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THE REVITALIZATION OF THE ENVIRONMENTAL PROTECTION AGENCY'S BROWNFIELDS PROGRAM

(110–100)

HEARING

BEFORE THE

SUBCOMMITTEE ON
WATER RESOURCES AND ENVIRONMENT

OF THE

COMMITTEE ON
TRANSPORTATION AND
INFRASTRUCTURE
HOUSE OF REPRESENTATIVES

ONE HUNDRED TENTH CONGRESS

SECOND SESSION

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Washington, DC 20515

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February 8, 2008

SUMMARY OF SUBJECT MATTER

TO: Members of the Subcommittee on Water Resources and Environment

FROM: Subcommittee on Water Resources and Environment Staff

SUBJECT: Hearing on the Revitalization of the Environmental Protection Agency's Brownfields Program.

PURPOSE OF THE HEARING

The Subcommittee on Water Resources and Environment is scheduled to meet on February 14, 2008 at 2 p.m., to receive testimony on Federal, State, and local efforts to address the nation's brownfields, and on reauthorization of the "Brownfields Revitalization and Environmental Restoration Act of 2001" (Pub. L. 107-118). The Subcommittee will hear from representatives of the Environmental Protection Agency ("EPA"), local governmental officials, non-profit organizations, academia, and other stakeholders.

BACKGROUND

Brownfields are properties, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Types of brownfields include inactive factories, gas stations, salvage yards, or abandoned warehouses. These sites drive down property values, provide little or no tax revenue, and contribute to community blight. There are estimated to be between 450,000 to one million brownfields sites in the United States. Redevelopment of these abandoned sites can promote economic development, revitalize neighborhoods, enable the creation of public parks and open space, or preserve existing properties, including undeveloped green spaces.

Prior to enactment of the Brownfields Revitalization and Environmental Restoration Act in 2002, many potential lenders, investors, and developers were reluctant to become involved with brownfields sites because they feared financial liability through laws such as the Comprehensive Environmental Response, Compensation, and Liability Act (Superfund). This uncertainty over liability protection and standards for cleanup was identified as a

hindrance to the redevelopment of brownfields. As a result, investors and developers often turned to undeveloped "green spaces" outside of urban centers for new development opportunities. This development practice tends to encourage sprawl, and potentially strands blighted neighborhoods that already may be experiencing declining tax-bases from underdeveloped properties.

EPA began to issue demonstration grants for brownfield assessments in 1995 utilizing funding from the Superfund Trust Fund. However, at that time there was no specific authority for a comprehensive brownfields program to encourage the redevelopment of these contaminated sites so that towns could realize the economic, environmental, and social benefits of reclaimed land.

BROWNFIELDS REVITALIZATION AND ENVIRONMENTAL RESTORATION ACT

In 2001, Congress created specific authority to address brownfields with the Brownfields Revitalization and Environmental Restoration Act, which was title II of the Small Business Liability Relief and Brownfields Revitalization Act. This became Public Law 107-118 in January 2002. This legislation amended the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), more commonly known as the Superfund law, to authorize funding through EPA for brownfields assessment and cleanup grants, provide targeted liability protections, and increase support for State and tribal voluntary response programs. The authorization of appropriations for EPA's brownfield program expired at the end of Fiscal Year 2006.

The Brownfields law provides grant authority totaling $250 million annually. This includes $200 million annually for assessment, cleanup, revolving loan funds, research, and job training. Of that amount, $50 million, or 25% of appropriated funds if less than the fully authorized level, is set aside for assessment and cleanup of petroleum contaminated sites. Assessment grants are limited to $200,000 per site except in some cases, where due to size and contamination level, the limit is $350,000. The cleanup grants can be used to capitalize a revolving loan fund or used directly to remediate sites. Each cleanup grant is limited to $1 million.

$50 million of the $250 million authorized each year is for state and tribal response programs. States may use this assistance to establish or enhance individual state response programs, capitalize existing revolving loan programs, and develop risk-sharing pools, indemnity pools, or insurance mechanisms to provide financing for remediation activities. Only one state, North Dakota, does not currently have a voluntary state response program; however, the state of North Dakota plans on moving such a program through its state legislature in the Fall of 2008.

The law also provides targeted protection from Superfund liability for innocent landowners, owners of property contaminated by a source on contiguous property, and for prospective purchasers of property which may be contaminated. The Brownfields Revitalization and Environmental Restoration Act clarified Superfund's "innocent landowner" defense against liability for a person who unknowingly purchased contaminated land, provided the person made "all appropriate inquiries" prior to the transaction. The brownfields law did not define what constitutes "all appropriate inquiries," but directed EPA

to establish by regulation the standards and practices which would satisfy the "all appropriate inquiries" requirement. On November 1, 2005, EPA issued a final rule establishing the standards and practices which would satisfy the "all appropriate inquiries" requirement. (70 Fed. Reg. 66070).

The brownfields program generally has been well received by EPA, states, communities, investors, and developers. Since its inception, the Environmental Protection Agency has awarded 1,067 assessment grants totaling more than $262 million, 217 revolving loan fund grants totaling more than $201.7 million, and 336 cleanup grants totaling $61.3 million. In addition, according to EPA, Federal brownfields assistance has leveraged more than $10.3 billion in additional cleanup and redevelopment funding. This is consistent with the intent of the brownfields program to provide vital Federal "seed money" for redevelopment, and to leverage this money in conjunction with funding from state, local, private, and other federal sources to address brownfield sites. According to EPA, its brownfields program has resulted in the assessment of more than 11,500 properties and the cleanup of 239 properties, and helped create more than 47,000 jobs. According to a 2001 study conducted by George Washington University, every acre of brownfields redevelopment saves more than four acres of greenspace.

For fiscal year 2007, the Environmental Protection Agency received 801 proposals requesting $236.3 million in funding. On May 14, 2007, the Environmental Protection Agency announced that 202 applicants were selected to receive 294 assessment, revolving loan fund, and cleanup grants totaling $70.7 million. $36.8 million in grants went for 189 site assessments, $17.9 million went for 92 remediation or cleanup grants, and $16 million went to States to capitalize 13 revolving loan programs. The list of FY 2007 grants and the Environmental Protection Agency press release can be accessed at the follow web address: http://yosemite.epa.gov/opa/admpress.nsf/e87e8bc7fd0c11f1852572a000650c05/c7251cab903bd8b9852572db0064a83d!OpenDocument.

FUNDING OF EPA'S BROWNFIELDS PROGRAM

EPA's brownfields program has an authorized funding level of $250 million annually (which expired at the end of fiscal year 2006). In FY 2008, Congress appropriated $164.3 million for the brownfields program, of which $93.5 million was for brownfields site assessment and cleanup grants, $48.7 million was for State voluntary cleanup programs, and $22.1 million was for EPA's administrative expenses for the program. In the fiscal year 2009 budget request, the administration has requested a total of $165.8 million for the brownfields program, of which $93.6 million is for brownfields site assessment and cleanup grants, $49.5 million is for State voluntary cleanup programs, and $22.7 million is for EPA's administration of the brownfields program. At the administration's funding levels, only about one-quarter of eligible applicants could receive grants.

REAUTHORIZATION ISSUES

Although, generally speaking, the brownfields program has been effective at expanding the redevelopment of former-brownfields sites, some stakeholders have suggested changes be considered along with reauthorization of the funding. These include expanding the eligible uses for brownfields grants beyond site assessments and cleanup to include other

purposes, such as demolition costs (which are currently not eligible under the Brownfields law). In addition, the grant limits per site could be raised, although without additional funding, even fewer than one-fourth of eligible recipients could receive funding if grant limits increase. In addition, some have suggested eliminating the 25% funding set aside for petroleum site grants letting them compete with other sites for priority and funding.

Brownfields stakeholders also advocate for increasing the overall authorization of appropriations for the brownfields program beyond the $250 million annual level. As stated earlier, currently EPA receives 4-times as many grant applications as can be funded under current appropriations. Assuming full funding of the brownfields program, there would still likely be a shortfall between the amount requested through grant applications and annual appropriations. Accordingly, stakeholders advocate for increasing the overall authorization of appropriations for the brownfields site assessment and cleanup grant component of the program commensurate with the apparent needs.

Another issue related to the program is that there are no effective performance measures available to determine the extent to which the program is achieving its goals. While the Environmental Protection Agency does report on the cumulative sites addressed, jobs generated, and the cleanup and redevelopment funds leveraged, there has been little reporting on cleanup and redevelopment activities, which is one of the primary objectives of the program. In addition, the Environmental Protection Agency has not developed measures to determine how the Brownfields Program has reduced environmental risks, thereby meeting the agency mission to protect human health and the environment.

On a related matter, as the program begins to mature, it is possible to begin reviewing the performance of the brownfields program in equitably promoting economic development goals throughout the nation. Although brownfields are typically thought of as solely urban sites, brownfields properties can be found in large urban centers, small rural communities, and suburban neighborhoods. Limited funding of the brownfields program has restricted the ability of the brownfields law to address all of the site assessment and cleanup grant applications proposed in any one year. Yet, there has never been a formal review of the types of brownfields properties that have been addressed through the EPA program, and whether the current selection process, when combined with a lack of sufficient Federal funding, results in equitable distribution of brownfields redevelopment grants.

AGENDA

PANEL I

The Honorable Susan Parker Bodine
Assistant Administrator for Solid Waste and Emergency Response
U.S. Environmental Protection Agency
Washington, D.C.

The Honorable Vonciel Jones Hill
Council Member, City of Dallas
Dallas, Texas

Mr. Matthew Zone
National League of Cities
Council Member, City of Cleveland
Cleveland, Ohio

PANEL II

Mr. Mark Albrecht
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Atlanta, Georgia

Mr. Jerome Leslie Eben
Immediate Past President
America Institute of Architects New Jersey
Trenton, New Jersey

Mr. Gary Silversmith
President
P&L Investments, LLC
Washington, D.C.

HEARING ON REVITALIZATION OF THE ENVIRONMENTAL PROTECTION AGENCY'S BROWNFIELEDS PROGRAM

Thursday, February 14, 2008

HOUSE OF REPRESENTATIVES
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE,
SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT
Washington, DC.

The Subcommittee met, pursuant to call, at 4:00 p.m., in Room 2167, Rayburn House Office Building, the Honorable Eddie Bernice Johnson [Chairman of the Subcommittee] presiding.

Ms. JOHNSON. The Subcommittee will come to order.

I apologize for the schedule we have had to endure this afternoon. I must announce that I have to leave shortly and hope to return in a little while.

I welcome everyone to our hearing today on the reauthorization of the Environmental Protection Agency's Brownfield program. I have deep appreciation for the subject matter of today's hearing, because I have been able to witness first-hand the many positive effects that brownfields redevelopment affords the local communities.

In the heart of my Congressional district, very close to my district office lies a 72-acre site known as the Victory Park. This former industrial wasteland, once polluted by an old meat-packing plant, a paint plant, a train yard, and a 100 year-old grain silo that had been forgotten by time, is now the home of American Airlines Center, the W. Dallas Hotel, and high-rise apartments and condominiums as well as other retail and commercial enterprises. This dramatic turnaround would not have been possible without the assistance of the State's voluntary cleanup program and the partnership of EPA, the city of Dallas and private developers.

Instead of blight and depressed areas, this Dallas community now enjoys the benefits of a vibrant economic growth, expanded employment and increased revenue from productive use of the properties. Simply put, for Dallas the brownfields program has been overwhelmingly successful. That can be and should be replicated throughout the Nation.

Today we begin the discussion on reauthorization and revitalization of the brownfields program. This program, which was conceived and initiated in the Clinton Administration and legislatively enacted in the Bush Administration, has proven to be a necessary catalyst to the revitalization of under-utilized sites and the preservation of undeveloped areas.

The brownfields program generates jobs and economic activities, allows for the efficient use of transportation resources, and helps restore and maintain the environment. However, the brownfields program has been unnecessarily constrained since its enactment, principally by under-investment by this Administration and the appropriations process.

As President Bush said when signing the Small Business Relief and the Brownfields Revitalization Act of 2002, this is a good jobs creation program. But I think he has forgotten this fact. That is why it is so frustrating to see the brownfields program consistently and dramatically underfunded. Congress authorized and the President supported a funding level of $200 million annually for site assessment and cleanup.

Yet, appropriations for the brownfields assessment and cleanup program peaked at $97.7 million in fiscal year 2002. Since that time, appropriations for the site assessment and cleanup component of brownfields grants have hovered right around $90 million annually. I applaud the President for requesting a slightly increased funding level for the site assessment and cleanup grants in its fiscal year 2009 budget.

However, the addition of $100,000 proposed will not likely have a significant impact in addressing the backlog of pending brownfield applications. For example, last year EPA received 810 proposals for funding that passed its threshold requirements for eligibility. Yet EPA could only fund 294 individual proposals, or just 36 percent of the requests for funding. While this fact is in itself concerning, so is the fact that the gap between eligible project applications and available funding continues to widen.

For example, just two years ago, EPA could fund roughly one in three applications. However, as more communities learn of the potential benefits of brownfield remediation, we should expect that the number of applications for funding will continue to increase. I expect that many of our witnesses this afternoon will discuss the importance of brownfields cleanup for the revitalization of neighborhoods, while placing under-utilized properties back on local tax rolls, and for the protection of human health and the environment.

However, I believe the restoration of brownfields also has a tremendous economic stimulus effect on our cities and neighborhoods. In these uncertain economic times, we need to focus our efforts on ways that the Federal investments can have a real beneficial impact on the lives and livelihoods of our citizens.

I can think of few more beneficial impacts than the creation of economic development. As EPA stated last week in its Committee budget briefings, the brownfields program has resulted in the assessment of more than 11,500 properties and helped create more than 47,000 jobs. If this is the success rate of an underfunded program, imagine the economic impact and potential for job creation that could come from actually funding all of the applications that are submitted to the agency each year.

I do not believe that we have seen all the good that this program can do for our communities and for helping American families. I am glad that the Subcommittee begins today the discussion of reauthorization and revitalization of the brownfields program. I welcome our witnesses here today.

We await my partner here, the Ranking Member. While we do, I want to welcome my councilwoman from Dallas, Texas, the Honorable Vonciel Jones Hill, who is a very bright and very contributing member of the Dallas City Council. Thank you for being here.

We are going to ask unanimous consent to place all of our formal statements into the record so we can hear our witnesses.

I want to thank our Members here for having the day that we have had and still being present. Statements from the National Construction Alliance, the Building Construction Trades Department, the City of New York's Office of Environmental Coordination and the National Brownfields Coalition all will be made part of the record, without objection.

We are pleased to have three very distinguished witnesses on our first panel here this afternoon. First, we have the Honorable Susan Parker Bodine, Assistant Administrator for Environmental Protection Agency's Office of Solid Waste and Emergency Response. Next we have the Honorable Vonciel Jones Hill, council member for the City of Dallas, Texas. And finally, we have the Honorable Matthew Zone, council member for the City of Cleveland, Ohio, who is speaking on behalf of the National League of Cities.

We are pleased that you were able to make it this afternoon, and your full statements will be placed into the record. We ask that you try to limit your testimony to five minutes, and we can read the entire record.

We will proceed with Mr. Zone, who has a plane to catch shortly. Mr. Baird will take over as Chair.

Mr. BAIRD. [Presiding] We apologize for the transition. As you know, it has been a hectic day. We appreciate your perseverance and we are glad to be here. Brownfields is tremendously important, and we have a number of sites in my district, probably every Member does. We look forward to your testimony. Mr. Zone, we would be happy to hear from you to begin with.

TESTIMONY OF THE HONORABLE MATTHEW ZONE, NATIONAL LEAGUE OF CITIES, COUNCIL MEMBER, CITY OF CLEVELAND; THE HONORABLE SUSAN PARKER BODINE, ASSISTANT ADMINISTRATOR FOR SOLID WASTE AND EMERGENCY RESPONSE, U.S. ENVIRONMENTAL PROTECTION AGENCY; THE HONORABLE VONCIEL JONES HILL, COUNCIL MEMBER, CITY OF DALLAS

Mr. ZONE. Thank you, Mr. Chairman and Members of the Committee. I am Matt Zone and I am a council member from Cleveland, Ohio.

I am here today on behalf of the National League of Cities, the oldest and largest organization representing local elected officials in America's cities and towns. I appreciate the opportunity to present the views of local elected officials on the revitalization of the Environmental Protection Agency's brownfields program.

The City of Cleveland has had a successful partnership with the EPA brownfields program in redeveloping our urban landscape. Since 2004, Cleveland has received $800,000 in EPA brownfields assessment grant funds that has led to cleanup of nearly 100 acres. Assessment dollars are critical to local governments, as they support the first and most risky phase of the redevelopment project.

Assessment funds granted by the EPA brownfields program assists local governments in evaluating the extent of contamination and the potential costs for remediation.

The City of Cleveland has successfully used these grants to leverage over $15 million. Without these funds, many projects would not have gone forward. In addition to the assessment dollars, the City of Cleveland has also received technical assistance from EPA. The assistance is just as critical to local governments as the grant funds. With the technical assistance of an expert brownfields professional from the EPA Region V brownfields office, the City's development department has increased their capacity to redevelop brownfields in Cleveland.

The EPA brownfields program is vital for local governments in aiding the redevelopment efforts. But much work remains to be done. NLC urges Congress to increase the overall funding authorization level for the EPA brownfields program, to increase the caps on the assessment grants amounts, whether site-specific or community-wide and to increase the technical assistance offered to communities. Additionally, NLC asks Congress to enact legislation addressing and resolving the disincentives created by the potential liability to facilitate re-use of brownfields properties. Such legislation should provide a waiver, a definitive limitation or an elimination of liability for non-contributing local governments coming to title of previously contaminated properties involuntarily. This is a real problem in our city, with one site specifically that you will hear about in a minute, Mr. Chairman.

Cleveland truly considers the EPA to be a partner in the area of the brownfields redevelopment. But I come to you today with a pressing issue that could jeopardize Cleveland's and other cities' strategic redevelopment policies. As an older industrial city, Cleveland's legacy of manufacturing and commerce is now symbolized by numerous abandoned structures, obsolete buildings, leaky underground storage tanks and polluted properties. The impact of our industrial legacy has spread across our neighborhoods like cancer, killing once vibrant areas and leaving behind dead zones.

The factories that once built America and employed thousands of Clevelanders are no longer an asset, they are a liability. Our current vacant property portfolio puts my city at risk. Local governments need support of Congress and our Federal agencies to revitalize the abandoned properties and the buildings that are growing in number. These abandoned buildings have compounded our financial problems and cost our city millions by shrinking our tax base and undermining property values.

In fact, our city has had to increase its demolition budget fourfold just since 2006. We anticipate spending over $9 million this year to demolish dangerous abandoned structures that threaten the safety of our cities. Local governments rightly approach brownfields redevelopment as an economic development activity. However, strategically redeveloping these contaminated properties means much more than dollars and taxes. It means correcting the environmental injustices that are unduly thrown upon those living in our impoverished neighborhoods. It means protecting our first responders by eliminating contaminated enclaves of criminal activity and

structures of high fire risk. For Cleveland, it means protecting Lake Erie. It also means creating a more sustainable future.

Finally, the issue of municipal liability for cleanup costs is a concern for local governments, particularly if they were not involved in the contamination of the site. As a general rule, under the current law, local governments have a disincentive to clean up and develop brownfields properties because of the liability they could face. Often, as involuntary owners of brownfields properties, many local governments are wrongly designated potentially responsible for parties and held liable for the cleanup.

The fear of such designation has led municipalities choosing not to invest in the cleanup or the development of land. The City of Cleveland, through its partnership with the EPA and the State of Ohio, implemented a land bank program in 2005. This industrial land bank program targeted former industrial and commercial properties for redevelopment. Our program's rationale is simple, to strategically invest our limited resources in strategic economic development areas. The land bank program allows the city to take a holistic approach to brownfields and redevelopment. Currently, the city is redeveloping nearly 50 acres of brownfields properties through our program and has invested over $16 million in demolition and cleanup costs. One property of particular interest is referred to as the Trinity Building. This is the picture you are seeing on the screen here. This site is posing huge challenges to the city due to the lack of Federal liability protections afforded to local governments.

Mr. BAIRD. Mr. Zone, I neglected earlier to remind the witnesses we have a five-minute limit. I see you have quite a bit more in your written comments, so if I can ask you to conclude here and we will take the written comments into account. That time we will have time for a little Q&A as well.

Mr. ZONE. Sure. Just in closing, Mr. Chairman, I believe our city has enough experience and expertise to address these brownfields in our neighborhoods. But our story and experience are no different than any other American city with an industrial legacy. Congress has shown great leadership, amending CERCLA in 2002. While progress has been made and beneficial relationships formed between local and Federal entities, the Federal Government must continue its efforts and commitment toward this program.

On behalf of the National League of Cities and the City of Cleveland, Mr. Chairman, I thank you.

Mr. BAIRD. Thank you, Mr. Zone. I think you raise some outstanding points.

We have been joined by John Boozman from Oklahoma.

Mr. ZONE. Sir, thank you and my colleagues for letting me go out of order. I do have a 6:20 flight, so if I walk out during questioning, please pardon me.

Mr. BAIRD. Our apologies to all of you for the delay.

Mr. BOOZMAN. I have a statement that I would like to put into the record, with your permission.

Mr. BAIRD. Without objection, so ordered.

Administrator Bodine?

Ms. BODINE. Thank you, Mr. Chairman and Members of the Subcommittee. It is a pleasure to be here once again before the Water

Resources and Environment Subcommittee. It is a particular pleasure to talk about the brownfields program.

More than a decade ago, local governments, States and EPA all identified a problem that local communities were facing when they were trying to revitalize properties in their communities that were either contaminated or potentially contaminated. The private and public sectors were extremely hesitant to get involved with these sites, which we now call brownfields sites. And some of that concern was over Superfund liability, which could hold someone responsible for cleaning up property contamination that was caused by a prior owner.

Some of that concern, also, was simply fear of the unknown. Nobody wanted to get involved in a property that might be contaminated because they couldn't estimate how much it was going to cost to clean up. So it was an unknown risk.

Now, it is important to understand when we talk about the brownfields program that these are properties that aren't contaminated enough to rise to a level of Federal concern under our Federal cleanup programs. These are not Superfund sites. But we all recognize that the fear of Federal liability has acted as a barrier to redevelopment of these properties.

Now, to address the liability concern, EPA did develop tools, like prospective purchaser agreements, and States developed voluntary cleanup programs. EPA worked with States and recognized the strength and validity of these programs and recognized them as appropriate mechanisms for getting these sites cleaned up in lieu of Federal liability. We continue to enter into memoranda of agreements with States to recognize strong State programs, including State programs that take a one cleanup program approach, so that they can clean up RCRA sites or PCB sites or brownfields sites or even oil sites all under the same program.

To address the concern over the uncertainty at these sites, EPA developed a program to provide grants to local governments to inventory and assess contamination. Once cleanup costs were quantified, then developers could make the business decision whether or not to invest in contaminated property. Over the years, EPA added grants to capitalize revolving loan funds, to provide seed money for cleanup, and the agency also provided job training grants to provide employment opportunities in the communities where brownfields were located.

Thanks to the work of the Transportation and Infrastructure Committee, and of course other Committees in Congress, President Bush was able to sign into law the Small Business Liability Relief and Brownfields Revitalization Act in January 2002. That law broadened EPA's brownfields program to include cleanup grants, to provide seed money for cleanup, and provide statutory liability protection to promote private sector participation in brownfields cleanup and redevelopment.

I am very pleased to report that EPA's brownfields program has been highly successful. With the over $660 million in seed money that EPA has provided for assessments, revolving loan fund capitalization and cleanup grants, there have been more than 11,500 property assessments and that work has leveraged over $10.3 bil-

lion in cleanup and redevelopment investment. All of that together has leveraged more than 47,000 jobs.

Helped by the over $300 million that EPA has provided for State programs, and tribal programs as well, States and tribes have continued to develop and enhance their programs, which have resulted in the cleanup of over 70,000 properties. The Federal investment in brownfields has produced significant results. The public funding has not just created a return on the investment, but has provided long-term sustainability benefits, helping to preserve green space.

Our grant selection program for 2008 is underway. The deadline was in October, we received over 800 applications. Last year we received about 801. Of those, 770 were actually legally eligible to receive funding, and we funded 294 proposals. We plan to fund a similar number this year.

The way these proposals are selected is through an evaluation process. There are 10 different panels of agency staff, and each panel has one headquarters person or one person from another Federal agency. They review the proposals and they rate them based on the environmental benefits, the cleanup benefits, the community benefits, and the economic benefits. The proposals are also evaluated based on the programmatic ability to clean up these sites.

The ones that are funded are the ones that are rated highest by these panels, so we can be confident we are getting the best return on the Federal investment. To reach more communities in 2009, we are looking at potential changes to our grant proposal guidelines, so that we can allow coalitions of communities to apply for up to a million dollars for assessment grant funding. The purpose of that is to allow small and rural communities to partner with larger communities or cities or counties or States that have the programmatic capability to manage these grants that the small, rural communities might not have. That makes them eligible for the funding and lets the funding reach more communities.

I see my time is up. I just want to let you know that we are continuing to focus on streamlining grants. We are continuing to focus on sustainability and in particular, we are collecting data from all of our grant recipients about the contaminants that are addressed, the media that are addressed, the cleanup activity, the institutional controls and the number of acres that are being made available for use. All that goes into a public data base, all that information is publicly-available.

Thank you very much.

Mr. BAIRD. Thank you, Administrator Bodine.

Ms. Jones Hill.

Ms. JONES HILL. Thank you, Mr. Chairman, Members of the Subcommittee. Thank you for providing me this opportunity to promote the brownfields program and Dallas' successful 13-year partnership with the Environmental Protection Agency. I am Vonciel Jones Hill, councilwoman from the City of Dallas, and I am here to discuss why the brownfields program is extremely important for community revitalization.

Since the program began in 1995, the City of Dallas has received $1.12 million in EPA assessment grants for brownfields revitalization, and has been able to leverage more than $3.4 billion in pri-

vate and public investment to assist in the revitalization of 47 brownfields sites. With our assessment dollars, the City of Dallas has conducted 32 phase one environmental site assessments and 9 phase two assessments. We have leveraged more than 6,800 construction and redevelopment jobs and more than $13.5 million in private sector cleanup funding in 2008.

Brownfields redevelopment is not just an evolving issue for developers, it is another option to redevelop deteriorating inner city neighborhoods, create jobs, enhance the local tax base and reduce crime. I am proud to say that Dallas exemplifies the success of the brownfields program well. Accordingly, in 1998, the EPA designated Dallas as brownfields showcase community. Please allow me to highlight two of Dallas' nationally-recognized brownfields success stories.

Victory Park, previously mentioned by Chairwoman Johnson, is a $3 billion multi-use development offering retail shops, restaurants, office space, residential units, hotels and entertainment venues, such as the American Airlines Center, which is the home of the Dallas Stars and the Dallas Mavericks. Victory Park is a national model for the importance and success of a public-private partnership. The 73-acre site is adjacent to downtown Dallas and was a neglected brownfield for many years. It is now one of the city's most thriving areas, teeming with jobs and activities.

In 2001, EPA recognized the American Airlines Center and Victory Park as one of the Nation's largest and most successful brownfields projects, through presentation of the EPA's Phoenix Award. The development also received the Phoenix People's Choice award that same year. Victory Park is expected to generate $1 billion annually and has already created 1,200 jobs with many more expected in 2009.

Next is the Jack Evans Police Headquarters facility, a $59 million city project, just south of the central business district. The site was donated by a developer to enhance security and reduce crime in a neighborhood emerging from decades of decline. The new facility serves as a model for the Dallas green building program and in 2005, received a leadership in energy and environmental design silver certification. The Jack Evans Police Headquarters is part of a larger transit-oriented development revitalization effort. It is one block from the Dallas Area Rapid Transit Cedars light rail station. The area includes another successful brownfields project, the 1.2 million square foot South Side on Lamar Complex, which houses 457 residential units and 120,000 square feet of commercial and retail space. In 2003, the Phoenix Award was awarded to the Jack Evans police headquarters as well.

In summary, the EPA brownfields program has been a remarkable, remarkable success in Dallas and has led to the revitalization of what was once an abandoned, neglected area of our city. I urge you to reauthorize the Small Business Liability Relief and Brownfields Revitalization Act to continue this vitally important effort.

Thank you, Mr. Chair. Thank you, Committee.

Mr. BAIRD. Ms. Jones Hill, to all our witnesses, thank you very, very much for your interesting and informative testimony. It is very pleasant to see individuals from cities who have used the Fed-

eral program to great benefit. We thank you for your testimony on that, and also for your very cogent recommendations.

Ms. Bodine, I have just a couple of quick questions, and then I will yield to Mr. Boozman. At one point I understand there was a program called Brownfields to Brightfields, which I think Secretary of Energy then-Bill Richardson established, which was designed to promote brownfield usage for renewable energy, like solar installations. I think a number of Federal agencies have surplus property that may well qualify as brownfields, you think of the military bases or others. I am wondering, as part of reauthorization, do you know if EPA has any thoughts about using Brownfields to Brightfields kinds of approaches to promote renewable energy resources?

Ms. BODINE. In our existing grant guidelines we have in there an evaluation of proposals based on sustainable re-use of brownfields. So the proposals are evaluated and they get extra points to the extent that they are promoting sustainable re-use. That of course could include clean energy uses as well as green buildings, as well as low-impact development. So I guess I would urge you to continue to consider the broad range of sustainability efforts that could be leveraged with brownfield dollars, so that then grantees can pick their target of opportunity, where they see the greatest opportunity to leverage to get the sustainable benefits, instead of focusing on one particular benefit over another.

Mr. BAIRD. Thank you for that.

You heard some comments from Mr. Zone and Ms. Jones Hill, and we will hear testimony in a minute from the folks in the National Brownfields Association, as well as other folks involved with brownfields. As we look, in this Committee, toward reauthorization of the brownfields program, does the Administration at this point have any particular recommendations that you intend to make that you think we could use to improve this program, and also, do you have any comments on some of the suggestions offered by Mr. Zone in his testimony, or, I don't know if you have had a chance to look at the testimony of the other witnesses who will follow in the second panel.

Ms. BODINE. We have not developed a legislative proposal. We would be happy to work with your staff in offering technical assistance. There are some areas where there could be some greater clarity and some technical improvements that I think we should definitely be providing.

Mr. BAIRD. One of the areas in which we see some proposals is to expand the qualification criteria for brownfields. Are there concerns about, if we expand it, does that dilute, given that we are already under-funding it relative to authorized levels, are there any concerns about, by expanding the eligibility, you thereby dilute the resource that is available for the existing eligible programs?

Ms. BODINE. It is hard to answer that in the abstract. I don't know who you are trying to expand the eligibility to include. I think in looking at that, you would want to look at, are these grant applicants that would then be providing the same kind of benefits.

Mr. BAIRD. Mr. Zone, did you care to comment?

Mr. ZONE. Yes, thank you, Mr. Chairman. From our city's perspective, EPA has been a wonderful partner. One project that I

cited, we worked very closely with EPA, and actually, they encouraged us to go in and demolish that structure. After we demolished it, surrounding that structure, there is a senior housing, there is a day care center, we found PCBs onsite. Now we are kind of in a tug-of-war with EPA where potentially there is a $6 million cleanup left on the site after we as a city have already invested nearly $3 million.

We would like to see the city, from our perspective, have some sort of indemnification that if we work cooperatively with the Federal Government and go in and do the cleanup, that we are not the polluters of the property. We are the recipients of an abandoned, blighted property. We are just trying to abate a nuisance. If we could work more closely together and hold that being held liable, that would greatly aid our effort.

Mr. BAIRD. I think you made that point well in your testimony. Thank you.

Ms. Jones Hill?

Ms. JONES HILL. Thank you, Mr. Chairman.

The City of Dallas has two recommendations that we would like to place on the record for improvement of the program. We recommend that the EPA increase the brownfields revolving loan fund for major cities to $5 million per individuals grantee for multiple site, industrial brownfields projects. Secondly, we recommend establishing an opportunity to seek a waiver of the one-year time requirement for completion of cleanup on large projects.

Thank you so much for allowing us to offer those suggestions for improvement.

Mr. BAIRD. Outstanding suggestions and in both cases, from hard practical experience, it sounds like. Those are the best kinds of suggestions Committees can receive. Thank you for that.

The Chair recognizes Mr. Boozman.

Mr. BOOZMAN. Thank you. I appreciate your patience today. I know this has been a hard day for you as well as for us, running back and forth. So we really do appreciate you.

I would like to follow up on what you said, Mr. Zone, what you were just talking about, just throw it open to the panel real quickly. Would an exemption from CERCLA liability for non-liable parties that do not take ownership of a brownfields site but are willing to take cleanup action, contribute cleanup funding or provide other substantial support to the cleanup site, would that encourage more brownfields site cleanups by such innocent parties?

Ms. BODINE. Congressman, you prefaced that by talking about non-liable parties. Clearly, one of the barriers to brownfields redevelopment that had been identified was the fear of Superfund liability. The way that was addressed in the amendments in 2002 was to have new owners who were coming into the property, prospective purchasers, have them not be liable. So that is in the law right now. Now, to get the benefit of that liability exemption, you need to have done an investigation on the property, all appropriate inquiry. Then you also can't impede any cleanup that is going on. But under current law, if you didn't cause or contribute contamination and you are new to the property, then you are not liable.

Mr. BOOZMAN. So if the city wanted to go in and clean up the property, and they are not the owner of the property?

Ms. BODINE. You can take ownership. If you are a new owner, you become what is called a prospective purchaser, and you are not liable. But you have to have done the all appropriate inquiry, you have to have done the site assessment, evaluating the property for contamination. The fact that you find contamination doesn't make you liable for it, but you have to have done the investigation.

Mr. BOOZMAN. So if a city that wanted to go in and just be helpful and clean up, is that what you are referring to, that is not an owner and doesn't want to be an owner?

Ms. BODINE. Oh, I am sorry, I misunderstood the question. The statutory protection only applies to owners. It doesn't apply to a Good Samaritan who is coming in or a volunteer who is coming in, or a non-profit or a city.

Mr. BOOZMAN. Would it be helpful if we made it such that a city could do that, I guess is what I am asking, or another party?

Ms. BODINE. The only issue I see on that, you would definitely encourage more people to participate in cleanup activity, and that is always a good thing. There may be an issue of control of the property that you would want to think about, because you would then have someone who isn't the owner. But there certainly could be a benefit to encouraging more cleanup activity if you have more people who would be willing to come in.

Mr. BOOZMAN. Yes, sir?

Mr. ZONE. We met all of the requirements that the EPA asked, and we worked very closely with them. Even after encouragement, we went in there and just tried to abate the nuisance. But we found ourselves after doing everything that they asked us to do, now when we found PCBs onsite, we immediately contacted them, they came in and did some more testing and said potentially, you have a $6 million cleanup effort that you might be responsible for, it is difficult for us to go and abate a nuisance and do the dirty work, for lack of a better term, and now find ourselves being responsible for that cost.

Mr. BOOZMAN. Yes, ma'am?

Ms. JONES HILL. Congressman, if I may, thank you. Your idea of encouraging more persons to clean up is certainly a good idea. But encouraging a non-owner to clean up a site is an idea that we would want to think through very carefully, because of liability and ownership and control issues, an issue that I certainly would want to talk with my council colleagues about. I believe we would have to move very carefully in that direction.

Mr. BOOZMAN. Thank you.

That is all I have, Mr. Chairman. We would like, if it is okay, to submit some things in writing, in the interest of time.

Mr. BAIRD. Without objection, absolutely.

The gentlelady from California, Ms. Richardson.

Ms. RICHARDSON. Thank you, Mr. Chair.

I have a question for Ms. Bodine, our EPA representative. Actually, it is in light of reviewing subsequent testimony, and I am not sure if you will still be here, so that is why I wanted to ask the question now.

Dr. Nancey Green Leigh, in her testimony, the written that we have, on page 5, it says, "Given the public sector's emphasis on allocating scarce brownfields redevelopment resources to those prop-

erties that will realize the greatest market returns, oftentimes properties in small or local depressed neighborhoods are overlooked," things like laundromats, et cetera, in neighborhoods. So when I turn to, for example, in reference of 2002 Small Business Liability Relief and Brownfields Revitalization Act, my question would be to you, a representative of the EPA, what is your commitment and willingness to target the additional increment funds to brownfields neighborhoods with the worst health exposures and the greatest need of economic development?

Ms. BODINE. Thank you. The proposals are evaluated and ranked and the funding is provided based on not just economic development, but community involvement, community benefits, environmental benefits, and the public health benefits that you are talking about. So that is taken into account.

What we do find, though, and I refer to it in my statement, is that there is an issue where smaller communities don't have the programmatic capability to handle these grants. My colleagues here all have very great programmatic capability that is not shared, necessarily, by all the smaller communities around the Country. What we are looking at is trying to provide opportunities for those smaller communities to partner in coalitions with either States or counties or larger communities, so that they too can be the beneficiaries of the grants.

Ms. RICHARDSON. Do you have a percentage that you keep track of, of your allocations of neighborhood or more depressed areas versus larger downtown areas?

Ms. BODINE. We track population, like under 100,000, and we track whether it is a HUB zone property, properties that are designated as particularly needed zones. So yes, we do track that.

Ms. RICHARDSON. Could you provide that to this Committee?

Ms. BODINE. Yes, certainly.

Ms. RICHARDSON. And just with all due respect, I would push back a little with you. I happen to represent, one of the cities in my jurisdiction is the City of Long Beach, which is the fifth largest city in the States. I would encourage you, though, sometimes with cities, they may take the opportunity to, for example, improve their downtown area, versus doing one of their more depressed neighborhoods.

So I would really be looking for what commitment would EPA have of the cities and organizations who are applying to say, we are not just going to leave it up to you to decide who gets it. Maybe there should be a percentage that is considered, given the fact that many smaller neighborhoods may not have the advocacy necessary to be able to apply. This would encourage those other cities or organizations to step up and say, okay, well, we need to make sure we are getting at least one in five years or one in ten years, or we are doing something to these communities.

So we would also ask that you would consider a greater role that EPA might play in encouraging the consideration of these neighborhoods. Thank you.

Mr. BAIRD. I thank the gentlelady. The gentleman from New York, Mr. Arcuri.

Mr. ARCURI. Thank you, Mr. Chairman. I would like to thank the panel again for your patience today.

I just have one very short question. Do you think, as involved with your cities, which are both very large cities, that it would be beneficial for you to have more flexibility in terms of how the money is spent? Very often a project starts, you get halfway through the project, things change, circumstances are different. Would some degree of flexibility or increased flexibility be beneficial?

Mr. ZONE. An excellent question, Congressman Arcuri. Every project is different. Once you put the shovel into the ground, you are going to find something you didn't expect was going to be there. The project that I cited was, we went in there because it was a public health hazard, and that is what put us in that situation. The EPA again has been a great partner to work with thus far.

I have another brownfield site in my ward that was owned by the old Union Carbide and Energizer Company. We remediated that property. The alkaline battery was invented on that site. We call it Battery Park now. We remediated that site, about 15 acres, to a residential standard. Now we are building 328 units of housing. It is just amazing. If we had that type of flexibility, it would greatly aid us in being able to do more types of developments exactly like the question you asked.

Ms. JONES HILL. Congressman, thank you. Certainly, greater flexibility would be helpful to the cities. That is flexibility on the funding. Also, I want to reiterate that from Dallas' standpoint, some flexibility on the time requirement would be very, very helpful if we had the opportunity to waive that one-year time requirement for the larger projects, because that one-year time requirement on the larger projects is really a critical issue. Flexibility on both the funding and the time would be very, very helpful, especially to our city.

Mr. ARCURI. I think your point is very well taken. Do you have any specific suggestions on the kinds of flexibility that would be beneficial?

Ms. JONES HILL. I would want to talk with our staff and my colleagues. But I would think if we had the opportunity for, perhaps a three-year time line, that would perhaps be much better for us.

Mr. ARCURI. Great, thank you. Mr. Zone?

Mr. ZONE. If assessing the property and funding could be under one program, I think it would create more flexibility.

Mr. ARCURI. Can you just expand on that a little bit?

Mr. ZONE. I am not the technical person. I brought my brownfields manager with me.

Mr. ARCURI. So basically just to have a little more ability, money that is deemed for assessment that you would be able to use it in alternative ways?

Mr. ZONE. Yes, the funding that, what I understand now, the funding, that these are two separate funding streams. And if it was under one umbrella, it would give much more flexibility for those types of efforts.

Mr. ARCURI. Very good. Thank you very much.

Mr. BAIRD. With that, I very much thank the panel for their preparation work, for your work on this issue. We will look forward to further comments. With that, this panel is dismissed and I call the next panel to the table, and we will proceed.

Thank you again for your patience with our hectic schedule today.

The second panel, we thank also for your patience. I know, Dr. Leigh, you may have a flight to catch earlier, so we will try to accommodate that. Are there others who have urgent flights that we need to be cognizant of? What are your time frames, if I may ask? All right. We will try to accommodate that. What we will do is give very brief introductions.

Mr. Mark Albrecht is Brownfields Manager for the Mayor of Akron, Ohio's Office of Economic Development, here on behalf of the National Brownfields Association. Mr. Steven McCullough, President and CEO of Bethel New Life, Inc. Dr. Nancy Green Leigh, Professor at Georgia Institute of Technology, College of Architecture. Mr. Jerome Leslie Eben, immediate past President of the American Institute of Architects. Mr. Gary Silversmith, President of P&L Investments.

We will really urge you to keep your comments to five minutes. We have read the written comments as well. With that, we will begin with Mr. Albrecht. Thank you very much.

TESTIMONY OF MARK ALBRECHT, NATIONAL BROWNFIELDS ASSOCIATION, BROWNFIELDS MANAGER, MAYOR'S OFFICE OF ECONOMIC DEVELOPMENT, CITY OF AKRON; STEVEN MCCULLOUGH, PRESIDENT/CEO, BETHEL NEW LIFE, INC.; NANCEY GREEN LEIGH, PROFESSOR, COLLEGE OF ARCHITECTURE, GEORGIA INSTITUTE OF TECHNOLOGY; JEROME LESLIE EBEN, IMMEDIATE PAST PRESIDENT, AMERICAN INSTITUTE OF ARCHITECTS NEW JERSEY; GARY SILVERSMITH, PRESIDENT, P&L INVESTMENTS, LLC

Mr. ALBRECHT. Thank you, Mr. Chairman and Members of the Committee, for the opportunity to provide testimony today.

I am wearing several hats today on behalf of the National Brownfields Association as well as the City of Akron. I will share my experience both as a member of the executive team of the National Brownfields Association, but also as a municipal brownfields practitioner.

I serve on the Brownfields Association Advisory Board, but also work as the brownfields and economic development manager for the City of Akron, where I have been working on planning, economic development and brownfield projects for the last 30 years. Just as way of background, NBA is a 501(c)(3) dedicated to promoting the responsible and sustainable development of brownfield projects by promoting the construction of green and sustainable buildings using energy-efficient technologies and recycled materials on environmentally-impaired properties, i.e., brownfields. NBA members have been able to improve local economies, increase local property taxes, reduce blight, clean up contaminated land, minimize sprawl, reduce greenhouse gas emissions and minimize the environmental footprint of new developments.

Founded in 1999, the NBA membership has grown to more than 1,400 members in the United States and Canada. They come from both the public and private sectors and include property owners and developers, investors, service professionals and representative from Federal, State and local governments, academia and non-prof-

its. As the premier national brownfield organization, the NBA provides local, national and international perspective on the brownfield market through members in more than 20 chapters in the United States and Canada.

For the last five years, the NBA has been the recipient of an EPA grant that has provided us the opportunity to do brownfield education and training to municipalities. We have successfully conducted more than 30 workshops throughout the Country to hundreds of municipal and State attendees, who have given us high marks. The goal of the workshops is to make municipal employees more conversant in the real estate language and the Brownfield redevelopment practices, so that they can attract additional private sector investment into the communities, and leverage Government funds.

NBA also has started to host a deal flow conference. The first was held in 1999 and creates a marketplace where buyers and sellers of brownfields can meet and make transactions. After all, that is what brownfield redevelopment equating to economic development means. Last year, the Big Deals Conference attracted more than 1,000 attendees, and it showcased more than 30 projects for redevelopment.

U.S. EPA also holds an annual brownfields conference, and NBA has proposed to combine these two events, allowing EPA to save in excess of $1 million annually. We look forward to meeting with EPA to collaboratively work together to advance this important market.

I would like to just kind of step back to Akron, Ohio for a brief moment, just to give you a sense as a local practitioner. The City of Akron is a prime example of the important role that brownfield transactions have had in improving the local economic condition of the city and the role that U.S. EPA has played with us. Akron is a city of 207,000, with an economic legacy in the industrial and manufacturing segment.

We have had to transition. To give you a sampling, in 1970 we had 35,000 rubber jobs, producing tires in Akron. By 1990, there were 3,000, today there are 300. We have been able to transition to an economy of plastics, polymers, metal-working, technology industries, largely predicated on our ability to recapture brownfields as the city contains 62 square miles but yet has less than 2 percent vacant land in which we can place these new businesses and industries.

In the past ten years, we have been able to take advantage of three U.S. EPA grants to seed funding to assist with this brownfield recapture. I would like to just show a few images of Akron, if I can. This is a project that we used some seed EPA money. This is a national corporation for research in advanced elastomers. That was the before and after in reverse order. Former B.F. Goodrich company, which was actually a brownfield that was built in 1970, terribly contaminated with asbestos. Today it is the home of Gojo, which is the Purell hand cleaner. We are using it for the former Goodyear air dock facility.

The major Ohio contribution here, we also used some U.S. EPA funding that will eventually house the new Missile Defense Agency's high altitude airship program. This is an important one that

we used EPA funding on, to create the first new retail center in Akron in 40 years. As pre-development costs, the city had to take the lead and act as developer.

An old contaminated power plant that is on the Ohio and Erie National Heritage corridor that has now a very popular 300,000 users a year. It was a U.S. EPA grant for cleanup, we were able to take care of this arson fire problem using a demolition grant.

We are currently involved with the major brownfield projects with Goodyear Tire and Rubber and Bridgestone Firestone Tire Company to retain their world headquarter and North American headquarters, respectively, in our community. These are critical opportunities for us if we are to take advantage of this.

Very quickly, in summary, Akron, as well as other communities around the Country, has been very valuable, taking advantage of the U.S. EPA brownfields programs, invaluable to non-profits and local communities. It is an important first step in funding and addressing the brownfield program. We too would like to see greater flexibility in the program in terms of combining the assessment and cleanup under direct grants as well as the RLF. Most importantly, we would like to see the combination of the petroleum and city-wide hazardous grants into one grant program, thus moving things further.

Thank you for this opportunity to present today. I will be glad to answer questions.

Ms. RICHARDSON. [Presiding] Thank you, Mr. Albrecht. We take your recommendations seriously, and obviously your success is why we are here today.

Next we have Mr. Steve McCullough. He is the President and CEO of Bethel New Life, Inc.

Mr. MCCULLOUGH. Thank you to the honorable Members of the Subcommittee on Water Resources and Environment. Thank you for inviting me to testify today. My testimony focuses on the Environmental Protection Agency's brownfields program and how it can continue to be an effective tool in improving the quality of life for communities across the Country.

Bethel New Life is a faith-based community development corporation located in Chicago's west side. Bethel began in 1979 as a housing ministry of Bethel Lutheran Church to rebuild neighborhoods left in ruins after 1968's civil rights riots. Our mission is to realize God's vision of a restored society by empowering individuals, strengthening families and building neighborhoods through community-driven, solution-oriented and value-centered approaches.

Bethel is nationally known for its pioneering community development initiatives, especially in the areas of sustainable urban growth, smart growth and urban context and brownfields redevelopment. Bethel has ben a part of the clean-up and redevelopment of seven brownfields sites in Chicago that have provided major economic stimuli to our lower-income community. We were recently a recipient of EPA's Smart Growth Award in 2006.

Our work in brownfield development is close 20 years old. We recently celebrated the opening of a new transit-oriented development project on a former brownfield. This development, called the

Bethel Center, is a trend-sitting example of transit-oriented neighborhood revitalization. It is also a LEED certified Gold building.

Our work around brownfield development has given us the opportunity to partner with the American Planning Association to train communities across the Country on putting together brownfield remediation strategies. The APA is the recipient of a brownfields training research and technical assistance grant from EPA. Creating community-based brownfield redevelopment strategies is a three-year initiative with the goal of helping community groups in low-income communities develop a new set of eyes to see brownfield sites as opportunities.

Non-profit community development organizations are uniquely positioned in a number of key ways to revitalize communities through the brownfield redevelopment. First, community-based non-profits have the long-term vision and active presence necessary to guide revitalization efforts. Second, non-profits serve a crucial role as credible, neutral intermediaries between community and public and private entities advocating for brownfield redevelopment projects that are in the interest of the public good, not just in the interest of a private developer.

Third, non-profits have the specialized brownfield knowledge to act as catalyst, managing and coordinating brownfield activities on behalf of and in support of community-based organizations that would otherwise pass up these sites without the non-profit's assistance. Lastly, non-profits have the capacity to leverage brownfield funding with both private sector resources and with other public funds, including transit-oriented development, anti-sprawl and smart growth program funds.

The Brownfields Act should recognize the tremendous value that non-profits, whether single-handedly or in partnerships, play in redeveloping brownfields by making non-profit organizations and non-profit controlled entities eligible to receive brownfields assessments and RLF grants, along with cleanup and job training grants. This represents a lost opportunity to maximize these Government resources, by taking advantage of the community development and financing infrastructure that has developed over the last 20 years, and make more efficient use of public and non-profit resources for successful brownfields redevelopment.

Community development corporations and community development financial institutions and other non-profit institutions have a place in the infrastructure that will allow them to leverage these funds with other public and private resources and expeditiously deliver these resources to revitalize brownfields in the struggling neighborhoods of all sizes.

The Brownfields Act should make non-profit organizations and non-profit controlled entities eligible to receive brownfield assessment and RLF grants, along with cleanup and job training grants. This change recognizes the tremendous value that non-profits, whether single-handedly or in partnerships, play in redeveloping brownfields.

The 2002 Brownfields Act should require site ownership as a condition of eligibility to receive direct brownfield remediation grants or revolving loan fund sub-grants in order to ensure that the project moves forward and that responsible parties do not benefit

from the grants. Many projects and otherwise eligible entities are willing and able to obtain site control prior to purchase for the purpose of conducting remediation but are reluctant to take ownership of contaminated brownfield properties prior to completion of remedial activities, due to uncertain liability exposure. This represents also a lost opportunity to revitalize many brownfields sites.

Finally, the expansion, the last recommendation is expansion of EPA brownfield grant eligibility, including community development entities. A community development entity, otherwise known as a CDE, is defined by the Internal Revenue Code as any domestic corporation or partnership where the primary mission of the entity is serving or providing investment capital for low-income communities or low-income persons. The entity maintains accountability to residents of low-income communities through their representation on any governing board or any advisory board.

In conclusion, EPA's brownfield program is a vital tool that should be allowed to evolve into an even more valuable resources to improve communities across the Country. Thank you for the time and opportunity to speak to you.

Ms. RICHARDSON. Thank you, Mr. McCullough. I think you are really speaking to some of the questions that our group here has had. Thank you for your testimony.

Next we have Dr. Nancey Green Leigh, Professor of the College of Architecture with the Georgia Institute of Technology in Atlanta, Georgia. Welcome.

Ms. LEIGH. Good afternoon, Chairwoman Richardson and Members of the Subcommittee.

As a Georgia Tech professor, I have been researching, writing and teaching about brownfields redevelopment since the early 1990s. Since EPA's programs were initiated to overcome the market failure and brownfield redevelopment caused by CERCLA, the brownfield industry has become a niche real estate market that relies upon public-private partnerships, employs between 5,000 to 10,000 people and has many high-profile redevelopment successes. There simply would not be the brownfield industry we have today without the EPA's programs and the 2002 Small Business Liability Relief and Brownfields Revitalization Act.

But as others have noted, there is still much to be done. The number of brownfields that have been cleaned up through State voluntary programs represents only 5 to 10 percent of the total problem. My research suggest that for every known brownfield, there could be as many as 14 more than have not made it onto official lists. Further, new brownfields, such as meth fields, are still being created. It is likely that these new brownfields will be disproportionately located in disadvantaged areas.

Brownfields fall into three groups: those with negative values where environmental liabilities far exceed their value; those with modest or neutral value; and those with strong positive values. The last group have very desirable locations and tend to be the bigger sites on which large scale redevelopment can occur.

So far, the predominant brownfield redevelopment focus, both private and public, has been on the most marketable and larger properties, or the low-hanging fruit. The rationale for the public sector focus has been to maximize return on public investment

while the private sector logically and appropriately is seeking to maximize profits. Largely missing from the national dialogue has been the issue of whether brownfields status impacts more than the individual property or brownfield. My own research has found that the presence of brownfields reduces the value of surrounding properties in a neighborhood. This of course leads to lower property tax revenue to pay for schools and essential services and to support economic development.

There is legitimate concern over large, mothballed sites, but the remaining brownfield inventory is increasingly composed of small and medium size sites. Many would be considered marginal redevelopment prospects by the private sector. Neglecting their redevelopment acts as a barrier to neighborhood revitalization. In turn, the neighborhoods where they are located are left further behind from those that are being revitalized.

The back to the downtown movement that is occurring in our major cities due to the rejection of suburban living by certain demographic groups, as well as firms seeking to avoid the cost of sprawl, has provided a helpful impetus for brownfield redevelopment. But it could also contribute to growing income and equality and displacement of low-income residents due to gentrification, unless EPA's brownfields programs become more focused on low-income neighborhoods.

The Brownfields Act was aimed at promoting economic development and achieving environmental restoration. Since such a small percentage of brownfields have been redeveloped, the Act clearly needs to be reauthorized and its funding substantially increased. It also needs revision. To counter trends in urban inequality and gentrification displacement, the reauthorized Act should target the additional increment in funds and placement of EPA staff and brownfields neighborhoods with the worst health exposure and greatest need for economic development.

It should require a demographic and economic impact assessment of projects and gentrification prevention or redress plans. It should emphasize a neighborhood approach if there are community-wide, multi-purpose grants. And it should encourage the development of workforce housing.

EPA adopted an environmentally responsible redevelopment and re-use initiative for encouraging the best sustainable environmental practices in brownfields redevelopment in 2004. However, there appear to have been only two pilot projects resulting from this initiative.

To further the greening of brownfield redevelopment, the reauthorized Act should encourage life cycle assessment analysis to minimize environmental burdens of brownfield projects, encourage on-site remediation strategies, promote deconstruction over demolition when buildings are removed, and require green building and site development standards.

In conclusion, my own view is that EPA's Brownfield Act and the program have fostered more innovation and economic development, leading to a sophisticated brownfields industry, than environmental solutions. However, EPA could be a real catalyst for sustainable development that maximizes both objectives if it requires, rather than simply encourages, green redevelopment standards.

These standards would reduce energy and consumption costs, lower building and site maintenance costs, create healthier living and work spaces, foster new businesses and jobs in the brownfield sector as well as in the larger economy.

Thank you for the opportunity to present my testimony. I would be happy to answer your questions.

Ms. RICHARDSON. Thank you, Dr. Leigh, for not only your testimony but your work in this area.

Next we have Mr. Jerome Leslie Eben, the immediate Past President of the American Institute of Architects from Trenton, New Jersey. Welcome, thank you for being here.

Mr. EBEN. Thank you, Madam Chairman and Members of the Subcommittee. The AIA is a professional society representing 82,000 licensed architects across our Country. We are leaders in our communities and we play a major role in strengthening America's economic vitality.

I would like to also commend the Committee for holding this hearing today on a topic of vital concern to both us as architects and you as our political leaders in not only suburban communities but in urban communities across the Country. My home State of New Jersey is home to at least 20,000 contaminated sites, the majority of which qualify as brownfields. Essex County, where I was born, where I live and where I work, has over 1,000 brownfields.

Newark is in Essex County, and is the third oldest city in the United States, settled in 1666. It is one of the most economically charged cities in America. It has 500 certified brownfields, probably hundreds more which sit unoccupied, contributing to the city's blight. Bringing these contaminated sites back to life through brownfields redevelopment is imperative to restoring American cities, not only like Newark, but other American cities that were mentioned here today, Akron, Cleveland, other cities.

Architects throughout the Nation understand the enormous significance of redeveloping these sites. We are committed to planning the design and construction of vital, healthy communities, and we are understandably concerned that brownfields sites blight neighborhoods and need revitalization. We have long supported Congressional efforts to facilitate brownfield cleanup and redevelopment.

However, this Committee, the AIA and EPA know that there are still hundreds of thousands of brownfields sites that sit vacant and under-used. Therefore the Federal brownfields law must be updated to provide communities with the necessary tools and resources to clean up these sites.

Redeveloping brownfields sites produces undeniable economic benefits, I think that has been testified to here today, demonstrating that intelligent Federal spending on brownfields will provide the needed economic investment for cities and communities nationwide. The message is clear, investing in brownfields will boost the economic vitality of our cities, our communities, create jobs, stimulate the economy at a time when Congress is exploring ways to do that, to stimulate the economy, particularly in the housing and real estate sections. Investing in brownfields should be an important priority.

Therefore, we strongly urge the Committee to increase funding levels in the program and reauthorize this legislation. It is clear

more brownfields exist than can be redeveloped. Each year, EPA is faced with the difficult task of choosing which projects to provide grant monies, and which projects to exclude. Given the extensive competition among applicants for limited grant funding, we feel that including additional project qualifications in the programs grant-making criteria would direct funding to the best possible projects.

One such condition is energy efficiency, mentioned by you, Congresswoman. We believe that the efficiency in green building standards should be a factor in determining which grant applications do receive this funding. Most brownfield redevelopment projects will require major renovation of buildings onsite and in most cases, new buildings altogether. It makes sense for buildings to be designed in an intelligent, energy-efficient way. Architects and builders across this Country are utilizing the most modern design techniques, materials and building systems to achieve the significant energy savings in new and renovated buildings.

Energy-efficient or green buildings offer countless benefits to their inhabitants, including reduced energy use. Given that many brownfields are located in low-income areas, such as Newark, reduced energy costs for future building occupants should be factors in determining which projects receive these grant monies.

Furthermore, reclaiming contaminated sites helps improve the natural environment. Once a brownfield site is cleaned up, it is counter-productive then to build an energy-guzzling building on that very same site, especially when the cost of green buildings are negligible. Thus, we strongly believe that brownfield redevelopment projects that will result in energy-efficient and green buildings should be given a preference as the EPA chooses which projects to do in the future.

When this Committee attempted to reauthorize the brownfields law during the 109th Congress, language was included requiring the EPA to include the use of green standards and energy efficiency as criterion in grant-making. We urge the Committee once again to take this route to ensure our Nation that the brownfields are redeveloped in the smartest and most energy-efficient way.

America's architects are committed to designing healthy communities. In order to redevelop some of the most economically depressed neighborhoods, the Federal Government's brownfields program must be expanded. This will facilitate the cleanup of blighted areas across America. The AIA strongly supports this Committee's efforts to improve the brownfields program, and I welcome your questions.

Ms. RICHARDSON. Thank you, Mr. Eben.

We are going to take a brief pause, if you don't mind, Mr. Silversmith. We realize Mr. Albrecht has to hop on a plane in five minutes. So we are going to deter for a slight second and have Mr. Boozman, who is our Ranking Member from Arkansas, ask a question. Then we will continue on.

Mr. BOOZMAN. Thank you. I have one that I would like to throw out for the panel, and why don't you start, Mr. Albrecht, then you can go ahead and leave if you would like. Believe me, it doesn't matter if I start, if I have a 1:00 o'clock flight or a 5:00 o'clock or

an 8:00 o'clock at night, I am constantly running, as all of us are, to catch that. So I understand.

Dr. Leigh mentioned about the mothballed sites in her testimony. How can we make it possible for the so-called mothball sites to be cleaned up and put into productive use? Would mothballed sites be cleaned up if protections from liability were made available?

Mr. ALBRECHT. I am not an environmental attorney, but from a practical standpoint at the city, the one slide that I showed you of an old Imperial Electric that was an arson fire, we took ownership of that just probably eight months prior to the January 11th, 2002 rule that kicked in the all appropriate inquiry. What we were able to do, through the cooperation of Region 5 in Chicago was we had to demonstrate that we did do some level of due diligence prior to that.

We really feel locally that that particular benchmark rule is inappropriate. As Cleveland demonstrated, we have been land-banking properties for 10 years. Some of those have been in our portfolio, the first project I showed you was the AES Elastomer Systems project. We took that on initially to demolish the building. It turned out the company wanted it rehabbed.

But we took it on blind faith. So you need to provide us some flexibility in how our ownership patterns work in that regard. Thank you.

Mr. BOOZMAN. With the Chair's permission, then, you can go ahead and go. Is that all right, Madam Chair?

Ms. RICHARDSON. Yes, you are released, and thank you very much for your testimony.

Mr. BOOZMAN. Yes, thank you very much.

Do the rest of you have anything to say about that?

Mr. SILVERSMITH. If I may, just a few things. Number one, some of the cities are afraid to exercise eminent domain or otherwise foreclose for back taxes on these mothballed properties. Because under CERCLA, they are not liable if it is an involuntary acquisition. The issue among the lawyers is, if you take it by eminent domain or for back taxes, was it an involuntary acquisition. So consequently, some of the properties remain mothballed because the liability relief is not broad enough for the cities.

In addition, there are some tenants who come into properties that are already contaminated. The responsible party is the owner, and the tenant does not have a liability release under CERCLA. Then finally, gas stations are not exempt. So when we come in to clean up gas stations, there is an issue there for liability.

So pursuant to your questions, there clearly could be an expansion of the liability relief.

Mr. BOOZMAN. Good. Thank you very much. Thank you, Madam Chair.

Ms. RICHARDSON. Did anyone else want to respond? Okay, we will continue with our last panelist here. We have Mr. Gary Silversmith. Thank you for comment on that question. He is President of P&L Investments, Inc. here in Washington, D.C. Thank you, and welcome.

Mr. SILVERSMITH. Thank you, Madam Chairwoman, and my Valentine to the Subcommittee is that I am your last witness.

I am the President, as you mentioned, of P&L Investments, a national brownfields investor and developer headquartered here in Washington, D.C. We are involved in the cleanup and redevelopment of dozens of properties around the Country, ranging from an abandoned gas station in Los Angeles that we are converting to affordable housing to cleaning up an old shopping center in Maine that we are releasing.

We not only acquire large brownfields held by major corporations, such as AIG Environmental and General Motors, but we also clean up and redevelop many small properties, including a truck stop in Denton, Texas, near Madam Chairwoman's district office.

We were told that were are the first company in America to get permission to convert a Superfund site to residential use. Before cleaning up the Superfund site, it was contaminated with PCBs, mercury, and asbestos. The property consisted of a dilapidated factory building occupied by drug dealers and arsonists. In fact, the EPA's onsite trailer was burned down.

We demolished these buildings and we cleaned up the site. The townhouses built on the land appreciated over 300 percent in the first four years. So the community not only got rid of a drug-infested blight, but the residents made money. Also, the EPA wrote a complimentary article about the project in their Cleanup News publication, and EPA gave us a very important liability release.

In Pennsylvania, we took an abandoned 90-acre asbestos brake plant and asbestos landfill, and we converted the plant to an industrial park with high-tech companies. We capped the landfill with asphalt and converted it to a commercial parking lot. For this project, we received a liability release from the Commonwealth of Pennsylvania. We would have never undertaken this project without the liability relief for innocent purchasers provided in the brownfields law.

The Federal brownfields law also recognizes the critical importance of public-private partnerships in bringing these contaminated properties back to productive use. We are currently involved in an innovative public-private partnership with an Ohio community where we are converting a landfill to a golf course with new commercial buildings around the golf course. As part of this partnership, the local government entity will receive 25 percent of the profits. This project would not have been possible without the investment of both State and Federal grant monies.

While the Federal brownfields law has stimulated the revitalization of thousands of properties around the Country, those of us in the industry have learned a great deal since the law was passed six years ago. As part of my written testimony, I have attached recommendations developed by the National Brownfields Coalition, which I wholeheartedly support. Based upon my experience in the field, I would like to highlight just a few of the recommendations.

Number one and most importantly to me, Congress should increase the ceiling on brownfield cleanup grants. As you know, the maximum amount that EPA can provide for a cleanup grant under the current law is $200,000. There are many sites where the cleanup cost is millions of dollars. In these cases, $200,000 from EPA is usually not enough help, even taking into account funding from other sources. As a result, these sites are usually mothballed.

Number two, pursuant to Congressman Arcuri's question, the Government should provide flexible multi-purpose grants. The slow timing and the lack of flexibility with the Federal brownfield grants is a real problem. Under the current grant process, there is a lengthy delay between the time of the grant application and the time the funding is available. In addition, the grants are for only either assessment or cleanup. Moreover, the cleanup grants are typically tied to a specific site.

Local governments could really use multi-purpose grants that are processed quickly that can be used for assessment and/or cleanup and that can be employed in a variety of brownfield properties.

Congress should make it clear that Federal grants can be used for demolition and site clearance. For many of the larger projects we undertake, demolition and site clearance are major costs. For example, we are now converting an abandoned factory in Baltimore County to mostly park land. One reason the cleanup is delayed is because the prospective purchaser, the Maryland State Park System, would like the abandoned factory demolished as part of the cleanup. But the State Park System cannot get an EPA grant for all of the demolition. If EPA could award a more flexible grant, then the demolition could proceed.

In summary, the 2002 brownfields law was a milestone for brownfield redevelopment. And it should be expanded to fund both bigger grants and to be more flexible in its application.

In addition, pursuant to Congressman Boozman's question, its liability relief should be expanded. After all, brown to green is good. Thank you.

Ms. RICHARDSON. Thank you very much, Mr. Silversmith.

Any further questions, Mr. Boozman?

Mr. BOOZMAN. I don't think so, Madam Chair. We probably will have some that we would like to submit, with your permission, though.

Ms. RICHARDSON. Absolutely. Seeing no further questions, first of all, I would like to thank the panelists for your work, for your testimony as well as your time today. On behalf of Chairwoman Johnson, and the entire Subcommittee, we want to recognize your comments and your recommendations into the record and assure you that they will be considered in our future deliberations. As we close, we want to thank the witnesses and suggest that any Members, whether present at this moment or coming forward on this Subcommittee, that we might have follow-up questions that we would submit to you. We ask that you would respond to them in a timely fashion.

We appreciate your cooperation and your valuable participation today, especially given the hour and your patience with us. This hearing is adjourned.

Thank you.

[Whereupon, at 5:28 p.m., the Subcommittee was adjourned.]

OPENING STATEMENT OF
THE HONORALBE RUSS CARNAHAN (MO-3)
WATER RESOURCES AND ENVIRONMENT SUBCOMMITTEE
TRANSPORTATION AND INFRASTRUCTURE COMMITTEE

Hearing on
Revitalization on the Environmental Protection Agency's Brownfield Program
February 14, 2008

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Chairwoman Johnson, thank you for holding this hearing so the subcommittee can hear from various witnesses who have been involved in the Brownfields program as we consider the reauthorization of the program. I am especially interested to hear from our witnesses who come from communities where the redevelopment of brownfields has contributed to the revitalization of neighborhoods.

Since the creation of the Brownfield program more than two-hundred sites have been redeveloped nationwide. For these communities where a brownfield has been redeveloped jobs have been created and greenspace preserved. There are many more brownfields that could be redeveloped to revitalize depressed neighborhoods across the country. However, this program has received insufficient funding to reach its potential resulting in a large backlog of eligible sites nationwide. Congress has a perfect opportunity to make improvements to the Brownfields program so more communities can reap the benefits of this great program.

Again, I want to thank the Chairwoman and Ranking Member for holding this hearing. I look forward to working with each of you going forward.

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STATEMENT OF
THE HONORABLE JERRY F. COSTELLO
SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT
HEARING ON THE REVITALIZATION OF THE EPA'S BROWNFIELDS PROGRAM
THURSDAY FEBRUARY 14, 2008

Thank you, Madame Chairwoman, for holding today's hearing on the Reauthorization of the Brownfields Program.

I believe the brownfields program provides communities with new financing options for redevelopment projects. It gives local communities a valuable tool to address blight and contamination, create new jobs, and expand their tax bases. Without proper clean up and revitalization, these sites affect individual communities by threatening our groundwater supply, cost our local communities jobs and revenue, and contribute to urban sprawl.

Unfortunately, the largest obstacle cities face when redeveloping Brownfields sites is a lack of capital which is needed for remediation and clean-up. Because there is risk to fully clean-up a site, it is challenging for local communities to get funding from the private market, saddling our towns with the heavy task of redevelopment. Many communities are faced with this in my congressional district.

The Brownfields program was designed to provide some relief to this problem and has been viewed by many to be a success. I am interested to hear from our witnesses their thoughts on the structure of the current program – the strengths and weaknesses – and where we go from here as we tackle reauthorization.

I look forward to our witnesses' testimony.

1 Harry E. Mitchell

Statement of Rep. Harry Mitchell
House Transportation and Infrastructure Committee
Subcommittee on Water Resources and Environment
2/14/08

--Thank you Madame Chairwoman.

--Today we will are examining the EPA's Brownfields program, a relatively new program which already has numerous accomplishments to its credit.

--By providing financial incentives for developers to clean up and redevelop contaminated sites, the Brownfields program

2

not only revitalizes neighborhoods, it helps preserve outlying green spaces.

--In fact, according to at least one study, every acre of Brownfields redevelopment saves more than four acres of green space.

--Brownfields are not just good for the environment, they're good for the economy. According to the EPA, the investment spurred by Brownfields has created more than 47,000 jobs since the program's inception.

3

--As with any program, however, I'm sure there's room for improvement. And that's why I am looking forward to hearing from today's witnesses.

--I yield back.

USEPA BROWNFIELD PROGRAM FUNDING
TESTIMONY BY MARK ALBRECHT, ON BEHALF OF
THE NATIONAL BROWNFIELD ASSOCIATIONS 2-14-08

Dear Mr. Chairman and members of the committee, thank you for allowing me to provide my testimony. On behalf of the National Brownfield Associations (NBA), I will share my experience both as a member of the NBA Executive Team and as a municipal brownfield practitioner. I serve on the NBA Advisory Board and work as the Brownfields and Economic Development Manager for the City of Akron, where I have been involved in planning, economic development and brownfield redevelopment for over 30 years.

The NBA is a 501(c)(3) nonprofit organization dedicated to promoting the responsible and sustainable redevelopment of brownfields. By promoting the construction of green and sustainable buildings (that use energy-efficient technologies and recyclable materials) on environmentally impaired properties—brownfields—NBA members improve local economies, increase property tax roles, reduce blight, clean up contaminated land, minimize sprawl, reduce greenhouse gas emissions, and minimize the environmental footprint of new developments.

Founded in 1999, the NBA membership has grown to more than 1,400 members in the U.S. and Canada. Members come from both the public and private sector and include property owners, developers, investors, service professionals, and representatives from federal, state and local governments, academia and nonprofits. As the premier brownfield organization, the NBA provides a local, national and international perspective on the brownfield market through members in more than 20 chapters in U.S. states and Canadian provinces.

For the last five years, the NBA has been a recipient of an EPA grant that has allowed us to provide brownfield education and training to municipalities. We have successfully instructed more than 30 workshops throughout the country to hundreds of municipal and state attendees who have given us high marks for these efforts. The goal of these workshops is to make municipal employees more conversant in real estate language and brownfield redevelopment practices, so that they can attract private sector investment into their communities, leverage government funds and clean up more properties that get put back into productive use.

We also host a deal flow conference (the first was held in 1999) that creates a marketplace wherein buyers and sellers of brownfields can meet and make transactions. In 2007, The Big Deal conference drew more than 1,000 attendees and showcased more than 30 brownfield properties for sale. The U.S. EPA holds an annual brownfield conference and we have proposed to combine these two events, allowing the EPA to save approximately $1.5 million annually. We look forward to meeting with the EPA to discuss this proposal. As an EPA grant recipient, and as an organization that will continue to apply for EPA grants, we hope this unsolicited proposal receives serious consideration and will allow us—the NBA and the EPA—to work together to advance this important market.

The City of Akron is a prime example of the important role that brownfield transactions have on improving the economic condition of a city and the important role U.S. EPA funding plays. The City of Akron (population 207,000) has an economy based on a legacy of heavy industry and

manufacturing. In 1970, there were over 35,000 rubber production jobs in City of Akron; by 1990, fewer than 3,000 rubber production jobs were left.

In the past 10 years, Akron has utilized U.S. EPA funding to assist with major brownfield redevelopments. It is currently working on brownfield redevelopments with Goodyear Tire and Rubber and Bridgestone Firestone to retain their World and North American headquarters in our city. Both of these projects involve brownfield recapture. Goodyear's project entails transfer of over 500 acres to a private developer who, with brownfield assessment and cleanup assistance from the city, will invest $600 million in new corporate, office and retail facilities. Akron has received three U.S. EPA brownfield grants.

Summary – The U.S. EPA Brownfield Program is very valuable to nonprofits and local communities. It has become an important source of first-step funding in addressing brownfield redevelopment. Reauthorization of the Brownfield Statute is critical so that the funds used for grants will still be available to cities like Akron to use in revitalizing their local economies, and to organizations like the NBA to educate stakeholders and facilitate more brownfield transactions that connect green building to brownfield development.

The EPA brownfield conference has evolved to a point where the information it provides needs to be disseminated through different venues to meet the larger number of advanced practitioners and the constant flow of new entrants into the brownfield market. The NBA is well suited to assist in this transition.

Additional Points: USEPA Brownfield Program

- **Meeting Brownfield Project Needs**
  - Establish multi-purpose grants to provide flexibility in meeting meet the full range of brownfield requirements including assessment and cleanup under direct grants and RLF.
  - Maintain and, if possible, increase overall U.S. EPA Brownfield funding commensurate with the demonstrated demand nationally. Over the past two years, U.S. EPA has turned down nearly 800 grant applicants.

- **Improvements to simplify and enhance USEPA Brownfield Program**
  - Eliminate petroleum set-aside grants.
  - Combine the petroleum and hazardous grant applications to increase program flexibility and permit an increase in the maximum grant award per successful applicant.
  - The maturity of the brownfield program should now permit more risk-based corrective action and use of institutional controls.
  - All Appropriate Inquiry Rule – the restriction on grant funds being used on sites that were acquired before the 1-11-02 Brownfield Revitalization Act should be lifted if the applicant did not cause or contribute to the contamination.

STATEMENT OF
SUSAN PARKER BODINE
ASSISTANT ADMINISTRATOR
OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE
U.S. ENVIRONMENTAL PROTECTION AGENCY
BEFORE THE
SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
UNITED STATES HOUSE OF REPRESENTATIVES

FEBRUARY 14, 2008

Good morning, Madame Chair, and members of the Subcommittee. My name is Susan Parker Bodine. I am the Assistant Administrator for the U.S. Environmental Protection Agency's (EPA's) Office of Solid Waste and Emergency Response (OSWER). I am pleased to appear today to discuss EPA's Brownfields Program.

As you know, brownfields are all around us, in the smallest towns and largest cities -- empty warehouses, abandoned and deteriorating factories, vacant corner gas stations, and junk-filled lots. Brownfields are defined by statute as "real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant or contaminant." These are properties where real or potential environmental concerns pose a barrier to reuse. Estimates of the number of brownfields across the country range from 450,000 to more than one million properties.

EPA's Brownfields Program began more than a decade ago. Through calendar year 2007, EPA's Brownfields Program has assessed more than 11,500 properties, made more than 3,600 acres ready for reuse, generated more than 47,000 jobs, and leveraged more than $10.3 billion in economic development. Brownfields revitalization also produces long-term sustainability benefits, with every acre of brownfields reused saving 4.5 acres of greenspace. Working with communities, states, tribes and other federal agencies, the brownfields initiative

has become a coordinated national effort, linking environmental protection, economic development and community revitalization.

In 2008, OSWER will continue to focus efforts on streamlining the grants application process, strengthening our state and tribal response programs, promoting greener and more sustainable clean ups and reuse, and expanding land revitalization across all of EPA's land cleanup programs.

EPA'S BROWNFIELDS PROGRAM

Brownfields Grants

I would like to describe the Brownfields Program components in greater detail. Assessment grants provide funding to: inventory, characterize, and assess properties; develop cleanup plans; conduct clean ups; and conduct community involvement activities related to brownfields. Environmental site assessments provide the information that communities and property owners need to move forward with reuse. In fact, up to one-third of the properties assessed show little or no contamination, freeing the site for reuse after a relatively small public investment. Since the passage of the Brownfields Law in 2002, EPA has awarded 818 assessment grants to small and large communities, usually for $200,000 each, for a total of $175.5 million.

For example, a $200,000 EPA assessment grant enabled the City of Gardena, California to perform environmental assessments on selected brownfields on a former airstrip more recently used for open-air swap meets. The city's brownfields assessments drew immediate attention from private developers. Economic Development Director Yvonne Mallory said, "The city

brought attention to several sites and helped spur development... no one paid attention until we got the Brownfields site money." Following assessments, Gardena acquired the former airstrip/swap meet area and plans to redevelop the site into a new, state-of-the art, public transportation facility. Development of this new facility is being funded by $25 million from the Federal Transit Administration and $4 million in state transportation funds.

In addition to its grant programs, EPA conducts Targeted Brownfields Assessments (TBAs). These single property assessments help communities on a direct basis, especially small communities. EPA allocated $16.3 million for TBA support in fiscal years 2003 through 2007. To date, EPA has conducted TBAs at 1,522 properties. For example, EPA conducted a TBA at an old power plant located on Jekyll Island, Georgia. Following assessment, the plant was renovated and now houses the Georgia Sea Turtle Center. The Center opened in June 2007 and includes educational exhibits and a research center.

EPA awards direct cleanup grants of up to $200,000 per site to public and nonprofit property owners to carry out cleanup activities at brownfield sites. Since passage of the Brownfields Law, EPA has awarded 426 cleanup grants totaling $78.7 million. As an illustration, Ohlone Community College in Newark, California cleaned up an 81 acre, former agricultural field property with the help of a $200,000 EPA Brownfields Cleanup grant. Today, it is the home of the Ohlone Community College Newark Center for Health Sciences -- a project creating the first "green" community college campus in the nation. The redevelopment incorporates photovoltaic solar panels, geothermal heating and cooling, high efficiency lighting, low water consumption, and extensive use of recycled materials.

The Brownfields Program also supports property clean up with grants to states and local governments to capitalize revolving loan funds. The Brownfields Revolving Loan Fund (RLF) grants provide the capital to make low or no interest loans and subgrants to finance brownfields clean up. Since passage of the Brownfields Law, EPA has awarded 84 RLF grants totaling $103.1 million.

In February 2007, the Ohio Department of Development used its Brownfields RLF to loan $2 million to the Summit County Port Authority to assist with clean up of the Akron Airdock. The clean up is underway and the loan will leverage more than $11 million in additional cleanup funding. When completed, the Akron Airdock will be transformed and used to develop a prototype High Altitude Airship. The expansion of the Airdock is expected to generate about 93 jobs.

Properties contaminated with petroleum such as abandoned gas stations are a common type of brownfields. The Brownfields Law requires that 25 percent of brownfields competitive grant funding address petroleum contamination. For example, a $200,000 EPA Brownfields Assessment grant awarded to the Utah Department of Environmental Quality helped define the extent of contamination from a leaking 4,000 gallon underground storage tank, including elevated levels of petroleum in the property's soil and groundwater. Following clean up, an 84 unit, mixed income apartment complex was built on the property. Since passage of the Brownfields Law, EPA has awarded 389 assessment, revolving loan fund, and cleanup grants totaling $79.5 million for petroleum contaminated brownfields.

In reviewing proposals and awarding grants, EPA has found that brownfields come in a range of sizes and types. Brownfields are often stereotyped as large industrial sites in urban

areas. The reality is that most brownfields are small properties such as dry cleaners, vacant lots and gas stations. More than half of the grants go to communities of fewer than 100,000 people.

The grant selection and award process for fiscal year 2008 is underway. The application deadline was October 12, 2007, and EPA received more than 800 applications. The Agency plans to award more than 200 grants this year.

In addition to funding brownfields assessments and clean ups, EPA also funds brownfields training, research, and technical assistance. As communities clean up brownfields, they need a workforce with environmental cleanup skills. To date, EPA has awarded 118 job training grants, resulting in the placement of more than 2,600 people in jobs with an average wage of $13.86 an hour.

State and Tribal Programs

States and tribes are at the forefront of brownfields clean up and reuse. Most brownfields clean ups are overseen by state response programs. In fiscal year 2006 alone, 38 states reported that 27,000 properties were enrolled in state response programs and more than 70,000 acres were made ready for reuse. Additionally, state response programs provided technical assistance at more than 1,200 properties.

Similarly, tribal response programs, newer in development, are taking an active role in the clean up and reuse of contaminated property on tribal lands. Tribes are developing and enhancing their response programs to address environmental issues on tribal lands. Through brownfields grant assistance, tribes are creating self sufficient organizations for environmental protection. Tribal response programs conduct assessments, create ordinances, and educate their communities about the value and possibilities of brownfields clean up and reuse.

The development of successful state and tribal programs is essential to ensuring the successful implementation of the national brownfields program. Our states and tribes are at the frontlines of effective brownfields clean ups. Providing financial assistance to states and tribes increases their capacity to meet brownfields clean up and reuse challenges. It helps to ensure that clean up and reuse is protective and in accordance with federal, state and tribal standards.

Under the Brownfields Law, EPA provides financial assistance to establish or enhance state and tribal programs so they can meet the challenges of brownfields clean up and reuse. In fiscal year 2008, EPA's brownfields appropriation included $48.7 million for states, tribes and territories. EPA anticipates an increasing demand for these funds from states and tribes in the future.

EPA awards funds to states and tribes through a national process where EPA holds states and tribes accountable for the efficient use of the grant funds. EPA reviews the level of funds remaining on prior years' grant awards and reduces new awards accordingly. States and tribes that use their funding in a timely manner see funding levels hold steady or increase; those with unspent funds receive fewer dollars. Through this effort, EPA encourages the appropriate and timely use of grants funds, ensuring effective planning and development of response and voluntary cleanup programs, and providing for a transparent measure of accountability.

States and tribes use the grant funding for a variety of activities. For some, the funding provides an opportunity to create new response programs to address contaminated properties, while for others it allows them to enhance existing programs with innovative new tools. Some states, such as Colorado, use the funds to bolster cleanup revolving loan funds, while others, such as Wisconsin, use the funds to maintain a "one cleanup" approach to assessment and clean

up. Many use the funds to conduct site specific activities, such as the assessment and clean up of brownfields sites. Since fiscal year 2003, states and tribes reported conducting more than 900 site assessments on brownfields.

Liability Protection

A critical element of the Brownfields Program is the liability protections and clarifications provided for certain landowners who are not responsible for prior contamination at brownfields properties. These protections increase comfort and certainty for prospective purchasers and provide incentives for redeveloping brownfields. To encourage investment in contaminated property, EPA has worked to clarify federal liability, particularly under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). EPA has issued guidance and enforcement discretion policies to advance brownfields clean up and redevelopment.

The Brownfields Law clarified the landowner liability protections of bona fide prospective purchasers, innocent landowners and contiguous property owners under CERCLA. To qualify for liability protection, these property owners must satisfy certain statutory requirements. For example, prior to acquiring a property, purchasers must meet environmental due diligence requirements by undertaking "all appropriate inquiries" into the previous uses and condition of the property. EPA collaboratively developed a regulation establishing standards for conducting "all appropriate inquiries." The final rule was issued in November 2005 and went into effect in November 2006.

CONCLUSION

EPA's Brownfields Program serves as an innovative approach to environmental protection, spurring environmental clean up, reducing neighborhood blight, preserving greenspace, generating tax revenues, and creating jobs. Our continued success will require collaboration among all levels of government, the private sector, and nongovernmental organizations. EPA will continue to implement the Brownfields program to protect human health and the environment, enhance public participation in local decision making, build safe and sustainable communities through public and private partnerships, and recognize that environmental protection can be the engine driving economic redevelopment.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAR 2 1 2008

OFFICE OF CONGRESSIONAL AND
INTERGOVERNMENTAL RELATIONS

The Honorable James L. Oberstar
Chairman
Committee on Transportation and Infrastructure
U.S. House of Representatives
Washington, DC 20515

Dear Chairman Oberstar:

Thank you for your letter of February 15, 2008, containing questions for the record from the Committee on Transportation and Infrastructure, Subcommittee on Water Resources and Environment. Please find enclosed responses from the U.S. Environmental Protection Agency (EPA) to questions posed by the Subcommittee pursuant to the February 14, 2008, hearing titled, "Revitalization of the Environmental Protection Agency's Brownfields Program," as well as a response to a question asked during the hearing.

If you have further questions, please contact me, or your staff may contact Amy Hayden in EPA's Office of Congressional and Intergovernmental Relations at (202) 564-0555.

Sincerely,

Christopher P. Bliley
Associate Administrator

cc: Chairwoman Eddie Bernice Johnson
Ranking Member John Boozman

Follow-up Questions for Susan Parker Bodine
House Committee on Transportation and Infrastructure
Subcommittee on Water Resources and Environment
Hearing on Revitalization of the Environmental Protection Agency's Brownfields Program
Thursday, February 14, 2008

Question 1: Several outside stakeholders, including the National Brownfields Coalition, have suggested that one beneficial change to the brownfields law would be to incorporate additional "flexibility" into the award of brownfields grants. For example, there is interest in having grants be awarded for multiple purposes, such as site assessment AND remediation within the same grant, depending upon needs at an individual site. In addition, there is a desire to have EPA offer multiple rounds of grants each year, rather than simply combining all resources into one annual grant announcement.

Last Congress, the Committee considered this proposal, and came to the conclusion that both of these "flexibilities" – the multiple purpose grants and additional rounds of grant awards – were not prohibited by the Brownfields law. In fact, the Committee report for last Congress' bill made note of this, and suggested that these two changes could be made administratively, rather than requiring an amendment to the Brownfields law.

Do you concur with this assessment, that these two change[s] are not prohibited by the statute, and could be accomplished within the scope of the existing brownfields law?

Answer: The U.S. Environmental Protection Agency (EPA) agrees that the Brownfields Law does not prohibit multi-purpose grants or multiple rounds of grants each year. EPA is considering approaches to multi-purpose grants. When considering a multi-purpose grant for assessment and clean up, the funding limitations established in the Law would apply: up to $350,000 per site for assessment and up to $200,000 per site for clean up. Also, for clean up grants, the Law requires that the site be owned by the eligible entity that receives the grant. Non-profit organizations are eligible to receive cleanup grants, but are not eligible to receive assessment grants.

EPA does not plan to conduct multiple rounds of grants each year. With more than 800 proposals to review and evaluate, in EPA's experience, a single, annual competition for assessment, revolving loan fund, and cleanup grants is the most efficient and effective way to manage the program.

Question 2: In the second panel of the hearing, Dr. Leigh discussed the development of a "sophisticated brownfields industry" of specialists in brownfields finance, insurance, and real estate redevelopment – mainly as a result of the enactment of the brownfields law.

Dr. Leigh also discusses how certain categories of brownfields – which she describes as those "with strong positive [redevelopment] values" – may not require public assistance or incentives for redevelopment, but should be ripe for redevelopment through the private marketplace.

In ranking potential brownfields grant applications, what rank/weight does EPA place on each of the ten factors outlined in section 104(k)(5)(C) of CERCLA? Please describe the process through which EPA compares legally-eligible individual brownfields site assessment and cleanup grant applications submitted in any given fiscal year, and how EPA determines which applications to fund, and which will not receive funding.

Answer: The attached table identifies the points/weights associated with the ranking criteria in the Law as reflected in the criteria in the *FY08 Proposal Guidelines for Brownfields Assessment, Revolving Loan Fund, and Cleanup Grants (Guidelines)*, which can be found at www.epa.gov/brownfields. Please note that there are additional ranking criteria that appear in the Guidelines that are not in the Law (i.e., budget, site selection process, programmatic capability, etc.) The points vary for the different grant types – assessment, revolving loan fund, and cleanup.

EPA does not compare proposals. As stated in the Guidelines, "each proposal must stand on its own merits based on the responses given to the criteria relevant to the grant type for which the applicant is submitting a proposal and must not reference responses to criteria in another proposal."

Each proposal that successfully meets all of the applicable threshold criteria for that grant type (assessment, revolving loan fund, and cleanup) is evaluated by national panels composed of EPA Headquarters and Regional staff and other federal agency representatives. In accordance with the Law, EPA selects the highest ranking proposals for award based on the funding available. There is no point value associated with the criterion, "The extent to which a grant will further the fair distribution of funding between urban and non-urban areas," as it is not something that can be evaluated. Instead, EPA takes this factor into consideration when making its final selections after having ranked all of the proposals.

Question 3: During the question and answer period of the hearing, you responded to a question on your views of a "Good Samaritan" brownfields authority by expressing concern about potential issues of "control over the property." Can you elaborate on these concerns?

Answer: EPA supports considering ways to provide liability protection to non-liable parties (also known as Good Samaritans) conducting voluntary clean ups at properties they do not own. EPA has issued guidance and model agreements to help Good Samaritans, particularly regarding former mining sites. Good Samaritans conducting voluntary clean ups should have the necessary site access and control to conduct the clean up.

Attachment 1: Ranking Criteria in the Brownfields Law and the FY08 Brownfields Assessment, Revolving Loan Fund, and Cleanup Grants

Ranking Criteria in Law	Ranking Criteria in FY08 Guidelines	Points for an Assessment Proposal	Points for a RLF Proposal	Points for a Cleanup Proposal
The extent to which a grant will stimulate the availability of other funds for environmental assessment or remediation, and subsequent reuse, of an area in which one or more brownfield sites are located.	Leveraging of Additional Resources	10	10	10
The potential of the proposed project or the development plan for an area in which one or more brownfield sites are located to stimulate economic development of the area on completion of the cleanup.	Sustainable Reuse of Brownfields	12	12	12
The extent to which a grant would address or facilitate the identification and reduction of threats to human health and the environment, including threats in areas in which there is a greater-than-normal incidence of diseases or conditions (including cancer, asthma, or birth defects) that may be associated with exposure to hazardous substances, pollutants, or contaminants.	Reduction of threats to human health and the environment	26	26	27
The extent to which a grant would facilitate the use or reuse of existing infrastructure.	Sustainable Reuse of Brownfields	12	12	12
The extent to which a grant would facilitate the creation of, preservation of, or addition to a park, a greenway, undeveloped property, recreational property, or other property used for nonprofit purposes.	Creation and/or Preservation of Greenspace/Open Space or Nonprofit Purpose	5	5	5

Ranking Criteria in Law	Ranking Criteria in FY08 Guidelines	Points for an Assessment Proposal	Points for a RLF Proposal	Points for a Cleanup Proposal
The extent to which a grant would meet the needs of a community that has an inability to draw on other sources of funding for environmental remediation and subsequent redevelopment of the area in which a brownfield site is located because of the small population or low income of the community.	Community Need	15	15	15
The extent to which the applicant is eligible for funding from other sources.	Leveraging of Additional Resources	10	10	10
The extent to which a grant will further the fair distribution of funding between urban and nonurban areas.	This is taken into consideration during the final selection of the grants. There is no point value associated with this criterion.	0	0	0
The extent to which the grant provides for involvement of the local community in the process of making decisions relating to cleanup and future use of a brownfield site.	Pre-Award Community Notification and Ongoing Community Involvement	12 and 16	12 and 16	12 and 16
The extent to which a grant would address or facilitate the identification and reduction of threats to the health or welfare of children, pregnant women, minority or low-income communities, or other sensitive populations.	Community Need	15	15	15
	Budget	10	10	10
	Site Selection Process	6	NA	NA
	Programmatic Capability	20	20	20
	Business Plan for RLF Program	NA	24	NA

Question from Representative Richardson Posed During the Hearing

Question: What is EPA doing to ensure that the grant funds are reaching communities and neighborhoods within communities that most need the Federal support?

Answer: EPA's Brownfields program is structured to provide seed money for the assessment and clean up of properties in communities with unique needs. As part of the grant guidelines ranking criteria, "community need" is specifically considered, as is impact on human, environmental and economic health, among other factors. To help ensure that the grant funds are reaching multiple areas of need, our application guidelines request information on urban and non-urban communities, including those defined by the U.S. Department on Housing and Urban Development with targeted needs (e.g., Federal Empowerment Zone, Enterprise Community, and Renewal Communities).

For the purpose of the brownfields program, EPA defines an urban community as an area with a population of 100,000 or greater. EPA defines a non-urban community as an area with a population of less than 100,000. Using these guideline criteria, from FY 2004 to FY 2007, the brownfields program awarded 610 grants to non-urban communities and 494 grants to urban communities.

From FY 2004 to FY 2007, applicants indicated a designation in one of these categories as set forth below:

FY 2004 – 85 applicants designated – 43 grants awarded
FY 2005 – 65 applicants designated – 38 grants awarded
FY 2006 – 63 applicants designated – 36 grants awarded
FY 2007 – 66 applicants designated – 29 grants awarded

THE AMERICAN INSTITUTE OF ARCHITECTS

STATEMENT OF
JEROME LESLIE EBEN, AIA
IMMEDIATE PAST PRESIDENT
AIA NEW JERSEY

"Brownfields Reauthorization"

United States House of Representatives
Committee on Transportation and Infrastructure

-

February 14, 2008
Rayburn House Office Building

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Madam Chairman, Members of the Subcommittee — good afternoon. I am Jerome Leslie Eben, AIA, an architect and planner from New Jersey and immediate past president of AIA New Jersey, the New Jersey component of the American Institute of Architects (AIA). The AIA is the professional society representing more than 82,000 licensed architects across the country. We are leaders in our communities and play a major role in strengthening America's economic vitality. AIA members work to promote a better quality of life for all Americans through good design.

I would like to first commend the committee for holding this hearing today on a topic that is of vital concern to both architects and our political leaders of urban and suburban communities across America, brownfields. My state of New Jersey is home to at least 20,000 contaminated sites, the majority of which qualify as brownfields. Essex County, where I was born, where I live, and where I work, has over 1,000 brownfields. Essex County is home to Newark, America's third city (settled in 1666) and one of the most economically challenged cities in America. It has nearly 500 certified brownfields, and probably hundreds more which sit unoccupied, contributing to Newark's blight.[1]

Bringing these contaminated industrial sites back to life through brownfields redevelopment is imperative to restoring American cities like Newark. Thus I welcome the opportunity to speak before the subcommittee today as your efforts to reauthorize the Environmental Protection Agency's brownfields program are critical to restoring countless cities and communities nationwide.

Architects throughout the nation understand the enormous significance of redeveloping these contaminated sites. As the AIA is committed to the planning, design and construction of vital, healthy communities, we are understandably concerned that brownfield sites blight neighborhoods in need of revitalization. Due to the unknown level of contaminants below ground, developers are often hesitant to take the chance of developing a brownfields site. The contamination is thus responsible for stymieing redevelopment, and limiting economic investment and job creation.

Architects view brownfields redevelopment legislation as an opportunity to redesign and enhance America's communities. As the subcommittee is obviously aware, redeveloping a brownfields site will have profound effects on the community. Transforming brownfields into mixed uses, including parks, shopping areas, affordable housing, and office buildings, can literally bring a community back to life. It increases the local tax base, creates jobs, revitalizes neighborhoods, and extends environmental protection for all citizens. The benefits of brownfields redevelopment can be seen throughout the community for years to come. It is not only an investment in a parcel of land; it is an investment in our communities, and in our people.

The AIA has long supported Congressional efforts to facilitate brownfield cleanup and redevelopment. In 2002, we strongly supported the Brownfields Act (PL 107-118), which encouraged the reuse of brownfield sites by, among other provisions, limiting and/or exempting current owners and prospective purchasers of brownfield sites from liability. This Act sparked a nationwide effort to redevelop forgotten buildings in the heart of America's cities. However, as this Committee, the AIA, and the EPA know, there are still hundreds of thousands of brownfield

sites that sit vacant or underused. Therefore the federal brownfields law must be updated to better provide communities with the necessary tools and resources to cleanup and redevelop these sites. Without this, the communities that house these sites will continue to deteriorate, causing the local residents to suffer.

The Environmental Protection Agency estimates that 400,000 to 1 million brownfield sites exist nationwide.[2] Each year, the EPA is flooded with requests from local, state, and tribal governments for assessment, cleanup, and revolving loan grants to begin the process of revitalizing these sites/buildings. At current funding levels, it is impossible for the EPA to fulfill even a fraction of the grant requests. Thus in order for the federal government to truly help facilitate the cleanup of our most downtrodden communities, the AIA believes that Congress should increase the overall funding level for the EPA's brownfields program.

Redeveloping brownfield sites produce undeniable economic benefits, demonstrating that intelligent federal spending on brownfields will provide needed economic investment for cities and communities nationwide. Since 1995, the EPA reports that it has invested nearly $800 million for the assessment and cleanup of brownfields, leveraging nearly $9 billion in environmental cleanup and revitalization dollars.[3] These varying federal, state, local, and private investments have resulted in the creation of nearly 40,000 jobs.[4] The message is clear- investing in brownfields will boost the economic vitality of our cities and communities, create jobs, and stimulate the U.S. economy. At a time when Congress is exploring ways to stimulate the economy, particularly in the housing and real estate sectors, investing in brownfields remediation

should be an important priority. Therefore we strongly urge the Committee to increase the funding levels for the program in any brownfields reauthorization legislation.

As noted above, it will be nearly impossible to provide the EPA with the necessary resources to improve even a majority of our nation's brownfields. That is why we feel it is beneficial to explore other options to finance brownfield redevelopment. One such strategy would be to provide businesses with a tax credit for undertaking the redevelopment of brownfield sites. During the first session of the 110th Congress, Representatives Stephanie Tubbs Jones (D-OH) and Mike Turner (R-OH) introduced H.R. 3080, legislation that would provide a business tax credit for 50 percent of the expenditures for the abatement or control of hazardous substances, the demolition of structures on brownfield sites, and the reconstruction of utilities at brownfield sites. The AIA strongly supports this legislation, and while recognizing that this Committee does not have jurisdiction over this particular bill, we encourage the members of this committee to work with other committees to explore a variety of strategies to facilitate the redevelopment of our nation's brownfields.

It is clear that more brownfields exist than can be redeveloped. Each year, the EPA is faced with the difficult task of choosing which projects to provide grant monies and which projects to exclude. The AIA generally supports the EPA's criteria for ranking grant applications in determining which projects will receive grant funding. However given the extensive competition among applicants for limited grant funding, we feel that including additional project qualifications to the program's grant making criteria would direct funding to the best possible projects.

One such condition is energy efficiency; the AIA believes that energy efficiency and green building standards should be a factor in determining which grant applicant receives funding. As most brownfield redevelopment projects will require a major renovation of buildings on site, (and in most cases, new buildings all together), it makes sense that these buildings be designed in an intelligent, energy-efficient way.

Architects and builders across the country are utilizing the most modern design techniques, materials, and building systems to achieve significant energy savings in new and renovated buildings. Energy efficient (or green) buildings offer countless benefits to their inhabitants. One such benefit, reduced energy use, will lessen monthly utility bills for businesses and residents. And given that many brownfields are located in low-income areas, reduced energy costs for future building occupants should be a factor in determining which projects receive grant monies.

Furthermore, aside from the economic and community restoration benefits of brownfields redevelopment, reclaiming contaminated sites helps improve the natural environment. Once the brownfield site is cleaned up, it is counterproductive to then build an energy-guzzling building on that very same site, especially when the costs of building green are often negligible.[5] Thus we strongly believe that brownfield redevelopment projects that will result in energy efficient green buildings should be given preference as the EPA chooses which projects to finance.

When this committee attempted to reauthorize the brownfields law during the 109th Congress, the Committee included language requiring the EPA to include the use of green standards and energy efficiency as criteria in grant making. We urge the Committee to once again go this route and make sure that our nation's brownfields are redeveloped in the smartest, most energy efficient way possible.

America's architects are committed to designing healthy communities. In order to redevelop some of the most economically depressed neighborhoods, the federal governments' brownfields program must be expanded as this will facilitate the cleanup of blighted areas across America. The AIA strongly supports the Committee's efforts to improve the brownfield program and I welcome any questions the subcommittee may have. Thank you.

---

[1] New Jersey Department of Environmental Protection (http://www.nj.gov/dep/srp/kcs-nj/essex/).

[2] U.S. Environmental Protection Agency, Brownfields and Land Redevelopment (http://www.epa.gov/swerosps/bf/about.htm).

[3] CRS Report RS22515, *Brownfields Issue in the 110th Congress* by Mark Reisch.

[4] House Report 109-608, *Brownfields Revitalization Activities and State Response Programs,* House Committee on Transportation and Infrastructure, July, 2006.

[5] http://www.davislangdon.com/USA/Research/ResearchFinder/2007-The-Cost-of-Green-Revisited/ *The Cost of Green Revisited,* by Lisa Fay Matthiessen and Peter Morris, 2007.

AIA New Jersey

The New Jersey Society of Architects
A Chapter and Region of the American Institute of Architects

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February 28, 2008

Mr. Michael Brain
B-376 Rayburn House Office Building
Washington, DC 20515

Dear Mr. Brain:

In response to the Hon. James L. Oberstar's question regarding real-world examples of the benefits and potential costs of implementing energy efficient and green building technologies I turned to Jason Kliwinsky, AIA, LEED AP who serves as AIANJ's current First Vice President, and is our resident expert on everything green.

Jason had the following to offer:

1. Renewable Energy Systems:
    a. Photovoltaics are roughly $7K-$8K/KW installed depending on economy of scale. Their expected payback periods in NJ with the incentives available are approximately 10 years.
    b. Wind is less expensive than solar at around $6K/KW installed, but the right location must be found and here in NJ we have some strong zoning ordinances that would frown on 100 ft. tall wind towers.
2. HVAC:
    a. This really depends on the building envelope, the structures orientation and the type of system. On average, a $30/sf budget for an institutional/commercial building is a good budget but you can go far less expensive and with more conventional building systems if you build a better envelope (tighter building enclosure)
    b. Types of technologies to consider are natural ventilation, passive heating, displaced ventilation, and thermal storage, which are a wash in first cost.
    c. Jason firm has been involved with all of the above mentioned systems on various building types including the School of the Future in PA, Morris County School of Technology in Denville, NJ and Howell Schools in Howell Twp, NJ. We could arrange for a tour of these and other buildings with innovative HVAC systems for members of the committee.

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d. As simple as it sounds, the orientation of the building (ideally for a southern exposure) can also greatly affect the heating and cooling loads as well as the available day lighting of the building. HVAC and lighting account for 75% of all building energy use. Good design starts with the proper orientation and there is no cost for that typically with the results of huge savings

3. Building Envelope:
    a. Here there are a lot of options and this is the smartest place to spend construction dollars. Walls and windows are the longest lasting , fixed part of a building. HVAC systems get old, outdated and breakdown. Upfront costs for better building materials are often offset with reduced HVAC system costs and expected operational savings.
    b. Insulation: spray foam or SIP construction can increase a wall R value to 24 easily with a small premium that pays for itself in the first couple of years of the building's operation. Air infiltration is also reduced dramatically to less than .5. SIP panel construction is no more expensive than conventional wood frame construction.
    c. Windows: the cost to jump from a standard vinyl window to a better insulation fiberglass or wood window is small, but the impacts can be huge. Windows are typically 50% of the HVAC load in a building. Marvin, Pella and other window manufactures make affordable energy star rated products. An R3 or better should always be sought.
    d. Roof: code requirements vary depending on building type, but specifying R30 to R38 or better insulation is typically the standard
4. Green Building Products:
    a. FSC Wood, recycled content materials usually found in steel, concrete, flooring, carpet, ceiling title, gypsum wall board, local materials within a 500 mile radius and materials made from rapidly renewable sources like cork or bamboo are all considerations.

There are a number of project case studies available with a variety of materials and systems out there. AIA COTE's top ten green buildings is a good place to start as their submissions typically include this detailed information. You and members of the committee can also go to www.usgbc.org or www.buildinggreen.com for more information and case studies.

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There is a great study on costing green by Lisa Fay Matthiessen and Peter Morris of Davis Langdon, entitled Costing Green: A Comprehensive Cost Database and budgeting Methodology that I have copied and attached to this letter.

In addition to the above, please inform the Congressman that he or members of his staff can call Tom Bergan, a Program Manager at AIA in Washington who will be glad to help him further with any additional questions, relating to promoting green architecture. They can reach Tom at (202) 626-7507 or via E-mail at tbergan@aia.org.

Sincerely,

Jerome Leslie Eben, AIA, Past President, AIA New Jersey
C: Seth A. Leeb, AIA, President of AIA New Jersey
Jason Kilwinski, AIA, LEED AP, First Vice President AIA New Jersey
Tom Bergan, Program Manager, AIA

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Costing Green: A Comprehensive Cost Database and Budgeting Methodology

July 2004

Lisa Fay Matthiessen
Peter Morris

DAVIS LANGDON

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Introduction

The first question often asked about sustainable design is: what does 'green' cost, typically meaning does it cost more? This raises the question: more than what? More than comparable buildings, more than the available funds, or more than the building would have cost without the sustainable design features? The answers to these questions have been thus far elusive, because of the lack of hard data.

This paper uses extensive data on building costs to compare the cost of green buildings with buildings housing comparable programs, which do not have sustainable goals. The foundations are also laid to analyze incremental costs over starting budgets, and to compare the costs for different specific measures and technologies. Additionally, we present a budgeting methodology that provides guidelines for developing appropriate budgets to meet the building program goals, including sustainability goals.

This report looks only at construction costs. It is true that the costs and benefits of sustainable design can and should be analyzed holistically, including operations and maintenance implications, user productivity and health, design and documentation fees, among other financial measurements. However, it is our experience that it is the construction cost implications that drive decisions about sustainable design. By assisting teams to understand the actual construction costs on real projects of achieving green, and by providing a methodology that will allow teams to manage construction costs, we hope to enable teams to get past the question of whether to green, and go straight to working on how.

From this analysis we conclude that many projects achieve sustainable design within their initial budget, or with very small supplemental funding. This suggests that owners are finding ways to incorporate project goals and values, regardless of budget, by making choices.

However, there is no one-size-fits-all answer. Each building project is unique and should be considered as such when addressing the cost and feasibility of LEED. Benchmarking with other comparable projects can be valuable and informative, but not predictive. Any assessment of the cost of sustainable design for a particular building must be made with reference to that building, its specific circumstances and goals.

Basis of Analysis

A Measure of Sustainability

The United States Green Building Council (USGBC)'s Leadership in Energy and Environmental Design (LEED®) rating system is useful for gauging level of sustainability, or 'greenness' in a building. Thus, in order to answer the question of the cost of sustainable design, we can look to the costs involved in meeting each level of LEED certification when compared to non-LEED buildings.

The USGBC developed the LEED rating system, "a voluntary, consensus-based national standard for developing high-performance, sustainable building[1]" as a measure to assess the sustainability of buildings in the United States. Using a point system, project teams identify sustainable design measures that can be incorporated into the project, and self-evaluate their success in doing so. If the building meets certain qualifications, it is recognized, with certification levels of Certified, Silver, Gold, or Platinum. The highest levels of certification (Gold and Platinum) are intended to require significant effort and ingenuity on the part of the project owners and designers, challenging them to push the boundaries and create highly efficient, sustainable buildings to serve as examples, and push market transformation.

LEED provides a means to actually measure sustainability using accepted standards and methodologies, and often using cost and quantities as determinants. It therefore lends itself to statistical analysis. Also, LEED has effectively become the accepted standard for measuring green design in the United States; most project teams have the basic knowledge allowing them understand the implications of the analysis undertaken here.

Gathering the Information: The Davis Langdon Knowledgebase

As a cost consulting company, Davis Langdon analyzes the detailed costs for hundreds of projects each year. Each of these projects contains important information that can be used to compare buildings and help determine costs for future buildings. Corporate experience over the past thirty years includes estimating work for thousands of projects, on every continent (including Antarctica)

One of the main focuses of Davis Langdon's research department has been to establish an internal knowledge database to serve as a clearinghouse of cost information for all projects estimated within the Davis Langdon offices. At the time of this report, the database contains information from nearly 600 distinct projects in 19 different states, encompassing a wide variety of building types, locations, sizes, and programs. As information from new projects is added to the database, the number of building programs and locations represented will continue to increase.

This database provides an opportunity to evaluate a large number of projects across a range of project types. We track the construction costs and design parameters of all of our projects. This includes quantitative measures of the buildings, as well as specific sustainability measures and LEED points targeted, or achieved, by the building. We also track detailed cost and program data and design narratives.

The most common program types for projects in the knowledgebase are (in no particular order):

- Universities and Colleges (academic buildings)
- Classrooms (higher education and K-12)
- Laboratories (academic and commercial)
- Offices
- Hospitals
- Libraries
- Multilevel Parking Structures (underground and above ground)

[1] LEED http://www.usgbc.org/leed/leed_main.asp

- Theaters
- Gymnasiums, Multipurpose rooms, and Auditoriums
- Sports Facilities
- Museums and Art Galleries
- Animal Care Facilities (such as shelters and vivariums)

In addition to these, the knowledgebase contains cost data for courthouses, visitor and community centers, police and fire stations, emergency operation centers, hotels, convention centers, retail stores, restaurants, apartments and student housing, and many other program types.

While the database was built to store information about each project such as estimate phase and date, inclusions and exclusions, and construction conditions, the main focus of the knowledgebase centers on the collection of component cost information for the projects. This data allows us to run comparison reports for total costs as well as individual component costs, across program type, building size, or project location.

Customized search functionality built into the database provides the ability to specify selection criteria, such as program type or location. Once criteria are specified and the search is run, a list of projects is displayed, which can then be sorted, selected or discarded as needed. Once selected, the data is then extracted into a side-by-side comparison within a worksheet, listing control quantities and component costs, and displayed as total numbers and as cost per square foot. If desired, design development or cost contingencies stored with project information can be applied to all costs as they are extracted. Once the data is extracted, further statistical or graphical analysis can easily be performed.

In addition to cost data, the knowledgebase also stores point-by-point information about LEED for applicable projects. For each point that is sought the database stores credit identity, cost for the point (where applicable), level of point achievement, and any notes that may be necessary to provide explanation for the point attempted or achieved. This information is stored to allow quick calculations of total points per project, as well as to provide statistical analysis on which points projects are or are not seeking.

Feasibility and Cost

Point by Point Analysis

The LEED rating system comprises 7 prerequisites and 69 elective points, grouped into 6 categories. Of these, some will result in no additional cost to a project, while others may result in an identifiable cost. When considering LEED for a building project, it is crucial first to determine which points are achievable by the project. From there, an understanding of the potential costs of each achievable point can be developed.

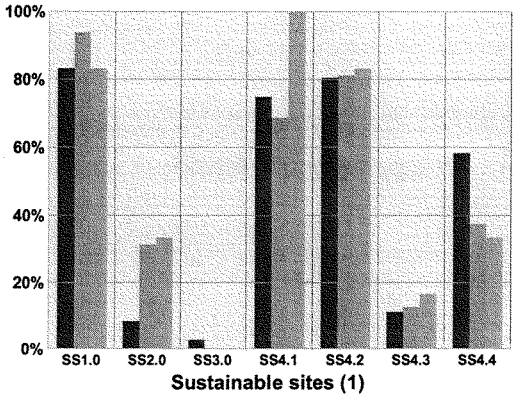
The following section discusses feasibility of each LEED point, based on the points either earned or being attempted by the projects studied for this report.

The graphs shown in each category discussion show the percent of projects that have indicated that they expect to qualify for those points. For the purposes of this paper we determined that a point would be counted if it was specifically included in the design and budget for the project; where a point appears to be wishful only, it has been excluded. Additionally, feasibility is divided by LEED category. The green bars indicate those projects aiming for Certified; the silver bar is for Silver ratings, and the Gold bar encompasses both Gold and Platinum projects.

Following each graph is a discussion of the more salient implications. Further study of the links between cost and feasibility is underway and will be made available at a later date.

Point percentages were calculated based on LEED checklists obtained from 61 LEED-seeking projects selected from our knowledgebase.

Sustainable Sites



1.0 Site Selection
2.0 Urban Density
3.0 Brownfield
4.1 Mass Transit
4.2 Bike racks/showers
4.3 Refueling Stations
4.4 Parking / Carpool

It is our experience that building project sites are rarely selected for their LEED-related impact. The first four points have to do with site selection, urban density, brownfield reclamation, and proximity to mass transit; the ability of a project to get any of these points is usually unconnected to whether or not the project has a LEED goal.

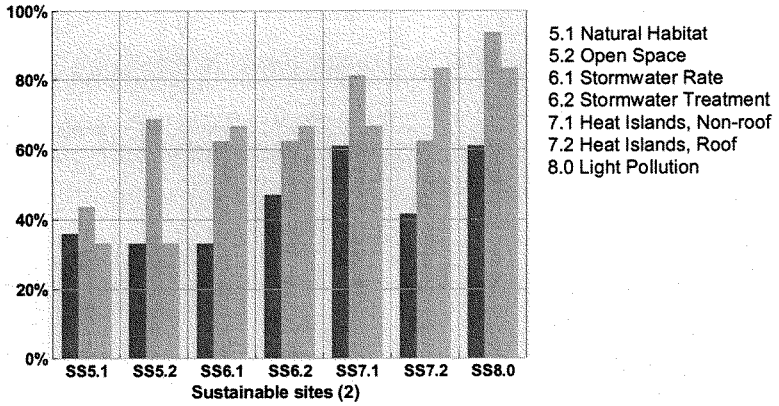
One of the more prescriptive LEED points, Site Credit 4.2 requires the provision of bike racks and showers. This is a relatively inexpensive point with low design impact; most projects target this point from the start.

Site Credit 4.3 similarly has relatively low cost and design impacts; electric refueling stations can be added almost any time during design and construction. However, electric cars are not the future trend once expected, and there are no other market-ready options available. While this

point can be awarded if an owner provided a fleet of alternatively fueled vehicles, our database contains only a handful that have taken this route.

Most projects that achieved Site Credit 4.4 did so by making minimal design changes – adding striping and signage for car and vanpool parking. Few projects actually reduced total parking in order to achieve this point. This is therefore a low cost and design impact point.

Like all the Prerequisites, Erosion and Sedimentation Control, is not shown on the chart. In terms of cost, the standards and technologies are standard to most projects, or easily achieved at minimal added cost.



Unlike site selection, site design is often modified to meet LEED criteria. In general, most Certified projects achieve 5 or 6 of the total 14 available site points, with the higher LEED levels achieving 9 or more.

Credit Site 5.1 requires either the minimization of site construction – usually achieved only where there is minimal construction cost implication, i.e. where substantial excavation is not required, or by restoring half of the non-building area to natural habitat. Projects in our study achieved this point typically by replacing a portion of plant materials with native species. Credit 5.2 is also typically achieved at minimal cost or not achieved at all; we have not seen projects actually reduce their development footprint by any appreciable amount. Rather, projects have realized that open space is indeed available and have obtained commitment from the owner.

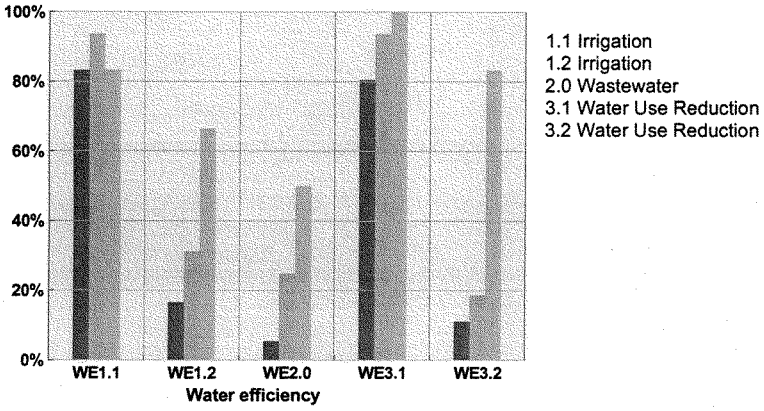
Methods used to slow stormwater flow, and to treat stormwater, are linked to LEED Site Credits 6.1 and 6.2. Site size plays a significant role in whether or not the stormwater-related points result in additional cost. Swales tend to have a minimal cost impact, retention or detention ponds are more expensive, and installation of stormwater collection tanks can be very costly. Projects on large sites tend to install swales or ponds, while buildings on limited sites, usually urban, use collection tanks and filters to meet this point. In general, projects used the less costly approaches, or did not attempt the rate and quantity point, choosing to target treatment only using filters. Several Silver and Gold projects used the more costly underground tank approach to the first point; these projects also capitalized on opportunity for synergies between this point and other irrigation and water use reduction points.

Most LEED projects target the first heat island effect point, SS 7.1. This is most often achieved by changing the color of concrete paving and adding shade elements for relatively low cost, with design standards being the only impediment.

Specification of high-emissivity roofing for the second point can be costly. However, design impacts are minimal and the change relatively easy to make if undertaken early enough. We have seen few projects attempt this point via a green roof. This may have a little to do with cost, but probably has more to do with perceived structural and maintenance issues, more substantial aesthetic impact, and added design effort.

Most projects attempt Light Pollution Credit, SS C8.0. However, many will not achieve it. Clients and code officials often perceive this point to be at odds with security requirements. In addition, project teams may be dissuaded because the standards cited are not always well understood and the required documentation time consuming. Hard costs are reasonable, typically having to do with the placement of more light standards.

Water Efficiency



Irrigation point WE 1.1 is typically easily achieved by designing high efficiency irrigation, at minimal cost, although this can be difficult to achieve if the landscaping includes turf grass. (The use of turf grass can also preclude attainment of Site Credit 5.2; it is often impossible to filter phosphorous used in fertilizing lawns to the standard required for the point.)

While the first irrigation point is high on the list of points to attempt, the second is less popular. This is often because the decision to install no permanent irrigation requires stronger commitment than many project owners feel. Most projects that achieved this point by using reclaimed water did so using water supplied to the site by the local water district. Costs were therefore low. Where reclaimed water was available, project teams often elected to bring the water into the building for use at sewage conveyance, thus achieving several more points.

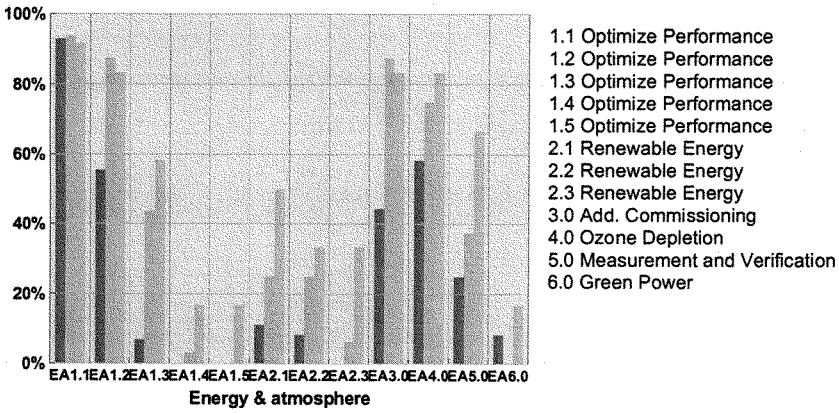
The preponderance of projects that achieved Water Credit 2.0, the wastewater point, did so by installing waterless urinals and low-flow toilets. While there is usually no cost impact to the use of the urinals, there may be difficulty in implementation. This is still unfamiliar technology in many areas, and resistance from operators and code officials can be a stumbling block to achieving this point. Feasibility is therefore often a larger concern than cost.

The installation of low flow fixtures and other standard water saving devices such as faucet aerators or sensor flow controls in public bathrooms facilitates achievement of the water use reduction point WE 3.1. The second point is often more difficult to achieve and is usually only attempted by those projects reaching for a higher level of LEED certification. This point is often achieved in conjunction with Credit 2.0 by the use of waterless urinals.

In general, Certified and Silver projects tended to achieve the first irrigation and water use reduction points, using standard technologies at no additional cost. Gold and Platinum projects tended to achieve all 5 water points, typically at reasonable added cost, but with significant

commitment. Further analysis will look at the synergies between these and other systems and site points.

Energy and Atmosphere



In many cases, projects can earn the first two to three energy use reduction points with relatively little changes to the existing design approach. local code requirements often establish minimum levels of efficiency which allow a project to qualify for some of these LEED points very little additional effort and cost. However, as the graph shows above, as energy use reduction requirements rise, the difficulty in reaching those levels also rises, and the last few energy use points are usually only attempted by projects hoping to qualify for the higher levels of LEED. These points require a high level of integrated design and/or innovative technology. Costs range widely; some projects added significant costs and others actually save money. In every case, an integrated design process and early commitment to sustainable design enable high achievement.

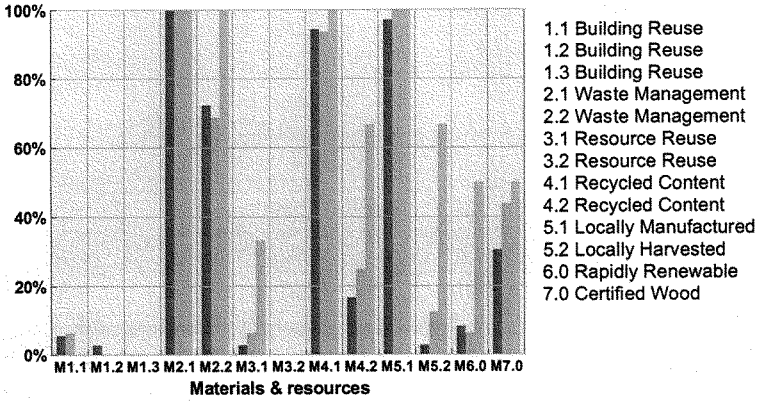
On-site generation of renewable energy – almost always photovoltaics – has a substantial construction cost impact. However, installation of these systems usually provides a long term cost savings. Additionally, incorporating renewable energy into design will earn the project at least one additional energy use reduction point. Many projects offset costs through available incentives, integration of photovoltaics into architectural features, and overall reduction of energy use requirements.

The additional commissioning point represents a reasonable added cost as compared to the substantial costs that come with attaining the commissioning prerequisite. Point feasibility is more often predicated on design team intent than on cost; this is one of the few LEED points that literally requires early commitment.

Many projects attempt to qualify for the additional measurement and verification point. However, this point requires a higher level of monitoring than provided by most Building Control Management Systems, and so will result in substantial added costs. Projects attempting this point typically have fairly complex systems, and users/operators that are likely to actively use the resulting data. In our study, this point was targeted by laboratories and larger buildings on campuses with a strong facilities department. Many of these projects use the DDC for user education as part of an innovation point.

The acquisition of offsite-generated renewable energy is typically considered an operations rather than first cost, and is usually reasonable.

Materials and Resources



Certified and Silver projects tend to achieve 4 of the 13 points in this category, while Gold and Platinum achieve 8 or more.

Few projects incorporate the Building Reuse points. It can be difficult for remodeling projects to achieve other points, especially site and energy use reduction, without a significant increase in cost. We find, therefore, that few remodel projects seek to pursue LEED certification. These points in themselves do not necessarily add cost to a project; it is the impact of the cost of achieving the other necessary points that tends to make these points uncommon.

Construction waste management is achieved at some level on almost every project. Costs vary greatly depending on project location and availability of established construction waste recycling programs. While urban projects are typically able to achieve these points for minimal cost impact, rural projects may see cost greater impacts. Additionally, waste management is greatly dependant on how familiar or comfortable the general contractor is with such practices. Cost impact is therefore extremely dependent on contractor commitment. Thus, in order to understand the potential cost impact of achieving these points, we must not only be familiar with the programs available within the area, but also with the ability and willingness of the contractors to comply.

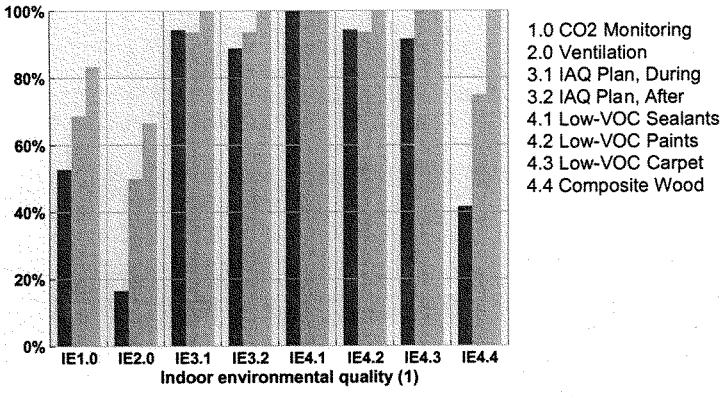
The use of recycled content is usually not difficult for most projects, at minimal or no added cost. Steel framed buildings usually qualify for at least one point for recycled content with no additional cost impact. The balance of materials required can be made up in standard materials.

Use of locally harvested and/or produced materials is usually neither difficult nor costly for most projects to achieve. By comparing the point expectations of our study projects with the actual achievements of the current USGBC certified projects, we find that more projects actually earn these points than are anticipated in our study. This is because the difficulty of these points lies more with the documentation than with the actual specification; once the contractor develops a documentation procedure, meeting the points becomes relatively straightforward. As with recycled content, these points are typically earned using standard materials.

Most projects are unable to meet both the rapidly renewable materials and reused materials points. While many applicable materials tend to be high-end finishes and therefore costly, projects tend to lost these points more because it is quite difficult to achieve the required percentage of building materials, than because of cost.

Certified wood is usually more expensive than non-certified wood, and prices tend to fluctuate. Knowledge of sources and prices is needed to establish actual cost impact on any individual project.

Indoor Environmental Quality



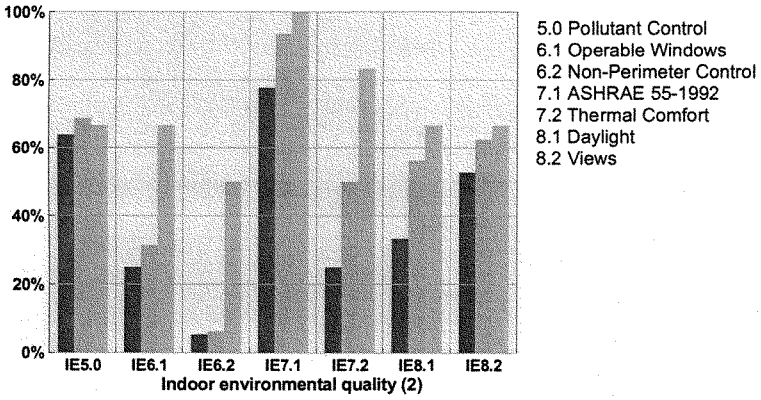
Of all the categories, the points in the Indoor Environmental Quality category tend to be the most often sought. This is likely because so many of these points are already incorporated into normal designs, due to building codes and availability of materials.

Establishing an air quality plan during the construction process is high on the list of points projects attempt to achieve, but fail to qualify for. This is because this point requires significant coordination and management on the part of the contractor and all members of the construction crew, as well as a strong commitment by all members of the construction crew to abide by the rules. In order to qualify for these points, construction must be carefully planned and sequenced, and crew members must be carefully trained and monitored to ensure that all criteria are met. The direct cost of this point is relatively low, but the impact on the contractor's bid can be very significant if the contractor views this as onerous and undesirable.

The feasibility of the second air quality point depends a great deal on the climate. In hot, dry areas such as most of California a two week flush-out with outdoor air is quite feasible as long as it is planned into the construction schedule. In areas where there is high humidity, however, this point is simply not feasible, since a two week flush-out with outdoor air in wetter climates is more likely to expose the interior of the building to mold and other problems.

Neither of the indoor air quality points needs to have a cost impact on a project if the project owners and construction team are committed. However, not all crews are willing or able to maintain the level of management needed to ensure the performance necessary to meet these points successfully. These points may seem easy to achieve, but often turn out far more complicated, and thus less feasible, than anticipated.

The materials points in this category are usually fairly easy to achieve. In many cases, local or regional ordinances may already require that projects meet those standards. For example, in California, buildings are required to meet standards which allow projects built under those rules to qualify for most – if not all – of the materials points without any impact to cost or design. Where local or regional regulations do not already establish the use of low emitting materials, making use of these should have only minimal – if any – impact on cost, as these are usually widely available.



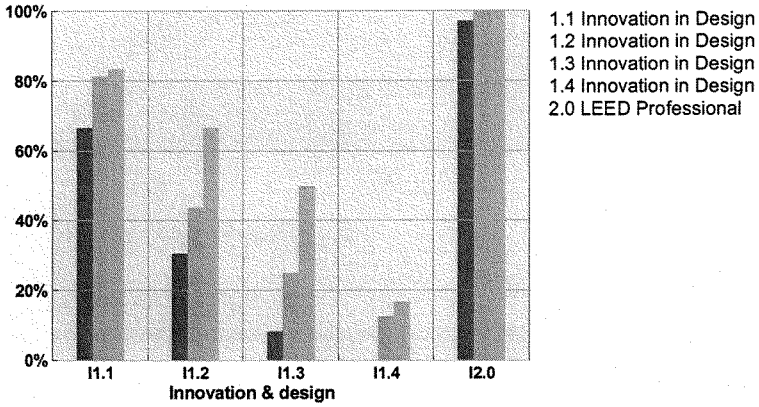
The pollutant control requirement can usually be met with little added cost, although the requirements do add some exhaust ductwork and drainage.

Operable windows have a fairly low direct cost premium over fixed windows, but often have a significant added cost when combined with a traditional air conditioning system. Owners often require control interlocks between the air conditioning and the windows to ensure that the air conditioning is not running while the window is open. This can add controls, zones and ductwork, leading to a premium cost much greater than the cost of the windows. Operable windows may also simply be impractical or undesirable; laboratories and healthcare facilities can not have operable windows, owners may have a concern for the security of occupants or contents, or the climate may simply not lend itself to operable windows for much of the year.

Non-perimeter control can be much more difficult to achieve, since it requires control by individual occupants. Few buildings have systems geared to individual control, and adding such systems can significantly increase the number of controls and zones. Raised floor systems are the most common and economical way of achieving this point.

Many projects attempt to qualify for the last two points in this category – daylighting and views. However, these points are calculated based on mass and depth of the building and light actually entering the interior spaces, making these points are more difficult to achieve than most people realize. We expect that this will improve as design standards change over time and the benefits of daylighting and views become more desired. Because these two points have to do with mass and depth there is no feasible way to assign a single line-item cost to either.

Innovation and Design



The Innovation and Design category is a catch-all section, designed to allow projects to earn points for items that may not fall into any other designated point. Innovation points can be achieved by either:

- Going over and above the required level of a specific point, such as establishing higher reductions in estimated energy or water use than specified by those points.
- Incorporating something not already addressed into the design. In the past this has included things such as providing educational signage in the building which points out the sustainable features, or making use of other innovative technologies, such as straw bale or rammed earth construction, fuel cells, and so on.

Most projects achieve at least one innovation point. By and large, projects are doing so at minimal added cost by simply capitalizing on measures already included in the project design, or by pursuing one of several previously defined, low-cost innovation points. The former might include exemplary performance in water use reduction or construction waste management – both essentially already paid for in the base points. The latter might include green housekeeping or educational signage, both reasonable cost adds.

The expected rates shown above are low compared to actual rates of Certified projects: many of the projects in this study may find themselves achieving points not currently targeted.

Virtually all projects are achieving the point for including a LEED Accredited Professional, at no added construction cost.

As time goes on and the sustainable techniques listed in the LEED points become more mainstream we expect that concepts that were once considered innovative will eventually be incorporated into standard design.

Factors That Influence Feasibility and Cost

As already touched on briefly in the overview of the LEED points, there are a number of factors which can greatly influence the cost of green (or the ability to achieve certain points). These include:

- Demographic Location
- Bidding climate and culture
- Local and regional design standards, including codes and initiatives

- Intent and values of the project
- Climate
- Timing of implementation
- Size of building
- Point synergies

Demographic Location

The location of the project can have a significant impact on the cost and feasibility of certain of the LEED points. To demonstrate the implications of simply siting a building in a rural versus an urban setting, we took a newly built library which achieved a LEED Silver rating. It was built in the middle of a large city – an urban setting. To examine the effects of site selection on cost and feasibility we 'moved' it to a rural setting and looked to see what might have had to change.

	rural	urban
Site Selection		✓
Urban Redevelopment		✓
Alternative Transportation, Public Transportation Access		✓
Reduced Site Disturbance, Protect or Restore Open Space	✓	
Reduced Site Disturbance, Development Footprint	✓	
Stormwater Management, Rate and Quantity	✓	$$$
Stormwater Management, Treatment	✓	$$$
Water Efficient Landscaping, Reduce by 50%	✓	
Water Efficient Landscaping, No Potable Use or No Irrigation		✓
Construction Waste Management, Divert 50%		✓
Construction Waste Management, Divert 75%		✓
	5	6 to 8

This chart lists the LEED points which would be most impacted by the type of site selected for the building. As we can see, the urban redevelopment and alternative transportation points would only be available in the urban setting. However, the rural setting would allow the project to earn a few of the other Site Selection points which the urban setting could not. These included the points which involve open space and protection of natural habitat. The rural site would be more likely to include larger areas of green space around the building. This would improve the ability of the project to earn the stormwater management points, since the larger areas provide an easier and less expensive alternative to capturing and treating stormwater. While in the urban site there was cost associated with stormwater management, due to the lack of space and thus the need to install detention tanks, a larger, rural setting provides space for low-cost retention ponds, as well as more landscaping to both filter and slow the rate of the stormwater runoff.

The ability of the project to earn the construction waste management points is also clearly impacted by the selection of the urban versus the rural setting. In urban environments there is more likely to be well-established construction waste recycling or reclamation programs. Additionally, contractors are more likely to be familiar with these practices.

Bidding Climate

Perhaps the most significant single factor in the cost of sustainable design is the bidding climate, or the response of bidders to the green requirements in the contract. There are some measurable direct costs to be borne by the contractor. These include the cost of documentation of the material credits, the application of the construction indoor air quality credits, and some of the schedule impacts of post construction building flush-out. These, however, are relatively low costs.

A far greater impact comes where the contractor perceives the sustainable requirements as onerous or risky. Below are clauses from two actual construction contracts:

The Contractor shall:

- "ensure that the Project achieves LEED"
- "deliver a finished Work Product that assists the Owner in achieving a LEED green building rating of Certified"

The first of these clauses transfers the liability for achieving LEED certification to the contractor. The second engages the contractor in the process, seeking cooperation rather than obligation. Clearly the contractor, when faced with the former, will include a greater risk contingency into their bid, if they are willing to bid at all. In order to manage the impact of sustainable design on bid response it is necessary to write reasonable specifications and contracts, and to engage the contractor in a collaborative process, possibly even including training and bonuses for compliance, rather than transferring risks and applying penalties for failure.

In many areas where bidders are unfamiliar with building sustainable projects, they are likely to be more wary. This has two effects: firstly bidders are inclined to add contingencies or risk premiums to cover the perceived risk; secondly, the bid pool diminishes, leading to poorer competition and higher bid prices. As bidding communities become more familiar with sustainable buildings, the risk premiums decrease, and the competition increases, reducing or eliminating the green premium.

The cost impact of bid climate is more pronounced when bidders have plenty of alternative work. When work is scarce, bidders are more willing to discount the risk in order to remain in business. For this reason it is essential to understand the bid community and the work availability.

California currently has one of the highest levels of LEED-seeking buildings in the country. Thus, it makes sense that more contractors in California are familiar with sustainable design, and thus more contractors are willing to bid on green projects. However, the recent high levels of construction growth has created an atmosphere where bids may still be higher than expected, because there is so much other work available for the contractor that they may be less willing to bid (or else they will bid high) on projects they consider 'difficult'. This might translate into higher bids on LEED Gold and Platinum projects.

As opposed to California, many other parts of the country have experienced a slower recovery from the economic downturn of the past few years. The New York and New Jersey region, for example has had less growth, and in fact contractors are struggling to return to work. Contractors are thus more willing to take on sustainable design projects, even if they might be considered more 'difficult' than non-green projects.

As we can see, there needs to be an understanding of the balance between the construction market in the area and whether or not the local environment supports, and is familiar with, sustainable building. Attempting to build green in an area where sustainable design is not a familiar concept, and where contractors are unwilling to bid, can significantly impact the cost of the project.

Intents / Values

Another one of the key factors in determining the feasibility of incorporating sustainable design into a building is the established intent and values of the building owner and project team. The best and most economical sustainable designs are ones in which the features are incorporated at an early stage into the project, and where the features are integrated, effectively supporting each other. If the owner has no expressed desire to incorporate elements of sustainable design, it becomes more difficult to incorporate the necessary modifications into the design.

This underscores the importance of understanding the actual intents and desires of the owner and the design team. If they are not actually serious, or are unwilling to invest the time and cooperation that may be needed, it will be much more difficult to reach the desired LEED level. This is also likely to impact cost to build.

Climate

The climate where the building is to be constructed can play a key role in whether or not the project can actually achieve certain LEED points. It can also impact the cost to achieve particular LEED ratings.

To study how the climate can impact cost and feasibility, we took the design for the Bren School (a laboratory building which achieved LEED 1.0 Platinum) on the University of California, Santa Barbara campus, and placed it into five hypothetical settings, each with its own, unique climate issues. The design, as it was built in Santa Barbara, was costed for each climate to determine the impact of each. For the purpose of this study, we chose to minimize the variables by keeping the base building design constant, as opposed to optimizing the design for the different climates.

	Platinum*	Gold*	Silver*
UCSB	7.8 %	2.7 %	1.0 %
San Francisco	7.8 %	2.7 %	1.0 %
Merced	10.3 %	5.3 %	3.7 %
Denver	7.6 %	2.8 %	1.2 %
Boston	8.8 %	4.2 %	2.6 %
Houston	9.1 %	6.3 %	1.7 %

Costs are shown as a percentage of starting budget, and indicate additional cost necessary to reach each specified level of LEED.

The climates selected were the following:

- Mild Coastal – Santa Barbara and San Francisco
- California Central Valley – Merced
- Gulf Coast – Houston
- Northeast Coast – Boston
- Rocky Mountains - Denver

It will be noted that not only are the premiums different by location, but also, there is quite a wide variation in the steps between levels. For example, Silver in Houston has a lower premium than Merced, but Gold has a higher premium. Some of the variations in premium relate to specific issues arising from the method of calculation. Since the LEED point is based on cost of energy saved, the relative cost of heating and cooling energy in each market can have an impact on the effectiveness of energy economy measures.

This analysis underscores the need to understand the climate and the energy costs where the building will be located. Yearly temperature fluctuations and levels of humidity can play a significant role in determining cost for mechanical systems, as well as whether or not the project may be able to use passive heating or cooling instead of relying on a mechanical system.

Feasibility and Cost - Conclusion

As we can see, there are a number of factors which can have a significant impact on both the ability to achieve specific LEED points, and on the cost to build a sustainable building. When considering cost and feasibility for pursuing LEED certification for any building, it is extremely important that you:

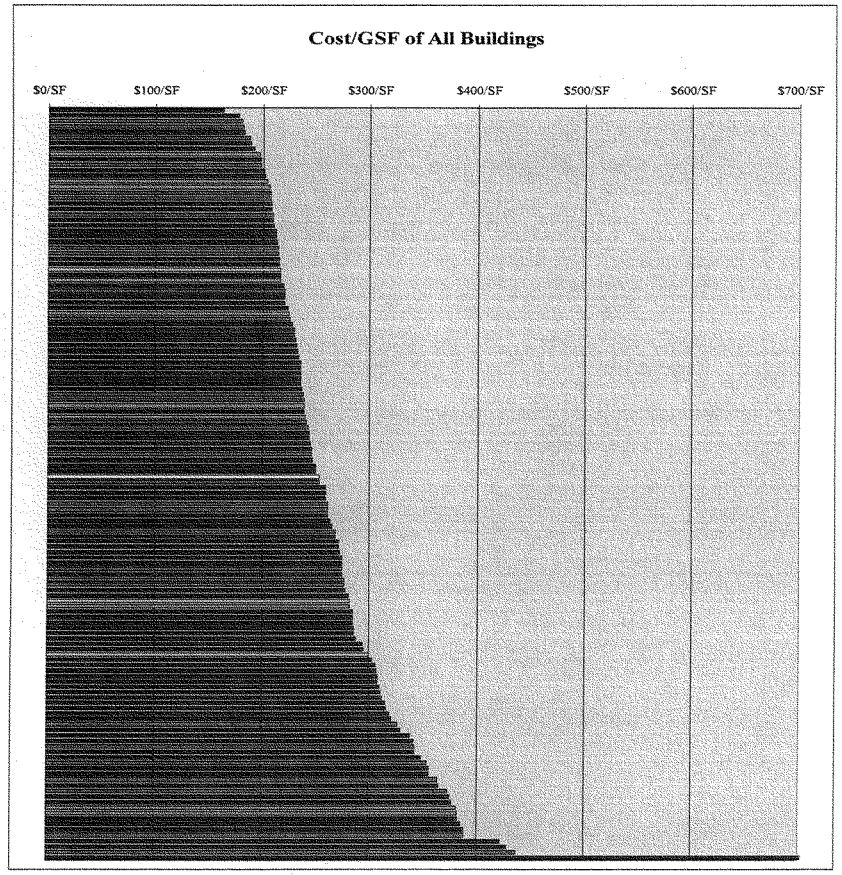
- Understand the feasibility of each point for your project
- Understand the factors affecting cost and feasibility

Having a comprehensive understand of these factors allows an owner to more accurately determine potential costs, and to make better choices as to which LEED points a particular building should pursue.

Analyzing the Data – Cost Analysis of Similar Buildings

In this study, our goal was to compare construction costs of buildings where LEED certification was a primary goal to similar buildings where LEED was not considered during design. We selected projects from our extensive database of cost information which were designed with a goal of meeting some level of the USGBC's LEED certification. 61 buildings were selected which met this criteria. Of these, the most common three program types were libraries, laboratories, and academic classroom buildings – these categories made up 45 of the buildings studied.

We compared the green projects in the three largest categories to buildings with similar program types. 138 buildings were studied – 93 non-LEED and 45 LEED-seeking. All costs were normalized for time and location in order to ensure consistency for the comparisons. It is important to note that the only distinction between the buildings was the intent to incorporate sustainable design in order to achieve LEED rating. The non-LEED buildings all would have earned some LEED points by virtue of their basic design, but sustainability had not been the intent. We will look at the differences between LEED-seeking and non-LEED a little later.



The graph above compares the cost per square foot for all buildings in our study, from lowest to highest. Blue lines show non-LEED buildings, green lines indicate buildings attempting LEED Certified, silver lines indicate those seeking LEED Silver, and gold lines indicate those buildings seeking to achieve either LEED Gold or Platinum.

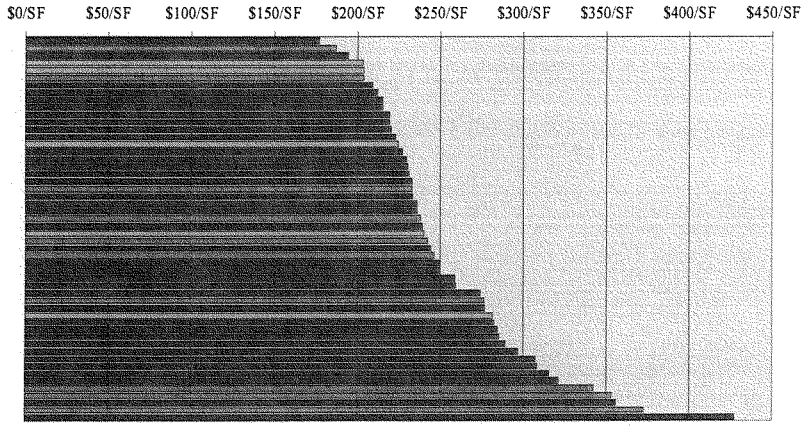
In a comparison between all projects – LEED-seeking versus non-LEED, something interesting came to light: the cost per square foot for the LEED-seeking buildings was scattered throughout the range of costs for all buildings studied, with no apparent pattern to the distribution. This was tested statistically using the t-test method of analyzing sample variations. This test indicated that there was no statistically significant difference between the LEED population and the non-LEED population. In other words, any variations in the samples, or the sample averages, were within the range to be expected from any random sample of the whole population. It is important to note, however, that the standard deviation in dollars per square foot cost for each category (LEED-seeking and non-LEED) was quite high, since there is such a wide variation in building costs.

Academic Buildings

After comparing all 138 projects, we next compared buildings by category. First we looked at academic classroom buildings, located on college and university campuses. A total of 52 buildings were studied – 15 LEED-seeking and 37 non-LEED.

As we can see from the graph below, there was no indication that the LEED-seeking projects tended to be any more expensive than the non-LEED. The difference between average cost per square foot was, again, statistically insignificant for academic classroom buildings.

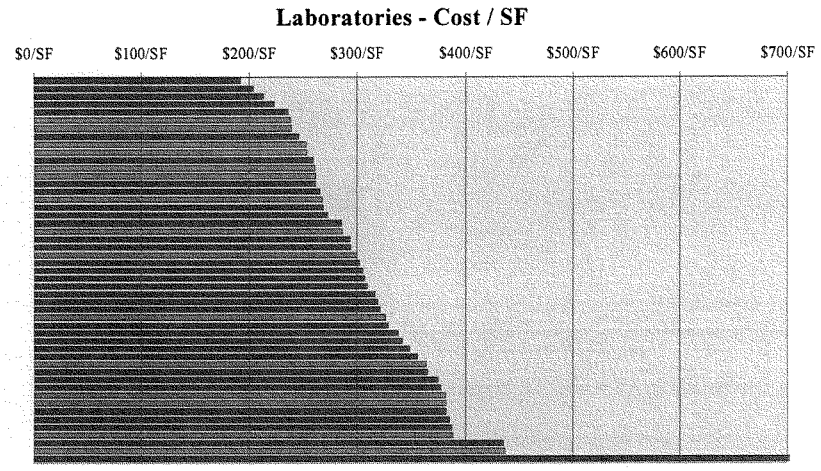
Academic Buildings - Cost / SF



In the sampling of academic classroom buildings which were LEED-seeking, the only LEED levels attempted were Certified and Silver (Certified are shown as green bars in the graph above, while Silver projects are shown as silver bars). When the Silver projects were averaged and that average compared to the average cost per square foot for non-LEED buildings, there was still no significant difference noted.

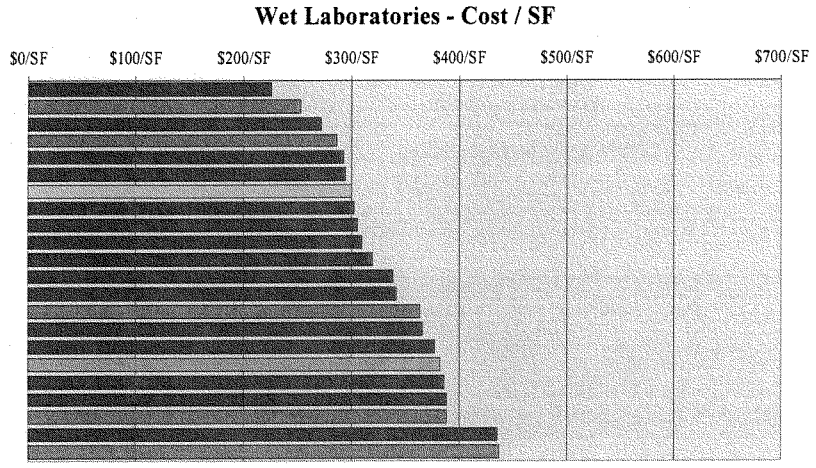
Laboratory Buildings

The next category examined was laboratory buildings. 15 LEED-seeking laboratories were compared to 34 non-LEED laboratory buildings.



Again, no significant statistical difference was noted between the average costs per square foot for LEED-seeking versus non-LEED laboratories. However, we did see a fairly large standard deviation in price between the labs. This was not unexpected, since construction costs for laboratory buildings often varies widely depending on the type of laboratory being built. For example, materials and forensics laboratories tend to be more expensive, while teaching and environmental studies laboratories tend to be less expensive overall.

To try to eliminate the effect of this wide variation in costs due to laboratory type, we took a closer look at only the wet labs, excluding teaching and materials labs to remove the higher and lower end costs from the analysis. For this, only 22 total buildings were studied – 7 LEED-seeking and 15 non-LEED.

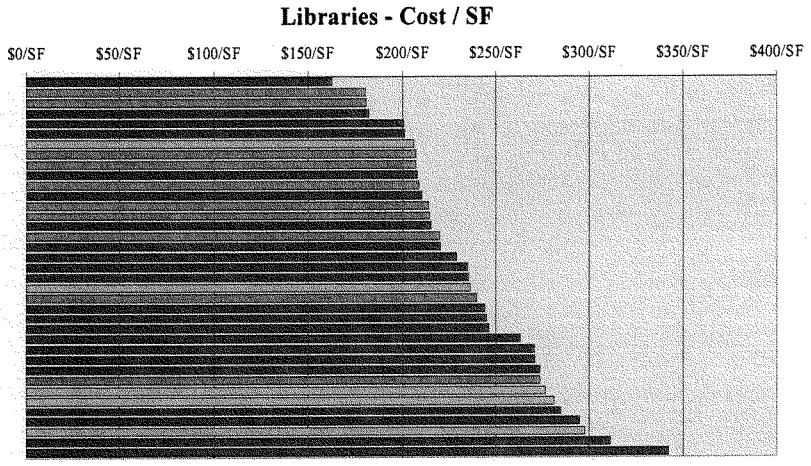


In this graph, LEED levels are denoted by the different colors. Green bars indicate Certified buildings, silver bars indicate Silver buildings, and the gold bar indicates a laboratory which was attempting LEED Gold rating. Interestingly, while we drastically reduced the standard deviation between lowest and highest cost for the buildings studied, we still saw no significant statistical differences between average costs per square foot for the LEED-seeking versus the non-LEED buildings.

Library Buildings

Finally, we compared 15 LEED-seeking libraries to 22 non-LEED libraries.

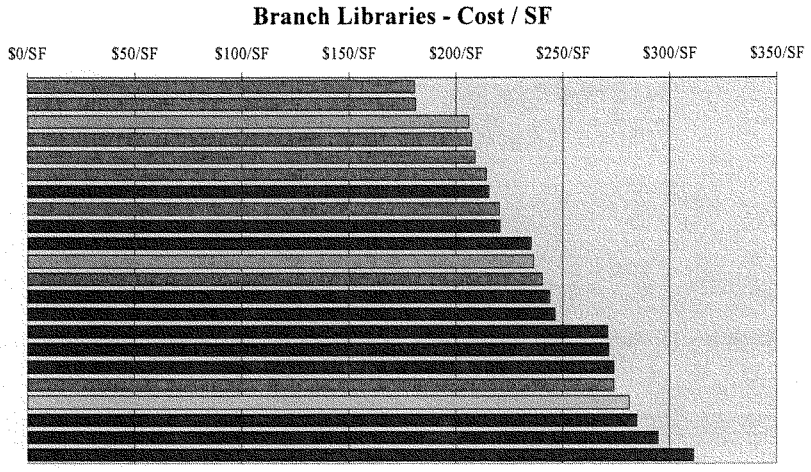
Bar color denotes LEED level attempted – gold for LEED Gold, Silver for LEED silver, and green for LEED Certified.



It is interesting to note that the majority of the LEED-seeking libraries tend to fall into the lower half of the range for cost per square foot. However, this does not automatically suggest that green libraries are, overall, less expensive than non-LEED libraries to build. A majority of those libraries were all built by the same owner, who has mandated LEED for all libraries, regardless of the assigned budget. This comparison does suggest, however, that green libraries are certainly affordable and achievable.

Due to the fact that so many of the LEED-seeking libraries come from one owner and constituted tighter construction budgets, the average cost per square foot for green was slightly lower than the average cost per square foot for non-LEED libraries. This difference, however, was again not statistically significant, nor, if it had been significantly different, could we have surmised that this was a true result which could be applied to any LEED-seeking libraries across the board.

As with laboratories, there does tend to be a wide variation in construction costs per square foot overall for libraries, based on the type of library constructed (academic, main community library, or city or community branch library). To narrow the analysis by library type, we excluded all but branch libraries from the comparison – looking only at those libraries that were less than 40,000 total square feet. This reduced the numbers to 11 LEED-seeking and 11 non-LEED library buildings.



Bar color denotes LEED level attempted – gold for LEED Gold, Silver for LEED silver, and green for LEED Certified.

When we narrowed in on these types of buildings, we finally see a statistically significant difference in cost per square foot between LEED-seeking and non-LEED libraries. The difference noted suggested that the LEED-seeking libraries were cheaper to build than the non-LEED! However, again, we point to the fact that a majority of those green libraries in the analysis were from a single owner with a set commitment to achieve LEED, and with tight controls over budget and costs to suggest that this statistically significant difference in cost is likely skewed by this fact.

LEED-Seeking versus Non-LEED

Throughout these comparisons we have referred to the two groups as LEED-seeking and non-LEED. However, it is important to keep in mind that the difference between these groups is simply that the LEED-seeking buildings were designed with LEED certification in mind, while this was not one of the goals for the non-LEED buildings. Non-LEED buildings qualified for at least some LEED points by virtue of their design, location, and other factors.

To compare LEED-seeking to non-LEED buildings, ten non-LEED buildings were selected at random from the 93 examined for this study. A LEED checklist was created for each of these ten buildings to determine the number and type of points each project would receive with their current design.

This analysis concluded that these non-LEED projects achieved between 15 and 25 points with their established designs, and in fact one project was estimated to qualify for 29 points – enough to earn a rating of LEED Certified if the building owners had so desired.

Closer examination of the non-LEED and LEED buildings suggests that for any building, there are usually about 12 points that can be earned without any changes to design, due simply to the building's location, program, or requirements of the owner or local codes. Up to 18 additional points are then available for a minimum of effort, and little or no additional cost required.

Cost Analysis of Similar Buildings – Conclusion

We can draw four key conclusions from our analysis of construction costs for LEED-seeking versus non-LEED seeking projects:

- There is a very large variation in costs of buildings, even within the same building program category.
- Cost differences between buildings are due primarily to program type.
- There are low cost and high cost green buildings
- There are low cost and high cost non-green buildings.

There is such a wide variation in cost per square foot between buildings on a regular basis, even without taking sustainable design into account, that this certainly contributed to the lack of statistically significant differences between the LEED-seeking and non-LEED buildings. Additionally, comparisons of this type can not be considered reliably meaningful because budgets can never be compiled based on an average. Any number of factors can distort the results obtained, as we saw with the comparison of library buildings, such that the same comparisons done with a completely different sampling of buildings might yield completely different and conflicting results. While we saw no significant differences in cost per square foot in the sampling of buildings studied, this could easily not be the case for any other data configuration. Averages will always be highly dependent on the data pool being sampled.

What does this mean in regard to the cost of green? The conclusion is that comparing the average cost per square foot for one set of buildings to another does not provide any meaningful data for any individual project to assess what – if any – cost impact there might be for incorporating LEED and sustainable design. The normal variations between buildings are sufficiently large that analysis of averages is not helpful. Remember – buildings can never be budgeted on averages.

rated elementary school was built at a cost of $18,500 per student. The Gold-rated middle school in Oregon was built at a cost of $20,800 per student. Compare this to the average amount spent per student in California, which is just over $13,000[4]. Clearly we can see that starting budget must play a role in determining final LEED premium for these projects.

As we can see from this example, simply comparing a project's cost to its budget does not give an accurate picture of the true cost of green.

Initial Budget Cost Analysis - Conclusion

As the various methods of analysis showed, there is no 'one size fits all' answer to the question of the cost of green. A majority of the buildings we studied were able to achieve their goals for LEED certification without any additional funding. Others required additional funding, but only for specific sustainable features, such as the installation of a photovoltaic system. Additionally, our analysis suggested that the cost per square foot for buildings seeking LEED certification falls into the existing range of costs for buildings of similar program type.

From this analysis we can conclude that many projects can achieve sustainable design within their initial budget, or with very small supplemental funding. This suggests that owners are finding ways to incorporate the elements important to the goals and values of the project, regardless of budget, by making choices and value decisions.

[4] "Fact Book 2003: Handbook of Education Inform", http://www.cde.ca.gov/resrc/factbook/factbook03.pdf

Analyzing the Data – Initial Budget

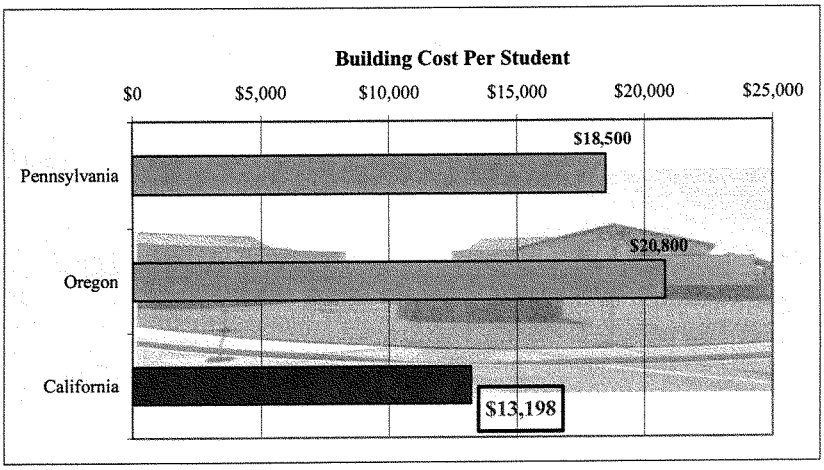
One of the most common methods used to establish the cost of green has been to compare the final construction costs for the project to the established budget. In other words, was the budget increased to accommodate the sustainable elements, or were those elements incorporated into the project within the original available funds. Within the 61 LEED seeking buildings we studied, we found that over half the projects had original budgets that were set without regard to sustainable design, and yet received no supplemental funds to support sustainable goals. Of those that did receive additional funding, the supplement was usually provided only for specific enhancements or requirements, such as photovoltaic systems, and the range of monies supplemented, for those few that required it, was typically in the range of 0 – 3% of initial budget.

The projects that were the most successful in remaining within their original budgets were those which had clear goals established from the start, and which integrated the sustainable elements into the project at an early stage. Projects that viewed the elements as added scope, tended to experience the greater budget difficulties.

It is important to be circumspect when using initial budget performance as a benchmark, however, as the budget performance alone may not present the full picture. The following graph compares the building cost per student for schools built in Pennsylvania, Oregon, and California:

- The Pennsylvania elementary school obtained a LEED Silver certification for a premium of 2%[2].
- In Oregon, a middle school was built that obtained a rating of LEED Gold for no additional premium[3].

Taken without additional information, one might surmise that LEED certification could be obtained for around 2% over starting budget.



However, this conclusion would be misleading. As can be seen from the chart, the cost per student allocated to each newly constructed school varies widely between the states. The Silver-

[2] "Clearview Elementary School – Highlighting high performance", http://www.nrel.gov/docs/fy02osti/32680.pdf
[3] "Case Study – The Dalles Middle School", http://www.energy.state.or.us/school/thedalles.pdf

project team is unaware of the mismatch, or more often, due to wishful thinking that something will turn up to resolve the problem.

In order to align the budget with the program, a cost model should be developed, which allocates the available funds to the program elements. It is quite possible to develop a thorough cost model from program information, even when design information is limited. The program will dictate the majority of the cost elements, both in quantity and quality, and from that it is possible to build a cost model. The cost model will both reflect the program – highlighting areas of shortfall – and provide planning guidance for the design team by distributing the budget across the disciplines.

The cost model also provides a communication tool for the project team, allowing clear understanding of any budget limitations. These must be addressed by adjusting scope, design or funds. Proceeding with inadequate funding will lead to more drastic scope reductions at later stages in the design process, and greater conflict between competing interests in the program. It is in these cases that sustainable elements are most vulnerable to elimination as unaffordable expenses.

In order to align your budget with your program you must:

- Understand your starting budget.
- Generate a cost model for the project to understand where costs lie.
- Allocate funds.
- Address limitations in the budget at the Program stage.

It is the choices made during design which will ultimately determine whether a building can be sustainable, not the budget set.

Stay On Track

Once you have a clear understanding of the goals and values for the project, as well as the budget available, it is important to stay on track throughout the entire process. The steps for staying on track include:

- *Documentation*: Begin any necessary documentation as early as possible, and maintain it as you go.
- *Update / Monitor Checklist*: Update and monitor the LEED checklist so you have a clear picture of how the sustainable goals are being met, and whether the LEED goal is succeeding.
- *Energy / Cost Models*: Use energy and cost models as design tools. Energy models are useful during all design phases to establish the design criteria necessary to meet selected LEED points. Cost models will allow you to track cost impacts from any necessary changes to design or procedure as the project progresses. Energy and cost models can be combined to make a very effective decision making tool, preferably early in design.

Budgeting Methodology – Conclusion

The only effective way to budget for sustainable features within buildings is to identify the goals, and build an appropriate cost model for them. If they are seen as upgrades or additions, the cost of the elements will also be seen as an addition. It is possible to establish goals and budgets from the very beginning of the project. Other methods are ineffective and unnecessary.

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Introduction

The purpose of this paper is to revisit the question of the cost of incorporating sustainable design features into projects. It builds on the work undertaken in the earlier paper "Costing Green: A Comprehensive Cost Database and Budget Methodology," released in 2004, and looks at the developments that have occurred over the past three years, as sustainable design has become more widely accepted and used.

In the earlier paper we examined the cost of green from three perspectives: the cost of incorporating individual sustainable elements, the cost of green buildings compared to a population of buildings with a similar program, and the cost of green buildings compared to their original budget. This paper provides an updated look at the cost of green by examining a larger sampling of buildings and looking at additional building types. In both this and the earlier paper, the USGBC's LEED rating system is used as a parameter for determining level of sustainable design.

Findings

1. Many projects are achieving LEED within their budgets, and in the same cost range as non-LEED projects.
2. Construction costs have risen dramatically, but projects are still achieving LEED.
3. The idea that green is an added feature continues to be a problem.

Executive Summary

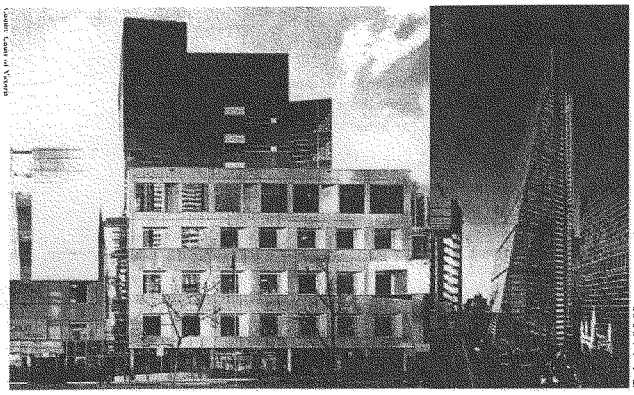
The 2006 study shows essentially the same results as 2004: there is no significant difference in average costs for green buildings as compared to non-green buildings. Many project teams are building green buildings with little or no added cost, and with budgets well within the cost range of non-green buildings with similar programs. We have also found that, in many areas of the country, the contracting community has embraced sustainable design, and no longer sees sustainable design requirements as additional burdens to be priced in their bids. Data from this study shows that many projects are achieving certification through pursuit of the same lower cost strategies, and that more advanced, or more expensive strategies are often avoided. Most notably, few projects attempt to reach higher levels of energy reduction beyond what is required by local ordinances, or beyond what can be achieved with a minimum of cost impact.

The cost of documentation remains a concern for some project teams and contractors, although again, as teams become accustomed to the requirements, the concern is abating somewhat.

We continue to see project teams conceiving of sustainable design as a separate feature. This leads to the notion that green design is something that gets added to a project – therefore they must add cost. This tendency is especially true for less experienced teams that are confronting higher levels of LEED certification (Gold and Platinum). Until design teams understand that green design is not additive, it will be difficult to overcome the notion that green costs more, especially in an era of rapid cost escalation.

Average construction costs have risen dramatically the past three years - between 25% and 30%. And yet we still see a large number of projects achieving LEED within budget. This suggests that while most projects are struggling with cost issues, LEED is not being abandoned.

"....there is no significant difference in average cost for green buildings as compared to non-green buildings."



Gaskin Court of Victoria
Victoria, Australia

The Leadenhall Building
London, England

Analyzing the Data – Cost Analysis of Similar Buildings

In this study, we compared construction costs of buildings where LEED certification was a primary goal to similar buildings where LEED was not considered during design. The building types analyzed included the three previously evaluated - academic buildings, laboratories and libraries - and two new types - community centers and ambulatory care facilities. Projects in the study used either LEED NC 2.1 or 2.2; for consistency, all project checklists were adjusted to 2.2 standards. It should be noted that LEED 2.2 is significantly different from 2.1 in ways that impact cost; this is particularly the case for EA Credit 1, where the energy efficiency credits have become appreciably more challenging.

A total of 221 buildings were analyzed. Of these, 83 buildings were selected which were designed with a goal of meeting some level of the USGBC's LEED certification. The other 138 projects were buildings of similar program types which did not have a goal of sustainable design.

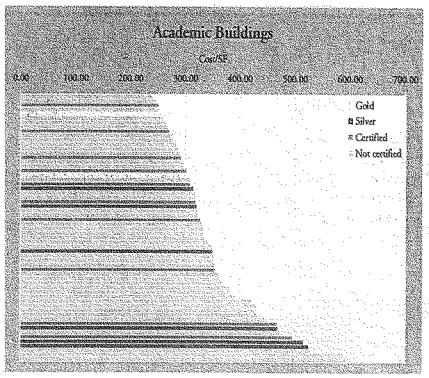
All costs were normalized for time and location in order to ensure consistency for the comparisons. It is important to note that the only distinction made between the buildings was the intent to incorporate sustainable design in order to achieve LEED rating. Many of the non-LEED buildings might have earned some LEED points by virtue of their basic design. Cost per square foot was compared between all projects – LEED-seeking and non-LEED.

Buildings are compared by category, as follows. In the graphs presented, LEED levels are denoted by the different colors. Green bars indicate Certified buildings, silver bars indicate Silver buildings, and gold bars indicate Gold buildings. There are no platinum rated projects in our sample.

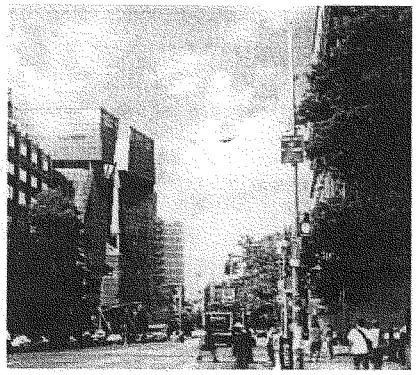
Analyzing the Data – Cost Analysis of Academic Buildings

A total of 60 academic classroom buildings – 17 LEED-seeking and 43 non-LEED – were analyzed. Academic buildings are classroom, computer lab or faculty office buildings in higher education settings. These buildings are located on college and university campuses across the country, and include a range of architectural forms and styles. The higher LEED scoring designs in this category tended to find points in sites, energy efficiency, and indoor environment.

As can be seen, the LEED seeking academic buildings are scattered broadly through the population, with no significant difference in the average costs of LEED seeking and non-LEED seeking buildings. It is worth noting that the Silver buildings do tend to fall in the higher range, both within the population of green buildings and in the overall population, while the Gold buildings are in the lower range, although the sample size for the Gold buildings is too small to draw meaningful conclusions on the cost of Gold within the population. However, it can be said the Gold projects by and large seemed to have kept costs low by using simple approaches to sustainability, rather than adding technologies to achieve green. Both levels achieved similar numbers of points for Credit EA 1, but the Gold projects did not use photovoltaics to achieve fairly high energy efficiency points, and achieved 3 or 4 Innovation Points.



The Cooper Union for the Advancement of Science & Art
New York, New York

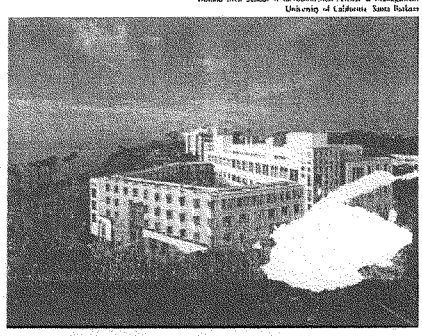


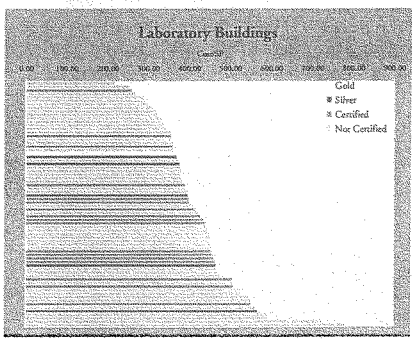
Analyzing the Data – Cost Analysis of Laboratory Buildings

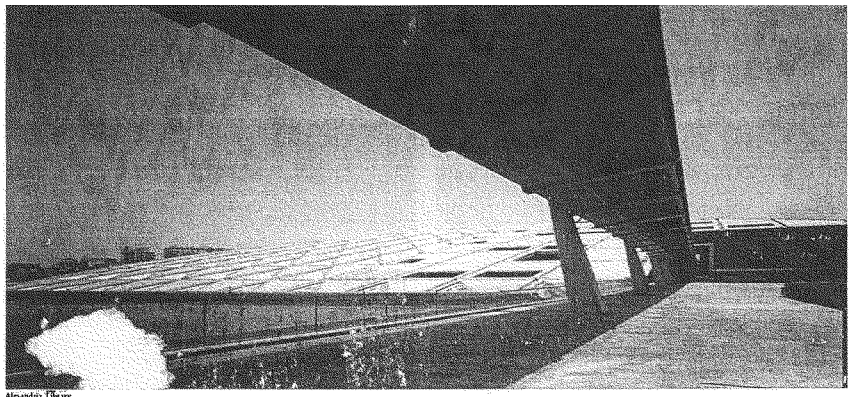
A total of 70 laboratories – 26 LEED-seeking and 44 non-LEED – were analyzed. The laboratories include both wet and dry science buildings, covering a wide range of science disciplines, in teaching, research and production settings. LEED projects in this category tended to score high in the Energy category; these buildings tend to have robust mechanical systems, and find ways to increase efficiency therein.

Again, no significant statistical difference was noted between the average costs per square foot for LEED-seeking versus non-LEED laboratories. Even though there is a fairly large standard deviation in price between the labs, the sustainable projects are scattered quite broadly through the population. The Silver buildings are also quite widely distributed and, as with academic buildings, the Gold population is too small for meaningful conclusions on cost within the population.

Donald Bren School of Environmental Science & Management
University of California Santa Barbara





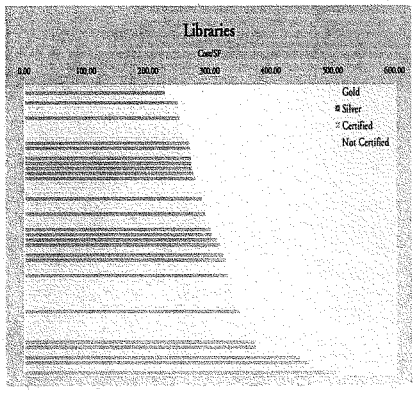


Alexandria Library
Alexandria, Egypt

Analyzing the Data – Cost Analysis of Library Buildings

A total of 57 libraries – 25 LEED-seeking and 32 non-LEED – were analyzed. The library buildings include community branch libraries, main public libraries and university campus libraries. LEED projects in this category tended to score well in indoor environmental quality.

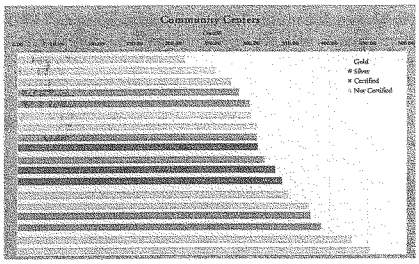
As the graph demonstrates, there is no indication that the LEED-seeking projects tend to be any more expensive than the non-LEED projects. In fact, the green population tends to fall more towards the lower end of the overall population. It is also worth noting that this category has one of the highest green to non-green ratios. Over the past several years, libraries have become one of the more common categories of new construction to embrace sustainable design.

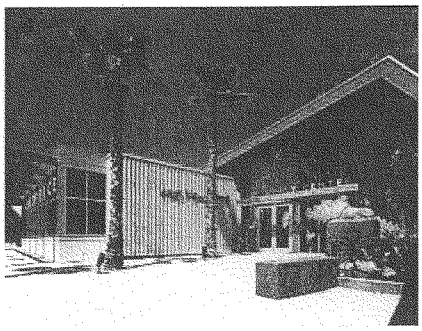


Analyzing the Data – Cost Analysis of Community Centers

A total of 18 community centers – 9 LEED-seeking and 9 non-LEED – were analyzed. The community center buildings usually include meeting rooms, classrooms, recreational facilities and community gymnasiums. Many include warming kitchens for catering for events in the centers. These projects tended to score high in the indoor environmental quality and site categories.

As with libraries, community centers are generally fairly simple buildings, and provide opportunities for cities to demonstrate green buildings within the community. While the data set is quite small, and not adequate for true statistical analysis, it is still possible to see the broad trend that the green buildings are indistinguishable from the greater population on a cost basis.

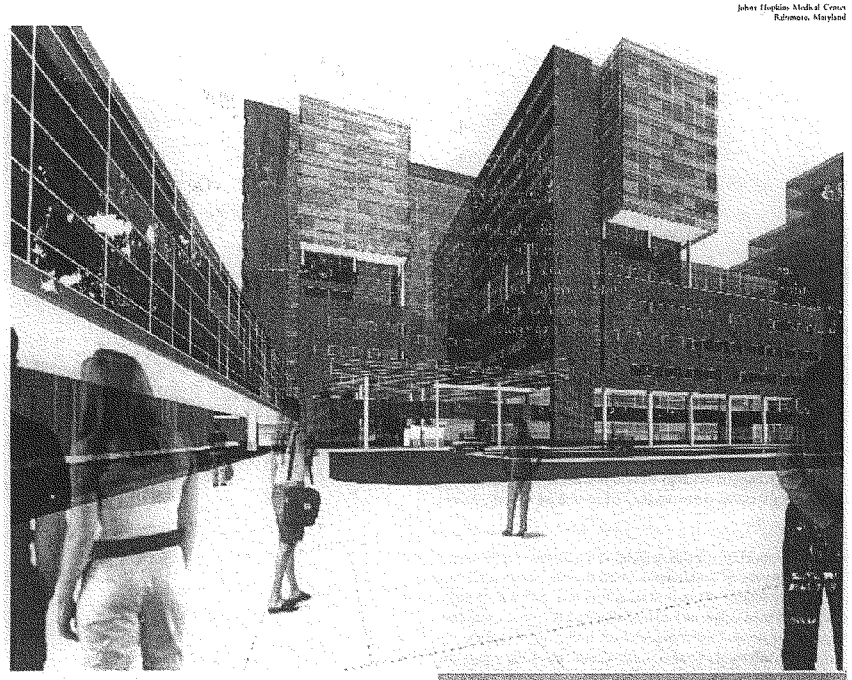




West Hollywood Community Center
Hollywood, California

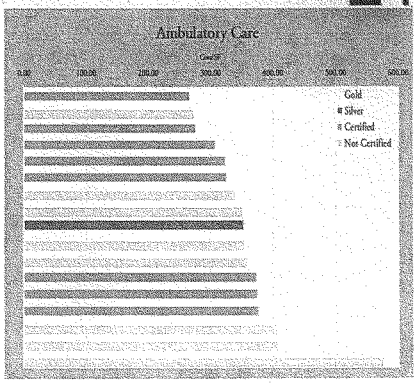
Analyzing the Data – Cost Analysis of Ambulatory Care Facilities

Johns Hopkins Medical Center
Rehmann, Maryland



A total of 17 ambulatory care facilities – 9 LEED-seeking and 8 non-LEED – were analyzed. Ambulatory Care Facilities are medical buildings that do not provide inpatient care, or come under the 'I' occupancy designation of the building code. The buildings in the sample include cancer treatment centers (excluding any radiation treatment elements), same-day surgery suites, and ambulatory care centers. Medical Office buildings were not included.

As with community centers, the sample size is not sufficient to develop robust statistical data, but it is still evident that the green buildings fall well within the range of the overall population of costs.



LEED-Seeking versus Non-LEED

Throughout these comparisons the two groups compared have been referred to as LEED-seeking and non-LEED. However, it is important to keep in mind that the difference between these groups is simply that the LEED-seeking buildings were designed with LEED certification in mind, while this was not one of the goals for the non-LEED buildings. Non-LEED buildings qualified for at least some LEED points by virtue of their design, location, and other factors. Based on our earlier paper and subsequent studies, we find that most non-LEED projects achieve between 10 and 20 points with their established designs.

Conclusion

Four key conclusions can be drawn from the analysis of construction costs for LEED-seeking versus non-LEED seeking projects:

- There is a very large variation in costs of buildings, even within the same building program category.
- Cost differences between buildings are due primarily to program type.
- There are low cost and high cost green buildings.
- There are low cost and high cost non-green buildings.

There is such a wide variation in cost per square foot between buildings on a regular basis, even without taking sustainable design into account, that this certainly contributed to the lack of statistically significant differences between the LEED-seeking and non-LEED buildings.

The overall conclusion is that comparing the average cost per square foot for one set of buildings to another does not provide any meaningful data for any individual project to assess what – if any – cost impact there might be for incorporating LEED and sustainable design. The normal variations between buildings are sufficiently large that analysis of averages is not helpful; buildings cannot be budgeted on averages.

Analyzing the Data – Initial Budget

One of the most common methods used to establish the cost of green has been to compare the final construction costs for the project to the established budget. In other words, was the budget increased to accommodate the sustainable elements, or were those elements incorporated into the project within the original available funds. For many, this is the ultimate test of affordability; could green be acquired within the funds available. This measure is, however, challenging to use, since it is difficult to assess the reasonability of the original budget, or what other factors may have contributed to a project's budget performance. It is, therefore, the most subjective of the three measures.

In our earlier study, we found that the majority of projects did achieve their sustainable goals within their original budget. Subsequent analysis supports this finding. It is likely that, in some of these cases, budgets were set with sustainability in mind, making the finding for those projects less meaningful, but in general, we find that projects with budgets set without reference to sustainable goals are still achieving certification with little or no adjustment to their budget.

We also found that the population data is statistically highly skewed; that is to say that the distribution is not evenly spread about the average, but instead is highly weighted towards the lower end premiums with a long tail containing a few high premium projects. This, coupled with the fact that very few projects, if any, will report coming in under budget due to sustainable features, means that the average reported cost (mean) is typically higher than the reported cost for the average project (median), which is in turn, likely to be higher than the premium for the typical project (due to the absence of any reported negative premiums).

It is worth noting that the past three years have seen unprecedented construction cost escalation, with escalation running at over 10% per annum in many parts of the country. This has put tremendous pressure on all aspects of project design, including the sustainable features. Even with this pressure, many projects are still able to deliver successful green strategies, and achieve their sustainable goals. The most successful are those which had clear goals established from the start, and which integrated the sustainable elements into the project at an early stage. Projects that viewed the elements as added scope, tended to experience the greater budget difficulties.

Conclusion

As the various methods of analysis showed, there is no 'one size fits all' answer to the question of the cost of green. A majority of the buildings we studied were able to achieve their goals for LEED certification without any additional funding. Others required additional funding, but only for specific sustainable features, such as the installation of a photovoltaic system. Additionally, our analysis suggests that the cost per square foot for buildings seeking LEED certification falls into the existing range of costs for buildings of similar program type.

From this analysis we can conclude that many projects can achieve sustainable design within their initial budget, or with very small supplemental funding. This suggests that owners are finding ways to incorporate the elements important to the goals and values of the project, regardless of budget, by making choices and value decisions.

Feasibility and Cost

The LEED-NC version 2.2 rating system comprises 7 prerequisites and 69 elective points, grouped into 6 categories. The following section discusses the feasibility of each LEED point and overall likely cost effect (if any) for construction cost, soft cost, and documentation cost.

SUSTAINABLE SITE CREDITS (SS)

Many of the credits in Sustainable Sites have very low cost impacts. The credits tend to be either readily achievable at little cost, or impractical for a given project. Some credits are more suited to urban locations, others to more open locations. In many cases, the driver for these credits is the degree of urbanization. It is our experience that building project sites are rarely selected for their LEED-related impact.

The first four points have to do with site selection, urban density, brownfield reclamation, and proximity to mass transit; the ability of a project to get any of these points is usually unconnected to whether or not the project has a LEED goal. The distribution of points being pursued is generally in line with the findings in our earlier study.

SS Prerequisite 1: Construction Activity Pollution Prevention
In order to comply, it is necessary to develop a compliant site sedimentation and erosion control plan. These plans are mandatory in many parts of the country. Compliance with this credit is generally within customary practices for design and construction teams.

In most cases, this credit has no construction or soft cost impact. The standards and technologies required for this point are standard to most projects; if not, they are achieved at minimal added cost. The credit can generate a very small reduction in overall construction costs by reducing cleanup and corrective action which would otherwise arise following significant storm events.

SS 1: Site Selection
Most site selection is driven by a wide range of factors, and appropriateness of site is usually a result, not a driver, of the site selection. There are typically no construction or soft costs associated with the credit, since there is no mitigation other than avoiding non-compliant sites. However, choice of location can affect feasibility and cost of sustainable design measures, and thus overall project costs. Possible costs would be related to land value where appropriate sites are available at an added cost.

SS 2: Development Density and Community Connectivity
As with SS 1, this credit is usually a result, rather than a driver, of site selection, and credit compliance is a consequence of other factors. The credit is usually suited to urban projects and suburban projects, where the site happens to comply either because of density or proximity to amenities. In certain cases, it may be possible to achieve the point by increasing project density. The costs associated with increased density are related to the development of multi-story buildings and structured parking. There can also be added costs associated with lack of staging and lay-down space in very dense site locations. The greatest cost impact of this credit is likely to be felt in smaller rural or suburban buildings which might otherwise be built as single story buildings with surface parking. For these types of projects, the cost impact of increasing the density of the project could be substantial.

SS 3: Brownfield Redevelopment
This credit is usually a result, rather than a driver, of site selection, and credit compliance is a consequence of other factors.

This credit is achieved either by soils remediation, or removal/abatement of asbestos or other hazardous materials from an existing facility (to be renovated or demolished).

There are a variety of strategies for mitigating soils contamination, including encapsulation, remediation, etc. These can lead to a variety of costs, depending on the strategies selected, or required (such as hazardous materials removal or encapsulation during demolition or renovation, removal or encapsulation of contaminated soils, and/or remediation of contaminated soils using chemical additives).

While the cost of this credit can be substantial, it is rarely a significant factor in site selection for most projects. A brownfield site may be selected for other reasons, such as property availability, transit connections, etc. Costs to mitigate hazardous materials in an existing building (demolition or renovation) would typically be incurred regardless of sustainable design goals.

The cost of basic remediation of a brownfield site can range from $50,000 / acre to as much as $2 million per acre, although the typical range is $300,000 to $500,000 per acre. For development densities of 80,000 SF to 120,000 SF / acre, this amounts to $3.00 to $6.00/SF of building area. There will also be additional soft cost for design, testing and monitoring. These costs would be typically required in a brownfield remediation, regardless of pursuit of the LEED credit.

SS 4-1: Alternative Transportation - Public Transportation Access
This credit is usually a result, rather than a driver, of site selection, and credit compliance is a consequence of other factors. Because of this, the credit is usually suited to urban projects, where the site happens to comply.

If the site is not close to public transportation, it may be possible to work with transit providers to bring bus lines to the site. The project can also provide shuttle buses to transport staff and patients from the project site to bus or train stops to meet the credit requirements. These measures can reduce the amount of parking needed, and therefore reduce project costs.

In practice, this credit typically has no construction or soft cost implications.

Feasibility and Cost

SS 4-2: Alternative Transportation - Bicycle Storage and Changing Rooms
This is a relatively inexpensive credit with low design impact and simply requires the installation of adequate bicycle racks and shower/changing facilities. The cost for this credit is likely to show up not as cost per square foot, but rather in the additional square footage to be built, or reduced useable square footage within a building from the development of the shower facilities.

In practice, this credit typically has very small construction or soft cost implications. The number of racks and showers required to meet this credit is usually quite small. Encouragement of the building users to use bicycles and other alternate transportations may alleviate the need for parking spaces and actually save money.

SS 4-3: Alternative Transportation - Low-Emitting and Fuel-Efficient Vehicles
This credit is typically achieved in the least costly manner – that is, by providing preferred parking for efficient and alternatively fueled vehicles. Refueling stations can be added almost any time during design and construction. This point could also be awarded if the owner provides a fleet of alternatively fueled vehicles, but typically few facilities take this route.

This credit typically has very minor construction and soft cost implications; electric refueling stations typically cost between $5,000 and $20,000 for a two car station, while costs for signage are negligible.

SS 4-4: Alternative Transportation - Parking Capacity
As with SS 4-3, this credit is not difficult to achieve, but compliance may be unacceptable in many facilities due to restrictions on available parking for users. Where sites are highly constrained and parking limited by available space, the credit may be met simply as a result of the program limitations. Also, in many projects parking is constrained to such a degree that it would not be possible to exceed local zoning requirements.

This credit can actually reduce construction and soft costs by reducing overall parking and vehicular circulation area.

SS 5-1: Reduced Site Disturbance - Protect or Restore Habitat
For greenfield sites, the main strategies relate to managing the construction and ensuring that construction activities are kept within the limitations specified in the requirement. While this is a construction management issue, it is essential that the design team understand the constraints, and that these are detailed within the construction bid documents.

Credit requirements can be difficult if not impossible to achieve at greenfield sites where excavation below grade of more than one story is required.

For previously developed sites, the main strategies relate to designing appropriate site restoration. This credit can be challenging to achieve in urban areas because of limitations in site area which make it difficult to find the required site area for restoration.

For urban sites with large impervious areas, such as surface parking lots, strategies can include construction of parking structures to allow for conversion of paved areas into landscaped areas. Green roofs at parking structures and buildings can contribute to this point.

Many of the strategies for achieving this credit can be combined with other credits. For example, landscaped areas can be designed to provide natural habitat, to manage and filter stormwater, and to facilitate both heat island credits. In many jurisdictions, strict stormwater mandates can be cost-effectively met using native landscape. Where strategies and credits can be integrated, costs can be greatly minimized.

This credit typically does not incur significant construction costs, where sufficient land is available to answer parking needs and leave room for native plantings. Where space is a premium and parking must be put underground or in a structure to provide space for natural habitat, costs can be significant or prohibitive. If measures can be used that allow achievement of several sustainable design goals at once, costs can be controlled.

There are usually relatively small soft cost implications.

SS 5-2: Reduced Site Disturbance - Maximize Open Space
The typical strategy for meeting this credit is to limit hardscape and parking areas, to allow sufficient open space. For projects that earn SS 2, this point is typically achieved by providing a green roof and pedestrian oriented hardscape. For campus projects, this point can be achieved at no cost by providing open space elsewhere. Cost impacts for this credit are typically zero to minimal for rural, suburban, and campus sites. For dense urban sites, costs can be minimal to significant due to densification of the building and/or addition of a green roof.

SS 6-1: Stormwater Management - Quantity Control
Stormwater can be detained on site prior to release to the stormwater system. Detention can involve dissipating the flow through swales, or holding the water in detention ponds, surge chambers or tanks. Water can also be retained on site for other uses, or for infiltration into the ground. Retention can involve holding the water in ponds, surge chambers or tanks, or the use of landscaped areas or permeable paving for infiltration. Detention ponds or tanks are usually smaller than retention ponds or tanks, since they typically need to hold water for shorter periods.

Site size plays a significant role in whether or not the stormwater related points result in additional cost. Swales tend to have a minimal cost impact; retention or detention ponds are more expensive, and

installation of stormwater collection tanks can be very costly. Projects on large sites tend to install swales or ponds, while buildings on limited sites (usually urban) use collection tanks and filters to meet the requirements.

Increasingly, stormwater management is required by local jurisdictions; in such cases the cost is included in the base design, not added. In some cases, the project may be required to foot the bill to increase capacity of the local infrastructure; in such cases onsite measures may be more cost-effective.

Local weather patterns will impact cost; frequency and amount of rainfall will determine the scale of both landscape and tank interventions. Soil conditions also can affect cost; sites with clay soils, high water tables or bedrock will not be able to use the swale and surface infiltration approaches.

Diversion of rainwater for use in irrigation or sewage conveyance will satisfy point requirements, and is becoming a more accepted and used approach to compliance. The provision of tanks and additional piping can represent a significant cost.

In practice, many projects may not have sufficient site area to develop the less costly solutions to this credit. If this is the case, the point can be challenging to achieve.

SS 6-2: Stormwater Management - Quality Control
The strategies for meeting this point typically depend on the extent of site area available for stormwater management. In sites with large landscaped areas, it is possible to provide treatment through the use of landscape elements such as vegetated swales and retention ponds to infiltrate water. Where site conditions do not allow use of landscaping to meet this credit, it is necessary to provide filtration tanks and oil separators at inlets. On very constrained sites, it may be necessary to capture rainwater in tanks and reuse it for irrigation and/or cooling towers.

An additional element is the development of a landscape management plan, aimed at reducing the total phosphorus load entering the stormwater system. This management plan includes both selection of appropriate landscaping and planting, and long-term fertilizer management by the facility.

In practice, some projects may not have sufficient site area to develop the less costly solutions to this credit, and as a result, the credit can be very challenging or expensive to achieve. However, many jurisdictions require the filtration of stormwater before it enters the municipal system; in such cases the cost is included in the base design, not added. An integrated design that uses landscape and other design elements to help meet credit requirements will reduce construction and operations costs.

Diversion of rainwater for use in irrigation or sewage conveyance can satisfy, or assist in satisfying, point requirements, and is becoming a more accepted and used approach to compliance. The provision of tanks and additional piping can represent a significant cost.

SS 7-1: Heat Island Effect - Non-Roof
This credit is most often achieved by changing the color of concrete paving and adding shade elements at relatively low cost. Where surface parking is provided, this credit can be achieved at minimal or no added cost by using white asphalt or by providing open grid paving or gravel at parking stalls, leaving only the aisles asphalt.

By providing a parking structure, site area can be freed for use in landscaping, which will help achieve other LEED credits including stormwater management and filtration, open space and natural habitat, and places of respite.

In practice, this credit typically has very minor construction and soft cost implications, since the most economical way in which to achieve this credit is to provide shade trees in parking areas. We have not seen projects chose to provide structured parking simply to achieve this point.

SS 7-2: Heat Island Effect - Roof
The typical approach to this credit is to use a high emissivity roof. While costs for these are usually slightly ($1 - $2/SF) more than conventional black roofs, the overall impact on the cost of the project is usually relatively low, since roofs make up a very small part of the total project cost.

Increasingly, projects use a green roof to achieve this credit. The added cost is significant, adding typically between $10 and $30/sf, but green roofs can facilitate achievement of LEED credits for stormwater management and filtration, open space, and natural habitat, as well as contributing to energy efficiency. The use of green roofs is increasing as designers and owners become more familiar with them and as the value of green roofs for stormwater management are more widely accepted.

SS 8: Light Pollution Reduction
The primary strategy for this credit involves careful site lighting design and fixture selection. Many projects attempt this credit, but not all achieve it. Clients and code officials often perceive this point to be at odds with security requirements, although this situation is increasingly rare. In order to be successful with this credit, therefore, it is important to include site lighting in the earliest stages of site planning, and to include security and site safety in the considerations of the design.

Where the credit is attempted, the credit typically has very low cost impact, both for construction and soft costs.

Water Efficiency Credits (WE)

Of the credits in Water Efficiency, most projects try for WE 1.1 and 3.1; few attempt the other credits, which can be quite challenging, unless they are seeking the higher levels of LEED certification. The noticeable difference here is that few projects appear to be attempting credit 2. This could simply be within the normal range of statistical variance, but could also reflect the recognition of the costs associated with this credit.

WE 1-1 & 1-2 Water Efficient Landscaping –Reduce by 50% and No Potable Use or No Irrigation

There are two main strategies for meeting these credits. The first is to use landscaping that requires less irrigation primarily by reducing the extent of grass and by increasing the use of native, drought tolerant plants. The second is to use more efficient irrigation methods or reclaimed water for irrigation. LEED requires both strategies to achieve this credit.

There can be a perceived sanitation issue with using reclaimed, grey, or rainwater for irrigation. Some projects address such concerns by ensuring that the irrigation water is never touchable by humans; this is done by using below-ground irrigation.

Specific actions include:

- Providing native, drought tolerant plants
- Avoiding the use of turf grass
- Using high efficiency irrigation methods such as drip irrigation or automated controls with moisture sensors
- Using municipally provided reclaimed water for irrigation
- Capturing site rainwater to reuse for irrigation
- Using HVAC condensate or cooling tower waste water for irrigation (only possible with non-chemical cooling tower treatments systems)
- Installing temporary irrigation for establishment of plants only (hose bibbs)

In practice, these credits typically have very small construction and soft cost implications, and the election to pursue these credits is driven more by preference for appearance than by cost. If no permanent irrigation system is installed, costs can actually be reduced. WE 1-1 is usually accomplished by the use of drought tolerant planting and efficient irrigation.

Where municipally provided reclaimed water is used, the cost is limited to the cost of connecting to the reclaimed water system, and of providing filtration if needed. In many areas where reclaimed water is municipally provided, it is mandatory to use it for irrigation; in such cases there is no added cost.

The most expensive strategies involve rainwater storage. The costs for water storage can be significant, if large volumes are required for irrigation. This strategy is typically not attempted in areas with very short rainy seasons.

If cooling tower waste water is to be used for irrigation, storage tanks can be minimal in size, since cooling towers are likely to be running year round and will provide a consistent supply of water. Costs associated will be for collection, storage, and minimal filtration.

While potable water costs are currently quite low, it is extremely likely that costs will rise dramatically in the near future. Minor design changes now could save major costs later.

WE 2: Innovative Wastewater Technologies

Low-flow and waterless flush fixtures are typically available at no added cost. Reclaimed water, gray water, and rainwater systems (which would typically include cisterns and filtration systems) all require the provision of additional supply. Typically this could be expected to add $4 - $8/SF over the cost of the entire building. There would be minor increases in design and inspection costs, and moderate documentation costs associated with the necessary calculations and demonstration of compliance. On-site wastewater treatment adds significantly to the cost of a facility.

WE 3-1 & WE 3-2: Water Use Reduction – 20 Percent Reduction & 30 Percent Reduction

The typical approach is to use low flow fixtures for lavatories and showers, motion sensor operated devices, reduced flush or dual flush toilets, and waterless or reduced flush urinals. These strategies have little premium costs, and in most cases will be sufficient to ensure achievement of the first point associated with this credit, and often the second. For healthcare and other facilities with different potable water demands, or where potable water flow is required for hygiene or infection control reasons, this credit can be challenging.

Energy and Atmosphere Credits (EA)

Our project data indicate that the Energy and Atmosphere credits are not strongly pursued in many cases, other than the initial two to four points for energy cost reduction. This is similar to the findings from our earlier study. Energy credits do require a high degree of focus, and can be challenging for many projects. Oddly, these are some of the credits which have the most readily calculated Life Cycle costs and the clearest business case.

EA Prerequisite 1: Fundamental Commissioning of the Building Energy Systems

This credit has construction and soft cost implications, although increasingly facilities undertake basic commissioning regardless of this credit. Usually commissioning is viewed as a soft cost, and so the primary cost impact shows up in that category. There are, however, some additional construction costs related to commissioning arising from the additional work required of the contractor to support the commissioning process, and the corrective work required as a result of the commissioning. Basic commissioning typically costs in the range of $1.50 - $3.00/SF.

This credit can provide significant benefits, both in the short and long term. The greatest benefits are achieved with the use of Additional Commissioning (EA 3), but the basic conditioning under this prerequisite can provide significant benefits.

In the short term, commissioning can help the project team develop an efficient design, and in conjunction with design modeling, serve to reduce overall design and construction time. In the long term, the commissioning has been shown to have very strong improvements in system performance and reduced operating cost[1].

EA Prerequisite 2: Minimum Energy Performance

The energy performance standards set by the prerequisite are not particularly difficult to meet, and should not typically lead to significant increases in first cost. If the decision to pursue energy efficiency is made early in design, it should be possible to meet minimum requirements without adding cost. With an integrated design approach, savings may even be realized. If energy efficiency is not addressed early the costs can become significant.

EA Prerequisite 3: Fundamental Refrigerant Management

Most new facilities will automatically meet this prerequisite, unless an existing central plant uses CFC refrigerants. Equipment replacement can be costly and is typically undertaken only when that equipment has reached the end of its useful life. Since the prerequisite only requires the commitment to future replacement, there are no construction cost implications.

EA 1: Optimize Energy Performance (1 to 10 points)

Most projects in our sample that are pursuing LEED certification seek at least two of the energy optimization credits, and many aim for more. With the adoption of the requirement that all projects much achieve a minimum of two energy points, all LEED seeking projects will need to address energy performance issues in the future. The standards under LEED 2.2 are generally more challenging than those under LEED 2.1, but the 14% energy cost reduction required for the first two points should be achievable for most projects, with careful attention to energy performance and energy efficiency measures.

Many energy efficiency measures involve little or no additional cost, but rather focus on efficient design, right-sizing of equipment, and improvements in basic building systems. For many building types, these measures can be sufficient for meeting the two point prerequisite and beyond. Going beyond the first two to four points requires much more attention to integrated design and energy efficiency. For some building types, improvements in energy efficiency can actually lead to reduced construction cost, since the improvements come from reducing dependence on mechanical systems and improving the passive design of the building. Examples where this can occur include libraries, community centers, schools, and such like, particularly where the climate is relatively benign. For other building types, such as hospitals and laboratories, higher levels of energy efficiency can involve significant increases in first cost. Strategies considered include total heat recovery, careful zoning design with supply air temperature reset, control over air change rate in unoccupied areas, and decoupling of ventilation and thermal loads through such strategies as radiant heating and cooling. Taken together, these strategies can be very effective in delivering significant energy cost reductions even in very demanding buildings, but the cost premium can be quite high.

Common strategies for achieving the first two credits include:

- Energy Load Reduction
  - Occupancy and time of use analysis, leading to rightsizing of systems and careful zoning design
  - Analysis of actual loads in similar existing buildings
  - Envelope improvements, including improved insulation and glazing performance, reduced air infiltration
  - Sunshading and daylighting harvesting, reduced lighting power density
  - Decoupling of thermal and ventilation demands, including radiant heating and cooling
  - Heat recovery from air and water systems
- Improved Equipment Efficiency
  - Increased duct size leading to reduced fan power requirements
  - Variable frequency drives for motors
  - Condensing stack boilers
  - Sophisticated controls.

Energy and Atmosphere Credits (EA)

EA 2: Onsite Renewable Energy (1 to 3 points)
On-site generation of renewable energy has a substantial construction cost impact. Installation of these systems usually provides a long-term cost savings, although the life cycle cost payback is usually very long even with available credits and incentives. Incorporating renewable energy into design will earn the project at least one additional energy use reduction point. This credit can be cost effective for projects where power needs are fairly low, and the cost of providing grid-based power to remote buildings are substantial.

EA 3: Enhanced Commissioning
This credit has construction and soft cost implications. Usually commissioning is viewed as a soft cost, and so the primary cost impact shows up in that category. There are, however, additional construction costs related to commissioning arising from the additional work required of the contractor to support the commissioning process and the corrective work required as a result of the commissioning. Additional commissioning typically costs in the range of $1.00 - $2.00/SF.

This credit can provide significant benefits, both in the short and long term. In the short term, it can help the project team develop an efficient design, and in conjunction with design modeling, serve to reduce overall design and construction time. The short term benefit can be found to some degree with Basic Commissioning (EA Prerequisite 1), but it is most achievable with the additional commissioning.

EA 4: Enhanced Refrigerant Management
This credit is becoming quite easy to achieve, as more and more manufacturers provide compliant equipment. Typically, this credit has minor construction cost implications if any, and minimal soft cost and documentation requirements.

EA 5: Measurement and Verification
The cost of metering to the level required by this credit can be significant, and the cost for writing and implementing the measurement and verification program can be substantial. Individual meters are relatively inexpensive, but to provide the quantity required and to provide a good quality reporting system can add $2.00 to $4.00/SF to the overall cost of the project. The cost to write and implement the measurement and verification program can range from $50,000 to $200,000. For some projects, the initial cost is sufficiently high that adoption of this credit is not considered. The cost of monitoring is usually independent of whether the building has a Building Management System (BMS), since BMS systems do not normally provide the level of monitoring required by this credit.

EA 6: Green Power Strategies
The first cost of green power contracts is relatively low, but operationally it can add to overall long term costs. The cost for green power or renewable energy credits varies widely, with green power contracts running from below $.01 per kWh in some areas, to over $.15 per kWh in others. Credits usually are in the range of $.02 per kWh. At this rate, it would represent a 15% to 20% increase in electricity cost for a typical user.

[1] Mills, Ethan, et al "The Cost-Effectiveness of Commercial-Buildings Commissioning" Lawrence Berkeley National Laboratory, Dec 2004 | http://eetd.lbl.gov/emills/PUBS/Cx-Costs-Benefits.html

Materials and Resources

Materials and Resources credits fall into two sharply distinct categories, with most projects pursuing the credits related to construction waste management, and the first credits for recycled content and local content, and very few pursuing the others. This represents a slight change from our earlier analysis. More projects are pursuing the second construction waste recycling credit, reflecting an increased acceptance of this requirement by the construction community, and fewer projects are pursuing the second recycled content and local content credits, due to the raising of compliance thresholds in these points.

MR Prerequisite 1: Storage and Collection of Recyclables
In most cases, this credit has no construction or soft cost impact. Many buildings already have waste handling areas and procedures, and the incorporation of dedicated recycling areas represents a very small increase in program. In many projects, this is incorporated regardless of the credit.

MR 1-1 to 1-3: Building Reuse
These credits simply require the reuse of specified percentages of a building's fabric. While many projects involve the reuse of existing buildings, few projects incorporate these points. It can be difficult for remodeling projects to achieve other points, especially site and energy use reduction, without significant increase in cost. We find, therefore, that few remodel projects seek to pursue certification. These points in themselves do not necessarily add cost to a project; it is the impact of the cost of achieving other necessary points that tends to prohibit remodel projects from achieving LEED.

MR 2-1 & 2-2: Construction Waste Management - Divert From Landfill
The ease and cost of compliance with this credit varies greatly by location. In areas where construction waste management is widely used, the costs are minimal, if any. In other areas, or with contractors unfamiliar with construction waste management, the costs can be substantial.

While it is increasingly common for contractors to hire a waste hauler to take commingled waste and sort it off-site, many contractors have found that they can actually save costs by sorting waste onsite, if the space is available.

In most areas there is no substantial difference between the two points available. Once the contractor has committed to achieving the first point, the second usually follows.

The cost premium can be seen in two forms. In the first instance there is the direct cost of waste management: developing procedures, training, recycling charges, savings in dump fees, etc. The second cost impact is less measurable, and that is the impact on bidders. In periods of high construction demand and limited competition, inexperienced bidders may view these requirements as unduly onerous, and as a result decline to bid, or bid high to cover what they perceive as the risk. This can be mitigated to some degree through bidder outreach and training, but the cost can, nevertheless, be significant in certain locations at periods of low competition. Where the contractor can be engaged during the design process, the costs associated with this point can be reduced or eliminated.

There should be no additional soft cost, but there will be moderate documentation requirements if the project wishes to demonstrate compliance with the credit.

MR 3-1 and 3-2: Materials Reuse
These credits are usually not readily achievable, primarily because, for most buildings, there is not enough opportunity for use of salvaged, refurbished or reused materials, products or furnishings to meet the 5 percent or 10 percent thresholds. Even though some reclaimed materials or products can be incorporated at low cost or even for a reduction in cost, the cost for compliance with these credits can be significant since the percentage thresholds are quite high. Achievement of this credit may not be achievable for all but a very few projects.

MR 4-1 and 4-2: Recycled Content
The use of recycled content is usually not difficult for most projects, and can be done at minimal or no added cost. Most buildings qualify for at least one point for recycled content with no additional cost impact, and minimal or no design effort (projects typically use standard construction materials that already have high recycled content.) The second point can be challenging, however, since the thresholds (20 percent by value) are quite high, and concentrated effort is needed to identify high recycled content materials to replace more standard products.

There should be no additional soft cost, but there will be significant documentation requirements should the owner wish to demonstrate compliance with this credit.

Documentation involves tracking recycled content materials. This can be done with a simple one-page form that each trade is required to fill out for each product. Product manufacturers are familiar with this requirement and often provide recycled content data whether or not it has been requested. Trades are also being asked to isolate the cost for materials, separate of labor and other costs. Once the general contractor has set up a tracking document and process, the added labor is not significant.

MR 5-1 and 5-2: Local/Regional Materials
With the modifications made to this requirement under LEED 2.2, which added the requirement for local extraction as well as local manufacture, this credit became very difficult to achieve, even in areas with strong local manufacturing bases. It is difficult to assess what the cost implications might be, since strategies to achieve could have major impacts on the approach to basic design and structure of each project.

Materials and Resources

MR 6: Rapidly Renewable Materials
Even though some rapidly renewable materials can be incorporated at low cost, the cost for compliance with these credits can be significant, since the percentage threshold is quite high for most projects, and it can be difficult to find sufficient suitable materials to comply with this credit .

For many projects, the obstacle is not the cost of renewable materials, but the feasibility of identifying enough materials to meet the required threshold. For this reason, the compliance threshold has been lowered in LEED 2.2, making this credit more available.

There should be no additional soft cost but there will be significant documentation requirements.

MR 7: Certified Wood
The cost of certified wood varies widely with location and timing, and is dependent primarily on supply and demand. Project teams should continually monitor supply and price and consider making a final decision as close to bid as possible.

For buildings using certified wood only in finished carpentry, and in areas where there is more than one supplier, the cost premium is minimal. For buildings requiring large quantities of dimensional softwood or sheet goods, the cost can be significant.

There should be no additional soft cost but there will be significant documentation requirements.

Indoor Environmental Quality Credits (EQ)

Indoor Environmental Quality is the most popular section for credit achievement, with many of the credits well represented in all projects. The distribution of credits is similar to our earlier study, and does not show any significant shift in the credit profile of projects.

EQ Prerequisite 1: Minimum IAQ Performance
In most cases, this prerequisite has no construction or soft cost impact. The standards and technologies required for this point are standard to most projects. The documentation requirements are not onerous.

EQ Prerequisite 2: Environmental Tobacco Smoke (ETS) Control
The simplest way to achieve this credit is to eliminate smoking in the building; with this approach there is no added construction cost. If smoking is permitted, the cost to provide designated smoking areas with adequate ventilation systems range from moderate to substantial.

In most cases, this prerequisite has very little construction or soft cost impact. The standards and technologies required are standard to most projects or easily achieved at minimal added cost.

EQ 1: Outdoor Air Delivery Monitoring
In most cases, this credit has little construction or soft cost impact. The added sensors and the modifications to the control systems make a very small contribution to the overall cost of the air conditioning systems. The standards and technologies required for this point are standard to most projects or easily achieved at minimal added cost.

EQ 2: Increase Ventilation
Compliance with this credit has a very small construction cost impact, whether through the use of operable windows for natural ventilation or through the increased use of outside air in mechanical ventilation systems, but can have a significant impact on the operational cost of the facility, particularly in areas where the outside air temperature or humidity is significantly different from the required indoor conditions.

Increasing outdoor air through the use of natural ventilation can have an impact on mechanical system controls, as well as on fenestration costs.

Increasing outdoor air quantities in mechanical ventilation systems will usually lead to increased coil sizes, and possibly increased chilling and heating plant capacity. The increased operational costs can be offset to some degree through the use of total heat recovery.

EQ 3-1: Construction IAQ Management Plan - During Construction
This credit is one that many projects aim for. Even though acceptance of these requirements is growing within the construction community, it can be difficult to achieve because the credit requires significant coordination and management on the part of the contractor and all members of the construction crew, as well as a strong commitment by all members of the construction crew to abide by the rules.

The ease and cost of compliance with this credit varies greatly by location. In areas where construction IAQ management is widely used, the costs are minimal, if any. In other areas or with contractors unfamiliar with construction IAQ management the costs can be substantial.

The cost premium can be seen in two forms. In the first instance there is the direct cost of IAQ management: developing procedures, training, material handling, etc. The second cost impact is less measurable, and that is the impact on bidders. In periods of high construction demand and limited competition, inexperienced bidders may view these requirements as unduly onerous, and as a result decline to bid, or bid high to cover what they perceive as the risk. This can be mitigated to some degree through bidder outreach and training, but the cost can be significant in certain locations at periods of low competition.

There should be minimal additional soft cost, mainly related to collaboration with the contractor in developing and overseeing the operation of the IAQ plan, but there will be moderate documentation requirements in order to monitor and demonstrate compliance.

EQ 3-2: Construction IAQ Management Plan - Before Occupancy
The feasibility of this credit has changed under LEED 2.2, since it now allows for testing as an alternative to a building flush out, and the flush out requirement is no longer two weeks at 100% outside air. As a result of the change, more projects are considering pursuing this credit.

In hot, dry areas a two week flush-out with outdoor air is quite feasible as long as it is planned into the construction schedule. In areas where there is high humidity, however, flushing out is difficult in certain seasons, since a flush-out with outdoor air in wetter climates is more likely to expose the interior of the building to mold and other problems.

The costs for flush out are usually very small, in the range of $0.25 to $0.50/SF, but the schedule impact may not be acceptable. The costs for testing are minimal, usually a few thousand dollars per area. For most buildings, there will be a limited number of areas, with test areas usually in the range of 10,000 to 20,000 SF.

Indoor Environmental Quality Credits (EQ)

Low Emitting Materials: EQ 4-1: Adhesives and Sealants; EQ 4-2: Paints and Coatings; EQ 4-3: Carpet Systems; EQ 4-4: Composite Wood and Agrifiber Products

The first three of these credits are fairly easy to achieve. In some cases, local or regional ordinances may already require that projects meet the required standards. Where local or regional regulations do not already establish the use of low emitting materials, making use of these should have only minimal – if any – impact on cost, as these are usually widely available. The requirement for composite wood and agrifiber products can be harder to achieve, as suitable products are less readily available.

In most cases, these credits have no construction or soft cost impact. The technologies required for these points are standard to most projects, or easily achieved at minimal added cost. The one exception is EQ 4-4: Composite Wood and Agrifiber Products. Prices for composite wood materials with no added urea-formaldehyde can vary widely, depending on the product selected and market conditions. Documentation of the use of materials is a concern for contractors. Some states are considering banning building materials with added urea-formaldehyde; this should have a positive impact on costs.

EQ 5: Indoor Chemical and Pollutant Source Control

This credit is usually fairly easy to achieve with little added cost. Entry grates carry minimal costs, unless the building has multiple entries. In most cases, requirements for chemical mixing areas are already in the design. The use of MERV 13 filters usually represents a minimal added cost if any (many projects already require this as good practice). In smaller projects with small or package systems, it may not be possible to add the filters.

In most cases, this credit has minor construction and no soft cost impact.

EQ 6-1: Controllability of Systems – Lighting.

With the changes that came with LEED 2.2, this point can be easily achieved in most projects. The cost impact comes from enhanced lighting controls, which are increasingly being incorporated as part of the energy efficiency strategies implemented by projects. These costs can range from minimal to significant.

EQ 6-2: Controllability of Systems – Lighting, Thermal Comfort

Where areas are under the control of the single occupants, the cost of controlling thermal comfort can be fairly high, since it includes not only the control point, but also control valves on the air or hydronic supply to the space. These can be expensive in most conventional systems, although when integrated into more sophisticated, or carefully planned systems, the cost per control can be significantly lower. This point is achieved in projects with VAV, radiant panels, or displacement air systems.

EQ 7-1: Thermal Comfort – Design:

Most projects are designed to comply with ASHRAE comfort standards, and meet requirements for no added cost. The point is not easily achieved in projects with smaller systems, or that are trying to reduce energy usage by relaxing comfort standards.

EQ 7-2: Thermal Comfort – Verification

This point is easily achieved in LEED 2.2. The costs associated with preparing a survey of building occupants are moderate. There are no implications to soft costs. Many owners, however, choose not to pursue this credit, from reluctance to survey occupants.

EQ 8-1: Daylight and Views - Daylight 75 Percent of Spaces.

There are two main elements in the strategy to achieve this point. The first is to reduce the maximum distance from the exterior by narrowing the floorplate as far as possible. The second is to maximize the daylight penetration into the building by the use of good orientation, high quality glazing, and effective light shelving.

In many projects, the floor plate size is set by program, and it can be challenging to reduce the overall depth of the floorplate. In other projects, such as office buildings, it is generally easier to configure the floorplates to allow for greater daylight penetration. Even so, it can be difficult to get enough daylight to achieve compliance.

Costs associated with this point are usually for high performance glazing and/or increased glazing opening sizes, and can range from minimal to significant.

EQ 8-2: Daylight and Views - Views for 90 Percent of Spaces

This point is usually achievable by the thoughtful arrangement of interior spaces, and the addition of glazing at interior partitions. Costs are minimal to moderate.

Innovation and Design Process Credits (ID)

Most projects seek at least two Innovation in Design credits, plus the credit for having a LEED accredited professional on the project. The innovation credits come from two main sources:

- Exceeding thresholds in other credits, for example diverting 95 percent of waste from landfill, higher levels of recycled materials, or significantly higher use of public transit systems.
- Incorporating innovative environmental strategies not covered by other credits. These can include, among many options:
  - Developing an environmental educational program or community outreach program using the building. This requires a specific educational program, and not simply a passive 'poster' display.
  - Incorporation of green housekeeping strategies.
  - Extension of Materials and Resources credit requirements to Furnishings, Fixtures or Equipment (FF&E).
  - Use of extended Labs21 or Green Guide for Healthcare criteria where appropriate, or adoption of other LEED system requirements, such as LEED for Neighborhood Development credits.
  - Preconstruction surveys of other similar buildings to establish actual baseline performance, leading to right sizing of equipment.

Feasibility and Cost – Conclusion

As we can see, there are a number of factors which can have a significant impact on both the ability to achieve specific LEED points, and on the cost to build a sustainable building. When considering cost and feasibility for pursuing LEED certification for any building, it is extremely important that the owner:

- Understand the feasibility of each point for the project
- Understand the factors affecting cost and feasibility

Costs are not necessarily cumulative. In many cases, a design feature that allows a project to meet one sustainable design criteria will also allow that project to meet other criteria, without any additional cost impact beyond that resulting from the first point.

Having a comprehensive understanding of these factors allows an owner to more accurately determine potential costs, and to make better choices as to which LEED points a particular building should pursue. The fact that a point may have a cost impact when assessed individually does not mean that it will have an impact on final budget. Quite a few points have the potential for cost impact when considered independent of the overall project design; it is the choices made by the project team that ultimately determine whether those design elements (and their associated costs) are included simply as part of the existing budget, the same as any other non-green-specific design element. It is for this reason that one of the most critical indicators of whether sustainable design goals will result in some form of cost premium is the willingness of the project team to embrace the project's sustainable goals and make the necessary choices to achieve that result.

Budgeting Methodology for Green

When establishing a design and a budget for a LEED building, the key point to remember is that sustainability is a program issue, rather than an added requirement. Our analysis indicates that it is necessary to understand the project goals, the approach to achieving the goals, and the factors at play in for the project. Simply choosing to add a premium to a budget for a non-green building will not give any meaningful reflection of the cost for that building to meet its green goals. The first question in budgeting should not be "How much more will it cost?," but "How will we do this?"

This must be done as early as possible in the project and it must be considered at every step of design and construction. This is done by:

- Establishing team goals, expectations & expertise
- Including specific goals in the Program
- Aligning budget with program
- Staying on track through design and construction

Perhaps the most important thing to remember is that sustainability is not a below-the-line item.

Establish Team Goals, Expectations and Expertise

When considering sustainability, it is important to understand your team. As we discussed previously, the feasibility and potential cost impact of a number of LEED points can be significantly increased or decreased by whether or not the members of the design and construction teams are familiar with sustainable practices, and willing to commit to following established protocols and procedures.

It is also important to ensure that the team includes the expertise that will be necessary to allow the sustainable elements to be incorporated smoothly. And finally, you must align the goals and values of the project such that all members of the team accept and understand them.

Include Specific Goals

A LEED checklist should be prepared at the start of the project and at every program stage. This will enable the project team to clearly understand their current ability to meet the project's established goals and values. Additionally, the team should specify specific design measures to be employed in meeting the goals, and these should be routinely monitored to ensure complete compliance.

It may seem impractical to develop a sustainable design strategy during the program stage of design, when so little of the building is defined. It is our experience, however, that many of the features can be identified, visualized and incorporated into the cost model if sufficient attention is paid to them.

In the design, include contingency points, recognizing that some of the points may be unsuccessful. It is essential to plan for at least three or four points more than the minimum required for a given level. We have found that where projects need "just one more point", those last points tend to be difficult and very expensive.

It is also important to be specific in point selection. There will always be points which are uncertain, which should properly be counted as points in the 'maybe' column on the checklist. The 'maybe' column should not, however, be used as a substitute for thinking through the feasibility of a point; 'maybe' is not the same as indecision.

Align Budget with Program

It is essential to align the budget with the program during the programming phase of the project. If there are insufficient funds to fulfill all of the program goals, either the goals must be reduced, or the budget increased. Too often projects move forward with a mismatch, either because the project team is unaware of the mismatch, or more often, due to wishful thinking that something will turn up to resolve the problem.

In order to align the budget with the program, a cost model should be developed, which allocates the available funds to the program elements. It is quite possible to develop a thorough cost model from program information, even when design information is limited. The program will dictate the majority of the cost elements, both in quantity and quality, and from that it is possible to build a cost model. The cost model will both reflect the program – highlighting areas of shortfall – and provide planning guidance for the design team by distributing the budget across the disciplines.

The cost model also provides a communication tool for the project team, allowing clear understanding of any budget limitations. These must be addressed by adjusting scope, design or funds. Proceeding with inadequate funding will lead to more drastic scope reductions at later stages in the design process, and greater conflict between competing interests in the program. It is in these cases that sustainable elements are most vulnerable to elimination as unaffordable expenses.

In order to align your budget with your program you must:

- Understand your starting budget.
- Generate a cost model for the project to understand where costs lie.
- Allocate funds.
- Address limitations in the budget at the Program stage.

It is the choices made during design which will ultimately determine whether a building can be sustainable, not the budget set.

Budgeting Methodology for Green

Stay On Track

Once you have a clear understanding of the goals and values for the project, as well as the budget available, it is important to stay on track throughout the entire process. The steps for staying on track include:

- *Documentation:* Begin any necessary documentation as early as possible, and maintain it as you go.
- *Update / Monitor Checklist:* Update and monitor the LEED checklist so you have a clear picture of how the sustainable goals are being met, and whether the LEED goal is succeeding.
- *Energy / Cost Models:* Use energy and cost models as design tools. Energy models are useful during all design phases to establish the design criteria necessary to meet selected LEED points. Cost models will allow you to track cost impacts from any necessary changes to design or procedure as the project progresses. Energy and cost models can be combined to make a very effective decision making tool, preferably early in design.

Conclusion

The only effective way to budget for sustainable features within buildings is to identify the goals, and build an appropriate cost model for them. If they are seen as upgrades or additions, the cost of the elements will also be seen as an addition. It is possible to establish goals and budgets from the very beginning of the project. Other methods are ineffective and unnecessary.

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CITY OF DALLAS

Testimony
of
Councilmember Vonciel Jones Hill
City of Dallas, Texas

Subcommittee
on
Water Resources & the Environment

Committee on Transportation & Infrastructure

United States House of Representatives

February 14, 2008

OFFICE OF THE MAYOR AND CITY COUNCIL CITY HALL DALLAS, TEXAS 75201 TELEPHONE 214/670-4050 or 670-4054

Testimony of Councilmember Vonciel Jones Hill
City of Dallas
February 14, 2008

Chairman Johnson, Ranking Member Baker and members of the Subcommittee, thank you for this opportunity to testify on reauthorization of the Environmental Protection Agency (EPA) Small Business Liability Relief and Brownfields Revitalization Act. I am Councilwoman Vonciel Jones Hill, City Council Member from Dallas, TX, and I am here to discuss why the Brownfields Program is important for community revitalization nation-wide.

The City of Dallas is pleased that the Subcommittee is looking to reauthorize this fantastically successful and important program. The Brownfields Program has leveraged a relatively small federal investment into great returns, bringing life and economic vitality back to urban neighborhoods long left for dead and helping to reverse the relentless, decades-long migration of jobs and economic activity away from central cities to "greenfields" at the far flung edges of our nation's metropolitan areas.

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence of a hazardous substance, pollutant, or contaminant. Their derelict state often affects neighboring properties, making it difficult to revitalize central city neighborhoods and driving commercial and residential development to the exurban fringes of metropolitan areas. These trends have a spiral affect, leading to development that requires expensive new infrastructure, which in turn leads to more vehicle miles traveled and exacerbates congestion and air pollution.

The EPA Brownfields Program provides grants to state and local governments to assess brownfield sites and to clean up contamination found as a result of those assessments. It also provides limited liability relief for prospective property purchasers of sites that have been assessed and cleaned up under the program, removing the biggest obstacle to their revitalization.

The City of Dallas illustrates the success of the Brownfields Program well. In 1998, EPA designated Dallas a ***Brownfields Showcase Community***. EPA recognized Dallas for good reason. Since the inception of the Dallas Brownfields Program in 1995, $1.125 million in federal Brownfields Assessment Grants has resulted in more than $3.4 billion in public and private investment which has contributed to the revitalization of 47 Brownfield sites. With our assessment dollars, the City of Dallas has conducted 32 Phase I environmental site assessments and 9 Phase II assessments. This infusion of federal brownfields funding has created over 6,800 jobs, generated $13.5 million in private sector clean up funding and has transformed derelict and moribund central Dallas properties into thriving urban neighborhoods.

Combined with the opening of Dallas Area Rapid Transit (DART) Light Rail and City of Dallas initiatives, the redevelopment of these Brownfield sites has sparked an urban renaissance in Dallas. Downtown Dallas has reclaimed its position as one of the metropolitan area's top office markets. More importantly, neighborhoods throughout the City have seen a remarkable amount of commercial and residential development. The redevelopment of brownfields has shown the potential of urban, central city projects and sparked countless nearby development projects that are transforming Dallas neighborhoods long left in decline. Reauthorization of the Small Business Liability Relief and Brownfields Revitalization Act will provide an important boost to these efforts.

In the year 2008, Brownfields redevelopment is not just an evolving issue for developers. It has become another option to help eliminate urban sprawl, create jobs, enhance the local tax base, and reduce crime.

The successes in Dallas include: 16 mixed use, (including business, residential, retail, commercial and hospitality), two educational, three public safety, one business assistance/job training center, three municipal, and one transportation, one industrial, and two recreational and green space projects.

I have descriptions of all of Dallas's brownfield projects and a map that illustrates how this program has positively impacted the entire City of Dallas. With your permission, Chairman Johnson, I would like to enter the descriptions and the map into the record. Two City of Dallas projects have been recognized on the national level and have received EPA Phoenix Awards.

American Airlines Center and Victory Park

Located on the site of an abandoned power plant and related industrial uses near Downtown Dallas, Victory Park is a $3 billion mixed-use development that offers retail shops, restaurants, office space, residential units, hotels and entertainment venues, including the American Airlines Center, home of the professional sports teams, the Dallas Mavericks and the Dallas Stars. Victory Park is a national model for the importance and success of a public/private partnership which changed the face of 73-plus acres of underused land adjoining the central business district; created a major destination location. Victory Park is expected to generate $1 billion annually and has already created 1,200 jobs with many more expected in 2009. In 2001, EPA recognized the American Airlines Center and Victory Park with the Phoenix Award for the highest excellence in brownfields redevelopment and the People's Choice Award that same year.

Jack Evans Police Headquarters

The Jack Evans Police Headquarters, a $59 million City project, was constructed just south of the Central Business District. The site, which had previously housed gasoline stations, automotive shops and a dry cleaner, had been vacant for more than a decade. It was donated by the owner/developer to provide security and reduce crime in a neighborhood coming out of decades of decline. An estimated 300 clean-up and construction jobs were created during the construction phase of the facility. The building was the beta test for the Dallas Green Building Program and received a

Leadership in Energy and Environmental Design (LEED) silver certification in November 2005. Jack Evans Police Headquarters is also part of a neighborhood transit-oriented development, within one block from the DART Cedars Light Rail Station. This project has been a catalyst for new construction in the immediate area. The first phase of a private sector, four-building residential development is under construction across the street. In 2003, EPA recognized the Jack Evans Police Headquarters as one of the nation's largest and most successful brownfields projects through presentation of the EPA Phoenix Award for the highest excellence in brownfields redevelopment.

Jefferson North End - 1996

Jefferson North End was the City's first Brownfields success story and the venue for the signing ceremony for the Memorandum of Understanding involving environmental cleanup standards between the state regulatory agency and EPA. Buildings on this site were razed in the 1970s leaving the property vacant for more than 20 years. The site once housed a gas station, metal finishing operation, battery manufacturing, automotive repair, and paint and varnish manufacturing. Two developers purchased the site from FDIC and employed soil excavation to clean up the property. The 11 acres were sold to JPI which built a 540-unit multifamily residential complex on the site. The complex included an affordable housing component.

South Side on Lamar - 1997

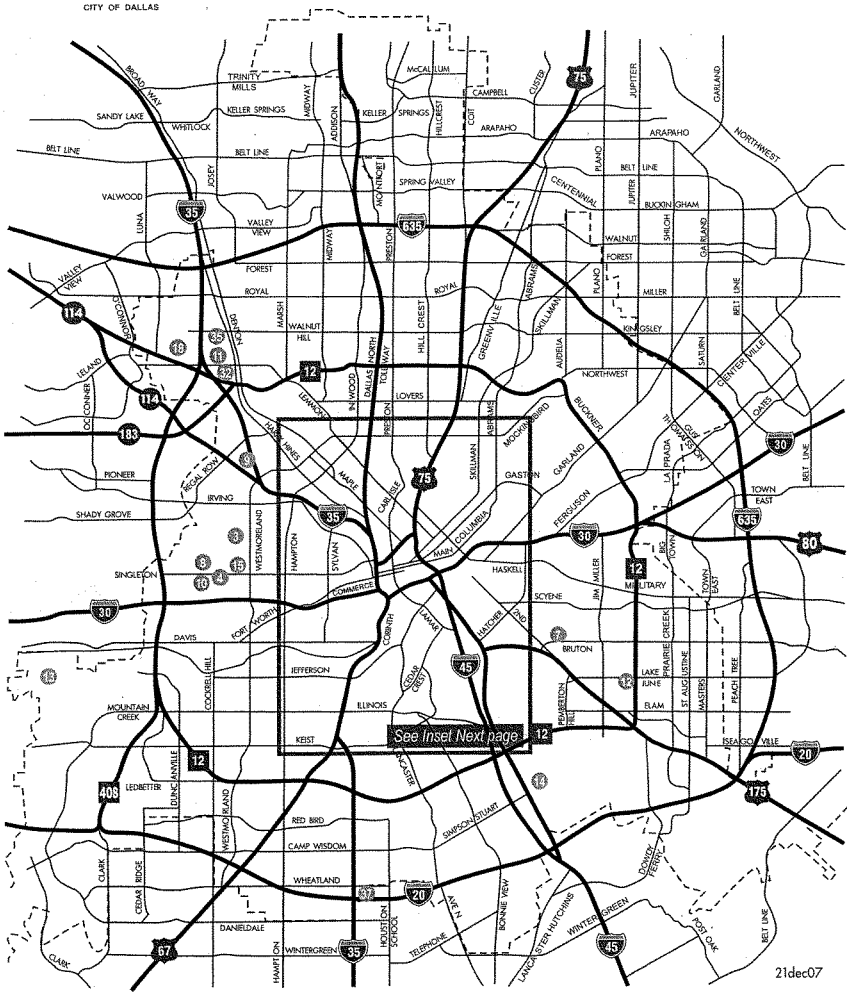
The one million square-foot former Sears, Roebuck Catalog Merchandise Center main building now houses 457 residential lofts, 120,000 square feet of commercial and retail space, and 25 artists' studios. Matthews Southwest purchased the property and converted the main building to 455 lofts and 120,000 square feet of commercial and retail space.

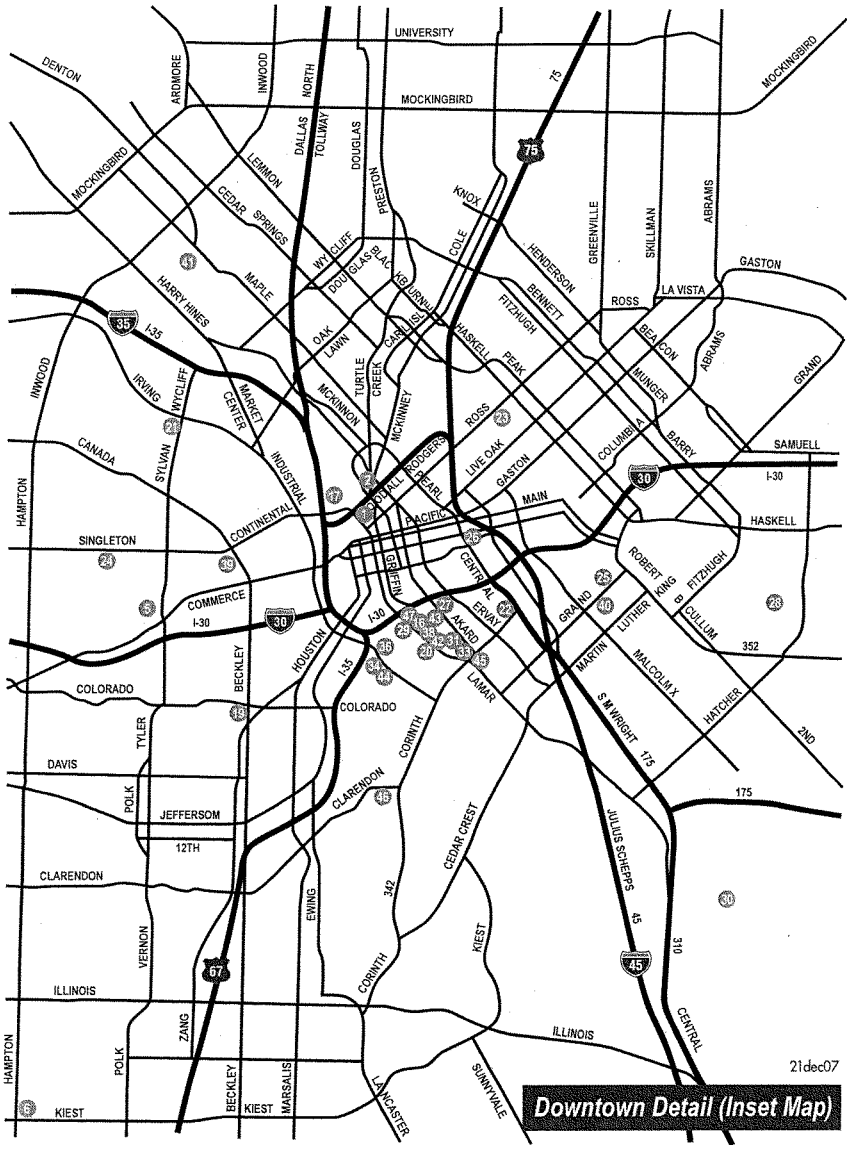
Thanks to the EPA Brownfields Program, in 2008 the redevelopment of idle urban land is no longer the specialized niche of pioneer developers and committed local officials. In response to this innovative federal program, state and local governments have developed capacity, incentives and regulations that complement the federal program and developers of all sizes have undergone a paradigm shift so that investment in central city, urban projects occupies a core part of their investment strategy.

The City of Dallas's partnership with the EPA exemplifies an unqualified success. I commend the Subcommittee for its interest in reauthorizing this critically important and successful program. The Brownfields Program has led to an urban renaissance in our nation and I urge Congress to reauthorize and fully fund the Small Business Liability Relief and Brownfields Revitalization Act.

City of Dallas Brownfields Program
Brownfield Success Story Sites

CITY OF DALLAS




UNIVERSITY
MOCKINGBIRD
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DOUGLAS
PRESTON
LEMMON
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KNOX
COLE
HENDERSON
GREENVILLE
SKILLMAN
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BENNETT
FITZHUGH
HARRY HINES
MAPLE
WYCLIFF
DOUGLAS BL
AUBURN
HASKELL
PEAK
BEACON
MUNGER
GRAND
I-35
OAK LAWN
TURTLE CREEK
CARLISLE
IRVING
WYCLIFF
MARKET CENTER
MCKINNON
MCKINNEY
ROSS
LIVE OAK
COLUMBIA
BARRY
SAMUELL
CANADA
SYLVAN
INDUSTRIAL
DOLL
RODGERS
PEARL
GASTON
MAIN
I-30
HASKELL
HAMPTON
SINGLETON
CONTINENTAL
PACIFIC
GRIFFIN
CENTRAL
ERVAY
ROBERT
KING
FITZHUGH
CULLUM
COMMERCE
I-30
AKARD
GRAND
LUTHER
MARTIN
MALCOLM X
352
HOUSTON
I-35
LAMAR
S M WRIGHT
175
HATCHER
2ND
COLORADO
BECKLEY
COLORADO
TYLER
CORINTH
DAVIS
POLK
CLARENDON
JEFFERSOM
12TH
CEDAR CREST
JULIUS SCHEPPS
45
CLARENDON
342
EWING
VERNON
KIEST
310
ILLINOIS
ZANG
CORINTH
ILLINOIS
CENTRAL
HAMPTON
POLK
BECKLEY
MARSALIS
LANCASTER
SUNNYVALE
KIEST
KIEST
21dec07
Downtown Detail (Inset Map)

Brownfields Success Story Sites

1. Jefferson North End
   2323 North Field Street, Dallas, TX 75201

2. Consolidated Castings
   2425 Caroline Street, Dallas, TX 75201

3. Magdeline Street
   3700 Block Magdeline Street, Dallas, TX 75212

4. PalEx (formerly American Pallet Recyclers)
   2401 Vinson Street, Dallas, TX 75212

5. Wooten Property
   919 Fort Worth Avenue, Dallas, TX 75208

6. Catellus
   3001 South Hampton Road, Dallas, TX 75224

   2919 South Hampton
   2927 South Hampton
   3100 South Hampton

7. Larry Johnson Recreation Center
   3700 Dixon Avenue, Dallas, TX 75210

8. DART Passenger Transfer Location
   5057 Singleton Boulevard, Dallas, TX 75212
   Now 5151 Singleton Blvd., two properties

9. Empire Stemmons
   8383 Stemmons Freeway, Dallas, TX 75247
   (original property address)

   Five businesses constructed on site:

   Star Wholesale Florist, 8223 N Stemmons Frwy.
   Kinko's, 8303 N Stemmons Frwy
   Taco Bell, 8249 N. Stemmons Frwy
   Schlotzsky's Deli, 8235 N Stemmons Frwy
   Burger King, 8383 N. Stemmons Frwy

10. Sundown Market
    5302 Singleton Boulevard, Dallas, TX 75212

11. Centennial Plaza Addition
    2271 West Northwest Highway, Dallas, TX 75220

    10326 Finnell Street, Extended Stay Suites
    10319 Finnell Street, Cabo Cantina
    (formerly Schlotzsky's Deli)
    10410 Finnell Street, Centennial Offices
    Lots, 10300, 10341 and 10429 Finnell Street

12. Dallas Fire Station #34
    7604 Lake June Road, Dallas, TX 75217
    Now – 1250 Carbona Drive

13. Hensley Field (formerly Naval Air Station Dallas)
    8100 West Jefferson Boulevard, Dallas, TX 75211

14. Dallas Eco Business Park (formerly McCommas Bluff/Floral Farms)
    5215 Simpson Stuart Road, Dallas, TX 75241

15. West Dallas Training Institute
    3423 & 3425 North Westmoreland Road, Dallas, TX 75212

16. South Side on Lamar
    1300 - 1700 South Lamar Street, Dallas, TX 75215
    Includes 1300, 1400, 1401, 1409, 1319, 1325, and 1601
    1400 South Lamar Street is now the Jack Evans Police
    Headquarters

17. American Airlines Center (formerly 2707 Flynn Street)
    2500 Victory Avenue, Dallas, TX 75201
    72-plus-acre Victory Development including
    W Hotel, 2425 North Houston Street

18. Botanical Technologies
    1841 West Northwest Highway, Dallas, TX 75220

19. Jefferson at Kessler Heights
    1520 North Beckley Avenue, Dallas, TX 75203

20. Jack Evans Police Headquarters
    1400 South Lamar Street, Dallas, TX 75215

21. River Levee Operations
    2243 & 2245 Irving Boulevard, Dallas, TX 75207
    Now – 2245 Irving Boulevard

22. The Dress Factory
    2201 South Harwood Street, Dallas, TX 75215

23. Fishburn's Cleaners
    3200 - 3216 Ross Avenue, Dallas, TX 75204

24. Los Arboles de Santa Maria (formerly St Mary's Project)
    1810 - 1846 Muncie Avenue &
    1802 - 1838 Bayonne Street, Dallas, TX 75212
    This is a total of 27 lots.

25. Grand Plaza Shopping Center
    3103 - 3129 Grand Avenue, Dallas, TX 75210

26. Dallas Police Association
    2104 & 2108 Jackson Street, Dallas, TX 75201

27. Dallas Police Association
    1412 East Griffin Street, Dallas, TX 75215

28. Drew's Place
    2802 Lagow Street, Dallas, TX 75210

29. Former Red Coleman Store
    1226 South Lamar Street, Dallas, TX 75215

30. Buckeye Trail
    3000 Rochester Street, Dallas, Texas 75215

31. 1923 South Akard Street, Dallas, Texas 75215

32. 10501 Shady Trail, Dallas, TX 75220

33. 1919 South Akard Street, Dallas, TX 75215

34. 1500 South Industrial Boulevard, Dallas, TX 75207

35. Northwest Service Center
    9901 Harry Hines Boulevard, Dallas, TX 75220
    Now 9809, 9809A, and 9811 Harry Hines Boulevard

36. Alford Refrigerated Warehouses property
    318 Cadiz Street, Dallas, TX 75207

37. BAC5 Business and Job Training Center
    208 Wheatland Road, Dallas, TX 75241

38. The Beat (formerly Belleview – Lamar Condos)
    (formerly South Side on Lamar property)
    1300 South Lamar Street, Dallas, TX 75215

39. Calatrava Bridge Approach
    2920 & 2930 South Beckley Avenue, Dallas, TX 75212

40. SouthFair Lots
    2400 & 2500 Blocks of Meyers, Jeffries, and Merlin Streets,
    Dallas, TX 75215

41. Cityville at Southwestern Medical District
    2306 Motor Street, Dallas, TX 75235

42. Dallas County Community College District properties
    (formerly South Side on Lamar properties)
    1601 & 1700 South Lamar Street, Dallas, TX 75215

43. 700 Belleview Street, Dallas, TX 75215

44. Former Ace Foundry
    1203 & 1205 South Industrial Boulevard, Dallas, TX 75215

45. 1300 Corinth Street, Dallas, TX 75215

46. 1524 & 1526 East Clarendon Drive, Dallas, TX 75203

47. 1008-1022 South Lamar Street, Dallas, TX 75215

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Follow-up Questions for the Honorable Vonciel Jones Hill
House Committee on Transportation and Infrastructure
Subcommittee on Water Resources and Environment
Hearing on Revitalization of the Environmental Protection Agency's Brownfields Program
Thursday, February 14, 2008 at 2 p.m.

DURING THE QUESTION AND ANSWER PERIOD OF THE HEARING, YOU RESPONDED TO A QUESTION ON YOUR VIEW OF A "GOOD SAMARITAN" BROWNFIELDS AUTHROITY BY EXPRESSING CONCERN ABOUT POTENTIAL ISSUES OF LIABILITY, OWNERSHIP, AND CONTROL OVER THE PROPERTY.

CAN YOU ELABORATE ON THESE CONCERNS?

The City of Dallas does not generally have authority to access and work on privately owned property. This remains true in those situations where a developer abandons environmental clean up work. Unfinished clean up work may pose a potential threat to human health and the environment. Unfortunately, the City may not be able to complete the clean up work without taking control of the property. The City's taking charge of a cleanup potentially could result in liability for the site's environmental issues.

Environmental Protection Agency's (EPA) Good Samaritan Initiative is an Agency-wide effort to facilitate the cleanup of certain watersheds affected by Orphan Mine Sites by encouraging the efforts of certain non-liable parties ("Good Samaritans") who are willing to voluntarily clean up some of these sites. The Good Samaritan Initiative's principal purpose is to use the federal government's authority to provide greater legal certainty to Good Samaritans by reducing or eliminating the threat of federal liability to local units of government which act as Good Samaritans. The Good Samaritan model could be reviewed to determine if it's appropriate for use in the Brownfields arena. Additionally, the EPA could explore funding sources to encourage Good Samaritans to pursue these important clean up activities.

Nancey Green Leigh, PhD, AICP
Professor of City and Regional Planning
City and Regional Planning Program
Georgia Institute of Technology[1]

Testimony regarding "Revitalization of the Environmental Protection Agency's Brownfields Program"

U.S. House of Representatives Committee on Transportation and Infrastructure, Subcommittee on Water Resources and Environment

February 14th, 2008

Good afternoon Chairwoman Johnson and members of the subcommittee. Thank you for inviting me here to testify on reauthorizing and revitalizing the Environmental Protection Agency's Brownfields Program.

I am a professor of City and Regional Planning at the Georgia Institute of Technology. I specialize in local economic development planning and have been researching, writing and teaching about brownfield redevelopment since the early 1990s. In particular, I have focused on the unintended consequences of the Comprehensive Environmental Response, Compensation, and Liability Act or (CERCLA), and how brownfields affect prospects for urban revitalization in general, and economic development efforts in low-income communities, specifically. In this testimony I will speak to the successes of US EPA's brownfield programs, identify an unintended and non-benign consequence of successful federal brownfield redevelopment initiatives, and discuss the potential for EPA to be a stronger catalyst for advancing sustainable redevelopment.

As is well acknowledged, the unintended consequence of CERCLA was the impetus for the enactment of US EPA and other federal programs brownfield legislation and initiatives. CERCLA's intent was to promote clean up of contaminated land, and to

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provide opportunities for EPA to recover clean up costs from all potentially responsible parties (PRPs), including past and present property owners as well as lending institutions. However, due to the subsequent fear of being assigned liability as a PRP, in both the public and private sector, CERCLA had the effect of stymieing interest in redeveloping brownfields, or, in other words, creating an economic development market failure.

States and localities, particularly those in the "Rustbelt," were leaders in seeking means to overcome CERCLA's unintended consequences. Eventually, EPA responded with the 1995 Brownfield Action Agenda, and it has been active ever since in promoting brownfield redevelopment. The Agenda included brownfield pilot grants to communities, clarification of liability issues for brownfield property owners, partnerships between federal, state, and local agencies to promote brownfield redevelopment, and job development and training for brownfield remediation. Other federal agencies have created initiatives to further increase brownfield redevelopment activity. EPA's proactive stance was significantly enhanced with the 2002 enactment of the Small Business Liability Relief and Brownfields Revitalization Act that is now under consideration for reauthorization. This act has furthered the establishment of a brownfields marketplace by: authorizing funding for site assessment and cleanup; clarifying liability for innocent landowners, contiguous property owners and prospective purchasers, and delegating authority to the states to sign-off on completed brownfield remediations in their Voluntary Clean-Up Programs (Bartsch 2007).

The US EPA has been a critical catalyst for overcoming the market failure for brownfield redevelopment. In little more than the decade since the federal brownfield program was initiated, a sophisticated brownfield industry has evolved to include specializations in environmental consulting, finance and investment, law, insurance, real estate, engineering and remediation, and research and development of new remediation technologies. Conferences, trade associations, technical training programs, and an extensive and growing literature on brownfield redevelopment are all components of this industry. There simply would not be the brownfield industry we have today without the EPA's brownfield programs, and the 2002 Small Business Liability Relief and Brownfields Revitalization Act.

Likewise, there would not have been the development of essential environmental insurance products for furthering the growth of the brownfield market. These transfer risk related to brownfields cleanup costs and liability from project stakeholders to the insurance company. Common types of environmental insurance policies are: [1] Pollution Liability that protects an insured against on-site cleanup costs of unknown, pre-existing pollution, pollution from ongoing operations, and third-party claims; [2] Cost Caps that protect against cleanup costs exceeding the anticipated cost; and [3] Secured Lender that protects the lender when a borrower defaults on a loan due to a pollution condition. It should be noted, however, that a major deficiency of these environmental insurance programs is that they are not cost effective for small brownfields.

Also vital to the success of the industry has been the development and application of technologies for assessing the extent of contamination on a brownfield site (for example, fiber optic chemical sensors) and treating contaminants (for example, air sparging and bioremediation). Thus, there has been great progress in providing the institutional supports and technical solutions required for brownfield redevelopment.

Today, the brownfield industry is a niche real estate market that relies upon public-private partnerships and employs between 5,000 to 10,000 people. There have been many high profile successes, the largest of which is the 2004 National Brownfield Award-winning, mixed-use project called Atlantic Station that was developed on a 138-acre former Atlantic Steel plant, in midtown Atlanta, Georgia. Acquired by Jacoby Development, the site required $10 million in clean-up costs. Besides Jacoby, key participants on the private side include AIG Global Real Estate Investment Group, and more than one national home developer. On the public sector side are the US EPA, the State of Georgia, the City of Atlanta, and a number of neighborhood groups from the surrounding area. A range of public incentives, including infrastructure improvements and tax incremental financing, were provided to the project because it is expected to contribute to the region's Smart Growth, or, anti-sprawl efforts. At build out, $2 billion will have been spent on the redevelopment that will have 5,000 residential units to meet a

range of income levels; 6 million square feet of office space; 2 million square feet of retail and entertainment space; 1,000 hotel rooms; and 11 acres of public parks.

While the US EPA Small Business Liability Relief and Brownfields Revitalization Act in 2002 has been an essential element for creating a strong brownfields redevelopment marketplace, there is still much to be done. Further, the marketplace will be unable to completely resolve the brownfields problem. While an estimated 50,000 to 60,000 brownfields have gone through state voluntary cleanup programs, this represents only the tip of the iceberg. The common view is that the full extent of the nation's brownfield problem cannot be quantified. However, there has been no attempt to create a national brownfields property database. "Guesstimates" of the total number range from 450,000 to 1,000,000.

With my former student, Sarah L. Coffin, now an assistant professor at the University of St. Louis, I created a brownfields database for two cities, Atlanta and Cleveland, that sheds some light on the magnitude of the brownfield problem. We examined historic city business directories for each city for the years 1910, 1930, 1950, and 1970 to obtain the addresses of all businesses that had a 50 percent or greater likelihood for contamination based on their prior economic activity. We have labeled the properties on which these businesses were located "potential brownfields." We combined these potential brownfields with known brownfields that have been placed on official federal and state lists, and then input them into a Geographic Information System database. For every known or official brownfield, we found over fourteen potential brownfields (Leigh and Coffin 2005). See Figures 1 and 2.

The public sector response to brownfields has been predominantly characterized by a focus on the economic efficiency of cleanup and redevelopment of individual properties, as opposed to how remediation and redevelopment affects neighborhood property values, and correspondingly contributes to the overall economic revitalization of neighborhoods (Iannone, 1996; Black, 1995). Brownfields can be large or small properties, and they can be found in depressed as well as healthy areas of our cities and

states. But given the public sector emphasis on allocating scarce brownfield redevelopment resources to those properties that will realize the greatest market returns (Simons and Iannone, 1997; US EPA, 1996; Argonne National Laboratories, 1998), properties that are small and/or located in depressed neighborhoods are more likely to be overlooked. Largely missing from the national brownfield dialogue has been the issue of whether brownfield status impacts more than the property labeled as such. That is, does the brownfield label also stigmatize and de-value surrounding non-brownfield properties? Our research also sought to provide insight into this question.

After creating the brownfield databases for the two cities, we used hedonic modeling to control for neighborhood and property characteristics and found that the presence of listed and potential brownfields lowered residential property values in both Atlanta and Cleveland. Lowered property values, of course, also lead to lower property tax revenue with which to pay for schools and essential services.

As a supplement to our modeling efforts and to explore the economic justice implications of our model results, we analyzed redevelopment rates (proxied by property turnover) in high and low poverty neighborhoods of both cities. Defining high poverty neighborhoods as census tracts with a 20% or greater poverty rate, and low poverty neighborhoods as those having less than 20% poverty, we found the average percentage of property turnovers per census tract in poverty census tracts was 9.5% in Atlanta and 8.7% in Cleveland. In contrast, the average percentage of property turnovers per census tract in non-poverty census tracts was 13% in Atlanta and 15.2% in Cleveland. To the extent that brownfields act as a barrier to property turnover occurring with redevelopment in weak market areas, high poverty neighborhoods' prospects for revitalization are thwarted by the continued presence of brownfields. These findings suggest there is a need to target EPA brownfield assistance to poverty neighborhoods and disadvantaged communities.

Additionally, it should be understood that though there is greater knowledge of hazardous substances and how environmental damage can occur, new brownfields are

still being created, primarily due to illegal activities. For example, a new source comes from "methfields," or brownfields created by clandestine drug labs. These have rapidly multiplied throughout urban and rural areas. The dumping of their waste – estimated at five pounds for every one pound of methamphetamine produced – is contaminating drain fields, soils and surface waters. It is likely that this new source of brownfields will be disproportionately located in disadvantaged areas.

Properties in the brownfield marketplace can be divided into three groups: [1] those with clearly negative values where environmental liabilities far exceed their value; [2] those with modest or neutral value; and [3] those with strong positive values. Those in the third category have very desirable locations and tend to be the bigger sites on which large-scale redevelopment can occur. In a properly functioning marketplace, brownfield properties with strong positive values should not need public assistance or incentives for redevelopment. With the development of financial, insurance and technical mechanisms that make up a large part of today's brownfield industry, the private sector is increasingly able to take care of the properties in the third category.

Up until now, the predominant brownfield redevelopment focus – both private and public -- has been on the most marketable and larger properties, or what has come to be called the "low hanging fruit." The rationale for the public sector focus has been to maximize return on public investment, while the private sector logically and appropriately is seeking to maximize profits. While legitimate concern over large moth-balled sites is reflected in the National Brownfields Coalition's proposal for the reauthorization of the Brownfields Act, the remaining brownfield inventory is increasingly composed of small and medium-sized sites, many of which would be considered marginal redevelopment prospects by the private sector due to their locations, limited end uses, and profit potentials. Neglecting their redevelopment stigmatizes and de-values surrounding non-brownfield properties acting as a barrier to neighborhood revitalization. In turn, these neighborhoods are left further behind from those that are being revitalized due to the proactive redevelopment climate catalyzed by the EPA's Brownfield Revitalization Act. There has been a "Back to the Downtown" movement

occurring in our major cities due to the rejection of suburban living by certain demographic groups (aging babyboomers, young professionals...) as well as firms seeking to avoid the costs of sprawl (Birch 2005). While a very positive trend overall, there is increasing concern over how this relates to trends in growing income inequality, and displacement of low income residents due to gentrification. Unless EPA's brownfield programs become more tightly focused on low-income neighborhoods, an unintended consequence of the programs may well be widening urban inequality.

The 2002 Small Business Liability Relief and Brownfields Revitalization Act was clearly aimed at promoting economic development as well as achieving environmental restoration of brownfield sites. Since as little as five percent of brownfields have been remediated and redeveloped,[2] the Act needs to be reauthorized and its funding substantially increased as the National Brownfields Coalition has suggested. The act also needs revision. To counter trends in urban inequality and gentrification displacement, the reauthorized act should:

- Target the additional increment in funds to brownfields neighborhoods with the worst health exposure and greatest need for economic development.
- Require demographic and economic impact assessments of projects, as well as displacement projections and prevention/redress plans.
- Target the placement of EPA staff via Intergovernmental Personnel Agreements in brownfields neighborhoods with the worst health exposure and greatest need for economic development.
- Emphasize a neighborhood approach in any provision for community-wide multi-purpose grants for use for both assessment and cleanup on multiple sites.
- Encourage the development of workforce housing on appropriate brownfield sites.

[2] Calculated as 50,000 remediated sites of a possible one million brownfields.

There have been calls in proposals for the reauthorization and in the brownfield community for the adoption of greener redevelopment strategies. Further, in 2004 EPA adopted an Environmentally Responsible Redevelopment and Reuse (ER3) Initiative for encouraging the "best sustainable environmental practices in the redevelopment and reuse of a previously contaminated facility." To date, however, there have been only two pilot projects resulting from this initiative. To further the greening of brownfield redevelopment, the reauthorized act should:

- Encourage life cycle assessment analysis to minimize the environmental burden of brownfield remediation and redevelopment projects.
- Encourage In Situ (on site) remediation strategies.
- Promote deconstruction over demolition when buildings are removed during the redevelopment.
- Require green building and site development standards.

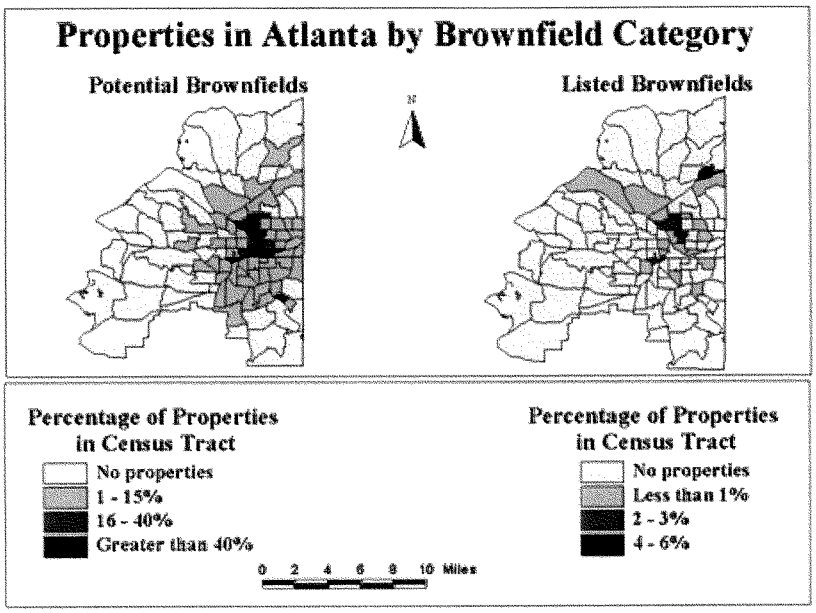
Total or partial demolition of structures is common in brownfield redevelopment projects. Deconstruction is the systematic disassembly of buildings to enable the reuse and recycling of construction materials. It generates skilled jobs and businesses for selling salvaged materials. In contrast, demolishing buildings and landfilling the debris turns assets (buildings) into liabilities (demolition debris), thereby undermining both environmental and economic development goals of sustainability (Leigh and Patterson 2006).

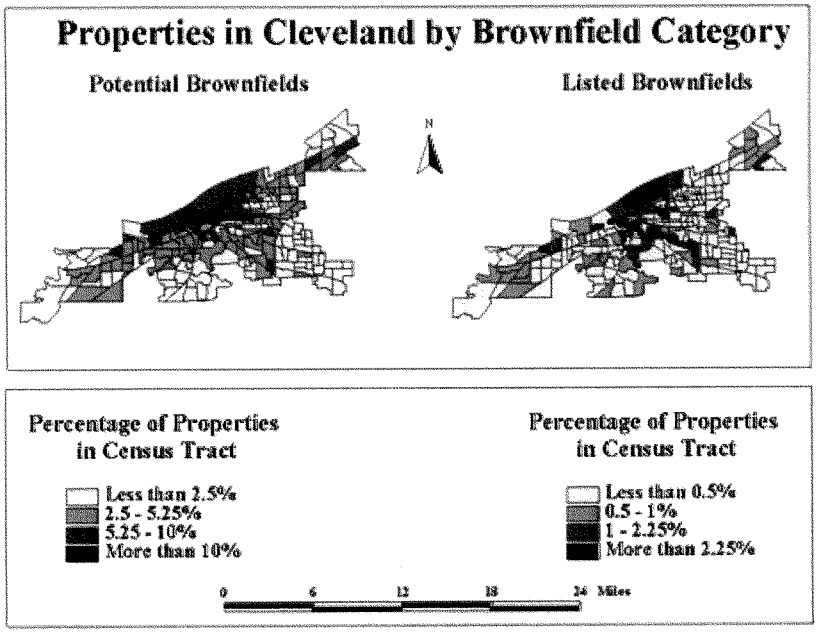
In conclusion, there is a clear need for reauthorization and revision of the EPA Brownfields program. The next version of the EPA Brownfields program should seek to insure that limited public resources do not go to strong positive value brownfields at the expense of those with negative or neutral values. The more appropriate intervention for increasing the redevelopment of strong positive value brownfields in healthy neighborhoods is to strengthen Smart Growth strategies that end the public subsidization of greenfield properties. If limited public funds are not carefully invested in brownfield

redevelopment strategies that foster community revitalization in disadvantaged neighborhoods, there is the possibility that intraurban inequality will rise as nonremediated brownfields become increasingly associated with these neighborhoods.

Finally, as I stated earlier, the 2002 Small Business Liability Relief and Brownfields Revitalization Act was clearly aimed at promoting economic development as well as achieving environmental restoration of brownfield sites. It has been a true catalyst for creating a functioning brownfields marketplace. My own view is that the Act and program have fostered more innovation in economic development than environmental solutions for brownfield redevelopment. However, EPA's Brownfield Program could be a real catalyst for sustainable development that maximizes both objectives if it requires, rather than simply encourages, projects that receive grants and loans to adopt green standards. These standards would reduce energy consumption and costs, lower building and site maintenance costs, create healthier living and work spaces, and foster new businesses and jobs in the brownfield sector, as well as, the larger economy.

Figures 1 and 2





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March 3, 2008

James L. Oberstar, M.C.
U.S. House of Representatives
Committee on Transportation and Infrastructure
Washington, DC 20515

Dear Chairman Oberstar,

This letter provides my written responses to the follow-up questions posed to me subsequent to my testimony before the Subcommittee on Water Resources and Environment on February 14, 2008, concerning **"Revitalization of the Environmental Protection Agency's Brownfields Program."**

1. As a follow-up to your testimony about the potential for brownfields sites to be redeveloped either through the private marketplace or when federal assistance is likely required, have you conducted any research on the brownfield grants that have been awarded since 2002, and into which of your three categories these grants predominantly fall?

In my testimony, I stated that the three categories into which brownfields fall are:

> [1] those with clearly negative values where environmental liabilities far exceed their value; [2] those with modest or neutral value; and [3] those with strong positive values. Those in the third category have very desirable locations and tend to be the bigger sites on which large-scale redevelopment can occur. In a properly functioning marketplace, brownfield properties with strong positive values should not need public assistance or incentives for redevelopment.

I also stated:

> Up until now, the predominant brownfield redevelopment focus -- both private and public -- has been on the most marketable and larger properties, or what has come to be called the "low hanging fruit." The rationale for the public sector focus is to maximize return on public investment while the private sector logically and appropriately is seeking to maximize profits.

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A Unit of the University System of Georgia An Equal Education and Employment Opportunity Institution

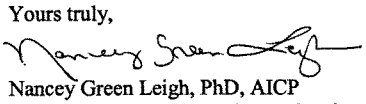
My statement is based on observations of the brownfield industry in trade publications, at brownfield conferences, and from talking with brownfield redevelopment specialists. Further, my observations were not specifically of EPA's grant making process, but, rather, of the brownfield industry overall. However, the question raised by Congresswoman Richardson about how EPA's grants fall into the three categories could be very useful to legislators and policy makers considering revisions to federal support for brownfield redevelopment. Ideally, it would be most insightful to know how grants are distributed relative to known and potential brownfields (the latter are those properties with high probabilities of being contaminated but which have not made it onto official lists). However, the work to determine the potential brownfields, as my own research has shown, is quite arduous and requires going back to turn of the century historical property and business records for each locality, tracking identified properties forward to the present, along with any associated street name and number changes, and then geo-coding and correlating the locations with census neighborhood data. A second-best answer to the question could be determined by analyzing each locality's EPA-funded brownfield projects with the list of the locality's known brownfields and their attributes (size, location, and socioeconomic characteristics of neighborhood). To the best of my knowledge, this data is not readily available in a national data set. Rather, it would have to be collected for each locality, and then aggregated, and then grouped by the three property categories.

2. Would you recommend targeting neighborhood revitalization projects to help bridge your concern about a potential "income inequality" in awarding brownfield grants?

Yes. Rather than pursuing the frequently cited "Industrial Triage" approach for brownfield redevelopment (a concept developed by Argonne National Laboratories with federal funding), I recommend that the economic development status of the neighborhood, and the impact brownfield status has on the neighborhood be given more explicit and higher priority. In doing so, the objective would be to prevent choosing brownfields for redevelopment in neighborhoods experiencing revitalization and gentrification over those which are not, unless a mechanism can be established for transferring some of the economic benefits to those not experiencing revitalization.

Thank you for the opportunity to provide additional testimony.

Yours truly,



Nancey Green Leigh, PhD, AICP
Professor of City and Regional Planning

Testimony by

Steven McCullough,
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To the
Subcommittee on Water Resources and Environment

Revitalization of the Environmental Protection Agency's Brownfields Program

February 14, 2008

To the Honorable Members of the Subcommittee on Water Resources and Environment:

Thank you for inviting me to testify today. My testimony focuses on the Environmental Protection Agency's Brownfields Program and how it can continue to be an effective tool in improving the quality of life for communities across the country.

Bethel New Life, Inc. is a faith-based community development corporation located on Chicago's Westside. Bethel began in 1979 as a housing ministry of Bethel Lutheran Church to rebuild neighborhoods left in ruins after the 1968 civil rights riots. Our mission is: "Realize God's vision of a restored society by empowering individuals, strengthening families, and building neighborhoods through community-driven, solution-oriented, and value-centered approaches." Bethel offers nearly 20 programs through four divisions – Community of Elders, Housing & Economic Development, Family & Individual Support, and Community Development.

Bethel is currently implementing a 5-year strategic plan to challenge these statistics and transform the entire Westside into a Community of Choice. A Community of Choice is one in which people choose to live, work and do business. It is a community that provides existing residents with services and resources found in any healthy, vibrant community while also providing amenities that attract future residents. To achieve this community concept, we will use a framework to help employ, invest, build and retain both residents and assets, while focusing on three main areas: 1.) Creating Sustainable Wealth for Families; 2.) Delivering Quality Affordable Housing; and 3.) Being a Catalyst for Lifelong Quality Education for All Residents.

Bethel is nationally known for its pioneering community development initiatives, especially in the arenas of sustainable urban community, smart growth in an urban context, and brownfields redevelopment. Bethel has been a part of the cleanup and redevelopment of seven brownfields sites in Chicago that have provided major economic stimuli to a low-income community.

As a result of this experience, Bethel staff has led workshops at U.S. EPA conferences, sustainable community conferences, and as a part of the environmental curriculum of the University of Delaware.

Our work in brownfield development is close to twenty years old. We recently celebrated the opening of a new transit oriented development project on a former brownfield. This development called the Bethel Center is a trend setting example of a transit oriented, neighborhood revitalization, LEED Gold building.

The Bethel Center is part of Bethel's overall Lake Pulaski Transit Village Plan, which wraps community resources around the Green Line transit. The Transit Village includes affordable energy-efficient homes; traffic calming strategies, bicycle racks, greening and parks, Brownfield redevelopment, commercial development, and close proximity to childcare, schools, shopping and jobs. So far, 70 energy-efficient homes have already been built throughout the community.

Bethel Center's Employment Services site provides job counseling, job placement and a community computer lab. It houses Bethel's second Child Development Center for 106 children,

offering affordable childcare to parents who work or attend school. Its six retail spaces provide the community with job opportunities and economic growth. Bethel Center also helps meet other community needs such as food services, dry cleaning, and starting in January 2006 — an alternative to currency exchanges and payday lenders through our upcoming Financial Services Center. The Bethel Center also provides visitors with direct access to Green Line "L" stop via a connecting bridge. The site makes adaptive reuse of a Brownfield, replacing an environmental hazard and eyesore with this smart, green building that is being hailed as a national model.

Bethel Center is a 23,000 sq. ft., two-story building with smart, green construction and a transit-orientated design. The ground floor houses six commercial retail shops including a Subway Restaurant, local dry cleaners, and our forthcoming Financial Services Center. The upper level houses our Childcare Development Center, Employment Services Center, and community computer lab. The total construction cost was $4.9 million, funded through grants and tax credits.

Our work around brownfield redevelopment has given us the opportunity to partner with the American Planning Association to train communities across the country on putting together brownfield remediation strategies. The American Planning Association is the recipient of a Brownfields Training, Research and Technical Assistance Grant from the U.S Environmental Protection Agency. Creating Community-Based Brownfields Redevelopment Strategies is a three-year initiative with the goal of helping community groups in low-income communities develop a new set of "eyes" to see brownfields sites as opportunities.

By creating a workbook and training program for community development corporations and similar groups, the project team intends to empower residents to actively and effectively participate in brownfields redevelopment and understand how different development strategies will benefit their communities.

APA's research department is undertaking this project, working in close collaboration with Bethel New Life, Inc. APA and Bethel are also working with the Center for Public Environmental Oversight (CPEO), an organization that promotes and facilitates public participation in environmental activities, including brownfields, to create the workbook.

Brownfields & Community Redevelopment

Nonprofit community development organizations are uniquely positioned in a number of key ways to revitalize communities through brownfield redevelopment. First, community based nonprofits have the long-term vision and active presence necessary to guide revitalization efforts that often last well beyond the limits of an election cycle. Second, nonprofits can serve a crucial role as a credible, neutral intermediary between the community and public and private entities, advocating for brownfield redevelopment projects that are in the interest of the public good, not just in the interest of a private developer. Third, nonprofits have the specialized brownfield knowledge to act as catalysts, managing and coordinating brownfield activities on behalf of, and in support of, community based organizations that would otherwise pass up these sites without the nonprofit's assistance. Lastly, nonprofits have the capacity to leverage brownfield funding with both private sector resources and with other public funds, including transit-oriented development, anti-sprawl, and smart growth program funds.

Community development corporations and redevelopment agencies recognize that there are inherent risks involved in cleaning up contaminated land and putting it back to productive use. This is why some level of public guarantee or incentive is necessary to bring developers and subsequent private investment dollars into each deal.

Community development corporations like Bethel New Life play a significant role in redeveloping contaminated brownfield sites. Localities depend on partnerships with CDCs because they are able to leverage limited public funding and create a larger more effective economic development tool by bringing private investment to these deals. Federal funding is typically used as seed money and serves to boost investor confidence in these risky development projects. Grants to states to form revolving loan funds are particularly attractive and allow states to make low interest loans to conduct brownfields cleanup activities on contaminated sites.

There are a few different sources of federal grant money that are key to brownfields redevelopment. The EPA and Department of Housing and Urban Development (HUD) have served as the primary federal agencies that dedicate resources to brownfields cleanup. There are four brownfields grant programs at EPA – brownfields assessment grants, brownfields revolving loan fund grants, brownfields job training grants and brownfields cleanup grants.

Recommended Priorities

Expand EPA Brownfield Grant Eligibility

The 2002 Brownfields Act made nonprofit organizations eligible for brownfield cleanup grants and job training grants. However, it did not make nonprofits eligible for assessment grants or Revolving Loan Fund (RLF) grants. The Brownfields Act should recognize the tremendous value that nonprofits—whether single-handedly or in partnerships — play in redeveloping brownfields by making nonprofit organizations and nonprofit-controlled entities eligible to receive brownfield assessment and RLF grants, along with cleanup and job training grants. This represents a lost opportunity to maximize these government resources by taking advantage of the community development and financing infrastructure that has developed over the last twenty years, and make more efficient use of public and nonprofit resources for successful brownfield redevelopment. Community Development Corporations (CDCs), Community Development Financial Institutions (CDFIs), and other nonprofit organizations have in place the infrastructure that will allow them to leverage these funds with other public and private resources and expeditiously deliver these resources to revitalize brownfields in struggling neighborhoods of all sizes.

CDFIs, CDCs, and many other nonprofits have established track records developing and implementing cutting edge brownfield remediation loan products and successfully navigating the complicated and multi-faceted world of brownfield development financing. Direct RLF grants to nonprofits would maximize the pre-existing community development finance infrastructure already in place (e.g. CDFIs) and make more efficient use of public and nonprofit resources for successful brownfield redevelopment.

The Brownfields Act should make nonprofit organizations and nonprofit-controlled entities eligible to receive brownfield assessment and RLF grants along with cleanup and job training grants. This change recognizes the tremendous value that nonprofits—whether single-handedly or in partnerships — play in redeveloping brownfields.

Improve Flexibility of EPA Brownfield Grant Site Ownership Requirements

The 2002 Brownfields Act requires site ownership as a condition of eligibility to receive direct brownfield remediation grants or revolving loan fund (RLF) sub-grants in order to ensure that the project moves forward and that responsible parties do not benefit from the grants. Many otherwise eligible entities are willing and able to obtain site control prior to purchase for the purpose of conducting remediation, but are reluctant to take ownership of contaminated brownfield properties prior to completion of remedial activities due to uncertain liability exposure. This represents a lost opportunity to revitalize many brownfield sites.

The Brownfields Act should give the EPA discretion to determine on a case-by-case basis the most appropriate timeline for site ownership so that the grantee may make the most productive us of direct remediation grant or RLF sub-grant funds in the remediation of the site they are purchasing. Similar to the expectation of site access in the case of site assessment grants, site control should be sufficient for remediation grant eligibility, so that the awarding of the grant or RLF sub-grant may provide the recipient with the financial comfort necessary to follow through with the cleanup and purchase.

Nonprofits nationally are involved directly in the cleanup and redevelopment of brownfield sites. Nonprofits often do not take direct, sole ownership of property for a variety of reasons:

1. A nonprofit will often form a Limited Liability Corporation (LLC) for the sole purpose of purchasing and developing a specific property because the nonprofit would not otherwise be able to assume the risks involved in property acquisition. The additional liability concerns on brownfields make the LLC structure critical to the nonprofit's ability to invest in such a site.
2. Two or more nonprofits will often form an LLC for the sole purpose of purchasing and developing a specific property because it is only through the pooling of the multiple parties' resources that the project can be successfully managed and financed.
3. A nonprofit housing developer will often form an LLC or a Limited Partnership (LP) with a for-profit financing institution for the sole purpose of taking advantage of various tax credits (i.e. affordable housing, new market, etc.) that the nonprofit would be unable to take advantage of on their own. The terms of the partnership are structured such that the financing partner's involvement is limited strictly to the receiving of tax credits in exchange for crucial up-front financing, without which many affordable housing projects would not be realized. The for-profit partner does not benefit directly from the development in any way, and the recommended amendment language ensures that all development-related management decisions lie exclusively in the hands of the nonprofit partner.

Expansion of EPA Brownfield Grant Eligibility to Include Community Development Entities

A Community Development Entity (CDE) is defined in section 45D(c)(1) of the Internal Revenue Code as any domestic corporation or partnership where (A) the primary mission of the entity is serving, or providing investment capital for, Low-Income Communities or Low-Income Persons; (B) the entity maintains accountability to residents of Low-Income Communities through their representation on any governing board of the entity or on any advisory board to the entity; and (C) the entity is certified by the Community Development Financial Institutions Fund of the U.S. Department of Treasury.

CDEs are the vehicle to deploy private capital, often for real estate development projects, raised through the New Markets Tax Credit program. The Treasury Department's rigorous certification requirements ensure that CDEs are operating first and foremost in the interest of the low-income communities in which they operate. CDEs are sophisticated organizations with strong track records that are well positioned to leverage EPA Assessment, Cleanup and Revolving Loan Fund grants with private capital to facilitate the redevelopment of brownfield sites for the benefit of low-income communities and persons.

Summary Recommendations

Reauthorizing EPA Brownfields Program
Reauthorize the 2001 Federal Brownfields Law. It is a crucial step to build on the success of the existing EPA Brownfields Program through increased, more flexible funding and the removal of other remaining barriers to brownfield revitalization.

Full Funding for EPA Brownfields Program
There has been demonstrated tremendous success of the EPA Brownfields Program and the compelling need in communities across the country to continue the work. This year it is particularly important for Congress to maintain funding for brownfield remediation in EPA's FY09 budget because the President's budget rescinds altogether the brownfields program at HUD. For the past three years (FY06, FY07 and FY08) the brownfields redevelopment program at HUD was funded at 10 million.

In FY09 the President has proposed $49.5 million for the Brownfields grant program to help states and tribes develop and enhance their response programs. This represents an increase of $772,000 for the grant program. In addition, the EPA budget provides for infrastructure and special projects, which includes the Brownfields Revolving Loan Fund. Total funding for these Brownfields environmental projects in FY09 is **$93.6 million** for grants for assessment activities, cleanup of contaminated sites and revolving loan funds.

	FY08 Budget	FY08 Enacted	FY09 Budget
Brownfields Projects:	$89.3 mm	$93.5 mm	$93.6 mm

De-Coupling BEDI and Section 108
The Brownfield Economic Development Initiative (BEDI) is a competitive grant program administered by the US Department of Housing and Urban Development (HUD) that targets brownfield redevelopment activities. De-coupling the BEDI program from HUD's Section 108 loan guarantee program, so that communities lacking the capacity to participate in the Section 108 program may receive BEDI grants.

Making Brownfield Expensing Incentive Permanent
Removal of the sunset date - thus making permanent - of the brownfield expensing incentive, which allows brownfield developers to fully deduct assessment and remediation costs from their taxable income in the year in which the expenses were incurred. The bill would also eliminate the recapture provision.

Browfields & Green Jobs

Brownfield Reclamation does fall in line with the new push for training in "green" jobs. They actually precede the current movement, which just passed in December under the Energy Independence and Security Act of 2007 (H.R. 6), by nearly a decade.

"Since 1998, the EPA has awarded over 22 million for brownfield-related job training. According to the EPA, 3,000 people have been trained. Approximately 60% of those individuals obtained environmental-related employment and earn an average of $13.26." (Rindfleisch, Elise, "EPA grants over 2.3 million for brownfields job training grants," Vermont Journal of Environmental Law". Also according to this journal, the Brownfield Job Training Grants are used "to teach environmental assessment and brownfield cleanup skills to individuals living in low-income areas near brownfields."

These brownfield jobs have a two-fold benefit. One, they not only do what the new green jobs act hopes to do by training workers for a growing market that will have the positive benefits of providing them with hard and soft skills to bring them into living wage jobs while improving the environment, but there is also the solid data to support this. Secondly, these jobs usually directly impact and improve the communities in which the participants live. They are not installing solar roofs in high-income areas, and they are not traveling to the country to work on wind-power generators. They are working down the street to remove an environmental threat and just general eyesore to create a healthier community where they live.

Otherwise, while not included in the H.R. 6 bill unless they were considered under "the deconstruction and materials use industries," they are listed in the study on defining 'green' jobs for the Ella Baker Institute out of Oakland which was instrumental in the Green Jobs Act included in H.R. 6. They would be considered one of 22 fields as "hazardous materials cleanup". You can glance at the summary of this report (http://bss.sfsu.edu/raquelrp/).

In conclusion, EPA's Brownfields Program is a vital tool that should be allowed to evolve into an even more valuable resource to improve communities across the country. Thank you.

BETHEL NEW LIFE
EMPOWERING INDIVIDUALS • STRENGTHENING FAMILIES • BUILDING NEIGHBORHOODS

Revitalization of the Environmental Protection Agency's Brownfields Program

Responses To Questions From The Subcommittee On Water Resources And Environment

Can you explain further what efficiencies or expertise non-profits offer for brownfields redevelopment, and where organizations, such as yours can provide services that may be overlooked by traditional governmental involvement in brownfields?

Non-profits like Bethel New Life have a number of advantages of efficiency and expertise for Brownfield development:

- Non-profits know their communities that they serve better than many private developers. They know the history, the key stakeholders, and the impact that a Brownfield has had in their respective community. Local knowledge and history is an important factor in determining project viability.
- In terms of efficiency, non-profits have the ability to leverage public, private, and philanthropic money in a way no single entity can do to execute Brownfield redevelopment projects. This sometimes takes more time and effort but the risk is mitigated across many constituencies as opposed to government alone or for-profits alone carrying the entire burden.
- Non-profits' focus typically is trying to create economic opportunities for their communities. In most cases the objective is to create jobs and not shareholder profits. With that said, non-profits focus more on community economic impact and the creation of permanent jobs for community residents. Non-profits motivation is clearly tilted toward creating long-term economic impact for the benefit of community residents.

Do you believe that non-profit organizations have access to capital for leveraging cleanup that other entities may not, and if so, can you describe this further?

Non-profit organizations do have the opportunity to access a diverse range of capital for leveraging cleanup. Non-profits have the ability to leverage not only their own equity but also, money from philanthropic institutions, private developers (mostly as joint ventures), and local, state, and federal money. For example, at the federal level, many non-profits leverage money through EPA with New Markets Tax Credit money from the Treasury Department, and Office of Community Service money from job creation opportunities.

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Do you concur that certain categories of potential brownfields projects are being passed over under the current brownfields program?

I do concur that certain categories of potential brownfields projects are being passed over under the current brownfields program. The way that funds are access put the objectives of using funding in the hands of a local government entity, which then determines the projects that may not necessarily be in-line with community goals. Second, the types of projects that are in need of funding in many communities are low-priority by local government but high-priority to community residents, like the cleanup of gas stations and laundry facilities.

My recommendation to address this concern is to allow non-profits to have the ability to directly apply for brownfields funding at the federal level through a competitive process. This would mean that a different classification of projects and applications need to be developed but non-profits will have the ability to use federal funding to leverage with other financial resources to address brownfields that communities have been struggling with for years.

Respectfully Submitted

Steven McCullough
President & CEO
Bethel New Life

STATEMENT OF
GARY JAY SILVERSMITH
PRESIDENT, P&L INVESTMENTS, LLC

Presented to the

SUBCOMMITTEE ON WATER RESOURCES & THE ENVIRONMENT
HOUSE COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE

February 14, 2008

INTRODUCTION

Good afternoon, Madam Chairman, and members of the Subcommittee. My name is Gary Silversmith, President of P&L Investments, LLC, a national brownfield investor and developer, headquartered here in Washington, D.C. I appreciate the opportunity to testify today on the reauthorization of the federal brownfields law, The Small Business Liability Relief and Brownfields Revitalization Act.

My testimony provides some background on my firm and our work redeveloping brownfields across the country. I will provide comments on how the federal brownfields law has provided important tools and resources to stimulate brownfields revitalization. In addition, I will provide some examples which demonstrate the need to improve the law in certain areas.

BACKGROUND ON P&L INVESTMENTS

P&L Investments is involved with the clean-up and redevelopment of dozens of properties across the country ranging from an abandoned gas station in Los Angeles that we are converting to affordable housing to cleaning up an old shopping center in Maine that we are releasing.. We not only acquire large brownfields held by major corporations, such as AIG Insurance and General Motors, but we also clean up and redevelop many small properties, including a truck stop in Denton, Texas, near Madam Chairman's district office.

We were told that we were the first company in America to get permission from EPA to convert a Superfund site to residential use. Before cleaning the Superfund site, it was contaminated with PCBs, mercury, and asbestos. The property consisted of dilapidated factory buildings occupied by drug dealers and arsonists. In fact, EPA's on-site trailer was burned down. We demolished these buildings and cleaned up the site. The townhouses built on the land appreciated over 300% in the first four years. So the community not only got rid of a drug-infested blight, but the residents made money. Also, EPA wrote a complimentary article about the project in its Cleanup News publication.

VALUE OF THE FEDERAL BROWNFIELDS LAW

The federal brownfields law signed in early 2002 has been important to the success of the brownfields industry. First, the law provides important liability relief from the federal Superfund statute for innocent land owners and purchasers. Second, the law makes it clear that if we clean up a property under a state voluntary clean-up program and satisfy the requirements of the state program, the federal government is barred from taking any enforcement action against us. For example, in Pennsylvania we took an abandoned 90-acre asbestos brake plant and asbestos landfill and converted the plant to an industrial park with European high tech companies, and we capped the landfill with asphalt and converted it to a commercial parking lot. For this project, we received a liability release from the Commonwealth of Pennsylvania. We would have never undertaken this project without the liability relief for innocent purchasers provided in the brownfields law.

The federal brownfields law also recognizes the critical importance of public-private partnerships in bringing these contaminated properties back to productive use. It is not economical to redevelop many brownfields because the cost of clean-up is often greater than the value of the property. It is only through assistance from local governments receiving federal or state funding for site investigations and clean-up that we are able to provide the private investment needed. For example, through our affiliate, the Value Recovery Group, we are currently involved in an innovative public-private partnership with an Ohio community, where we are converting a landfill to a golf course, with new commercial buildings around the golf course. As part of this partnership, the local government entity will receive 25% of the profits. This project would not be possible without the investment of public remediation dollars from the state and federal government. Moreover, it is unlikely that we would have entered into the partnership without the innocent purchaser liability relief provided by the federal brownfields law.

RECOMMENDATIONS FOR IMPROVEMENTS TO THE FEDERAL BROWNFIELDS LAW

While the federal brownfields law has stimulated the revitalization of thousands of properties around the country, those of us in the brownfields industry have learned a great deal since the law was passed six years ago. As part of my written testimony, I am attaching recommendations developed by the National Brownfields Coalition, which I wholeheartedly support. Based upon my experience in the field, I would like to highlight five of these recommendations:

#1 Congress should increase the ceiling on brownfield clean-up grants. As you know, the maximum amount EPA can provide for a clean-up grant under the current law is $200,000. There are many sites where the clean-up cost is Millions of Dollars. In these cases, $200,000 from EPA is usually not enough help, even taking into account funding from other sources. As a result, these sites are usually mothballed.

For example, we are now struggling to help a suburb of Detroit, Ypsilanti, Michigan, redevelop a 40-acre, old industrial brownfield site that is a blight in the heart of their downtown. They desperately want some retailers to come to the site. We have some interested retailers, and this would revitalize the entire community. The problem is, the estimated clean-up costs significantly exceed $50,000 an acre, and the estimated fair market value of the land, if clean, is only $50,000 an acre. For such a project, additional grant money is needed. EPA already gave the town a $120,000 grant, but that amount is so insufficient that the town cannot find a developer willing to redevelop the site.

#2 Congress should authorize and appropriate more funding for the federal brownfields program. I understand that EPA was only able to fund 25 percent of the brownfield grant applications received this year. This lack of grant money is exacerbated by the current economic situation. In cities such as the Detroit area, where Ypsilanti is located, the State is in a difficult financial condition, and it simply does not have sufficient State monies to clean up its brownfields. Moreover, in the current credit crisis, banks have tightened their lending criteria, particularly in areas of the country that are economically depressed. Banks that previously were willing to lend money on brownfields are, today, often rejecting the loan requests. It doesn't matter if the interest rate is low, if the bank won't give you the money. So, without additional EPA grant monies, many brownfield projects will be unable to proceed, particularly in the parts of the country that need them the most.

#3 Provide flexible, multi-purpose grants to local governments. The slow timing and the lack of flexibility with federal brownfield grants is a real problem. Under the current grant process, there is a lengthy delay between the time of the grant application and the time that funding is available. In addition, the grants are for only either assessment or clean-up. Moreover, the clean-up grants are typically tied to a specific site. As a brownfield investor, I can tell you that local governments could really use multi-purpose grants that are processed quickly, that can be used for assessment and/or clean-up, and that can be employed at a variety of brownfield properties.

By example, our Ohio landfill project received both a $3 million state grant and a $200,000 EPA assessment grant. EPA originally awarded the project a $200,000 clean-up grant, but when the recipient city requested that the grant instead go to a nonprofit entity that was going to take title, EPA would not allow the title of the grant recipient to change. Consequently, that important grant was never funded. This is an example of where EPA grants are sometimes too rigid. More flexible multi-purpose grants would have enabled this much-needed funding to be used on this project.

#4. Congress should make it clear that federal grants can be used for demolition and site clearance. For many of the larger projects we undertake, demolition and site clearance are major costs. For example, we are now converting an abandoned factory in Baltimore County, Maryland to mostly park land. One reason the cleanup is delayed is because the prospective purchaser, the Maryland State Park System, would like the old abandoned factory to be demolished, as part of the clean-up. But, the State Park System

cannot get an EPA grant for all of this demolition. If EPA could award a more flexible grant, then the demolition could proceed.

#5 Congress should provide liability relief for the clean-up of petroleum sites. Gas stations are treated different then all other brownfields. Since petroleum is regulated under the Resource Conservation and Recovery Act (RCRA), innocent purchasers are not afforded the liability protection that all other properties receive. As a result, we almost did not initiate the clean up at the Denton Texas site. At that site, we were unsure of the total clean up costs, so we were concerned about liability for petroleum contamination. We do not understand the public policy behind not giving the same federal liability relief to an innocent person who cleans up a gas station.

In summary, the 2002 Brownfields law was a milestone for brownfield redevelopment, and it should be expanded to both fund bigger grants and to be more flexible in its application. In addition, its liability relief should be expanded. After all, brown to green is good. Thank you.

Proposal for the

REAUTHORIZATION OF THE FEDERAL BROWNFIELDS LAW

From the National Brownfields Coalition:

The U.S. Conference of Mayors
National Association of Counties
Northeast-Midwest Institute
National Association of Local Government Environmental Professionals
National Conference of Black Mayors
International City/County Management Association
Local Initiatives Support Corporation
National Association of Towns and Townships
National Association of Development Organizations
International Council of Shopping Centers
Community Revitalization Alliance
The Real Estate Roundtable
National Association of Home Builders
National Association of Industrial & Office Properties
Environmental Bankers Association
National Brownfield Association
National Brownfield Nonprofit Network Initiative
Cherokee Investment Partners, LLC
Smart Growth America
Scenic America
Groundwork USA
Trust for Public Land

KEY PROVISIONS FOR REAUTHORIZATION OF THE FEDERAL BROWNFIELDS LAW

FUNDING THAT MEETS AMERICA'S BROWNFIELDS NEEDS

1. **Increase Cleanup Grant Amounts** – Congress should recognize the complexity of the cleanup process at larger or more complicated sites by increasing the funding limit for cleanup of a single site to up to $1 million. Under special circumstances, EPA could waive the limit and go up to $2 million per site

2. **Establish Multi-Purpose Brownfield Grants** – Congress should allow eligible entities to have the option to apply for multi-purpose grants that can be used for the full range of brownfield-funded activities (assessment, cleanup, reuse planning, etc,) on an area-wide or community-wide basis. Such multi-purpose grants should be available in grant amounts of up to $1.5 million. Applicants would be required to demonstrate a plan and the capacity for using this multi-purpose funding within a set timeline in order to qualify for such funding.

3. **Establish Pilots for Sustainable Reuse and Alternative Energy on Brownfields** – The Act should authorize $20 million for pilots that demonstrate sustainable reuse, green buildings, and alternative energy. Pilots should allow use of funds for site assessments, cleanup, site planning, feasibility analysis, and engineering studies related to environmentally beneficial site improvements, such as, high performance/green buildings, green infrastructure, ecosystem restoration, and/or renewable energy production.

4. **Establish Pilots for Waterfront Brownfields** – The Act should authorize $20 million for EPA to fund demonstration pilots and create an interagency taskforce to help communities overcome the unique challenges of waterfront brownfields restoration along rivers, coastal lands, lakes, ports, and other water bodies. Pilots should allow use of funds for site assessments, cleanup, site planning, feasibility analysis, and engineering studies related to environmentally-beneficial site improvements, such as, riparian zones, green infrastructure, low impact development, remediation and management of sediments, and flood damage prevention.

5. **Increase Total Brownfield Grant Program Funding** – Congress should increase overall EPA funding for brownfields grants, beginning with $350 million in FY07 and increasing by $50 million annually to a total of $600 million in FY12 and beyond.

MAKING BROWNFIELDS GRANTS WORK BETTER AT THE LOCAL LEVEL

1. **Facilitate Petroleum/UST Brownfield Cleanups** -- Grantees that seek to use assessment, cleanup or multi-purpose grants on sites with petroleum contamination should not be required to make the difficult demonstrations that the site is "low risk" and that there is "no viable responsible party" connected with the site. Replace the "No Viable Responsible Party" language with a prohibition on using funds to pay for cleanup costs at a brownfield site for which the recipient of the grant is potentially liable under the petroleum statutes (parallels the language for non-petroleum brownfields sites).

   Create greater flexibility in use of grant funds by eliminating the currently defined set-aside of total grant funding for petroleum brownfields. Substitute a new "Ranking Criteria" that gives weight to petroleum-contaminated sites.

2. **Clarify Eligibility of Publicly-owned Sites Acquired Before 2002** – Congress should allow local government applicants to obtain funding at sites acquired prior to the January 11, 2002 enactment of the Brownfields Revitalization Act – when there was no required standard for "all appropriate inquiries" – provided that the applicant did not cause or contribute to the contamination and performed "appropriate care." For these sites, applicants would not have to demonstrate that they performed all appropriate inquiry.

3. **Establish that Non-Profits are Eligible for Assessment and RLF Grants** – The law should clarify those non-profits and related community development entities are eligible to receive brownfields assessment, cleanup, revolving loan fund, and job training grants. Currently non-profits are only eligible for cleanup and job training grants.

4. **Streamline Funding Approvals by Reducing Redundant EPA Reviews** – Congress should direct EPA to streamline the RLF and cleanup grant process by eliminating redundant EPA reviews for quality control, cleanup alternatives analysis, cleanup protectiveness analysis, and community involvement plans, when those reviews are already conducted by a State brownfields response program. EPA should be directed to propose an administrative solution to the problem of redundant EPA involvement in sites that are being overseen by state voluntary cleanup programs.

5. **Allow Funding for Reasonable Administrative Costs for Local Brownfields Programs** -- Brownfield grant recipients should be allowed to use a small portion of their grant to cover reasonable administrative costs such as rent, utilities and other costs necessary to carry out a brownfields project.

6. **Clarify Eligible Brownfields Remedial Activities** – The Act should clarify that assessment, cleanup, RLF, and multi-purpose grants can be used for remedial activities connected with demolition, site clearance and site preparation.

TOOLS TO HELP FREE THE MOTHBALLED BROWNFIELD SITES

1. **Promote State Institutional Control Programs** – The Act should encourage the effective use of institutional controls at brownfield sites by requiring states to develop a plan for establishing, monitoring, and enforcing appropriate institutional control mechanisms designed to assure that all future uses of brownfields sites are consistent with any restrictions placed on such sites.

2. **Promote State and Local Environmental Insurance Programs** – The Act should foster the use of environmental insurance at brownfield sites by supporting State, Local or Tribe-sponsored environmental insurance programs like the successful program in the Commonwealth of Massachusetts, which assist purchasers of environmental insurance who are remediating a brownfield through the state response program. The Act should authorize EPA to provide grants to States, localities or Tribes to support the establishment of environmental insurance programs for brownfields, with a 50% match from the applicant.

3. **Remove Barriers to Local and State Governments Addressing Mothballed Sites** – The Act should exempt local and state government from CERCLA liability if the government unit (a) owns a brownfield as defined by section 101(39); (b) did not cause or contribute to contamination on the property; and (c) exercises due care with regard to any known contamination at the site. Alternative language would amend section 101(20) (D) to clarify that properties acquired through eminent domain qualify for the CERCLA exemption for local governments involved in "Involuntary Acquisitions."

4. **Extend Protections to Innocent Lease Holders** – The Act currently gives protections to tenants of an entity that qualifies as a Bonafide Prospective Purchaser (BFPP), but does not protect an entity that directly leases land from the seller/RP. The Act should also provide protections to an entity that leases a brownfields site and meets all the other requirements for BFPP protection.

5. **Encourage Voluntary Cleanups of Underground Storage Tank (UST)** – For petroleum-contaminated sites the Act should provide liability protections for Bona Fide Prospective Purchasers and innocent land owners at brownfield sites, parallel to CERCLA/brownfields liability protections. Petroleum-contaminated sites should be afforded the same bar on federal enforcement as that provided under CERCLA if the site is being cleaned up under a qualified state program.

6. **Encourage Voluntary Cleanups of PCBs**– To facilitate PCB cleanups, the Act should :
    a. Establish that the remediation of PCB sites under qualified State cleanup programs satisfies the federal requirements established under TSCA for cleaning up releases of PCBs;

b. Provide protections for Bona Fide Prospective Purchasers and innocent land owners at brownfield sites, parallel to the protections afforded CERCLA/ brownfields sites.
c. Establish eligibility for brownfields revitalization funding for PCB-contaminated sites (by eliminating the current exclusion of PCB-contaminated sites from the definition of a brownfields site).

ASSISTANCE FOR HIGH PRIORITY COMMUNITIES AND SITES

1. **Offer EPA Staff for Disadvantaged Communities, Small Communities, and Rural Communities** – The Act should authorize EPA to provide EPA brownfield staff to small, disadvantaged, and rural communities that need support to build local capacity to cleanup and revitalize brownfields. These staff would be provided via Intergovernmental Personnel Act ("IPA") assignments of up to three (3) years to localities, States, Tribes, and eligible non-profit organizations that competitively apply for an IPA assignment.

2. **Encourage Brownfield Cleanups by Good Samaritans** – The Act should provide an owner-operator exemption from CERCLA liability for non-liable parties that take cleanup action or contribute funding or other substantial support to the cleanup of a brownfield, in conformance with a federal or state cleanup program, but do not take ownership of that site.

National League of Cities

STATEMENT OF

THE HONORABLE MATT ZONE
COUNCILMAN, CLEVELAND, OHIO

BEFORE THE
HOUSE COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE,

SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT

FEBRUARY 14, 2008
WASHINGTON, DC

Statement of

Matt Zone
Councilman, City of Cleveland, Ohio

On behalf of the National League of Cities

Before the House Transportation and Infrastructure Committee,
Subcommittee on Water Resources and Environment

"Revitalization of the Environmental Protection Agency's Brownfields Program"

February 14, 2008

Good afternoon, Madam Chairwoman and Members of the Committee. I am Matt Zone, Council Member from Cleveland, Ohio. I am here today on behalf of the National League of Cities (NLC), the oldest and largest organization representing local elected officials in America's cities and towns. I appreciate the opportunity to present the views of local elected officials on the revitalization of the Environmental Protection Agency's (EPA) Brownfields Program.

The City of Cleveland has had a successful partnership with the EPA Brownfields Program in redeveloping our urban landscape. Since 2004, Cleveland has received $800,000 in EPA brownfields assessment grant funds that led to the cleanup of nearly 100 acres. Assessment dollars are critical to local governments, as they support the first, and most risky, phase of a redevelopment project. Assessment funds granted by the EPA Brownfields Program assist local governments in evaluating the extent of contamination and potential costs for remediation. The City of Cleveland has successfully used these grants to leverage over $15 million. Without these funds many projects would not have gone forward.

In addition to assessment dollars, the City of Cleveland also received technical assistance from EPA. This assistance is just as critical to local governments as grant funds. With the technical assistance of an expert brownfields professional from the EPA Region 5 Brownfields Office, the city's development department has increased their capacity to redevelop brownfields in Cleveland.

The EPA Brownfields Program is vital for local governments in aiding their redevelopment efforts, but much work remains to be done. NLC urges Congress to increase the overall funding authorization level for the EPA Brownfield Programs, to increase the cap on the assessment grant amounts, whether site-specific or community wide, and to increase technical assistance offered to communities. Additionally, NLC asks Congress to enact legislation addressing and resolving the disincentives created by potential liability to facilitate reuse of brownfield properties. Such legislation should provide a waiver, a definitive limitation or elimination of

liability for non-contributing local governments coming into title of previously contaminated properties involuntarily.

BROWNFIELDS REDEVELOPMENT ISSUES

Cleveland truly considers the EPA to be a partner in the area of brownfields redevelopment, but I come to you today with pressing issues that could jeopardize Cleveland's and other cities' strategic redevelopment policies.

As an older industrial city, Cleveland's legacy of manufacturing and commerce is now symbolized by numerous abandoned structures, obsolete buildings, leaking underground storage tanks and polluted properties. The impact of our industrial legacy has spread across our neighborhoods like cancer, killing once vibrant areas and leaving behind dead zones. The factories that once built America and employed thousands of Clevelanders are no longer an asset—they are a liability. To regain our stature as a great American city once again, we will need help in revitalizing our land and buildings.

Our current vacant property portfolio puts my city at risk beyond previous crises. Local governments need the support of Congress and our federal agencies to revitalize the abandoned properties and buildings that are growing in number in our communities. These abandoned buildings have compounded our financial problems and costs the City of Cleveland millions by shrinking our tax base, undermining property values and increasing service costs. In fact, our city has had to increase its demolition budget four-fold since 2006—we anticipate spending over $9 million this year to demolish dangerous abandoned structures that threaten the safety of our citizens. In addition to depressing the economic well-being of my city, a failure to act will compromise the well-being of our residents.

Local governments rightly approach brownfields redevelopment as an economic development activity. However, strategically redeveloping these contaminated properties means much more than dollars and taxes. It means correcting the environmental injustices unduly thrown upon those living in our impoverished neighborhoods that are host to a disproportionate share of brownfields. It means protecting our first responders by eliminating contaminated enclaves of criminal activity and structures of high fire risk. For Cleveland, it means protecting Lake Erie and our streams and rivers. It also means creating a more sustainable future by promoting urban infill rather than urban sprawl and incorporating more environmentally-friendly design and building stock into our existing urban fabric.

Finally, the issue of municipal liability for cleanup costs is a concern for local governments, particularly if they were not involved in the contamination of the site. As a general rule, under current law, local governments have a disincentive to cleanup and develop brownfield properties because of the liability that they could face. Often, as involuntary owners of brownfields property, many local governments are wrongly designated potentially responsible parties and held liable for cleanup. The fear of such designation has led to municipalities choosing not to invest in the cleanup or development of land, not because they do not want to, but because they cannot afford the liability costs.

THE CLEVELAND EXPERIENCE: TRINITY BUILDING

The City of Cleveland, through its partnership with the EPA, State of Ohio, local businesses and other entities, implemented a land bank program in 2005, targeting former industrial and commercial properties for redevelopment. Known as the Industrial-Commercial Land Bank, the rationale for the program is simple—to strategically invest our limited local resources in properties that would, if not for the investment, sit unused for decades.

The land bank allows the city to take a holistic approach to brownfields redevelopment and to take on multiple projects at a time. Currently, the city is redeveloping nearly 50 acres of brownfields properties through the land bank program and has invested over $16 million in demolition and cleanup costs. One property of particular interest is referred to as the "Trinity Building." This six-acre site, while small, is posing huge challenges to the city and puts the land bank program in jeopardy due to the lack of federal liability protections afforded to local governments that assume the responsibility of cleaning up contaminated properties polluted by previous users. The current cap on assessment grants, however, actually limits the city's ability to invest in these properties.

The Trinity Building, once the workplace to over 500 Clevelanders, sits on a main thoroughfare adjacent to a daycare, multi-family housing, a nursing home and several commercial businesses. In the 1980s the company that occupied the Trinity Building relocated out of state. By the mid-90s, after many failed attempts to encourage the property owner to voluntarily bring the building up to code, the abandoned building became a blight on the community that posed a risk to public health and safety. Demolishing and remediating the property was the only solution to these problems, and it wasn't until the city established its Industrial-Commercial Land Bank that a local mechanism was available for implementation.

The city eventually took ownership of the property through a foreclosure action. Using the land bank as a mechanism, the city determined that it was in the best interest of the neighborhood to demolish the building and remediate the land. Within a year, the city allocated $2.9 million for these costs. In early 2007, the city discovered unforeseen PCB (polychlorinated biphenyl) contamination. Because the cost and extent of the risk to public health and the environment was beyond the capacity of the city, the city requested that EPA investigate the contamination and take immediate response measures to protect adjacent residents and businesses. During the summer of 2007, the EPA conducted interim response actions under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, also known as Superfund) to address the most urgent public health matters.

In December 2007, The EPA notified the City of Cleveland that it was a party potentially liable for the cleanup under Superfund. Now, instead of EPA and the city partnering to clean up the site, the city finds itself defending its demolition and cleanup activities of a vacant and abandoned brownfields. After following all the rules and the city's good intentions, the redevelopment is at a standstill and the Trinity Building remains a pile of rubble on contaminated land in the middle of Cleveland. The current situation prohibits a neighboring business from expanding onto the property. In addition, the demolition debris left on the site attracts metal scrappers and is an eyesore.

The 2002 amendment to CERCLA that established the brownfields program was a step in the right direction, but as the portfolio of risky, polluted properties in our urban cities is growing larger and larger, the exposure to liability, such as the one Cleveland is experiencing with the Trinity Building, makes redevelopment of these site impractical and cost-prohibitive.

In closing, the City of Cleveland has the experience and expertise to address the brownfields in its neighborhoods. The city established a land bank program to prepare brownfields sites for economic growth. Cleveland's story and experiences are no different than any other American city with an industrial legacy. Congress showed great leadership amending CERCLA in 2002. While progress has been made and beneficial relationships formed between local and federal entities, the federal brownfields program has not achieved its full potential. The Federal government must continue its commitment to the brownfields program and to the cities protecting its citizens and the environment from the dangers these sites pose.

On behalf of the National League of Cities and the City of Cleveland, I thank you for the opportunity to submit this testimony on a most timely issue. I look forward to your questions.

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Statement
By
Mark H. Ayers, President,
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Reauthorization of the
"Brownfields Revitalization and Environmental Restoration Act of 2001"
House Committee on Transportation & Infrastructure
Subcommittee on Water Resources and Environment

February 14, 2008

The Building and Construction Trades Department, AFL-CIO (BCTD) strongly supports the reauthorization of the "Brownfields Revitalization and Environmental Restoration Act of 2001". While this is basically a good law, its potential for environmental remediation and economic development has been limited due to the lack of adequate resources.

In this respect, we believe that the Congress should consider a dramatic expansion of funding for the cleanup and remediation of these largely abandoned industrial sites. Such an expansion would also result in tens of thousands of new jobs, thereby providing a much-needed stimulus to the U.S. economy.

Funding Levels
Under the existing law, the Brownfields program is authorized at $250 million annually. However, over the past several years the President has neither requested, nor has the Congress appropriated the full amount. For example, the fiscal year 08 omnibus appropriations bill provided $168.3 million for Brownfields activities, which was $3.3 million over the FY 2007 level. Of this amount, only about $100 million is allocated for actual brownfields assessments, cleanups, training and community assistance. The rest goes to state programs and EPA administration costs. Under the law, brownfields assessment grants to eligible communities are limited to $200,000-$350,000 per site, and cleanup grants are limited to $1 million. Even at these levels, only about one-third of eligible applicants receive assistance.

These funding levels are simply not adequate to meet the demand. There are an estimated 500,000 to 1 million brownfields sites in the United States. These are

properties with no viable responsible owner where the expansion, redevelopment or reuse is often complicated by the presence of hazardous substances, pollutants or other contaminants. They include everything from large inactive factories and industrial sites to abandoned gas stations, salvage yards, and warehouses. Brownfields exist in large inner-cities as well as in small towns and rural areas. They are ubiquitous throughout the Nation and they tend to drive down property values, provide little or no tax revenue, and contribute to community blight.

Economic Development & Jobs

The clean-up and redevelopment of brownfields can promote economic development, revitalize neighborhoods, enhance the environment, and, in the process, create jobs. According to the EPA, since its inception, the brownfields program has spent about $800 million for site assessments and remediation. These federal funds have "leveraged $8.2 billion in cleanup and redevelopment dollars" from other funding sources including state and local governments, private entities, and other federal programs. According to EPA, "the program has resulted in the assessment of more than 8,000 properties and helped create more than 37,000 jobs", or about 4,600 jobs a year.

If these numbers are correct, then an increased federal investment would result in a proportional 10-fold increase in assessment and clean-up activities and corresponding employment. For example, if the Congress increased funding to $1 billion a year, then the resultant impact would be $10 billion in assessment and clean-up activities and some 45,000 jobs annually. Such funding would accomplish more in one year than what the program has achieved since 2001.

Training

The workers engaged in environmental cleanup and remediation are largely employed in the building and construction industries, many of which belong to the unions affiliated with the BCTD. Much of this work involves dealing with hazardous materials including toxic chemicals, fumes, dusts and other contaminants. By its very nature the work is dangerous to both the workers and the surrounding community. Those engaged in this work need the skills and safety and health protections that only highly sophisticated training programs can deliver.

Since 1987, many of our unions and other nonprofit organizations have been partners in the Superfund "Worker Education & Training Program" (WETP), administered by the National Institute for Environmental Health Sciences (NIEHS). Through its national network of non-profit providers the NIEHS WETP, has developed and delivered high-quality, safety and health training to hazardous waste workers and emergency responders.

Moreover, the NIEHS WETP has provided critical training to workers responding to both natural and intentional disasters including the 9/11 attacks, the Oklahoma City bombing, and hurricanes Katrina and Rita. Additionally, it has funded hazardous waste

remediation and skills training to minority worker populations and those associated with Brownfields clean-up activities.

While the demands on the program have expanded over the years, its statutory mission and its funding have remained relatively unchanged. We believe that given its success in meeting all of these demands, the time has come to adjust the statutory scope and mission of the NIEHS WETP and its authorized funding level.

Conclusion
Although the Brownfields Program has been generally well received, its primary shortcoming has been that not enough resources have been devoted the assessment, cleanup and remediation of brownfields sites. At its current pace the program has resulted in an average of about 1,000 site assessments a year and even fewer actual cleanups. Compared to the scope of the problem with a minimum of 500,000 known brownfields sites, it's obvious that the current program is dwarfed by the magnitude of the problem. However, the brownfields problem also creates an opportunity to cleanup the environment, revitalize and redevelop blighted communities and create thousands of new jobs, all of which would serve as a further stimulus to the national economy.

STATEMENT OF ROBERT KULIKOWSKI, DIRECTOR
CITY OF NEW YORK
MAYOR'S OFFICE OF ENVIRONMENTAL COORDINATION

TO THE SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT

HOUSE COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE

REGARDING THE REVITALIZATION OF THE
ENVIRONMENTAL PROTECTION AGENCY'S BROWNFIELDS PROGRAM

UNITED STATES HOUSE OF REPRESENTATIVES
14 FEBRUARY 2008

I am pleased to submit testimony today to inform the Subcommittee's consideration of EPA's Brownfields Program. I commend Subcommittee Chair Johnson for your interest in brownfields and in the potential reauthorization of the Small Business Liability Relief and Brownfields Revitalization Act (Brownfields Law). Redevelopment of brownfields leverages private investment; increases jobs, housing and open space; raises property values and tax revenues; and revitalizes neighborhoods.

The City of New York has been working with EPA brownfield grants since 1996. Although the vast majority of brownfield sites in New York City do not go through federal programs, EPA grants facilitate investigation and cleanup on sites that are beyond the capacity of public agency capital plans and have helped to increase stakeholders' knowledge of brownfield issues. Since the passage of the federal Brownfields Law in January 2002, the City has received ten assessment, cleanup, and revolving loan fund grants totaling $2.8 million. These grants are an important complement to state and local brownfields revitalization efforts. To date, the City has used the EPA grants to conduct assessment work at three sites that will be used for open space and affordable housing, is commencing cleanup activities at two park sites, and is identifying more sites that are eligible for funding and planning community outreach activities.

In light of the experience we have had with the program, we urge Congress to consider several improvements that will hasten cleanup and redevelopment of these contaminated and abandoned properties.

1. Increase Funding for the EPA Brownfields Program
Although the law authorized $250 million for the brownfields program, it has only been funded at about 65% of this level, thereby enabling EPA to fund only a third of the applications it receives. To be most effective, the program should be fully funded and increased each year to account for inflation.

2. Make the Funding Easier to Use
The restriction of $200,000 per site does not accommodate the complexity of the cleanup process at larger or more contaminated properties. The funding limit for cleanup of a single site should be increased to $1 million, and grants should be awarded on a community-wide multi-purpose basis, allowing recipients the flexibility to determine whether assessment, cleanup, or reuse planning activities are most appropriate at the time the money is available.

3. Make it Easier to Propose Eligible sites
Presently, the law requires a grantee to demonstrate that appropriate due diligence was conducted before it acquired a site, in order to propose it for funding. For sites acquired prior to the 11 January 2002 enactment of the Brownfields Law, there was no required standard for "all appropriate inquiry" – making it very difficult to prove that due diligence was done, particularly for sites acquired before CERCLA or other significant environmental laws were in place. For these sites, applicants should simply have to demonstrate that they did not cause or contribute to the contamination and have performed "appropriate care."

4. Facilitate Petroleum Investigations and Cleanups
Additionally, the law has two requirements concerning petroleum that make the grants difficult to use. Twenty-five percent of brownfield grant funding is set aside for sites with petroleum contamination. This does not allow municipalities the needed flexibility to address their most pressing needs. Fostering petroleum investigations and cleanups would be more effectively accomplished by replacing the set-aside with a practice of giving extra weight to such sites in the proposal rankings.

The law also requires that eligible petroleum sites be "low risk" and that there be "no viable responsible party." Demonstrating such provisions entails a nearly impossible task of tracking down and determining the financial viability of a site's two previous owners. Petroleum site eligibility restrictions should be made similar to those for non-petroleum brownfield sites that prohibit the use of grant funds where the recipient is potentially liable under the applicable statutes.

These reforms to the Small Business Liability Relief and Brownfields Revitalization Act would make EPA's brownfields program much more attractive and effective.

There are other opportunities on the Federal level to increase brownfields revitalization activity for both public and private entities. Several examples include de-linking HUD's Brownfields Economic Development Initiative (BEDI) grants from a municipality's Section 108 loan guarantees, making the Federal brownfield tax expensing provisions permanent, and creating a 50% Federal tax credit for brownfields remediation, to be distributed to states based on population.

The City would be pleased to provide further information on any of these proposals and looks forward to a timely reauthorization of the Brownfields Law that will address the shortcomings in current law and make this important program more effective.

National Brownfields Coalition:

U.S. Conference of Mayors
National Association of Counties
Northeast-Midwest Institute
National Association of Local Government Environmental Professionals
National Conference of Black Mayors
International City/County Management Association
Local Initiatives Support Corporation
National Association of Towns and Townships
National Association of Development Organizations
International Council of Shopping Centers
The Real Estate Roundtable
National Association of Industrial & Office Properties
Environmental Bankers Association
National Brownfield Association
National Brownfield Nonprofit Network Initiative
Cherokee Investment Partners, LLC
Community Revitalization Alliance
Smart Growth America
Scenic America
Groundwork USA
Trust for Public Land

February 14, 2008

The Honorable Eddie Bernice Johnson
Chairman
House Water Resources Subcommittee
U.S. House of Representatives
Washington, DC 20515

The Honorable John Mica
Ranking Member
House Transportation & Infrastructure Committee
U.S. House of Representatives
Washington, DC 20515

RE: Statement for Hearing on Reauthorization of the Small Business Liability Relief and Brownfields Revitalization Act

Dear Chairman Johnson and Ranking Committee Member Mica:

Thank you for convening the February 14 hearing to consider reauthorization of the brownfield revitalization program. The undersigned coalition of organizations represents thousands of communities and millions of Americans with keen interest in the strength and success of the federal brownfields program. We have been working to advance and promote brownfield revitalization since the issue emerged in the early 1990s. We are pleased to submit this statement for the record.

As you know, Congress enacted the Small Business Liability Relief and Brownfields Revitalization Act with unanimous bi-partisan support in both the House and the Senate in 2001. This Act built on the initial success of the brownfield demonstration program that the Environmental Protection Agency established in 1995. The pilot program provided seed money to demonstrate how federal funding for assessment and cleanup could leverage substantial private sector investment to help bring contaminated properties back into productive use. The 2002 law provided the brownfields program with a Congressional mandate, and new tools to attract additional private capital investment and promote reuse. It also authorized increased

funding, to a level of $250 million per year: $200 million a year for brownfields assessment and clean-up grants to local communities and entities focused on redevelopment; and $50 million a year in grants to states and Indian tribes to help them implement stronger and better state brownfield response programs.

By any measure, the federal brownfields program has been a tremendous success. The EPA has invested approximately $1.3 billion in brownfields site assessment and cleanup since 1995. According to EPA, the program's relatively modest investment has leveraged $10.3 billion in cleanup and redevelopment monies – a more than eight to one return on public investment. This has taken place because the brownfields program has been shaped to reflect the realities of the real estate market – a relatively small up-front public investment to overcome cleanup barriers and make sites "shovel ready" can leverage significant follow-on investment. In addition, this investment has resulted in the assessment of 11,600 properties and helped to create 47,200 new jobs nationwide. Moreover, the EPA program typically serves as a revitalization catalyst, attracting other state and federal agency resources, as well as local incentives, which serve to attract the private sector participation essential to success.

While the EPA brownfields program has helped hundreds of communities, much remains to be done. With estimates ranging up to one million sites nationally, brownfields can still be found in virtually every community, as abandoned or underused warehouses, salvage yards, inactive manufacturing facilities, former gas stations and dry cleaners, and other eyesores that undermine economic and social vitality. Reauthorization of the program can build on the substantial successes of the program's first five years; key refinements can make it even stronger, further enhancing its ability to make a difference in communities.

The National Brownfields Coalition represents decades of public, private, and non-profit experience with brownfields in thousands of communities across the country. The ideas and recommendations for strengthening the program, summarized below, represent our collective experience. In general, the collective point of view represented by our constituent organizations is that reauthorization presents an opportunity to make adjustments, encourage innovation, and improve intergovernmental partnerships, all with the goal of accelerating cleanups and leveraging community revitalization.

We have attached a summary of our proposals. Some of the key recommendations include: increase overall funding authorization to $600 million by 2012; increase the cleanup grant ceiling to $1 million per site; establish multi-purpose brownfield grants; facilitate petroleum/UST brownfield cleanups by eliminating extra site eligibility tests and by eliminating the petroleum set-aside; establish pilot grants for sustainable reuse of brownfield sites and waterfront redevelopment; clarify that publicly-owned sites acquired before 2002 are eligible; allow non-profit organizations to be eligible for assessment and RLF grants; allow entities that lease property from responsible parties to qualify for bona fide prospective purchaser protections; encourage local and state governments to address mothballed sites by clarifying liability for state and local government; and expand innocent purchaser protections for petroleum and PCB cleanups.

For more information on these recommendations, please contact Judy Sheahan (US Conference of Mayors), Paul Connor (NALGEP) Charlie Bartsch (ICF), Ken Brown and Matt Ward (The Ferguson Group), Evans Paull (Northeast-Midwest Institute) or any of the brownfield coalition members below.

Thank you for your consideration.

Sincerely,

U.S. Conference of Mayors
National Association of Counties
Northeast-Midwest Institute
National Association of Local Government Environmental Professionals
National Conference of Black Mayors
International City/County Management Association
Local Initiatives Support Corporation
National Association of Towns and Townships
National Association of Development Organizations
International Council of Shopping Centers
The Real Estate Roundtable
National Association of Industrial & Office Properties
Environmental Bankers Association
National Brownfield Association
National Brownfield Nonprofit Network Initiative
Cherokee Investment Partners, LLC
Community Revitalization Alliance
Smart Growth America
Scenic America
Groundwork USA
Trust for Public Land

Proposal for the

REAUTHORIZATION OF THE FEDERAL BROWNFIELDS LAW

From the National Brownfields Coalition:

The U.S. Conference of Mayors
National Association of Counties
Northeast-Midwest Institute
National Association of Local Government Environmental Professionals
National Conference of Black Mayors
International City/County Management Association
Local Initiatives Support Corporation
National Association of Towns and Townships
National Association of Development Organizations
International Council of Shopping Centers
Community Revitalization Alliance
The Real Estate Roundtable
National Association of Home Builders
National Association of Industrial & Office Properties
Environmental Bankers Association
National Brownfield Association
National Brownfield Nonprofit Network Initiative
Cherokee Investment Partners, LLC
Smart Growth America
Scenic America
Groundwork USA
Trust for Public Land

KEY PROVISIONS FOR
REAUTHORIZATION OF THE FEDERAL BROWNFIELDS LAW

FUNDING THAT MEETS AMERICA'S BROWNFIELDS NEEDS

1. **Increase Cleanup Grant Amounts** – Congress should recognize the complexity of the cleanup process at larger or more complicated sites by increasing the funding limit for cleanup of a single site to up to $1 million. Under special circumstances, EPA could waive the limit and go up to $2 million per site

2. **Establish Multi-Purpose Brownfield Grants** – Congress should allow eligible entities to have the option to apply for multi-purpose grants that can be used for the full range of brownfield-funded activities (assessment, cleanup, reuse planning, etc,) on an area-wide or community-wide basis. Such multi-purpose grants should be available in grant amounts of up to $1.5 million. Applicants would be required to demonstrate a plan and the capacity for using this multi-purpose funding within a set timeline in order to qualify for such funding.

3. **Establish Pilots for Sustainable Reuse and Alternative Energy on Brownfields** – The Act should authorize $20 million for pilots that demonstrate sustainable reuse, green buildings, and alternative energy. Pilots should allow use of funds for site assessments, cleanup, site planning, feasibility analysis, and engineering studies related to environmentally beneficial site improvements, such as, high performance/green buildings, green infrastructure, ecosystem restoration, and/or renewable energy production.

4. **Establish Pilots for Waterfront Brownfields** – The Act should authorize $20 million for EPA to fund demonstration pilots and create an interagency taskforce to help communities overcome the unique challenges of waterfront brownfields restoration along rivers, coastal lands, lakes, ports, and other waterbodies. Pilots should allow use of funds for site assessments, cleanup, site planning, feasibility analysis, and engineering studies related to environmentally-beneficial site improvements, such as, riparian zones, green infrastructure, low impact development, remediation and management of sediments, and flood damage prevention.

5. **Increase Total Brownfield Grant Program Funding** – Congress should increase overall EPA funding for brownfields grants, beginning with $350 million

in FY07 and increasing by $50 million annually to a total of $600 million in FY12 and beyond.

MAKING BROWNFIELDS GRANTS WORK BETTER AT THE LOCAL LEVEL

1. **Facilitate Petroleum/UST Brownfield Cleanups** -- Grantees that seek to use assessment, cleanup or multi-purpose grants on sites with petroleum contamination should not be required to make the difficult demonstrations that the site is "low risk" and that there is "no viable responsible party" connected with the site. Replace the "No Viable Responsible Party" language with a prohibition on using funds to pay for cleanup costs at a brownfield site for which the recipient of the grant is potentially liable under the petroleum statutes (parallels the language for non-petroleum brownfields sites).

   Create greater flexibility in use of grant funds by eliminating the currently defined set-aside of total grant funding for petroleum brownfields. Substitute a new "Ranking Criteria" that gives weight to petroleum-contaminated sites.

2. **Clarify Eligibility of Publicly-owned Sites Acquired Before 2002** – Congress should allow local government applicants to obtain funding at sites acquired prior to the January 11, 2002 enactment of the Brownfields Revitalization Act – when there was no required standard for "all appropriate inquiries" – provided that the applicant did not cause or contribute to the contamination and performed "appropriate care." For these sites, applicants would not have to demonstrate that they performed all appropriate inquiry.

3. **Establish that Non-Profits are Eligible for Assessment and RLF Grants** – The law should clarify that non-profits and related community development entities are eligible to receive brownfields assessment, cleanup, revolving loan fund, and job training grants. Currently non-profits are only eligible for cleanup and job training grants.

4. **Streamline Funding Approvals by Reducing Redundant EPA Reviews** – Congress should direct EPA to streamline the RLF and cleanup grant process by eliminating redundant EPA reviews for quality control, cleanup alternatives analysis, cleanup protectiveness analysis, and community involvement plans, when those reviews are already conducted by a State brownfields response program. EPA should be directed to propose an administrative solution to the problem of redundant EPA involvement in sites that are being overseen by state voluntary cleanup programs.

5. **Allow Funding for Reasonable Administrative Costs for Local Brownfields Programs** -- Brownfield grant recipients should be allowed to use a small portion of their grant to cover reasonable administrative costs such as rent, utilities and other costs necessary to carry out a brownfields project.

6. **Clarify Eligible Brownfields Remedial Activities** – The Act should clarify that assessment, cleanup, RLF, and multi-purpose grants can be used for remedial activities connected with demolition, site clearance and site preparation.

TOOLS TO HELP FREE THE MOTHBALLED BROWNFIELD SITES

1. **Promote State Institutional Control Programs** – The Act should encourage the effective use of institutional controls at brownfield sites by requiring states to develop a plan for establishing, monitoring, and enforcing appropriate institutional control mechanisms designed to assure that all future uses of brownfields sites are consistent with any restrictions placed on such sites.

2. **Promote State and Local Environmental Insurance Programs** – The Act should foster the use of environmental insurance at brownfield sites by supporting State, Local or Tribe-sponsored environmental insurance programs like the successful program in the Commonwealth of Massachusetts, which assist purchasers of environmental insurance who are remediating a brownfield through the state response program. The Act should authorize EPA to provide grants to States, localities or Tribes to support the establishment of environmental insurance programs for brownfields, with a 50% match from the applicant.

3. **Remove Barriers to Local and State Governments Addressing Mothballed Sites** – The Act should exempt local and state government from CERCLA liability if the government unit (a) owns a brownfield as defined by section 101(39); (b) did not cause or contribute to contamination on the property; and (c) exercises due care with regard to any known contamination at the site. Alternative language would amend section 101(20) (D) to clarify that properties acquired through eminent domain qualify for the CERCLA exemption for local governments involved in "Involuntary Acquisitions."

4. **Extend Protections to Innocent Lease Holders** – The Act currently gives protections to tenants of an entity that qualifies as a Bonafide Prospective Purchaser (BFPP), but does not protect an entity that directly leases land from the seller/RP. The Act should also provide protections to an entity that leases a brownfields site and meets all the other requirements for BFPP protection.

5. **Encourage Voluntary Cleanups of Underground Storage Tank (UST)** – For petroleum-contaminated sites the Act should provide liability protections for Bona Fide Prospective Purchasers and innocent land owners at brownfield sites, parallel to CERCLA/brownfields liability protections. Petroleum-contaminated sites should be afforded the same bar on federal enforcement as that provided under CERCLA if the site is being cleaned up under a qualified state program.

6. **Encourage Voluntary Cleanups of PCBs**– To facilitate PCB cleanups, the Act should :

a. Establish that the remediation of PCB sites under qualified State cleanup programs satisfies the federal requirements established under TSCA for cleaning up releases of PCBs;
b. Provide protections for Bona Fide Prospective Purchasers and innocent land owners at brownfield sites, parallel to the protections afforded CERCLA/ brownfields sites.
c. Establish eligibility for brownfields revitalization funding for PCB-contaminated sites (by eliminating the current exclusion of PCB-contaminated sites from the definition of a brownfields site).

ASSISTANCE FOR HIGH PRIORITY COMMUNITIES AND SITES

1. **Offer EPA Staff for Disadvantaged Communities, Small Communities, and Rural Communities** – The Act should authorize EPA to provide EPA brownfield staff to small, disadvantaged, and rural communities that need support to build local capacity to cleanup and revitalize brownfields. These staff would be provided via Intergovernmental Personnel Act ("IPA") assignments of up to three (3) years to localities, States, Tribes, and eligible non-profit organizations that competitively apply for an IPA assignment.

2. **Encourage Brownfield Cleanups by Good Samaritans** – The Act should provide an owner-operator exemption from CERCLA liability for non-liable parties that take cleanup action or contribute funding or other substantial support to the cleanup of a brownfield, in conformance with a federal or state cleanup program, but do not take ownership of that site.

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Statement
By
Raymond J. Poupore, Executive Vice President
National Construction Alliance

"Brownfields Revitalization and Environmental Restoration Act of 2001"

House Committee on Transportation & Infrastructure
Subcommittee on Water Resources and Environment
February 14, 2008

The National Construction Alliance (NCA) represents nearly 1.8-million members of three of the nation's largest construction unions: the Laborers' International Union of North America, the International Union of Operating Engineers, and the United Brotherhood of Carpenters and Joiners of America. For many years, thousands of our members have been trained to work in the environmental cleanup and restoration industries.

Because of our historical involvement in this work, the NCA and its affiliates support the reauthorization of the "Brownfields Revitalization and Environmental Restoration Act of 2001." During this reauthorization process we urge the Congress to increase the authorized level of funding for the program with a greater emphasis on brownfields cleanup activities. Such an effort would not only be beneficial for the environment but it would also spur the economic development of blighted communities and create increased employment opportunities.

The Government Accountability Office (GAO) has estimated that there are at least 500,000 Brownfield sites throughout the United States. EPA defines a brownfield as "a property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant." These are mostly properties with no viable responsible owner, and include everything from factories and other industrial facilities to abandoned gas stations, salvage yards, and warehouses. They are found in large cities, towns and rural areas, and tend to depress property values, provide little or no tax revenue, and contribute to community blight. Cleaning up and reinvesting in these properties increases local tax bases, facilitates job growth, utilizes existing infrastructure, takes development pressures off of undeveloped, open land, and both improves and protects the environment.

Currently, the law only authorizes $250 million for the Brownfields program, of which less than half can be used for environmental cleanup and restoration purposes. Moreover, in recent years, the President has neither requested nor has the Congress appropriated the full authorization. The amount appropriated by Congress for FY 08 was $168.3 million.

In a 2006 survey conducted by the U.S. Conference of Mayors, 86 percent of the cities surveyed cited the lack of clean-up funds as the single greatest impediment to brownfields redevelopment. Under the law, brownfields assessment grants to eligible communities are mostly limited to $200,000 per site, and cleanup grants are limited to $1 million. Even at these very modest levels, only about one-third of eligible applicants receive assistance. According to the EPA, since its initiation, the brownfields assistance program has spent about $800 million on grants to communities for brownfields site assessment and clean up, generating about 37,000 jobs.

While the Brownfields law, especially the liability provisions, has been received favorably by many mayors and other interested parties, we believe that its reauthorization provides the Congress with a singular opportunity to transform what has been a very limited approach to environmental remediation, restoration and redevelopment into a major, national undertaking. Indeed, as the American economy heads toward what may be a major recession, increased spending on brownfields cleanup and restoration would appear to be an excellent investment in both the environment and job creation. This is especially so if the EPA is correct that every public dollar invested in brownfields restoration generates $2.50 in private investment. The construction sector needs this targeted investment. With unemployment running at 11% in the construction sector and over 1-million construction workers unemployed, the time is now to invest in Brownfields clean-up.

In this respect, we believe that the Congress should seriously consider at least a four-fold increase in the authorized Brownfields spending level to $1 billion. It should also provide for a greater emphasis on the actual cleanup of these sites and make the cleanup funds available directly to eligible communities.

Moreover, as we have previously suggested to the Committee in a letter to the Subcommittee Chairwoman on February 1, 2008, we believe that the reauthorization also should include an amendment to the hazardous waste "Worker Education and Training Program," administered by the National Institute for Environmental Health Sciences.

The Brownfields Revitalization and Environmental Restoration Act of 2001 provides an excellent framework for cleanup, remediation and redevelopment of environmentally contaminated properties. While we strongly support its reauthorization, at the same time we urge the Congress to consider expanding and improving the program in the aforementioned manner.

NCA
www.ncabuild.org

Laborers' International Union of North America

International Union of Operating Engineers

United Brotherhood of Carpenters & Joiners of America

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NATIONAL CONSTRUCTION ALLIANCE

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February 1, 2008

The Honorable Eddie Bernice Johnson
United States House of Representatives
1511 Longworth House Office Building
Washington, DC 20515

Dear Chairwoman Johnson:

As you consider re-authorization of the Brownfields legislation in the Water Resources and Environment sub-committee in the coming weeks, the National Construction Alliance seeks your support for expanding the authority and funding levels under which the National Institute of Environmental Health Sciences' Worker Education and Training Program (WETP) is operated.

The National Construction Alliance (NCA) represents nearly 1.8-million members of three of the nation's largest construction unions: the Laborers' International Union of North America, the International Union of Operating Engineers, and the United Brotherhood of Carpenters and Joiners of America. These unions and their labor-management training partnerships operate successful initiatives under the WETP, which are supported by resources provided under this statute.

The proposed amendment broadens the existing workforce development authority to include safety and health training, as well as skills acquisition, specifically intended for disaster emergency response, rescue, recovery and clean-up, and Brownfields clean-up and redevelopment. The current authority only deals with two specific issues: training for "hazardous waste removal or containment or emergency response" and the research function that has been a part of the legislation since 1986. Further, the proposed amendment would specifically authorize the Minority Worker Training Program, which has been funded in previous years.

In practice, the workforce component of the Brownfields program has operated in the way that we propose for many years. In response to the September 11th attacks and the recent Gulf Coast hurricanes, the WETP received supplemental funding to undertake cleanup of environmental problems stemming from these national disasters. To date, $14.2 million has been awarded to National Institute of Environmental Health Sciences (NIEHS) to support these training efforts. Similarly, in 1998, the Environmental Protection Agency (EPA), through an Interagency Agreement with the NIEHS, developed the Minority Worker Training Program (MWTP) to increase the opportunities of community residents who live in close proximity to Brownfields sites.

In short, adopting the proposed amendment will clarify the existing statutory authority to include disaster response and codify the MWTP.

Since the workforce component's inception in 1987, approximately 2-million workers have received safety and health training from the WETP. This program has made a profound difference in the lives of these workers, many of whom went on to obtain family-sustaining jobs, high-quality training, nationally-recognized credentials, and exceptional fringe benefits through our three unions and their labor-management training partnerships. By broadening the authority under which these programs are governed and expanding its funding level, Congress can ensure that a diverse, skilled workforce will be prepared in the event of another national disaster.

Thank you for your leadership on these critical issues.

Sincerely,

Raymond J. Poupore
Executive Vice President

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