Appendix D: NJDEP Brownfields Policies

NJ DEPT. OF ENVIRONMENTAL PROTECTIONIMMEDIATE RELEASE
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Adds Incentives to Redevelopment Efforts, Areawide Pilot Projects Planned in Three Cities

(02/127) TRENTON — New Jersey Department of Environmental Protection (DEP) Commissioner Bradley Campbell today announced a new brownfield policy to bolster redevelopment of contaminated sites in New Jersey, accelerating the process and making it more efficient and predictable. DEP also announced the creation of a new Office of Brownfield Reuse that will implement and serve as the focal point for the department's new brownfield programs..

"A strong brownfield reuse program is a vital component of Governor McGreevey's smart growth efforts to stem the tide of sprawl, channel new development to cities and towns and create a broader range of choices and more livable communities for businesses and families in New Jersey," said Campbell. "New Jersey is plagued with thousands of sites that are or may be contaminated and serve as a drain on the economy and quality of life in our urban centers. Our new brownfield programs will help better coordinate and accelerate the work of state, municipal, business and community partners who want to clean up and return of these properties to productive use."

DEP's new brownfield policy is focused on reducing uncertainties and inefficiencies in existing site remediation regulations, broadening the scope of potential re-uses for brownfield sites and working with communities to support areawide planning and redevelopment in cities that have multiple brownfield sites.

DEP has selected the cities of Trenton, Elizabeth and Camden to pilot this comprehensive approach to revitalize entire neighborhoods through partnerships among local communities, local and state officials and private parties. The initial pilot projects will focus on Trenton's Monument neighborhood, Camden's Cramer Hill and North Camden neighborhoods and Elizabeth's E-port neighborhood.

"Partnering with DEP under its new areawide program will bring much needed housing, commercial and open space development to Trenton's Monument neighborhood," said Trenton Mayor Douglas Palmer. "The new Marriott at Lafayette Yard is a prime example of a brownfield success for our city."

The following are additional reforms and programs included in the DEP brownfield policy:

Liability Reform: DEP will not assert liability for damages or compensatory restoration against non-liable brownfield developers at sites at which there is historical natural resource injury.

No Further Action Letters: DEP will issue No Further Action (NFA) letters for soils when soil cleanup at a brownfield property is complete, but groundwater contamination may remain. DEP will also issue NFA letters for groundwater when a Classification Exception Area has been established for a brownfield site and natural attenuation has been approved as the appropriate remedial action.

Letting Developers Get to Closing: DEP will permit non-liable brownfield developers to per-

form, as necessary, a well survey and potable well sampling and analysis and determine groundwater flow direction, promptly after purchasing a brownfield property, rather than requiring such developers to perform these activities prior to purchase.

Expanded Use of Market Tools: DEP will encourage the use of financial and market instruments to help manage financial uncertainties associated with complex and long-term cleanups while providing community assurance that cleanup requirements will be met. These mechanisms include allowing brownfield developers of single sites in areas affected by ubiquitous groundwater contamination to resolve their groundwater liability through establishment of a groundwater trust for DEP to use for future and comprehensive groundwater remediation efforts; ensuring the reliability of institutional and engineering controls; and, where appropriate, reducing the burden on the regulated community of maintaining these controls.

"Cleanup Star" Program: DEP will develop this program, which will reform the role of environmental consultants by allowing developers and responsible parties to contract with consultant professionals pre-qualified by DEP. These pre-qualified consultants will work under the direction of the DEP and will help expedite remedial analysis, evaluation, and decisions. DEP will public notice the selection criteria and expected qualifications for consultant participants. DEP will also develop appropriate auditing requirements and other safeguards to ensure that public health and environmental standards are rigorously enforced, and that pre-qualified professionals who perform inadequate work are removed promptly from the pre-qualified list.

Technical Review Panels: DEP will establish a technical review panel comprising senior DEP technical staff who will expedite final cleanup decisions where remedial action has been delayed or potentially may be delayed by disagreements between brownfield developers (or other responsible parties) and DEP case managers on the best approach to meeting standards and technical requirements to protect public health and the environment.

Brownfields to Greenfields: DEP's Brownfield Reuse Office will work with the Green Acres Program, the Division of Fish and Wildlife, municipal officials, and community and environmental leaders to identify opportunities to pilot new potential reuses of brownfield sites. This effort shall focus particularly on identifying brownfield sites that may be used for residential development projects, for local and regional parks, for recreation areas, including off-road vehicle use areas, and for natural resource restoration. Where bona fide conservation groups have an interest in stewardship at sites being restored for these purposes, DEP shall develop appropriate prospective purchaser agreements to address potential liability arising from ownership. The Office of Brownfield Reuse shall identify at least two "brownfield to greenfield" pilots over the next twelve (12) months.

Zero Tolerance for "Warehousing": Where industrial owners of contaminated brownfield sites have chosen to "warehouse" the brownfield properties by leaving them abandoned and avoiding or delaying remediation, DEP will assist impacted communities to ensure that a beneficial reuse occurs. Where appropriate, DEP will use its enforcement authorities to require remediation. Where a municipality acquires a warehoused property through condemnation, DEP will partner with the municipality by allowing the local government to take the lead in cleaning up the site, by providing appropriate assurances concerning the scope of liability, and by ensuring that responsible parties pay for the cost of remediation.

Commissioner Campbell made the announcement today at the Marriott at Lafayette Yard Hotel and Conference Center, a brownfield project selected for a national 2002 Phoenix Award recognizing excellence in community redevelopment at a brownfield site. Joining Commissioner Campbell at today's event were city of Trenton Mayor Douglas Palmer, city of Elizabeth Mayor Chris Bollwage, Department of Community Affairs Commissioner Susan Bass-Levin and several leaders of New Jersey's business and development, environmental and local communities.

New Jersey Department of Environmental Protection

Policy Directive 2002-2003

Acceleration of Brownfield Cleanup and Reuse

New Jersey is plagued by more than 12,000 properties that are or may be contaminated by hazardous substances. These brownfield sites are unhappy legacies of New Jersey's industrial history and poor waste management practices in the past, but many of these sites can be transformed into centerpieces of economic and community renewal. These properties must be remediated and reused to fulfill Governor James E. McGreevey's goals to control sprawl, promote redevelopment, and reform dated regulatory practices. In Executive Order No. 38 (Oct. 22, 2002), Governor McGreevey focused the Department of Environmental Protection (DEP) and other agencies on redevelopment of idle sites in already developed areas. This focus is central to the Governor's objectives of promoting smart growth and creating a broader range of choices and more livable communities for businesses and families in New Jersey.

While New Jersey's brownfield programs to date have made progress in accelerating the cleanup and redevelopment of those brownfield sites most suited to redevelopment, DEP's programs require further reform and improvement to address those sites where the technical, practical, and environmental challenges are more complex. Sites have languished, and communities have been blighted, due to the failure to work effectively with the business community and municipalities and to undertake reforms that will accelerate public health protection and economic renewal that come with returning these idle sites to productive use. The assumption that brownfield sites should be used only for commercial or residential redevelopment has limited potential use of these sites for residential, recreational, open space, and other uses. In some cases, the absence of adequate enforcement and safeguards has allowed responsible site owners to "warehouse" sites - to defer needed cleanup by choosing to keep the sites idle rather than having responsible parties own up to their cleanup obligations.

This directive identifies and directs, pursuant to Executive Order No. 38, implementation of the policy and program changes needed to reduce regulatory uncertainty, to reconcile business and regulatory decision time frames, to expand potential reuses of brownfield sites, and to ensure that owners responsible for contamination no longer have the option of leaving their sites idle rather than meet their cleanup obligations. Each of these changes will be undertaken in consultation with DEP's partners in brownfield redevelopment: the Office of Smart Growth and other offices of the Department of Community Affairs; the Economic Development Administration and other offices of the Department of Commerce, the State Planning Commission, the Brownfields Taskforce, municipalities, and interested constituencies.

Definitions

The term "brownfield" refers to abandoned, idled, or underutilized industrial or commercial sites where expansion, redevelopment or reuse is complicated by actual or perceived environmental contamination. Brownfield sites may also include sites that were once heavily contaminated and where cleanup has been completed but redevelopment has not been initiated.
The term "smart growth area" means the State's urban, suburban and rural population centers, the revitalization of which is essential to the prevention of sprawl and the degradation of natural and agricultural resources and environmental quality. Smart growth areas shall be identified in coordination with the Office of Smart Growth in the Department of Community Affairs, the Economic Development Administration in the Department of Commerce, the State Planning Commission, municipalities, and interested constituencies.

Policy

The Department shall implement the following measures prospectively to encourage the remediation and reuse of brownfield sites, particularly in smart growth areas:

Reducing Regulatory Uncertainty

1. Office of Brownfield Reuse: The Department shall establish, within the Site Remediation Program, an Office of Brownfield Reuse. This Office shall serve as the focal point for the Department's brownfield programs, and shall be charged with informing the public and those interested in brownfield reuse about these programs. Furthermore, this Office shall develop and implement new policies and programs to encourage brownfield remediation and reuse, shall set priorities among brownfield sites that may be appropriate for accelerated cleanup and redevelopment and shall directly oversee the remediation of high priority brownfield projects identified by the Department.

2. Liability Reform: The Department shall not assert liability for damages or compensatory restoration against non-liable brownfield developers at sites at which there is historical natural resource injury. This policy shall not diminish responsibility for restoration actions that are inherent in remedial activity.

3. No Further Action Letters: The Department shall issue No Further Action Letters for soils when remediation of soils at a brownfield property is complete, but groundwater contamination may remain. The Department shall also issue No Further Action Letters for groundwater when a Classification Exception Area has been established for a brownfield site and natural attenuation has been approved as the appropriate remedial action.

4. Letting Developers Get to Closing: The Department shall permit non-liable brownfield developers to perform, as necessary, a well survey, potable well sampling and analysis, and a determination of groundwater flow direction, promptly after purchasing a brownfield property, rather than requiring such developers to perform these activities prior to purchase. The procedures of current and proposed technical regulations and manuals shall conform to this policy.

Aligning Regulatory and Redevelopment Objectives and Timetables

5. Areawide Brownfield Reuse Program: The Department shall establish an areawide brownfield development program that will enable communities to plan comprehensively for the remediation and reuse of multiple brownfield sites. The Department will assist these communities through coordinated remediation oversight of the brownfield properties and assist with coordination of relevant programs both within the Department and within other federal and state agencies. The first sites selected for this program shall be in Camden, Elizabeth, and Trenton, with further sites to be selected through application to the Department. This program shall complement other applicable brownfield programs and incentives.

6. Expanded Use of Market Tools: The Department shall encourage the use of financial and market instruments to help manage and allocate financial risks associated with the uncertainties of complex and long-term cleanups while providing communities with greater assurance that cleanup requirements will be met. These may include the use of sureties, insurance products, and trust fund mechanisms to: a) manage or reduce risks of uncertainty concerning potential costs of future remedial decisions; b) allow brown-

field developers of single sites in areas affected by ubiquitous groundwater contamination to resolve their groundwater liability through establishment of a groundwater trust for DEP to use for future and comprehensive groundwater remediation efforts; c) ensure the reliability of institutional and engineering controls and, where appropriate, to reduce the burden on the regulated community of maintaining these controls; and d) otherwise provide greater certainty to potential developers and greater assurance to communities that cleanup needs will be met.

7. "Cleanup Star" Program: The Department shall develop a "Cleanup Star "program to reform the role of environmental consultants and to accelerate brownfield site redevelopment. This program shall include the following elements:

a. Following reasonable public notice of selection criteria and expected qualifications, DEP will establish a list of pre-qualified consultant professionals sufficiently qualified to oversee remedial work with minimal oversight.

b. For developers and responsible parties willing to select and fund the use of consultant professionals from the pre-qualified list and provide by contract with the consultant that the consultant will act at the direction of DEP, DEP will make use of the consultant to expedite remedial analysis, evaluation, and decisions.

c. DEP will make this option available initially at sites presenting relatively low or moderate risk and less complex cleanup challenges.

d. DEP shall develop appropriate auditing requirements and other safeguards to ensure that public health and environmental standards are rigorously enforced, and that pre-qualified professionals who perform inadequate work are removed from the list promptly.

e. DEP shall convene an advisory group of interested constituencies and appropriate representatives of interested labor organizations to oversee and guide implementation of this initiative.

f. The DEP labor-management committee shall audit the program annually to ensure that it is not used to reduce or divert the internal staffing and resources devoted to site remediation.

8. Technical Review Panel: The Department shall establish a technical review panel, comprised of senior DEP technical staff, to expedite final cleanup decisions where remedial action has been delayed or potentially may be delayed by disagreements between brownfield developers (or other responsible parties) and DEP case managers on the best approach to meeting standards and technical requirements to protect public health and the environment.

Expanding Potential Reuses of Brownfield Sites

9. Brownfields to Greenfields: The DEP Office of Brownfield Reuse shall coordinate with the Green Acres Program, the Division of Fish and Wildlife, municipal officials, and community and environmental leaders to identify opportunities to pilot new potential reuses of brownfield sites. This effort shall focus particularly on identifying brownfield sites that may be used for residential development projects, for local and regional parks, for recreation areas, for off-road vehicle use areas, and for natural resource restoration. Where bona fide conservation groups have an interest in stewardship at sites being restored for these purposes, DEP shall develop appropriate prospec-

tive purchaser agreements to address potential liability arising from ownership. The Office of Brownfield Reuse shall identify at least two "brownfield to greenfield" pilots over the next twelve (12) months.

Promoting Cleanup and Re-use of "Warehoused" Sites

10. Zero Tolerance for "Warehousing": Where industrial owners of contaminated brownfield sites have chosen to "warehouse" the properties by leaving them abandoned and avoiding or delaying remediation, the Department shall assist impacted communities to ensure that a beneficial reuse occurs. Where appropriate, the Department shall utilize its enforcement authorities to require remediation. Where a municipality determines to acquire a warehoused property through condemnation, the Department shall, in appropriate circumstances, partner with the municipality a) by allowing the municipality to assume a lead role in implementing remedial action, b) by providing appropriate assurances concerning the scope of liability, and c) by ensuring that responsible parties pay for the cost of remediation.

The Assistant Commissioner for site remediation shall report to the Commissioner on progress and achievements in implementing this directive on or before January 1, 2004.
This directive is a statement of policy intended for the fair and efficient administration of the Department of Environmental Protection and shall not be construed to create any legal or equitable rights or to provide the basis for any judicial or administrative remedy.

Date: November 25, 2002

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Bradley M. Campbell
Commissioner
Department of Environmental Protection

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Appendix F: Brownfields Financing

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It is no secret that Brownfields redevelopment poses challenging finance issues. Freight-related Brownfield projects add another challenge, which is their need to generally follow the market demands of the industry as opposed to being able to generate demand for their services on their own. From the environmental perspective, even the perceived (as opposed to substantiated) environmental risks or other impairments present significant barriers such as limiting the marketability of the property and the number of appropriate buyers, blunt an effective community planning process, and increase the chances of transactional failure.

Still, the overall finding is that the general market strengths of the geographic study area clearly favor freight-related Brownfields. That being said, it needs to be noted that financing is forced to deal with the site-specific factors pertinent to the location and immediate surroundings. It is at this scale that the many concerns affecting successful financing arise. The list of these concerns is long, but a few examples demonstrate the real potential for intractable equity and debt lender issues with respect to financial risk identification, quantification, and management. Major uncertainties can exist with respect to:

- The extent of contamination
- Environmental agency remediation termination criteria (e.g., requirements For No Further Action)
- Timing and length of remediation
- Remedy success and cost/timing of cure
- Remedy cost variance (e.g., estimated 65% of remedies go 10% or more over budget)
- Long-term and (potentially indeterminate) environmental risk exposure
- Incomplete Disclosure Risk
- Buyer/Seller Liability Transfer Failure
- Business Interruption Risk (rental loss/income loss)
- Buyer/Seller Remediation Control Risks (e.g., seller may have incentive to do less stringent remediation)

In addition, Brownfield projects often requires multiple layers of equity and/or debt financing, with all the commensurate lender take out, facility divestiture, equity partner contact(s) and other risk transfer structures. Another complexity can arise from the need for a combination of public as well as private funding to make a freight-related Brownfield project feasible, in part because the larger projects can benefit so much from transportation infrastructure improvements. In summary, from a real estate finance perspective, these and other issues make Brownfields financing more complex that that for competing assets with lesser impairments.

This has resulted in a situation where the most financially viable Brownfield projects have a reasonable chance of success due to an atypically favorable confluence of real estate transaction factors. Those properties that do not meet this profile have often languished or gone through a series of failed transactions, some lying fallow to this day. Significant work has been done to address this situation of the last few years in New Jersey, but more work and resources need to be brought to the task to move Brownfield projects.

The study took into account this real estate finance setting both in terms of general/regional aspects and site-specific analyses. The general finding was that the significant demand for appropriately located industrial space within the study area helped diminish a portion of the competitive disadvantage of Brownfield property. In addition, the properties location in the New Jersey/New York City metropolitan area means that some of the best financial and risk management expertise is available to assist Brownfield projects. This is not incidental, as historically; the successful solutions to the above-mentioned complexities of these projects are often tied to remedies provided by specific individuals or companies involved in a project.

Vital public funding and tax abatements/incentives are being put into place, and risk management instruments to address equity and debt providers' concerns are available, even in the current insurance environment. Also, new methods are being developed to solve long-standing problems associated with complex environmental liability structures (e.g., Superfund PRP groups) and assuring coverage of timing and cost risks associated with long-term operation, maintenance and monitoring (OM&M) for affected Brownfield properties.

Certain findings were discerned as priorities for additional discussion and subsequent action. The priorities were based on the potential for work in these financially related areas to significantly impact the success of freight-related Brownfield redevelopment. Conversely, failure to make progress in addressing these designated areas could adversely affect the potential for success of future projects and implementation of the related state planning objectives. Discussion of these areas is provided below.

Financial Incentives in Current Brownfields Law

Current laws with tax rebates favor retail development versus freight, as the tax savings are derived primarily from sales taxes. This has historically been very helpful for retail-related Brownfield projects, although not typically enough in and of itself to override the other basic underlying risks inherent in Brownfield work.

New legislation intended to assist industrial Brownfield redevelopment has been proposed and will offer tax abatement mechanisms that should ameliorate some of the costs and risks associated with freight-related Brownfields. In addition, the tax benefits stemming from developing mixed-use properties that include freight operations in these projects should also be considered. Discussion of the many additional benefits related to mixed –uses are provided in subsequent sections.

Environmental Insurance Should be Evaluated as Risk Management Tool

Environmental insurance, when integrated into the real estate financing of a project, can be an essential factor in the success of the effort. It should be noted that every insurance package is project-specific, and that parties to the transaction should be prepared to invest the appropriate amount of time in the planning, negotiation and binding phases of the insurance-related work.

Another general guideline is to begin the insurance planning effort even during the site selection or feasibility study portion of a real estate deal. The reason for this is that problems and their solutions can be identified early on in the process, often in a preemptive mode. This can save considerable time and money, which are both critical in such projects.

Also, since quality insurance brokers have access to considerable databases of past projects, they are able to offer valuable advice in the planning phase, including recommendation for investment partners that work in the Brownfields area, sources of debt capital, and specialty environmental consulting or legal assistance.

Finally, it will important to identify early on if the particular Brownfields project is a candidate for insurance or not, and what alternatives are available in the financing aspects of the project. For example, remediation cost cap policies may only be feasible if remediation costs exceed certain amounts, or available only under restrictive terms if the estimated costs are insufficient are the duration of the remediation is too short.

Solutions to this problem are often similar to those needed to address freight-related Brownfield issues of scale. Specifically, efforts to aggregate parcels to address the space needs of a freight-related property use can also be integrated into the insurance package to spread risk, increase the target coverage and buffer amounts, and obtain the best possible terms from underwriters. This may also significantly assist the overall project financing effort and increase the chances of success.

There are a multitude of insurance products that address in some cases the impact of environmental risks on the seller, the debt lender, the equity players, the developer, tenants, the ultimate owner(s) and third parties (e.g., communities). A detailed coverage of the means and methods of implementing environmental insurance products is well beyond the scope of the study. In addition, even the basic policy types may have specific exclusions that differ from the general descriptions provided here, because, as stated above, each product mix is specific to a particular projects needs and constraints.

Finally, it is important to note that the underwriting process will be significantly affected by the sufficiency of the environmental data and accuracy analysis for the subject property(ies). All underwriters will refer to decision tree analysis methods and probabilistic risk models to derive their negotiation conditions.

The stringency of the terms for the coverage will be directly related to the degree of uncertainty in the data and the characteristics of the areas of environmental concern. The study found that the use of real-time environmental data acquisition using quantitative field-analytical methods, can significantly decrease these uncertainties. When this approach is integrated with a dynamic interactive remedy and financial sensitivity analysis a marked positive impact on the eventual underwriting and financial viability, terms and schedule for deal closing can be realized.

The basic insurance products include:

- Remediation Cost Cap or Stop Loss (covers remediation cost overruns, including remediation of previously unknown off-site conditions),
- Pollution Legal Liability (flexible coverage including residual or legacy liabilities, 3rd party bodily injury, property damage and remediation costs),
- Contractor Pollution Liability (coverage of completed activities of the contractor for 3rd party claims, remediation costs, and legal defense costs), and
- Secured Creditor Insurance (coverage to pay loan balance or lesser of loan balance and remediation –triggered by default and environmental condition, 3rd part bodily injury property damage and claims, and 1st party claims for remediation costs if insured has foreclosed on the property).

Again, there are many variations of these policies that can cover other risks such as non-owned disposal sites, etc. and qualified brokers or underwriters should be consulted.

Coverages can be blended in many ways for most development needs. Finite programs offer a chance to eliminate escrow conditions for a Brownfield property and accommodate certain development schedule requirements. Under a finite program, the cost of the premium, buffer and estimated cleanup cost can be paid in advance to the insurance company. The funds then earn interest under a variety of investment arrangements at the same time that costs for remediation or

other development activities are submitted as claims to the policy and contractors reimbursed on a pre-determined set of conditions.

Cost savings realized at negotiated project completion milestones can be shared by parties to the policy and/or provided as incentive payments to the contractor for early completion inline with calculated financial advantages to the developer. These programs can be very sophisticated and require extensive effort to design and bind. However, they offer a powerful solution to many financial barriers to successful Brownfields projects.

As noted above, there can be limits to the effectiveness of insurance. These can only be addressed by development and or finance activities. Such activities are necessary on occasion to raise the level of the financial commitment to levels that allow entry into the insurance markets. These would include the pooling of risks and aggregating separately owned parcels, as briefly discussed in subsequent sections.

However, it is quite possible to use various financial methods to mitigate potential development barriers created by the need to utilize these and other techniques. Ultimately, the advantage that environmental insurance can bring to the freight-related Brownfields marketplace is significant, and means to continue its integration into relevant financing methods and the regional planning and implementation effort should be further explored.

Reassessment of Environmental Remediation Scope and Costs and Financing Solutions

Many candidate properties for freight-related Brownfield redevelopment have ongoing or completed environmental assessment or remedial planning activities. The study found that, in many cases, more precise or thorough determination of likely remediation activities might be needed under a Brownfields development scenario than that previously done in the absence of an anticipated property improvement and freight–related/mixed use.

In other words, the future use and financing mechanisms may be significantly influenced by the methods and considerations used to appropriately address a property's environmental risks.

For example, in the absence of a future use, residential soil cleanup criteria may have been applied. This could easily increase remediation costs to the point where a real estate asset already impaired by other value diminution factors could have the remediation cost greater the present or future value.

However, in the presence of a freight-related (i.e., industrial) use, where large amounts of paved areas are desirable and actually increase the property's value, then less stringent non-residential criteria could apply, and the property improvements provide acceptable engineering controls to mitigate the environmental risks.

Therefore, in the event that a property is being evaluated in a Brownfields context, existing remediation plans may need to be reassessed and refined with respect to the development plan and the planning-level pro forma financial analyses, as well as the other available risk management tools such as insurance options. In addition, another phase of investigation using the above-mentioned methods and analyses should be considered in order to gain the best financial and risk management terms possible.

Financing analysis should be incorporated into the earliest stages of the Brownfields development planning process

Redevelopment often requires more equity in the debt/equity arrangement than purchases and improvement of land with existing structures and uses. Because equity financing and payback terms are often sensitive to unanticipated changes in any of a number of development factors, equity funding has its own unique constraints and risks. This automatically makes any land or property development riskier relative to potentially competing properties without such require-

ments. When the possibility of contaminated land and environmental risk management requirements are added to this situation it only increases these risks on equity. In any case, the parties providing the debt side of the financing equation will have in many cases very well defined risk management data objectives that must be addressed for a Brownfield property transaction.

Therefore, it is imperative that financial planning be incorporated into Brownfield Redevelopment at its earliest stages. It is far better to learn that the "numbers just won't work" at the early stage, and begin to access the many tools and alternative solutions to resolve the situation, as timing risk remains one of the more significant development risks requiring management, and if not addressed in the earliest planning stage can lead to failure of the deal.

For example, the assessment of the maximum price that should be paid for a Brownfield property intended for future freight-related use can be significantly affected by:

- The estimated short-term remediation cost;
- The estimated schedule for remedy completion/effectiveness;
- The schedule for the related long-term remediation cost; and/or
- Estimates of short-term or long-term site disruption associated with remediation.

Each of these information categories typically has associated uncertainty; therefore, ranges of costs and schedules are used to quantify them.

The results of the study indicated that financial analysis and supplemental sensitivity analysis of those results should be used to assess the financial liabilities associated with the above-mentioned remediation scenarios. The results of these analyses should be assessed with respect to the proposed pricing and terms of the Brownfield transaction.

Example financial analyses include:

- Pro forma statements of cash flows for the remediation/construction portion of the project and the operating period of the development;
- Assessments of profitability before and after taxes of the projected life of the investment, including the effect of property transfer to sponsors with lesser risk tolerance;
- Required rates of return, and
- Depreciation and amortization schedules for applicable project costs.

The target maximum price of the land can then be assessed with respect to the results of the foregoing effort to determine its viability, and/or pricing issues.

In order to address the additional uncertainties that are often associated with Brownfield land development, the results of the pricing analyses can be assessed for its sensitivity with respect to variations in key industry-specific risk factors such as price per square foot rentable space. Conversely, the ultimate value of the project can be compared against variations in land price to assess opportunities to maximize value and/or identify areas of flexibility to help address environmental or other impairments to the project success.

The conclusion of the analysis may be that the project is not financially viable, or only marginal, under the currently projected remediation and site disposition plan. In this case, the results of should be fed back into the estimated remediation cost and schedule scenarios analyses to identify opportunities to achieve viability. For example, different remedial technologies may be assessed, mixes of passive and active technologies can be considered, or site use planning, grading or infrastructure can be revised.

It is important to note that early knowledge of the financial impacts of the preliminary financial plan will increase the value of the remedial planning effort. Using this information, subsequent

remedial planning efforts can make a significant contribution to the transactional negotiations and increase the potential for project success.

Similarly, this interactive process will be able to identify if remedial planning alterations cannot by themselves address the project needs, and that at this point financial risk management tools or other business solutions (e.g., property aggregation) may need to be considered to address the viability issues.

Integrate Financial Planning into the Community Planning Effort

As noted in several preceding sections, local rules and reaction to freight-related development can create barriers that can push redevelopment. However, this can be addressed in a classic win-win manner if mixed uses are considered in the community planning effort. Mixed uses can also provide the setting for addressing passive long-term OM&M needs related to ground water cures or other protective measures that can be integrated into the development.

Under this scenario, benefits of state programs could then be gained from both the tax portion of the transaction, as well as from the decrease in overall risk from blending of uses, increase of income generation, increased underlying land and property value growth, increased lender and equity base, and long-term upside in divestiture and securitization options. Not incidentally, it can also address important community-planning concerns that can follow proposals for freight operations, especially on Brownfield properties. Since these matters can have a profound effect on the financial viability of project, the implications of alternative use scenarios must be considered. At the same time, potential "deal killers" (such as overly conservative remediation end-points inconsistent with intended site use) offering minimal to no additional cost/benefit should be avoided.

Consider Pooling and Assembling of Brownfield Properties to Solve Remediation Scale Issues

As noted in previous sections, one major factor affecting viability is land area and its environmental character. The study found that issues concerning this factor for Brownfield properties can potentially be addressed via the same principals used in assembling traditional real estate investment trusts, loan facilities, or bond packages. That is, properties assigned a higher risk due to environmental or other impairments blended are into a pool containing lower risk assets.

In addition, many Brownfield sites by themselves can be too small to support ideal freight-related and/or warehousing use or, for example insufficient congestion-reduction benefits. Assemblages of properties can also address this need, at the same time lowering the incremental risk of an impaired asset. As noted in the community planning section, this approach can also be used to create mixed-use developments addressing profitability, cash flow goals of the investment, as well as community interest and quality of life objectives. That is, the risk of contaminated land is mitigated not only by the pooling with lesser risks but by the sometimes significantly greater value of those portions of the portfolio assigned to non-industrial uses. This type of approach then also creates the potential opportunity to add greater open space provisions, natural area improvements or extensions, and other quality of life amendments. Future work should explore Federal, State and local mechanisms and partnerships to assist such efforts, including land-banking programs.

Consider tiered financial risk management in the financial planning

The study also found that the assessment of the environmental remedy and cost estimates can be combined with a financial program that integrates a schedule for phases of risk reduction associated with phases of remediation completion and future site disposition strategies. As the properties risks are reduced by completion of phases of remediation or other improvements, they become more valuable and have greater flexibility with respect to equity/debt terms and types of

participating entities. It was observed that site owners can often look no further than the sale or lease of their Brownfield property, and in doing so, can often:

- Fail to complete a transaction;
- Fail to realize their investment goals;
- Significantly delay transaction completion;
- Fail to complete successfully against other properties; and
- Create an incentive for undesirable site use (e.g., inappropriately located container storage)

However, if this and other financial risk management approaches are is considered in the planning phase, then the potential to overcome the first phase activities, and highest risk/return barrier, can be significantly increased. That is, the certainty of having a number of participants predetermined across multiple phases of the anticipated project life increases the likelihood of total project success.

This can be ideal for single or multiple environmentally impaired assets. Many transactions have failed or come close to failure due to failure to consider all the options to get the money or term the seller needed. Significant owner advantages could be realized by use the traditional approach of accessing certain types of risk capital at certain times, then using a portion of the money to reduce risk, and make the development available to the next tier of equity players and debt providers.

The approach can also incorporate another development approach where options to liquidate holdings at pre-determined schedules are included, or sale-leaseback and securitization through the cash flow stream of the lease is added to address the needs of equity or debt partners.

As noted, this approach can be set up in advance in the planning process and analyzed in the pro formas, integrated with the environmental work, and other risk management activities. Future work should investigate how to get the knowledge of such approaches and to public and private participants in the freight-related Brownfield redevelopment effort, and customize it to the special needs of the marketplace and participants.

Support Development and Implementation of Funding and Insurance for OM&M "long tail" remediation risks

The study indicated that the uncertainties associated with the long-term management of environmental risks from the State and Federal regulatory perspective can pose significant barriers to a Brownfield project's success. While the advent of risk-based corrective actions has facilitated the remediation efforts in the country, regulators still bear considerable risk in connection with the final determination of remediation finality.

For example, there is no clear definition of how clean is clean or when monitoring of remedies will be definitively ended. This situation is likely to continue for the foreseeable future. The ability of regulators to enforce remedies and monitoring programs over the long-term is also uncertain, given incentives to cut environmental regulatory staff and the remaining staff's need to focus on more active priority sites.. In addition, solutions to address potential failure of institutional controls such as deed restrictions are also not consistently defined. As a result, true finality is absent from the majority of all but the most conservative environmental remedial solutions.

These conservative solutions are inevitably more expensive in terms of remediation and project financing. This leads to only the most ideally positioned Brownfields being developed, or significant delays in less than ideal locations. This can leave a substantial number of sites with low probabilities for eventual redevelopment.

Insurance programs exist that can address to a certain degree the private party risks concerning

the above. However, the observation was made that there are few if any vehicles that can consistently provide risk protection concerning this aspect of the public/private arena.

Conceptual test models for financial trust fund-based solutions have been proposed and tested in several states that seek to address this problem (e.g. the Guardian Trust ™). The study indicated that additional effort should be made to assess such vehicles, track their pending implementation in other states, and focus on ways to assist their implementation in freight-related Brownfield redevelopment. The possibility of instituting such trusts for a targeted portfolio of sites located in portions of the study area identified as having critical transportation needs might also be considered.

There is a Significant Need to Provide access to expertise and experience to Municipal and Other Parties

In all cases, public/private centers of excellence where the skills and resources would exist to assist parties in Brownfield transactions should be established such that these possible approaches can be used to the benefit of the region. Integration with existing state and federal organizations will be critical to the success of such efforts.