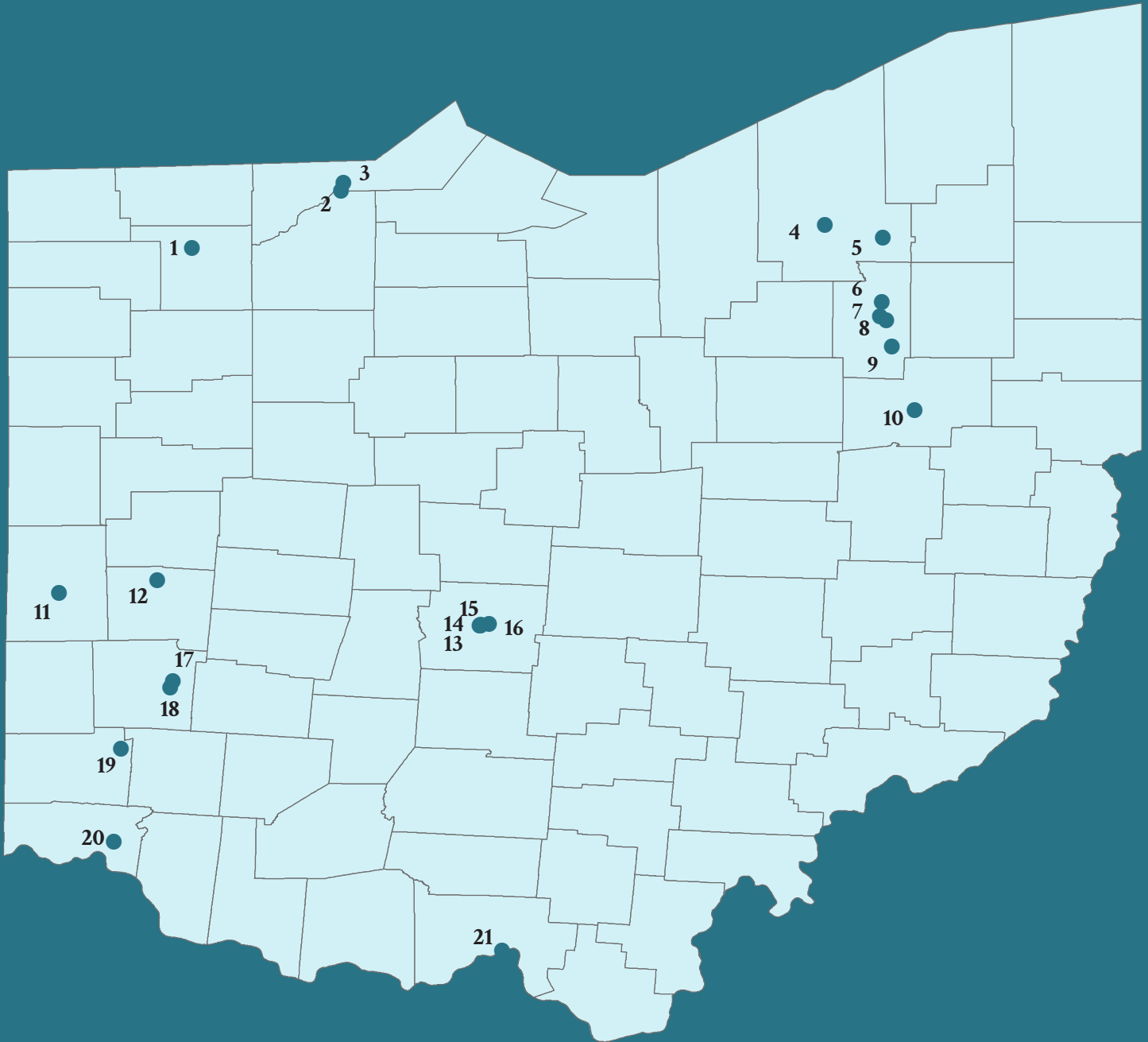


Investing in Brownfields: The Economic Benefits of the Clean Ohio Revitalization Fund

Greater Ohio Policy Center
April 2013



21 Selected Projects



1. Napoleon Commerce Park
2. Maumee Riverfront
3. Tower on the Maumee
4. Great Lakes Towing
5. Cuyahoga Community College/ Metro Health
6. Buckeye Mixed-Use Redevelopment Project
7. Former State Road Shopping Center
8. Cuyahoga River Corridor
9. Lockheed Martin
10. Former Hercules Engine Plant
11. Corning Glass
12. Fort Piqua Hotel
13. Former Kimball Midwest Site
14. Gowdy Field
15. Columbus Heliport/ N. Gowdy
16. AC Humko/ Harrison West
17. Dayton Tech Campus
18. NCR
19. Middletown Regional Hospital
20. Former NuTone Property
21. New Boston Steel

Executive Summary

Greater Ohio Policy Center (GOPC) conducted an independent study of the Clean Ohio Revitalization Fund (CORF or Program) to analyze the statewide economic impacts of public investments in brownfield sites. At a time of potential transition for the Program, this Study aims to inform the public dialogue about the Program's future and to ensure that the Program fulfills the mission set out for it in 2000, when Ohio voters first approved it.

To date, CORF has funded 160 projects with a total of \$315,231,174 in grant funding. This Study evaluates the performance of 21 Projects, selected from 103 CORF projects that had site remediation and related predevelopment activities underway or completed as of October 2012. The 21 Projects were chosen as a representative sample that includes sites with a range of characteristics. The sample included sites with varying degree of completed redevelopment and reuse; types of end uses; presence or absence of known end use; statewide geographic diversity; site sizes; funding rounds; jurisdictional size of site location; and proximity to other CORF sites and anchor institutions.

As of October 2012, these 21 Projects utilized \$49.3 million of CORF grant funds, or 15.6% of the total program funds. To capture the total economic impact of the 21 surveyed Projects, the Study analyzed both direct and indirect economic impacts, meaning the impact of CORF funds from the initial purchase of goods and labor directly related to site cleanup and subsequent new development (direct impacts) and the additional purchases of goods and labor that "ripple" elsewhere in the economy from the income produced by those initial goods and labor (indirect impacts). From the analysis, GOPC emerged with five major findings:

- The 21 Projects resulted in a net positive value for the state's investment, producing \$1.16 billion in one-time contributions and \$1.4 billion in annual contributions to the state GDP.
- Goods and services related to predevelopment alone produced a return on investment of \$4.67 in new economic activity for every one dollar spent by the Program on the 21 Projects.
- For every job created or sustained through activities directly tied to a remediated brownfield, more than one additional job was indirectly created or sustained by the 21 Projects.
- Predevelopment and construction activities in the 21 Projects created more than \$360 million in household and business earnings, while ongoing project operations produce almost \$500 million in household and business earnings annually.
- The 21 Projects annually generate \$55 million in state and local taxes and were responsible for an additional \$42 million in one-time state and local taxes.

All findings apply solely to the 21 Projects studied and are calculated for the years 2003 to 2012.

Introduction

Background

In 2000, Ohio voters approved the Clean Ohio Fund, dedicating \$400 million to support an innovative mix of environmental conservation, preservation, and brownfields revitalization activities throughout the state. Of the total \$400 million, \$200 million went towards brownfields redevelopment through the Clean Ohio Revitalization Fund (CORF or Program), with the remaining funds divided among Green Space Preservation (\$150 million), Agricultural Easement Purchase, and Trails programs (\$25 million each for the latter two). In November 2008, Ohio voters renewed their support for the Clean Ohio Fund, authorizing the state to sell another \$400 million in bonds to fund the four programs in the same proportions as the original funding. The Clean Ohio Fund received broad support throughout the state with a majority of voters in each of Ohio's 88 counties voting to re-authorize the funding.

For more than a decade, CORF, administered jointly by the Ohio Department of Development (now Ohio Development Services Agency [ODSA]) and the Ohio Environmental Protection Agency (OEPA), has awarded grants to municipalities and other public entities, such as counties and port authorities, to clean up sites and prepare them for redevelopment with private sector partners. The Program, which is administered in rounds, awards grants of up to \$3 million for acquisition, demolition, remediation, infrastructure, and infrastructure-related activities.¹ In total, CORF has supported the removal and cleanup of 160 brownfield sites, investing over \$315 million grant dollars.

Currently, the process that determines project funding is in transition, with JobsOhio Network Partners (regional partners) becoming actively involved with the initial selection and advancement of proposed brownfield remediation projects.

Study Purpose

Greater Ohio Policy Center (GOPC) conducted the first independent study of CORF to analyze the statewide

economic impacts of public investments in brownfield sites, which are vacant or underused properties originally developed for industrial or commercial uses and containing hazardous substances or petroleum.² At a time of transition for the Program, this Study aims to inform the public dialogue about the Program's future and to ensure that the Program fulfills its mission of incentivizing brownfields redevelopment, reducing blight, maximizing the sites' marketability, protecting human health and the environment, creating jobs, and benefitting Ohio's economy and communities.

Study Parameters

To date, CORF has funded 160 projects with a total of \$315,231,174 in grant funding. The Study evaluates the performance of 21 Projects from Funding Rounds 1 through 8; in total, there were 103 projects funded through those rounds. All 103 projects have remediation underway and were eligible for analysis. This Study did not consider projects from Rounds 9 through 12 because projects awarded funding through those rounds have not begun, or have barely begun, remediation and redevelopment activities, making it too early to measure their economic impact adequately.

Due to time and resource constraints and data availability, this Study narrowed its sample of 103 eligible projects to 21 Projects for detailed analysis. Using Program information released by ODSA in October 2012, the 21 Projects were chosen as a representative sample that includes sites with a range of characteristics: degree of completed redevelopment and reuse; types of end uses; presence or absence of known end use; statewide geographic diversity; site sizes; different funding rounds; jurisdictional size of site location; and proximity to other CORF sites and anchor institutions.

Of the 21 Projects in the sample, the earliest project was funded in 2003 (Round 1) and the latest project received funding in 2010 (Round 8). The 21 projects were originally awarded a total of \$53.8 million.

As of October 2012, when GOPC requested and received data from ODSA, these 21 Projects had spent \$49.3 million of CORF grant funds or 15.6% of the total program funds of \$315,231,174.

The selected 21 Projects had site remediation and related predevelopment activities underway or completed as of October 2012 (see Appendix Table A for details). In March 2013, ODSA released updated project statuses for all CORF projects. None of the 21 Projects had a change in project status from October 2012 to March 2013. Fifteen of the 21 Projects have No Further Action (NFA) letters. (NFA letters indicate that a professional certified by the state deems a contaminated site cleaned and remediated to state standards.³) Of those fifteen projects, twelve hold a Covenant Not to Sue (CNS), which protects site owners from being legally responsible in future investigations or cleanups.

To capture the economic impact of the Program, this Study analyzed projects that are representative of all 160 CORF projects. The 21 Projects analyzed in this Study vary in the extent of their completed redevelopment and reuse:

- Eleven projects have NFA letters and do not require further remediation, redevelopment, or construction. All eleven have an end user occupying the site. The Fort Piqua Hotel, which currently houses the Piqua Public Library, the Fort Piqua Plaza Banquet Center, and Winans Candies, is one example.⁴
- Two projects with NFA letters have end users in place on part of the site while building construction or structure rehabilitation continues. Cuyahoga Community College (Tri-C) in Highland Hills has expanded its academic and institutional facilities on property that used to be a hospital in the Metrohealth system.⁵
- Two projects with NFA letters have had no new construction and do not have an end user in

place. The Middletown Regional Hospital site is one such project where the cleaned site is vacant.⁶

- Three projects with no NFA letters have end users that occupy a remediated part of the site while remediation, redevelopment, and construction continue. For example, at Dayton Tech Town, 10 acres have already been developed with an additional 30 acres to be developed in the next year. Tech Town's first completed building, the Creative Technology Accelerator is already 100% leased.⁷
- One project, the Buckeye Mixed-Use Redevelopment Project in Cuyahoga Falls, does not have an NFA letter although construction of a new building has begun. Remediation and related predevelopment activities will continue through 2013 along with construction of a new retail shopping center.
- Two projects have begun remediation and site redevelopment but have not completed site decontamination; no new construction has begun and no end user is in place. The Former State Road Shopping Center in Cuyahoga Falls expects an NFA letter in 2014; the Former Hercules Engine site in Canton halted cleanup from 2009 to 2012 due to the recession, but plans to restart in 2013.

All sites have begun predevelopment and remediation activities; all sites, except for the Former Hercules Engine site, have been issued NFA letters or are working toward receiving an NFA letter within the next year.



Study Methodology

This Study's economic impact analysis investigated economic activities occurring from 2003 to 2012. To capture the total economic impact of the 21 Projects, the Study analyzed both the direct and indirect economic impacts of the projects.

The direct economic impacts of the 21 Projects are the economic activities directly related to site cleanup and subsequent development. These are activities with receipts directly related to the site. The indirect impacts are the additional economic activities that occur elsewhere in the economy, and which “ripple” from the economic impact generated by those initial goods and labor. For example, the environmental engineering and waste management services involved in site cleanup produce a direct economic impact. Indirect economic impacts include supplies purchased by the direct service providers and the groceries purchased by workers from wages earned while working on the site.

The Study calculated the direct impacts of three types of activities: *predevelopment* (including remediation), *construction*, and *operations*. These terms diverge from ODSA's slightly in order to capture different activities (see Appendix Table B for a comparison of ODSA and this Study's economic activity definitions).

The economic impact of *predevelopment* activities includes the jobs created and goods purchased that are directly tied to demolition, cleanup activities, engineering, infrastructure development, and site preparation. This Study analyzed predevelopment activities that occurred through October 2012 as tracked by ODSA through receipts related to predevelopment activities and submitted by site managers.

New *construction* on the cleaned site also produced jobs and goods purchased. Construction financial information was collected through emails and phone calls to grant applicants and site managers through December 2012. GOPC obtained information on 17 projects. Site managers and construction companies for 4 projects did

not answer numerous requests for information.⁸ This Study did not attempt to infer construction expenditures for these 4 projects; consequently, the construction impacts in this report include only the 17 projects for which information was available. As a result, construction outputs and impacts are understated.

Finally, the last direct impact of the Program involves jobs and revenues created in the new or rehabilitated buildings on the cleaned site in *operations* activities. The economic impacts of operations begin when a project opens and continue as long as reuse activities continue to operate; this Study's analysis estimates the annual impact of operations.

The Study used Reference USA, an online, real-time database of 14 million businesses, to collect operational data. Information from Reference USA was accessed in November 2012.

To calculate indirect impacts, which represent the “ripple” or multiplier effects of direct output, earnings, and employment generated through predevelopment, construction, and operations activities by the 21 Projects, this Study utilized an economic impact model: the Regional Input-Output Modeling System (RIMS II), developed by the United States Bureau of Economic Analysis.

RIMS II is based on a framework called an input-output table. For a given industry in a given geographic area, the input-output table calculates how a one-dollar increase in the given industry's output increases purchases from, and sales to, other local firms. The table itemizes economic impact by industry, which allows researchers to track the varying effects of each economic “ripple.” As with all input-output tables, RIMS II measures the effects of direct impacts in creating indirect impacts by order of magnitude and so indirect impact numbers are not precise. GOPC applied RIMS II multipliers to all direct, documented, economic impacts related to predevelopment, construction, and operations to derive the indirect economic impacts of those three economic activities.

Findings

The 21 Projects resulted in a net positive value for the state’s investment, producing \$1.16 billion in one-time contributions and contributing \$1.4 billion annually to the state’s Gross Domestic Product.

This Study calculated that the \$49.3 million CORF grant funds invested in the 21 Projects from 2003 to 2012 generated:

- \$1.16 billion in one-time impacts through goods and services related to the predevelopment of, and new construction on, Ohio’s brownfields
- \$1.4 billion annually through new businesses and economic activity operating in buildings located on 15 of the 21 remediated brownfield sites



Table 1

One-Time Economic Impacts of 21 Projects (in dollars)			
	Direct	Indirect	Total
Predevelopment outputs	100,018,000	130,415,000	230,428,000
Construction outputs	386,230,000	544,149,000	930,380,000
Total			1,160,808,000

Table 2

Annual Economic Impacts of 21 Projects (in dollars)			
	Direct	Indirect	Total
Operations outputs	666,168,000	808,149,000	1,474,317,000

Output - also referred to as Gross Domestic Product (GDP) - is the value of goods and services produced in Ohio directly or indirectly, in this case, as a result of predevelopment, construction, and operations activities. Undertaking these activities requires labor, thereby increasing employment, and generating earnings to business owners and workers. Salaries, wages, and taxes are not part of calculating Ohio’s GDP.

Goods and services related to predevelopment alone produced a return on investment of \$4.67 in new economic activity for every dollar spent by the Program on the 21 Projects.

Predevelopment activities at the 21 Projects—such as the demolition of old structures, the removal of asbestos and contaminated soil, smoothing the site’s soil to an even grade, and sodding the site—generated between \$1.9 million (Ft. Piqua Hotel in Piqua) and more than \$22.4 million (the Lockheed Martin Airdock project in Akron) in output per project. CORF awards only supported up to \$3 million of each project’s total predevelopment activities. All direct predevelopment activity, i.e. labor and purchases for which there is an actual receipt on file at ODSA, spun off additional economic activity throughout the community, thereby creating indirect economic impacts.



The Study calculated the return on investment (ROI) by first adding the total direct and indirect economic impacts of predevelopment at the 21 surveyed projects to determine total output. The Study then analyzed what proportion of the total output was due to CORF dollars. The resulting proportion is the Program’s ROI. See Appendix Table C for an example of what predevelopment impacts were used to calculate direct and indirect economic impacts.

Table 3

Predevelopment Impacts of 21 Projects (in dollars)			
	Direct	Indirect	Total
Output	100,018,000	130,415,000	230,428,000
CORF funds spent			49,297,041
Return on investment			4.67

The ROI calculated here does not include increased economic activity on neighboring properties resulting from the redevelopment of the subject site or improved property values that result from eliminating blight, due to the difficulty of isolating the effect of CORF funding on surrounding properties. Despite the inability to capture the exact increases caused by CORF funds spent on the 21 Projects, projects like the new Harrison West neighborhood in Columbus—which is located on a former vegetable oil refinery— have been cited anecdotally as leading to increased property values in the surrounding area, thus contributing to the positive indirect impacts of the Program.

Additionally, this ROI does not include construction or operations returns. Some construction or operations activities, such as the commercial office space built by MedPace on Cincinnati’s former NuTone property, or the expansion of the Akron Airdock for Lockheed Martin, might have occurred even without CORF funding. To avoid overstating ROI by including activities that would have occurred in the state whether the Program existed or not, the Study’s calculated ROI derives only from economic impacts wholly credited to CORF funding, i.e. predevelopment activity on the subject parcels. Therefore, to avoid speculating on

whether construction and operations activities at each project were indisputably due to CORF funding or if construction and operations activities might have occurred elsewhere in the absence of CORF funding, the Study did not use these data in its ROI calculations. This conservative methodology also suggests that the ROI for the Program as a whole may indeed be higher than 4.67:1.

ODSA’s literature notes that CORF has “leveraged over \$10.00 of investment per grant dollar.”⁹ To arrive at this leverage ratio, ODSA used the anticipated construction costs projected by each project’s applicant to determine a ratio of (projected) construction activities to grant dollars invested.

This Study has not attempted to calculate a construction to investment leverage rate. Instead, this Study has chosen to focus on the return on predevelopment investments, because those data points are actual and clearly result from the Program, and do not include projected values or investments that might have occurred somewhere in Ohio regardless of the availability of CORF funding. Additionally, construction costs for some of the surveyed projects are still ongoing.

Calculating ROI, instead of a leverage rate, provides a more robust, and more conservative, picture of the economic impact of CORF in the state.

For every job created or sustained through activities directly tied to a remediated brown field, more than one additional job was indirectly created or sustained by the 21 Projects between 2003 and 2012.



The economic impacts and ROI of CORF are due, in large part, to the jobs created and sustained by the 21 brownfield remediation projects. From 2003 to 2012, the 21 Projects can be credited with creating or sustaining:

- 4,500 jobs directly related to predevelopment or construction
- 5,200 jobs indirectly related to predevelopment or construction

Additionally, almost 4,700 workers are employed¹⁰ on an ongoing basis in industries located in the rehabilitated or new buildings built on remediated brownfields. These workers include the 107 skilled technicians and scientists at Dayton Tech Town who are working on sensors and data mining and management and the 900 office workers at Time Warner Cable, located on the former Gowdy Field site in Columbus, who handle customer service and regional management duties. The direct and indirect jobs from operations continue indefinitely as long as the use or scale at the 21 Projects does not change.

**Table 4
Employment Impacts**

	# of jobs directly related to brownfields revitalization	# of jobs indirectly related to brownfields revitalization	Ratio of direct : indirect jobs
Predevelopment	809	1,026	1 : 1.27
Construction	3,693	4,197	1:1.14
Operations (ongoing)	4,683	6,683	1: 1.43

Predevelopment and construction activities in the 21 Projects created more than \$360 million in household and business earnings, while ongoing project operations produce almost \$500 million in household and business earnings annually.

All jobs directly or indirectly created by the 21 Projects have been responsible for wages, salaries, and business proprietors' earnings:

- \$70 million through predevelopment activities
- \$293 million from construction activity related to predevelopment or new construction on former brownfields

Additionally, businesses located on the 21 CORF-remediated brownfields analyzed in this Study produce almost \$500 million a year in household and business earnings. As is true of employment, these earnings continue indefinitely (in inflation-adjusted terms) unless the use or scale changes. These businesses include medical doctor and dentist offices, restaurants and cafes, business incubators and community college classrooms, grocery stores and dry cleaners, expanded factory facilities, and new scientific laboratories.



Table 5

One-Time Earnings from 21 Projects (in dollars)			
	Household and business earnings directly related to brownfield revitalization	Household and business earnings indirectly related to brownfield revitalization	Total
Predevelopment	33,602,000	36,462,000	70,064,000
Construction	143,494,000	149,990,000	293,484,000
Total Earnings			363,548,000

Table 6

Annual Earnings of 21 Projects (in dollars)			
	Houshold and business earnings directly related to brownfield revitalization	Houshold and business earnings indirectly related to brownfield revitalization	Total
Operations (ongoing)	260,532,000	235,538,000	496,070,000

The 21 Projects annually generate \$55 million in state and local taxes and were responsible for an additional \$42 million in one-time state and local taxes.

From 2003 to 2012, predevelopment and construction activities by the 21 Projects generated \$42.3 million in sales, personal income, personal property, and commercial activity taxes at the local and state levels.

Operations at the 21 Projects annually generate nearly \$55 million in state and local taxes. Taxes include state Commercial Activity Taxes (CAT) paid by businesses for the “privilege of doing business in Ohio,”¹¹ state and local income and sales taxes paid by households, and local household property taxes.

The CAT is assessed on most goods and services sold in Ohio. The Study's analysis of total CAT revenues is understated for indirect activities because the economic analysis only considered goods and services produced (and thus taxed) within Ohio. However, the sales to Ohio consumers by producers outside the state are also subject to the CAT, so these purchases also yield state tax revenue not included in the analysis.

Table 7

One-time taxes impact for remediation and construction			
on 21 CORF-remediated sites (in dollars)			
	Direct	Indirect	Total (direct + indirect)
<i>State Taxes</i>			
Remediation Commercial Activity Tax	240,633	317,444	558,077
Construction Commercial Activity Tax	926,857	1,325,831	2,252,688
Remediation Workers Income Tax	868,552	958,759	1,827,311
Construction Workers Income Tax	4,194,807	3,974,054	8,168,861
Remediation Workers Sales Tax	462,139	514,916	976,954
Construction Workers Sales Tax	2,164,773	2,124,139	4,288,912
Remediation less worker property rollback	-164,680	-186,485	-351,062
Construction less worker property rollback	-784,133	-769,414	-1,553,547
Remediation Total State Tax	1,406,644	1,604,433	3,011,178
Construction Total State Tax	6,502,305	6,654,609	13,156,914
Remediation and Construction Total State Tax	7,908,949	8,259,042	16,168,092
<i>Local Taxes</i>			
Remediation Workers Income Tax	676,638	766,770	1,443,307
Construction Workers Income Tax	3,224,078	3,163,560	6,387,638
Remediation Workers Sales Tax	108,262	122,685	230,847
Construction Workers Sales Tax	515,610	505,931	1,021,541
Remediation Workers Property Tax (including rollback)	1,481,119	1,678,466	3,159,485
Construction Workers Property Tax (including rollback)	7,057,196	6,924,729	13,981,925
Remediation Total Local Tax	2,265,818	2,567,721	4,833,740
Construction Total Local Tax	10,796,884	10,594,220	21,391,104
Remediation and Construction Total Local Tax	13,062,702	13,161,941	26,224,844
Total State and Local Tax for Remediation and Construction Activities	20,971,651	21,420,983	42,392,936

Table 8

Ongoing taxes for operations on 21 CORF-remediated sites (in dollars)			
	Direct	Indirect	Total (direct + indirect)
<i>State Taxes</i>			
Commercial Activity Tax	1,779,419	2,267,117	4,046,536
Workers State Income Tax	5,370,420	7,837,988	13,208,408
Workers State Sales Tax	2,590,296	4,124,661	6,714,957
Less worker Property Tax rollback	-938,225	-1,494,097	-2,432,322
Total State Tax	8,801,910	12,735,669	21,537,579
<i>Income Taxes</i>			
Local Workers Income Tax	3,857,763	6,143,116	10,000,879
Local Workers Sales Tax	616,938	982,391	1,599,329
Worker Property Tax (including rollback)	8,444,225	13,446,579	21,890,804
Total Local Tax	12,918,926	20,572,086	33,491,012
Total State and Local Taxes			55,028,591

Conclusion

Based on this analysis of these 21 Projects, GOPC concludes that CORF funding has reaped an impressive return on investment over the last decade by many economic and financial measures. A basic financial goal of the Program – leveraging private investments with public grant dollars – has been achieved. However, public dollars are more precious than ever, and the economic climate has seen dramatic changes since the Program’s inception in 2000.

Looking to the future, maximizing public investments in brownfields and the ability to leverage Ohio’s hundreds of brownfields as assets and achieve high rates of return on taxpayers’ dollars depends upon maintaining a streamlined, but still accessible, predictable, and transparent, program. A strong program will continue to align brownfield redevelopment properties and end uses strategically with other job and business creation programs in Ohio, while protecting the environment and human health.



Appendix

TABLE A: Selected Project Overview

Project (Location)	Rd	Grant Date	Grant Amount Spent	Project Status	Projected* /Actual End Use
New Boston Steel (New Boston)	1	1/24/2003	\$3,000,000	Holds CNS.** Construction is complete, with end user occupying the site.	Retail
Maumee Riverfront (Toledo)	2	3/30/2004	\$2,999,717	Holds CNS. Construction is complete, with end user occupying the site.	Casino
Dayton Tech Campus (Dayton)	2	4/29/2004	\$2,638,167	Construction is partially completed, with end users already occupying the completed section of the site. NFA letter expected in 2013 or 2014.	Research, Office
Fort Piqua Hotel (Piqua)	2	4/29/2004	\$1,358,546	Holds CNS. Construction is complete, with end users occupying the site.	Retail, Hotel, Public Space
Harrison West/AC Humko (Columbus)	2	4/29/2004	\$3,000,000	Holds CNS. Construction is complete, with end user occupying the site.	Residential
Napoleon Commerce Park* (Napoleon)	2	4/29/2004	\$3,305,370	Holds CNS. Predevelopment activities have been completed, but no new development has started on the property.	Industrial
Gowdy Field (Columbus)	3	3/13/2006	\$2,940,256	Holds CNS. Construction is complete, with end user occupying the site.	Office
Corning Glass (Greenville)	3	5/23/2006	\$2,002,050	Holds CNS. Construction is complete, with end user occupying the site.	Industrial
Lockheed Martin (Akron)	3	5/23/2006	\$3,000,000	Holds CNS. Construction is complete, with end user occupying the site.	Industrial
NCR (Dayton)	3	6/1/2006	\$2,253,752	Holds CNS. Construction is partially completed, with end user occupying the site.	Educational
Cuyahoga River Corridor (Cuyahoga Falls)	4	1/28/2008	\$2,023,089	Remediation activities nearing completion; NFA letter anticipated submission in 2013. Construction partially completed, with end user already occupying the completed section of the site.	Residential, Retail, Public Space
Middletown Regional Hospital* (Middletown)	4	3/24/2008	\$1,708,089	Holds CNS. The remediated property does not have new development or an end user in place.	Residential

TABLE A continued:

Former Hercules Engine* (Canton)	4	4/24/2008	\$1,000,975	Predevelopment activities started in 2008, ceased in 2009, and will restart in 2013. No new construction has occurred and no end user is occupying the site.	Retail, Residential, Office
Tower on Maumee (Toledo)	5	5/22/2009	\$2,772,872	Holds CNS. Construction is complete; the building owner is currently leasing offices on the site.	Office
Great Lakes Towing (Cleveland)	5	6/10/2009	\$1,488,897	Holds CNS. Construction is complete, with end user occupying the site.	Industrial
Former State Road Shopping Center *** (Cuyahoga Falls)	6	7/22/2009	\$1,639,795	Predevelopment activities are close to completion. NFA letter anticipated submission in 2013. Construction slated to begin in summer 2013.	Retail
Columbus Heliport/North Gowdy (Columbus)	6	8/13/2009	\$3,000,000	Holds NFA letter; does not hold CNS. Construction is complete with end users occupying the site.	Medical
Buckeye Mixed-Use Redevelopment Project (Cuyahoga Falls)	6	8/17/2009	\$1,450,740	Predevelopment activities are close to completion. NFA letter anticipated submission in 2013. Construction is currently underway.	Residential
Cuyahoga Community College Expansion /MetroHealth (Highland Hills)	6	9/28/2009	\$2,928,994	Holds NFA letter; does not hold CNS. Construction partially completed, with end users already occupying the completed section of the site.	Educational
Former NuTone Property (Cincinnati)	7	3/25/2010	\$2,000,918	Predevelopment continuing, with completion date scheduled for September 2013. NFA letter anticipated submission in 2013 or 2014. Construction partially completed, with end users already occupying the completed section of the site.	Research, Office
Former Kimball Midwest Site (Columbus)	8	8/6/2010	\$2,784,814	Holds NFA letter ; does not hold CNS. Construction is currently underway.	Residential

* The Napoleon Commerce Park, Middletown Regional Hospital and Hercules Engine projects had identified known end users in their applications. However, those designated end users are no longer associated with these projects.

**CNS stands for Covenant Not to Sue. Once the OEPA confirms a brownfield site has been remediated to state standards, OEPA will grant a CNS to the site owner. The CNS protects site owners from being legally responsible in future investigations or cleanups, as long as the site is being used and maintained as specified in the Covenant.

*** The Former State Road Shopping Center is the only project the Study surveyed that was a “redevelopment ready” project, meaning it did not have a known end user identified on its application. Rounds 1 through 4 did not have “redevelopment ready” and “known end user” tracks; these tracks were introduced in Round 5.

**** A No Further Action(NFA) letter is a document completed by a third party certified professional describing the environmental problems found at a property how those environmental problems were investigated and how the property was cleaned up to state standards contained in Ohio’s Voluntary Action Program (VAP).

Table B: Definitions

Construction. The Study’s term for activities related to the creation of new facilities or the rehabilitation or expansion of existing facilities on a site. “Facilities” includes buildings and other structures.

Development. A term used by OSDA that signifies, broadly, post-remediation activities, including construction or operations.

Operations. The Study’s term for activities by an end user on the site that create tax receipts. In practical terms, this usually means that the end user is occupying a rehabilitated or new building on the cleaned site and generating commercial activity tax, sales taxes, income taxes, or other business taxes.

Output. Economic term used by the Study to mean the value of goods and services. Output is used to calculate Gross Domestic Product (GDP). Salaries, wages, and taxes are measured separately from output or GDP.

Predevelopment: The Study’s term for activities related to structure demolition, asbestos abatement, soil removal, groundwater cleanup, site grading, and other activities required to remove and abate chemical and petroleum contaminants. The Study uses “predevelopment” to include only activities itemized on CORF applications and supported by CORF or the grant match. When predevelopment activities on a site are completed satisfactorily, a No Further Action letter is issued by a Certified Professional. Once OEPA reviews the Certified Professional’s materials, OEPA will grant a Covenant Not to Sue which protects site owners from being legally responsible in future investigations or cleanups, as long as the site is being used and maintained as specified in the covenant.

Remediation. A term used by OSDA that refers to activities required to mitigate a brownfield and prepare it for safe and productive use.



Table C: Project Example—Calculating Direct and Indirect Predevelopment impacts

Examples of items used to determine indirect predevelopment impacts through the RIMS II input-output table.

2002-003 SOPA New Boston Cost - AMENDMENT 09-26-05												
Category	Item	COF Funds Unit Price	Quantity	COF Total	Match Funds Unit Price	Quantity	Match Total	Match Funds Total	Match Funds Total	Project Item Total		
Acquisition Assessment				\$ -	\$ 250,000	1	\$ -	\$ 250,000	\$ 250,000.00	\$ -		250,000.00
Demolition	demo structures & tunnels	\$ 1,728,089	1	\$ 1,728,089.17	\$ 1,209,066	1	\$ 1,209,066	\$ 1,209,065.95	\$ 1,209,065.95	\$ 2,937,155.12		2,937,155.12
	prepare & grind concrete (ton)			\$ -	\$ 2	164880	\$ 329,760	\$ 329,760.00	\$ 329,760.00	\$ 329,760.00		329,760.00
Cleanup/Reasbestos	above & below grade field office & trailer	\$ 283,281	1	\$ 283,281.37	\$ 35,851	1	\$ 35,851	\$ 35,851.13	\$ 35,851.13	\$ 319,132.50		319,132.50
	mob/demob equipment			\$ -	\$ 4,314	1	\$ 4,314	\$ 4,313.80	\$ 4,313.80	\$ 4,313.80		4,313.80
	close monitoring wells	\$ 3,500	6	\$ 21,000.00	\$ 9,500	1	\$ 9,500	\$ 9,500.00	\$ 9,500.00	\$ 9,500.00		9,500.00
	clear & grub land			\$ -	\$ 1,573	16.43	\$ 25,840	\$ 25,840.11	\$ 25,840.11	\$ 25,840.11		25,840.11
	Remediation of soils and pipelines	\$ 1,200	24	\$ 29,382.99	\$ 161,317	1	\$ 161,317	\$ 161,317.01	\$ 161,317.01	\$ 190,700.00		190,700.00
	Remediation of RR ties	\$ 1	21040	\$ 21,040.00						\$ -		-
	place ground concrete (ton)	\$ 95,480	1	\$ 95,480.00	\$ 54,000	1	\$ 54,000	\$ 54,000.00	\$ 54,000.00	\$ 149,480.00		149,480.00
	mob/demob env equipment	\$ 8,500	1	\$ 8,500.00						\$ -		8,500.00
	regrade site (ton)	\$ 725,024	1	\$ 725,024.47	\$ 1,577,400	1	\$ 1,577,400	\$ 1,577,400.00	\$ 1,577,400.00	\$ 2,302,424.47		2,302,424.47
	seed & veg (acre)	\$ 561	41	\$ 23,002.00	\$ 23,800	1	\$ 23,800	\$ 23,800.00	\$ 23,800.00	\$ 46,802.00		46,802.00
	remed design, sampling & anal, H&S	\$ 35,200	1	\$ 35,200.00	\$ 35,200	1	\$ 35,200	\$ 35,200.00	\$ 35,200.00	\$ 70,400.00		70,400.00
	closure reports, nfa	\$ 30,000	1	\$ 30,000.00	\$ 28,003	1	\$ 28,003	\$ 28,003.00	\$ 28,003.00	\$ 58,003.00		58,003.00
	groundwater diversion system			\$ -	\$ 375,000	1	\$ 375,000	\$ 375,000.00	\$ 375,000.00	\$ 375,000.00		375,000.00
	EPA in kind and grants			\$ -	\$ 141,033	1		\$ 141,033.00	\$ 141,033.00	\$ 141,033.00		141,033.00
	Infrastructure			\$ -						\$ -		-
	Total Costs			\$ 3,000,000.00			\$ 3,957,734	\$ 4,260,084.00	\$ 7,239,044.01			7,239,044.01

CORF funds + matching dollars=direct impacts
 \$3,000,000 + \$4,260,064 = \$7,239,044

Direct impacts analyzed through RIMS II= indirect impacts
 \$7,239,044 => \$9,887,000

Direct impacts + indirect impacts = total economic impact
 \$7,239,044 + \$9,887,000 = \$17,126,000

Return on investment = total economic impact/ contributed CORF funding
 \$17,126,000 / \$3,000,000 = 5.7

Table D: Quick facts on all 160 projects supported by CORF:

- 85% urban /15% rural projects
- Number of projects by JobsOhio region
 - Northwest: 15
 - Northeast: 63
 - Central: 22
 - Western: 23
 - Southwest: 26
 - Southeast: 11
- Average Grant Amount: \$1,970,194
- Number of communities receiving CORF grants: 71
- Acres of clean development-ready land resulting from CORF projects: 3,200
- Average # of jobs anticipated (according to application estimates, not Study's analysis): 86 jobs per site
- Number of grant funding rounds: 12
- Number of Redevelopment Ready Projects: 43, or 27% of all CORF projects.
 - *Redevelopment Ready/ Known End User designation only applicable to projects submitted in Rounds 5-12.*
- Number of Redevelopment Ready Projects with construction started or completed (as of October 2012): 0.
- % of Non-Redevelopment Ready Projects, that have received CORF dollars, with construction underway or complete: 55



Endnotes

¹A sister program, the Clean Ohio Assistance Fund, accepts applications on an on-going basis and awards grants of up to \$300,000 for Phase II Environmental Assessments and up to \$750,000 for remediation and demolition activities.

²ORC Section 122.65(D).

³State standards for remediating a contaminated site are found at Voluntary Action Program (VAP) rules (OAC Chapter 3745-300).

⁴New Boston Steel; Maumee Riverfront (Hollywood Casino); Ft. Piqua Hotel; AC Humko (Harrison Park); Time Warner-Gowdy Field; Corning Glass; Lockheed Martin (Akron Airdock); Tower on the Maumee; Great Lakes Towing; Columbus Heliport/N. Gowdy (The Ohio State University's James Care Ambulatory Women's Oncology Center) ; Former Kimball Midwest site.

⁵NCR, Metrohealth (Cuyahoga Community College Expansion)

⁶Napoleon Commerce Park; Middletown Regional Hospital

⁷Tech Campus (Dayton TechTown); Cuyahoga River Corridor; Former NuTone Property (MedPace).

⁸The four projects that GOPC was unable to obtain construction data on were: New Boston Steel, Corning Glass, Lockheed Martin Airdock, and the Cuyahoga Community College/Metrohealth expansion.

⁹<http://clean.ohio.gov/BrownfieldRevitalization/>

¹⁰Employment is defined as full and part-time workers (headcount) at the typical mix for each industry.

¹¹Only businesses with revenues of \$1 million or more are subject to the CAT.

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Page 2. Buckeye Mixed Use Redevelopment Project, Department of Development, City of Cuyahoga.

Page 4: Watermark Building- Cuyahoga River Corridor, Department of Development, City of Cuyahoga Falls.

Page 5. High Bridge Glens Park-Cuyahoga River Corridor, Department of Development, City of Cuyahoga Falls.

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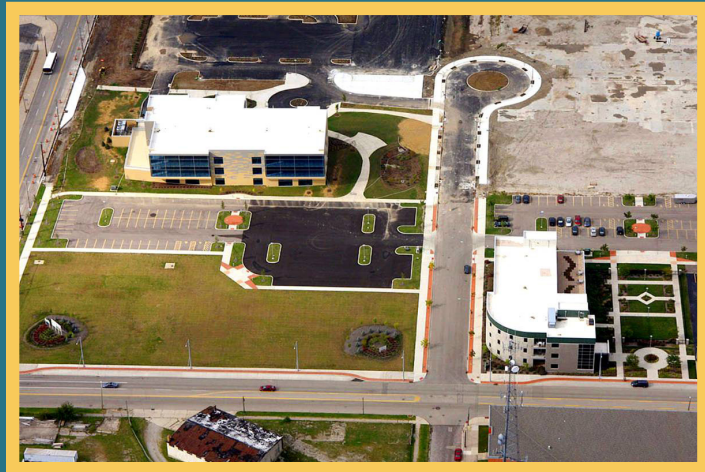
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Regionomics™, founded by Bill LaFayette, Ph.D. in 2011, is a consulting firm specializing in regional and community economic and workforce strategy.



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