

INNOVATIVE FINANCING FOR GREAT LAKES ENVIRONMENTAL RESTORATION

*CONCEPTS FOR TYING WATERFRONT DEVELOPMENT TO ENVIRONMENTAL RESTORATION AND
FUNDING THE NON-FEDERAL MATCH FOR GREAT LAKES LEGACY PROJECTS*

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Creative Financing for Great Lakes Environmental Restoration

I. EXECUTIVE SUMMARY

There are 43 “Areas of Concern” (AOC) in the Great Lakes region, of which 31 are in U.S. territory. AOCs are areas characterized by contaminated water bodies and contaminated sediments that constitute “impairments to any one of 14 beneficial uses (e.g., restrictions on fish and wildlife consumption, dredging activities, or drinking water consumption) associated with these areas.”¹ Many organizations regard the current pace of AOC cleanup as too slow and the funding commitments as insufficient relative to the mutually agreed upon goals of cleaning up the Great Lakes by the year 2020. Compounding the funding problem, the Great Lakes Legacy Program, which is the primary federal funding source for AOC cleanup activities,) requires a 35 percent non-federal match, and some potential projects are languishing due to inability to cover non-federal share.

Given that foreseeable governmental and private funding of AOC cleanups is falling short, Northeast-Midwest Institute (NEMW) proposed to carry out a project that would examine “new financing products that restore the Great Lakes ecosystem,” paying particular attention to “tax increment financing and the development of a Great Lakes Bond for the cleaning of contaminated sediments...”

The principal findings are summarized below. A common theme is that neither of the two original focal points for the study – tax increment financing and the Great Lakes Bond – holds enough potential to make those concepts centerpieces of a Great Lakes environmental restoration strategy. Instead, the study offers a range of new strategies that need to be considered in the context of individual projects and individual state and local programs.

Land-Side Development and Sediment Cleanup:

1. ***Waterfront development should complement ecosystems restoration.*** There is vast potential to take better advantage of the trend toward waterfront development and also use it as a mechanism to make gains for environmental and water quality objectives.

Local mechanisms - Tax Increment Financing and Special Assessment Districts:

2. ***Tax increment financing (TIF) can and does work for land-side environmental restoration.*** NEMW found numerous examples of TIF being used as a funding source for land-side environmental improvements that are complementary to development projects. A variety of projects reported using TIF for wetlands restoration, stream naturalization, parks and trails, habitat reclamation, and “daylighting” a river.
3. ***For sediment cleanup, TIF is feasible and can be part of a menu of options; however, the prerequisites and conditions for a successful match of TIF and sediment cleanup are insufficiently common to justify building a strategy around the TIF-sediment connection.*** Using TIF for sediment cleanup, in contrast to land-side environmental enhancements, presents particular impediments and hurdles: there are legal complexities that may constitute

¹ See: <http://epa.gov/greatlakes/aoc/index.html>

substantial hurdles; the funding needs are several orders of magnitude higher; sediment problems are less visible; sediment contamination is geographically dispersed, often crossing jurisdictional boundaries and having little direct relationship to any one project or set of projects; many rivers have been cleaned up to the point that the stigma no longer significantly affects land value; and cash-strapped localities tend to view sediment cleanup as the responsibility of higher levels government.

4. ***There are potential legal barriers to using TIF for sediment cleanup and changes to state enabling legislation may be necessary.*** If later efforts produce a project where TIF can be used for sediment cleanup, legal advisers to the project should review TIF enabling legislation in that state and evaluate whether the project can be allowed or whether changes to enabling legislation will be necessary. An alternative approach would be proactive changes to TIF enabling legislation in each of the Great Lakes states.
5. ***Special assessment districts and property tax surcharges, in addition to TIF, represent ways that localities could tie waterfront development to sediment cleanup projects, but states may need to provide BOTH relevant enabling legislation AND an incentive (a state match) for localities to participate.*** In Milwaukee, the Kinnickinnic River cleanup has benefited from a contribution from a special assessment district, demonstrating the principle that adjacent property owners may be willing to tax themselves in order to river cleanup jump-started.

State and Multi-State Strategies - Bond Issues and Dedicated Revenue Sources

6. ***There is potential, albeit very little precedent, for establishing a regional multi-state authority that would have bonding capacity to support Great Lakes environmental restoration.*** The benefits of such an organization could be extensive and far-reaching; however, the impediments – chiefly, identifying a reliable multi-state revenue stream – are considerable and would require a concerted high level effort.
7. ***States considering environmental bond commitments may want to consider new revenue sources that can create a dedicated revenue stream by tying development patterns to funding for environmental restoration.*** Two options that hold some promise are an impervious surface tax, and a waterfront development surcharge on transfer taxes.
8. ***Great Lakes environmental advocates should make it a priority to establish sediment cleanup as an eligible activity under any new state environmental bond issues that are being considered by individual states.***
9. ***Non-point source Clean Water State Revolving Funds (CWSRF) funds can potentially be used for sediment cleanup and other water quality-oriented environmental restoration projects.*** CWSRF funds can be paired with tax increment financing or special assessment districts producing financing at favorable (subsidized) interest rates.

Other Mechanisms to Cover the Non-Federal Match For Legacy Projects:

10. ***Insurance archeology represents a largely untapped option for boosting the non-federal share of Legacy projects.*** Funding for a test of the feasibility of using insurance archeology is recommended.

- 11. Supplemental Environmental Projects (SEPs) represent another potential mechanism to fund sediment cleanup and environmental restoration.*
- 12. Port authorities and water and sewer authorities represent alternative conduits to the bond market, and, in some instances, potential sources of credit enhancement or direct funding of sediment cleanup.*

Combining Resources and Getting Deals Done:

- 13. Creative financing solutions should be tailored to individual project circumstances.* The study concludes that no single strategy is likely to work in all, or even most, cases. Recommendations encompass an expanded toolbox of potential financing sources: tax increment financing, special assessment districts, insurance archeology, CWSRF loans, and new bond issues that might be derived from new funding sources, such as an impervious surface tax or a surcharge on transfer taxes in waterfront zones. Then, as waterfront development is taking shape in individual communities, state and local officials should come together with financing experts to explore ways to incorporate sediment cleanup into the redevelopment plan.

II. BACKGROUND

There are 43 “Areas of Concern” (AOC) in the Great Lakes region. AOCs are areas characterized by contaminated water bodies and contaminated sediments that constitute “impairments to any one of 14 beneficial uses (e.g., restrictions on fish and wildlife consumption, dredging activities, or drinking water consumption) associated with these areas.”² The Great Lakes Policy Committee projected that cleanup of AOC contaminated sediments would cost between \$1.5 and \$4.5 billion.³

Many organizations regard the current pace of AOC cleanup as too slow and the funding commitments as insufficient relative to the mutually agreed upon goals of cleaning up the Great Lakes by the year 2020. Compounding the funding problem, the Great Lakes Legacy Program, which is the primary federal funding source for AOC cleanup activities, requires a 35 percent non-federal match, and some potential projects are languishing due to inability to cover non-federal share.

In a 2006 report, researchers from the Brookings Institution estimated that the economic value of eliminating all AOC contaminated sediments is \$12 to \$19 billion. The authors also estimated that the full economic impact of comprehensive Great Lakes ecosystems restoration is between \$29 and \$42 billion.⁴

Given the magnitude of the potential benefits, as well as current shortfall in funding levels, the Northeast-Midwest Institute proposed to carry out a project that would examine “new financing products that restore the Great Lakes ecosystem,” paying particular attention to “tax increment financing and the development of a Great Lakes Bond for the cleaning of contaminated sediments...”

Tax increment financing (TIF) was selected for particular attention largely because of a body of research which indicates that poor water quality, as indicated by AOC status, is associated with lower property values in neighborhoods up to five miles from the AOC. Hedonic pricing models have generally indicated that the AOC depresses nearby housing values by between 3 and 14 percent.⁵

III. LAND-SIDE DEVELOPMENT AND SEDIMENT CLEANUP

Trend Toward Waterfront Development

Waterfront development and redevelopment for mixed use and “new urbanist” communities is currently a dominant part of the real estate marketplace and will likely continue to grow. Demographic trends, economic shifts away from traditional industry, and energy demands and issues are all converging to create demand for waterfront living in new or redeveloped walkable communities.⁶ This trend seemingly creates an opportunity to link environmental restoration to land-side development, but the question is: what is the right mechanism to create this tie-in?

² <http://epa.gov/greatlakes/aoc/index.html>

³ Cited in Great Lakes Regional Collaborative, 2006

⁴ Litan et al, 2007

⁵ Braden et al, 2003 and 2006

⁶ Urban Land Institute and Price-Waterhouse-Coopers, 2007; and Anderson, 2008

Examples of Sediment Cleanup Being Linked to Land-Side Development

Looking at past examples of projects where this tie-in has been achieved, the mechanisms and motivations of the principal parties varied and fell into four general categories.

Regulatory compliance

A number of cases where sediment cleanup has been linked to land-side development involve Superfund or other regulatory compliance as the primary motivating factor. Such cases include:

1. ASARCO plant redevelopment in Tacoma, Washington – A proposed redevelopment of the vacant Superfund site was held up by regulators and linked to ASARCO's \$28 million commitment to sediment cleanup.⁷
2. Hilton Hotel, San Diego, California – Waterfront hotel development was linked to a \$30 million commitment to sediment cleanup.⁸ The deal was brokered by the Port Authority of San Diego. The 1,000 room convention hotel was held up pending agreement with regulators and the result was 30,000 cubic yards of contaminated sediment were dredged and nine acres of streambed was capped.
3. GE site on the Housatonic River - A 1998 consent decree committed GE to a \$70 million cleanup of the land and the contaminated water body. The agreement avoided a Superfund National Priority List designation and allowed GE and the City of Pittsfield to market the 250-acre site for redevelopment.⁹

Integration of sediment cleanup with community plans

There are at least two examples where regulators came together with local environmental, port, and development interests to create a plan that integrates sediment cleanup with economic development and environmental restoration: These were both accomplished under NOAA's Portfields Initiative.

- o New Bedford, Massachusetts -- The New Bedford port was designated one of NOAA's three national portfield pilot projects. A major aspect of the New Bedford portfield designation centers on the harbor's 1982 listing as a Superfund CERCLA site by the EPA. Sediments in the harbor are laced with metals, organic compounds, and high concentrations of polychlorinated biphenyls (PCBs). Along with many improvements to waterfront properties by local authorities, the EPA has begun the removal of the contaminated sediments. The highest priority contaminated hotspots -- 15 acres -- have been removed in the immediate port waters, and a remaining 240 acres of sediments in adjacent commercial and residential properties are slated for remediation over the next few years. The activities have made the port one of the Eastern seaboard's most viable harbors and translated into a huge economic boost for the region.¹⁰
- o Bellingham, Washington – A similar portfields process was the key to achieving a community consensus that integrated sediment cleanup into a larger port and community plan.¹¹

⁷ See: http://www.usdoj.gov/opa/pr/2006/July/06_enrd_470.html

⁸ See: http://www.signonsandiego.com/news/metro/20030811-9999_1m11clean.html

⁹ Northeast-Midwest Institute, 2001

¹⁰ See: <http://www.ci.new-bedford.ma.us/portofnewbedford.htm>; and http://www.brownfields.noaa.gov/htmls/portfields/pilot_newbed.html

¹¹ See: <http://www.ogc.doc.gov/ogc/legreg/testimon/107f/kennedy0719.htm>

Economic necessity/dredging for harbor depth

When harbors need to be dredged to maintain channels and water depths, the dredging projects often involve cleanup of contaminated sediments. The Waukegon Harbor in Illinois was dredged and simultaneously cleaned up in the early 1990s. There are many other examples.

“Voluntary” cleanup of sediments

It is “voluntary” sediment cleanup projects that are of the greatest interest here – cleanups that are motivated by the need to address stigma, improve environmental conditions, and encourage redevelopment. The NEMW project is largely focused on ways to encourage sediment cleanup/environmental restoration that is unlikely to occur in the absence of the stronger motivations of regulatory compliance and economic necessity. NEMW has not been able to find a large number of examples, but a few illustrate the point:

1. Pfizer Global Research and Development, New London - When Pfizer chose to build a new global research and development facility in New London, the company was confronted with an adjacent waterway – Bentley Creek – that was heavily polluted from more than a century of industrial waste. The company agreed to restore Bentley Creek as part of its agreement for construction. The property needed a zoning change, and local officials linked sediment cleanup to the zoning change. Working with local, state, and federal officials, Pfizer removed 1,800 tons of contaminated sediment, removed contaminated soil and derelict boats, constructed a new deep channel for better fish habitat, and shaped the final marsh surface to maximize the growth of smooth cordgrass.. Although the restored creek area is only about two acres, the impact on the local community has been enormously positive.¹² Pfizer brought almost 4,000 new jobs to New London.
2. Mystic Valley, Massachusetts/Telecomm City – An ambitious plan to redevelop a 207-acre brownfields site was linked to cleanup of sediment in the adjacent Malden River in order to address the stigma of the contaminated water body.

Conclusion – Land-side Development and Sediment Cleanup

Waterfront development complements ecosystems restoration. The basic underlying assumption of this project is sound: there is vast potential to take better advantage of the trend toward waterfront development and also use it as a mechanism to make gains for environmental and water quality objectives.

IV. LOCAL TOOLS - TAX INCREMENT FINANCING AND SPECIAL ASSESSMENT DISTRICTS

There are synergies between water quality improvements and waterfront development, and conceptually, there should be a mechanism to capture revenues from the development to help expedite water quality projects. The primary mechanisms examined below are tax increment financing and special assessment districts.

Tax Increment Financing – Legal Basis and Relationship to Environmental Projects

¹² Phoenix Award application for Pfizer.

The basic principle behind TIF financing is that in order to pay for upfront costs - usually infrastructure - the locality freezes the taxes at a site's pre-development levels and then uses the expected post-development increases in taxes as a revenue stream to finance a bond or loan, which then pays for the upfront (infrastructure) costs. While there are many exceptions, some of which are discussed below, the usual TIF approach involves going to the private bond market to convert the incremental revenue stream into upfront cash for the project.

There are, however, numerous variations on the theme. At one end of the spectrum are cities and states that use TIF only for private development gap financing, and the TIF district is small and well-defined, often coinciding with the project that will be financed. At the other end of the spectrum are communities that designate large areas of the city, or even the entire city, and then use the TIF revenue much like general obligation bonds in order to fund capital projects. The City of San Jose, California, designated a significant portion of Silicon Valley as a TIF district in the 1980s. The district produced revenues beyond anyone's expectations, and the city was able to finance a new arena and a children's museum from the TIF district.

State TIF-enabling legislation varies rather widely on numerous points, and several of these variations could affect whether or not TIF can be used for sediment cleanup. NEMW contracted with the legal firm of Bell, Boyd, and Lloyd to review each of the Great Lakes states' TIF enabling legislation in relation to potential obstacles. Their findings outline the potential legal obstacles:

- First, several states (including New York and Pennsylvania) limit the use of TIF to projects that address blight, and interpretation may be required in order to determine whether sediment contamination would qualify as blight. The definition of blight tends to refer to dilapidated buildings and abandoned real property.
- Second, some states (Ohio and Pennsylvania) limit the use of TIF proceeds to public infrastructure, and interpretation may be required in order to determine whether sediment cleanup meets the definition of infrastructure.
- Third, some states further limit TIF projects by requiring a geographic proximity and relationship between the proposed project and the TIF district. This is a potential problem area if, for example, the sediment cleanup area is much more diffuse or the redevelopment area is separated from the sediment cleanup area. Pennsylvania and Minnesota require that the TIF district encompass any areas where TIF dollars are to be spent.
- Fourth, there is also a variation among the states on the issue of whether or not the tax increment revenue includes school district taxes. New York is one state that prohibits school revenue from use in TIF; consequently, TIF is much more difficult in New York for *any* TIF project, not just for sediment cleanup. Michigan also limits school tax inclusion from TIFs.
- Fifth, most states have adopted a purpose statement that cites economic and community development objectives as the rationale for TIF. There may be a gray area in applying these purpose statements to sediment cleanup.
- Sixth, several states (Minnesota, Wisconsin, Ohio, and Pennsylvania) have size limitations for TIF districts which may conflict with the concept of a large waterfront district corresponding to a diffuse sediment contamination zone.
- Seventh the legal and ownership status of submerged lands varies from state to state and may affect how sediment cleanup can be incorporated into the TIF.
- Eighth, Michigan has placed strict limits on the creation of new TIF districts. This would mean that using TIF for sediment cleanup would have to involve either an existing TIF district or another authority, such as, Michigan's Brownfields Redevelopment Authorities.

Bell-Boyd's conclusion was that, although there were numerous points where positive interpretation would be required, there were no legal obstacles that were direct conflicts or were deemed insurmountable, at least in the abstract.

Bell, Boyd also suggested that, if TIF becomes a preferred strategy for sediment cleanup in a given state, or even for an individual project, that state's TIF enabling legislation will need to be reviewed in relation to the above points and changes should be considered to reflect the sediment cleanup objective. Bell-Boyd's report discusses the specific elements of each state's TIF laws that are potentially problematic.

Water Quality Projects that Lead to Land-Side Value

NEMW has worked with the University of Illinois at Urbana-Champaign on hedonic pricing models to estimate the degree to which contaminated sediments depress property values. These studies, carried out by Professor John Braden, have resulted in findings that property values within one to five miles of an AOC are depressed by between 3 and 14 percent.¹³

Anecdotally, White Lake, Michigan, is a real-world example where sediment cleanup has led to vast increases in land-side property values and tax revenues. Although the cleanup there was accomplished through enforcement action against private parties, local officials attribute significant new development and a general rise in property values to the lake cleanup.

These studies and examples reinforce the case for TIF application to the sediment cleanup problem.

Precedents – Application of TIF Authority for Environmental Benefit

Examples of programs that use TIF for environmental benefit

NEMW found at least five TIF programs or proposed programs where TIF was a mechanism to achieve environmental objectives:

1. In 2008 Michigan adopted special legislation to allow the use of TIF for inland lakes. Communities may use TIF funds to implement "water resource improvements." Dredging and cleanup of contaminated sediments are not mentioned in the bill.¹⁴
2. Michigan's Brownfield Redevelopment Authorities (BRAs) capture TIF revenues to finance land-side environmental cleanup.¹⁵ At least one BRA project also proposed to use TIF revenues for dredging in order to deepen a waterway for commercial port-related uses.
3. In Portland, Maine, a port/waterfront TIF has been used for dredging and combined sewer overflow (CSO) projects, as well as for more traditional economic development activities.¹⁶
4. In Tampa, Florida, the East Tampa Community Development District uses a regional TIF to finance stormwater compliance projects.

¹³ Braden, 2003 and 2006

¹⁴ SB 47, 2007, see:

[http://www.legislature.mi.gov/\(S\(x5bvua45c4lmsx45nfhdtkut\)\)/mileg.aspx?page=getObject&objectName=2007-SB-0047](http://www.legislature.mi.gov/(S(x5bvua45c4lmsx45nfhdtkut))/mileg.aspx?page=getObject&objectName=2007-SB-0047)

¹⁵ See: http://www.michigan.gov/deq/0,1607,7-135-3311_4110_23246---,00.html

¹⁶ See: http://www.portofportland.com/T4_EA_Home.aspx

5. In Florida, special legislation established TIF for land conservation in instances where more than one political jurisdiction was willing to dedicate tax increments for acquisition of land for conservation.¹⁷

Examples of projects that use TIF for environmental benefit

There are, additionally, many project-specific examples where TIF has been used to finance an environmental improvement related to a development plan:

1. Two parks in South Carolina - In Beaufort, the city had to completely rehabilitate a large waterfront park. The park was confronted with deteriorated drainage and sewer systems, and severe erosion from tidal inflow. In order to stop water pollution sources and overhaul the park, the city financed approximately \$2.1 million through revenue bonds and tax increment financing, providing about one-quarter of the project costs. The park's facelift accentuates how esthetic improvements can boost tax revenues and make bond repayment through TIF a reality.

Very similarly to Beaufort, the city of Clemson had a waterfront park that became so choked with silt and uncontaminated sediment that the majority of a large bay was unusable for recreation. Using bond financing repayable with tax increment financing, the city dredged the bay to depths adequate for recreational boating and sustaining fish. Today, boating, swimming, and fishing are strong attractions at the waterfront park, and new residential properties dot the shoreline.

2. Consumers Union, Jackson, Michigan - One of the most interesting and applicable sites was the Consumers Union project in Jackson, Michigan. TIF was the primary mechanism for achieving a variety of site improvements, including a stream naturalization project. Quoting from the Phoenix Award application:¹⁸

“Not only has a distressed part of the City been revitalized, but the influx of downtown visitors to the site and new businesses has resulted in improvements in the public's sense of safety and security in the downtown area, particularly at night. The uncapping and naturalization of the Grand River has restored a visual and functional asset, long considered an unattractive hazard by citizens. The associated riverfront development has contributed to the restoration of a vital ecological feature and preservation and utilization of greenspaces and riparian buffers. It also has stimulated public awareness that the river is an important recreation and development asset for the City and that environmentally conscious riverfront development can become a reality. The Grand River Trail runs adjacent to the Consumers [Union] headquarters, and is part of a public arts and culture promenade, complete with an outdoor amphitheater and sculpture plazas, linking to an artists-in-residence district currently under development.”

3. Yonkers – A proposed \$500 million project is using \$35 million of a \$160 million TIF for daylighting the river.¹⁹

¹⁷ Florida CS/CS/SB 2134, 2007

¹⁸ Document provided to NEMW by Consumers Union.

¹⁹ See: <http://www.sfcyonkers.com/>

4. Kalamazoo, Michigan – a \$7.5 million TIF financed the daylighting of Arcadia Creek, a key piece in a downtown redevelopment plan.²⁰
5. East Moline, Illinois – For the mixed use “The Quarter” project, a 100-acre riverfront brownfields project, East Moline devoted a significant portion of a \$15 million TIF to a new bike and jogging path, new infrastructure with river access, and restoration of wildlife and ecological habitat areas.²¹
6. Everett, Washington – A \$12 million TIF is being used to preserve about 40 percent of a 220-acre riverfront development site. The TIF supports the city’s commitments to developer Oliver McMillan for infrastructure and environmental enhancements, including restored wetlands and habitat areas, trails, and parks.²²
7. Baltimore/Clipper Mill – TIF revenues from the \$75 million mixed use project were devoted to constructing the north central trail through the site.²³
8. University North Park, Norman, Oklahoma – A TIF allocated \$8 million of a \$54 million TIF to the development of a park.

NEMW concludes that TIF is being routinely used as a funding source for land-side environmental restoration aspects of development projects; there is no need for the current NEMW project to “demonstrate” the principle of using TIF for land-side environmental restoration. However, using TIF for sediment remediation is a far more rare occurrence, reflecting the greater cost and complexity of sediment remediation projects. NEMW therefore concentrated its efforts on researching TIF for sediment cleanup.

Concept Models for TIF and Great Lakes Sediment Cleanup

Turning to sediment cleanup, NEMW conceptualized that there are at least two models for establishing a tie-in between TIF and sediment cleanup.

Project-specific TIF

A hypothetical TIF would earmark some portion of incremental revenues for sediment cleanup, much like several of the projects in the previous discussion earmarked funds for a park improvement. One scenario might be:

- \$100 million project.
- Generates \$1.4 million in annual increments.
- If 15 percent of the increment were diverted for 20 years, it would generate \$4.2 million, which is assumed to represent approximately \$3.3 million in upfront cash through a bond mechanism.
- If matched by the state, the total non-federal amount would be \$6.6 million.

²⁰ Pinkham, 2000

²¹ Koch, 2004.

²² Sources: <http://www.heraldnet.com/article/20070924/NEWS01/709240022/0/column07>, and <http://www.ci.everett.wa.us/CityNews.aspx?ID=1&nID=613>

²³ Telephone conversation with Tim Pula, Struever Brothers Eccles and Rouse

- Plus 65 percent federal - \$12.2 million.
- Total sediment remediation project - \$18.8 million.

Area waterfront plan TIF

Rather than attaching a TIF to a specific project, a jurisdiction that is anticipating a slowly redeveloping waterfront could designate a waterfront TIF district and earmark a percentage of the tax increment to sediment cleanup/ecosystems restoration. The numbers might be the same as above, but the earmarked revenues would be less predictable at least for several years. In this case, the TIF revenues would probably not be used to leverage a bond because the revenues may be too unpredictable. Rather, the revenues would accumulate and be used within a “pay-go” TIF structure.

Under either scenario, TIF for sediment cleanup/environmental restoration appears to be feasible because a sizable funding source can be generated while using only a small portion of the projected revenue increment.

Prerequisites for Successful Match of TIF and Sediment Cleanup

While, conceptually, there appears to be a strong potential to use TIF for sediment cleanup, there are particular circumstances and prerequisites for a successful project. In the previous discussion, NEMW recognized several circumstances that create a strong motivation to address sediments concurrently with land-side development. The strongest motivators are regulatory compliance (Superfund) and economic necessity (dredging for shipping depths). However, the current project is more focused on situations where the cleanup activities are voluntary for the locality and the private entities. This is the point at which finding the right circumstances becomes difficult. The prerequisites are:

1. There must be a significant waterfront development project or projects moving toward implementation, and the development is projected to generate a sizable tax increment;
2. There must be reasonable correspondence between the proposed TIF district and the geography of the sediment project;
3. The water quality issues are a hindrance to this new investment by virtue of regulation or stigma;
4. The tax increment is not needed to make the development feasible; and
5. The jurisdiction is politically willing to divert a portion of the projected revenues to the environmental project.

If the proposed project passes those prerequisites, it must then also be tested for legal and financial feasibility. Legal feasibility, as noted above, can be problematic.

AOC Communities Case Study Analysis Fell Short

In the Great Lakes AOC areas, despite extensive outreach, NEMW was unable to find an AOC community that met all the prerequisites and would be willing to engage in a process to determine the financial and legal feasibility of a project that would tie together TIF and sediment cleanup. The primary reasons were:

1. Many AOC communities are not projecting sufficient development to generate a significant tax increment.
2. Many AOC communities are in severe fiscal distress and express great reluctance to divert projected local revenue away from provision of basic services.

3. The diffuse nature of sediment contamination means that it rarely matches up with the boundaries of specific projects or specific political jurisdictions.
4. Many AOC communities do not see cleanup of sediment as their responsibility. Sediment contamination usually crosses jurisdictional lines and is assumed to have a higher price tag than localities can afford. To date, no Legacy project has involved local government funding.
5. Many AOC communities are skeptical of the purported property value benefits of sediment cleanup. Ironically, the progress that has been made in cleaning up these water bodies has led to diminished stigma. Conventional wisdom is that property values are depressed only when a stigma has been raised by startling evidence of contamination, such as the Cuyahoga River catching on fire.

Special Assessment Districts and Property Tax Surcharges

Tax overlay districts, or special assessment districts, are usually used to generate operating costs for a specific purpose. Duluth, Baltimore, and other communities have tax overlay districts for their waterfront areas to finance the operating costs of keeping the areas clean and safe.

Special assessment districts are also used to finance lake dredging and other lake maintenance and capital improvement projects. Michigan has adopted laws and regulations governing inland lake special assessment districts.²⁴ A number of special assessment districts have been adopted, including: Upper Long Lake Estates and Mallard Court Canals,²⁵ and Townsend Lake.

If sufficiently sized, a tax overlay district can also be designed to provide revenues for a bond, or can be pledged as a credit enhancement for bonds that are based on other revenues. Michigan's special assessment district enabling legislation does allow for the revenues to be used to support bond debt. Additionally, tax overlay districts are often used as a guarantee for TIF bonds.

Milwaukee - Kinnickinnic River.

Property owners adjoining the Kinnickinnic River AOC are using a special assessment district to raise \$250,000 of non-federal match for \$22 million sediment cleanup project. The special assessment district revenues are being pledged as a revenue source for a loan from the City of Milwaukee. The funds are paying for dredging and seawall protection. The property owners were motivated by several factors: the need to reduce stigma; the need to dredge to increase water depth in order to accommodate marinas that are part of several landside development plans; and the need to protect and shore up the seawall in light of the dredging project.

A variation on this strategy is a state-mandated property tax surcharge, such as that adopted by Florida to support the Everglades restoration.

Florida Everglades

One potential model is the property tax surcharges that provide a dedicated revenue stream for the Everglades restoration. NEMW has examined the South Florida Water Management District, which funds the Everglades restoration, as a potential model for a state-imposed special assessment district to fund a multi-jurisdiction environmental problem. Among other financing mechanisms, the District

²⁴ See: <http://www.bloomfieldtp.org/Services/EES/Environment/LakeBoards/InlandWaters.pdf>

²⁵ See: <http://www.bloomfieldtp.org/Services/EES/Environment/LakeBoards/UpperLongLakeCanalDredging.pdf>

is funded through a state-imposed property tax surcharge effective in all contiguous counties in the amount of 62.4 cents per thousand dollars of value. This mechanism has raised significant funds: the proposed 2009 budget includes \$525 million from this tax.²⁶ It is the authors' understanding that the property tax surcharge is state-mandated, not a local opt-in. The ad valorem tax surcharge is also used to leverage bond funds.²⁷

While the Everglades approach has been successful, the presumption for this project is that a state-mandated property tax surcharge is politically infeasible in the Great Lakes states and that local opt-in would be required.

In order to make tax overlay districts a regional multi-state strategy, each state would have to commit to proposing enabling legislation that would allow the tax overlay/property tax surcharge districts for sediment cleanup. The Michigan legislation for special assessment districts for inland lakes may serve as a model. In order to provide an incentive for localities to adopt the overlay districts, the states should commit to matching local funds raised for sediment cleanup projects. Attention would need to be paid to the multi-jurisdictional nature of the AOCs; the enabling legislation would need to encourage multi-jurisdictional approaches.

The potential for using tax increment financing was discussed above with the conclusion that it would be useful for sediment cleanup in limited circumstances. However, if TIF mechanisms were also added to the above recommendation, that would give localities a menu of options for raising a local share in anticipation of a state match and a 65 percent federal contribution for a Legacy project.

Since NEMW found local resistance to using TIF for sediment cleanup, advocates for the use of tax overlay zones should anticipate similar resistance and should undertake an intense public awareness campaign to support the effort.

Conclusions – Local Tools - TIF and Special Assessment Districts

Tax increment financing (TIF) can and does work for land-side environmental restoration.

NEMW found numerous examples of TIF being used as a funding source for land-side environmental improvements that are complementary to development projects. A variety of projects reported using TIF for wetlands restoration, stream naturalization, parks and trails, habitat reclamation, and “daylighting” a river.

For sediment cleanup, TIF is feasible and can be part of a menu of options; however, the prerequisites and conditions for a successful match of TIF and sediment cleanup are insufficiently common to justify building a strategy around the TIF-sediment connection. Using TIF for sediment cleanup, in contrast to land-side environmental enhancements, presents particular impediments and hurdles: there are legal complexities that may constitute substantial hurdles; the funding needs are several orders of magnitude higher; sediment problems are less visible; sediment contamination is geographically dispersed, often crossing jurisdictional boundaries and having little

²⁶ See:

https://my.sfwmd.gov/pls/portal/docs/PAGE/PG_GRP_SFWMD_ABOUTSFWMD/PORLET_BUDGETSTRATPLAN/TAB2234118/BUD_BRIEF_2009.PDF

²⁷ See: http://www.tampachamber.com/ci_viewnews.asp?id=1098

direct relationship to any one project or set of projects; many rivers have been cleaned up to the point that the stigma no longer significantly affects land value; and cash-strapped localities tend to view sediment cleanup as the responsibility of higher levels government.

There are potential legal barriers to using TIF for sediment cleanup and changes to state enabling legislation may be necessary. If later efforts produce a project where TIF can be used for sediment cleanup, legal advisers to the project should review TIF enabling legislation in that state and evaluate whether the project can be allowed or whether changes to enabling legislation will be necessary. An alternative approach would be proactive changes to TIF enabling legislation in each of the Great Lakes states.

Special assessment districts and property tax surcharges, in addition to TIF, represent ways that localities could tie waterfront development to sediment cleanup projects, but states may need to provide BOTH relevant enabling legislation AND an incentive (a state match) for localities to participate. In Milwaukee, the Kinnickinnic River cleanup has benefited from a contribution from a special assessment district, demonstrating the principle that adjacent property owners may be willing to tax themselves in order to river cleanup jump-started.

V. STATE AND MULTI-STATE STRATEGIES - BOND ISSUES AND DEDICATED REVENUE SOURCES

With TIF determined to be a limited solution, especially for sediment cleanup, NEMW examined a series of other methods of raising dedicated revenues and using bond mechanisms, each from the perspective of capitalizing on the trend toward waterfront development. First, NEMW examined other local government mechanisms to raise dedicated funds – tax overlay zones, or special assessment districts, and property tax surcharge mechanisms.

Second, NEMW was tasked with conceptualizing a Great Lakes Bond that would be a funding source for Great Lakes sediment cleanup and environmental restoration. To address this task, NEMW:

- Examined current and past state environmental bond issues with particular reference to dedicated funding sources;
- Considered options and precedents for the governing body of a multi-state bonding authority; and
- Considered future state bond issues and dedicated revenue sources.

State Environmental Bond Issues

NEMW has tracked and summarized the major state bond issues that have financed a variety of environmental projects, sometimes including sediment cleanup. (Our report, “Financing the Cleanup Warchest...” will be available in the NEMW website.) See Table 1 for a summary of the uses of funds for these bond issues. Clean Michigan²⁸ and the recent Wisconsin Contaminated Sediment

²⁸ Clean Michigan - Legacy projects that have received Clean Michigan Funding include: [Black Lagoon](#); [Ruddiman Creek](#); and [Tannery Bay](#)

Removal Bonding²⁹ are the only state bond programs that actually reserved dollars for sediment cleanup and proved to be a useful source in providing non-federal match. Most of the other bond funds, however, do fund stream restoration and wetlands restoration type activities.

A \$400 million renewal of the Clean Ohio bond issue was renewed by voter approval in the November, 2008, election.

Some of these bond issues are reaching the end of their spending limits. Michigan DEQ has proposed a new \$1.3 billion bond that includes \$390 million that would go toward “water protection and restoration, including programs to combat aquatic invasive species, restore habitat, remove contaminated sediment, address toxic pollutants and monitor water quality.” The proposal failed to gain legislative approval in 2008. Discussions are underway in New York relative to renewal of the Clean Air and Clean Water bond issue.

Past bond issues - dedicated revenue sources of state revenues

Of the above bond issues, several (Michigan, Ohio, and New York Clean Air-Clean Water) were general obligation bonds with no dedicated funding source. Others were based solely or partially on dedicated funding sources, including municipal solid waste tipping fees (Pennsylvania), and liquor taxes (Ohio). The New York Environmental Protection Fund is not a bond fund per se, but is noted because of its dedicated sources of revenue: real estate transfer taxes, the Bluebird License Plate program, and bottle bill revenues, which were added in 2008.

Going beyond the Great Lakes states, the project inventoried environmental bond issues and noted dedicated sources of revenue, such as:

- Maryland Chesapeake Bay Restoration - surcharge on municipal sewer bills;
- State of Washington/Centennial Clean Water Program - tobacco tax;
- Arizona Heritage Fund – lottery;
- California Inland Wetlands Conservation Fund – cigarette tax;
- Illinois Natural Areas Acquisition and Management Program – 15% real estate transfer tax .

Everglades Restoration. In Florida, the Everglades restoration effort is funded from a variety of dedicated revenue sources, including:

- An ad valorem property tax surcharge (one-tenth of a mil, generating hundreds of millions annually) in the watershed area (noted above in the “Special Assessment District and Property Tax Surcharge” section);
- Agricultural Privilege Tax, generating \$13 million annually;
- A percentage of documentary stamp revenues, generating \$12.5 million annually;

²⁹ See: [Wisconsin Contaminated Waterway Sediment Program](#) – Funds are being used in the [Kinnickinnic River Cleanup](#)

Table 1. Summary of largest (legislature and voter approved) state environmental bond issues

| | Clean Michigan | Clean Ohio | NY Clean Air-Clean Water | NY Environmental Protection Fund | Pa Grow Greener II | MA Environment Bond | WI Contaminated Sediment Bond |
|--|-----------------------|--|---------------------------------|--|---------------------------------|----------------------------|--------------------------------------|
| <i>Year/amount</i> | 1997/\$675 million | 2000/\$400 million 2008/\$400 million | 1996/\$1.75 billion | 1992 | 2005/\$625 million | 2002/\$707 million | 2007/\$17 million |
| <i>Repayment source</i> | General funds | 2000 - Liquor sales tax 2008 – General obligation | General funds | Real Estate Transfer Tax, Bluebird License Plate program, and (added in 2008) bottle bill revenues | Municipal waste and tipping fee | General funds | General funds |
| <i>Uses of funds:</i> | | | | | | | |
| Brownfields | • | • | • | | • | | |
| Urban waterfront redev't/historic preservation | • | • | • | • | • | • | |
| Watershed protection/rivers and lakes/ | • | • | • | | • | • | |
| Sediment cleanup | • | | | | | | • |
| Land preservation | | | • | • | • | • | |
| Trails and parks | | • | • | • | • | • | |
| Lead paint | • | | | | | • | |
| Habitat and fish hatchery protection | | | | | • | • | |
| Air quality | • | | | | | • | |
| Solid waste | • | | | | | • | |

Florida and the other states cited used dedicated funding sources designed to work within the tax structure and the political landscape of an individual state – they are offered here to raise awareness and suggest possibilities. To state the obvious, what may work in Michigan may be completely infeasible in Ohio; because there is insufficient commonality among the tax structures in the states.

Multi-State Bonding Authority

In addressing a Great Lakes Bond (part of NEMW’s charge for the project), NEMW considered organizational vehicles for a multi-state authority with bonding capacity. The current Great Lakes Commission operates on a multi-state basis but does not have debt or bonding authority.

NEMW and its consultant team examined other regional/multi-state environmental entities, such as the Chesapeake Bay Program, and various river basin commissions. This effort uncovered two multi-state river basin commissions that have bonding authority: the Delaware River Basin Commission and the Susquehanna River Basin Commission. The compacts of both commissions outline that the institutions may “issue bonds of indebtedness in order to raise capital or borrow funds as deemed necessary.” In the forty-plus year history of the commissions, neither has used their bonding authority – both river basin commissions receive funding from appropriations of member state legislatures.

NEMW examined precedents of regional/multi-state bodies that operate for other (non-environmental) purposes and have bonding authority. For example, the Port Authority of New York and New Jersey has bonding authority based on New York’s tunnel and bridge fees, but the use of those fees for infrastructure and economic development is not comparable to the Great Lakes’ need for sediment cleanup funding. The Tennessee Valley Authority finances all of its programs, including those for environmental protection, integrated river management, and economic development, through power sales and the sale of bonds in the financial markets. The Appalachian Regional Commission operates from federal appropriations, not bonding authority.

The conclusion was that there are no currently operating regional entities comparable to the Great Lakes states with reference to funding sediment cleanup and environmental restoration.

Proposed Chesapeake Bay Regional Financing Authority

NEMW reviewed one interesting proposal to create a multi-state authority with bond issuing capacity and an environmental objective: a proposed Chesapeake Bay Regional Financing Authority.³⁰ The Chesapeake Bay Program’s report outlines three options for reliable revenue that can be leveraged on the bond market:

- Fees and taxes. The report indicates that, “There are a host of fees and charges that can be considered under this type of financing structure. For example, the system might employ user fees, interest charges on loans that it issues, surcharges on mortgages, real estate transfer fees, or development impact fees. It might even sell a product or service. A system also could rely on taxes, imposed individually by each jurisdiction or by the regional authority if the power to tax were granted it.”

³⁰ Chesapeake Bay Program, 2005

- Federal appropriations. Appropriations could be leveraged on the bond market much the same way the Clean Water State Revolving Funds work.
- Jurisdictional/member contributions. The report cites the Tahoe Regional Planning Authority (TRPA) as a good example. The states and counties in the TRPA area pay annual fees according to an apportioned and pre-determined formula. However, the Authority does not have bonding capacity.

The proposed Chesapeake Bay Authority was never implemented or seriously considered. NEMW presumes that decision-makers found their proposed funding mechanisms to be infeasible.

NEMW offers this model as information, rather than a recommendation. The benefits of such an authority in the Great Lakes region could be dramatic; however, establishing such an entity would require a concerted high level effort among all the Great Lakes governors and other political leaders.

Reciprocity agreements between states

NEMW also examined the potential for reciprocity agreements between states to lower borrowing costs, thus making each state's individual environmental bond issues more attractive. After consulting with financing experts, NEMW concluded that while the concept was potentially feasible, the benefit was minimal – a “rounding error,” as one expert explained.

Future Bond Issues and Dedicated Revenue Sources – Ways to Capitalize on Growth Patterns and Waterfront Development

From the above, NEMW concluded that 1) finding a single state-level dedicated funding source that would work in all states would be difficult if not impossible, and 2) there was no real precedent for a multi-state entity with bonding authority and an environmental mission. This led NEMW to consider new avenues for dedicated funding, albeit to be considered on a state-by-state basis. The underlying premise of the two options outlined below is that, because of the relationship between growth patterns and water quality, new funding mechanisms should be derived from the nexus of development activities and sediment cleanup.

State impervious surface tax

A bill was introduced in the 2007 session of the Maryland General Assembly proposing a new tax on the creation of new impervious surfaces, including rooftops, driveways, sidewalks, streets, etc. The proposal outlined that impermeable surfaces would be taxed at a rate of 25 cents per square foot within state-designated growth areas and \$2 per square foot outside of the areas. The tax was projected to raise \$130 million in revenues annually to fund Chesapeake Bay restoration projects. The proposal failed to gain approval, and a more modest \$50 million fund was created by dedicating a portion of motor fuel tax and car rental tax to Chesapeake Bay restoration.³¹

Greensboro, North Carolina, has already adopted impervious surface taxes to help pay for storm water management systems. Its tax averages \$2.44 per month per property and raises between \$6 and \$7 million in revenues annually.³² At the county level, Anne Arundel County, Maryland, has reportedly been looking into creating a hard-surface tax.

³¹ See: http://www.cbf.org/site/DocServer/Green_Fund_fact_sheet.pdf?docID=7483

³² See: http://www.citizenreviewonline.org/august_2002/the_rain_tax.htm

An impervious surface tax, aside from its considerable potential to raise funding levels for vital environmental projects, would also serve smart growth and climate change objectives; it would add to the cost of spread development patterns and reward compact development. Compact development has been shown to reduce vehicle miles traveled and travel-related greenhouse gases by 20 to 40 percent.³³

An impervious surface tax would also serve water quality objectives. When impervious surfaces cover more than 10 percent of a watershed, rivers, creeks, and estuaries suffer severe biological degradation. Therefore, watersheds that are covered with less than 10 percent impervious surfaces should be protected, and urbanized watersheds with imperviousness of more than 10 percent should absorb the majority of growth.³⁴

Politically, it may not be possible to make an impervious surface tax a regional, multi-state strategy because of likely resistance to new state taxes. Nevertheless, the concept has merit for any individual state looking for a funding source to support environmental and water quality programs.

Transfer tax surcharge in waterfront development zones

Another potential source of revenues for financing environmental bonds is to establish a surcharge on the transfer tax in specified waterfront/riverfront zones. This concept is specifically designed to capitalize on the projected real estate trends cited in the “Trend toward waterfront development section.” The concept is based on the principle that those living on the water are immediate beneficiaries to sediment cleanup, because the cleanup will result in lifting beneficial use restrictions, and property values are likely to rise. By focusing on the transfer tax, the proposal does not affect property owners until they sell their land. The uses of the dedicated fund could also include land-side environmental improvements and brownfields redevelopment.

One example is that in 1998 the New York legislature authorized Long Island townships to add a two percent surcharge on real estate transfer taxes in order to preserve open space, protect estuarine resources and groundwater quality, and preserve historic properties. The legislature required each township to pass the surcharge by referendum, and each of the East End townships did so by large majorities. The transfer tax surcharge had raised \$169 million through January 2004.³⁵

Politically, it may not be possible to make a new waterfront zone transfer tax a regional, multi-state strategy because of likely resistance to new state taxes. Nevertheless, states could allow a local “opt-in,” such as New York established for Long Island. A more refined version of the New York approach would be to allow localities to define waterfront zones where the transfer tax surcharge would be applied.

Renewal of state bond issues

The Clean Ohio bond was renewed by Ohio voters in November, 2008. Discussions are underway in Michigan and New York for renewal of Clean Michigan and Clean Air-Clean Water, respectively. As these bond issues are being reconsidered, there is a limited window of opportunity for Great Lakes environmental advocates to place sediment cleanup on the list of eligible activities. As pointed out

³³ Urban Land Institute, 2008

³⁴ Beach, 2002

³⁵ See: <http://www.epa.gov/nep/fundexamples.htm#peconic>

above, the only current state environmental bond issue that explicitly identifies cleanup of contaminated sediments as eligible is Clean Michigan.

Clean Water State Revolving Funds

One further state funding source to consider is the Clean Water State Revolving Funds (CWSRF). In a prior NEMW report “[Baseline Study: Opportunities for Financing Great Lakes Cleanup and Ecosystem Restoration](#),” (carried out under a prior grant from GLPF), several funding sources were examined. The Executive Summary from the baseline study is Appendix 1.

CWSRF funds can potentially be used for sediment cleanup and other water quality-oriented environmental restoration projects. CWSRF funds can be used for loans with a substantial interest rate subsidy. The key is having a reliable source of revenue for repayment. Not all states use CWSRF for non-point source projects such as sediment cleanup – the NEMW report referenced above reviews each state’s use of CWSRF funds.

CWSRF funds can be paired with tax increment financing or special assessment districts. If a locality is considering a pledge of certain revenues, such as TIF or special assessment district funds, the state can make those dollars go further by having the locality borrow from CWSRF, rather than the bond market or other private financing options, because the interest rate is subsidized.

Conclusions – State and Multi-State Strategies - Bond Issues and Dedicated Revenue Sources

There is potential, albeit very little precedent, for establishing a regional multi-state authority that would have bonding capacity to support Great Lakes environmental restoration. The benefits of such an organization could be far-reaching; however, the impediments – chiefly, identifying a reliable multi-state revenue stream – are considerable and would require a concerted high level effort.

States considering environmental bond commitments may want to consider new revenue sources that can create a dedicated revenue stream by tying development patterns to funding for environmental restoration. Two options that hold some promise are an impervious surface tax, and a waterfront development surcharge on transfer taxes.

Great Lakes environmental advocates should make it a priority to establish sediment cleanup as an eligible activity under any new state environmental bond issues that are being considered by individual states.

Non-point source Clean Water State Revolving Funds (CWSRF) funds can potentially be used for sediment cleanup and other water quality-oriented environmental restoration projects. CWSRF funds can be paired with tax increment financing or special assessment districts producing financing at favorable (subsidized) interest rates

VI. OTHER MECHANISMS TO COVER THE NON-FEDERAL MATCH FOR LEGACY PROJECTS

NEMW examined two other potential sources of non-federal match for Legacy projects: insurance archeology; and Supplemental Environmental Projects (SEP).

Insurance Archeology

NEMW recommends that insurance archeology be explored as one way to close the gap for the non-federal match requirement. The concept of insurance archeology is that businesses that may now be defunct or not viable had insurance coverage when they were operating and responsible for polluting the land or the water. In many cases, claims for cleanup costs against these insurance policies have been upheld by the courts. Insurance archeology is usually applied to “commercial general liability” policies that were typical before the mid-1980s. In the late 1980s, insurers began writing well-defined pollution exclusions. There are now a number of legal firms that specialize in insurance archeology, and land cleanup by this method is well-established. At least one sediment cleanup project – the Fox River, Wisconsin³⁶ - was also assisted by this method, and there is currently a CSO case that is using insurance archeology.

Supplemental Environmental Projects

A Supplemental Environmental Project (SEP) is an environmentally beneficial project voluntarily undertaken by environmental defendants in partial mitigation of penalties. Generally SEPs must have a ‘nexus to the violation,’ and the project cannot be one that the violator is required to perform. EPA lists examples of SEPs including:

Stream Restoration - Potential projects include removal of solid waste/sediments from stream/river-beds; stabilization and revegetation of stream banks; construction of fish ladders/passageways; enhance fish and other aquatic life habitats.³⁷

One example of the use of SEP funds for environmental restoration is that the Coastal Bend Bays and Estuaries Program (Corpus Christi, Texas) received a \$1.5 million SEP and used the funds for wetlands and habitat restoration and land preservation.³⁸

EPA routinely uses SEPs in their sediment cleanup enforcement activities; however AOC communities and riverkeeper groups should also be aware of this mechanism as a potential source for non-federal match.

Port Authorities and Water and Sewer Authorities

The potential to use port authorities and water and sewer authorities as financing sources for sediment cleanup was addressed in detail in the earlier NEMW study: [Baseline Study: Opportunities for Financing Great Lakes Cleanup and Ecosystem Restoration](#),” (carried out under a prior grant from GLPF). The Executive Summary from the baseline study is Appendix 1. Port authorities and water and sewer authorities can represent advantageous ways to access the bond market because they can get better terms and avoid certain fees. Note that the Legacy project for cleanup of the Ashtabula River involved the creation of a port authority to act as a banker for the other financing sources; the port authority did not commit any funds.

³⁶ See: <http://www.breitstone.com/CM/Custom/SOQ.pdf>

³⁷ See: <http://www.epa.gov/compliance/resources/policies/civil/seps/projectsideas42004.pdf>

³⁸ See: <http://www.epa.gov/nep/fundexamples.htm#coastalbend>.

Aside from accessing the bond market, some port authorities and water and sewer authorities have broader mandates and could potentially use funds directly for sediment cleanup.

Lastly, revenue streams controlled by port authorities and water and sewer authorities can potentially be used as a credit enhancement against a loan or TIF bond.

Conclusions - Other Mechanisms to Cover the Non-Federal Match for Legacy Projects

Insurance archeology represents a largely untapped option for boosting the non-federal share of Legacy projects. Funding for a test of the feasibility of using insurance archeology is recommended.

Supplemental Environmental Projects is another potential mechanism to fund sediment cleanup and environmental restoration.

Port authorities and water and sewer authorities represent alternative conduits to the bond market, and, in some instances, potential sources for credit enhancement or direct funding of sediment cleanup.

VII. COMBINING RESOURCES AND GETTING DEALS DONE

The above discussion points to any number of opportunities to expand funding for environmental restoration and sediment remediation, but there is no single panacea or magic bullet. Making the connection between land-side development and sediment cleanup will require tailored solutions to individual circumstances; there is no cookie-cutter solution. Environmental advocates are usually not financing experts, but sediment cleanup projects could benefit from financial creativity, as well as good early-on communication between the financing entities, the regulatory entities, the locality, and the developer.

One hypothetical illustrates the need for financial expertise and early on collaboration. The following scenario could lead to successful application of TIF to the sediment contamination problem:

- There is a potential developer for a waterfront parcel, adjacent to an AOC.
- The project has an infrastructure need that causes a gap.
- The locality is willing to devote TIF revenues to covering the gap and the developer has agreed to a special assessment district to backstop the TIF..
- The state identified the AOC as a potential Legacy project and has some funds budgeted, but not enough for the total non-federal match.
- The strategy to get the AOC cleanup done includes:
- The state:
 - Lines up CWSRF loan funds for the sediment cleanup project.
 - Lines up infrastructure funding, thereby freeing up the locality's TIF dollars.
 - Advises the locality that it could use the TIF funds that were to be used for infrastructure as repayment source for a CWSRF loan.
- The developer agrees to using the special assessment district revenues as a credit enhancement for the TIF-CWSRF loan, leading the State to make the CWSRF loan at the most favorable interest rates.
- The TIF-CWSRF loan is used to close the gap on the AOC/Legacy project.

- The result is the project includes sediment remediation to complement the redevelopment. The city's TIF dollars go further because they are used to repay a subsidized CWSRF loan, rather than a market rate bond for infrastructure.

This is a simplistic example, but it illustrates an obvious point: where there is a will, getting the right people in the room may lead to finding a way.

Lastly, creative approaches might also consider ways to involve port authorities and water-sewer authorities in financing. Although not usually a source for subsidy, these authorities may represent preferred routes to access the bond market. Port authorities and water-sewer authorities in the Great Lakes region were described and assessed in the prior NEMW report "[Baseline Study: Opportunities for Financing Great Lakes Cleanup and Ecosystem Restoration](#)" (see Appendix 1).

Conclusion – Combining Resources and Getting Deals Done

Creative financing solutions should be tailored to individual project circumstances. The study concludes that no single strategy is likely to work in all, or even most, cases. Recommendations encompass an expanded toolbox of potential financing sources: tax increment financing, special assessment districts, insurance archeology, CWSRF loans, and new bond issues that might be derived from new funding sources, such as an impervious surface tax or a surcharge on transfer taxes in waterfront zones. Then, as waterfront development is taking shape in individual communities, state and local officials should come together with financing experts to explore ways to incorporate sediment cleanup into the redevelopment plan.

BIBLIOGRAPHY

- Anderson, Geoff, “The Federal Opportunity (for smart growth as a climate change solution),” presentation at the Northeast-Midwest Institute Congressional Briefing, July, 17, 2008.
<http://www.nemw.org/SustainModelAnderson.pdf>
- Beach, Dana, “The Effects of Urban Design on Aquatic Ecosystems in the United States,” for the Pew Oceans Commission, 2002, http://www.pewtrusts.com/pdf/env_pew_oceans_sprawl.pdf
- Braden, John B., Sudip Chattopadhyay, and Arianto A. Patunru, University of Illinois at Urbana-Champaign, “The Economic Value of Environmental Cleanup: Contaminants in Waukegan Harbor, Illinois” for the U.S. Environmental Protection Agency, Great Lakes National Program Office, December 2006.
- Braden, John B., Laura O. Taylor, DooHwan Won, Nicole Mays, Allegra Cangelosi, and Arianto A. Patunru, University of Illinois at Urbana-Champaign, Northeast-Midwest Institute, Universitas Indonesia, “Economic Benefits of Sediment Remediation” for the U.S. Environmental Protection Agency, Great Lakes National Program Office, August, 2003.
- Chesapeake Bay Program, Finance Authority Committee, “Chesapeake Bay Financing Authority Organizational Template, a White Paper from the Financing Authority Committee,” Chesapeake Bay Program, July, 2005.
- Great Lakes Regional Collaborative, “Great Lakes Regional Collaboration Strategy to Restore and Protect the Great Lakes,” 2006.
- Koch, David, “Case study – Illinois, Taking Back the Mississippi Riverfront,” Brownfields News, December, 2004
- Litan, Robert E., John C. Austin, Soren Anderson, Paul N. Courant, and. Brookings Institution, “America’s North Coast: A Benefit-Cost Analysis of a Program to Protect and Restore the Great Lakes,” September 2007.
- Northeast-Midwest Institute, “Baseline Study: Opportunities for Financing Great Lakes Cleanup and Ecosystem Restoration,” for the Great Lakes Protection Fund, December, 2006
<http://www.nemw.org/opportunities%20for%20Fin%20GL%20Cleanup.pdf>
- Northeast-Midwest Institute, “Integrating Sediment Cleanup and Brownfield Redevelopment,” 2001,
<http://www.nemw.org/SedimentReport.pdf>
- Pinkham, Rischard, “Daylighting: New Life for Buried Streams,” Rocky Mountain Institute, 2000
- Urban Land Institute and Price Waterhouse Coopers, “Emerging Trends in Real Estate, 2008,”
http://www.uli.org/sitecore/content/ULI2Home/ResearchAndPublications/EmergingTrends/~/_media/Documents/ResearchAndPublications/EmergingTrends/Americas/2008/ET30.ashx
- Urban Land Institute, Smart Growth America, the Center for Clean Air Policy, and the National Center for Smart Growth, “Growing Cooler: The Evidence on Urban Development and Climate Change,” 2008,
<http://www.smartgrowthamerica.org/gcindex.html>

APPENDIX 1 – EXECUTIVE SUMMARY, BASELINE STUDY: OPPORTUNITIES FOR FINANCING GREAT LAKES CLEANUP AND ECOSYSTEM RESTORATION

Purpose/Background

In order to help develop new financing products for ecosystems restoration, the Northeast-Midwest Institute has reviewed several existing entities within the Great Lakes basin that have the capacity to issue tax-exempt financing instruments. This opportunity baseline suggests which institutions offer the best prospects for financing ecosystem restoration, and identifies policy reforms that could enable more Great Lakes entities to finance restoration efforts.

The need for enhanced funding to finance cleanup of contaminated sediments in the Great Lakes (hereafter referred to as “Great Lakes cleanup”) and ecosystems restoration has been documented by the Great Lakes Regional Collaboration in its December, 2005, report, “Great Lakes Regional Collaboration Strategy (to Restore and Protect the Great Lakes).” That report estimates the need for federal Great Lakes Legacy funds to be \$2.25 billion total, or \$150 million annually between 2006 and 2020.

This analysis explores opportunities to finance that cleanup through programs and institutions that may have been formed for other purposes but have conceivable application to contaminated sediment cleanup, including:

- Clean Water State Revolving Funds;
- Water-sewer authorities;
- Port authorities; and
- State environmental bond issues.

This report looks beyond the two obvious federal sources for Great Lakes cleanup - Great Lakes Legacy funds and the Army Corps of Engineers - for three reasons:

- The current level of Legacy funding (\$10 million in fiscal year 2004 and \$22 million in 2005) is only about one-tenth of the need;
- Both Legacy and Army Corps funds have non-federal match requirements (35 percent for Legacy funds) that have proven difficult to meet for states and localities; and
- Great Lakes cleanup creates certain economic and other benefits, which, if captured, potentially become a source to finance the cleanup.

The latter point requires some amplification relative to the current analysis. While most work on potential funding has focused on grant sources, this analysis also looks at loan sources. The reason is that parallel Great Lakes studies attempt to quantify property value increases that might follow from cleanup of contaminated waterfronts (land and water). At least in theory, the cleanup may cause a significant rise in property values, and that increase is potentially capturable through a tax increment financing (TIF) mechanism. Conceptually, this provides a revenue stream to pay off a loan.

Clean Water State Revolving Funds (CWSRF)

- *Great Lakes cleanup appears to be an eligible use of CWSRF/Non-Point Source (NPS) funds.* However, there are no known instances where CWSRF funds have been used for cleanup of contaminated sediments. EPA Region 5 would need to give an affirmative determination as to eligibility.
- *There must be a viable/reliable revenue source to service the CWSRF loan.* Because most of the Great Lakes states leverage CWSRF funds on the bond market, bond rating agencies must be convinced of the reliability of the revenue source. In-depth analysis in the next phase of this study will be required to determine if TIF financing could produce a sufficiently reliable revenue source.
- *There is a cost advantage associated with using the CWSRF program to finance Great Lakes cleanup projects.* Assuming that a revenue source can be identified, e.g., if TIF financing proves feasible, there would be a substantial savings in interest costs by using the CWSRF program, compared with conventional bond market financing.
- *However, there are numerous obstacles and issues, outlined in the CWSRF section of this report, that would need to be overcome in order for CWSRF to work on a broad scale. The three most difficult are:*
 - a. Two states (Illinois and Wisconsin) lack statutory or administrative authority to fund a project like Great Lakes cleanup and a third (Pennsylvania) appears to be in a grey area.
 - b. With federal appropriations declining, most states are already looking at a pipeline of projects that exceeds their ability to fund. The Great Lakes cleanup would have to successfully compete for limited dollars; if successful, the downside is that numerous other worthy projects won't get funded.
 - c. If Congressional appropriations continue to decline, the CWSRFs will not be a viable source for Great Lakes cleanup financing.
- *If a given project is eligible for Great Lakes Legacy funds, but there are insufficient grant funds for the non-federal share, a loan from CWSRF, linked to TIF financing, should be explored.* A case would have to be made that because local TIF financing is the repayment source for the SRF loan, the loan should therefore count as "non-federal." Since this scenario is perhaps a "usual" rather than an "exceptional" case, a recommendation is for Great Lakes planners to address this issue with the Legacy Fund, SRF administrators, and EPA Region 5 in order to establish a policy that allows use of SRF funds as "non-federal share" as long as the repayment source of the SRF loan is non-federal.
- *CWSRF may work for financing some individual Great Lakes cleanup projects, depending on the individual circumstances in the state; however, basing an overall Great Lakes cleanup plan on CWSRFs would be quite problematic.* A possible solution to the difficulties of working through each state would be a threefold strategy:
 - 1. There should be a special Congressional earmarked appropriation under the SRF program for the Great Lakes cleanup.
 - 2. There should be a multi-state entity formed and designated as the recipient of those funds.

3. The new entity would operate much like the individual state CWSRFs, leveraging the earmarked appropriation to create a larger fund, and then loaning the funds at a discounted rate to communities, states, or to itself to carry out Great Lakes cleanup.

Water-Sewer Authorities

- *Water and sewer authorities are unlikely participants in Great Lakes cleanup under current practices.* The narrow definition of projects that water and sewer districts undertake follows from the self-supporting nature of these entities. Water and sewer fees (or, in two cases, dedicated property taxes) are expected to pay both capital and operating costs; thus, these entities generally do not undertake water quality projects that are unrelated to their core mission. The only example of a water-sewer district undertaking a watershed restoration project was in Milwaukee, but that project was undertaken under flood protection authority, not a water quality mandate. Some observers contend that water and sewer authorities could be more active in water quality projects such as sediment cleanup, while staying within their current legal authority; nevertheless, the self-supporting nature of their activities would tend to mean that their only involvement would be as a conduit to the bond market, much like port authorities.

Port Authorities

- *Most port authorities of the Great Lakes states are not potential sources for cross-subsidies.* Some observers may have looked at the Port Authority of New York-New Jersey (PANYNJ) as a potential model, in that PANYNJ controls vast revenue sources from bridge and tunnel tolls, and is commonly viewed as having the capability of cross-subsidizing a variety of port-related projects. Our survey of the Great Lakes port authorities did not find port authorities that have capabilities that parallel PANYNJ.
- *Statutory restrictions probably eliminate participation on the part of the port authorities in Toledo, Milwaukee, and Duluth.* Port authorities that appear to have sufficiently broad authority include Indiana, Illinois, and Cleveland-Cuyahoga County; however, a legal opinion should be obtained before any assumptions are made. Detroit's current authority is limited, but pending legislation would allow the authority to issue self-supporting bonds for any purpose.
- *Most of the port authorities that could participate would do so as conduits to the bond market for projects that are self-supporting from identified revenues.* This would be the same role that port authorities play in financing major private business expansions. The advantages to the business or to the Great Lakes cleanup project are modest – somewhat more favorable terms and saving certain fees. In this kind of financing, the port authorities are not spending or risking port authority funds in any fashion. Note that the recently announced cleanup of the Ashtabula River involved the creation of a port authority to act as a banker for the other financing sources; the port authority did not commit any funds.
- *Two port authorities – Duluth and Cleveland-Cuyahoga County – have broader involvement in infrastructure development, ownership/development of land, and, in one case, the development of a waterfront park.* These activities are not necessarily self-supporting and

conceivably lay the groundwork for participation in Great Lakes cleanup if tied to port/economic development objectives.

State Environmental Bond Issues

The states of Ohio, Michigan, New York, and Pennsylvania have passed voter-approved bond issues that provide major financial commitments to environmental improvements, brownfields redevelopment, and sensible growth. These vary widely as to whether they can be used for Great Lakes cleanup/ecosystem restoration.

- *The overall conclusion is that these bond issues are currently very limited as a resource for Great Lakes cleanup.*
- *The only clear authority to use bond funds for sediment cleanup is in Michigan, under the Clean Michigan bond issue in which \$25 million was specifically appropriated for cleanup of contaminated sediments. However, a 2005 annual report listed only \$1.5 million of that \$25 million as “remaining to be appropriated.”*
- *Both the New York Clean Air - Clean Water Bond Issue and Pennsylvania’s Grow Green II require interpretation to determine eligibility. Both list as eligible projects that “implement a watershed restoration plan.” New York’s program, authorized in 1996, no longer has funds available. Grow Green was authorized in 2005 with funding of \$230 million devoted to cleanup of rivers and streams, abandoned mines, and brownfields.*
- *Clean Ohio and New York’s Environmental Protection Fund do not appear to include authority for cleanup of contaminated sediments. Eligible sites/projects for the “Open Space and Watershed Protection” part of Clean Ohio are projects to protect or enhance riparian corridors and watershed protection measures. Ohio, where bond funds were authorized in 2000, is also currently going through the last round of funding applications. New York’s Environmental Protection Fund can be used only for acquisition of land.*
- *The Great Lakes team should attempt to get in on the ground floor in any states that may be considering new versions of soon-to-be-exhausted bond funds. Ohio, New York, and Michigan are all near the end of their spending authority. If new bond issues are being planned, it would be important to make the case for clear language and dedicated funds for cleanup of contaminated sediments.*

Potential Models

Michigan’s Brownfield Redevelopment Authorities (BRAs) are a good model for the use of tax increment financing (TIF). Two sediment cleanup projects have been approved for BRA TIF financing. Although neither project has proceeded, the principle has been established that the BRAs are a potential vehicle to link TIF to sediment cleanup.

The Rouge River National Wet Weather Demonstration Project should be examined as a potential model for water/sewer districts to take on broader environmental objectives, as well as a potential model for inter-jurisdictional cooperation to achieve environmental benefit. The Rouge River project

started out with a focus on combined sewer overflow, but expanded its mission to include watershed protection, wetlands restoration, and, in one instance, the cleanup of contaminated sediments (Lake Newburgh).

Ohio's Water Resource Restoration Sponsor Program offers watershed restoration grants that are leveraged from CWSRF loans. The state pairs up a watershed restoration project that needs grant funds with a municipality that is seeking loan funds. The state will consider reducing the interest rate to the municipality so that the municipality can pass along its cost savings to the watershed restoration project in the form of a grant. The projects funded through this mechanism are not multi-million dollar projects; nevertheless, this could be one piece of the puzzle in patching together a local match for a Legacy grant.

Minnesota's recently passed Clean Water Legacy (CWL) is a potential model for states boosting environmental funding through dedicated revenue sources. CWL was proposed as an \$80 million annual program to be funded from fees on municipal wastewater connections and septic permits. It passed in June, 2006, as a \$25 million program - \$15 million funding from the general fund and a commitment to use \$8.31 million in bonding for phosphorous reduction at wastewater treatment plants (see http://cleanwaterlegacy.net/CWL_overview.pdf). Eligible uses of funds include:

- Assessing lakes, rivers, and streams;
- Prioritizing and accelerating TMDL cleanup plans;
- Implementing restoration activities to cleanup rivers; and
- Assisting cities in meeting cost of wastewater treatment upgrades.

General Conclusions

- *There is no universal approach that will work in all circumstances.* Individual projects will have to be tailored to the financing resources that may be available in that state at the particular time that the project is being planned.
- *Although the circumstances will vary widely from state to state, the first place to start for loan funds would be the Clean Water State Revolving Funds (CWSRF).* If TIF financing proves feasible, borrowing from the CWSRFs, rather than going directly to the bond market, would save substantial interest costs. This approach, however, is complicated by the growing demand for and shrinking supply of CWSRF funds.
- *Grant funds are going to be hard to come by, but the first place to look would be funds available through statewide bond issues, assuming that those programs which are at or near the end of their spending authority become renewed in some fashion.* Grants from these bond funds rarely exceed \$1 million (see 5. below). A second place to look for grant funds is state Non-Point Source (NPS) Section 319 programs. To the extent that some states have their own state-funded NPS programs and may have broader project eligibility criteria than EPA, some modest funding may be available as a non-federal match for Legacy funds.
- *The Great Lakes team should attempt to get in on the ground floor in any states that may be considering new versions of soon-to-be-exhausted bond funds.* Ohio, New York, and Michigan are all near the end of their spending authority. If new bond issues are being

planned, it would be important to make the case for clear language and dedicated funds for cleanup of contaminated sediments.

- *When non-federal match requirements for Great Lakes Legacy or Corps of Engineers funding exceed the scope of available grant funds, Great Lakes cleanup planners should explore a larger loan that could be repaid using tax increment financing.* As an example, a \$30-million cleanup might require a \$10.5 million non-federal match to qualify for Legacy funds. Typical state grants available for clean water purposes might be less than \$2 million. The case would need to be made that a \$10.5 million low-interest loan is equivalent to and has the same net present value as a \$2 million grant. If TIF financing proves feasible, the loan could then be repaid using the TIF.
- *Follow-up studies on the feasibility of using TIF to finance Great Lakes Cleanup should examine the role that philanthropic organizations might play in offering a credit enhancement to improve TIF feasibility/credit rating.* Any scenario that involves borrowing, be it from a bank, CWSRF, or the bond market accessed through a port authority, involves credit rating. A philanthropic organization could offer a cleanup project a credit enhancement, which might be some kind of limited guarantee. The advantage for the project is better terms. The advantage for the philanthropic institution is that its funds are only used if project revenues fall short.