NYU SCHOOL OF PROFESSIONAL STUDIES

SCHACK INSTITUTE OF REAL ESTATE

New York City BROWNFIELD PARTNERSHIP

New York State Brownfield Cleanup Program and Tax Credits: Analysis of a Three Generation Program October, 2021

NYS BCP Project Ave. U Brooklyn Photo: Hydrotech

Chandler Street NYS BCP Redevelopment Photo Buffalo News

New York State Brownfield Cleanup Program (NYS BCP) and Tax Credits 2021

This study was conducted by the NYU SPS Schack Institute of Real Estate with support from the New York City Brownfield Partnership. The NYU Schack team is responsible for this impartial analysis of the NYS BCP and is grateful for the assistance and expertise of the NYCBP and especially its study committee.

While considering the overall program, this report builds upon an earlier NYU study that covered Generations 1 and 2 of the program written prior to the 2015 amendments. This study focuses primarily on Generation 3, the program as it is today and will be considered for renewal in the 2022 legislative session. While much of the study utilizes New York State Departments of Environmental Conservation and Finance and Taxation databases, other sources for housing and economic data, were also utilized and cited in Addendum 2.

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. **I**. **Executive Summary**

Over eighteen years and three legislative Generations, the New York State Brownfield Cleanup Program (NYS BCP) has evolved substantially. This study looks at the overall NYS BCP with an emphasis as what has occurred since 2015, Generation 3, which is the current program being considered for renewal.

The NYS BCP is, at its core, an environmental program that has provided substantial remediation benefits, though this study's focus is on economic benefits. There is a significant environmental benefit from 502 cleanups of significantly contaminated properties in New York State, often in low income communities. The 2020 US EPA nationwide Brownfield study noted sustainability improvements by both a decrease in new development impervious surface reducing run-off and a decrease in Vehicles Miles Traveled which benefits air quality. Within New York, an example is the 40+ NYS BCP projects located on or in the Hudson River watershed, where contamination has been removed or contained, thus helping to improve Hudson River water quality.

A. *Conclusion and Recommendations: Over three generations the NYS BCP has become a more targeted and effective tool across the state. Formerly contaminated industrial sites have been remediated and redeveloped, especially benefitting upstate communities. In NYC, the BCP has made a significant contribution to housing, including affordable housing. The following are recommendations to continue to improve the effectiveness of the program as it is being considered for renewal:*

   - *Keep streamlining the program process, reduce uncertainty, provide sufficient staff and ensure use of the best technology to meet environmental goals,*
   - *Make technical changes that support the use of brownfield tax credits as a financial tool in all stages of development, and*
   - *Support educational and promotional programs so that more professionals in every region make maximum use of the program.*

B. *The BCP continues to grow; both the number of applications and the number of projects receiving Certificates of Completion (COC) continue to increase: 502 projects have been completed statewide as of May, 2021 out of approximately 914 accepted applications.*

C. *Both the value of private development investment and amount of tax credits also continue to grow. The on-site rate of return consistently shows a ratio of $6.63 in private development for every $1 of tax credits. Overall the BCP has resulted in $17.61 billion in private investment and $2.77billion in tax credits. The Tangible Property Tax Credit is the largest and shows the highest rate of return, ($1 to $7.81)*

compared to the Site Preparation and Groundwater Tax Credits. Legislative changes have resulted in improved targeting; fewer very large tax credits to individual projects, more moderate sized projects, more affordable housing and En-Zone projects, and more mid-range industrial projects. Recent EPA studies show that nationwide returns on investment in brownfield projects can be even more substantial, when off-site development, tax revenue and community improvements are also factored in.

D. *Brownfield projects have been accomplished in all regions across New York State and 40 counties. Regions 9 and 2 have the largest number of projects, investment and tax credits, with Region 9 having many industrial projects which have impacted the entire region.*

E. *The 2015 Generation 3 changes created gateways—e.g., affordable housing and En-Zones for tangible tax credits in only Region 2. Yet the number of NYS BCP applications and tax credits in New York City has increased substantially - targeted to affordable housing and En-zone communities. Overall, NYS BCP projects in NYC have supported development of 20,000 residential units, of which 6,400 are affordable housing units.*

F. *More than half of all NYS BCP projects have been located in economically distressed En-Zones, with the proportion of projects in En-Zones increasing in Generation 3 since 2015; many BCP projects are also in Environmental Justice and Brownfield Opportunity Areas.*

G. *The pace and number of NYS BCP projects has increased, suggesting increased familiarity with the rigorous process required to meet the specific environmental guidelines for each of 4 tracks. Median time from application to completion has improved in Generation 3 and is now just over 2 years, even as more projects are being processed and completed.*

H. *The study revealed how an inherent challenge of this tax credit program has been partly overcome; that tax credits are received well after completion, but project financing is needed earlier. As the NYS BCP has consistently grown, especially in Generation 3, Brownfield Tax Credits have become more accepted and incorporated by banks as part of financing. Also a market for the syndication of brownfield tax credits has evolved, allowing the inclusion of credits proceeds to be used as equity, often as part of affordable housing projects also using federal Low Income Housing Tax Credits.*

II NYS BCP Program Analyses

A. NYS BCP Program Generations

The NYS BCP has 3 Generations based upon three changes in the state law

- Generation 1 Program inception in 2004 until June 22, 2008
- Generation 2 June 23, 2008 to June 30, 2015
- Generation 3 July 1, 2015 to December 31, 2022
  Includes Region 2 (NYC) specific regulations

B Applications and Certificates of Completion (COCs)

There have been since inception, 1,430 total applications to the NYS BCP program and 914 accepted applications from 2004 through 2020, as reported in May 2021. 502 sites have been remediated and received Certificates of Completion, the NYS DEC official determination that the environmental cleanup meets applicable standards and the project is eligible to receive tax credits. Generation 3 has thus far had 452 applications, the largest number, in part due to increasing familiarity with the program

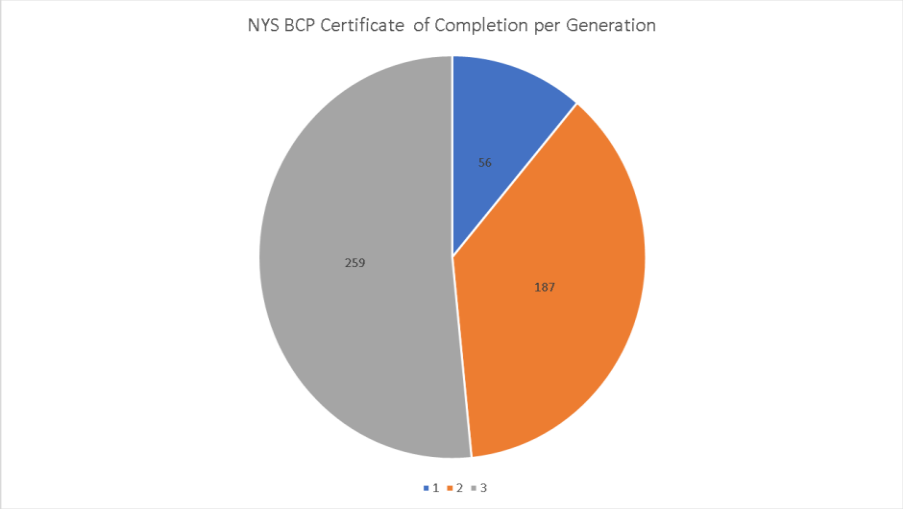
Applications and Tax Credits By Generation		
Number Of Applications		**Year Range**
Generation 1	71	Years: Before 2008
Generation 2	391	Years: 2008-2015
Generation 3	452	Years: 2015 -2021
Total	**914**	**Years: ALL**

Total Tax Credits		**Year Range**
Generation 1	$378,743,152	Years: Before 2008
Generation 2	$1,000,873,706	Years: 2008-2015
Generation 3	$1,391,502,307	Years: 2015 -2020
Total	**$2,771,119,165**	**Years: ALL**

NYS BCP Certificates of Completion over Time

There have been a total of 502 Certificates of Completion issued for the NYS BCP program from inception until May, 2021. Charts below show COCs by Generation and by year as of date of this report.

- Generation 1 56 COCs
- Generation 2 187 COCs
- Generation 3 259 COCs



C, Project Scale

Generation 3, the current NYS BCP, is significantly different than the earlier generations in terms of project scale. Obviously the maximum tangible property credits limitation to $35 million has achieved the goal of reducing the number of very large projects. Most accepted applications resulting now in under $5 million in total credits, shown by median and mode statewide. The average (or mean) is still somewhat skewed by a few large projects, the median and mode reflect more accurately most or typical projects; and all are shown statewide in the chart below.

Region 2, all five boroughs of New York City, is of special interest as the 2015 Generation 3 amendments create distinct limiting eligibility criteria for the tangible property tax credits in

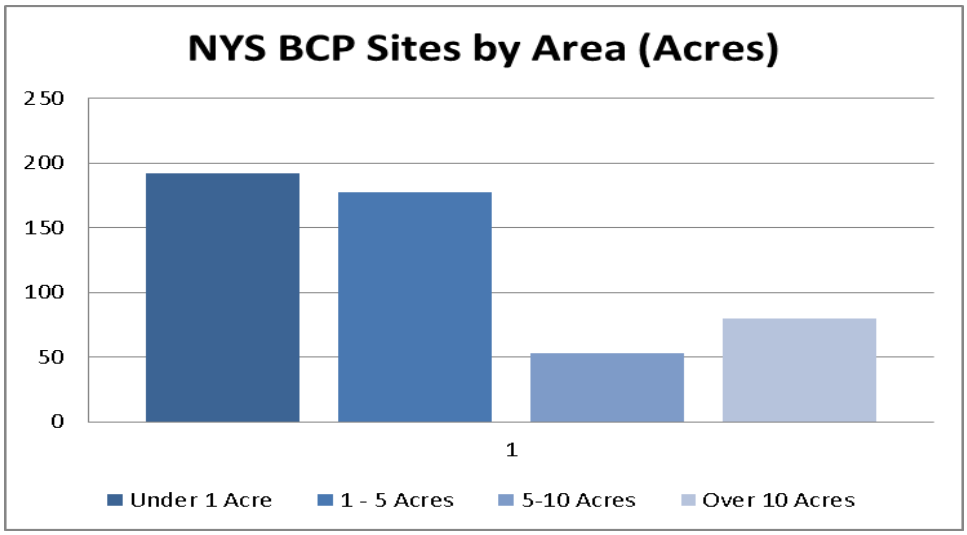
only this region. Projects in Region 2 are now eligible for the tangible property brownfield tax credits via four gateways; being an affordable housing project, in an En-Zone, or located on an "upside-down property" (i.e., the cleanup is more than the value of the property) or pursuant to a tightly defined concept of being "underutilized". Despite these limitations, the number of projects and the amount of tax credits has increased since these 2015 changes. However, the locations and nature of the projects has changed—e.g., to more often affordable housing in Brooklyn, the Bronx or Queens.

NYS BCP Tax Credits by Component and Credits Amount

NYS BCP All Regions Through 2020			
Site Prep Component Cost	$2,273,094,767		
Site Prep Component Credit	$698,101,131		
Tangible Property Component Cost	$15,249,091,485		
Tangible Property Component Credit	$2,048,767,391		
Onsite Groundwater Remediation Cost	$93,534,699		
Onsite Groundwater Remediation Credit	$24,250,622		
Total Private Development Investment	$17,615,720,951		
Total Brownfield Tax Credits	$2,771,119,165		
Total Credits Average (Mean) per Accepted Application	**$3,031,859**		
Total Credits Median per Accepted Application	**$402,213**		
Project Credits $0 Up To 1 Million	550	Projects	
Project Credits $2 Million - 5 Million	218	Projects	
Project Credits $5 Million - 10 Million	79	Projects	
Project Credits $0 Million - 25 Million	47	Projects	
Project Credits $25 Million Plus	20	Projects	

Another measure of project scale is land area. Most BCP sites, especially in urban areas, are small, but the average is skewed by some large projects; median and mode are more indicative of typical projects.

COC Acreage Data			
Average Acre	5.3	Meaning: This is the average acre size of all COC's	
Median Acre	1.7	Meaning: This is the Median acre size of all COC's	
Mode	Under 1 Acre	192	
	1-5 Acres	177	
	5-10 Acrea	53	
	10+ Acres	80	
	Check	*502*	



D. NYS BCP Geographic Distribution of Projects:

NYSBCP projects through all generations are dispersed around New York State; projects in all NYS DEC regions and 40 of New York's 62 Counties, but some areas have significantly more projects. The first table shows projects and tax credits in each region by generation, followed by the regional proportion of BCP to all environmental sites. The next group shows distribution by County, followed by a detailed analysis of Region 9, Buffalo/Niagara. Region 2, New York City and its specific eligibility criteria is discussed later in this report.

Number and Tax Credits of NYS BCP Projects by Region and Generation

		# Of Projects		**Total Tax Credit**
Region 1	Generation 1	0	Generation 1	$0
	Generation 2	4	Generation 2	$17,515,460
	Generation 3	10	Generation 3	$7,233,321
Region 2	Generation 1	22	Generation 1	$177,715,799
	Generation 2	130	Generation 2	$575,861,887
	Generation 3	167	Generation 3	$968,653,799
Region 3	Generation 1	9	Generation 1	$156,052,690
	Generation 2	60	Generation 2	$55,822,805
	Generation 3	59	Generation 3	$208,044,169
Region 4	Generation 1	1	Generation 1	$84,000
	Generation 2	4	Generation 2	$94,219,868
	Generation 3	8	Generation 3	$45,130,630
Region 5	Generation 1	0	Generation 1	$0
	Generation 2	1	Generation 2	$240,124
	Generation 3	3	Generation 3	$1,424,983
Region 6	Generation 1	1	Generation 1	$6,882
	Generation 2	8	Generation 2	$556,677
	Generation 3	3	Generation 3	$392,372
Region 7	Generation 1	16	Generation 1	$9,659,108
	Generation 2	33	Generation 2	$78,852,171
	Generation 3	19	Generation 3	$8,296,417
Region 8	Generation 1	6	Generation 1	$4,270,269
	Generation 2	53	Generation 2	$26,086,972
	Generation 3	29	Generation 3	$10,385,216
Region 9	Generation 1	16	Generation 1	$30,954,404
	Generation 2	98	Generation 2	$151,717,742
	Generation 3	154	Generation 3	$141,941,400

The chart below indicates the number of "environmental" sites within each NYS DEC Region which include BCP, VCP, MGP, Superfund and others but not spill sites (a separate database). The charts above and below show that some regions have made more use of the NYS BCP; factors include not only the number of potentially eligible sites, but also real estate market conditions, environmental conditions (e.g., Region 1, Long Island is more dependent upon groundwater), and the expertise and aggressiveness of developers, consultants and public officials in each region.

New York State DEC Environmental Remediation Site Database
Analysis by Region

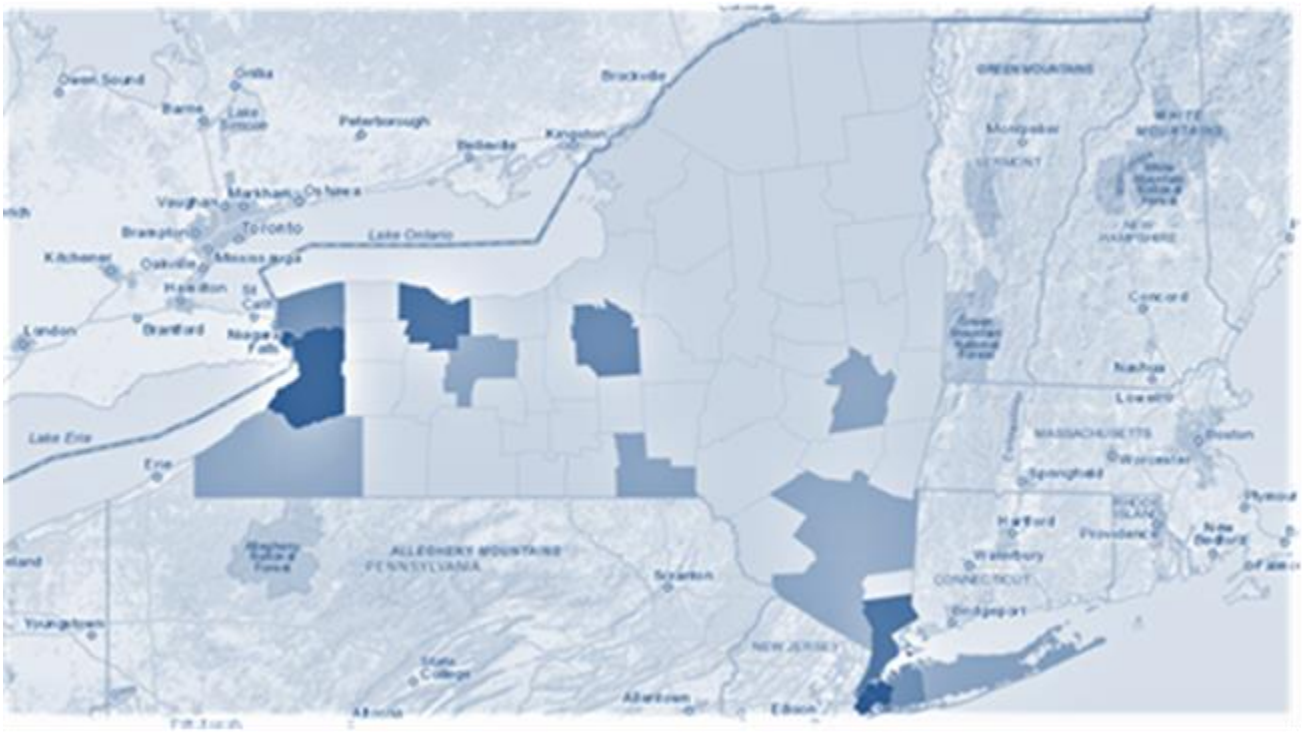
Region	Environmental Sites	NYS BCP	% of Env. Sites in NYS BCP
Region 1	647	14	2.16%
Region 2	1133	319	28.16%
Region 3	848	128	15.09%
Region 4	339	13	3.83%
Region 5	228	4	1.75%
Region 6	293	12	4.10%
Region 7	483	69	14.29%
Region 8	640	88	13.75%
Region 9	841	268	31.87%
Total	5452	915	16.78%

https://www.dec.ny.gov/cfmx/extapps/derexternal/haz/results.cfm?pageid=3

NYS BCP Geographic Distribution Continued

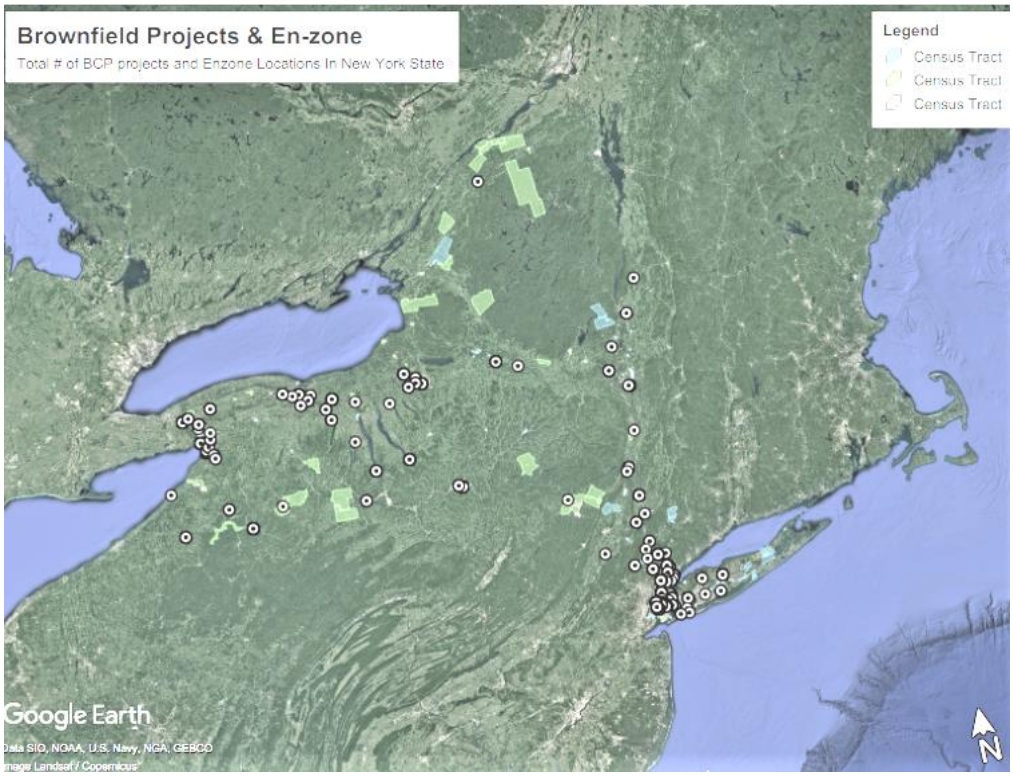
This first chart is an update from the 2015 NYU NYCBP study, showing the ten New York counties that have the largest number of BCP projects over the entire program, which show only moderate change, with Erie County gaining more projects. The second chart is the expanded list of 21 counties with 6 or more NYSBCP sites through 2020. The maps that follow show the distribution of BCP and En-Zones sites in New York State and illustrate the historical industrial growth pattern across the state.

Map of NYS BCP Projects Number by County



>86-199 **0**
>36-85 **0**
>19-35 0
>7- 19 0
>0 -7 0

Map of New York State BCP and En-Zones



New York State En-Zones and BCP Sites

Above En-Zone Census tracts: Type A Green, Type B Blue, Type AB Pink.

BCP Sites ⊙

Below: En-Zone census tracts in Southern New York State

E. NYS DEC Region 9

NYS Region 9, Buffalo, Erie, Niagara region, has been particularly active, especially in Generation 3 of the NYS BCP Program and tax credits, second only to Region 2, New York City. In part, this is due to the number of formerly industrial contaminated sites. Additionally the professionals working in this region have become expert at utilizing the program and obtaining early-stage financing, whether debt or equity (not necessarily formal syndication) based upon the brownfield tax credits to be received after completion.

The 2020 US EPA Study of the Benefits of Brownfield Redevelopment looked at six categories of metropolitan areas including "legacy cities" such as Buffalo and found that 2.9 – 10% of job growth as a measure of overall economic benefit occurred at brownfield redevelopment sites. The Buffalo region has experienced slow growth and sprawl (see, e.g., "Sprawl Damaging Buffalo & Its Suburbs", May, 2017 By Rise Collaborative). The extensive use of the NYS BCP in the region, with 269 projects, $325-million in tax credits: 31% of NYS DEC Environmental Sites and over 60% of the projects taking place in En-Zones (i.e., high poverty, high unemployment areas based on Census data), suggests not only a significant return on investment on-site (as shown below), but also a much more significant impact on the surrounding neighborhood, as demonstrated in the US EPA study. Using the EPA data, there are substantial impacts not only on the Brownfield site itself but on adjacent sites, affecting the region's overall growth pattern, with more activity in the urban core of the city.

Region 9 NYS BCP Projects		
Number Of Projects		**Year Range**
Generation 1	16	Years: Before 2008
Generation 2	98	Years: 2008-2015
Generation 3	154	Years: 2015 -2021
Total	**268**	**Years: ALL**

Total Tax Credits		**Year Range**
Generation 1	$30,954,404	Years: Before 2008
Generation 2	$151,717,742	Years: 2008-2015
Generation 3	$141,941,400	Years: 2015 -2020
Total	**$324,613,546**	**Years: ALL**

En-zone Yes		**Year Range**
Generation 1	11	Years: Before 2008
Generation 2	55	Years: 2008-2015
Generation 3	95	Years: 2015 -2021
Total	**161**	**Years: ALL**

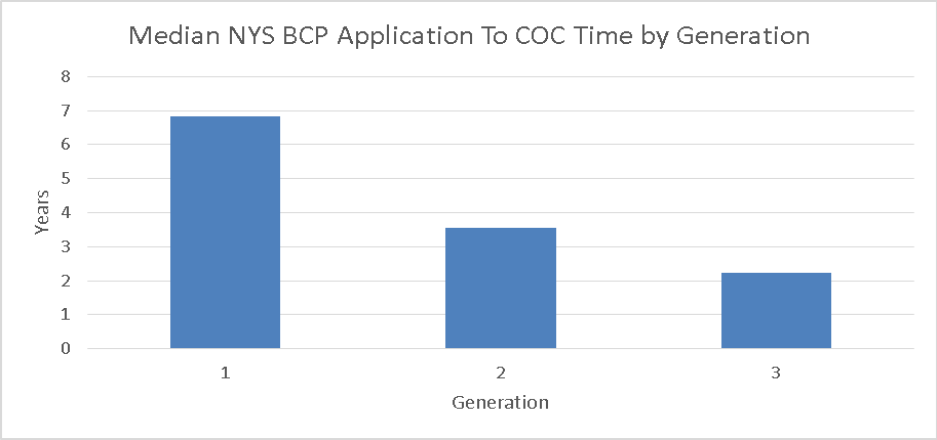
F. Approval time:

The first chart shows the time from acceptance of NYS BCP application until Certificate of Completion is first shown for the entire program since inception by mean (or average) which NYS DEC calculated as over 4 years, but this time frame is skewed by some very lengthy early projects. The median (half longer, half shorter) is 3.31 years and the mode shows that most projects take 1-5 years and some over 5 years. The time from application to completion is primarily how long the actual, physical remediation requires, but it also includes the submission and approval of a remedial action plan and the verification of completion.

The second chart shows the median time from application to completion by Generation, for the current Generation 3 the median time from application to COC is just over two years. The number of COCs issued per year had also steadily increased over time and Generations, indicating increased familiarity by all parties, more applications; approvals, and a more consistent process.

Years From Application to COC Since Inception

Average Time		4.43	
Median Time		3.31	
Mode		Under 1 Year	12
		Between 1 & 5 Years	335
		5 Years +	155
	Check		*502*



The third time chart below shows that the number of COCs issued per year has steadily increased over time and Generations. These three charts indicate that over time, more BCP applications have been processed and more cleanups completed more quickly, building confidence in the program. The factors resulting in faster completion include technological advances in remediation, refinements in the program, as well as more consistency and familiarity with the process by all parties.

NYS BCP COCs per year by Generation

Generation 1	
Average	14.0
Median	15.5
Generation 2	
Average	26.7
Median	21.0
Generation 3	
Average	43.2
Median	52.5

G. Context

The NYSBCP is unique. Each of the 50 states has different brownfield programs. Many states and US EPA provide direct on-budget or up-front funding, rather than refundable, post-remediation tax credits, but often at lower dollar values. New York is also unusual in having an as-of right program, meaning that any site that meets all requirements will be funded. Also NYS BCP tax credits are subject to federal income tax. New York City has the only municipal brownfield program which, through a Memorandum of Agreement with the State of New York, provides cleanup approval; but the NYC program largely deals with smaller, less contaminated properties in a dense, 400-year old city with ubiquitous urban fill. Some other state programs use tax credits though not as lucrative as New York's. Many others, including NJ and CT, use direct reimbursement of a percentage of all environmental costs and grant significant responsibilities to licensed site professionals

The US EPA national economic impact studies cited include measurement of varied programs and community benefit beyond the redevelopment site. In particular, the US EPA Brownfield Assessment Group provides otherwise hard-to-get funds for initial site investigation, which carries risk that no development will follow, but often enough there is development, so EPA studies show a high return on investment. This study does not compare programs, but many were reviewed, learned from and provide context for this report.

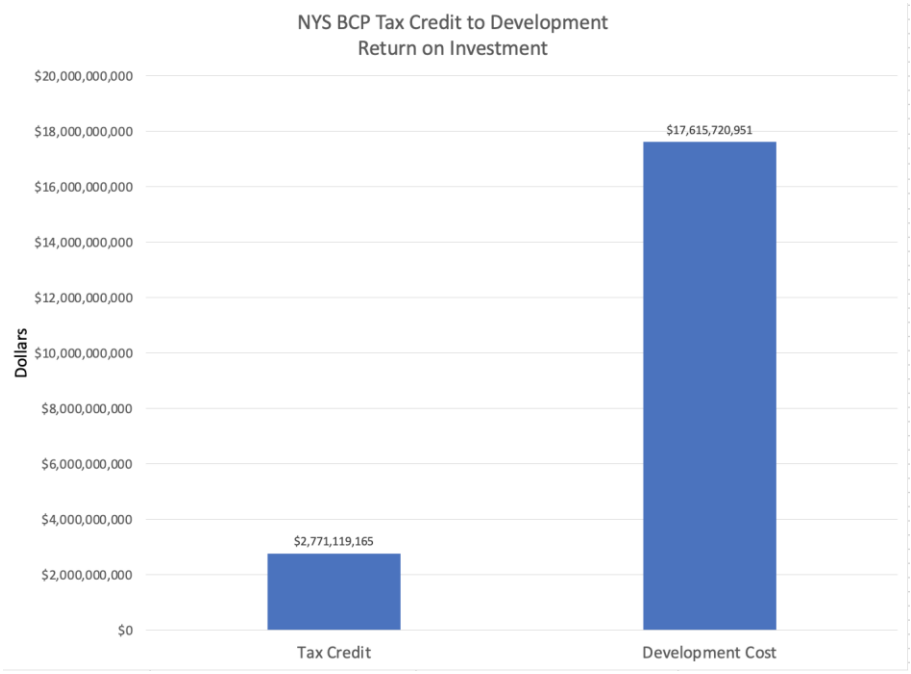
III. NYS BCP Impacts

A. Return on Investment

The NYS BCP has shown an overall return of $6.63 in on-site development cost for every $1.00 of tax credits. Over the entire 18-year history there has been $2,777,119,165 in total tax credits received and $17, 615,720,951 in total development investment. This ratio has been consistent over all 3 generations but is limited to impacts on the brownfield sites themselves and does not take into account increased estate tax revenues, jobs created or other community benefits. In 2020 filings there was a total of $372,407,486 in tax credits with a slightly higher redevelopment cost ratio than overall or Generation 3 history.

"*Brownfields development will sometimes produce additional benefits for growth beyond brownfield sites*"; according to the 2020 US EPA nationwide study of the Benefits of Brownfield Redevelopment. The study looked at six categories of metropolitan areas, all found in New York State, and that the impact for all categories was 3.3 – 11.0% more job growth in brownfields than in trend development as a measure of overall economic benefit occurred at brownfield redevelopments**.** This is one of several methodologies measuring the broader positive impacts, what economists' call the multiplier effect: how specific projects such as brownfields redevelopment have impact that extend beyond the site into the overall community and its economy.

NYS BCP Tax Credits and Development Costs Comparison



B. Return and Distribution of Types of Tax Credits

The distribution and use of the various types of credits; Site Preparation, Tangible Investment (includes construction costs) and Groundwater Remediation, has also remained relatively stable over the history of the BCP. This distribution for Generation 3 projects is shown below. Tangible credits are both the largest proportion of credits and show the highest return on investment, $7.81 of private investment for each $1 of tax credit. Site preparation credits require differentiating construction from remediation which can limit rate of return

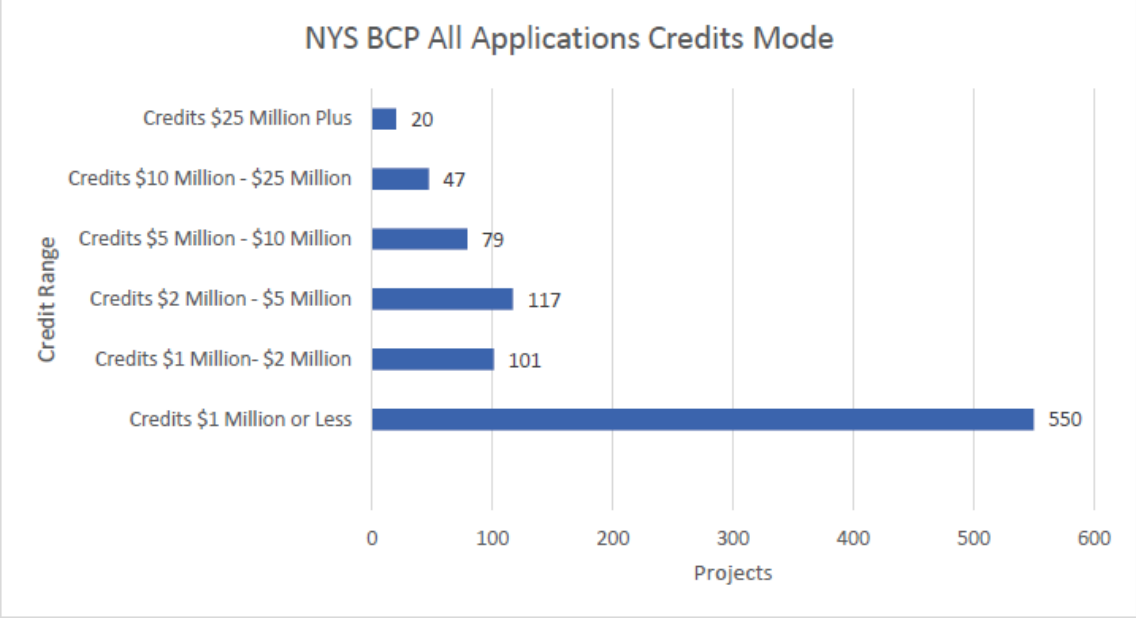
NYS BCP Gen 3 Credits and Investment Ratio

Percent Total Credits over Development Cost	**16.54%**
Percentage Site Prep Credits over Development Cost	**34.73%**
Percentage Tangible Credits over Development Cost	**12.85%**
Percentage Groundwater Credits over Development Cost	**29.52%**

C. Tax Credit Size of Projects over Generations

The nature of NYS BCP projects has changed over time and generations, reflecting targeted legislative mandates. Since 2015, Generation 3 (the program as it is today), projects have been largely mid-sized. No projects over $35-million have been allowed since 2008 and there have been few over $10-million in tax credits recently. While a few large projects in Gen 1 (pre-2008) misleadingly skew overall averages, the detailed review below reflects recent and current patterns. The legislative strategy of supporting moderate size industrial development projects mostly upstate, affordable housing in New York City and in En-Zones throughout the state appears to have been successful. The charts below show the average of tax credits per project has declined over generations, reflecting a greater proportion of moderate size projects. The second chart shows tax credit size modality for all accepted applications in the program since inception.

NYS BCP Project Size of Tax Credits over Generations				
Generations	**Average Tax Credits Per Year by Generation**	**Number of Projects Per Year**	**Average Tax Credits Over Average # of Projects Per Year In Each Generation**	**Year Range**
Generation 1	$126,247,717	24	$5,334,411	Before 2008
Generation 2	$142,981,958	52	$2,743,059	2008-2015
Generation 3	$302,826,510	113	$2,679,881	2015 -2022



D. Regional Distribution of Tax Credits

NYS BCP Tax Credits and All DEC Environmental Sites by Region

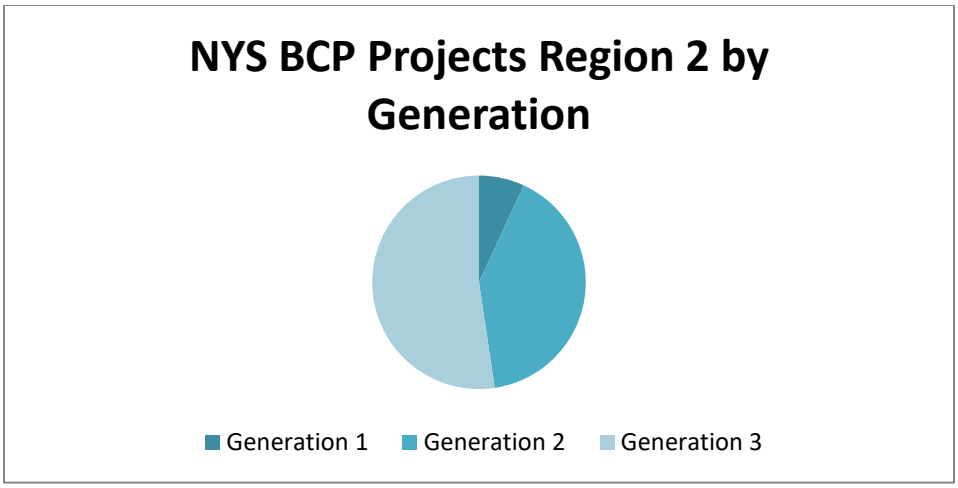
While there is a wide differential among regions, every region had projects that utilized the NYSBCP projects and received tax credits. The chart below illustrates this distribution and the changes over the three generations of the program

E. Region 2 Generation 3

Region 2, all five boroughs of New York City, is of special interest as the Generation 3 2015 amendments create distinct criteria for only this region. Projects in Region 2 are now only eligible for Tangible Brownfield Tax Credits via four gateways; being an affordable housing project, in an En-Zone, or a tightly defined "under-utilized" or upside down site. Despite these limitations, the number of projects and the amount of tax credits has increased since these 2015 changes. Extensive use has been made of the Affordable Housing and En-Zone gateways, often obtaining equity or debt financing based upon future brownfield tax credits, as discussed below in NYC Affordable housing section.

Number Of Projects		**Year Range**
Generation 1	22	Years: Before 2008
Generation 2	130	Years: 2008-2015
Generation 3	167	Years: 2015 -2021
Total	**319**	**Years: ALL**

Total Tax Credits		**Year Range**
Generation 1	$177,715,799	Years: Before 2008
Generation 2	$575,861,887	Years: 2008-2015
Generation 3	$968,653,799	Years: 2015 -2020
Total	**$1,722,231,485**	**Years: ALL**



F. Housing in Region 2, New York City

The number of housing units and of affordable housing units has been carefully studied using numerous data sources in addition to NYS DEC and New York State Department of Taxation and Finance databases. Despite the 2015 amendments that limited use of the NYS BCP in Region 2, a significant number of projects, tax credits, housing units and affordable housing units continue to be developed using the available gateways,

The chart on the following page lists the largest 11 NYS BCP housing projects in Region 2 NYC, detailing dates, tax credits, the number of housing units and the number and percentage of affordable units. Similar lists for each of the three generations are in Addendum 2. The total number of NYC housing units built on BCP projects through 2020 is 19,843, of which 5,813 are affordable units. Projects recently completed and under construction, including large projects underway in Jamaica, Queens and other boroughs, will bring the totals to over 20,000 total units and 6,400 affordable units developed on NYS BCP projects in NYC. Complete lists of Region 2 NYS BCP Housing Developments for each Generation are included in Addendum 2.

An important factor in the increased use of NYS BCP appears to be a way of addressing one of the tax credit program's inherent challenges, notably tax credit funds are actually received a year or even two years after completion and the filing of a tax return claiming the credit. While overall approval times have been reduced, interviews noted that interpretation issues such as determining site preparation credits, in some cases delay the process. The capability to syndicate or otherwise have the value of the tax credits included in early stage financial underwriting addresses this important timing challenge. The federal Historic Tax Credits and especially the federal Low Income Housing Tax Credit are models of how tax credits can be syndicated and used as up-front equity. While the concept of utilizing tax credits to obtain project financing was apparent from the start of the BCP, actual syndication or other financing requires both an

established legal process and confidence that the NYS BCP program and its tax credits will remain in effect and thus are marketable to entities such as banks to invest based upon the tax credits. The syndicators also want to know what costs will or will not count toward the tax credits with some certainty. In Generation 1 few affordable housing developers and especially their banks were able to invest early in projects based upon later receipt of brownfield tax credits. By Generation 3, years later this capability now seems part of the increase in Region 2 NYS BCP Affordable Housing projects. New York City and State Housing agencies are asking developers doing LIHTC projects to also syndicate their BCP tax credits. This has resulted in the BCP becoming an important source of funding for affordable housing in New York City, and more tax credits have been issued, despite the Region 2 limitations in the 2015 Gen 3 NYS BCP amendments.

The chart below shows NYC housing projects with the largest number of units benefitted by receiving NYS BCP tax credits. The list is for the entire history of the program, both the calendar year of application and year tax credits were claimed is provided. Again, Addendum 2 has the complete list of all Region 2 NYS BCP housing projects by Generation.

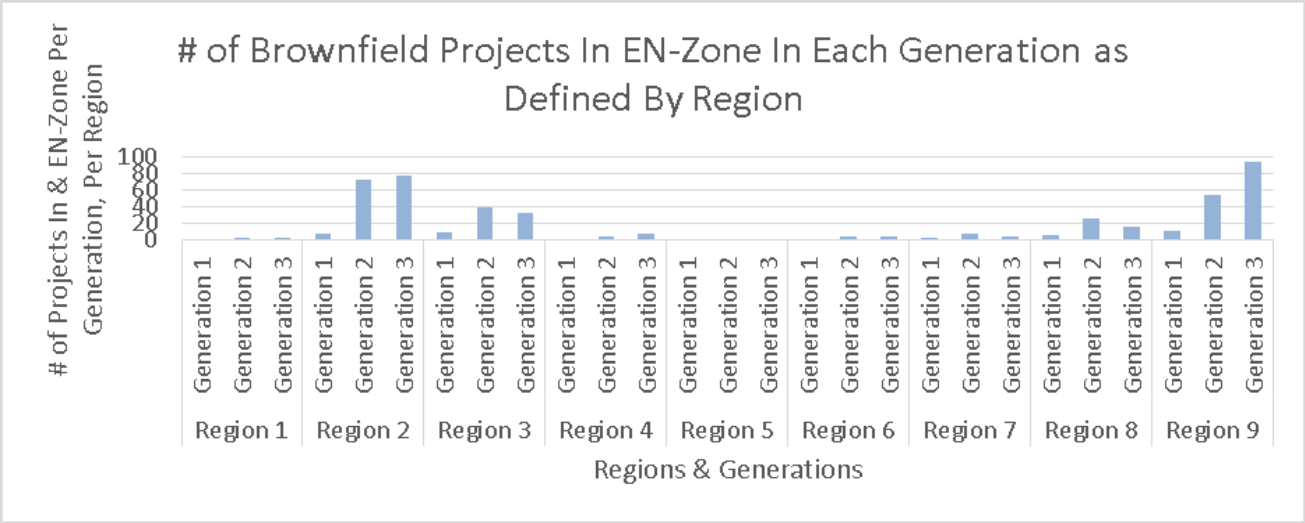
Largest NYC Housing Developments in NYS BCP Projects

Largest NYC Housing Developments in BCP Projects												
Cal Year	Tax Year	Project Site Nam	Project Sit	Notes	En-Zon	Total Credit	Com/Res	Type	Total Units	Affordabl	% Affordable	
2019	2018	Queens Plaza Re	C241105		No	17,311,780	Residenti	Rental	1900	475	25.00%	
2019	2018	Queens West Wa	C241095, C	3/, 9/	No	318,323	Residenti	Rental	1725	431	25.00%	
2016	2015	Former W 41st St	C231077	3/	Yes	8,028,106	Mix use re	Rental	1400	420	30.00%	
2017	2016	Former Neptune	C241138	3/	Yes	12,353,341	Residenti	Rental	1115	223	20.00%	
2020	2019	Kips Bay Fuel Ter	C231014		No	1,063,359	Residenti	Rental	761	152	19.97%	
2020	2019	85 Jay Street (Bro	C224248	4/	No	25,436,122	Residenti	Condo	728	0	0.00%	
2017	2016	Harlem Park	C231041	3/	Yes	418,707	Residenti	Rental	670	134	20.00%	
2017	2016	Mid Block #57 Pro	C231062	3/	Yes	35,000,000	Residenti	Rental	625	142	22.72%	
2020	2019	Jamaica 94th Ave	C241184	2/, 4/, 7/	No	361,931	Residenti	Condo	522	379	72.61%	
2020	2019	420 Kent Avenue	C224201	3/	No	18,521,400	Residenti	Rental	450	121	26.89%	
2018	2017	388 Carroll Street	C224173	3/	No	7,060,404	Residenti	Rental	430	54	12.56%	
									10326.00	2531	24.51%	
1st and	2nd Source											
https://www.dec.ny.gov/data/der/factsheet/c241105acucompeng.pdf												
https://newyorkyimby.com/2019/12/hill-west-architects-reveals-renderings-for-massive-waterfront-complex-in-flushing-queens.html												
https://	https://newyorkyimby.com/2015/07/demolition-beg	1st Source										
https://	https://www.cityrealty.com/nyc/long-island-city/5pointz-22-44-jackson-avenue/76391											
http://v	https://skyscraperpage.com/forum/archive/index.php/t-204053.html											
https://newyorkyimby.com/2020/11/front-yorks-curtain-wall-rises-steadily-at-85-jay-street-in-dumbo-brooklyn.html												
https://	https://newyorkyimby.com/2016/09/durst-plans-new-mixed-use-development-with-affordable-housing-at-1800-park-avenue-ha											
https://	http://www.57and11lottery.com/assets/Via_57_West_Ad_and_Application_for_Website-dad95614b8414bc85d5603c2a28b30054ef											
https://	https://newyorkyimby.com/2018/02/24-story-tower-coming-to-147-07-94th-avenue-jamaica-queens.html											
https://www.cityrealty.com/nyc/market-insight/features/affordable-housing/affordable-lottery-launches-eliot-spitzer-developed-420-k												
https://	https://ny.curbed.com/2017/3/20/14984568/gowanus-affordable-housing-lottery-363-bond-street											

G. Impact in Low and Moderate Income Communities Statewide

The proportion of projects and tax credits located in En-Zones and Brownfield Opportunity Areas has increased over time and generation. More than half of NYS BCP projects are in En-Zones. For Gen 3, Region 2 NYC, 78 projects or 53% were in En-Zones. While NYS DEC data only specify if a BCP project is an En-Zone, looking at the GIS maps it is clear that many BCP locations are also in Environmental Justice zones as defined by New York State.

NYS BCP Projects in En-Zones						
En-Zone Yes			Year Range			
Generation 1	33	6.92%	Years: Before 2008			
Generation 2	209	43.82%	Years: 2008-2015			
Generation 3	235	49.27%	Years: 2015 -2022			
Total	477		Years: ALL (out of 915 accepted applications)			

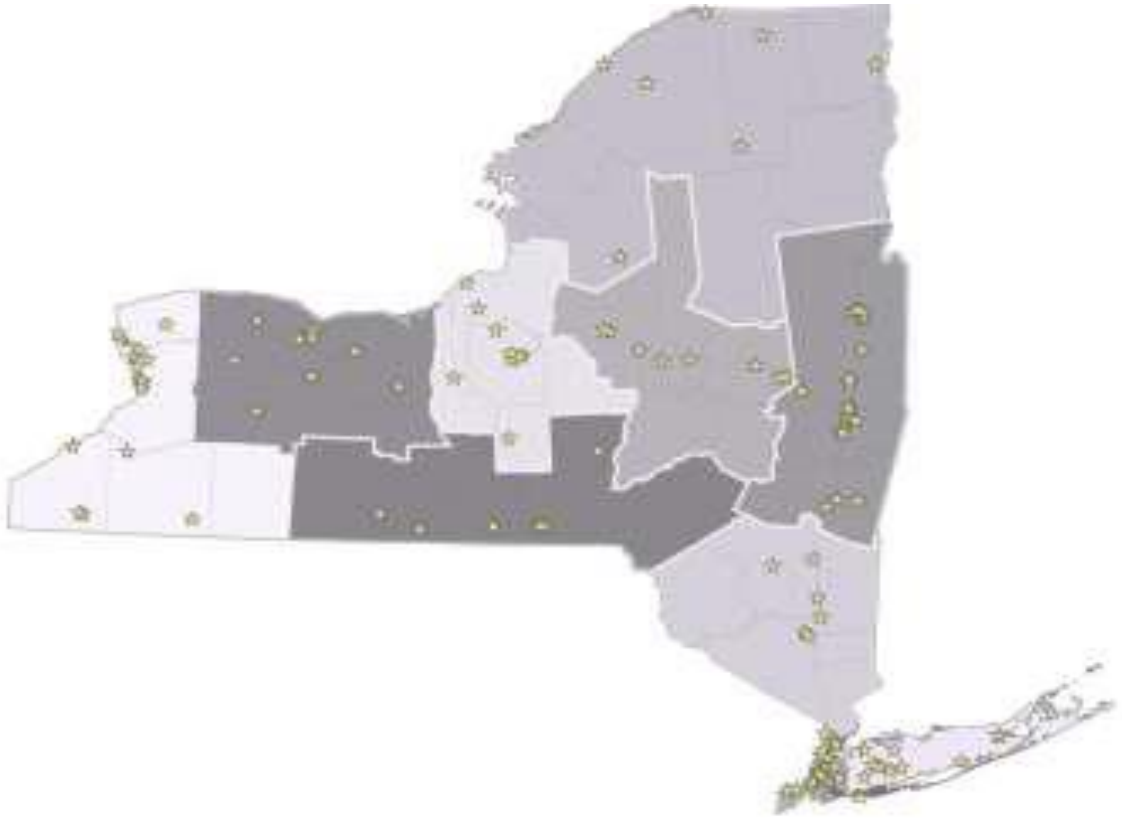


F. Brownfield Opportunity Areas (BOAs)

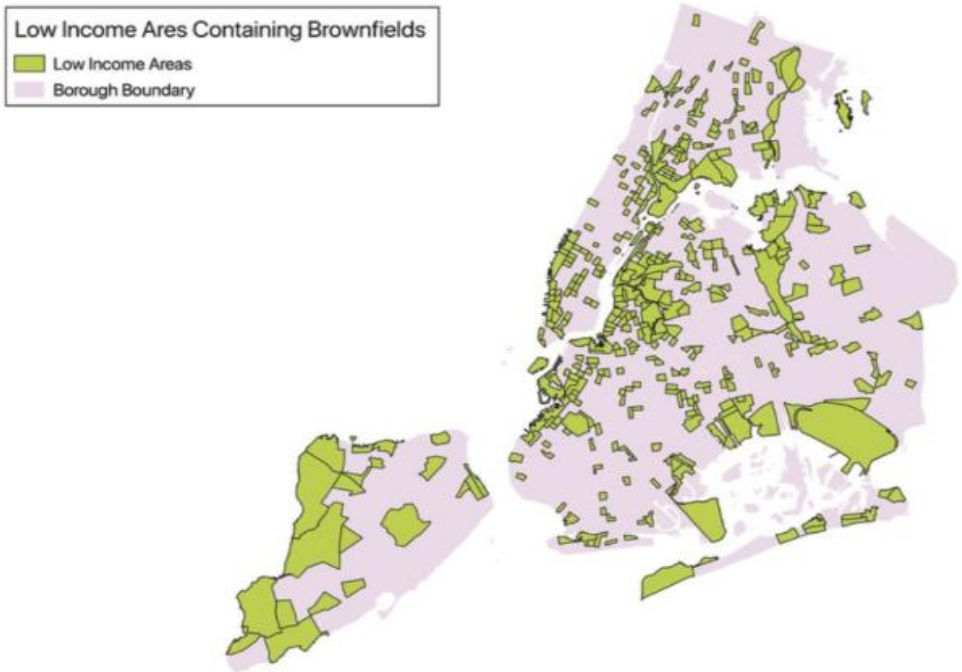
The Brownfield Opportunity Area (BOA) program is a separate New York State planning program administered by the Department of State. There are 122 BOA study areas, and 62 have been certified. The 2015 Generation 3 BCP legislation provided a "bump-up" from the prior 2% to 5%, in tax credits for projects in certified BOAs.

BOA benefits recipient communities in the planning and initiation of community projects, including brownfield redevelopments; engaging towns and neighborhoods in a wide range of improvements utilizing various private and public funding sources. These include several different remediation and redevelopment programs, the NYS BCP being suitable for some, and the bump-up is just one recent, complicated, and quite specific benefit. The NYS DEC database notes 22 NYS BCP projects as being in certified BOAs, 4 affordable projects have received the bump-up in credits permitted in Gen 3 and NYS Department of State reports granting 14 BCP projects BOA conformance approvals as of September, 2021 (listed in Addendum 4). Many of the 62 BOA have been relatively recently certified. There are more BOA-BCP bump-up projects in process. The first map below shows NYS BOAs distributed throughout the state's economic development districts. The second map shows Low Income Areas containing Brownfields in the City of New York.

New York State BOAs in Economic Development Districts. NYS DOS



Source: NYC Mayor's Office of Sustainability; Unique: American Geographical Society 2019



H. Environmental Impact, Including the Hudson River

The 502 cleanups accomplished by the NYSBCP, more than half in low-income communities, have had a significant positive environmental impact on the state overall and those communities in particular. The chart below indicates the number of cleanups by track and future use for all 502 COCs by NYS DEC Cleanup Track.

Allowable Future Use (DEC Track) Data

Residential	19
Commercial	157
Unrestricted	105
Restricted Res	203
Industrial	18
Check	*502*

The NYS BCP is open only to sites with significant contamination; and all remediation work is conducted, supervised and certified in accordance with NYS Department of Environmental Conservation regulations for the approved track. NYS BCP cleanups are often complex, involving solvents such as TCE (trichloroethylene), PCE (tetrachloroethylene or "Perc") and Benzene; PAHs (Polycyclic Aromatic Hydrocarbons) such as naphthalene; heavy metals such as lead; arsenic, vinyl chloride and even newly-emerging contaminants as well as many other dangerous pollutants. Projects in which older buildings are adaptively reused often involve asbestos and lead paint removal. BCP cleanups often use sophisticated and in some cases innovative technology both in testing and the actual remediation. Alternative remedy solutions range from soil removal, groundwater treatment to in-situ bioremediation. The remedy selection and design is generally proposed and implemented by environmental professionals and always with DEC oversight. Certificates of Completion are issued by DEC after thorough review.

The 2020 nation-wide study for US EPA developed two relevant sustainability criteria in its brownfield impact analysis: data on Vehicles Miles Traveled and storm water and impervious surface. Both are applicable to New York State brownfields. The study also found that VMT (Vehicle Miles Traveled) was from 25%-33% lower in brownfield redevelopments than traditional growth patterns, with a significant improvement in air quality, The study found that the proportion of impervious surface in brownfield redevelopment was -0.65 to -3.16 less than traditional growth patterns.

Hudson River Case Study:

There are, using the NYS GIS mapping information, more than 42 NYS BCP sites and 15 BOAs directly on or within 1000 feet of the Hudson River, or on tributaries within the watershed. There are environmental cleanup projects all along the 315-mile long river; several in the West Side of Manhattan and the Bronx, 10+ in Yonkers alone, and also in smaller river cities such as Poughkeepsie and Kingston, in addition to the extensive PCB cleanup from Schenectady south. The removal of many toxic contaminants in BCP and other cleanups has, by preventing current and storm related future migration of these contaminants, contributed to the ongoing improvement of water quality in the Hudson and reduced the potential impact of future, as measured by Riverkeeper and environmental agencies.

NYS BCP Projects on the Hudson River>

Addendum

1. Sources

New York State Databases

New York State Department of Finance and Taxation Brownfield Tax Credit Reports and Database through 2020, issued May, 2021
https://data.ny.gov/Government-Finance/Brownfield-Redevelopment-Credit-Beginning-Calendar/vud8-75x8/data

New York State Department of Environmental Conservation Databases, Remedial Site, Spill Incident and En-Zone Databases through July 1, 2021

New York State Department of State, Brownfield Opportunity Areas, Fact Sheet and Data

United States Environmental Protection Agency Studies

Environmental Benefits of Brownfields Redevelopment—a Nationwide Assessment Prepared for: U.S. Environmental Protection Agency Office of Brownfields and Land Revitalization Prepared by: ICF and Renaissance Planning EPA 560-R-20-001 May 2020

Hanger, K., L. Ma, and C. Timmins. 2017. The Value of Brownfield Remediation. Journal of the Association of Environmental and Resource Economists 4(1): 197-241.

Sullivan, K. 2017. Brownfields Remediation: Impact of Local Residential Property Tax Revenue, Journal of Environmental Assessment Policy and Management 19(3).

De Sousa, Christopher, Sustainable Brownfield Development, Building a Sustainable Future on Sites of our Polluting Past. Routledge, 2021

Other Studies and Data Sources

New York University Schack Institute of Real Estate, NYS BTC Analysis 2015, NYC Brownfield Partnership

Database of all BCP Applications Listed in the DEC ENB by Region Maintained by Knauf Shaw LLP, 2021

Riverkeeper Hudson River Fact Sheets, 2019
https://www.riverkeeper.org/water-quality/testing/water-quality-reports/

Real Estate Board of New York, New York City Brownfield Study, September, 2021.

Schnapf, Larry, New York State and New York City Brownfield Cleanup Programs Incentivize Redevelopment with Different Approaches, American Bar Association, Environmental Section January 25, 2019

Evaluation of the New York State Brownfield Opportunity Areas Program, New York University Wagner School of Public Service, Graduate Capstone Project for New Partners For Community Revitalization, Val Washington, Prof. Michael Keane, students authors: Rachel Cohen, Rose Martinez, Tyler Gumpright, Sam Levi, Javier Garciadiego, 2016.

Ginsburg v. United States; United States Court of Appeals, April, 2019. Upholding that New York State Brownfield Tax Credits are income subject to federal taxation.

2. Additional Charts, Graphs and Maps

NYC Housing. These charts show all the NYS BCP housing developments in DEC Region 2
Shows date, name, borough, total units, affordable units, percentage affordable with data sources listed below
First chart is Generation 3 (2015 and more recent) of the NYC BCP tax credit

NYS BCP Region 2 NYC Gen 3 Projects and Housing

	Cal Yr	Tax Yr	Project Name	DEC #	Notes	EN-Z	Tax Credits	Bldg Type		Units	Aff Units	% Aff
1	2020	2019	19 Patchen Avenue	C224232	4/, 7/	Yes	313,140	Commercial	Condo	8	0	0.00%
2	2020	2019	555 West 22nd Street	C231101	4/	No	14,318,529	Residential	Condo	141	0	0.00%
3	2020	2019	85 Jay Street (Brooklyn) LLC	C224248	4/	No	25,436,122	Residential	Condo	728	0	0.00%
4	2020	2019	Concourse Village West Apartmer	C203091	4/, 7/	Yes	1,651,317	Part of Resic	Rental	275	275	100.00%
5	2020	2019	Concourse Village West Apartmer	C203092	4/, 7/	Yes	1,714,511	Part of Resic	Rental	0	0	0.00%
6	2020	2019	Ebenezer Plaza 1	C224240	4/, 7/	Yes	5,982,014	Residential	Rental	197	106	53.81%
7	2020	2019	New 470 Project	C224242	4/, 7/	No	821,869	Residential	Rental	70	31	44.29%
8	2020	2019	One Flushing	C241185	4/, 7/	Yes	20,212,738	Residential	Rental	232	232	100.00%
9	2020	2019	1888 Bathgate Avenue Redevelop	C203088	4/, 7/	Yes	8,907,784	Residential	Rental	149	149	100.00%
10	2020	2018	82 King Street	C231103	4/	No	3,293,046	Residential	Condo	162	0	0.00%
11	2019	2018	515 West 18th Street	C231093	4/	No	30,872,861	Residential	condo	181	0	0.00%
12	2019	2018	Jamaica 94th Avenue	C241184	4/, 7/	No	4,338,660	Mixed use r	Rental	543	217	39.96%
13	2019	2018	18-46 Decatur Street	C241194	4/	No	100,238	Commercial	Single	0	0	0.00%
14	2019	2018	Former Liberty Brass Site	C241178	4/	No	7,010,729	Mix use office		0	0	0.00%
15	2019	2018	Tracks 1 & 4 - The Crossing at Jama	C241183	4/, 5/, 7/	No	8,508,703	Residential	Rental	580	145	25.00%
16	2019	2018	Tracks 1 & 4 - The Crossing at Jama	C241183	4/, 5/, 7/	No	1,927,990	0	0	0	0	0.00%
17	2019	2018	Williamsburg Bridgeview Apartme	C224233	4/, 7/	No	3,914,467	Residential	Condo	32	0	0.00%
18	2019	2018	1888 Bathgate Avenue Redevelop	C203088	4/, 7/	Yes	3,195,847	Residential	Rental	149	149	100.00%
19	2018	2017	One Flushing	C241185	4/, 7/	Yes	5,595,754	Residential	Rental	232	232	100.00%
20	2018	2017	Former F&S Manufacturing Corp S	C224230	4/	No	1,974,844	Commercial	0	0	0	
21	2017	2016	Jamaica 94th Avenue	C241184	4/	No	578,488	0	0	0	0	
			Tota tax credits, Units and Affordable Units				**$150,669,651**			**3679**	**1536**	

	Sources of Housing Data
1	https:/, https://www.dec.ny.gov/data/der/factsheet/c224232nfaprop.pdf
2	https://newyorkyimby.com/2021/01/the-cortlands-red-brick-facade-continues-progress-at-555-west-22nd-street-in-west-chelsea-manhattan.html
3	https://newyorkyimby.com/2020/11/front-yorks-curtain-wall-rises-steadily-at-85-jay-street-in-dumbo-brooklyn.html
4	http://joyconstructionnyc.com/project/concourse-village-west-apartments-building-a/
5	http://joyconstructionnyc.com/project/concourse-village-west-apartments-building-a/
6	https:/, https://www.6sqft.com/in-brownsville-106-affordable-apartments-come-online-starting-at-362month/
7	https:/, https://www.brownstoner.com/real-estate-market/affordable-housing-brooklyn-greenpoint-12-eckford-street-470-manhattan-avenue-lottery-opens/
8	https://hanac.org/affordable-housing/one-flushing/
9	https:/, https://www.6sqft.com/lottery-opens-for-149-units-at-amenity-packed-new-construction-in-the-bronx-from-462-a-month/
10	https://www.cityrealty.com/nyc/market-insight/features/future-nyc/toll-brothers-moves-forward-new-162-unit-condo-west-soho/9188
11	https://streeteasy.com/building/lantern-house
12	https:/, https://www.nychdc.com/sites/default/files/2021-01/Declaration%20of%20Intent%20-Jamaica%20II.pdf
13	https://www.dec.ny.gov/data/DecDocs/C241194/Work%20Plan.BCP.C241194.2017-02-16.RIWP.pdf
14	https:/, https://newyorkyimby.com/2018/08/renderings-revealed-for-regal-retail-complex-38-01-queens-boulevard-sunnyside-queens.html
15	https:/, https://newyorkyimby.com/2015/07/permits-filed-147-30-archer-avenue-the-crossing-at-jamaica-station.html
16	Not applicable
17	https://streeteasy.com/building/bridgeview-condominium
18	https:/, https://www.6sqft.com/lottery-opens-for-149-units-at-amenity-packed-new-construction-in-the-bronx-from-462-a-month/
19	https://hanac.org/affordable-housing/one-flushing/
20	Not Applicable
21	Not Applicable

Notes: Use NYS DEC and DTF records for most data, including obtaining addresses
Used addresses to obtain two sources of housing information for every project with housing units listed above
Verified to extent possible that projects are under-construction or completed, not aware of any project not started

Second chart is Generation 1, 2007 – 2009, with date, address, borough, housing units, affordable housing units and percentage, with housing data sources below

Generation 1 2007-9 BCP Region 2 NYC Houing Units and Affordable Housing												
Calendar Y	Tax Year	Taxpayer I	Project Sit	Project Sit	Notes	DEC Regio	County	Municipal	En-Zone	Total Unit	Affordabl	% Afford/Total
2009	2008	17TH AND	C231040	West 17th Street and		2	New York	Manhattai	No	478	59	12%
2009	2008	ADEE & LE	C203039	Former Dico G Auto a		2	Bronx	Bronx	Yes	75	75	100%
2009	2007	FLUSHING	C241051, C	Flushing I	9/	2	Queens	Queens	No	800	200	25%
2009	2007	IAC/INTER	C231017	West 19th Street Dev		2	New York	NYC	No	10	0	0%
2009	2007	IKEA HOLD	C224043	US Dredging Shipyar		2	Kings	NYC	No	0	0	0%
2008	2007	13TH & 14	C231048	Club East		2	New York	New York	No	113	30	27%
2008	2007	ATLAS PAI	C241045	Atlas Park (Office/Re		2	Queens	Glendale	No	0	0	0%
2008	2007	ATLAS PAI	C241088	Atlas Park Site-Parce		2	Queens	Glendale	No	0	0	0%
2008	2007	CONSOLID	C231047	Astor Substation Pro		2	New York	New York	No	0	0	0%
2007	2006	DERMOT C	C231011	Clinton Green Devel		2	New York	New York	Yes	695	174	25%
2008	2007	WEST END	C231043	West 61st Street (Tra		2	New York	New York	No	211	211	100%
2008	2007	RIVER PLA	C231012	River Place II West 4		2	New York	New York	Yes	933	233	25%
2008	2007	AVALONB	C241049	Queens West (Hunte		2	Queens	Long Islan	No	602	151	25%
									Totals	3,917	1,133	29%
Sources of Housing Data												
https://w	https://www.cityrealty.com/nyc/market-insight/carters-view/archives/59-478-apartments-the-caledonia-affordable/543											
https://www.dec.ny	https://www.lowincomehousing.us/det/adee__lester_lp-10467											
https://w	https://dos.ny.gov/system/files/documents/2021/05/flushingboa.pdf											
https://nypost.com/2020/10/25/developers-hope-to-revitalize-flushing-waterfront-with-new-offices-housing/												
https://www.dec.ny.gov/data/DecDocs/C224043/Fact%20Sheet.BCP.C224043.2006-03-31.remedial%20action-English.pdf												
https://w	https://a8	https://evgrieve.com/2019/12/all-about-housing-lottery-at-eve-on.html										
https://www.nyenvlaw.com/atlas-park-case-study/												
https://www.nyenvlaw.com/atlas-park-case-study/												
https://www.tax.ny.gov/pdf/stats/policy_special/brownfield_credit_reports/brownfield_credit_report_cy2008.pdf												
https://www.tullygroup.us/capabilities/astor-substation-brownfield-remediation/												
https://w	https://w	https://affordablehousingonline.com/housing-search/New-York/New-York-City/West-61st-Apartments/10036511										
https://w	https://www.zillow.com/b/river-place-ii-new-york-ny-29Zv/											
https://w	https://w	4-75 48th Av…										

Third chart below is Generation 2, 2009 – 2020 (including Generation 2 projects completed after 2105, with date, address, borough, housing units, affordable housing units, %, sources following.

Calenda	Tax Year	Project S	Project S	Notes	En-Zone	Total Credit	Type (Cc	Type	Total # o	Affordab	Percenta	1st Sour
2020	2019	Former Ge	C224176	3/	Yes	4,902,064	Hotel	N/A	0	0	0.00%	https://w
2020	2019	Former BF	C224153	3/	Yes	41,482	Residenti	Rental	210	105	50.00%	http://cor
2020	2019	432 Rodne	C224216	3/	Yes	15,942	Residenti	Rental	131	41	31.30%	https://w
2020	2019	1525 Bedf	C224206	3/	Yes	2,674,562	Residenti	Rental	133	35	26.32%	https://w
2020	2019	Former Su	C224207	3/	No	25,401,243	Commerci	N/A	0	0	0.00%	https://ne
2020	2019	Greenpoir	C224190	3/	No	598,977	Marina	N/A	0	0	0.00%	https://w
2020	2019	29 Flatbus	C224128	3/	No	125,165	Planned R	Rental	42	8	19.05%	https://w
2020	2019	Greenpoir	C224190	3/	No	53,027	Marina	N/A	0	0	0.00%	https://w
2020	2019	810 River	C203066	3/	Yes	10,811,905	Residenti	Rental	136	133	97.79%	https://w
2020	2019	Astoria St	C241155	3/	Yes	4,530,139	Planned F	Mix Use	0	0	0.00%	https://w
2020	2019	Former Sh	C231067	3/	Yes	5,600,809	Residenti	Condo	170	0	0.00%	https://w
2020	2019	268 West	C231089	3/	No	774,114	Residenti	Condo	46	0	0.00%	https://th
2020	2019	Former Ca	C224194	3/	Yes	825,016	Commerci	Industrial	0	0	0.00%	https://w
2020	2019	Former 11	C231087	3/	Yes	519,022	Subdivide	Condo	38	0	0.00%	https://w
2020	2019	Paragon P	C241108	3/	Yes	5,438	Proposed	Rental	248	74	29.84%	https://w
2020	2019	Kristal Aut	C224140	3/	No	304,754	Proposed	Rental	114	34	29.82%	https://pa
2020	2019	Former Cc	C224191	3/	No	3,597,722	Industrial	N/A	0	0	0.00%	https://w
2020	2019	Huxley En	C224147	3/	No	8,406,348	Residenti	Condo & F	287	140	48.78%	https://w
2020	2019	Huxley En	C224147	3/	No	308,356	Residenti	N/A	0	0	0.00%	https://w
2020	2019	Huxley En	C224147	3/	No	7,322,992	Residenti	N/A	0	0	0.00%	https://w
2020	2019	Tomat Ser	C224217	3/	No	3,312,967	Residenti	Rental	100	20	20.00%	https://w
2020	2019	Kristal Aut	C224140	3/	No	6,607,716	Part of Re	Rental	0	0	0.00%	https://pa
2020	2019	Queens Pl	C241171	3/, 5/	Yes	6,969,443	Residenti	Rental	132	33	25.00%	https://st
2020	2019	267-273 W	C231096	3/	Yes	1,737,638	Residenti	Condo	26	0	0.00%	https://w
2020	2019	21-25 31st	C241167	3/	No	3,981,766	Commerci	Retail	1	0	0.00%	https://w
2020	2019	87 Kent Av	C224188	3/	No	682,121	Commerci	Rental	0	0	0.00%	https://w
2020	2019	432 Rodne	C224216	3/	Yes	36,891	Residenti	Rental	136	41	30.15%	https://w
2020	2019	416 Kent A	C224200	3/	No	7,069,151	Residenti	Rental	252	65	25.79%	https://w
2020	2019	420 Kent A	C224201	3/	No	18,521,400	Residenti	Rental	450	121	26.89%	https://w
2020	2019	Paragon P	C241108	3/	Yes	1,359,153	Part of CIF	Rental	0	0	0.00%	https://w
2020	2019	511West 2	C231080	3/	No	14,302,145	Commerci	Rental	0	0	0.00%	https://st
2020	2019	77-57 Vlei	C241168	3/	No	1,522,461	Residenti	Rental	18	0	0.00%	https://w
2020	2019	2420 & 243	C231088	3/	Yes	7,608,837	Mix use of	Rental	0	0	0.00%	https://ne
2020	2019	Parkchest	C203079	3/	No	1,779,807	Residenti	Single	0	0	0.00%	https://w
2020	2018	112-21 No	C241157	3/	No	7,807,533	Residenti	Condo	208	0	0.00%	https://ne
2019	2018	432 Rodne	C224216	3/	Yes	1,435,849	Part of SH	Rental	0	0	0.00%	https://w
2019	2018	1525 Bedf	C224206	3/	Yes	9,328,107	Residenti	Rental	133	26	20.00%	https://st
2019	2018	Former Ph	C241150	3/	Yes	211,574	Residenti	Rental	89	0	0.00%	https://qn
2019	2018	29 Flatbus	C224128	3/	No	119,387	Residenti	Rental	327	65	20.00%	https://w
2019	2018	3475 Third	C203080	3/	Yes	5,637,641	Residenti	Rental	102	101	100.00%	https://w
2019	2018	44-30 Purv	C241162	3/	No	2,817,631	0	0	0	0		
2019	2018	261 Hudso	C231084	3/	No	500,516	0	0	0	0		
2019	2018	268 West	C231089	3/	No	29,725,467	0	0	0	0		
2019	2018	Former Ca	C224194	3/	Yes	14,116,402	0	0	0	0	0.00%	/
2019	2018	1899-1905	C203070	3/	Yes	17,051,230	0	0	0	0		
2019	2018	Paragon P	C241108	3/	Yes	197,319	0	0	0	0	0.00%	/
2019	2018	Former Gá	C203057	3/	Yes	8,596,604	0	0	0	0		
2019	2018	Silver Star	C241156	3/	No	4,467,545	0	0	0	0		
2019	2018	Queens P	C241151	3/	No	34,979,372	0	0	0	0	0.00%	/
2019	2018	Queens P	C241169	3/	No	9,236,796	0	0	0	0	0.00%	/
2019	2018	Queens W	C241095, (	3/, 9/	No	318,323	Residenti	Rental	1725	431	25.00%	https://ne
2019	2018	Huxley En	C224147	3/	No	6,419,013	0	0	0	0	0.00%	/
2019	2018	Huxley En	C224147	3/	No	14,801,518	0	0	0	0	0.00%	/
2019	2018	Prospect (	C203045	3/	Yes	15,189	0	0	0	0		
2019	2018	Purves Str	C241164	3/	No	307,733	0	0	0	0		
2019	2018	23-01 42nc	C241152	3/	No	175,911	0	0	0	0		
2019	2018	267-273 W	C231096	3/	Yes	9,695,202	0	0	0	0		
2019	2018	514-520 W	C231082	3/	No	4,867,268	0	0	0	0		
2019	2018	34-11 Bea	C241141	3/	Yes	11,462,508	0	0	0	0		
2019	2018	87 Kent Av	C224188	3/	No	3,943,190	0	0	0	0	0.00%	/
2019	2018	432 Rodne	C224216	3/	Yes	3,322,752	0	0	0	0	0.00%	/
2019	2018	416 Kent A	C224200	3/	No	8,396,028	0	0	0	0	0.00%	/
2019	2018	420 Kent A	C224201	3/	No	7,139,747	0	0	0	0	0.00%	/
2019	2018	Borinquer	C203056	3/	Yes	13,658,848	Residenti	Rental	145	145	100.00%	https://w
2019	2018	Paragon P	C241108	3/	Yes	941,372	0	0	0	0	0.00%	/
2019	2018	Former Dc	C224158	3/, 5/	Yes	2,124,186	Residenti	Rental	75	0	0.00%	https://w
2020	2017	112-21 No	C241157	3/	No	7,540,826	0	0	0	0		
2019	2017	Paragon P	C241108	3/	Yes	124,317	0	0	0	0	0.00%	/
2018	2017	432 Rodne	C224216	3/	Yes	306,992	0	0	0	0		

2018	2017	1525 Bedf	C224206	3/	Yes	2,325,598	0	0	0	0			
2018	2017	Former Ph	C241150	3/	Yes	3,748,530	0	0	0	0	0.00%	/	/
2018	2017	Former Su	C224207	3/	No	11,281,836	0	0	0	0	0.00%	/	/
2018	2017	29 Flatbus	C224128	3/	No	102,296	0	0	0	0			
2018	2017	Former Br	C224157	3/	Yes	548,085	0	0	0	0			
2018	2017	388 Carrol	C224173	3/	No	7,060,404	Residenti	Rental	430	54	12.56%	https://w	https://ny
2018	2017	Former Be	C224181	3/	Yes	2,003,880	0	0	0	0			
2018	2017	744 Bedfo	C224193	3/	Yes	1,571,999	Residenti	Rental	104	24	23.08%	https://w	https://ne
2018	2017	44-30 Purv	C241162	3/	No	9,224,887	0	0	0	0			
2018	2017	261 Hudso	C231084	3/	No	11,399,886	0	0	0	0			
2018	2017	Cinderella	C224160	3/	No	95,621	Commerci	Retail	0	0	0.00%	https://w	https://w
2018	2017	Former 11	C231087	3/	Yes	11,817,088	0	0	0	0			
2018	2017	Former Ur	C241163	3/	Yes	75,035	Mix use o	Rental	0	0	0.00%	https://w	http://ww
2018	2017	Former B8	C224195	3/	Yes	3,708,837	0	0	0	0			
2018	2017	601 Washi	C231091	3/	No	1,617,800	Residenti	Condo	10	0	0.00%	https://streeteasy.c	
2018	2017	2477 Third	C203047	3/	No	692,237	0	0	0	0			
2018	2017	Prospect C	C203045	3/	Yes	13,876	0	0	0	0			
2018	2017	23-01 42nc	C241152	3/	No	9,533,793	0	0	0	0			
2018	2017	267-273 W	C231096	3/	Yes	4,711,382	0	0	0	0			
2018	2017	514-520 W	C231082	3/	No	30,132,732	0	0	0	0			
2018	2017	87 Kent Av	C224188	3/	No	3,999,207	0	0	0	0			
2018	2017	432 Rodne	C224216	3/	Yes	710,437	0	0	0	0			
2018	2017	Purves Str	C241164	3/	No	5,381,097	0	0	0	0			
2018	2017	Former Dc	C224158	3/, 5/	Yes	6,422,339	0	0	0	0			
2020	2016	365 Bond S	C224174	3/	No	13,783,292	Residenti	Rental	430	54	12.56%	https://ny.curbed.c	
2019	2016	1899-1905	C203070	1/, 3/	Yes	2,821,614	0	0	0	0			
2019	2016	Paragon P	C241108	3/	Yes	3,848,483	0	0	0	0			
2019	2016	Elton Cros	C203073	3/	Yes	2,721,855	Residenti	Rental	198	198	100.00%	https://w	https://w
2018	2016	3475 Third	C203080	3/, 5/	Yes	1,449,257	0	0	0	0			
2018	2016	Paragon P	C241108	3/	Yes	7,987,501	0	0	0	0			
2017	2016	29 Flatbus	C224128	3/	No	748,008	0	0	0	0			
2017	2016	Norwood	C203067	3/	Yes	2,335,626	Residenti	Rental	115	56	48.70%	https://www.bandb	
2017	2016	Mid Block	C231062	3/	Yes	35,000,000	Residenti	Rental	625	142	22.72%	https://w	http://ww
2017	2016	6469 Broa	C203048	3/	No	2,712,348	0	0	0	0			
2017	2016	810 River	C203066	3/	Yes	1,966,304	0	0	0	0			
2017	2016	Former Sc	C224165	3/	Yes	714,136	0	0	0	0		https://www.dec.ny	
2017	2016	261 Hudso	C231084	3/	No	3,191,256	0	0	0	0			
2017	2016	268 West S	C231089	3/	No	20,427,315	0	0	0	0			
2017	2016	West & W	C231076	3/	No	9,549,697	Residenti	Rental	106	22	20.75%	https://w	https://w
2017	2016	Former G8	C203057	3/	Yes	821,287	0	0	0	0			
2017	2016	GDC LIC D	C241172	3/	No	1,410,104	Residenti	Rental Tw	76	0	0.00%	https://www.cityrea	
2017	2016	Former Ne	C241138	3/	Yes	12,353,341	Residenti	Rental	1115	223	20.00%	https://w	https://w
2017	2016	Harlem Pa	C231041	3/	Yes	418,707	Residenti	Rental	670	134	20.00%	https://w	https://ne
2017	2016	Former Dr	C224178	3/	No	916,663	Residenti	Rental	44	9	20.45%	https://w	https://st
2017	2016	2477 Third	C203047	3/	No	25,141	0	0	0	0			
2017	2016	149 Kent A	C224159	3/	Yes	5,867,007	0	0	0	0			
2017	2016	Former Ch	C224175	3/	No	1,569,295	0	0	0	0			
2017	2016	Huxley En	C224147	3/	No	17,297,583	0	0	0	0			
2017	2016	Former St	C224189	3/	No	3,702,558	0	0	0	0	0.00%	https://www.dec.ny	
2017	2016	Prospect C	C203045	3/	Yes	10,607	0	0	0	0			
2017	2016	23-01 42nc	C241152	3/	No	7,156,591	0	0	0	0			
2017	2016	Uniforms	C241103	3/	No	33,500	0	0	0	0			
2017	2016	34-11 Beac	C241141	3/	Yes	2,870,715	0	0	0	0			
2017	2016	85 Skillma	C224183	3/	Yes	1,510,233	Residenti	Rental	35	0		https://streeteasy.c	
2017	2016	Former Ne	C203061	3/	No	65,812	0	0	0	0			
2017	2016	511 West	C231080	3/	No	4,145,675	Commerci	Industrial	0	0	0.00%	https://streeteasy.c	
2017	2016	Former Dc	C224158	3/, 5/	Yes	1,700	0	0	0	0			
2018	2015	Former Dc	C224158	3/, 5/	Yes	11,906,303	0	0	0	0	0.00%	/	/
2017	2015	Former Ar	C224172	3/	No	100,161	0	0	0	0	0.00%	https://w	https://w
2017	2015	Lebanon V	C203060	3/	Yes	4,727,546	Residenti	Rental	315	141	44.76%	https://w	https://w
2016	2015	Former Ph	C241150	3/	Yes	1,437,595	0	0	0	0			
2016	2015	29 Flatbus	C224128	3/	No	2,038,846	0	0	0	0			
2016	2015	Former Br	C224157	3/	Yes	369,839	0	0	0	0			
2016	2015	6469 Broa	C203048	3/	No	745,191	0	0	0	0			
2016	2015	Former Be	C224181	3/	Yes	347,688	0	0	0	0			
2016	2015	44-30 Purv	C241162	3/	No	3,067,761	0	0	0	0			
2016	2015	Former 11	C231087	3/	Yes	3,754,463	0	0	0	0			
2016	2015	44-30 Purv	C241162	3/	No	2,952	0	0	0	0			
2016	2015	Former B8	C224195	3/	Yes	1,005,468	0	0	0	0			
2016	2015	Silver Star	C241156	3/	No	3,651,005	0	0	0	0			
2016	2015	2477 Third	C203047	3/	No	605,527	0	0	0	0			
2016	2015	149 Kent A	C224159	3/	Yes	4,711,937	0	0	0	0			
2016	2015	Former Ch	C224175	3/	No	22,545	0	0	0	0			
2016	2015	Prospect C	C203045	3/	Yes	18,509	0	0	0	0			
2016	2015	23-01 42nc	C241152	3/	No	2,670,916	0	0	0	0			
2016	2015	Uniforms	C241103	3/	No	35,000	0	0	0	0			
2016	2015	Purves Str	C241164	3/	No	1,310,610	0	0	0	0			
2016	2015	Former W	C231077	3/	Yes	8,028,106	Mix use re	Rental	1400	420	30.00%	https://ne	https://ne
2016	2015	85 Skillma	C224183	3/	Yes	655,746	Residenti	Rental	35	0	0.00%	https://streeteasy.c	
2016	2015	1133 Mar	C224153	3/	Yes	299,682	0	0	0	0	0.00%		
2016	2015	Former Ne	C203061	3/	No	93,549	0	0	0	0	0.00%		
					Totals	743,319,507		Totals	11,182	3,095	27.68%		

NYS BCP Region 2 Housing Projects Generation 2 including projects completed after 2015 Sources

https://www.brownstoner.com/development/brooklyn-boutique-hotel-1107-dekalb-avenue-bed-stuy-bushwick-banquet-hall-abcny/
http://cor https://www.nydailynews.com/new-york/60-000-people-apply-105-affordable-units-greenpoint-building-article-1.1911061
https://www.brownstoner.com/real-estate-market/affordable-housing-brooklyn-123-hope-street-williamsburg-studio-one-bedroom/
https://www.brownstoner.com/development/union-market-brooklyn-crown-heights-grocery-store-organic/
https://ne https://www.dec.ny.gov/data/DecDocs/C224207/Fact%20Sheet.BCP.C224207.2018-01-10.COC%20Fact%20Sheet.pdf
https://w https://www.dec.ny.gov/data/der/factsheet/c224190cucomp.pdf
https://www.cityrealty.com/nyc/market-insight/carters-view/carters-perch/the-dermot-company-moving-ahead-42-story-rental-tower-29-flatbush-avenue/2334
https://w https://www.dec.ny.gov/data/der/factsheet/c224190cucomp.pdf
https://w https://streeteasy.com/building/810-river-avenue-bronx
https://w https://newyorkyimby.com/2015/07/studio-v-drawing-up-plans-for-development-sites-at-2-15-3-15-26th-avenue-astoria.html
https://w https://www.nynesting.com/building/300-west
https://therealdeal.com/2014/07/22/related-to-build-nearly-50-condos-at-tribeca-development-site/
https://www.dnainfo.com/new-york/20160205/bed-stuy/former-cascade-laundry-site-slated-for-environmental-cleanup/
https://w https://streeteasy.com/building/circa-central-park
https://w https://licpost.com/developers-of-paragon-paint-building-scale-back-plans-seek-variance-1q2018
https://pa https://www.citylandnyc.org/new-rezoning-to-revitalize-portion-of-flatbush-avenue-in-brooklyn/
https://www.dec.ny.gov/data/der/factsheet/c224191cucomp.pdf
https://w https://www.6sqft.com/lottery-opens-for-140-affordable-units-at-greenpoints-tallest-tower-from-613month/
https://w https://www.6sqft.com/lottery-opens-for-140-affordable-units-at-greenpoints-tallest-tower-from-613month/
https://w https://www.6sqft.com/lottery-opens-for-140-affordable-units-at-greenpoints-tallest-tower-from-613month/
https://w https://www.dec.ny.gov/data/der/factsheet/c224217cuprop.pdf
https://patch.com/new-york/prospectheights/affordable-housing-project-moves-forward-crown-heights-review
https://st https://www.cityrealty.com/nyc/long-island-city/sven-27-29-queens-plaza-north/61934
https://w https://www.westend87.com/home1/#availability-section
https://w https://therealdeal.com/new-research/topics/property/21-25-31st-street/
https://www.dec.ny.gov/data/der/factsheet/c231096coc.pdf
https://www.brownstoner.com/real-estate-market/affordable-housing-brooklyn-123-hope-street-williamsburg-studio-one-bedroom/
https://www.brownstoner.com/real-estate-market/affordable-housing-brooklyn-416-kent-avenue-williamsburg/
https://www.cityrealty.com/nyc/market-insight/features/affordable-housing/affordable-lottery-launches-eliot-spitzer-developed-420-kent-avenue-williamsburg-waterfront-rentals
-420-kent-avenue-williamsburg-waterfront-rentals-867-month/29541
https://w https://licpost.com/developers-of-paragon-paint-building-scale-back-plans-seek-variance-1q2018
https://streeteasy.com/building/511-west-21-street-new_york
https://w https://newyorkyimby.com/2018/10/permits-filed-for-mixed-use-building-at-77-63-vleigh-place-in-flushing-queens.html
https://newyorkyimby.com/2018/11/radio-tower-hotel-breaks-ground-at-2420-amsterdam-avenue-in-washington-heights-manhattan.html
https://www.dec.ny.gov/data/der/factsheet/c203079coceng.pdf
https://newyorkyimby.com/2015/02/revealed-la-guardia-convention-center-112-21-northern-boulevard.html
https://www.brownstoner.com/real-estate-market/affordable-housing-brooklyn-123-hope-street-williamsburg-studio-one-bedroom/
https://st https://therealdeal.com/2015/01/27/adam-america-developing-130-unit-crown-heights-building/
https://qns.com/2017/10/new-seven-story-residential-building-opens-former-ridgewood-knitting-mill-site/
https://www.cityrealty.com/nyc/market-insight/carters-view/carters-perch/the-dermot-company-moving-ahead-42-story-rental-tower-29-flatbush-avenue/2334
https://w https://www.6sqft.com/101-units-up-for-grabs-in-the-bronxs-morrisania-from-368month/
https://newyorkyimby.com/2019/12/hill-west-architects-reveals-renderings-for-massive-waterfront-complex-in-flushing-queens.html
https://www.wsfssh.org/wp-content/files_mf/1429556565borinquenwsn.pdf
https://w https://therealdeal.com/new-research/topics/property/431-kent-avenue/
https://streeteasy.com/building/601-washington-street-new_york
https://w https://www.6sqft.com/live-in-a-brand-new-building-near-yankees-stadium-from-396month/
https://www.bandburban.com/projects/norwood-terrace
https://w http://www.57and11lottery.com/assets/Via_57_West_Ad_and_Application_for_Website-dad95614b8414bc85d5603c2a28b30054ef1cd17d3952a184d028d30a5db0eaf.
https://www.dec.ny.gov/docs/remediation_hudson_pdf/c224165e.pdf
https://w https://www.cityrealty.com/nyc/tribeca/456-washington-street/55591
https://www.cityrealty.com/nyc/market-insight/features/future-nyc/checking-38-two-family-rental-townhouses-coming-together-long-island-city/4083
https://w https://www.cityrealty.com/nyc/long-island-city/5pointz-22-44-jackson-avenue/76391
https://w https://newyorkyimby.com/2016/09/durst-plans-new-mixed-use-development-with-affordable-housing-at-1800-park-avenue-harlem.html
https://w https://streeteasy.com/building/11-jackson-street-brooklyn
https://www.dec.ny.gov/data/DecDocs/C224189/Decision%20Document.BCP.C224189.2015-05-07.Final%20Decision%20Document%20-%20Signed.pdf
https://streeteasy.com/building/85-skillman-street-brooklyn
https://streeteasy.com/building/511-west-21-street-new_york
https://w https://www.dec.ny.gov/docs/remediation_hudson_pdf/c224172e.pdf
https://w https://www.megagroup.nyc/projects/92

https://ne https://newyorkyimby.com/2015/07/demolition-begins-at-520-west-41st-street-site-of-106-story-mixed-use-tower-midtown-west.html
https://streeteasy.com/building/85-skillman-street-brooklyn
https://www.tax.ny.gov/pdf/stats/policy_special/brownfield_credit_reports/developer_reports/2013/17th_street_development_project.pdf
https://therealdeal.com/2016/11/08/tishman-speyer-paid-city-state-78m-for-air-rights-at-hudson-yards-project/
https://w https://lmdevpartners.com/projects/la-terraza/

2. New Rochelle Brownfield Projects
   City of New Rochelle is interesting case study with 19 projects near its Downtown core as part of an overall redevelopment effort

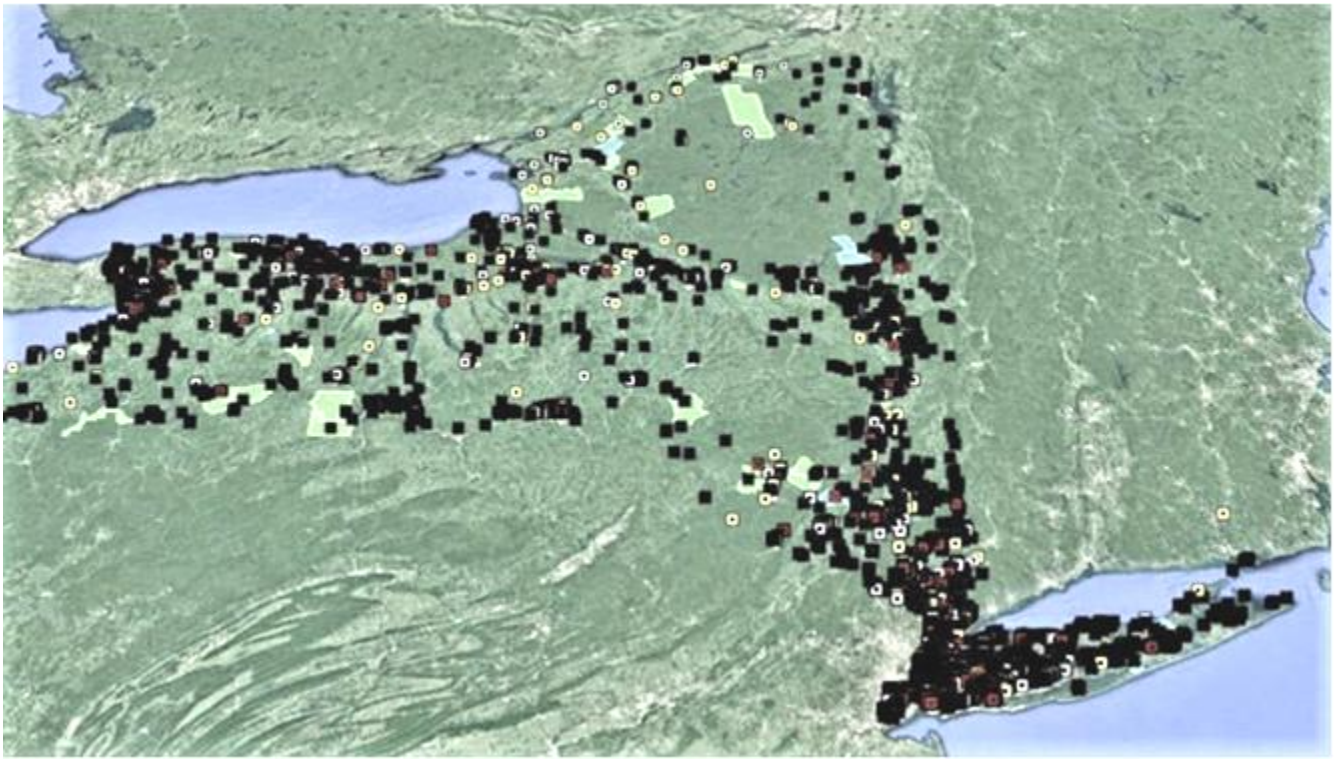
Number	Site Name	Address	App Complete	BCA – COC
1	Flamingo Cleaners C360078	149 North Avenue	N/A	12/5/2007 – 12/20/2016
2	Schoenfeld's Dry Cleaners C360088	358-364 North Avenue	12/28/2005	6/20/2006
3	City DPW Yard C360101	224 Main Street	N/A	8/21/2015
4	The Huguenot C360152	387 Huguenot Street	6/19/2017	10/27/2017
5	70 Madeline Place C360159	70 Madeline Place	8/1/2017	2/12/2018 – 12/31/2020
6	14 Le Count Subdivision Phase 1 C360176	14 Le Count Pl, 455 Main St	N/A	9/19/2018 – 12/27/2019
7	Cottage Garden Auto Repair Site C360180	20 Garden St., 26 Garden St. and 10 Cottage Place	9/24/2018	1/16/2019 – 12/31/2020
8	Depot Avenue Development - South C360183	33 Depot Avenue	N/A	6/28/2019
9	Church-Division Street, Tower A C360187	20 South Division Street	N/A	6/26/2019 – 12/15/2020
10	Garden St Apartments C360188	11 Garden Street	N/A	9/5/2019
11	10 Commerce Drive Rail Yard C360192	10 Commerce Drive	N/A	2/25/2020
12	28 South Division Street C360198	28, 42, 44 and 48 South Division Street	1/27/2020	6/4/2020
13	500 Main Street Laundry Site C360199	500, 506 and 510 Main Street and 11 Church Street	3/13/2020	6/3/2020
14	247 North Avenue Site C360200	247 North Avenue	4/23/2020	7/7/2020
15	AMN Site C360201	200 Main Street	5/28/2020	9/10/2020
16	Swan Garage Rear Supply Site C360210	[illegible]	11/23/2020	4/22/2021
17	Goodrich Rubber 285 North Avenue Site C360212	285 North Avenue	1/1/2021	3/31/2020
18	Firestone Tire and Auto Repair Site C360215	316 Huguenot Street	2/5/2021	6/1/2021
19	Block 417 New Rochelle C360216	327-329 Huguenot Street	3/5/2021	6/1/2021

3. NYS BCP Projects Received BOA Conformance Approvals

NYS Department of State, October, 2021

1 600 River Road Apartments, 600 River Road, North Tonawanda (City of North Tonawanda BOA)
2 291 Homer Street Site, 291 and 299 Homer Street, Olean (Olean Northwest Quadrant BOA)
3 Pierce Arrow Business Center, 155 Chandler Street, Buffalo (Tonawanda Street Corridor BOA)
4 Homeridae LLC Photovoltaic Solar, 231 and 251 Homer Street, Olean (Olean Northwest Quadrant Revitalization Plan BOA)
5 Harbor View Square, 68 West 1st Street, Oswego (Oswego Canal Corridor BOA)
6 Canal Plaza, 435 State Street, Binghamton (North Chenango Corridor BOA)
7 Thin Man Brewery, 166 Chandler Street, Buffalo (Tonawanda Street Corridor BOA)
8 The Crossings at Jamaica Station, 147-40 and 148-10 Archer Avenue (Jamaica BOA)
9 1050 Niagara Street Project Site, 1050-1088 Niagara Street, Buffalo (Tonawanda Street Corridor BOA)
10 Steel Sun 2, Unit 9, 2399 Hamburg Turnpike, Lackawanna (City of Lackawanna First Ward BOA)
11 Food E, 27-37 Chandler Street, Buffalo (Tonawanda Street Corridor BOA)
12 Ansco Camera Factory, 16 Emma Street, Binghamton (Endicott Johnson Industrial Spine BOA)
13 Black Rock Freight House, 68 Tonawanda Street, Buffalo (Tonawanda Street Corridor BOA)
14 Bronx Point, 575 Exterior Street, Bronx (Harlem River BOA)

5. NYS DEC Environmental Sites: BCP, VCP, RCRA, Superfund, and En-Zones



6. Literature Review

Acks, Kenneth, Society for Benefit-Cost Analysis- "The Costs & Benefits of Recycling in New York City"- 3/17/16 http://tinyurl.com/zpykqud

Acks, Kenneth, "Society for Benefit-Cost Analysis- "Economic Rents and Cost-Benefit Analysis - Issues Metrics and Application to Health and Energy Policy"- 3/16-3/17/17 Washington DD Abstract Accepted https://benefitcostanalysis.org/2017-annual-conference

Adler, Matthew D., Benefit–Cost Analysis and Distributional Weights: An Overview; Review of Environmental Economics and Policy, Volume 10, Issue 2 Pages 264-285, July 2016. URL https://academic.oup.com/reep/article-lookup/doi/10.1093/reep/rew005

Alberini, Anna; Determinants and Effects on Property Values of Participation in Voluntary Cleanup Programs: The Case of Colorado; Contemporary Economic Policy, Wiley, Volume 25, Issue 3, Pages 415-432, 2007. URL http://onlinelibrary.wiley.com/doi/abs/10.1111/j.1465-7287.2007.00051.

Alberini, Anna and Stefania ToninMargherita TurvaniAline Chiabai, "Paying for Permanence: Public preferences for contaminated site cleanup, Journal of risk and uncertainty, Volume 34 Issue 2, Pages, 155-178, Kluwer Academic Publishers Springer, Berlin, 2007.

Bartsch, Charlie: “Financing Strategies for Brownfield Cleanup and Redevelopment”, “Recycling America's Gas Stations”, and “Financing Renewable Energy Projects on Contaminated Properties – Strategies and Options”, just the most recent of his brownfield articles, mostly for Northeast-Midwest Institute, 2000 – 2017

Davis, Todd S. and Kevin D. Margolis. Brownfields: A Comprehensive Guide to Redeveloping Contaminated Property. American Bar Association. 1997.

De Sousa, Christopher, The greening of urban post-industrial landscapes: past practices and emerging trends, Journal of the Local Environment, Routledge. Volume 19, Issue 10, pages 1049-1067, 2016

Florida R., The Rise of the Creative Class: And How It’s Transforming Work, Leisure, Community, and Everyday Life, 2002, New York: Basic Books.

Hamlin, Roger and Ric Hula, Bianca Cobarzan, Cynthia Jackson-Elmoore, and Cristina Leuca “Brownfields: Making Programs Work for Michigan” Michigan State University, Urban Policy Briefs, Number 5, 2008.

Haninger, Kevin, Lala Ma, and Christopher Timmins: The Value of Brownfield Remediation National Bureau of Economic Research, Working Paper No. 20296, 2014.

Note: This study has been quoted frequently by US EPA leadership as an economic benefit measure of the brownfields program: Abstract: The U.S. Environmental Protection Agency Brownfields Program awards grants to redevelop contaminated lands known as brownfields. This paper estimates cleanup benefits by combining administrative records for a nationally representative sample of brownfields with high-resolution, high-frequency housing data. We find property value increases accompanying cleanup averaging from 5.0% to 11.5%; for a welfare interpretation that does not rely on the intertemporal stability of the hedonic price function, a double-difference matching estimator finds even larger effects of up to 15.2%. Our various specifications lead to the common conclusion that Brownfields Program cleanups yield positive, statistically significant, but highly-localized effects on housing prices.

Heffley, Dennis, Brownfields and Home Prices, The Connecticut Economy, 2011

Hersh, Barry, Rheingold Brewery Redevelopment, Bushwick, Brooklyn, New York, Descriptive Case Study, Lincoln Institute of Land Policy and Association of Collegiate Schools of Planning, December, 2019

Hersh, Barry, Urban Redevelopment: A North American Reader, 2017, New York, Routledge.

Leigh, Nancey Green and Sarah Coffin, Modeling the Relationship among Brownfields, Property Values, and Community Revitalization, Fannie Mae Foundation, 2005 https://www.tandfonline.com/doi/abs/10.1080/10511482.2005.9521543?journalCode=rhpd20

Jenkins Robin and Elizabeth Kopits, David Simpson, Measuring the Social Benefits of EPA Land Cleanup and Reuse Programs, National Center for Environmental Economics, US EPA, 2006

New York City Brownfield Partnership; New York State Brownfield Cleanup Program and Tax Credit Analyses, 2014 and 2015 Update, prepared by NYU Schack Institute of Real Estate.

OER Fiscal Impact Estimates, Template Model Documentation, City of New York, September 27, 2011 OER Database, Brownfield Cleanup Program Table, 2005 – 2020

Schilling, Joseph, editor, Brownfields Redevelopment: Making Brownfields Transactions Work: A Key to Urban Revitalization and Environmental Stewardship. American Bar Association Environmental Law Institute, San Francisco: August 1997.

Sullivan, Karen A., "Brownfields Remediation: Impact on Local Residential Property Tax Revenue" Journal of Environmental Assessment and Policy, Volume 19, Issue 03, September 2017. URL https://www.worldscientific.com/doi/abs/10.1142/S1464333217500132

Note: following is a portion of this paper's abstract: The US Environmental Protection Agency (EPA) Brownfields Program provides grants to assess and clean up brownfields. There are few studies that estimate tax revenue impacts from cleanup beyond those generated directly from within the remediated site's property lines. This study estimates the increased residential property tax revenue attributable to brownfields cleanup at 48 sites remediated between 2004 and 2011 under the EPA Brownfields Cleanup Grants Program. Findings from a previous study of a 5% to 15.2% property value increase following cleanup at these sites are applied to the assessed values of nearby residential properties along with local tax laws, assessment ratios, and rates to estimate tax revenue gained as a result of brownfields cleanup. The estimated increase in residential property tax revenue for a single tax year from remediating 48 brownfields properties was between $29 million and $97 million (2014 USD).

Partner Engineering and Science; Changing Perceptions of Environmental Risk Today, Globe St, Zotero, December, 2019. URL:
https://www.partneresi.com/sites/default/files/white_paper_partner_globest_enviro_risk_sept_20

Turvani, M and S. Tonin, Brownfields Remediation and Reuse: an Opportunity for Urban Sustainable Development, 2008, Sustainable Development and Environmental Management Pages 2007, 397- 411, Springer, 2007.
https://scholar.google.it/citations?user=uhBfujMAAAAJ&hl=en#d=gs_md_cita-d&u=%2Fcitations%3Fview_op%3Dview_citation%26hl%3Den%26user%3DuhBfujMAAAAJ%26cstart%3D20%26pagesize%3D80%26citation_for_view%3DuhBfujMAAAAJ%3AUebtZRa9Y70C%26tzom%3D300

Zabel, Jeffrey, The Impact of Imperfect Information on the Transactions of Contaminated Properties, Paper Number: 2007-03, National Center for Environmental Economics, US EPA, 2007

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