
The Power of Twenty

An Analysis of the Economic Benefits of the Cape-May Lewes Ferry System

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AUGUST 2020



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Executive Summary

In 2019 the Delaware River and Bay Authority (DRBA) retained Council Fire to assess the economic impacts of the Cape May-Lewes Ferry System. Carrying more than a quarter of a million cars and three-quarters of a million people in a typical year, the Ferry System provides a vital service in the region that promotes tourism, trade, and economic development. Its role is even more important today, as the region strives to revive its economy following the shutdowns necessitated by the COVID-19 pandemic.

In 2018, the most current year for which audited data are available, the Ferry System generated nearly \$19.8 million in revenue, primarily from tickets and concessions. Its direct operational costs were about \$40.6 million. Because \$9 million was for depreciation (an accounting write down for earlier expenditures), the Ferry System effectively runs with an operating subsidy of \$11.8 million. The DRBA as a whole, however, is completely self-financing thanks to tolls generated by the Delaware Memorial Bridge. The tolls cover net expenses not only of the Ferry but of DRBA's five airports, business park, and various economic development projects.

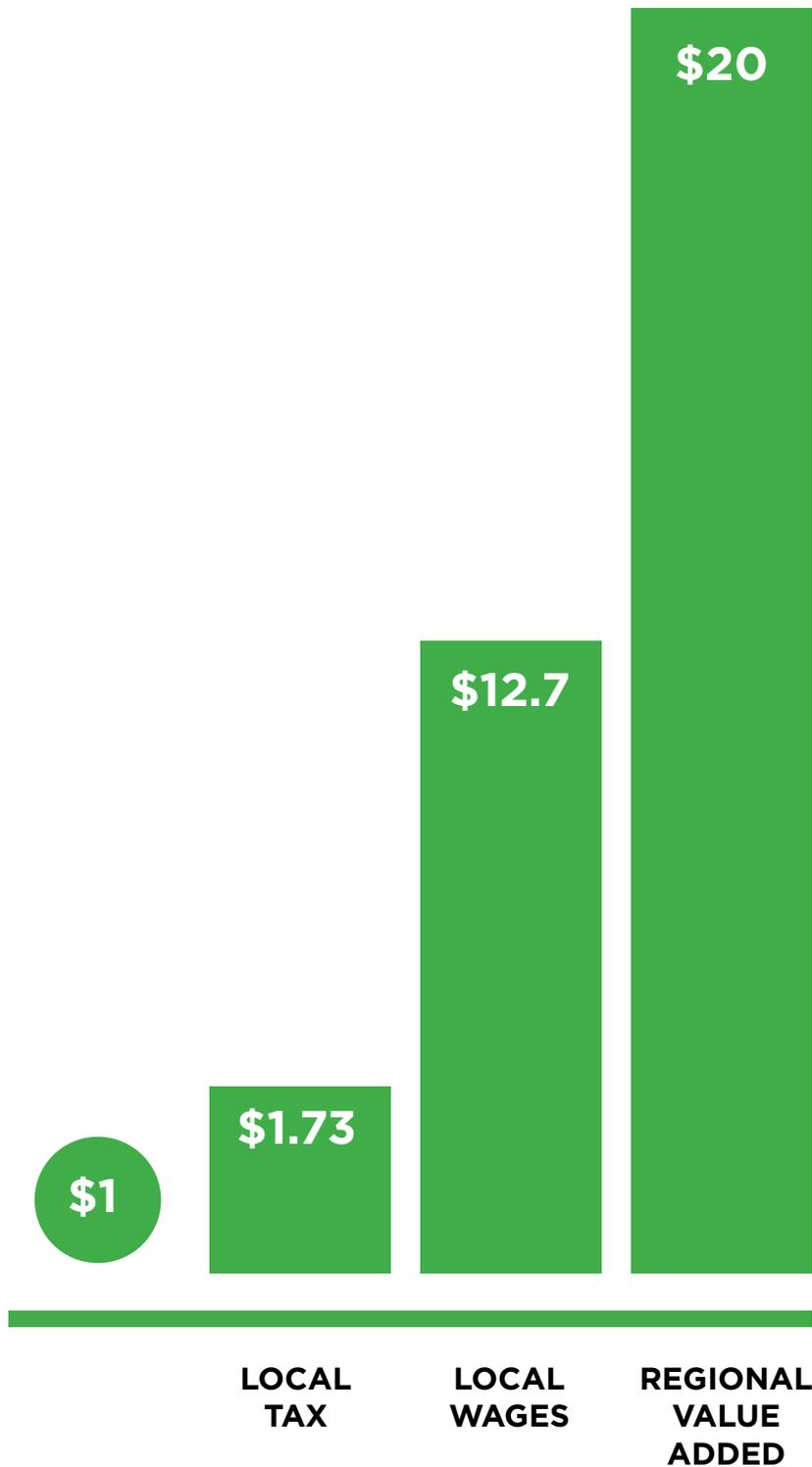
This study examines the considerable Return on Investment (ROI) of this \$11.8 million net expenditure on the economies of Sussex (DE) and Cape May (NJ) counties. It finds that every dollar of net expenditure invested in the Ferry System generates:

- **\$1.73 in state and local tax revenue**
- **\$12.70 in wages in the region, and**
- **\$19.76 in increased regional value-added (the local equivalent of GDP).**

The last point is why we titled the study “The Power of Twenty.” Every dollar of net expenditure on the Ferry System stimulates twenty dollars of economic activity—a remarkable multiplier effect.

Return on Investment (ROI)

Sussex (DE) and Cape May (NJ) counties



Every dollar of net expenditure on the Ferry System stimulates twenty dollars of economic activity.

These results were arrived at using IMPLAN, a computer model widely used by economic-development authorities across the United States. The spending associated with the Ferry System, including those made by the passengers it carries, sustains 4,130 jobs in the region. These jobs pay \$152 million per year and generate \$236 million in value added and \$21 million in state and local taxes.

In fact, the benefits are probably much greater. A planned second phase of analysis will likely show benefits in five other categories:

- The spending impacts of Ferry passengers in the states of New Jersey and Delaware outside of Cape May County and Sussex County.
- The enhancement of coastal property values by the Ferry.
- The value for some passengers to travel directly between Cape May and Sussex Counties.
- The contributions of the Ferry to the overall package attracting tourists to Cape May and Sussex Counties.
- The benefits of reduced congestion on the roads, and the benefits of a transportation option that pollutes significantly less than automobiles that travel a greater distance over the Delaware Memorial Bridge.

The bottom line is that the Ferry System is a powerful and vital cog in the Delaware Bay regional economic wheel.

The spending associated with the Ferry System sustains 4,130 jobs in the region. These jobs pay \$152 million per year and generate \$236 million in value added and \$21 million in state and local taxes.

About the Authors

Council Fire is a global management consultancy helping purpose-driven organizations thrive by creating lasting economic, social and environmental value. Its expertise spans a wide array of industries and market sectors, with particularized knowledge and demonstrated success in the areas of transportation systems, natural resource and oceans management, energy infrastructure and development, and water management. Its experts represent several hundred years of experience creating, implementing, and managing all aspects of environmental, economic, and social policies, programs and campaigns for government, public interest and private sector organizations. Its clients include: state, regional and federal governmental agencies such as Maryland's Port and State Highway Administrations, Chesapeake Bay Program, and U.S. Environmental Protection Agency; multinational, national, regional and local nonprofit organizations including the World Bank, Environmental Defense Fund, and World Wildlife Fund; foundations such as Walton Family Foundation and Oak Foundation; impact investment firms including Zoma Capital and Encourage Capital; and private corporations including Duke Energy, China Light & Power and NRG Bluewater Wind.

By virtue of our extensive experience and engagement in this wide array of assessment, policy and program development, and related undertakings, Council Fire has earned a strong global reputation as an independent, highly-regarded source of information and advice across sectors. Our programs have garnered national and international awards for clients and we are recognized as a leader in the sustainable business movement as evidenced by our selection as a "Best For The World" B Corporation honoring us as one of the highest-rated, most impactful companies in the world.

Council Fire's lead economist on this study, Michael Shuman, has performed impact and economic development analyses for dozens of clients including state and local governments, Native American reservations, and private businesses throughout the United States (California, Colorado, Idaho, Illinois, Kentucky, Maine, Maryland, Massachusetts, Michigan, Montana, New Mexico, New York, North Carolina, Ohio, Oregon, and Washington) and Canada (New Brunswick, Newfoundland, Nova Scotia, and Prince Edward Island). Shuman has also authored, coauthored, or edited ten books related to local economics and economic development and, as a prolific speaker, has given an average of more than one invited talk per week, mostly to local governments and universities, for the past 30 years in nearly every U.S. state and more than a dozen countries.

Introduction

The Delaware River and Bay Authority (DRBA) is a regional economic development authority that serves the states of New Jersey and Delaware. Created in 1962 through an interstate compact, DRBA runs the Delaware Memorial Bridge, the Cape May-Lewes Ferry, and the Forts Ferry Crossing, which collectively facilitate the transport of tens of millions of passengers and serve as critically important arteries for Mid- Atlantic commerce. In 1990, the compact was amended to allow for expansion of DRBA's authority to run five regional airports (in New Castle, DE; Cape May, NJ; Millville, NJ; Dover, DE; and Cheswold, DE). The authority also operates the Salem County Business Park and various economic development projects in partnership with the Diamond State Port Corporation and Delaware State University.

In 2019 DRBA retained Council Fire to assess the economic impacts of the Cape May-Lewes Ferry System (Ferry System). While the Ferry System has impacts on all of New Jersey and Delaware, DRBA tasked Council Fire to focus on the economic impacts on Cape May and Sussex Counties (referred to herein as the "CMLF Region"). Planned future work will assess the impacts beyond these two counties.

The reference year for this study is 2018, which is the most recent year for which audited financials for the Ferry System are available. These can be found in DRBA's *Comprehensive Financial Report* for FY-2018, and that study provides most of the data on DRBA's revenues and expenditures used for this analysis. The other important source of data is from surveys the Ferry System regularly administers to passengers. These surveys capture the expenditures passengers estimate they will make during their trips, and are the source of our estimates on tourist spending.

The report begins by determining the net operational cost of the Ferry System. This number is important because it is how DRBA itself, as well as its overseeing bi-state board and the New Jersey and Delaware state legislatures, measures its performance. DRBA requires no additional funds from the two states, because tolls from the bridge cover the net costs of the ferry, the airports, and the economic development programs. As further described herein, the internal operating subsidy to the Ferry System was \$11.8 million in 2018. This "deficit" varies slightly from year to year, and the DRBA considers the ferry, like other parts of its operation, a public service that helps promote economic development in the region.

While the costs of the Ferry System are easily calculated, the benefits are not as well understood or appreciated. To estimate the benefits, all the expenditures triggered indirectly by the Ferry System are tallied. These include:

- Ancillary spending by DRBA on behalf of the Ferry System (specifically, administration and police).
- Spending by the DRBA on Ferry System capital improvements.
- Spending in the CMLF Region by tourists riding the Ferry System.
- Spending in the CMLF Region by other tourists attracted to local amenities that include the Ferry System.

All together, these expenditures constitute the Ferry System's direct economic impact. But science of economic impact analysis requires following the secondary and tertiary effects of this spending (the so-called "multiplier" effect). That is where computer modeling comes in. Council Fire uses IMPLAN, which is widely used by economic-development authorities across the United States. IMPLAN allows the measuring of indirect and induced effects of these expenditures. Every direct expenditure leads to more spending by local businesses, which is considered the indirect effect. And the expansion of local businesses means more local spending by their workers, which is the induced effect.

As this report is being completed, the world is six months into an unprecedented pandemic that has led to dramatic impacts across local, regional and our national economy. Efforts to combat the spread of COVID-19 have included wholesale shutdowns of economic sectors which have affected the level of activity in the DRBA. These data, when available, will not be representative of a normal year, but will be important for future planning.

I. Operational Costs

The annual operational costs of the Ferry System reflect the net of its revenues and cash costs.

The two main revenue streams are tickets sold to cars and passengers using the ferry, and concessions sold on the ferry and at DRBA shops at the Cape May and Lewes ports. Again, these data are drawn from DRBA's *Comprehensive Financial Report* covering FY-2018. Chart 1 shows that in 2018, the Ferry System was used by 264,667 vehicles and 756,755 passengers. DRBA received a total of \$18.8 million in revenue: \$13.4 million from ferry tickets and \$5.3 million from concessions.¹

The following table provides a summary of revenue data:

Chart 1
Ferry Use and Revenues (2009-2018)²

Year	Use		Revenues (\$ 1,000s)		
	Vehicles	Passengers	Ferry Tickets	Concessions	Total
2018	264,667	756,755	\$13,432	\$5,326	\$18,758
2017	268,038	774,422	\$13,653	\$5,263	\$18,916
2016	258,859	752,649	\$13,142	\$5,087	\$18,229
2015	266,178	782,278	\$13,322	\$4,681	\$18,003
2014	262,010	767,209	\$13,353	\$3,858	\$17,211
2013	256,326	743,151	\$12,962	\$3,502	\$16,464
2012	272,358	795,541	\$13,724	\$3,820	\$17,544
2011	268,605	779,451	\$13,468	\$3,541	\$17,009
2010	286,462	831,686	\$14,258	\$3,565	\$17,823
2009	295,256	845,362	\$14,309	\$3,604	\$17,913

Additionally in 2018, the Ferry System received \$1.0 million in other income³. Half came from unused tickets that expired. The rest came from bus and trolley fares, surcharges, internet reservation fees, binocular fees, amusement sales, lottery ticket commissions, and insurance claims.

The total revenue of the Ferry System in 2018 was approximately \$19.8 million.

¹Note that these and other estimates in the narrative here are rounded. Unrounded data, however, were input into IMPLAN.

²2018 Comprehensive Financial Report, Schedule 25, p. 116, and Schedule 30, p. 121.

³Ibid, Schedule 10, p. 94.

Chart 2 shows the trend in annual operations spending by the Ferry System⁴. Audited expenditures in 2018 were about \$35 million for operations and \$5.5 million for concession operations. Therefore, total expenditures were \$40.6 million.

Chart 2
Operations Expenditures (2009-2018)
(\$1,000s)

Year	Ferry	Ferry	Total
	Operations	Concessions	
2018	\$35,143	\$5,472	\$40,615
2017	\$34,449	\$5,577	\$40,026
2016	\$33,702	\$5,617	\$39,319
2015	\$32,164	\$5,136	\$37,300
2014	\$33,052	\$4,495	\$37,547
2013	\$33,358	\$4,459	\$37,817
2012	\$32,463	\$4,104	\$36,567
2011	\$32,827	\$4,107	\$36,934
2010	\$31,779	\$4,107	\$35,886
2009	\$30,629	\$4,213	\$34,842

Comparing the revenues of the Ferry System (\$19.8 million) and the expenses (\$40.6 million) suggests that the financial cross-transfer from the bridge to the Ferry System was \$20.8 million. About \$9 million of the expenses were depreciation, however, effectively an accounting write off of earlier expenses.⁵ The actual cash transfer to the Ferry System in 2018 was \$11.8 million.

The key question for the remainder of this report is this: What is the economic impact of this net expenditure of \$11.8 million?

⁴ Ibid, Schedule 40, p. 131.

⁵ Ibid, Schedule 11, p. 95.

II. Indirect Operating Expenses by the Ferry System

In addition to direct expenditures made on Ferry System operations and concessions, the DRBA has two other categories of expenses that can be indirectly attributed to the Ferry System—administration and police. As shown in Chart 3, expenditures for DRBA administration total \$16.9 million and for DRBA policing total \$10.7 million. Chart 3 breaks down the total operations expenditures of all the relevant DRBA departments into the subcategories of wages, benefits, goods and services, and depreciation.⁶

Chart 3
Operations Expenditures by Spending Category (\$1,000s)

	Wages	Benefits	Goods & Services	Depreciation	Total
Ferry	\$9,574	\$8,182	\$8,533	\$8,854	\$35,143
Admin	\$5,988	\$5,024	\$4,336	\$1,556	\$16,904
Police	\$5,437	\$4,024	\$783	\$469	\$10,713
Concessions	\$2,012	\$1,037	\$2,392	\$31	\$5,472

To ascertain what percentage of the four categories actually should be attributed to the Ferry, we asked DRBA to provide a list of full-time-equivalent (FTE) staff in each whose work was primarily for the Ferry System. We concluded that about 20% of the administration and the police focused on the Ferry System. Chart 4 shows what the total expenditures are for the four subcategories without depreciation and then adjusted them for the workforce. So the indirect expenditures that should be attributed to the Ferry System were \$3.2 million for the administration and \$1.9 million for police.

Chart 4
Operations Expenditures without Depreciation, Adjusted for Workforce (\$1,000s)

	Total	Total (Minus Depreciation)	Attribution to Ferry	Total Spending
Ferry	\$35,143	\$26,289	100.00%	\$26,289
Admin	\$16,904	\$15,348	21.00%	\$3,223
Police	\$10,713	\$10,244	18.90%	\$1,936
Concessions	\$5,472	\$5,441	100.00%	\$5,441
				\$36,889

⁶ Ibid, Schedule 11, pp. 95-96.

⁷ Ibid., Schedule 40, p 131.

III. Ferry Non-Operating Expenses

The next impact from the Ferry system is from its capital or “non-operating” expenditures.⁷ These go to buildings, equipment, and other long-term expenditures. Chart 5 summarizes the ten-year trend in spending. In 2018 just over \$8 million was expended.

Chart 5
Capital Expenditures, 2009-18 (\$1,000s)

Year	Non-operations
2018	\$8,112
2017	\$7,366
2016	\$7,471
2015	\$9,431
2014	\$3,224
2013	\$7,248
2012	\$9,188
2011	\$4,159
2010	\$8,103
2009	\$2,656

Of the \$8.1 million spent in 2018, 4.7% (\$384,000) was spent on terminal improvements, while 95.3% (\$7.8 million) was spent on vessel maintenance and improvements.⁸

IV. Spending by Tourists Riding the Ferry in the CMLF Region

DRBA has shared with us internal calculations (via spreadsheet) of tourist spending in the region, based on regular surveys of its passengers. Consistent with this study’s focus, we only look at the spending patterns of tourists destined for Cape May or Sussex Counties. We recommend that future surveys also capture the spending patterns of tourists destined for other parts of New Jersey and Delaware.

In Chart 6, we break down aggregate expenditures into the six component parts that appear in the DRBA surveys.⁹ It shows that in 2018 riders destined for Cape May County planned to spend \$105 million, and riders destined for Sussex County planned to spend \$125 million. As the next section shows, these expenditures turn out to be relatively small components of overall tourist spending in the CMLF Region.

Chart 6
Ferry Riders Anticipated Spending in the CMLF Region in 2018

	Cape May	Sussex	Total
Accommodations	\$34,291,804	\$40,428,477	\$74,720,281
Food	\$19,254,763	\$22,889,827	\$42,144,590
Transportation	\$11,152,422	\$13,386,401	\$24,538,823
Retail Purchases	\$14,846,008	\$17,901,257	\$32,747,265
Entertainment	\$12,448,470	\$15,106,837	\$27,555,306
Recreation	\$12,636,555	\$15,275,068	\$27,911,623
Total	\$104,630,022	\$124,987,866	\$229,617,888

⁸ BA, “General Fund, Schedule of Fixed Assets, 31 December 2018,” internal communication.

⁹ DRBA developed these data by multiplying the number of passengers traveling to each destination by the average reported expenditures in each of the six categories.

It should be noted that the nature of the survey makes it somewhat ambiguous about where exactly spending occurs. For example, the \$75 million anticipated spending on accommodations could be going to home rentals, hotels, motels, trailer parks, or AirBNB homes.

Again, expanding this analysis beyond Cape May and Sussex Counties would increase the estimate of direct tourist spending. For example, if we focus on just northbound passengers, we estimate that \$39 million is also spent in Atlantic County, New Jersey, where ferry-riding tourists spend money in Atlantic City, Downbeach, and Brigantine.

V. Spending by All Tourists in the CMLF Region

Some percentage of the additional spending by tourists visiting Cape May and Sussex Counties also can be attributed to the Ferry System. Along with beaches, restaurants, parks, cultural events, and so forth, the ferry is part of a local “package” that draws tourists. Calculations that we performed on property values in Cape May County suggest that at least for homes within a mile of the Ferry Port, their proximity almost doubled their value compared to homes close to the shore in neighboring Atlantic County. We encourage DRBA to conduct surveys of tourists to shed more light on this question.

Chart 7 shows the recent trend in spending in Cape May County. These data are put together in annual reports by the County and are drawn from studies performed by New Jersey and Tourism Economics¹⁰ In 2019, the most recent year for which data are available, tourists spent \$6.9 billion and generated \$565 million in state and local tax receipts. The tourism industry was responsible for almost 27,000 jobs. Chart 8 shows how spending breaks down in the most recent years.

Chart 7
Tourism Spending in Cape May County, 2013-19
 (\$ Millions)

	Direct	Total	Tax
Year	Employment	Spending (\$ M)	Receipts (\$ M)
2019	26,981	\$6,905	\$565
2018	26,576	\$6,615	\$554
2017	26,826	\$6,363	\$542
2016	26,108	\$6,273	\$537
2015	25,825	\$5,975	\$521
2014	25,490	\$5,781	\$508
2013	25,140	\$5,519	\$499

Expanding this analysis beyond Cape May and Sussex Counties would increase the estimate of direct tourist spending.

¹⁰ A full collection of these studies, under the category of “Tourism,” can be found at: <https://capemaycountynj.gov/documentcenter>.

Chart 8**Breakdown of Tourism Spending in Cape May County, 2018-19**
(\$ Millions)

	2018	2019
Lodging	\$2,633	\$2,681
Food/Beverage	\$1,536	\$1,644
Retail	\$1,280	\$1,362
Recreation	\$711	\$742
Transportation	\$455	\$476
	\$6,615	\$6,905

Chart 9 shows the recent trend in spending in Sussex County. These data are developed annually by the State of Delaware, though unlike Cape May County data, they have not yet completed 2019.¹¹ In 2018, the most recent for which data are available, tourism generated \$2.2 billion of spending in the County and \$235 million and state and local taxes. Total employment in the sector there is almost 19,000. Chart 10 shows how spending breaks down in the most recent years.

Chart 9**Tourism Spending in Sussex County, 2014-18**
(\$ Millions)

	Direct	Total	Tax
Year	Employment	Spending (\$ M)	Receipts (\$ M)
2018	18,780	\$2,151	\$235
2017	18,350	\$2,059	\$225
2016	18,000	\$1,934	\$212
2015	17,010	\$1,792	\$199
2014	16,630	\$1,717	\$193

Calculations that we performed on property values in Cape May County suggest that at least for homes within a mile of the Ferry Port, their proximity almost doubled their value compared to homes close to the shore in neighboring Atlantic County.

¹¹ A full collection of these studies can be found at: <https://visitsoutherndelaware.com/tourism-research>.

Chart 10**Breakdown in Tourism Spending in Sussex County, 2017-18
(\$ Millions)**

	2017	2018
Hotel & Other	\$199	\$209
Rental Homes	\$1,214	\$1,255
Food/Beverage	\$309	\$330
Shopping	\$224	\$227
Entertainment	\$77	\$91
Transportation	\$36	\$39
	\$2,059	\$2,151

Using 2018 as the reference year, the total tourist spending in the two counties comprising the CMLF Region is \$8.8 billion, and the total state and local taxes generated is \$789 million. *This suggests that the \$230 million in annual spending by ferry passengers comprises about 2.6% of total tourist spending.* If further analysis suggests that the Ferry System is responsible for even an additional 1% of the total package of tourist amenities, it would mean that the Ferry System was generating indirectly another \$88 million in regional spending and \$7.9 million in state and local taxes. Our economic impact analysis, however, includes only the direct spending of ferry passengers in Cape May and Sussex Counties.

VI. Direct, Indirect, and Induced Impacts on CMLF Region

Chart 11 summarizes the analysis thus far and presents all the revenues and expenditures associated with the Ferry System for the reference year of 2018. The very large number, total tourist spending, adds the estimates of \$6.6 billion for Cape May County and \$2.2 billion for Sussex County summarized in the previous section.

Chart 11**Summary of the Revenues and Expenditures Associated with the Ferry in 2018
(\$1,000s)**

Revenue	\$19,770
Direct Operational Spending (without depreciation)	\$31,730
Indirect Operational Spending (without depreciation)	\$5,159
Capital Spending	\$8,112
Ferry Passenger Tourism Spending	\$230,618
Total Tourism Spending	\$8,766,000

Economic impact analysis is essentially a two-step process: count direct spending in a given area, and then follow the recirculation of that spending. Every dollar of direct spending leads beneficiary businesses to re-spend some percentage in other local businesses. This is called the indirect effect. Additionally, some portion of the money is paid to workers who themselves re-spend money locally. This is called the induced effect.

A standard tool for measuring the indirect and induced effects is IMPLAN, a regional input-output model that enables one to design hypothetical “events” and see the economic consequences. The best way of modeling the economic effects of the Ferry System is to start with the CMLF regional economy, and then design an “event” that removes all the spending associated with the Ferry System. The loss of ferry jobs and spending are thus the direct effects. The reduced Ferry System spending on other businesses in the region are considered indirect effects. The impact this has on worker spending, both former ferry workers and the workers of other affected businesses, is the induced effect.

Only some of the items on the list in Chart 11 are appropriate for an economic impact analysis. Because IMPLAN follows the impacts of spending, we need to set aside DRBA’s revenue. And because we do not have a reliable estimate of the percentage of overall tourism spending that should be attributed to the Ferry System, that number also should be set aside. The most justifiable expenditures for analysis are ferry operations spending (direct and indirect), capital spending, and passenger spending.

One challenge is how to map these changes onto IMPLAN’s 540 sectors. Every sector has a slightly different set of multipliers, production functions, and other characteristics. Modelers therefore must make some judgment calls. Here are ours:

- For DRBA’s operations spending (direct and indirect), we’ve selected the “Other State Enterprises” category (Sector Code 531).
- For DRBA’s capital spending, we’re assuming that the spending is split between “Maintenance and Repair of Nonresidential Structures” (Code 60) and “Boats” (Code 361). As noted in our analysis of capital expenditures, 95.3% is attributed to “Boats” and the rest to terminal maintenance.
- For tourist expenditures, we consulted with DRBA to ascertain the most relevant expenditure categories. We then looked at the 2018 output levels in each category in the CMLF Region, and applied that pattern to the tourist expenditures, as shown in Chart 12¹² The consequent inputs for IMPLAN are shown in Chart 13.¹³

¹² The output levels come from IMPLAN’s baseline model of the 2018 economy. The breakdowns represent the estimated portion of each tourism spending category, based on the relative output.

¹³ The inputs for each sector are derived by dividing the total expenditure by Ferry passengers in each category (Chart 6) by the relative percentages of each sector calculated in Chart 12.

Chart 12

Mapping IMPLAN Sectors onto DRBA Tourism Categories

Tourism Spending Category	IMPLAN Category (IMPLAN Code)	Output	% Breakdown
Food	Full Service Restaurants (509)	\$872,126,526	59.76%
	Limited Service Restaurants (510)	\$397,644,043	27.25%
	All Other Food & Drinking Places (511)	\$189,570,663	12.99%
Transportation	Gasoline Stations (408)	\$84,121,353	38.20%
	Air Transportation (414)	\$20,927,763	9.50%
	Water Transportation (416)	\$16,842,104	7.65%
	Transit & Ground Transportation (418)	\$51,876,507	23.56%
	Automobile Rentals (450)	\$46,461,918	21.10%
Retail	Food & Beverage Stores (406)	\$324,586,548	34.61%
	Health & Personal Care Stores (407)	\$111,752,693	11.92%
	Clothing & Clothing Accessory Stores (409)	\$201,902,267	21.53%
	Sporting Goods, Hobby, & Book Stores (410)	\$52,232,708	5.57%
	General Merchandise Stores (411)	\$152,075,226	16.22%
	Miscellaneous Store Retailers (412)	\$95,204,422	10.15%
Recreation & Entertainment	Performing Arts Companies (496)	\$25,927,944	7.27%
	Commercial Sports (497)	\$24,121,323	6.76%
	Racing and Track (498)	\$3,138,487	0.88%
	Independent Artists, Writers, & Performers (499)	\$4,245,324	1.19%
	Promoters (500)	\$23,857,639	6.69%
	Museums, Zoos, & Parks (501)	\$9,869,881	2.77%
	Amusement Parks & Arcades (502)	\$60,633,869	17.00%
	Gambling (503)	\$87,469,177	24.53%
	Other Amusement & Recreation Industries (504)	\$86,571,899	24.28%
	Fitness & Recreational Centers (505)	\$21,412,712	6.01%
	Bowling Centers (506)	\$9,326,305	2.62%
Accommodations	Hotels & Motels (507)	\$259,756,348	82.24%
	Other Accommodations (508)	\$56,101,730	17.76%

Every dollar of direct spending leads beneficiary businesses to re-spend some percentage in other local businesses. This is called the indirect effect.

Chart 13

Passenger Tourism Expenditure Inputs for IMPLAN

Tourism Spending Category	IMPLAN Category (IMPLAN Code)	IMPLAN Inputs
Food	Full Service Restaurants (509)	\$25,186,306
	Limited Service Restaurants (510)	\$11,483,637
	All Other Food & Drinking Places (511)	\$5,474,647
Transportation	Gasoline Stations (408)	\$9,373,120
	Air Transportation (414)	\$2,331,851
	Water Transportation (416)	\$1,876,611
	Transit & Ground Transportation (418)	\$5,780,277
	Automobile Rentals (450)	\$5,176,963
Retail	Food & Beverage Stores (406)	\$11,334,874
	Health & Personal Care Stores (407)	\$3,902,511
	Clothing & Clothing Accessory Stores (409)	\$7,050,621
	Sporting Goods, Hobby, & Book Stores (410)	\$1,824,016
	General Merchandise Stores (411)	\$5,310,613
	Miscellaneous Store Retailers (412)	\$3,324,630
Recreation & Entertainment	Performing Arts Companies (496)	\$4,033,219
	Commercial Sports (497)	\$3,752,191
	Racing and Track (498)	\$488,207
	Independent Artists, Writers, & Performers (499)	\$660,381
	Promoters (500)	\$3,711,173
	Museums, Zoos, & Parks (501)	\$1,535,309
	Amusement Parks & Arcades (502)	\$9,431,897
	Gambling (503)	\$13,606,261
	Other Amusement & Recreation Industries (504)	\$13,466,685
	Fitness & Recreational Centers (505)	\$3,330,853
	Bowling Centers (506)	\$1,450,753
Accommodations	Hotels & Motels (507)	\$61,448,697
	Other Accommodations (508)	\$13,271,584

In Chart 14, we show the resulting impacts in IMPLAN of removing these Ferry impacts from the DRBA economy. The region would lose 4,130 jobs, \$152 million in wages, and \$236 million in value added (the regional equivalent of GDP). The chart also breaks down the direct, indirect, and induced effects.

Chart 14

Economic Impacts of Removing the Ferry System from the CMLF Region

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	(3,017)	(\$106,028,016)	(\$153,939,543)	(\$263,844,748)
Indirect Effect	(561)	(\$22,166,478)	(\$37,655,830)	(\$77,341,321)
Induced Effect	(552)	(\$23,751,092)	(\$44,763,212)	(\$77,655,278)
Total Effect	(4,130)	(\$151,945,586)	(\$236,358,585)	(\$418,841,347)

These economic impacts carry tax consequences. Chart 15 shows the state and local tax impact of the removal of the Ferry System. It would result in a loss, collectively, of almost \$21 million. Put another way, the use of \$11.8 million in toll revenue for the Ferry System generates for the two states \$21 million dollars—effectively a \$9 million surplus.

Chart 15

Economic Impacts of Removing the Ferry System from the CMLF Region

Description	Employee Compensation	Proprietor Income	Tax on Production and Imports	Households	Corporations	Total
Dividends					(\$52,812)	(\$52,812)
Social Ins Tax- Employee Contribution	(\$50,199)	\$0				(\$50,199)
Social Ins Tax- Employer Contribution	(\$88,474)					(\$88,474)
TOPI: Sales Tax			(\$3,625,798)			(\$3,625,798)
TOPI: Property Tax			(\$7,355,547)			(\$7,355,547)
TOPI: Motor Vehicle Lic			(\$85,433)			(\$85,433)
TOPI: Severance Tax			\$0			\$0
TOPI: Other Taxes			(\$4,372,999)			(\$4,372,999)
TOPI: S/L NonTaxes			(\$226,474)			(\$226,474)
Corporate Profits Tax					(\$548,761)	(\$548,761)
Personal Tax: Income Tax				(\$3,687,579)		(\$3,687,579)
Personal Tax: NonTaxes (Fines- Fees)				(\$378,713)		(\$378,713)
Personal Tax: Motor Vehicle License				(\$105,003)		(\$105,003)
Personal Tax: Property Taxes				(\$92,833)		(\$92,833)
Personal Tax: Other Tax (Fish/Hunt)				(\$21,007)		(\$21,007)
Total State and Local Tax	(\$138,673)	\$0	(\$15,666,251)	(\$4,285,134)	(\$601,573)	(\$20,691,632)

Conclusion

One way of understanding these benefits is to calculate the return on investment (ROI) of the toll revenue used for the Ferry System. For every dollar of toll revenue spent, the Ferry System yields:

- **\$1.73 in state and local tax revenue**
- **\$12.70 in wages in the region, and**
- **\$19.76 in increased value-added production in the region.**

IMPLAN typically shows that every dollar of direct spending often generates, give or take, another dollar of indirect and induced spending. What greatly increases the impact of Ferry System spending are two factors. First, the Ferry System generates significant revenue, which reduces the net expenditures required to provide its service every year. Second, it carries passengers who in turn spend significant tourist dollars. Effectively the ferry unlocks \$230 million of tourist spending every year.

It's worth underscoring that this analysis is arguably too conservative because we have not yet counted many other benefits of the Ferry System, including:

- The spending impacts of ferry passengers in the states of New Jersey and Delaware outside of Cape May County and Sussex County.
- The enhancement of coastal property values by the Ferry System.
- The value for some passengers to travel directly between Cape May and Sussex Counties.
- The contributions of the Ferry System to the overall package attracting tourists to Cape May and Sussex Counties.
- The benefits of reduced congestion on the roads, and the benefits of a transportation option that pollutes significantly less than automobiles that travel a greater distance over the Delaware Memorial Bridge.

Future work planned to be performed by Council Fire will provide further documentation and quantification of many of these benefits.



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