the three counties over the most recent 3-year period for which the data is recorded. Table 5.4-3 summarizes the agricultural production in Daviess, Gibson and Pike Counties and state ranking according to the USDA National Agricultural Statistics Service: Indiana, 2005.

Description	Indiana	Daviess County	Gibson County	Pike County
Land and Production (2002)*				
Total Land Area (acres)	22,956,877	275,621	312,822	215,153
Land in Farms (and % of Total Area)	15,058,670 (65.6%)	206,625 (75.0%)	210,989 (67.4%)	75,716 (35.2%)
Harvested Cropland (acres)	11,940,000	154,929	178,777	56,138
State Ranking for Agricultural Production (2005)**				



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Corn		17	12	74
Soybeans		45	21	66
Wheat		25	3	-

* U.S. Department of Agriculture, Year 2002 Census of Agriculture, is taken every five years covering the years ending in "2" and "7." Although more current data is available for the State of Indiana as a whole, it is not available on a county-by-county basis. Therefore, for purposes of comparison, the 2002 census data is used.

** Source of most current state ranking data: U.S. Department of Agriculture, National Agricultural Statistics Service: Indiana, 2005: <http://www.nass.usda.gov>.

Table 5.4-4 summarizes the estimated farm income losses, by county, for each of the build alternatives in the Section 2 corridor.

Table 5.4-4: Estimated Crop Production and Production Loss for Alternatives, by County

Alternative	Corn		Soybeans		Wheat		Hay		Total		Receipts: County	County
	Acres	\$ Loss	Acres	\$ Loss	Acres	\$ Loss	Acres	\$ Loss	Acres	\$ Loss	3-Year	% 3- Year
											\$ Average	\$ Average
Daviess County												
A	202.2	\$78,923	135.8	\$40,961	12.6	\$2,590	26.7	\$8,229	377.4	\$130,703	\$53,275,000	0.25%
B	170.9	\$66,691	114.8	\$34,613	10.7	\$2,188	22.5	\$6,954	318.9	\$110,447	\$53,275,000	0.21%
Preferred	199.0	\$77,637	133.6	\$40,294	12.4	\$2,547	26.2	\$8,095	371.2	\$128,574	\$53,275,000	0.24%
Gibson County												
A	77.4	\$31,854	62.5	\$17,993	16.8	\$3,646	3.3	\$914	160.0	\$54,408	\$62,304,000	0.09%
B	73.1	\$30,083	59.1	\$16,993	15.9	\$3,443	3.1	\$863	151.1	\$51,382	\$62,304,000	0.08%
Preferred	77.4	\$31,854	62.5	\$17,993	16.8	\$3,646	3.3	\$914	160.0	\$54,408	\$62,304,000	0.09%
Pike County												
A	176.7	\$65,019	188.8	\$54,314	0.0	\$0	13.9	\$3,245	379.3	\$122,579	\$19,382,000	0.63%
B	178.2	\$65,578	190.4	\$54,782	0.0	\$0	14.0	\$3,273	382.6	\$123,633	\$19,382,000	0.64%
Preferred	176.7	\$65,019	188.8	\$54,314	0.0	\$0	13.9	\$3,245	379.3	\$122,579	\$19,382,000	0.63%

Sources:

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 3-year period, as shown on Table 4.2-13.

Loss Based on 2003, 2004, and 2005 data from USDA, National Agricultural Statistics Service: <http://www.nass.usda.gov>

Receipts: Based on 2002, 2003, and 2004 data from USDA, National Agricultural Statistics Service: <http://www.nass.usda.gov>. Receipts data for the year 2005 is not yet available by county.

The estimated acres and losses are based on 3-year averages (2004, 2005 and 2006). As can be seen, the losses as a result of the build alternatives will be a very small percentage (maximum 0.64% for Pike County, 0.25% for Daviess County and 0.09% for Gibson County) of the overall



receipts realized from crop production collectively. Table 5.4-5 summarizes this information for the build alternatives over the full length of the Section 2 corridor.

Table 5.4-5: Estimated Annual Crop Production Loss for Section 2 Build Alternatives—Daviness, Gibson and Pike Counties Combined		
Alternative (Gibson, Pike, and Daviness Counties)	Expected Total Annual Harvested Acreage Loss	Estimated Total Annual \$ Loss
A	916.7	\$ 307,690
B	852.5	\$ 285,462
Preferred	910.5	\$ 305,561

While crop production losses would occur as a result of I-69, some reduction in farm-related transportation costs would be expected with the new Interstate due to improved travel safety and travel time to local and regional markets and suppliers. (See Section 5.5.3.1, *Direct Economic Impacts*, for further discussion of potential economic impacts to farms.)

5.4.3.3 Parcel Severance, Point Rows, and Landlocked Parcels

Table 5.4-7 shows the impacts to farmland, by build alternative, as a result of right-of-way acquisition. Impacts include removal of agricultural land from production for right-of-way and the creation of uneconomic remnants² as a result of farmland severances and/or parcels landlocked³ as a result of loss of access. The number of existing parcels of farmland that will be severed as a result of the build alternatives varies from 225 to 250. The number of parcels remaining after severance ranges from 327 to 367, the majority of which will be 10 or more acres in size. The number of remaining parcels that potentially will be uneconomic remnants ranges from 130 to 140. Regarding uneconomic remnants, it is unlikely that all of these parcels would have no productive use. Most are adjacent to other farm parcels owned either by the same individual or by a neighbor who might want to acquire or lease the farmland. The state could buy the uneconomic remnant to offer for resale. Also, depending on location, some parcels might be suitable for development. In the case of landlocked parcels, many parcels that would have lost access as a result of the project will be provided new access via access or frontage roads (wherever cost-effective) as features of the project. Most are adjacent to other farm parcels and are expected to be farmed in the future. The disposition of landlocked parcels and uneconomic remnants will be addressed during final design.

5.4.3.4 Indirect Impacts

Farmland, forest, wetlands, and streams are the possible resources that the project’s indirect land use changes would affect. However, further analysis of the percent of forests, wetlands, and

² Uneconomic remnants include point rows, i.e., the formation of an acute angle along the edges of fields that limits or restricts the ability of farm equipment to access the area for farming purposes; and strips of land along an edge of a field that are too narrow to farm productively.

³ Landlocked parcels are those parcels to which road or driveway access has been terminated as a result of the project, and constructing new access roads is not proposed.



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streams compared to the percent of farmlands in the induced growth traffic analysis zones (TAZs) suggested that the land converted indirectly would be agricultural land. Collectively in the TAZs that are anticipated to experience induced growth, agriculture is the predominant land use. Therefore, given the abundance of available agricultural land in the more desirable locations, it is reasonable to assume that, in the foreseeable future, nearly all land required for development will be converted from agricultural land.

A total of 139 acres of indirect land use changes are forecasted with the alternatives studied. These changes would be the same for either of the build alternatives because they are located within the same corridor, varying only slightly between the actual alignments, and include the same number and locations of interchanges. The location and number of interchanges are the factors most influencing the location of induced growth. The forecasted amount of traffic, which creates much of the economic demand for the amount of indirect land use changes, is the same for each build alternative. Combined, the interchange locations and traffic volumes generally affect the location and amount of indirect land use changes. The 2001 USGS National Land Cover Database was used to identify the amount and types of land cover in the induced growth TAZs. Of a total of 12,831 acres comprising the 22 TAZs studied for induced growth, 9,203 acres (72%) were identified as “Agricultural/Other” (see Table 5.4-6). Indirect impacts to farmland are discussed in greater detail in Chapter 5.24, *Indirect and Cumulative Impacts*.

It is also anticipated that mitigation for direct impacts of the project to forests and wetlands would involve the acquisition and conversion of additional farmland, which would be considered an indirect impact of the project. Approximately 290 acres of farmland is currently proposed to be used for mitigation of forest and wetland impacts within Section 2 (although the actual mitigation areas may not necessarily be within Section 2). Further details can be found in Chapter 7, *Mitigation*.

Table 5.4-6: USGS National Land Cover Database: Amount of Land Cover Types in Induced Growth TAZs

County (# TAZs represented)	Developed (acres)	Unusable (acres)	Ag/Other in Floodplain (acres)	Available Ag / Other (acres)	Forest in Floodplain (acres)	Available Forest (acres)	Total Acres In TAZs (Ag Land/Other as % of total)
Gibson (3)	153	13	26	526	22	410	1,149
Pike (11)	870	7	150	4,481	49	1,095	6,652
Daviess (8)	683	2	4	4,016	9	317	5,030
Totals	1,705 (13%)	22 (0.2%)	9,203 (72% of total TAZ acres)		1,902 (15%)		12,831 (72%)

Source: USGS 2001 National Land Cover Dataset for Zone 49.
 Cover types:
Developed: Open Water; Developed, Open Space; Developed, Low Intensity; Developed, Medium Intensity; and Developed, High Intensity.
Unusable: Woody Wetlands; and Emergent Herbaceous Wetlands.
Agriculture Land/Other: Barren Land (Rock/Sand/Clay); Shrub/Scrub; Grassland/Herbaceous; Pasture/Hay; and Cultivated Crops.
Forest Land: Deciduous Forest; Evergreen Forest; and Mixed Forest.



5.4.4 Mitigation

Agricultural impacts in the form of permanent conversion of farmland to non-farmland use generally cannot be mitigated easily by the creation of new farmland elsewhere. For this reason, the mitigation of agricultural impacts tends to focus on those practices that assist in avoiding and/or minimizing conversion, or designing alignments to minimize disruption to existing agricultural patterns. General practices that were considered in developing alternatives for Section 2 included the following:

- When reasonable, alignments were developed to follow existing property lines and minimize dividing or splitting of large tracts of farmland.
- Agricultural property lines were followed as much as possible or fields were crossed at perpendicular angles to reduce point rows and the creation of uneconomic remnants.
- Where reasonable, access will be provided to parcels that would otherwise be landlocked as a result of the project.
- Overpasses were proposed at several locations to maintain the connectivity of county roads, thereby facilitating access to farm fields and operations severed by the interstate.

Coordination is continuing with NRCS to determine the feasibility of participating in the Farm and Ranch Lands Protections Program (formerly known as the Farmland Protection Program). Local and regional farmland protection strategies may also be incorporated into the I-69 Community Planning Program. FHWA and INDOT are providing financial and technical assistance for local land use planning through the I-69 Community Planning Program. The City of Washington jointly with Daviess County and the City of Petersburg jointly with Pike County have each received \$100,000 grants under this program to support land use and economic development planning. Gibson County has also received a similar grant for \$50,000. One of the goals of the grant program is to assist local governments in developing plans that protect farmland.

5.4.5 Summary

Direct impacts on farmland will result from the acquisition of farmland for the right-of-way needed for road construction. Direct impacts to farmland anticipated to occur as a result of each build alternative proposed in Section 2 are summarized in Table 5.4-7. The preferred alternative, a combination of Alternatives A and B, will require the acquisition of about 1,195 acres of agricultural land for right-of-way, of which approximately 910.5 acres are estimated to be cropland removed from production. As can be seen, no alternative has a clear advantage over others regarding the amount of impacts to farmland. The similarity of impacts is due primarily to the narrowness of the corridor in which the alternatives were developed and the resulting proximity of the alignments therein; the similarity of the proposed design features (i.e., number of lanes, right-of-way width, locations of interchanges and overpasses, etc.); and the efforts to minimize impacts to farmland 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.



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The project has been developed in compliance with the *Farmland Protection Policy Act of 1981*. Farmland Conversion Impact Rating forms for Corridor Type Projects have been prepared in coordination with the NRCS. Based on this analysis, neither alternative met 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 to be converted within Section 2 for Alternatives A and B are 1,209 and 1,196, respectively.

Indirect land use changes are anticipated to result from growth induced by the highway project. Such growth is anticipated to account for an additional 139 acres of farmland conversion by the year 2030. These indirect land use changes are forecasted to be located near the proposed interchanges with SR 64, SR 61, and US 50 within Gibson, Pike, and Daviess Counties. The preferred alternative is also expected to require approximately 290 acres of agricultural land to be used for wetland and forest mitigation. Indirect impacts are addressed in greater detail in Chapter 5.24, *Indirect and Cumulative Impacts*.



Potential impacts	Alternatives		
	A	B	Preferred
Total acres to be acquired for right-of-way	1,843	1,798	1,824
Total agricultural acres to be acquired	1,204	1,120	1,195
Acres of cropland to be acquired	917	853	911
Total number of farmland parcels in right-of-way	250	225	253
Total number of parcels after severance	367	327	374
0 – 5 acres	140	130	142
5 or more acres	227	197	232
Number of uneconomic remnants	142	130	144
Number of parcels landlocked	0	0	0
Annual receipt loss and % of loss compared with total county receipts			
Daviss County	\$130,703 0.25%	\$110,447 0.21%	\$128,574 0.24%
Gibson County	\$54,408 0.09%	\$51,382 0.08%	\$54,408 0.09%
Pike County	\$122,579 0.63%	\$123,633 0.64%	\$122,579 0.63%
Total receipt loss	\$307,690	\$285,462	\$305,561
Total acres prime +unique farmland¹			
Daviss County	531.9	509.7	N/A ²
Gibson County	167.8	155.9	N/A ²
Pike County	509.7	530.6	N/A ²

¹ Source: USDA-NRCS Form NRCS-CPA-106, in Appendix B. These figures indicate the acres of prime + unique farmland NRCS has determined will be converted to transportation use as a result of the project. Since these computations were made by USDA only for Alternatives A and B, they are not available for the preferred alternative.

² Alternative A is the preferred alternative in eight of the nine subsections. In Subsection 7, the one subsection where Alternative B is preferred, the farmland impacts are very similar (within less than 10 acres) and Alternative B has lower impact totals, so the overall preferred alternative will have slightly less farmland impact than Alternative A.



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