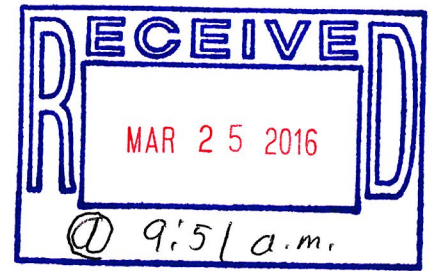


## **Amended Economic Impact Study**

The following is an amended Economic Impact study for the Department of Juvenile Justice related to the proposed closure of the Illinois Youth Center at Kewanee. The amended economic impact study was received at 9:51 a.m. on Friday, March 25<sup>th</sup>, 2016. The reason given for the need for an amended study was “there was a discrepancy in the numbers the professor used for the study so they were updated and new dollar amounts now reflect both the correct number of employees as well as the correct amounts for their wages/salaries.”



Report to

**Illinois Department of Juvenile Justice**

# **Economic Impact of Illinois Youth Center - Kewanee - Henry County, IL**

Prepared by

R | E | A | L

Regional Economic Applications Laboratory

University of Illinois  
607 S. Mathews, #318,  
Urbana, IL 61801-3671  
217-333-4740: fax 217-244-9339

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## **Executive Summary**

The report examined the impact of the potential closure of the Illinois Youth Center- Kewanee – on the Henry County, Illinois economy. Using data provided by the Illinois Department of Juvenile Justice, an economic model of the county was constructed using the IMPLAN system. The direct impacts, especially in terms of employment and purchases of goods and services were entered into the model. The results revealed that the predominant impacts were concentrated on the direct effects. The small size, in economic terms, of Henry County limited the magnitude of the indirect effects. In total, the estimates yielded a total loss of 218 jobs, \$20.9 million in wages and salaries and just over \$27.6 million in production. The analysis concentrated on the impact of the closure; no attempt was made to assess the impact of re-use of the facility or the potential for former employees to find other jobs within the county.

## Glossary of Terms and Models Used in the Analysis

To assist the reader in the interpretation of the results, a brief introduction to impact analysis and a glossary of terms is provided in this section.

### Linkages

A regional economy like the one characterizing the state of Illinois has several important features. First, sectors in an economy are linked – some directly, others indirectly. For example, a sector producing automobile parts that are shipped to the final assembly line would represent a *direct linkage* between two sectors. Assume the automobile component supplier purchases some fabricated metals products from another supplier; this too represents a direct linkage. However, the fabricated metals producer has an *indirect linkage* to the automobile assembly producer. Although not directly dependent on automobile production, the fabricated metal producer is clearly indirectly dependent on the production levels of the assembler. Hence, while many sectors of the economy are linked directly, many if not more are linked indirectly. In short, no one is independent in the economic system. In American Water case, the utility has little direct connection with supermarkets; yet, indirectly, many supermarket jobs are dependent on the expenditures made by American Water employees or those employed by suppliers to American Water.

### Ripple or Multiplier Effects

Consider the case just reviewed; assume automobile production increases. Now, the assembler will require more components: this will generate a direct effect – and a column in the tables in this report will indicate the size of these direct effects. But we know that the impacts will not stop here; the component supplier will purchase more fabricated metal products, the fabricated metal producer will buy more steel, the steel producer will buy more iron ore or scrap and so forth. What we have described here are the multiple levels of the ripple effect – a direct change in one sector leads to expansion in other sectors of the economy. These sector-to-sector effects are referred to as *indirect effects* – and these too are shown in the summary tables.

During this whole process, firms need to purchase not only components and materials from other sectors, but they also have to pay wages and salaries to their employees. In turn, these

employees will generate their own ripple effect. For example, an assembly line worker will use the extra income earned from overtime (assumed to occur to meet the additional demand) to take his/her family to dinner. Part of this expenditure becomes income to the waiter; he spends some of this income at the dry cleaners and part of that expenditure is then used by the owners of the dry cleaning business to buy lumber to renovate their house. Part of this expenditure will be used by employees in the lumber yard to enjoy an evening at the cinema – and so the process continues until the impact diminishes to zero. This part of the ripple effect is referred to as *induced income impacts*.

So we have direct effects and two types of indirect effects – one generated by industry-industry purchases and sales and one generated by expenditures by employees from wages and salaries. The summations of these impacts are revealed in the tables as *total impacts*. If the total impacts are divided by the direct impacts, we obtain the *ripple or multiplier effect*. Consider the employment multiplier of 1.5; the interpretation is as follows, for every direct job, an additional 0.5 jobs are generated through a combination of the indirect and induced impacts.

### **Models Used**

The analysis was conducted using IMPLAN, a proprietary suite of models that has been offered for several decades by a North Carolina-based company. Inputs provided by the Illinois Department of Juvenile Justice were entered in a model of Henry County to estimate the economic impacts, with a focus on production, income and employment as well as a variety of state and local government taxes.

## **1. Introduction**

This report provides an assessment of the economic impact of the closure of the Illinois Youth Center (hereafter the Center), Kewanee, on the Henry County economy. Data about the operation of the Center, including information on employees and expenditures on goods and services, were provided by the Illinois Department of Juvenile Justice. These data were then entered into a model of the Henry County economy constructed from information provided by the IMPLAN organization. The resulting outcomes are then presented in terms of impacts on production (value of goods and services produced), income (essentially wages and salaries) and employment; summary impacts on major state and local taxes were also estimated.

The analysis assumed the complete closure of the Center and no re-deployment of facilities; in addition, it was assumed that none of the employees would be hired by other companies or organizations. As such, the report can be considered a worst-case scenario.

## **2. Methodology**

The extended input-output system used in this analysis traces the impacts if a change in one part of the economy, in this case the closure of the Center, on the rest of the economy. The primary impacts will come from the loss of jobs, generating a negative ripple effect on other sectors as lost wages and salaries would result in a curtailment of spending by former Center employees on a range of goods and services. In turn, these direct losses would generate a further negative ripple effect as grocery stores, hardware operations, insurance companies and so on would find their revenues reduced; in all likelihood, these indirectly effected companies might have to curtail part or all of their operations, generating further losses in employment.

### 3. Results

Table 1 provides a summary of the main results; more detailed tables are provided in the Appendix. Table 1(b) provides the economy-wide (Henry County) results. In the column labeled 'Employment,' the direct employees, 199, generate a further 19 jobs in the county for a total impact of 218. The division of these two numbers ( $218/199$ ) yields the value 1.09; this is the 'multiplier,' revealing that each job in the facility generates a further 0.09 jobs elsewhere in the county. For income, the multiplier is a little higher; each dollar of income paid to employees generates a further \$0.18 while the impact on production is higher still, a multiplier of 1.40. The small size of the multipliers reflects the size of the county; Henry County is home to about 50,000 people of whom 22,400 are employed. As a result, the ripple effects from any change are likely to be small since the economic base cannot sustain a diverse set of activities – especially in terms of significant retail. In all likelihood, much of the indirect effects “leak out” into the Quad Cities regions. Hence, the major impacts from the closure will be heavily concentrated in the direct effects.

The main impact on taxes would be through sales (indirect taxes) as shown in table 1c.



**Table 1: Summary Table Economic Impacts****(a) Description**

Facility Name:	Illinois Youth Center - Kewanee
Number of Direct Employees:	199
Total Employee Compensation:	\$17,686,800*
Location:	Henry County
Impact type:	Industry Change
IMPLAN Economic Sector:	Individual and Family Services (485)

**(b) Economic Indicators**

Facility Name	Description	Employment	Income	Output
IYC - Kewanee	Direct Impact	199	\$17,686,800	\$19,695,500
	Total Impact	218	\$20,857,280	\$27,573,700
	Multiplier	1.09	1.18	1.40

**(c) Taxes Indicators**

Facility Name	Description	State and Local	Federal
IYC - Kewanee	Employee Comp.	\$94,964	\$2,798,761
	Prop. Income	\$0	\$618,527
	Ind. Bus. Tax	\$1,960,738	\$163,799
	Households	\$1,039,817	\$2,981,893
	Corporations	\$24,565	\$97,471

Note: Sum of Personal Services and Social Security expenses on IYC staff and School District employees  
 $\$17,686,800 = (15129900 + 1157400) + (1300000 + 99500)$

**Appendix: Detailed Economic Impacts - Henry County, IL****Employment\***

Description	Direct	Indirect	Induced	Total
<b>Total</b>	<b>199.0</b>	<b>8.5</b>	<b>10.2</b>	<b>217.7</b>
11 Ag, Forestry, Fish & Hunting	0.0	0.0	0.0	0.0
21 Mining	0.0	0.0	0.0	0.0
22 Utilities	0.0	0.0	0.0	0.0
23 Construction	0.0	0.2	0.1	0.4
31-33 Manufacturing	0.0	0.0	0.0	0.0
42 Wholesale Trade	0.0	0.2	0.4	0.6
44-45 Retail trade	0.0	0.1	2.1	2.3
48-49 Transportation & Warehousing	0.0	0.4	0.3	0.7
51 Information	0.0	0.2	0.1	0.3
52 Finance & insurance	0.0	1.1	0.9	2.0
53 Real estate & rental	0.0	2.1	0.4	2.6
54 Professional- scientific & tech svcs	0.0	1.4	0.4	1.8
55 Management of companies	0.0	0.1	0.0	0.1
56 Administrative & waste services	0.0	1.6	0.5	2.1
61 Educational svcs	0.0	0.0	0.2	0.2
62 Health & social services	199.0	0.0	1.6	200.6
71 Arts- entertainment & recreation	0.0	0.1	0.3	0.4
72 Accommodation & food services	0.0	0.2	1.2	1.4
81 Other services	0.0	0.7	1.5	2.2
92 Government & non NAICs	0.0	0.0	0.0	0.0
<i>Multiplier</i>	1.09			

**Income\***

Description	Direct	Indirect	Induced	Total
<b>Total</b>	<b>\$17,686,800</b>	<b>\$1,265,282</b>	<b>\$1,905,199</b>	<b>\$20,857,280</b>
11 Ag, Forestry, Fish & Hunting	\$0	\$1,178	\$17,064	\$18,243
21 Mining	\$0	\$182	\$237	\$419
22 Utilities	\$0	\$2,483	\$1,958	\$4,441
23 Construction	\$0	\$65,328	\$39,618	\$104,946
31-33 Manufacturing	\$0	\$3,006	\$2,013	\$5,018
42 Wholesale Trade	\$0	\$98,830	\$159,626	\$258,456
44-45 Retail trade	\$0	\$18,339	\$341,219	\$359,558
48-49 Transportation & Warehousing	\$0	\$179,252	\$136,872	\$316,124
51 Information	\$0	\$56,735	\$49,038	\$105,773
52 Finance & insurance	\$0	\$177,243	\$179,601	\$356,844
53 Real estate & rental	\$0	\$11,726	\$5,618	\$17,344
54 Professional- scientific & tech svcs	\$0	\$306,465	\$72,883	\$379,348
55 Management of companies	\$0	\$31,382	\$7,283	\$38,665
56 Administrative & waste services	\$0	\$161,101	\$54,645	\$215,746
61 Educational svcs	\$0	\$32	\$13,424	\$13,456
62 Health & social services	\$17,686,800	\$19	\$456,601	\$18,143,420
71 Arts- entertainment & recreation	\$0	\$3,339	\$18,103	\$21,442
72 Accommodation & food services	\$0	\$21,632	\$122,504	\$144,136
81 Other services	\$0	\$127,010	\$226,890	\$353,900
92 Government & non NAICs	\$0	\$0	\$0	\$0
<i>Multiplier</i>	1.18			

**Output\***

Description	Direct	Indirect	Induced	Total
<b>Total</b>	<b>\$30,962,882</b>	<b>\$4,905,813</b>	<b>\$7,334,247</b>	<b>\$43,202,942</b>
11 Ag, Forestry, Fish & Hunting	\$0	\$1,703	\$19,036	\$20,739
21 Mining	\$0	\$1,111	\$1,452	\$2,563
22 Utilities	\$0	\$8,264	\$6,823	\$15,086
23 Construction	\$0	\$235,093	\$146,432	\$381,525
31-33 Manufacturing	\$0	\$16,471	\$11,322	\$27,793
42 Wholesale Trade	\$0	\$319,869	\$516,639	\$836,507
44-45 Retail trade	\$0	\$59,909	\$910,428	\$970,338
48-49 Transportation & Warehousing	\$0	\$352,947	\$299,767	\$652,715
51 Information	\$0	\$467,139	\$416,564	\$883,703
52 Finance & insurance	\$0	\$947,608	\$868,292	\$1,815,900
53 Real estate & rental	\$0	\$1,041,916	\$1,951,640	\$2,993,555
54 Professional- scientific & tech svcs	\$0	\$655,222	\$191,938	\$847,161
55 Management of companies	\$0	\$72,663	\$16,863	\$89,526
56 Administrative & waste services	\$0	\$413,284	\$131,042	\$544,327
61 Educational svcs	\$0	\$72	\$33,165	\$33,238
62 Health & social services	\$30,962,882	\$41	\$847,484	\$31,810,407
71 Arts- entertainment & recreation	\$0	\$23,617	\$89,515	\$113,132
72 Accommodation & food services	\$0	\$71,853	\$433,665	\$505,518
81 Other services	\$0	\$217,030	\$442,181	\$659,211
92 Government & non NAICs	\$0	\$0	\$0	\$0
<i>Multiplier</i>	1.40			

\* Proportion Adjusted Values

## Taxes

### State and Local

Description	Employee Comp.	Proprietor Income	Ind. Bus. Tax	Households	Corporations
Dividends					\$886
Social Ins Tax- Employee Contribution	\$32,157	\$0			
Social Ins Tax- Employer Contribution	\$62,807				
Indirect Bus Tax: Sales Tax			\$805,353		
Indirect Bus Tax: Property Tax			\$1,039,840		
Indirect Bus Tax: Motor Vehicle Lic			\$26,868		
Indirect Bus Tax: Severance Tax			\$0		
Indirect Bus Tax: Other Taxes			\$65,352		
Indirect Bus Tax: S/L Non Taxes			\$23,325		
Corporate Profits Tax					\$23,679
Personal Tax: Income Tax				\$790,621	
Personal Tax: Non Taxes (Fines- Fees				\$162,693	
Personal Tax: Motor Vehicle License				\$56,663	
Personal Tax: Property Taxes				\$21,122	
Personal Tax: Other Tax (Fish/Hunt)				\$8,719	
<b>Total State and Local Tax</b>	<b>\$94,964</b>	<b>\$0</b>	<b>\$1,960,738</b>	<b>\$1,039,817</b>	<b>\$24,565</b>

### Federal

Description	Employee Comp.	Proprietor Income	Ind. Bus. Tax	Households	Corporations
Social Ins Tax- Employee Contribution	\$1,410,158	\$618,527			
Social Ins Tax- Employer Contribution	\$1,388,603				
Tax on Production and Imports: Excise Taxes			\$110,929		
Tax on Production and Imports: Custom Duty			\$41,171		
Tax on Production and Imports: Fed NonTaxes			\$11,700		
Corporate Profits Tax					\$97,471
Personal Tax: Income Tax				\$2,981,893	
<b>Total Federal Tax</b>	<b>\$2,798,761</b>	<b>\$618,527</b>	<b>\$163,799</b>	<b>\$2,981,893</b>	<b>\$97,471</b>