

# Impact of the Closure of Selected Department of Juvenile Justice Facility, 2012

Report to the Illinois Department of Juvenile Justice

Submitted by

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Table of Contents

	Page
Executive Summary .....	3
Glossary of Terms .....	4
1 Introduction .....	6
2 Methodology .....	6
3 Results: Individual Facilities.....	7
4 Impacts on State Income and Sales Taxes .....	16
5 Summary Evaluation.....	17

## **Executive Summary**

The economic impact of the closure of public facilities on local economies varies according to (1) the size of the facilities and its direct economic footprint on the economy and (2) the size and economic composition of the community itself. In times of high unemployment, as in the present case, the economic impacts are likely to be felt more strongly as the possibilities of employees finding alternative jobs may be significantly reduced. While re-location is an option for many employees, there is no guarantee that job prospects will be better elsewhere in the state – or even in other parts of the country. Further, given the depressed state of the housing market, with many communities experiencing times on the market in excess of 14 months, employees who have invested in homes may not be able to contemplate relocation.

The impacts reveal that in Illinois Youth Center Joliet for every facility job in excess of 0.4 additional jobs are created in the region. Further the closure of this facility is likely to reduce state and local (sales) income taxes and thus may have a negative impact on the provision of other public services – schools, health care, road maintenance and so forth.

The analysis only looks at the impacts without any consideration of mitigating programs.

## Glossary of Terms

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 Chicago Metropolitan area has several important features. First, sectors in a metropolitan 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.

### 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 and sectoral composition 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 the

money at the dry cleaners and part of that expenditure is 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 summation 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.

The closure of a facility in the Chicago metropolitan area will generate two types of impacts – a redistribution effect (associated with the redeployment of employees to other facilities in the metropolitan region) and a reduction in activity (associated with the relocation of employees outside the metropolitan region).

# **1 Introduction**

This report assesses the impacts of a selected Department of Juvenile Justice facility, on the metropolitan and regional economies in which the facility is located. The local economies are defined as individual counties or aggregations of counties in the case of metropolitan areas. Closure of this operation will involve the following impacts:

1. Redirection of non wage and salary expenditures to employees and
2. The impact generated by purchases of goods and services from non-state operated vendors, many of who may be located outside local economies in which the facilities are located;

In the first case, the net impact on the region will vary depending on (1) the size of the any compensation provided to communities to mitigate the negative impacts of job losses and (2) the degree to which existing employees opt to seek jobs in alternative sectors of the economy in the same region. The major changes that may occur may result a downsizing in the direct employment in the alternative facilities and the degree to which the occupational profile of the workforce in the new facilities mirrors that of the state-run operations.

# **2 Methodology**

Almost all impact studies employ a form of model that assesses the direct and indirect impacts of any change in an activity on an economy. In this case, REAL used a combination of its own model for the Chicago region with a set of models generated from IMPLAN data for facilities located outside the Chicago region. All the models attempt to understand and interpret the way in which a direct effect (in this case the closure of the two facilities) generates a ripple effect on a reference economy. This ripple effect will arise from (i) the expenditures of goods and service by employees in the facilities and (ii) through the purchases of goods and service (including medical supplies, utilities, building maintenance etc).

### 3 Results

The economic impacts for the facility proposed for closure are shown in a series of tables following this narrative. The magnitude of the impacts will vary according to the size of the facility and the structure of the community or county in which the facility is located. If the local economy is relatively small, then a larger percentage of the ripple effects will occur in other parts of the state; hence, the size of the local multiplier or ripple effect will be smaller than that observed in a larger, more sophisticated economy (such as the Chicago region). While there may be greater employment opportunities in a larger region, specific openings for the kinds of skills presented by employees in these facilities may not be available; it is likely that the problems of finding alternative employment will be greater in smaller communities. A further issue stems from the ability of employees to relocate where the relocation would involve the sale of a house or similar property. Given the depressed state of the housing market in some communities, selling a house may prove to be as difficult as finding another job; in many downstate communities, time on the market averages more than one year.

Consider the employment impacts; note that in the first column, 'Direct,' there is only one entry – the employment at the facility of 219 persons. Similar lone entries can be found in the 'Income' and 'Output' tables. As a result of the payment of wages and salaries to facility employees and the expenditures by the facility on goods and services to ensure the operation of the facility, the columns detail the path of the ripple effects. The 'Indirect' column shows the employment, income and output generated in supplier firms providing the goods and services to the facility. The 'Induced' column shows the impacts of wages and salaries paid the facility employees and those in firms providing goods and services to the facility as they are spent and re-spent in the county or community. The final column 'Total' sums all these activities. Hence, the 219 direct jobs generate a further 87 jobs for a total impact of 306 jobs. Each job in the facility thus generates another 0.4 jobs elsewhere in the region of impact. In essence, these may be the aggregations of parts of many jobs – the check-out clerk at the grocery store, a bank teller, auto repair shop mechanic and so forth. About \$13m worth of total income (direct, indirect and induced) can be attributed to the facility.

At the end of each table is a summary, the multiplier, which describes the magnitude of the ripple effect.

## ILLINOIS YOUTH CENTER – JOLIET

### EMPLOYMENT

Description	Direct	Indirect	Induced	Total
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	0.2	0.3	0.5
23 Construction	0.0	0.4	0.2	0.6
31-33 Manufacturing	0.0	0.7	0.7	1.4
42 Wholesale Trade	0.0	1.9	1.9	3.9
44-45 Retail trade	0.0	0.7	11.5	12.2
48-49 Transportation & Warehousing	0.0	1.2	1.2	2.4
51 Information	0.0	1.1	0.8	2.0
52 Finance & insurance	0.0	2.6	2.9	5.4
53 Real estate & rental	0.0	2.5	2.3	4.8
54 Professional- scientific & tech svcs	0.0	4.1	1.5	5.6
55 Management of companies	0.0	0.4	0.1	0.5
56 Administrative & waste services	0.0	8.9	2.1	11.0
61 Educational svcs	0.0	0.0	2.5	2.6
62 Health & social services	219.0	1.9	10.8	231.7
71 Arts- entertainment & recreation	0.0	0.3	1.6	1.9
72 Accommodation & food services	0.0	2.8	7.0	9.9
81 Other services	0.0	1.6	3.7	5.2
92 Government & non NAICs	0.0	2.3	1.8	4.1
<b>Total</b>	<b>219.0</b>	<b>34.0</b>	<b>53.0</b>	<b>306.0</b>
<b>Multiplier</b>	<b>1.40</b>			

### LABOR INCOME

Description	Direct	Indirect	Induced	Total
11 Ag, Forestry, Fish & Hunting	\$0.0	\$339.4	\$1,028.7	\$1,368.0
21 Mining	\$0.0	\$613.6	\$559.4	\$1,173.0
22 Utilities	\$0.0	\$30,641.7	\$34,112.3	\$64,754.0
23 Construction	\$0.0	\$22,007.7	\$13,303.1	\$35,310.8
31-33 Manufacturing	\$0.0	\$53,901.4	\$49,269.8	\$103,171.2
42 Wholesale Trade	\$0.0	\$114,405.5	\$114,439.4	\$228,845.0
44-45 Retail trade	\$0.0	\$19,617.9	\$339,219.1	\$358,837.0
48-49 Transportation & Warehousing	\$0.0	\$58,816.5	\$59,845.0	\$118,661.4
51 Information	\$0.0	\$62,900.9	\$47,294.5	\$110,195.5
52 Finance & insurance	\$0.0	\$117,277.6	\$131,146.2	\$248,423.8
53 Real estate & rental	\$0.0	\$57,484.5	\$53,862.7	\$111,347.2
54 Professional- scientific & tech svcs	\$0.0	\$231,352.9	\$82,572.3	\$313,925.2
55 Management of companies	\$0.0	\$34,207.9	\$6,586.5	\$40,794.4
56 Administrative & waste services	\$0.0	\$288,378.9	\$68,861.3	\$357,240.2
61 Educational svcs	\$0.0	\$1,080.4	\$56,628.7	\$57,709.2
62 Health & social services	\$10,024,263.3	\$85,755.7	\$494,499.9	\$10,604,518.9
71 Arts- entertainment & recreation	\$0.0	\$8,167.9	\$39,757.3	\$47,925.2
72 Accommodation & food services	\$0.0	\$53,564.1	\$133,441.3	\$187,005.4



81 Other services	\$0.0	\$51,515.6	\$121,921.3	\$173,436.9
92 Government & non NAICs	\$0.0	\$122,108.1	\$93,412.5	\$215,520.6
<b>Total</b>	<b>\$10,024,263.3</b>	<b>\$1,414,138.1</b>	<b>\$1,941,761.5</b>	<b>\$13,380,162.8</b>
<b>Multiplier</b>	<b>1.06</b>			

TOTAL OUTPUT

<b>Description</b>	<b>Direct</b>	<b>Indirect</b>	<b>Induced</b>	<b>Total</b>
11 Ag, Forestry, Fish & Hunting	\$0.0	\$750.2	\$2,273.9	\$3,024.1
21 Mining	\$0.0	\$2,300.8	\$2,097.7	\$4,398.5
22 Utilities	\$0.0	\$160,407.0	\$178,575.1	\$338,982.0
23 Construction	\$0.0	\$53,801.4	\$32,521.8	\$86,323.2
31-33 Manufacturing	\$0.0	\$543,858.8	\$497,126.8	\$1,040,985.6
42 Wholesale Trade	\$0.0	\$270,613.8	\$270,694.1	\$541,307.9
44-45 Retail trade	\$0.0	\$34,726.3	\$600,464.4	\$635,190.7
48-49 Transportation & Warehousing	\$0.0	\$142,843.3	\$145,341.2	\$288,184.6
51 Information	\$0.0	\$309,315.8	\$232,571.4	\$541,887.2
52 Finance & insurance	\$0.0	\$426,536.8	\$476,976.8	\$903,513.6
53 Real estate & rental	\$0.0	\$1,313,015.3	\$1,230,289.6	\$2,543,304.9
54 Professional- scientific & tech svcs	\$0.0	\$444,771.2	\$158,743.6	\$603,514.8
55 Management of companies	\$0.0	\$70,958.8	\$13,662.5	\$84,621.3
56 Administrative & waste services	\$0.0	\$607,589.3	\$145,084.9	\$752,674.2
61 Educational svcs	\$0.0	\$2,378.4	\$124,656.7	\$127,035.1
62 Health & social services	\$19,686,700.3	\$168,416.1	\$971,150.7	\$20,826,267.1
71 Arts- entertainment & recreation	\$0.0	\$23,910.3	\$116,384.3	\$140,294.6
72 Accommodation & food services	\$0.0	\$150,684.6	\$375,392.7	\$526,077.3
81 Other services	\$0.0	\$108,341.2	\$256,409.7	\$364,750.9
92 Government & non NAICs	\$0.0	\$161,252.6	\$123,357.9	\$284,610.6
<b>Total</b>	<b>\$19,686,700.3</b>	<b>\$4,996,472.1</b>	<b>\$5,953,775.7</b>	<b>\$30,636,948.1</b>
<b>Multiplier</b>	<b>1.56</b>			

## **4 Impacts on State Sales and Income Taxes**

Finally, even though the facilities are owned and operated by the state and thus do not incur sales taxes on goods and services purchased, the inputs into these goods and services are taxed. Further, employees in the facilities and those employees working in firms supplying the goods and services and in the activities providing consumer goods and services will all pay state income tax. The table below provides an estimate of the state income and sales taxes generated by the total impact of the facility on the economy. Property taxes, licenses and other fees, corporate taxes and so forth were not estimated.

<b>Facilities</b>	<b>JOLIET</b>
<b>Sales Tax</b>	\$314,649
<b>Income Tax</b>	\$212,238

## **5 Summary Evaluation**

The decision to close a facility will generate not only a direct impact but, in some cases, important indirect effects on the local community or county in which it is located. The analysis conducted here only looks at the negative effects of the closure of the facility; at this time, no information was available to assess the potential for existing employees to gain alternative positions in the community. Some of these employees may be rehired by other businesses in the community, although with unemployment rates over 9% or more in many of these communities, options may be limited. Others may chose to leave the community in search of jobs elsewhere or they may choose to change careers and seek positions in another sector of the economy. None of these actions can be predicted with certainty; each will have a different impact on the community.

However, there are other impacts that have not be considered – the nature and volume of charitable contributions – both time and money – provided by the facility employees; the impact of the closure and re-location of facility employees and their families on school district enrolments and so forth. All of these more qualitative impacts contribute to the fabric of the local community and may be valued just as highly – even is they are more difficult to measure.