A PUBLICATION OF ICMA'S BROWNFIELDS PROGRAM AND THE FEDERAL BROWNFIELDS PARTNERSHIP

Portfields Interagency Initiative: Phase I

Fall 2003

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The International City/County Management Association (ICMA) is the professional and educational association of more than 8,000 appointed executive administrators serving local governments. Members manage cities, counties, towns, townships, boroughs, regional councils, and other local governments in the United States and throughout the world with populations ranging from a few thousand to several million people.

Founded in 1914, ICMA pursues the mission of enhancing the quality of local government through professional management. Its members turn to ICMA for information, research, and technical assistance on many issues of special interest. ICMA's management assistance includes a wide range of publications, training programs, research, information, and training services.

ICMA's Research and Development Department seeks to enhance the quality of local government management through information sharing, technical assistance, research, and partnership building among concerned stakeholders. The Research and Development Department has been studying the role that local government can play in a variety of brownfields issues.

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Snapshots: A Preliminary Report on the 1998 Brownfields Showcase Communities

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CHAPTER 1

Revitalizing America's Ports: A New Interagency Initiative

The Portfields Initiative, a federal interagency project, focuses on the redevelopment of brownfields in and around ports, harbors, and marine transportation hubs, with an emphasis on development of environmentally sound port facilities. Brownfields are real properties where the expansion, redevelopment, or reuse may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Many of the estimated 500,000 brownfields nationwide are adjacent to waterways.

Portfields are brownfields in and around ports, harbors, and marine transportation hubs.

By 2020, international maritime trade is expected to double. This boom will exert pressure on coastal areas, which are already highly developed. Redeveloping brownfields in port areas ("portfields"), where available land is often limited, can facilitate marine transportation while providing environmental, economic, and social benefits to the surrounding communities and regions. To accommodate the expected increases in maritime trade, ports nationwide are addressing the problem of their aging infrastructure. In addition, because of their strategic significance as gateways into the country, ports are combining infrastructure improvement projects with enhancements to their security systems.

Brief History of the Initiative

The Brownfields National Partnership, including more than twenty federal government agencies, was created in 1996 and bolstered with passage by Congress of the Small Business Liability Relief and Brownfields Revitalization Act of 2002. In response to the new law, the federal partners renewed their commitment to work together in a timely manner to prevent, assess, safely clean up, and sustainably reuse brownfields. The result is the Brownfields National Partnership Action Agenda. An

important commitment on that agenda is the Portfields Interagency Initiative led by the National Oceanic and Atmospheric Administration (NOAA). In October 2002, NOAA convened an interagency meeting. Eight federal agencies—the Environmental Protection Agency, the Economic Development Administration, the U.S. Maritime Administration, the Army Corps of Engineers, the departments of Labor, Interior, Housing and Urban Development, and Justice—and the U.S. Navy, committed to working with NOAA on the initiative. Each partner brings its own specialized expertise to the table and contributes to the overall goal of revitalizing port communities.

Phases of the Initiative

The Portfields Interagency Initiative is organized in three phases. This report explains the initiative and information gathered during Phase I.

Phase I: To identify practices and strategies used by ports that have successfully redeveloped brownfields for port activities, representatives of various federal agencies interviewed port authorities and other stakeholders in the summer of 2003. The ports selected for Phase I interviews were the port of Baltimore, Maryland; the port of Houston, Texas; the ports of Long Beach, Los Angeles, and Oakland in California; New Bedford Harbor, Massachusetts; the port of Tampa, Florida; and the port of Toledo, Ohio. Information gathered from these interviews is presented in this report.

Phase II: In the summer of 2003, the portfields working group also interviewed representatives of the port authorities and other public and private stakeholders interested in redeveloping portfields to improve their capacity and efficiency, support waterborne commerce, improve environmental conditions, and benefit the economy. This information will be used to determine what assistance port communities need and want in their redevelopment efforts so that the federal agencies may better serve them.

Phase III: The Portfields Interagency Initiative is planning to implement pilot programs in three port communities in fiscal year 2004. Federal partners will work with port authorities and other stakeholders during this phase to plan and implement cleanup and reuse of portfields. Pilot programs receiving assistance from the federal partners will provide port communities, federal agencies, and other stakeholders useful information and strategies that can be used as models for other communities with similar issues.

Goals of the Initiative

The Portfields Interagency Initiative hopes to improve the delivery of partner agencies' financial and technical resources as well as to develop an ongoing program for port community revitalization. The primary goals of the initiative are as follows:

- Expedite portfields redevelopment while balancing environmental, social, and economic concerns, such as job creation
- Improve coordination among federal, state, and local partners with interests in redeveloping and revitalizing portfields
- Improve delivery of federal agency products and services to portfields
- Identify tools, techniques, and information needs to improve decision making at portfields sites
- Communicate lessons learned from the Portfields Interagency Initiative to other port communities.

Benefits of Redeveloping Portfields

Redevelopment of portfields produces numerous environmental, social, and economic benefits. Many former industrial sites sitting idle in port areas are contaminated. By returning this land to public use, communities remove dangerous structures and stop or stabilize contamination in or near waterways. This also can restore natural functions to watersheds, wetlands, woodlands, and habitat by improving surface-water and groundwater quality, and by improving stormwater management systems. Redevelopment of

portfields presents valuable opportunities for waterfront revitalization, and it may serve as a catalyst for revitalization in the broader community. Cleanup can reduce health risks for nearby communities, remove eyesores, and even help to improve air quality. Redevelopment and smart reuse of portfields, like other brownfields sites, have far-reaching environmental, social, and economic benefits in the surrounding area.

Reuse of portfields sites can provide jobs, goods, and services to the region and help increase the community's access to, and pride in, its waterfront. By redeveloping portfields, communities can expand their port facilities and port activities. This frees space for other uses or makes it possible to separate commercial and industrial uses of ports from tourism and recreational uses (for example, cruise ships and tourist uses can be separated from the fishing fleet and freight). In addition, redevelopment creates more available property for sale or lease. Several ports have found that leasing redeveloped property provides a constant revenue stream.

Stakeholders in Portfields Redevelopment

Many different stakeholders have a vested interest in the redevelopment and revitalization of portfields. They include port authorities; local governments; community members; nonprofits, nongovernmental organizations, and educational facilities; state and federal agencies; and private sector developers, lenders, and port users. Working together, these stakeholders can achieve much better results than each could accomplish alone.

Port Authorities

In many waterfront communities, the port authority is an autonomous government entity, authorized by the state and governed by a board of appointed commissioners. The responsibilities of port authorities, which differ from port to port, include planning and development of port areas, issuing permits, leasing land to port users, boat rescue and recovery, pollution control, stormwater management, environmental stewardship, safety inspections, fire and safety protection, criminal investigation and law enforcement, and provision of various port-related services. Some or all of these responsibilities may be shared with the local government or state and federal agencies, but the Port Authority is always a major stakeholder in port redevelopment projects.

Economic Impact of Selected Ports

By providing jobs and generating business, ports can have a huge impact on the local and regional economy, as the following statistics reported by five of the Phase I ports show.

Houston: The port of Houston employs 450 staff plus 100–300 casual day laborers. Port activity generates 75,487 direct jobs and 129,033 indirect jobs. Businesses providing services at the public and private marine terminals on the Channel generate $7.7 billion annually. Approximately 194 million tons of cargo moved through the port of Houston in 2001.

Long Beach: Trade through the port of Long Beach generates 320,000 jobs, 30,000 in Long Beach alone (one in twenty-two regional jobs in a five-county region in Southern California and one in eight local jobs). The value of cargo through the port was $88.8 billion in 2002.

Los Angeles: The port of Los Angeles directly and indirectly generates employment for approximately 260,000 people in Southern California, and it accounts for $1 out of every $23 in local income. The port handles 123 million metric tons of cargo representing some $102 billion.

New Bedford: Harbor-related businesses in New Bedford account for $671 million in sales and 3,700 jobs in the local area. Of that, the seafood industry alone accounts for $609 million in sales and 2,600 local jobs.

Tampa: The port of Tampa provides over 107,000 jobs in the Tampa Bay Region and pays workers $3.74 billion in wages and salaries. The total annual economic impact on the local economy is $13 billion. Impacted area businesses and workers paid an estimated $380 million in state and local taxes. The port handled 47 million tons of cargo and over a half million cruise passengers in 2002.

Toledo Port Authority as Landowner

In Toledo, Ohio, the port authority is the major landholder along the riverfront and leases land to private users. As a result, it often leads the planning and redevelopment process and coordinates the other stakeholders in port redevelopment. The port has the authority to issue bonds to raise funds for redevelopment projects. By maintaining ownership of the property and leasing it to occupants instead of selling it, the port authority receives a constant revenue stream that not only pays off their debt but can fund new projects. The port authority has an interest in the growth and success of the enterprises leasing its land because the lease amounts are based on a percentage of gross earnings.

Local Governments

The role of local government officials in port redevelopment projects varies. Some local governments coordinate stakeholder and community participation, assess infrastructure needs, and identify and market waterfront brownfields. In addition, local planning departments may develop plans for the use of port and waterfront properties. Sometimes, local government officials and port authority officials share responsibilities for port development. Local governments are more likely to be involved if the port area is an integrated part of the city. At one end of the spectrum is the port of Houston. The city of Houston is several miles from the port, and the local government's participation in port affairs is limited. At the other end of the spectrum is the New Bedford Harbor. This port is managed by the city of New Bedford and the town of Fairhaven. The portion of the port that falls within Fairhaven's boundaries is managed by the Fairhaven Harbormaster and Town Department of Waterways Resources. In addition, the Town Planning and Economic Development Department and Board of Selectmen will be responsible for implementation of the New Bedford Harbor Plan in Fairhaven.

Community Members

Community members have a good deal at stake in the port redevelopment process. Port expansion and redevelopment activities can positively affect their lives and livelihoods. Community members also have an interest in changes in public access to port facilities and waterways. Local governments have a responsibility to educate residents about portfields and to include them in planning for redevelopment. Reuses of ports can be tailored to the particular interests of community groups. In culturally significant areas, local cultural and historic organizations can help to ensure that the character and heritage of the port area is not lost during redevelopment and that historic buildings and structures are preserved. Similarly, local fishing and boating organizations can help to ensure that the port area is accessible and friendly to recreational users.

Nonprofits, Nongovernmental Organizations, and Educational Facilities

Nonprofit organizations can have an important role to play in port revitalization efforts. For example, environmental and land use organizations, as well as educational institutions, participate in land use decision making and can lend needed expertise, technical assistance, and information resources to projects. Nongovernmental Organizations (NGOs) can often provide quality technical assistance with environmental assessments, grant writing, and project management. Universities also make excellent partners because their faculty and students are often familiar with local community issues and have a great deal of data and expertise available to them. Community Development Corporations can provide demographic and economic data, community profiles, and services of benefit in port redevelopment.

Partnering with Nonprofits in Oakland

The port of Oakland partnered with a local nonprofit organization, the Youth Employment Program, to demolish several warehouses formerly owned by the U.S. Navy. Together they trained young, low-income adults to deconstruct the warehouses and salvage recyclable materials. The participants acquired valuable job experience and skills in construction and salvage. The program salvaged more than 2,000 tons of timbers, doors, windows and other materials.

State Government Agencies

State government agencies can provide necessary resources and technical assistance in port development efforts and help solicit funding from federal agencies. States also disseminate federal funds to local governments to further federal program goals and objectives. Many state environmental agencies run Voluntary Cleanup Programs (VCPs) for brownfields that would apply to portfields. Other state programs can help facilitate redevelopment efforts as well. For example, the port of Houston participates in the Texas State Accelerated Review Program under which the state will review site assessment and closure reports within forty-five days for a set fee. State fish and wildlife and environmental agencies are also often involved in port issues and state coastal zone management offices work to ensure that natural resource and environmental quality considerations are taken into account in port development.

Federal Government Agencies

As noted earlier, the Brownfields National Partnership program involves more than twenty federal agencies. These partners promote brownfields redevelopment, land preservation, habitat restoration, and community revitalization through programs and funding that are available to local governments and communities. These programs play an important part in redeveloping brownfields in port areas. Agencies actively involved in financing brownfields cleanup and redevelopment include the Environmental Protection Agency, the Department of Housing and Urban Development, the Department of the Interior, and the Department of Transportation. The National Oceanic and Atmospheric Administration and the U.S. Army Corps of Engineers often take leadership roles in coastal development issues. For ports instituting enhanced homeland security measures and dealing with foreign imports and exports, the Department of Homeland Security, the Coast Guard, and the Custom Service may be involved.

The Private Sector

Investments of capital move projects forward. Private developers, lenders, and investors are often the catalysts for brownfields cleanup and redevelopment. When a lender or developer is willing to put its name and money behind a brownfields project, other investors may be convinced of the project's economic viability and follow suit with funding. Alternatively, once private sector investors can see that the port, the local government, and state and federal agencies are supporting redevelopment efforts, they may be more willing to get behind them. In port revitalization projects, the private sector may become involved in shipping and trucking projects when they see that a port is being renovated to increase the flow of goods, or they may become interested in commercial, recreational, and entertainment projects that will bring more visitors to the waterfront. Whether leading or following, the private sector plays an important role in redeveloping waterfront properties.

Portfields Issues

Portfields redevelopment has issues that distinguish it from traditional brownfields redevelopment. As this section will explain, these issues are related to port management, the environment, development, transport/commerce, homeland security, and stakeholder coordination. Linking and balancing competing interests within a single port can be a tricky proposition for port authorities and other stakeholders in portfields redevelopment. Many ports are eager to expand port facilities, yet they want to minimize any adverse impact of development on the environment. A port's ability to balance these and other concerns, can determine the success of its revitalization efforts and the relationships between the stakeholders involved. No matter what the challenges are, stakeholders must develop a set of strategies to face them. Specific challenges confronting the ports involved in Phase I of the Portfields Interagency Initiative and successful strategies they have developed will be discussed throughout this report.

Historic Preservation at the Port of Long Beach

The port of Long Beach encountered historical preservation issues during the redevelopment of a closed naval complex. It came to the port's attention that some of the buildings at the former naval station were designed by Paul Williams, the first African American licensed architect. The community strongly opposed the proposed demolition of the structures designed by Williams. A complete historic and archaeological survey of the base, conducted by the port, indicated that the original Roosevelt Base could qualify as a historic district. In coordination with the U.S. Navy, the Advisory Council on Historic Preservation, the state of California Historic Preservation Office, and local interested parties, the port of Long Beach agreed to pay $4.5 million for preservation measures, which included documentation of historic buildings and establishment of the Long Beach Heritage Fund.

Port Management Issues

With projections for increased port commerce in the coming years, ports must plan for expansion of commercial port areas. Many ports support a wide variety of uses. For example, they may be used for freight, fishing, cruise ship docking, industry, public access, and non-water-dependent activities. Therefore, port managers must find ways to integrate and accommodate multiple uses. Portfields redevelopment can ensure that idle properties are used first, before wetlands, neighborhoods, or other existing uses are affected by expansion into areas that currently are not part of the port. In addition to managing multiple uses, ports are dealing with aging infrastructure that must be repaired or replaced. Some ports have found that replacing old, rotting, wooden piers with fill has helped them to reduce oil spills, fires, and rodent problems. Redevelopment projects present port managers with an opportunity to make some of these improvements in the context of the project, but old, working areas of the port must be maintained and upgraded as well.

Environmental Issues

Years of heavy industrial usage and the transport of hazardous materials have caused environmental contamination problems at many ports. There are often an abundance of contaminated sites along the waterfront, as well as contaminated sediments in the channels. Redevelopment of these ports has led to numerous environmental benefits such as remediation of sludge pits, removal of PCBs and underground storage tanks, and dredging of contaminated sediments, to name just a few. Pressured to deepen their channels to accommodate ever-larger vessels, ports are struggling more than ever to balance environmental and economic priorities. Because of the heavy industry traditionally found in port areas, and because of emissions from idling ships, numerous ports are in ozone non-attainment areas. As a result, ports are developing approaches to reduce emissions within their boundaries and working with nearby communities to do the same. Historic wetland loss and ecosystem disturbance are other problems, since many ports are located on filled wetlands. Port managers today are looking at environmental issues beyond their own facilities and responding with wetland and shallow water habitat creation, stormwater management, and overall watershed management strategies to improve the water and coastal ecosystem functions. Some ports are also in the process of developing and implementing environmental management systems to address existing problems and prevent new ones.

Development Issues

Port redevelopment is not easily accomplished. For portfields projects, like other brownfields projects, it is often difficult to find sufficient funding to cover the assessment and cleanup required to ready sites for development. For example, at the port of Baltimore, investment to develop a large brownfields site was lower and cleanup costs were higher than anticipated by stakeholders in this redevelopment effort. The lack of private investment delayed completion of the project. At the port of Baltimore and at ports nationwide, port officials must take care that the redevelopment projects brought in will be sustainable in

Stakeholder Involvement in Portfields Redevelopment

Successful portfields redevelopment requires the active participation of stakeholders in every stage of the planning process. Working together, stakeholders can develop the vision for site reuse, prioritize resources, and even contribute to long-term maintenance of redeveloped sites. Through early and active involvement in planning, port authority and local government officials, federal and state government agencies, community groups, developers, lenders, and others in the private sector take ownership of the project and have a vested interest in seeing it through to completion.

The Phase I ports have learned several valuable lessons based on their experience implementing redevelopment projects. The first lesson is to take a holistic rather than project-by-project approach to portfields redevelopment. Another important lesson is to establish clear goals for reuse. The lead agency should educate other groups about these goals and seek joint solutions to difficult issues. An attempt should be made early on to get support from community residents for the redevelopment project and to build trust between the various stakeholders.

Multiple-Site Projects

Revitalization efforts at most ports involved multiple rather than single sites. Because many of the same stakeholders are involved in each project, good communication is particularly important. Some communities create advisory councils that meet on a regular basis to discuss current and future projects. Other communities prefer a more informal approach and establish a single point of contact in each stakeholder group as the "go-to" person for that entity. An established and ongoing method of communication between stakeholders facilitates the redevelopment process at each step. It can also reduce questions about who is responsible for what and which approvals are required. If stakeholders are involved in planning from the beginning, unpleasant surprises later on often can be avoided.

Coordination in Toledo

The Port Authority of Toledo has exemplified a collaborative approach to redevelopment. It formed and maintained strong partnerships among the numerous stakeholders in its ongoing revitalization. Representatives of the city, county, and port meet once a month to discuss all of the projects with which they are involved.

In addition, a brownfields working group composed of the city, county, and port representatives, regional growth partnership representatives, environmental consultants, and other stakeholders meets periodically to discuss available grants, projects, and strategies. From the beginning of a brownfields project, they work together. By coordinating their efforts, basic problems such as which group should submit which grant application, are resolved. Stakeholders also combine resources to complete projects more quickly. The community has gained a positive reputation with funders because it is known as a good place to invest brownfields funds. The coordination and community support help guarantee that projects will get done and the money will not be wasted. Having several partners makes projects much less overwhelming because no one agency or organization is carrying all of the weight.

Finally, Toledo has formed a legislative consortium that meets once a month. This group includes representatives from the city, county, port, chamber of commerce, university, community college, and regional growth partnership. They joined together to develop priorities for the region, and then the consortium hired a lobbying firm to pursue its agenda full time at the state and federal levels. These coordination efforts keep a wide variety of stakeholders up to date with growth, development, and redevelopment taking place in the region.

the long term to avoid creating new brownfields in the future. Often a major employer in waterfront communities, ports must try to provide quality jobs for local citizens.

Transport/Commerce Issues

With projections of increased demands on maritime trade, ports are exploring ways to handle higher volumes of cargo. One of these strategies is the development on brownfields of multimodal facilities that speed the transfer of cargo between ship, rail, truck, and air transport. Many ports also are dredging their channels to provide access to larger vessels with deeper drafts. Others are redesigning roadways and overpasses along the waterfront to facilitate access to the seaports. Many ports have found that brownfields are ideal locations for expanding their facilities to accommodate more cargo traffic. American and Canadian ports on the Great Lakes and connected

rivers are working together to encourage expansion of the St. Lawrence Seaway to accommodate larger ocean-faring ships. This would enable the ships to bring their cargo farther inland.

Homeland Security Issues

Since September 11, 2001, homeland security has become a high priority in the United States. As strategic gateways into the country, ports are revamping and strengthening their security systems in accord with new federal regulations. Many are taking advantage of portfields redevelopment projects to implement new security measures. Ports are attempting to become more secure in a variety of ways. For example, they are using better lighting, implementing new surveillance measures, conducting random checks on cargo, utilizing x-ray scanners, and tightening access to port facilities. Some ports are also requiring clearance and background checks for those who enter certain areas of the port.

Stakeholder Coordination Issues

Port authorities, local government officials, community residents, state and federal agencies, members of nonprofits and nongovernmental organizations, developers, lenders, and port users are among the many stakeholders in the redevelopment of portfields. Ports across the country are discovering the challenge of bringing stakeholders to the table, sorting out their priorities and assumptions, and coordinating their efforts. Ports that have had successful redevelopment projects have usually had extensive upfront planning involving all stakeholders. As a result, buy-in from the community has been greater and resistance to plans less.

Conclusion

The history, phases, goals, and federal partners in the Portfields Interagency Initiative begun in 2002 have been explained. The benefits of redeveloping portfields and the wide array of stakeholders in the process also have been discussed. Regardless of location, ports share concerns related to management, the environment, development, transport/commerce, homeland security, and stakeholder coordination. The preceding survey of these issues leads to a closer look, in the next chapter, at specific port projects nationwide.

CHAPTER 2

Realizing the Benefits of Redevelopment: Portfields Projects Nationwide

Redevelopment Projects

Because of historic patterns of industrial development, many brownfields exist along the nation's waterways and coastal areas. Communities nationwide are attempting to revitalize these portfields without sacrificing natural coastal areas and other greenspace. One of the benefits of redeveloping existing port facilities is that it reduces the need for ports to expand into sensitive, unused areas.

Portfields revitalization and redevelopment projects vary widely from community to community, but the goals that drive them are surprisingly similar everywhere. Increasing port commerce while minimizing the environmental impact of redevelopment seems to be the most important goal of ports today, followed closely by economic development, job creation, environmental cleanup and restoration of land and water, and improved transportation systems. Many ports also cite the importance of improving harbor access and access to existing port facilities. Depending on its main business or industry, a port's more specific goals may include increasing tourism, revitalizing fishing and seafood industries, attracting commercial development, expanding distribution capabilities, and encouraging "green development."

This chapter describes the various types of projects and environmental considerations of Phase I ports in the Portfields Interagency Initiative. Recent projects at the Phase I ports can be divided into the following categories: port-related industrial projects; transportation projects; recreational, environmental, and nonport commercial projects; residential projects; and security-related projects. Many of the projects at Phase I ports fall into more than one of these categories.

Port-related Industrial Projects

Since many working waterfronts are largely industrial areas, it is no surprise that redevelopment projects often maintain traditional industrial uses. Some Phase I ports have redeveloped their portfields into industrial parks, with uses such as stone cutting and construction businesses or other manufacturers, others have encouraged maritime

Green Building at the Ports of Toledo and Oakland

The site of a former coal-fired power plant with two large fly-ash pits along the riverfront in Toledo has been named as a pilot community for the Green Building on Brownfields initiative of the U.S. Environmental Protection Agency. Each pilot receives expert consultant assistance (valued at up to $15,000) in the form of technical, financial, planning, outreach, and/or design expertise. The port authority is redeveloping one half of the property, and the city of Toledo the other half. The power company that formerly occupied the site is also a partner. It donated the land and $4.2 million for remediation. The plan is to remediate the site and clear all but the old power plant building—a large, attractive, red brick structure that will be renovated and reused. The site will likely be developed into a residential/entertainment district including a sports arena. The Green Building pilot assistance will be used to aid in planning for stormwater management and other sustainable building practices.

The port of Oakland is also venturing into green building. It intends to design and construct a new airport passenger terminal and associated parking area as a green building, certified by the nationally recognized Leadership in Energy and Environmental Design (LEED) Green Building Rating System. Port staff have worked closely with the architect throughout the design process to incorporate green building features. In addition, the rapid transit system is constructing an extension with a stop at the new airport parking garage. Transit engineers estimate that the connector, which takes passengers to the airport, will significantly lower air emissions by replacing 52 million vehicle miles driven annually.

and related businesses or other water-dependent uses specific to a port. Examples of port-specific projects of Phase I ports include expanding container terminals; improving cargo storage and transfer areas; extending wharf and berthing areas for fishing, cargo, excursion, charter, and cruise vessels; developing freight ferry terminals; and building bilge recycling facilities. Maritime industrial projects include development of shipyards, maritime trade facilities, an industrial park dedicated to seafood processing, and support businesses for the seafood industry.

Transportation Projects

A large number of port revitalization projects improve transportation systems, particularly the movement of cargo through the port and the movement of goods to their destinations. Communities are designing and constructing roads, railways, overpasses, and bridges to make truck and/or rail access to the port more efficient. Providing unencumbered access has helped several Phase I ports to alleviate traffic problems, such as trucks idling at freight rail crossings. The ports of New Bedford, Oakland, and Long Beach

Preserving New Bedford Harbor's Maritime Character

New Bedford, Massachusetts, was a center for whaling and later for commercial fishing. Its active fishing fleet and large seafood processing industry have earned New Bedford the title "Seafood Capital of the Northeast." To maintain its maritime character, the port is developing maritime and seafood industries and related businesses. For example, it is developing an entire industrial park dedicated to seafood processing. The city has also used nautical, fishing, and whaling themes in the restoration and reuse of historic areas and to promote tourism. An excellent example of this commitment to preserve local history is the New Bedford Whaling National Historical Park, created in 1996. The park, which includes historic buildings and ships, museum collections, a visitors' center, and archives commemorates the whaling port heritage of New Bedford.

Harbor and Channel Dredging

Toledo: Toledo Harbor requires more dredging than any other location in the Great Lakes. In fact, 25 percent of all dredging in the Great Lakes takes place in the Toledo Harbor. The sediment is very fine silt, resulting in dredge material that is a difficult-to-manage consistency. The dredge material is so fine, and there is so much of it, that it is hard to find a place to dump it or to find uses for it. The S&L Fertilizer Company mixes the dredge sediment with municipal biosolids (solids removed from wastewater) to make "New Soil," a Grade-B topsoil. (Grade B is not for use in residential areas.) Despite this use, there is still an overabundance of dredge material from Toledo Harbor.

New Bedford: New Bedford Harbor is in the midst of a Superfund cleanup necessitated by years of dumping of polychlorinated biphenyls (PCBs) into the harbor. The cleanup will take many years. Dredging of approximately 450,000 cubic yards of contaminated sediment is expected. Dredging to maintain channels and berths will also be taking place, and use of clean sediment for fill will eventually result in the creation of more land for marine industrial use within the harbor planning area.

Long Beach: The port of Long Beach developed an innovative approach to the disposal of contaminated sediment: it buried contaminated soil and sediments beneath a concrete cap. As part of its fill and major grading projects, the port isolated contaminated sediment dredged from the former naval complex and used the sediment over thirty acres to expand a container cargo facility. The U.S. Environmental Protection Agency gave the port of Long Beach an award for innovative sediment reuse.

Oakland: To deepen its channel to the target depth of forty-two feet, the port of Oakland in the mid-1990s excavated a large amount of sediment. Most of the dredged material was not contaminated, and about half of it was used to construct a 320-acre tidal wetland in Sonoma County called the Sonoma Baylands. About 700,000 cubic yards of contaminated material was used to cap an old landfill that had never been properly closed. A new golf course recently opened on top of that landfill.

Houston: Redfish Island was a favorite anchorage for boaters until it subsided. When the ship channel was deepened from forty feet to forty-five feet, the Port of Houston Authority (PHA) used the dredged material from the channel bottom to rebuild the island. Today it is again a favorite boating destination as well as a bird habitat and rookery. Work on the island also has re-established it as an oyster reef. In this same project, PHA will used dredged material to expand marshland in Galveston Bay by up to 4,250 acres, protecting marine life and providing bird watching and fishing opportunities.

are taking advantage of large brownfields and nearby rail lines to develop or improve intermodal transportation.

Port transportation projects are connecting, in various combinations, freight and commuter rail services, commercial and passenger marine transportation systems, and truck, bus, and air transportation. Some projects focus on rail transfer facilities or warehousing. In areas that no longer have active rail lines, the major task is to remove and redevelop old rail yards. Some ports have the goal of expanding their distribution capabilities. To help achieve this goal some ports are developing "just-in-time" facilities. These facilities manufacture or store manufacturing components that can be shipped where they are needed when they are needed. The necessary units are produced in the necessary quantities at the necessary time, thus reducing overproduction, unneeded inventory, and transport and waiting time. Finally, many Phase I ports are embarking on dredging projects to maintain and deepen navigation channels, turning basins, and berthing areas and to remove contaminated sediment.

Recreational, Environmental, and Nonport Commercial Projects

Communities may see their ports, not just as commercial areas, but as destinations for local residents and tourists to relax and enjoy the

Cleanup and Redevelopment at the Port of Long Beach

When the naval complex (including a naval station, supply depot and shipyard) at the port of Long Beach was closed in the early 1990s, it was turned over to the Long Beach Harbor Department for civilian port use. Prior to transferring the complex to the port, however, the U.S. Navy was required to clean up areas of contamination. It identified a number of areas requiring remedial action, because of hazardous and radioactive materials, contaminated sediments, and soil and groundwater contamination. Necessary remedial action also included removal of storage tanks. Recognizing the substantial time that it would take to demolish the existing facilities at the naval complex (over 200 buildings) and the time it would take to construct the large new container terminal that was proposed, the port decided to proceed with design and construction of new port facilities concurrently with the navy's environmental cleanup, and prior to identification of the terminal tenant.

A BRAC (Base Realignment and Closure) Cleanup Team (BCT) was established with representatives from the navy, EPA, California Department of Toxic Substances Control, and the port. The result was a strong partnership and coordinated activities. With the port's development schedule, the navy could target key properties for cleanup. Good communication with the navy and BCT was the key to the success of this project.

The port also worked with the California Regional Water Quality Control Board on surface-water and groundwater issues, in particular, the cleanup of petroleum hydrocarbons. During the redevelopment, the port encountered an endangered species issue. A large colony of endangered black-crowned night herons was relocated from the former naval station to a protected area in the port. Approximately fifty ficus and olive trees, a nesting area for the herons, were moved. The port also created approximately twenty-two acres of shallow-water habitat as a foraging area for another endangered bird, the California least tern. These actions were taken in exchange for development of the former naval station. The port is monitoring the new habitat in accordance with an agreement with the U.S. Fish and Wildlife Service. When grading or utility excavations uncovered localized soil and groundwater contamination, the port enlisted its own cleanup contractors to remediate the problem instead of waiting for the navy to do further cleanup. This process saved the navy money and kept the port's redevelopment on schedule. By October 2001, more than half of the naval complex was cleaned to industrial standards and deemed suitable for transfer to the city of Long Beach with deed restrictions.

waterfront. To this end, areas in and around ports are being used for public parks, greenways, river walks, bike trails, and marinas, and for better public access to the waterfront. Former industrial sites are being redeveloped into stadiums, sports arenas, restaurants, festival marketplaces, and entertainment districts. Historic structures are being incorporated into visitors' centers. Environmental restoration projects are enhancing the public's access to the shoreline. Historic ships, charter boats, and cruise ships docked in the harbor enhance many ports' appeal. Working ports also have tourist attractions. At these ports, creative solutions, such as pedestrian promenades for visitors to view and bypass the port without impeding commercial operations, are accommodating varied uses. Old industrial sites are sometimes used for large corporate offices or for destination attractions such as museums or aquariums with educational displays, research and education space, offices and meeting rooms, retail and concession areas, and other related commercial uses.

Residential Projects

Some communities have large waterfront sites that are not needed for port-related uses. These sites make very desirable locations for housing. Water-view condominiums may be placed on such a property. If the site is very large, single-family homes, townhouses, or mixed-use developments may be suitable. For example, Toledo's port authority is transforming an old industrial facility into a mixed-use development with an entertainment district, waterfront housing, and a marina.

Homeland Security Projects

Security improvements are being made at port facilities around the country. Several of the Phase I ports are instituting new security measures to help identify suspicious activities. The ports of

New Bedford and Long Beach are improving their lighting and using surveillance video monitors and perimeter cameras. Tampa is controlling access to the port by including new fences and installing gates with "smart card" recognition system technology. Houston has eliminated public tours of port facilities during high security alerts. The port of Oakland and other ports are increasing security checks of incoming containers by using x-ray scanners or making random checks of cargo. To "tighten down" security, some ports plan to spend several million dollars on security infrastructure.

Environmental Considerations

Ports nationwide are being redeveloped for reasons related to industry, transportation, recreation, tourism, housing, and security. The catalyst for port redevelopment also can be environmental considerations. This section describes remediation of past contamination as well as environmental stewardship to ensure that port redevelopment does not create brownfields in the future.

Environmental Remediation

Because of their prior industrial uses, many portfields are contaminated and will require environmental remediation before they can be reused. Time, expertise, and money should be allotted for the site assessment and cleanup. In some cases the hiring of consultants will be needed to address environmental issues. For some properties, a responsible party, such as the company whose factory contaminated the site, will contribute cleanup funds. On other properties, there will not be a responsible party available. Companies that are no longer in business or are in bankruptcy proceedings may hold the title to the portfields property. In this situation, the responsible party cannot contribute to cleanup costs. The port of Los Angeles found itself in this situation when the Todd Shipyard ceased operation, leaving 6,000 workers without jobs. The site was contaminated with a variety of hazardous substances, but the bankrupt company could not provide cleanup funds, so the port took

Environmental Cleanup in Los Angeles

In 1990, the port of Los Angeles removed twenty-two acres of contaminated land jutting into the turning basin. This improved the traffic flow of vessels and accommodated larger vessels in the port. Chevron, which had been using the site as a bulk liquid terminal, decided to terminate its lease. Before vacating the site, Chevron spent $30 million to remove pipelines and storage tanks and to conduct thermal treatments and bioremediation. Contamination had also entered the groundwater, and a plume traveled off-site, so groundwater was remediated as well. The port is still in litigation with Chevron to recover additional cleanup/in situ costs.

At about the same time that the Chevron project was under way, Todd Shipyard, the occupant of an adjacent site, went bankrupt and terminated its lease. Six thousand jobs were lost. The property that the shipyard had occupied was contaminated with asbestos, solvents, metals, and various petroleum hydrocarbons. The port paid a private salvage company to sell off the abandoned shipyard shop and remediated the property with funds from the sale. Federal money was used only for dredging of contaminated sediments. The port has used Contained Aquatic Disposal (CAD) sites for placement of contaminated sediments from these projects and hot spots around the harbor. Between these two projects, eighty acres have been redeveloped to meet the port's container terminal needs and to stimulate economic development in that area. Uncontrolled releases of contaminants have been reduced as well.

From its cleanup efforts, the port of Los Angeles has learned the following important lessons: Work with regulators to reach an agreement about leaving or containing an acceptable level of contamination on the site rather than transporting the contaminated material as state hazardous waste. Spend the extra money in monitoring and oversight. Develop close working relationships with the appropriate federal, state, and local agencies as well as stakeholders in the private and nonprofit sectors. Through the Chevron and Todd Shipyard projects, the port developed close working relationships with the Regulatory Water Control Board, the county of Los Angeles, Tetra Tech, Inc., the Army Corps of Engineers and the local fire department. It also created a community advisory committee to build community support for mitigation projects.

Using Recycled Materials at the Port of Oakland

The port of Oakland has made a commitment to reuse and recycle a variety of materials in order to reduce the amount of debris it sends to landfills. The Board of Port Commissioners adopted a resolution that requires reduction and recycling of construction and demolition debris. Port contractors must reuse, recycle, and salvage at least 50 percent of construction and demolition debris generated by port projects. The port has salvaged and crushed more than 1 million tons of concrete for reuse as base rock in marine terminal construction. Millions of cubic yards of dredge material have been used to raise the elevations of marine and rail terminals and to cap a landfill to prepare it for redevelopment as a golf course. At one project alone, 87 percent of the debris was reused or recycled. All of the asphalt and concrete were reused on-site, and other materials were recycled. Another project salvaged more than 2,000 tons of doors, windows, and other materials made from old growth redwood and Douglas fir.

action to clean up the site and redevelop it as quickly as possible.

On sites where there is a party responsible for the environmental damage that can be identified, some ports have met resistance, especially if the company's actions were legal at the time (that is, before current environmental regulations), or if the contamination occurred in the very distant past. Responsible parties may also be concerned about future liability issues. The port authority in Toledo found that it achieved better results cooperating with the responsible parties to achieve a mutually beneficial outcome, rather than blaming them or approaching them with a "punitive attitude." Sometimes the port authority may help the liable party to get public funds to clean up the site. In return, the site is sold or donated to the port authority to use for maritime trade. The port authority agrees to own and lease the site instead of selling it, and the port authority takes on any future liability. As a result, if a future tenant breaks through a cap, releasing contamination, the original responsible party is not liable for another cleanup of the same site. Deed restrictions and land use controls should be used when contaminants are being contained on-site, however, to avoid just such a situation.

Before cleanup of a site begins, it is preferable, although not always possible, to know the end use of the site. Several ports have found it helpful to use multi-disciplinary teams for the cleanup (for example, groundwater contamination specialists, remediation and geo-technical experts, and geologists). If this (on-staff or contracted) team works from the beginning with the architects and engineers designing the new development, the designs for the site can incorporate cleanup, on-site retention/containment, and

Environmental Management at the Port of Houston

While developing its environmental management system (EMS), the Port of Houston Authority asked port employees for suggestions on how to reduce air emissions. One employee suggested using Purinox fuel in port machinery. Upon implementation, use of this cleaner burning fuel has reduced the port's nitrous oxides (NOx) emissions by 25 percent. Getting employees involved in finding creative solutions has boosted morale at the port and had a beneficial impact on the environment. Due to voluntary EMSs implemented at two facilities, the port of Houston became the first U.S. port to achieve compliance with ISO 14001, an international standard for environmental management.

Bilge and Ballast Treatment

As ships travel, they take on water that collects in the bottom of the ship (bilge water). They also purposely take on water to weight the ship appropriately (ballast water). Bilge and ballast water is often taken on in one location and emptied at another. This practice has introduced invasive aquatic species in water bodies around the world. For example, zebra mussels were introduced to the Great Lakes in this way and have proliferated. The port of New Bedford has targeted part of one large brownfields project as the future site for a bilge recycling facility. This facility will help improve the environmental conditions of the port, minimize the risk of invasive species being introduced, and should provide sufficient revenue to become self-supporting. The port of Oakland is looking specifically for ways to prevent the introduction of invasive species from ballast water. The port received a grant to install an experimental ballast water treatment unit on a containership. It also managed a study to investigate the feasibility of treating ballast water onshore and committed funds to the Smithsonian Environmental Research Center for a study on various biological aspects of ballast water.

building. This coordination can result in creative and efficient plans. Completely clearing a site and removing all contamination to make it ready for any kind of development may take longer and cost more than a project where the cleanup plan and the design for the new development are integrated. In many states the level of cleanup required depends on the end use of the site. For example, a residential use would require a more extensive cleanup than a commercial or industrial use. Jurisdictions can save significant time and money by having an idea of the site's new use. Integration of cleanup and redevelopment plans can result in numerous innovations. A parking lot could cap a hot spot, monitoring systems could be incorporated into a redeveloped portfields site, materials could be reused on-site, and buildings and other structures could be located to optimize the safety of future users of the site.

Environmental Stewardship

Ports today are attempting not only to clean up past contamination when redeveloping brownfields but also to prevent future environmental problems. By incorporating environmental safeguards into designs for new developments, ports can avoid or minimize stormwater runoff, erosion, and destruction of wetlands. Operating ports must prevent new contamination if possible and, if contamination occurs, respond quickly. One option is to encourage reporting of suspicious activities by port tenants, and for port staff to carry out inspections to find and address contamination. It is important to locate new sources of contamination because the longer it continues, the more expensive and time consuming the cleanup will be. Some ports have found it beneficial to offer cleanup assistance to tenants and work with them to help prevent future contamination.

Contamination is not the only environmental problem that ports need to address. Because of industrial uses, proximity to large metropolitan areas, and exhaust from idling ships, trucks, and port machinery, many ports are in nonattainment areas for ozone. Fuel spills near the port and on land can lower water quality. Port development also can cause erosion and loss of wetlands and other habitat for wildlife. Finally, invasive aquatic

Maryland's State Critical Area Program

The state of Maryland's Critical Area Program has several requirements affecting development within 1,000 feet of the water's edge on the Chesapeake Bay and tidal tributaries. A naturalized shore is required, and runoff must be reduced by 10 percent relative to the runoff level before development. There are some exceptions for port areas. For example, with a port end use, a naturalized shore is impossible. While allowed to proceed with development in some cases, port developers must pay a large fine or sometimes construct new wetlands elsewhere instead.

species have been known to enter waterways through ships' ballast and bilge water. By outcompeting native species, they can create ecological havoc. In addition, the propulsion systems of ships can disturb bottom sediments and associated organisms living on or near them.

Conclusion

Phase I ports in the Portfields Interagency Initiative have projects under way in a variety of categories: port-related industrial projects; transportation projects; recreational, environmental, and nonport commercial projects; residential projects; and security-related projects. This chapter has described the specific characteristics of these projects and the environmental considerations that are essential in portfields redevelopment. As noted earlier, redevelopment must include not only environmental remediation of past contamination but environmental stewardship to prevent future brownfields.

CHAPTER 3

Keeping Port Projects Afloat: Public and Private Resources

In order to clean up and redevelop portfields sites, waterfront communities require resources at the following six stages: assessment, planning, remediation, site assembly, construction or development, and maintenance.

- *Assessment.* The evaluation of the site for contamination. With waterfront projects, assessment may be complicated by a high water table, the migration of contamination off-site or into groundwater or surface-water, and the potential need to do testing not only on land but also in the sediment. State and federal environmental agencies may also be involved at this stage.
- *Planning.* The process by which stakeholders provide input and make decisions about the site's future use or uses. Resources may need to be expended for community outreach, staff time, and planning assistance. For example, the port may need to hire planning, architecture, and/or engineering consultants.
- *Remediation.* The actual cleanup of the site to enable future use of it while ensuring that any remaining contamination does not pose unacceptable risks to human health and the environment. Remediation may include a variety of cleanup and site preparation measures such as soil removal, dredging, containment of contaminants, demolition or deconstruction of structures, and bioremediation. Contaminated materials are sometimes transported off-site for disposal, and sometimes they are capped (for example with uncontaminated fill or topsoil).
- *Site assembly.* The piecing together of different parcels of land to create a contiguous site for redevelopment. A jurisdiction may need to acquire properties, clear titles, and legally assemble them into one large property.
- *Construction or development.* The building or other actions required for the new use. The construction or development stage includes site preparation (for example, grading the site, stabilizing the riverbank) and installation of materials (such as buildings, piers, plants, and fencing).
- *Maintenance.* The ongoing upkeep of the site to ensure its long-term viability.

This includes not only building and infrastructure maintenance but also—for projects where contaminants were contained in place—the maintenance of containment structures, and barriers and the upkeep of other land use controls.

Leveraging in-kind and cash resources from stakeholders for the preceding expenses can alleviate the financial costs for the port authority or local government and foster a greater sense of community collaboration and accomplishment. Even with contributions from stakeholders, however, portfields redevelopment projects usually require outside funding and technical assistance.

Fortunately, communities interested in revitalizing their ports can turn to many sources of assistance, including local, state, and federal agencies, as well as private investors and nonprofit organizations. Not every program is applicable to every portfields project. In fact, many tools and resources are targeted to specific types of projects, such as those addressing water issues, recreational access, or habitat restoration. Local government officials, port officials, and community members, however, should cast a wide net in seeking support for their projects because programs that may not have the "brownfields," "port," or "waterfront" label may nevertheless be appropriate. Communities should seek out all possible funding sources, including those from all levels of government as well as from nongovernmental organizations.

Local Government Resources

Local funds or incentives can supplement the assistance communities receive from federal and state agencies to redevelop their portfields. Federal and state resources are rarely sufficient to take a project from start to finish. Moreover, federal and state funding is often dependent upon the availability of matching contributions from other sources. Local governments can employ a myriad of financing tools to fund projects or stimulate a flow of capital to them. These tools include

- Development impact fees
- General obligation bonds
- Revenue bonds
- Tax increment financing
- Tax abatements and exemptions
- Special taxing districts
- Zoning and permitting.

Development Impact Fees

Many local governments impose fees on developers of new construction to raise revenue for capital facilities that benefit the development. These fees are known by various names including development impact fees, user fees, benefit assessments, and connection charges. The fees are often used to pay for new roads, public transportation, and utility infrastructure, or to improve existing facilities to accommodate the new development. Revenues from impact fees can also be applied toward the creation and maintenance of parks, the preservation of open space, the construction of greenways and trails, or the improvement or creation of libraries and schools. For example, the city of Long Beach, California, charges developers park fees on all residential development. The fees can be used to mitigate the adverse environmental effects of new developments.

General Obligation Bonds

General obligation bonds are secured by the issuer (for example, the local government) and are supported by the issuer's taxing power. They generally require the approval of voters or the legislature. The benefit of general obligation bonds is that they provide all of the funds up front to facilitate the purchase of properties, and the costs are repaid from tax revenues over several years. However, local governments are limited in the amount of debt they can assume and competition between the various local priorities in need of financing can occur. As their name implies, general obligation bonds are not tied to a specific project. For this reason, taxpayers often frown upon them.

Revenue Bonds

Unlike general obligation bonds, revenue bonds are based on taxes levied for a specific project or on revenues anticipated from future user fees. For example, the port of Toledo issues revenue bonds

New Shipyard in the Port of Tampa

The port of Tampa initiated the redevelopment of Port Ebor, a former Department of Defense site. Plans for the sixty-acre site include development of a shipyard and warehouses, and operations are expected to begin between 2006 and 2010. The contaminated site is now cleaned up with the exception of about 500 cubic yards of soil contaminated with oil. This portion of the site is being bioremediated with the use of microbes. Having obtained a $1 million grant from the U.S. Department of Commerce's Economic Development Administration, the port has reconstructed 1,200 linear feet of bulkhead on the site. Expanding port commerce while minimizing the environmental impact of redevelopment is a top priority, and the port has gone beyond environmental requirements on this site by installing an advanced stormwater treatment system with baffle boxes. The boxes remove sediment and suspend particles and associated pollutants from the stormwater before it is released.

to pay for its brownfields projects. It then maintains ownership and leases the property, with the lease revenues helping to pay off the bond debt. Revenue bonds are not limited by a debt ceiling. The borrowing costs of revenue bonds are higher than those of general obligation bonds.

Tax Increment Financing

Local governments use tax increment financing (TIF) for economic revitalization efforts, usually in distressed areas. This financing mechanism relies on the assumption that tax revenues collected from a given area or district in the future will be higher than those collected today because property values will be higher as a result of economic revitalization. Bonds are issued to raise capital to fund redevelopment activities, and the new tax revenues generated from the project are earmarked to redeem the bonds. When a local government or redevelopment agency defines a redevelopment district, local tax assessors then freeze property values in the designated district to establish the revenue base. This revenue base remains in effect for a given period of time, usually ten to twenty-five years. The local government agrees to raise taxes at an incremental rate, as opposed to all at once following property improvements. However, the taxes received by the local government remain at the predevelopment rate, and the revenues from the incremental tax increases are used to service the debt and repay cleanup and redevelopment costs. Because repayment of the bonds relies on taxes, the reuse must include taxable uses like a factory, marina, or warehouse.

Special Taxing Districts

Cities can create special service areas or taxing districts in order to raise funds for services, improvements, or facilities to benefit the designated area. In a special taxing district, property owners agree that a real estate levy or special fee will be imposed on them that will benefit them with services or improvements. Special taxing districts could be used to fund the cleanup of a portfields site and its conversion into a waterfront park. Businesses surrounding a portfields property could decide that the site is an eyesore hurting their business so they agree to tax themselves to clean it up and turn it into something that would be attractive to potential customers.

Special Use Districts

Local governments can use planning tools such as special use districts and overlays to encourage specific types of development. For example, some communities create waterfront or port overlay districts that offer various incentives to property owners. Through the Massachusetts Coastal Zone Management Program, New Bedford has established Designated Port Areas (DPAs), a type of special use district. New Bedford's "Supporting DPA Use Eligibility Credit Program," is designed to function like a transfer of development rights program. In order to develop non-water-dependent uses within the DPA, property owners must purchase "eligibility credits." The revenue from these credits is distributed to owners of properties devoted to water-dependent industrial uses. In this way a substantial amount of assistance for the port economy is raised.

State Resources

Federal funding is often funneled through state governments before grants are allocated to municipalities. Many state governments are also able to offer grants for economic development and revitalization, including environmental assessment, site planning, technical assistance for site remediation, and liability assurances. A multitude of state programs designed to promote brownfields redevelopment and related activities, and various state agencies play a role in these redevelopment efforts.

One common type of state program is the Voluntary Cleanup Program (VCP). In many states, VCPs have become instrumental in the redevelopment of contaminated sites. VCPs allow voluntary parties, such as site owners or developers, to approach state governments and initiate environmental cleanups. These programs provide incentives to voluntary parties to clean up sites rather than rely on enforcement orders to accomplish remediation. Incentives to participate differ from state to state, but most VCPs include conditional exemptions for property owners from future state liability. Other common features are streamlined investigation and cleanup procedures, more expedient and economical cleanup alternatives, and cleanup standards that vary based on the future use of the site. The assurances are often issued as a "No Further Action" certificate or "Certificates of Completion," acknowledging that contaminated properties have been treated to levels sufficient to meet VCP standards. In other cases, legal contracts in the forms of Covenants Not to Sue are issued to protect site owners and developers against future liabilities should unanticipated environmental hazards be discovered later.

In addition to Voluntary Cleanup Programs, most coastal states, including those on the Great Lakes have a Coastal Zone Management Program, that may offer resources and assistance to port communities. The Coastal Zone Management Program (CZMP) is a federally approved state program administered at the federal level by the National Oceanic and Atmospheric Administration (NOAA). The program offers financial assistance, mediation, technical services and information, and participation in regional, state, and local forums. The CZMP leaves day-to-day management decisions to state-level offices in the thirty-four states and territories with federally approved coastal management programs. State and federal efforts in coastal zone management are guided by the CZMP's Strategic Framework, which is organized around three major themes: sustain coastal communities, sustain coastal ecosystems, and improve government efficiency.

Table 3-1 presents state government resources available for port projects in Massachusetts, Ohio, Florida, Maryland, and California. The programs listed are not exhaustive. Rather they exemplify the types of state programs that are available for the redevelopment of ports.

Federal Resources

For assistance with portfields redevelopment projects, communities can turn to the following federal agencies: the U.S. Environmental Protection Agency (EPA), the National Oceanic and

Bringing Port Liberty Back to Life in Baltimore

Used for shipbuilding during World War II, the thirty-acre Port Liberty site in Baltimore has extensive lead contamination. A private developer acquired the site in the 1980s for an industrial park, but the plan never came to fruition and the site sat vacant for the next several years. In 2001, the site was redeveloped to accommodate three businesses: an auto importer, a cable company, and a stone cutting company. Remediation, including soil removal and capping, was required to prevent lead runoff into the harbor. Monitoring for leaks and cap integrity will be ongoing. The Baltimore Development Corporation helped with cleanup and assessment financing. Through them, the Port Liberty redevelopment project was able to receive a $400,000 grant from the Maryland Department of Business and Economic Development (DBED) Revitalization Program a $400,000 loan from the HUD Empowerment Zone Brownfields Incentive Program loan, and other incentives.

Table 3-1 State Resources for Port Redevelopment

Massachusetts

Massachusetts Brownfields Program. Offers generic liability protection to eligible persons and tenants who did not cause contamination and to site owners who have contamination problems on their property that originated off-site.

Brownfields Redevelopment Fund. Provides low-interest loans for eligible persons for site assessment and cleanup in economically distressed areas. Cities, redevelopment authorities, and community development corporations can seek grants instead of loans.

Reclamation Pay Back Fund. Provides loans for site assessment and cleanup to cities or towns that certify that they will pay back the loan with half the property taxes generated by the redevelopment.

Brownfield Redevelopment Access to Capital (BRAC) Program. Subsidizes environmental insurance (up to half of the premium) for unanticipated costs associated with an approved cleanup. This program protects lenders from defaults on private loans made for cleanup and redevelopment.

Massachusetts Economic Development Incentive. An incentive geared toward properties in Economic Opportunity Areas. It includes a five percent investment tax credit and a ten percent abandoned building tax deduction.

Brownfield Credit for Rehabilitation of Contaminated Property. Innocent parties who clean up sites in economically distressed areas receive tax credits ranging from 25 percent to 50 depending on the level of cleanup and the new use of the site.

Back Taxes Negotiation. Municipalities are allowed to negotiate away back taxes on contaminated sites if the new owner makes a commitment to clean and restore the site to tax rolls.

Seafood Loan. Provides fixed asset financing for the purchase of land, buildings, and equipment for seafood facilities and for the construction or renovation of seafood facilities. Direct loans are also available for facility expansions.

Redevelopment Assistance. Small grants (less than $25,000) that support early-stage economic development projects. Applicants must match state funds dollar for dollar.

Ohio

Clean Ohio Fund. Authorizes the state to issue $200 million for brownfields redevelopment activities and $200 million for greenspace preservation. There are four initiatives under the fund, which was approved in a ballot initiative in 2000:

- *The Clean Ohio Revitalization Fund* for brownfields cleanup and redevelopment
- *The Clean Ohio Green Space Conservation Program* for preservation of open spaces, sensitive ecological areas, and stream corridors
- *The Clean Ohio Trails Fund* for creation and completion of trail systems and the preservation of natural corridors
- *The Clean Ohio Agricultural Easement Purchase Program* for the preservation of farmlands through the purchase of development rights.

Urban Redevelopment Loan Program. Provides loans to municipalities or nonprofit economic development organizations for real estate activities, such as site remediation, in distressed areas.

Water Pollution Control Loan Fund. Issues low-interest loans for water-related brownfields activities.

Ohio Water Development Authority. Extends loans to public or private entities for brownfields redevelopment and to projects dealing with drinking water, stormwater, sewage, water pollution, coastal erosion control, and several other development issues.

Competitive Economic Development Program. Offers grants to cities of fewer than 50,000 residents for business expansion and retention. Cities may loan some of the funds to businesses to be spent on brownfields remediation projects that will create or retain jobs.

Florida

Waterfronts Florida Partnerships Program. Provides technical assistance and training to create community-based, special area management plans. The program also provides limited financial assistance for implementation over two years. Through this program, the Florida Department of Community Affairs and the Department of Environmental Protection are working with local partners to restore economic vitality to working waterfront areas.

Florida Brownfields Redevelopment Program. Reduces public health and environmental hazards on commercial and industrial sites that are abandoned or underused due to these hazards; creates financial and regulatory incentives to encourage voluntary cleanup and redevelopment of sites; sets cleanup

(continued)

Table 3-1 State Resources for Port Redevelopment *(continued)*

target levels and a process for obtaining a "No Further Action" letter using Risk-Based Corrective Action principles; and promotes environmental equity and justice. Financial incentives include low interest loans to clear the property's title, sales tax credit on building materials for housing or mixed-use projects, and state loan guarantees.

Voluntary Cleanup Tax Credit. Encourages voluntary cleanup of sites contaminated by dry cleaning solvent or brownfields sites in designated "Florida Brownfield Areas." An eligible applicant can receive up to 35 percent of the costs of its voluntary cleanup activity. These tax credits can be applied toward the state corporate income tax or intangible personal property tax.

Brownfield Redevelopment Job Bonus Refund. Encourages redevelopment and job creation by offering up to $2,500 for every new job created in a designated brownfields area. Refunds are based upon taxes paid by the business.

Maryland

Maryland Voluntary Cleanup Program. Provides a menu of cleanup options, including uniform risk-based standards, site-specific risk assessment, federal/state soil standards or water quality standards, and other federal and state standards. It offers a No Further Requirements Determination or Certificate of Completion. The Maryland Department of the Environment also conducts site assessments, at no cost, for publicly owned brownfields sites.

Brownfields Revitalization Incentive Program. Offers five-year tax credits to offset increases in property tax due to remediation. Specifically, it offers a 50 percent state tax credit and a 20 percent local tax credit. These tax credits may be extended to ten years in designated Empowerment Zones. This incentive is available in jurisdictions that agree to contribute 30 percent of the property tax increase to the state's Brownfields Revitalization Incentive Fund.

Brownfields Revitalization Incentive Fund. Offers low-interest loans and grants to persons conducting environmental site assessments and voluntary cleanups of brownfields.

California

California Voluntary Cleanup Program. Helps corporations, real estate developers, and local and state agencies to restore properties. California's VCP is administered under the California Environmental Protection Agency's Department of Toxic Substances Control (DTSC), Those entering into the VCP fund the cleanup and DTSC's work on the project. DTSC supplies the expertise of a team of on-staff scientists, engineers, industrial hygienists, and other specialists. The team manages and cleans up the site, coordinates with other agencies, and offers assistance in complying with related laws.

Cleanup Loans and Environmental Assistance to Neighborhoods Loan Program. Provides low-interest loans for environmental assessments and cleanup and removal of hazardous materials.

Mello-Roos Districts. A district designation that allows the community to abate property taxes and issue bonds to capitalize a revolving loan fund for site assessment and cleanup.

Atmospheric Administration (NOAA) and the Economic Development Administration (EDA) of the U.S. Department of Commerce, the Army Corps of Engineers (the Corps) of the U.S. Department of Defense, the U.S. Department of Agriculture (USDA), the U.S. Department of Transportation (DOT), the National Institute of Environmental Health Sciences (NIEHS) of the U.S. Department of Health and Human Services, the U.S. Department of Housing and Urban Development (HUD), the Fish and Wildlife Service (FWS) and the National Park Service (NPS) of the U.S. Department of the Interior, and the U.S. Departments of Labor, Justice, and Treasury. Table 3-2 presents just a sampling of the federal programs that are available. It should not be considered an exhaustive list.

Nongovernmental Resources

Multiple nongovernmental sources of funding and technical assistance (for example, from foundations, local and national nonprofit organizations, and educational institutions) support various aspects of port redevelopment. Local governments and port authorities should tap into these sources when appropriate, along with the public sources discussed earlier. One other excellent

Table 3-2 Federal Resources for Port Redevelopment

U.S. Environmental Protection Agency

The U.S. Environmental Protection Agency (EPA), the federal government leader in brownfields cleanup and redevelopment, has many programs of benefit to communities that want to revitalize their ports. EPA heads the Interagency Working Group on Brownfields and coordinates the multiple federal partners in the Brownfields National Partnership. This partnership links environmental remediation, economic development, public health, and community revitalization efforts to address the multifaceted nature of the brownfields problem.

Brownfields Assessment Grants. Provide funding to inventory, characterize, assess, and conduct planning and community involvement related to brownfields sites.

Brownfields Cleanup Grants. Provide funding to clean up brownfields sites.

Brownfields Revolving Loan Fund Grants. Provide funding to capitalize a revolving loan fund. Subgrants are available for cleanup activities at brownfields sites.

Brownfields Job Training Grants. Help train and empower residents in brownfields communities. The funding brings together community groups, job training organizations, educators, investors, lenders, developers, and other affected parties.

Clean Water State Revolving Loan Fund. Low-interest loans that may be used for site assessments, reduction of non-point-source pollution, constructing wetlands, and other purposes including property acquisition.

Brownfields Technology Support Center. Provides technical support to federal, state, and local officials for investigation and cleanup of brownfields sites. The Center can help decision makers evaluate strategies to streamline the site investigation and cleanup process, identify and review information about complex technology options, evaluate contractor capabilities and recommendations, explain technologies to communities, and plan technology demonstrations.

Hazardous Substance Research Centers-TOSC/TAB. Thirty universities nationwide form a network of five Hazardous Substance Research Centers (HSRCs), each serving one to three EPA Regions. They are funded by the U.S. Environmental Protection Agency (EPA), the Department of Energy, and the Department of Defense, with additional funding from academia, industry, and other state and federal government agencies. The Technical Outreach Services for Communities (TOSC) program is a service of the HSRC program. TOSC uses university resources to help community groups understand the technical issues involving the hazardous waste sites in their midst. It encourages communities to participate in the decision-making process regarding their hazardous substance problems. Technical Assistance to Brownfields Communities (TAB) helps communities to clean and redevelop properties that have been damaged or undervalued by environmental contamination. The purpose of these efforts is to create better jobs, increase the local tax base, improve neighborhood environments, and enhance the overall quality of life.

U.S. Department of Commerce, National Oceanic and Atmospheric Administration

The U.S. Department of Commerce's National Oceanic and Atmospheric Administration (NOAA) is the primary coastal stewardship agency and a leader in promoting safe navigation. To revitalize urban estuaries and port areas while improving coastal habitat, NOAA is engaged in brownfields redevelopment from a number of perspectives. With its sister agency, the Economic Development Administration, NOAA is attempting to balance environmental and economic priorities for U.S. ports and other marine transportation systems.

Coastal Zone Management Program. Provides technical and financial assistance in voluntary partnerships with states. The program helps states with NOAA-approved Coastal Management Plans to protect and revitalize coastal resources. Funds can be used for feasibility studies, site assessments, and master plan development.

Office of Response and Restoration (OR&R). Protects and restores contaminated coastal resources and habitats through cost-effective environmental cleanup and restoration solutions at brownfields sites. OR&R provides a NOAA employee to the city of New Bedford to bring enhanced federal resources to bear on brownfields and portfields sites.

National Marine Fisheries Service and Science Centers ("NOAA Fisheries"). Administers NOAA's programs on domestic and international conservation and management of living marine resources. NOAA Fisheries supports domestic and international fisheries management operations, fisheries development, trade and industry assistance activities,

(continued)

Table 3-2 Federal Resources for Port Redevelopment *(continued)*

enforcement, protected species, and habitat conservation operations, and, through Science Center offices, the scientific and technical aspects of NOAA's marine fisheries program. NOAA Fisheries provides evaluations, consultations, and permits, including navigational and environmental dredging.

National Ocean Service (NOS). Develops the foundation for coastal and ocean science, management, response, restoration, and navigation. NOS maintains its leadership role in coastal and ocean stewardship by bridging the gap between science, management, and public policy in the following areas: healthy coasts, navigation, coastal and ocean science, and coastal hazards. This office includes the Coastal Zone Management Program and the Office of Response and Restoration.

U.S. Department of Commerce, Economic Development Administration

The Economic Development Administration (EDA) within the Department of Commerce generates new jobs, help retain existing jobs, and stimulates industrial and commercial growth in economically distressed areas. EDA assistance is available to rural or urban areas experiencing high unemployment, low income, or other severe economic distress. Since 1997, EDA has identified brownfields as strategic priorities for the projects that it funds at the local level. Generally, EDA provides communities with funds to make infrastructure improvements and to begin capitalized revolving loan funds, as well as other forms of support.

Public Works and Economic Development Facilities Program. Allows EDA to bolster economic development efforts in disadvantaged communities intended to attract local, private sector, and public sector funding for redevelopment projects. In many cases grant funding is used to develop or revamp deteriorated infrastructure on brownfields sites that are well suited for industrial or commercial redevelopment or both. In addition, this program allows special infrastructure and property enhancements for specific industries. Job training and job creation are other features of the program.

Planning Assistance for Economic Development Districts, Indian Tribes, and Redevelopment Areas. Strengthens local economic bases in disadvantaged areas including Indian communities and designated economic districts. Funding is provided through planning grants to generate and retain jobs as well as to stimulate industrial and commercial growth.

Short-term Planning Grants for States, Substate Regions, and Urban Areas. Provide distressed urban metropolitan areas as well as states with funding to encourage widespread economic revitalization. These planning grants are aimed at revitalizing commercial and industrial growth for an intrastate region or an entire state.

Local Technical Assistance Program. Provides funding and technical assistance to a broad range of communities and interest groups through state and local governments, educational institutions, and public-private institutions; promotes economic revitalization through comprehensive planning strategies including sustainable development and brownfields reuse.

U.S. Department of Defense, Army Corps of Engineers

The U.S. Army Corps of Engineers (the Corps) offers planning and technical consultation on brownfields redevelopment projects to communities and to other federal agencies. Many of those services focus on waterfront or waterway projects. The Corps provides appraisal, title, and deed restriction services; performs market impact studies and cost-benefit analyses; shares laboratory and field research data; develops environmental and structural frameworks for projects with contractors in pilot communities; and carries out projects to protect, restore, or create aquatic and ecological habitats related to the disposal of dredged materials.

Federal Navigation Projects. Maintain and improve channels by dredging to specified depths and widths and removing impediments like logjams. The navigation program includes all of the nation's deep draft harbors as well as hundreds of smaller harbors that serve a variety of recreational and commercial purposes.

Flood Control. Efforts ranging from small local protection projects (levees or nonstructural flood control measures) to major dams. Through its Flood Plain Management Services, the Corps advises communities, industries, and property owners on protection measures (such as zoning regulations, warning systems, and flood proofing,) that they can take themselves.

Environmental Programs. Ecosystem restoration programs to re-establish the attributes of a natural, functioning, and self-regulating ecosystem; environmental stewardship programs; environmental and natural resource management programs and compliance programs.

Table 3-2 Federal Resources for Port Redevelopment *(continued)*

Wetland and Waterways Regulation. Regulate activities in navigable waterways through granting permits. The Corps has regulatory authority over dumping of trash and sewage, as well as dredging and filling, in the "waters of the United States," including many wetlands. The Corps also determines which areas qualify for protection as wetlands.

U.S. Department of Agriculture

The U.S. Department of Agriculture (USDA) supports brownfields and other development initiatives through its many agencies and regional offices. USDA is the primary agency working in rural America, but its Forest Service promotes restoration and conservation of forested land and open space in both rural and urban areas.

Urban Resources Partnership. Provides federal resources to community-based and community-driven environmental projects in traditionally underserved neighborhoods of metropolitan areas. Working with federal, state, and local agencies, and stakeholders in the private sector, USDA contributes funding and technical assistance to education and restoration efforts in cities throughout the country. This partnership promotes the reuse of brownfields and other blighted properties.

Empowerment Zones and Enterprise Community Initiative. Emphasizes the revitalization of disadvantaged communities. Rural and small community EZ/EC efforts are run by USDA and urban EZ/EC programs are administered by the Department of Housing and Urban Development. Due to the historic location of industry and the location of workers' housing near waterways, many portfields projects are within EZ/EC communities.

U.S. Department of Transportation

The U.S. Department of Transportation (DOT) seeks to advance national growth through efficient, accessible, and convenient transportation and to protect the natural environment from adverse impacts of DOT-funded activities.

U.S. Maritime Administration (MARAD). Oversees the interests of U.S. domestic and international waterborne commerce, including the maintenance of a safe and environmentally sound maritime transportation system and the promotion of national security and economic growth through maritime endeavors. MARAD is able to contribute to waterfront redevelopment through economic and technical assistance. It recognizes the importance of shipyard revitalization and upkeep and has devised a number of programs to streamline operations in this industry. Those programs do not address redevelopment in the conventional sense. Rather they encourage financial stability and bureaucratic efficiency in shipbuilding industries.

Congestion Mitigation and Air Quality Improvement Program (CMAQ). Reduces transportation-related pollution. CMAQ funds are available to a wide range of government and nonprofit organizations. These organizations often plan or implement air quality projects as well as provide CMAQ funding to others to implement projects.

Transportation Equity Act for the 21st Century (TEA-21). Seeks to counteract the negative effects on communities of highway construction. It allows states to apply up to 40 percent of federal surface transportation funds to enhancements such as bicycle and pedestrian facilities, safety and educational activities for pedestrians and cyclists, conversion of abandoned rail corridors into greenways and trails, preservation of historic and archeological sites, and conservation of ecologically sensitive and scenic areas. TEA-21 funds can be used for planning grants, implementation grants, bicycle and pedestrian walkway projects and research to investigate the relationships between transportation, community, and system preservation.

U.S. Department of Health and Human Services, National Institute of Environmental Health Sciences

The National Institute of Environmental Health Sciences (NIEHS) strives to reduce human illness through investigating and understanding health issues resulting from environmental causes. NIEHS conducts community outreach, prevention, intervention, research, and education, and it supports brownfields redevelopment through worker training (for example, administration of the Brownfields Minority Worker Training (MWT) program) and through research conducted by the Superfund Basic Research Program.

U.S. Department of Housing and Urban Development

The U.S. Department of Housing and Urban Development (HUD) has been a leader in supporting brownfields cleanup and redevelopment at the local level. It has a network of regional and field offices

(continued)

Table 3-2 Federal Resources for Port Redevelopment *(continued)*

with professional expertise in community and economic development, transportation, public health, housing, and a number of other fields by which it extends technical assistance to local governments and community organizations.

Community Development Block Grants (CDBG). Develop viable urban communities by providing decent housing and a suitable living environment and expand economic activities for low- and moderate-income communities. The annual funding allotments for these grants are split between states and local jurisdictions with populations of 50,000 and above. CDBG funds may be used for a wide variety of activities that could be useful in portfields projects, including site assessment, remediation, redevelopment, and planning, as long as the activities benefit low- and moderate-income persons, prevent or eliminate slums or blight, or have a particular urgency because existing conditions in the community pose a serious and immediate threat to the health or welfare of the residents.

Section 108 Guaranteed Loans. Act as a second-tier funding mechanism to recipients of CDBG financing and are designed to stimulate private investment in redevelopment communities. Entitlement communities and states may use these secured loans to finance large-scale redevelopment projects that often address multiple facets of community revitalization. These funds must address community needs as specified in CDBG financing.

Brownfields Economic Development Initiative (BEDI). Finances projects that contribute to near-term economic benefits for low- and moderate-income communities by creating jobs or increasing the tax base. BEDI funds are very flexible and can be used for the full scope of brownfields activities. For example, BEDI funds help communities acquire brownfields sites, demolish existing buildings, install needed infrastructure (water and sewer lines, roads), construct or rehabilitate structures, conduct job training, provide business loans, create public facilities, and attract business start-ups and expansions.

Empowerment Zones and Enterprise Community Initiative. Help revitalize disadvantaged communities. HUD administers urban EZ/EC programs; USDA administers rural and small community EZ/EC programs. Due to the historic location of industry and the location of workers' housing near waterways, many portfields projects are within EZ/EC communities.

U.S. Department of the Interior, Fish and Wildlife Service

The U.S. Fish and Wildlife Service (USFWS) relies on more than 700 field units within seven geographic regions to regulate activities throughout the United States. It also fosters partnerships among government, public, and private institutions to encourage voluntary conservation efforts on private properties. In addition, USFWS has been involved in numerous channeling and dredging projects. Working with the appropriate state or federal agencies and the responsible parties, USFWS tries to minimize the negative environmental impacts of brownfields. When appropriate, a covenant not to sue can be granted, or in extreme circumstances the USFWS can undertake a Natural Resource Damage Assessment (working in conjunction with other Natural Resource Trustees) to ensure that threatened and endangered species, migratory birds, anadromous fish, and their habitats are restored.

U.S. Department of the Interior, National Park Service

The U.S. Department of the Interior (DOI), the government's principal conservation agency, manages the majority of publicly owned lands in the United States, including the national park system. DOI is charged with protecting and providing access to natural and cultural resources.

Land and Water Conservation Fund (LWCF). Helps communities acquire parkland, water resources, and open space for conservation and recreation. States can use LWCF matching grants to acquire and develop lands with high recreation potential, to build or redevelop recreation and park facilities, to create riding and hiking trails, to enhance access to recreation, and to conserve natural resource areas.

Rivers, Trails, and Conservation Assistance Program. Provides technical assistance to local governments, nonprofit organizations, community groups, tribes, and states to conserve rivers, preserve open space, and develop trails and greenways. Example projects include enhancing ecological habitat, restoring urban forests, and creating greenways.

Urban Park and Recreation Recovery Program (UPARR). Provides funding and technical assistance to economically distressed urban communities without adequate recreation opportunities. Grants are provided to local governments to rehabilitate existing recreation facilities and to encourage comprehensive planning, operation, and maintenance of

Table 3-2 Federal Resources for Port Redevelopment *(continued)*

recreation programs. Some of the UPARR grants can be used to develop programming for recreation (for example, environmental education or interpretive programs) and to improve amenities, (for example, security features and lighting) at urban parks.

U.S. Department of Labor

The U.S. Department of Labor (DOL) fosters, promotes, and develops the welfare of working people by improving working conditions and enhancing opportunities for profitable employment. It offers job and life skills training that complements environmentally focused training programs designed to help assess and clean up brownfields. Together these programs ensure that the community residents most affected by brownfields will directly benefit from their redevelopment.

Job Training Partnership Act. Provides job-training services for economically disadvantaged adults, dislocated youth, and others who face significant employment barriers. It seeks to move jobless individuals into permanent, self-sustaining employment, and it promotes stakeholder participation in brownfields redevelopment.

Adult Training Programs. Increase participants' employment retention and earnings as well as occupational skill attainment. This program aims to improve the quality of the workforce, reduce welfare dependency, and enhance the productivity and competitiveness of the nation's economy.

U.S. Department of Justice

The Office of Justice Programs (OJP) in the U.S. Department of Justice (DOJ) focuses on justice issues at the state and local levels. Two divisions of OJP, the Executive Office of Weed and Seed and the Community Relations Service, are involved in activities that support brownfields redevelopment.

Executive Office of Weed and Seed (EOWS). Implements a strategy that "weeds out" violent crime, gang activity, drug use, and drug trafficking in targeted neighborhoods then "seeds" the area with social and economic revitalization programs. EOWS recognizes the importance of linking federal, state, and local law enforcement programs with social services, the private sector, and community efforts to maximize the impact of existing programs and resources

Community Relations Service (CRS). Addresses environmental justice concerns in communities and neighborhoods where brownfields redevelopment issues are prevalent. The CRS is dedicated to preventing and resolving perceived and actual discrimination in local communities. It educates leaders of minority and impoverished communities about techniques to resolve disputes, as well as about the financial merits of brownfields revitalization efforts.

U.S. Department of Treasury

The Brownfields Tax Incentives program of the U.S. Treasury leverages private sector investments for brownfields redevelopment projects. Taxpayers can deduct environmental remediation expenditures under certain circumstances. Projects in eligible districts include EZ/EC communities, EPA Brownfields Demonstration Assessment Pilot communities, communities identified as having poverty rates of 20 percent or higher, or those with fewer than 2,000 residents in which more than 75 percent of lands are zoned for commercial or industrial uses.

source of information and programs specific to ports is the American Association of Port Authorities. It has, for example, a new program to train port staff how to develop Environmental Management Systems.

Foundations' grants and loans that could be used for port redevelopment projects often depend on the end use. For example, the Kellogg Foundation has a loan fund for high-risk business development. Sports foundations, such as Major League Baseball and the National Soccer Foundation, offer grants to build fields or facilities for their specific sports. Other foundations support different uses based on their mandates. The Urban Parks Initiative of the Wallace Reader's Digest Funds provides aid to increase the quality and quantity of parks for public use, especially in underserved neighborhoods. In a mixed-use port area, these funding sources may be appropriate, although they would not be available if all of the development is for maritime industry.

Local and national nonprofit organizations can also offer funding or technical assistance for certain types of port redevelopment projects. The Trust for Public Land, the Rails to Trails Conservancy, the National Recreation and Park

Association, and other organizations committed to recreation and open space preservation may offer support for the development of greenways, trails, parks, and interpretive materials. Others, like the Audubon Society, help to restore and maintain habitat areas. Organizations with an historical or cultural preservation focus, such as the National Trust for Historic Preservation, or local organizations (like New Bedford's Waterfront Historic Area League) can assist ports in preserving historic areas or help with identification of local historic structures. Local nonprofit organizations, with their smaller budgets than those of national nonprofits, are more likely to offer technical assistance or training programs than money. For example, the Youth Employment Program in Oakland trained young, low-income adults to deconstruct warehouses at the port of Oakland and salvage recyclable materials.

Academic institutions often can provide a community with resources that it may not have access to otherwise. Using university students as interns or for technical assistance can benefit the community, the student, and the university. Students receive hands-on, tangible work experience, and the community or local government receives services that it may not have the time or resources to undertake. Partnerships open the door for an ongoing dialogue between the university and surrounding community. Establishing these lines of communication can lead to other opportunities for collaboration. University staff can lend their expertise to a local project, students can provide technical assistance as part of their coursework, or interns can research and write grant applications for new sources of funding. All communities can benefit from a university's involvement in port redevelopment, but internships or technical assistance programs are especially helpful to local governments in small communities with a few staff members.

Another nongovernmental resource is environmental insurance, which can be used to limit liability for contamination, to quantify risk, and to lessen financial unknowns. An individual property owner, a consortium of owners of contiguous properties that share contamination, or an outside entity, such as a local government or port authority, can purchase environmental insurance. The insurance can be used as an economic incentive to stimulate brownfields redevelopment by attracting potential developers and investors. Or the insurance can be used to encourage current landowners to make their brownfields sites available for redevelopment. For example, at a former U.S. Navy site at the port of Oakland, the navy funded the cleanup. It paid environmental insurance premiums in case unexpected contamination was detected (pollution legal liability) or to cover cost overruns (cost cap insurance).

Conclusion

A continued commitment by public and private stakeholders is needed to keep port projects afloat. The cleanup and redevelopment of portfields require resources at six stages: assessment, planning, remediation, site assembly, construction or development, and maintenance. This chapter has described these stages and the financial and technical resources available to port communities from local, state, and federal government sources as well as the private sector.

CHAPTER 4

Summary and Recommendations

The Portfields Interagency Initiative is a federal project focusing on the redevelopment and reuse of brownfields in or around ports, harbors, and marine transportation hubs. Its emphasis is on the development of environmentally sound port facilities. Phases I and II have been completed, and the last phase will implement pilot projects that can be used as models for other communities redeveloping their portfields.

Benefits of Redeveloping Portfields

The benefits of portfields redevelopment are many. Redevelopment can remove or stabilize dangerous structures and contamination in or near waterways; restore health and natural functions to watersheds by improving surface-water and groundwater quality; remediate and restore wetlands, woodlands, and habitat; improve stormwater management systems; reduce health risks for nearby communities and waterway users; remove eyesores; and help improve air quality. Reuse of these sites can provide jobs, goods, and services and help increase the community's access to, and pride in, its waterfront.

By redeveloping portfields sites, communities can expand their port facilities, increase commercial port activity, and provide economic development opportunities. Space is made available for various uses, and more property is available for sale or lease, providing ports with a source of revenue.

Goals of Portfields Redevelopment

The goals that drive port revitalization are surprisingly similar nationwide. Increasing port commerce while protecting the environment and human health seems to be the most important goal of ports today, followed closely by economic development, job creation, environmental cleanup and restoration of land and water, and improved transportation systems. Phase I ports also cited the importance of improving harbor access and access to existing port facilities. Increased tourism, revitalized fishing and seafood industries, commercial development, expanded distribution capabilities, and "green development" are other goals.

Various Stakeholders in Portfields Redevelopment

Successful redevelopment of portfields requires the active participation of stakeholders in every stage of the planning process. They develop the vision for site reuse, prioritize resources, and even contribute to long-term maintenance of redeveloped sites. Stakeholders with a vested interest in the redevelopment and revitalization of ports include the port authority, local government officials, state and federal agencies, community members, nonprofit organizations, and private sector developers, lenders, and port users. If partnerships among these various stakeholders are created, waterfront communities can achieve much better results than would be possible if each party with a vested interest in redevelopment acted alone. It is often very challenging to ensure that all stakeholders are coordinated, that their interests and priorities are considered, and that they are able to participate fully in the process, but they all have an important role to play in improving ports. Ports that have had successful redevelopment projects have found extensive upfront planning involving all stakeholders to be very valuable. Getting everyone together at the beginning resulted in development of joint solutions and greater buy-in.

Protecting the Environment

After many years of heavy industrial usage and transport of potentially dangerous materials, ports face numerous environmental challenges. These include cleaning up contaminated sites along the waterfront as well as contaminated sediments in the channels. Wetland loss and ecosystem disturbance are other recurring problems, since many ports are located on filled wetlands. Numerous ports are in ozone nonattainment areas due to industrial uses and emissions from idling ships. These ports are developing approaches to reduce their own emissions, and they are working with nearby communities to do the same. Ports today are attempting not only to clean up past contamination when redeveloping portfields sites, but also to prevent future contamination. With wetland creation, management of contaminated sediment, stormwater management, and overall watershed management strategies, ports are seeking to improve both water and coastal ecosystem functions. In short, environmental considerations have played a major role in the revitalization of portfields by Phase I ports.

Recommendations

The federal agencies partnering in the portfields project are looking at ways to coordinate their efforts for the benefit of port communities. The ports interviewed for this report offered several suggestions about how these federal agencies could better serve them.

Some of the suggestions addressed basic needs of ports, such as help with permitting, funding, and technical assistance/expertise. Some port communities advocate a more proactive role for federal agencies. They would like the agencies to ask them what they need and explain what the agencies can do for them. One port representative recommended outreach materials that used simple stories to present complex issues and in this way gain public understanding and buy-in to portfields projects. Another suggested improved information sharing among ports throughout the country, possibly through workshops or meetings.

Many communities are not fully aware of the federal resources available to them, or they do not have a mechanism for accessing them. One recommendation is for agencies to match their capabilities to ports' specific needs. Ports need to know which of the agencies' programs are applicable and available. This suggestion implies more than a list of federal programs. An understanding is needed at the agency level of an individual port's plans and problems. The agency can then offer assistance that is tailored to the relevant issues. This could be accomplished through facilitated dialogues, forums, or meetings between federal agency officials and port representatives.

Another suggestion is the formation of special permitting teams that could respond to projects flexibly and quickly. Since many permits are administered by state agencies, they would

have to work with the federal partners. Staff from the appropriate agencies could come together on these teams and focus on a particular project, concentrating on all of the permitting issues and necessary approvals for that project before moving on to another project. Currently, projects can get tied up in the permitting process, with different permits in various stages at the different agencies. Consequently, approvals can be delayed. The special permitting teams proposed above could speed up this process.

An additional suggestion is the creation of a partnership funding stream dedicated to brownfields and/or portfields projects. Some communities find that a project may meet criteria for various federal assistance programs, but they do not have the time or staffing to pursue them all. With a dedicated partnership program, one application could receive the attention of several agencies. For example, a portfields project may meet grant criteria of EPA, HUD, and NOAA. Instead of applying to the one agency the port thinks it would have the best chance of receiving a grant from, it would apply to this partnership funding stream in the hopes of getting a larger aggregate amount.

The Portfields Interagency Initiative grew out of the success of the Brownfields Showcase Community model, which included a grant and a two-year Interagency Personnel Assignment, so this model will be used as a guide for partnering and serving port communities.

A Look Ahead

By 2020, international maritime trade at U.S. ports is expected to double, exerting pressure on highly developed coastal areas. Phase I ports are improving their aging infrastructure to handle this anticipated increase in development and trade. Portfields redevelopment will facilitate the improvements that are essential in marine transportation and trade in the twenty-first century. In addition, revitalization of America's portfields will provide environmental, economic, and social benefits, as well as an opportunity to make homeland security improvements.

APPENDIX

Port Fact Sheets

Port of Baltimore

Baltimore, Maryland

Depth of Channel: 35 feet
Cargo: Over 30 million tons per year
Major Activities: mixed cargo, recreational boating, cruise ship terminal
URL: http://www.mpa.state.md.us

The port of Baltimore on the Chesapeake Bay has numerous privately owned and operated marine terminals and six public terminals that handle general cargo and are administered by the Maryland Port Administration (MPA). Located inland and with good access to both I-95 and I-70, Baltimore is closer to many major cities in the East, South, and Midwest than are the other major ports in the mid-Atlantic region, including Philadelphia, New York, and Norfolk. More than 30 million tons of cargo move though the port of Baltimore annually. It is the number one port in the nation for roll/on, roll/off cargo and number four for containers. It also has facilities for a wide range of bulk, breakbulk, and various other types of cargo. Cargo handling is the predominant activity at the port, but there is some recreational boating and cruise ship activity. The port of Baltimore is a significant economic engine for the entire region, generating $1.4 billion in revenue annually and employing nearly 126,700 Marylanders in maritime-related jobs. These direct impacts on the local economy have extensive multiplier effects on the economy of the entire state.

Since the terrorist attacks of September 11, 2001, the port has enhanced security by adding perimeter barriers, controlling access, and increasing the presence of security and police personnel. On legislation affecting seaport security, the port of Baltimore has worked with the American Association of Port Authorities, the Maryland Congressional Delegation, and various federal agencies. Stakeholders' main goal is to ensure security without impeding the efficient operation and commercial activity of the port.

Port Redevelopment

Using the manufacturing and waste disposal procedures of the time, the industrial production that supported Baltimore's growth left behind many contaminated land parcels that were perceived as unusable and encumbered by heavy liabilities. In 1996, the governor appointed a task force to investigate ways to return the vacant and underutilized land fronting the port to productive use. Acting on the recommendation of the task force, the General Assembly in 1999 passed House and Senate Bills that created the Port Land Use Development Zone Advisory Council and authorized the preparation of a Master Plan to guide the redevelopment of lands in a development zone within 3,000 feet of the waterfront.

Most of the Maryland Port Administration terminals are currently operating at or near capacity and there is little land with deepwater access available in the harbor. As a result, the MPA tracks the waterfront real estate market, making quick decisions when land becomes available. MPA is assessing land on either side of its existing terminals so decisions about expansion can be made. It also is working with the city and county to ensure that waterfront property is reserved for water-dependent uses and waterborne commerce.

Many port development projects require environmental mitigation. The port has been involved in oyster reseeding and tree planting projects, and it is managing the design and construction of tidal wetlands within the Chesapeake Bay. Its commitment to preserve the environment has been demonstrated by protecting wetlands habitat, cleaning up contaminated properties and returning them to productive use, creating a conservation easement, and funding a shipboard demonstration of ballast water treatment technology to manage risk from invasive aquatic species.

More than 2 million cubic yards of silt are deposited in the Chesapeake Bay each year. To maintain safety and navigation, the MPA caries out an active dredging program. Finding disposal sites for the large amount of material that must be dredged is challenging. The port has engaged stakeholders in reaching dredge disposal solutions and in establishing a long-term strategic management plan for the dredge material.

Vision

The MPA has a long-term vision for the management and activities of the port of Baltimore. It wants to remain a major catalyst in the growth of international trade, and it wants to be competitive or dominant in all international cargo flows through East Coast ports. The port, sustained by strong public and private sectors, is committed to good stewardship of Maryland's natural environment.

Goals

The Port Authority's top three goals are (1) job creation, (2) environmental cleanup/restoration, including cleanup or containment of contamination and reduction of runoff, and (3) port commerce. The port authority hopes to solidify the port's position as the leading roll on/roll off port in the country. It also wants to add to the diversity of businesses operating in the port.

Redevelopment Initiatives

Former Port Liberty Site

The thirty-acre Port Liberty site was used for shipbuilding during World War II, and later it was used by Bethlehem Steel for making oil tanks. A private company decided to purchase the site in the late 1980s, with the intention of developing a maritime-related industrial park. No tenants were found, and the land sat vacant for ten years until early 2001 when three new tenants moved in: American Port Services (an auto importer), Caldwell Cable, and a small stone-cutting company. Job creation was the Port Authority's leading goal in the redevelopment of the former Port Liberty Site. Fewer than 100 new jobs, however, were created. Since the land had been used for shipbuilding/shipbreaking, it was heavily contaminated (for example, with sealants and lead-based paint). There was not heavy runoff into the harbor before redevelopment, but preventing new runoff was a major thrust of the cleanup

operations. The major use proposed for the site was auto importing. Constructing a cap was easily done because the site was to be a parking lot. Pier removal and bulkhead improvements were also accomplished.

Masonville Marine Terminal

The first phase of development of the Masonville Marine Terminal has been completed. The forty-five inland acres of this large waterfront site have been redeveloped with an $11 million investment to provide 100 painting and detailing jobs. The second phase of development is planned for an adjacent 40-acre dredge-spoil site. Cleanup is required, since some of the dredge material used for fill was contaminated. The channel around the site will also need to be deepened and a bulkhead built to complete the terminal. The project cost is estimated at $7 million. The creation of approximately 100 additional jobs is anticipated.

Key Stakeholders in Redevelopment

- Baltimore Development Corporation
- Maryland Port Administration
- Maryland Department of the Environment
- Maryland Department of Business and Economic Redevelopment Revitalization Program
- U.S. Environmental Protection Agency
- U.S. Army Corps of Engineers
- U. S. Department of Housing and Urban Development

Financial and Technical Assistance *(for Port Liberty site)*

- The Baltimore Development Corporation (a quasi-governmental agency) helped the owner to find sources of funding for assessment and cleanup. The owner also used funds from private sources (banks). The total remediation costs were estimated at $2.4 million.
- Maryland Department of Business and Economic Redevelopment Revitalization Program provided a $400,000 grant for cleanup.
- The U.S. Department of Housing and Urban Development provided Empowerment Zone funds: specifically a $400,000 loan from the Brownfields Incentive Program and a $500,000 loan from the Business Incentive Fund.
- The U.S. Environmental Protection Agency awarded various grants and had RCRA involvement for sites on the National Priorities List.
- The U.S. Army Corps of Engineers provided filling and renovation of piers and bulkheads.

Port of Houston

Houston, Texas

Area: 3,000 acres
Depth of Channel: 45 feet
Cargo: 194 million mean tons in 2001
Major Activities: cargo terminals, cruise ship terminal
URL: http://www.portofhouston.com

The port of Houston, Texas, is a twenty-five-mile-long complex of diversified public and private facilities located just a few hours of sailing time from the Gulf of Mexico. The channel extends fifty miles to Galveston Bay and the Gulf of Mexico, with port facilities all along the channel but primarily clustered inland twenty-five miles. The port is ranked first in the United States for foreign waterborne commerce and second for total tonnage. Approximately 194 million mean tons of cargo moved through the port of Houston in 2001. A total of 6,613 vessel calls were recorded at the port during that year.

The port of Houston is an autonomous governmental entity authorized in 1927 by an act of the Texas legislature. The port authority serves as the local sponsor of the Houston Ship Channel and is responsible for fire and safety protection along the channel. The port authority is governed by a board of seven commissioners appointed by local government officials from the municipalities located along the Ship Channel. These commissioners serve without pay.

The port of Houston encompasses about 9,000 acres: about 3,000 acres used by the port authority and its tenants, 4,500 acres of wetlands, 1,500 acres that are inactive, and 1 acre for recreation.

Port Redevelopment

The port has redeveloped numerous brownfields. Some of them are parcels of land the tenant has been anxious to lease; in other cases the port has purchased a contaminated piece of property on the ship channel or discovered contamination on existing acreage while working on infrastructure improvements or maintenance.

With the aide of the state of Texas, the port of Houston initiates the cleanup and redevelopment of these brownfields sites. The port participates in a state-accelerated review program whereby the port pays the state $100 an hour to review the assessment and closure reports of the redevelopment efforts within forty-five days.

The process for redeveloping and maintaining all brownfields sites is the same: soil, water, health, and safety assessment, followed by remediation and redevelopment. Contractors are often utilized to assess and remediate the brownfields sites. If a tenant or adjoining property owner causes the contamination, the port holds this party responsible for remediation costs.

Vision

The port of Houston, one of the largest and busiest ports in the United States, will continue to grow. Its 2020 master plan includes a new Bayport container terminal among other developments. The port is also involved in the development of the state coastal zone plan. Overall, the port's priority is to become self-sufficient, without relying on bond money for project funding.

Goals

The most significant goal for the port of Houston is job creation. Port activity generates 75,487 direct jobs and 129,033 indirect jobs, but an increase in jobs due to increased port commerce is expected. While expanding its commerce, the port is committed to minimizing the impact of development on the environment.

Redevelopment Initiatives

Sims Bayou Site

The port acquired the Sims Bayou site, a petroleum refinery in the 1950s, in a land swap. Since 1985, the site has been redeveloped as a petroleum/coke rail transfer facility. The redeveloped area covered thirty to fifty acres. The most contaminated part of the property was an acre containing two sludge pits. The assessment took an extended period of time because of groundwater contamination. The sludge pits, solidified now with cement and fly ash, must be monitored over ten years. The new tenant, ARCO/BP has occupied the site with a rail transfer facility. ARCO/BP cost-shared 50 percent of the $4 million cleanup costs and co-directed the consultants and contractors with the port. There are still other sludge pits on the property with lower levels of contamination; as they are cleaned up and restored, ARCO/BP will take over the property.

Peavey Street and Wingate Sites

Peavey Street and Wingate are adjacent waterfront properties covering seven acres of land in an economically depressed community on the ship channel. The population of that community is primarily Hispanic. Peavey Street's contaminants included PCBs in the soil. The Wingate site had chromium in the groundwater, because it was a former tannery operation. In the mid 1990s, the city of Houston and the Economic Development Administration (EDA) approached the port to develop these parcels into a maritime business park or industrial park. Although the port hired a consultant to write an EPA brownfields assessment grant proposal, funding was not granted because of a lack of community outreach in the proposal. The port was, however, awarded a million dollar EDA grant, which it did not accept because of EDA requirements. For example, a lien on the property noted that the grantee must fulfill ownership for twenty years. Lease income details had to be recorded and

other provisions complied with. The port continued with the cleanup process at a cost of $300,000, but unfortunately there are no plans for economic development at this time.

Key Stakeholders in Redevelopment *(for Sims Bayou Site)*

- Port Authority of Houston
- Various state agencies
- BP (formerly ARCO)

Financial and Technical Assistance

The port of Houston and ARCO/BP, the tenant of the redeveloped site, provided financial and technical assistance.

Port of Long Beach

Long Beach, California

Area: 7,600 acres
Depth of Channel: 42 feet to be deepened to 50 feet
Cargo: 65.5 million metric tons in 2002
Major Activities: container and other cargo terminals
URL: http://www.polb.org

The port of Long Beach, located in San Pedro Bay, is the nation's second busiest container port and a leading U.S. gateway for Asian trade. Founded in 1911, the port encompasses 7,600 acres of harbors, shipping channels, wharves, cargo terminals, roadways, and rail yards. All types of cargo (petroleum, lumber, steel, newsprint, cooking oils, cement, and other products shipped in cargo containers) move through the port. It can accommodate the largest container ships in the world. The Long Beach Board of Harbor Commissioners governs the port. Commission members are appointed by the mayor and confirmed by the city council. They in turn appoint the executive director of the Harbor Department, a 300-person department of the city of Long Beach.

Long Beach is the tenth busiest container cargo port in the world. If combined, the port of Long Beach and the port of Los Angeles would be the world's third-busiest port complex. The value of cargo through the port was $88.8 billion in 2002. That year, more than 4.5 million twenty-foot-long cargo container units (TEUs) moved through the port of Long Beach. East Asian trade accounts for more than 90 percent of the shipments through the port. Trade through the port generates 320,000 jobs (one in twenty-two regional jobs in a five-county region in Southern California) and 30,000 Long Beach jobs (one in eight local jobs).

Container throughput has increased by 175 percent since 1990 and is expected to increase in the future. To handle the projected cargo growth, the port is planning to redevelop seven of eight existing container terminals and to build at least two new terminals as part of the Mega-Terminal Development Plan. The new terminals will have dockside rail facilities that allow cargo to be transferred directly between ships and trains. Proactive in transportation planning, the port invested $200 million in the $2.4 billion Alameda Corridor, a twenty-mile railway connecting the ports of Long Beach and Los Angeles and Southern California's major railheads.

Port Redevelopment

In 1987, the port of Long Beach adopted the San Pedro Bay Ports 2020 Plan, a comprehensive plan to meet projected cargo handling needs of the ports through the year 2020. This plan was a collaborative venture involving the port of Long Beach, the port of Los Angeles, and the U.S. Army Corps of Engineers. The plan provided cargo estimates for the San Pedro Ports through 2020, and it called for new cargo terminals, on-dock or near-dock intermodal transportation facilities, and 1,200 acres of landfill in the Long Beach Harbor.

The port of Long Beach Facilities Master Plan presents different strategies for growth in the port of Long Beach through the year 2020, focusing on potential development projects and general patterns of land use within the port.

It incorporates the latest cargo forecasts and capacity estimates, explores a wide range of consolidation and minimum-landfill development options, and addresses both cargo and noncargo land uses.

To meet the land requirements that are projected for the year 2020, the port would have to more than double its container terminal acreage and build on-dock railyards and other port-related infrastructure to serve the additional terminals. The port of Long Beach has refocused its approach to meeting future needs. By emphasizing projects that use existing land more efficiently, it hopes to minimize the needs for major filling. Under the Mega-Terminal Development Plan, the port will consolidate and redevelop seven of its eight container terminals into five larger terminals, each exceeding 300 acres in size.

Vision

Facilities Master Plan:

- Complete the identified near-term development projects that have been identified and implement the strategies in the Mega-Terminal Development Plan. This plan allows for expansion and growth of cargo facilities without causing major land, environmental and regulatory impacts.
- Continue to work with port tenants to ensure efficient utilization and operation of port assets. By maximizing its assets, the port will delay the need for major fill projects.
- Continue advance planning for a major fill project within the West Basin. If all of the near-term development projects are implemented and future cargo demand is consistent with the low forecast, the port will not need to acquire more land until after 2020. However, if future cargo demand exceeds the low forecast, or if the port cannot implement enough of the near-term development strategies, then a major area within the West Basin would need to be filled before 2015.
- Consider the need for additional capacity in the long term. Cargo growth will not stop in the year 2020. In addition to the near-term projects and West Basin fill project, the port might need to implement other projects to meet demands of the post 2020 period.

Goals

The main redevelopment goal is to increase the container terminal capacity to meet the port's current and long-term needs. To handle projected cargo growth, the port is implementing the Mega-Terminal Development Plan. The following projects are planned for the next decade:

- Complete a 375-acre Pier T container terminal on Terminal Island
- Construct a 160-acre Pier S terminal on a former Terminal Island oil field
- Consolidate Pier G and Pier J container terminals, and fill a proposed twelve acres of land
- Build a deepwater, liquid bulk terminal on Pier T to serve larger tankers
- Replace four-lane Gerald Desmond Bridge with a taller bridge that has at least six lanes.

Redevelopment Initiative

Described below is one redevelopment project that has been particularly successful.

Pier T (Former Naval Complex)

Over the past decade, the port of Long Beach has undertaken a variety of capital improvement projects to enhance and enlarge terminal facilities and the local transportation network. The port actively investigates and redevelops contaminated property through its ongoing port improvements. As part of the San Pedro Ports 2020 Plan, the port planned to create new land with fill and develop a new container terminal, but the opportunity to redevelop the navy site became available. Reuse of the naval complex was viewed as an excellent opportunity to provide the region with additional deep-water marine terminal facilities.

The Pier T Marine Terminal is a 375-acre container terminal developed by the port on the site of the former Long Beach naval complex. PIER T is the port's largest container cargo facility and the first in a series of mega-terminal projects

planned over the next decade. PIER T has twelve of the largest and fastest Gantry cranes, a mile of modern deep draft berths, and the largest on-dock rail yard in the nation.

The redevelopment of Pier T has been a model for reuse of military bases elsewhere. The success of this project is largely attributable to the port's decision to proceed with development at the same time that the navy was conducting environmental remediation of the property. A Lease in Furtherance of Conveyance (LIFOC), established between the city of Long Beach and the navy, allowed development to commence prior to the completion of the navy's environmental cleanup.

Before transferring the naval station complex to the port, the navy was required to identify and clean up areas of contamination. The port determined that remedial action was needed in a number of areas, including hazardous materials, storage tanks, radioactive materials, radon, storage tank removal, contaminated sediments, and soil and groundwater contamination. Recognizing the substantial time that it would take to demolish more than 200 buildings and to construct the large, new container terminal, the port decided to proceed with design and construction concurrently with the navy's environmental cleanup.

A BRAC Cleanup Team (BCT) was established with representatives from the navy, EPA, and California Department of Toxic Substances Control (DTSC). The port attended the BCT meeting, which led to a strong partnership and coordinated activities. The navy was able to use the port's development schedule to target key properties for cleanup.

During the development of Pier T, the port encountered historical preservation issues and conducted environmental mitigation. The port relocated a large colony of black-crowned night herons, an endangered species, from the former naval station to a protected area in the port. The port also created approximately twenty-two acres of shallow-water habitat as a foraging area for the endangered California least tern. The port developed an innovative way to dispose of contaminated sediment: contaminated soil and sediments are buried beneath a concrete cap within fill or major grading projects.

Key Stakeholders in Redevelopment

- City of Long Beach
- California Department of Toxic Substances Control
- California Regional Water Quality Control Board
- State Historic Preservation Office
- Advisory Council on Historical Preservation
- National Oceanic and Atmospheric Administration
- U.S. Army Corps of Engineers
- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service
- U.S. Maritime Administration
- U. S. Navy

Financial and Technical Assistance

The Pier T project cost $576 million and was financed through revenue bonds. The land was given to the port by the navy at no cost.

Port of Los Angeles

San Pedro, California

Area: 7,300 acres
Depth of Channel: minimum depth of 45 feet
Cargo: 123 million metric tons per year
Major Activities: cargo terminals, cruise ship terminal
URL: http://www.portoflosangeles.org

The port of Los Angeles is located in San Pedro Bay, approximately twenty miles south of downtown Los Angeles. The port occupies 7,500 acres of land and water along forty-three miles of waterfront. The port of Los Angeles, which handles 3,000 vessels a year, is the busiest container port in the United States and seventh busiest in the world. A department of the city of Los Angeles, the port of Los Angeles is operated and managed under the State Tidelands Trust that grants local municipalities jurisdiction over ports.

The port is not subsidized by tax dollars. Rather it is maintained through generated revenues.

The port has thirty major cargo terminals, including facilities to handle automobiles, containers, dry bulk products, and liquid bulk products. Combined, these terminals handle more than 120 million metric tons of cargo representing $102 billion. Two major railroads serve the port, and it lies at the terminus of two major freeways within the Los Angeles freeway system. Subsurface pipelines link the port to many major refineries and petroleum distribution terminals within the Los Angeles Basin. The port's World Cruise Center is the largest and busiest passenger terminal on the West Coast. A dozen cruise lines call at the port, serving more than 1 million passengers each year.

The port of Los Angeles combined with the adjacent port of Long Beach forms the third busiest container port in the world. About one quarter of all products arriving in the United States move through the ports of Los Angeles and Long Beach. The port of Los Angeles has an economic impact not only on the city of Los Angeles and the county of Los Angeles, but also on the surrounding area. Indeed, it supports one of every twenty-four jobs in Southern California.

Port Redevelopment

In 1987, the port of Los Angeles adopted the San Pedro Bay Ports 2020 Plan, a collaborative venture involving the port of Los Angeles, the port of Long Beach, and the U.S. Army Corps of Engineers. The plan provided cargo estimates for the San Pedro Ports through 2020 and called for new cargo terminals and on-dock or near-dock intermodal transportation facilities. The 2020 plan has been changed several times to update the forecasts of container cargo growth. Growth projections are vastly higher than previously estimated. The growth forecasts from the 2020 plan have been incorporated in the port's Master Plan. To keep pace with the evolving global trade industry, the port has undertaken numerous development projects, including channel deepening, rail improvements, and the building of PIER 400, the site of the nation's largest container terminal.

Vision

Growth in cargo volumes at the port of Los Angeles is unprecedented, and it is projected to continue because of the tremendous boom in international trade. Conservative estimates call for annual volume increases through the port of 5 percent to 7 percent, with an overall doubling of cargo over the next ten years. The port's vision is to accommodate this projected increase in cargo, and to meet the changing demands of shippers and carriers. Development is planned to take care of the growing volumes of imports and exports with even greater efficiency. The port is also committed to improving intermodal cargo transportation. Significant investments in infrastructure are continually being made. The port of Los Angeles invested funds in the Alameda Corridor, a ten-mile railway connecting the ports of Los Angeles and Long Beach and Southern California's major railheads.

Goals

The main goal for site redevelopment is to meet the port's current and future needs for container terminal space. In response to the dramatic increase expected in cargo volume the port is modernizing existing facilities and developing new terminals, keeping in mind the importance of incorporating environmental measures. Development is to be carried out in an environmentally responsible manner. Carefully balancing growth and development with environmental considerations is a challenge. The port accomplishes this goal through more efficient cargo-handling operations, improved infrastructure, and biological, industrial, and internal environmental programs.

Redevelopment Initiatives

Former Chevron Site

In 1990, the port of Los Angeles decided to remove twenty-two acres of contaminated land jutting into the turning basin to improve vessel traffic flow and better accommodate larger vessels in the port. Chevron had been using the site as a bulk liquid terminal, but decided to terminate its lease. Before vacating the site, Chevron spent

$30 million to remove pipelines and storage tanks, and to conduct thermal treatments and bioremediation. Contamination had also entered the groundwater, and a plume traveled off-site, so groundwater was remediated as well.

Todd Shipyard

At about the same time, Todd Shipyard, the occupant of an adjacent site, went bankrupt and terminated its lease. Six thousand jobs were lost. The property that the shipyard had occupied was contaminated with asbestos, solvents, metals, and various petroleum hydrocarbons. The port paid a private salvage company to sell off the abandoned shipyard shop and remediated the property with funds from the sale. Federal money was used only for dredging of contaminated sediments. In total, eighty acres have been redeveloped to meet the port's container terminal needs and to stimulate economic development in that area. It has also reduced uncontrolled releases of contaminants from these two sites, and has used Contained Aquatic Disposal (CAD) sites for placement of contaminated sediments from these projects and other hot spots around the harbor.

Some of the success of this redevelopment can be attributed to the port's close working relationships with the California Regulatory Water Control Board, the county of Los Angeles, Tetra Tech, Inc., the Army Corps of Engineers, and the local fire department.

Key Stakeholders in Redevelopment

- Port of Los Angeles
- Los Angeles Fire Department
- California Regional Water Quality Board
- U.S. Army Corps of Engineers
- Chevron Corporation

Financial and Technical Assistance

Chevron Corporation financed the assessment and cleanup of its site. The port financed the redevelopment of the sites.

New Bedford Harbor

City of New Bedford/Town of Fairhaven, Massachusetts

Tidal Area: 13.2 square miles
Depth of Channel: 30 feet
Cargo: 818,000 short tons in 2001
Major Activities: active fishing fleet, seafood processing, freight and passenger ferry service, cruise ship docking, recreational boating
URL: http://www.portofnewbedford.org

Considered "the seafood capital of the Northeast," New Bedford Harbor in southeastern Massachusetts has a rich whaling and fishing history. The harbor is one of the safest in the eastern United States because of to its 3.5-mile hurricane barrier, which in heavy weather protects 1,400 acres of densely developed land. Administration of the harbor is shared by the city of New Bedford and the town of Fairhaven and they work together on projects affecting the harbor.

A 1998 study showed that harbor-related businesses provide approximately $671 million in sales and 3,700 jobs to the local economy. The seafood industry (including harvesting, processing and wholesaling) alone accounts for $609 million in sales and 2,600 jobs.

In addition to the fishing fleet and seafood operations, the port has freight and passenger ferry service, export shipping, recreational boating, and cruise ship docking. Support industries also exist for all of these above activities. There is convenient air, rail, and trucking access. The port is part of the New Bedford Foreign Trade Zone (FTZ), which provides importers and exporters duty-free manufacturing opportunities. Portions of the waterfront in New Bedford and Fairhaven are classified as Designated Port Areas (DPAs) under a program to preserve and promote maritime industry. Several brownfields sites at the water's edge are targeted for port expansion, commercial, and transportation initiatives. The Harbor Development Commission (HDC) manages port properties for the city of New Bedford, advises on brownfields and underused properties to support goals of port revitalization, and works on developing, marketing, and promoting the harbor and city.

Port Redevelopment

New Bedford Harbor is viewed as a single brownfields site rather than many separate sites. Comprehensive and regional plans are based on this concept. The plans connect the port's brownfields properties to water-borne activities.

The city of New Bedford and the commonwealth of Massachusetts initiated port redevelopment and created a harbor master plan, the New Bedford/Fairhaven Harbor Plan. Approved in September 2002, the plan took four years of preparation and includes five- and ten-year implementation plans. It also provides guidance to state regulators in making permitting decisions. Multiple state and city agencies, nonprofit organizations, and private companies are closely involved in the harbor's planning and redevelopment.

Vision

The New Bedford/Fairhaven Harbor Plan incorporates four overriding principles:

1. Develop traditional harbor industries by preserving seafood-related industries; maintain the "Seafood Capital" identity.
2. Improve tourism and recreational uses of the harbor by taking advantage of economic and community development opportunities such as the Oceanarium project and the National Park designation.
3. Upgrade infrastructure essential to the success of port development and tourism, including dredging and rail and pier improvements.
4. Enhance the harbor environment by further developing the harbor as an asset for local communities and the region, and improving public access and enjoyment of the waterfront.

Goals

Goals for the redevelopment of New Bedford Harbor include the following:

- **Port commerce.** Protect and expand the seafood industry by providing affordable berthing, lengthening operating hours for twenty-four hour operation, and upgrading facilities and infrastructure. Encourage a wider mix of uses for the port (for example, ferries, cruise ships, recreational boat slips). Increase the movement of imports and exports.
- **Tourism.** Use harbor as both a working port and a tourist destination by creating open space and commercial destinations. Improve visual and pedestrian links between the downtowns and the harbor.
- **Job creation**. Maintain current port-related jobs while expanding and diversifying the job base in transportation, retail, and hospitality industries. The harbor plan anticipates the creation of 700 to 800 private sector jobs.
- **Transportation issues.** Improve harbor access through redesign and redevelopment of a major artery connecting New Bedford to the regional highway, to reduce barriers between the waterfront and downtown. Relocate and rebuild an obsolete and unreliable harbor bridge. Create a commuter rail link and develop an intermodal transportation hub.
- **Environmental cleanup and restoration.** Link port development and restoration. Prepare contaminated waterfront properties for reuse to take advantage of the opportunities that will come after the EPA Superfund cleanup.

Redevelopment Initiatives

Standard Times Field

The city of New Bedford and HDC have prepared the site for a marine industrial park, preferably for businesses related to seafood processing, that could reach 300,000 to 500,000 square feet. As of 2003, seven of the ten lots had been sold for seafood-related businesses, and one lot was targeted as the site for a bilge recycling facility. The park will help to improve the environmental condition of the port, minimize the risk of introduction of invasive species, and it should provide sufficient revenue to become self-supporting.

South Terminal

The twenty-five-acre South Terminal site is a marine industrial area mostly occupied by

seafood processing facilities. It also houses multiple support industries including fishing gear, provisioning, and paper products for processors, vessels, or tradespeople. The local job base depends on these support industries to maintain a large fishing fleet and seafood processing commodities. Future plans include the continued development of South Terminal as a major center for the seafood industry and as a place where other port-related uses can be implemented.

Oceanarium

A power plant was previously located on the 83,000 square foot site that will house a new state-of-the-art oceanarium. The oceanarium could become a major cultural and educational attraction in the region. It will contain educational displays, research and education space, offices and meeting rooms, restaurants, retail and concession areas, parking, and other related commercial uses. Reuse of this site would expand marine industrial uses at the water's edge and separate cruise ships and tourist uses from the fishing fleet and freight.

State Pier and Central Waterfront

The Central Waterfront area is adjacent to downtown New Bedford, and it includes State Pier and neighboring wharves. Potential enhancements in this area include wharf extensions for fishing vessels and berthing areas for cargo, excursion, charter, and cruise vessels. A roll on/roll off freight ferry terminal has been constructed at State Pier. Plans for this area also include space for a seasonal market and special events. Historical structures will be reused for visitor services. A pedestrian promenade for visitors to access interpretive information and view a working seaport without impeding operations will also be developed.

New Bedford Intermodal Center

The centerpiece of New Bedford's revitalization efforts is the redevelopment of a former railroad depot into an intermodal transportation center. The North Terminal 2010/New Bedford Intermodal Center Initiative involves the remediation of a twenty-five-acre brownfields site for reuse as an intermodal transportation node connecting commuter and freight rail service, passenger and commercial marine transportation systems, highways, and regional bus service.

Key Stakeholders in Redevelopment

Local Government

- City of New Bedford
- Town of Fairhaven
- New Bedford Harbor Development Commission
- New Bedford Economic Development Council
- New Bedford Office of Tourism and Marketing

State Agencies

- Executive Office of Environmental Affairs
- Executive Office of Transportation and Construction
- Department of Conservation and Recreation
- Department of Environmental Protection
- Division of Marine Fisheries, Department of Fish and Game
- Office of Coastal Zone Management
- Schooner *Ernestina* Commission
- Seaport Advisory Council

Federal Agencies

- National Park Service
- National Oceanic and Atmospheric Administration
- U.S. Army Corps of Engineers
- U.S. Coast Guard
- U.S. Custom Services
- U.S. Environmental Protection Agency

Non-profit Organizations

- Azorean Maritime Heritage Society
- Buzzards Bay Action Committee
- Coalition for Buzzards Bay
- Community Boating Center
- New Bedford Oceanarium
- New Bedford Port Society

- New Bedford Whaling Museum
- New England Steamship Foundation
- Waterfront Historic Area League

Educational Institutions

- Northeast Maritime Institute
- School for Marine Science and Technology (SMAST)—University of Massachusetts at Dartmouth
- U.S. Coast Guard Auxiliary

Private Sector

- Many diverse private businesses, especially marine related

Financial and Technical Assistance

- EPA provided Brownfields grants, Brownfields Showcase Community pilot award, Superfund cleanup including harbor dredging of contaminated sediment.
- New Bedford Harbor Trustee Council (Members include NOAA, USFWS, Massachusetts Executive Office of Environmental Affairs) provided natural resource restoration and funded a public access plan.
- NOAA provided a staff person or a two-year position through the Showcase Community pilot program.
- Massachusetts Seaport Advisory Council recommended commonwealth of Massachusetts bond funding for many New Bedford projects, including pier improvements, dredging, ferry terminal construction, harbor plan development, geotechnical services and other planning services.
- Massachusetts Office of Coastal Zone Management provided technical assistance during harbor plan development and grants oversight of harbor plan coordinator funding. CZM continues to support the city and HDC in harbor plan implementation.
- Massachusetts Department of Environmental Protection assigned an ombudsman from the Southeast Regional Office to assist New Bedford with brownfields projects.
- Massachusetts Department of Housing and Community Development provided grant funds for demolition and cleanup.
- Massachusetts Office of the Attorney General gave legal and financial support to brownfields projects, negotiated and executed an assessment and cleanup agreement with a responsible party, provided financial support for assessment activities.
- University of Massachusetts partnered with the city of New Bedford on brownfields redevelopment and job training projects.
- New Bedford Health Department issues approval on building and occupancy permit applications for brownfields.
- New Bedford Economic Development Council provides access to financial packages, including incentives, for redevelopment projects.

Port of Oakland

Oakland, California

Area: 760 acres
Depth of Channel: 42 feet
Cargo: Imports 3,455,905 metric tons per year and exports: 3,900,481 metric tons per year
Major Activities: Container port that processes 98 percent of container cargo coming into northern California
URL: http://www.PortofOakland.com

The port of Oakland is located on the eastern shore of San Francisco Bay. The city of Oakland is considered an economically distressed area, with the port being a major revenue source, employer, landowner, and social steward. The port redevelopment project generated work for 1,500 construction workers, some of whom were trained under the port's Youth Employment Program. The project also created 2,000 permanent, full-time jobs with an annual payroll equaling $300 million. Thus, the port is a major economic engine for the city of Oakland and surrounding communities.

Oakland is the fourth busiest port in the United States. It has nineteen miles of shoreline, twenty-five active deepwater berths, and thirty-

three gantry container cranes. There are hundreds of acres of developable former industrial property along the waterfront. Major imports include automobiles and parts, computer equipment, processed foods, clothing, toys/games, industrial materials, household goods, and raw materials. Major exports include fresh produce, meat products, chemicals, industrial machinery, crude materials for fertilizers, animal feed, cereal products, and raw materials. The major role of the port is to maintain its competitiveness in container commerce. Recreational opportunities at the port for community residents and Bay area visitors also are important. Restoration of the natural shoreline and bottom habitat are incorporated by the port in its improvement projects.

The port is strategically positioned in the populated San Francisco Bay area with convenient access to major rail and highway arteries. Through its development efforts, the port can offer state-of-the-art container facilities including deep berthing, cold ironing facilities, and air mitigation pilot programs. The port has a mission to be environmentally sustainable, and it is in the process of establishing an environmental management system (EMS). The port attributes its success in redeveloping brownfields and in meeting other environmental challenges to a large in-house environmental staff. Recreational opportunities have improved in recent years. A former naval facility was transformed into a thirty-eight-acre park. The port considers public outreach important. It offers public tours and works with the local community to improve access to the waterfront. It also supports increased use of the trail network.

Port Redevelopment

The overall vision for the port is to accommodate all container shipping and maintain competitiveness in the global shipping market while improving environmental conditions through the port's redevelopment projects. The port plans to deepen its channel to 50 feet from the current 42-foot depth. Clean sediment in the channel will be used for filling holes and deep areas in embayments to create shallow water habitat, including restoration of eelgrass beds. The port also plans to extend existing terminals and to move the railyard from its current location on an old navy base to a closed army base site. This will allow for more waterside yard space. A consolidated intermodal terminal will facilitate the movement of goods and people in and out of Oakland, and it will improve the efficiency of port operations. A safer avenue for commuters to use the train terminal will be provided.

The port has a strong environmental stewardship record in addition to its contribution to the local and regional economy. The port's best management and local hiring practices encourage sustainability of the environment as well as benefit the community. As part of the Strategic Plan for 2002 and beyond, the port is implementing an environmental management system to increase the efficiency of its operations and to reduce environmental impacts. The port views the redevelopment of portfields as means for meeting its expansion needs, and it incorporates habitat restoration components into its revitalization and redevelopment projects.

Goals

Goals for redevelopment of the port of Oakland are in four categories: job creation, port commerce, environmental cleanup and restoration, and historic preservation. Accomplishments in each of the areas will be discussed.

The redevelopment project generated work for 1,500 construction workers, some of whom were trained under the port's Youth Employment Program. It also created 2,000 permanent, full-time jobs. The annual payroll recently equaled $300 million. Through increased capacity for container storage and operations (including four new marine terminals to service larger container ships, and one tugboat marine terminal), the expansion of the port has contributed $45 million annually to state and local taxes. Port redevelopment provided 120 acres of wildlife habitat in the Bay and thirty-eight acres of parkland along the water's edge. During the expansion, the port moved forty-four acres of land and reconfigured the current dock and berthing system to accommodate

larger ships and improve the safety of the existing infrastructure. The project widened the channel to reinforce pier walls. Some of the clean fill went toward shallow-water-habitat creation and eelgrass restoration, a critical component in the restoration of San Francisco Bay. Contaminated sediments were used for filling in berths, and then capping and paving for encapsulation of the sediments and expansion of the port container space.

To preserve the history of the naval facility, the parkland has a memorial and educational kiosks. Public access to waterfront activities has been improved. Visitors can now see panoramic views of the San Francisco skyline and surrounding area.

Redevelopment Initiative

Described below is one redevelopment project that has been particularly successful.

U.S. Navy Fleet and Industrial Supply Center, Oakland (FISCO) Facility

The FISCO site is located along the Oakland Inner Harbor Channel/Estuary on 580 acres of prime waterfront land. Prior to redevelopment, the site was the navy's largest West Coast industrial supply center. It contained 125 structures, maintenance and heavy equipment repair shops, and other industrial uses. The hazardous waste sites stored on the site contributed to soil and groundwater contamination. As an integral part of "Vision 2000," the port's major strategic plan for revitalization, the U.S. Navy FISCO facility was successfully cleaned up and redeveloped for expanded container operations, enhanced intermodal facilities, and environmental mitigation/restoration.

In 1911, the State Lands Commission granted the majority of the FISCO property to the port of Oakland as "tideland trust land." Tideland trust land must remain as property available for public trust uses, namely commerce, navigation, and fisheries. In 1940, the navy paid the port of Oakland $1.00 for the FISCO property and recorded a deed with a reversionary clause. The reversionary clause was the key that allowed the port to receive the land back from the navy under special legislation from Congress.

In 1996, new early-transfer legislation allowed the title to the land to be transferred from the federal government to private entities prior to completion of environmental cleanup. The U.S. Navy closed FISCO in 1998, and this was the first project in which the navy transferred land to a private entity before the environmental cleanup was completed. In 1999, the port agreed to accept liability and conclude the navy's remedial activities under its direct control. The navy funded the cleanup including environmental insurance premiums in case unexpected contamination was detected (pollution legal liability) or due to cost overruns (cost cap insurance). The major redevelopment took place from 1999 to 2003, resulting in 270 acres for container operations, 85 acres for an intermodal facility, and 38 acres for a shoreline park. The port has enhanced 120 acres of the Bay for wildlife habitat.

The port used several innovative approaches in redeveloping the FISCO site. These included reusing concrete demolition debris from navy buildings and other materials on-site; training local workers in construction, assessment, and cleanup technologies; using pavers instead of impervious surface for the container yards; and incorporating historical preservation and environmental restoration components into the redevelopment. There were also several key items that aided redevelopment of the FISCO site to support port expansion and revitalization. The port had clearly defined goals for the reuse project. The site was historically industrial, and the proposed port plans kept the site industrial. There were limited stakeholders and clear ownership of the property. The port had additional financial support from the Department Of Transportation's ISTEA funds. Tenants were ready to occupy the new container facilities as soon as they were developed. Finally, cooperation with the State Department of Toxic Substance Control and the Regional Water Quality Control Board helped the port to carry out the redevelopment project.

The port of Oakland learned important lessons about port redevelopment during work on this project. First, support for project goals from

the community is essential. In Oakland, a task-force focused on the mitigation park (recreation and habitat creation area) as a way to improve recreation and environmental conditions in and around the port community. Workshops where these improvements were discussed were used to garner support for port expansion. A second lesson is to adhere to clear standards on cleanup. Although the major proposed use for the site was industrial, the port conducted a risk assessment using residential cleanup standards. Many of the areas under investigation met the residential standards. Those that did not, now have restrictions on use in those areas. By conducting a thorough risk assessment, the port built trust between the community and government agencies involved in the redevelopment.

Key Stakeholders in Redevelopment

Port Authority

- Port of Oakland

Local Government

- City of Oakland

State Agencies

- Bay Conservation and Development Commission
- California Department of Fish and Game
- Regional Water Quality Control Board
- State Department of Toxic Substance Control

Federal Agencies

- NOAA Fisheries- National Marine Fisheries Service
- U.S. Army Corps of Engineers
- U.S. Department of Defense

Nonprofits and Community Groups

- Audubon Society
- Restoration Advisory Board
- Save San Francisco Bay Association

Financial and Technical Assistance

Revenue bonds have been instrumental in the redevelopment of the port of Oakland. The U.S. Navy provided cleanup (early transfer) funding. It also paid premiums on environmental insurance. The U.S. Department of Transportation provided ISTEA funds.

Port of Tampa

Tampa, Florida

Area: 2,500 acres, plus a 200-acre mitigation site. Fewer than 200 acres are available for development.
Depth of Channel: 43 feet
Cargo: 47 million tons in 2002
Major Activities: bulk and general cargo, transportation, cruise ship terminals, marine industries, fisheries, retail/entertainment uses, phosphate/chemical industries
URL: http://www.tampaport.com

The Tampa Port Authority is an autonomous governmental entity authorized in 1945 by the state of Florida. A board of five commissioners governs the port authority, including a county councilman, the mayor of Tampa, and three commissioners appointed by the governor. Tampa is Florida's largest seaport, handling nearly half of all seaborne commerce that passes through the state. It is the twelfth largest cargo port in the nation, handling 37,000 vessels and 47 million tons of cargo with an estimated value of $13 million annually. It is also a major cruise port. Currently, the port provides over 107,000 jobs in the Tampa Bay Region: $3.74 billion go into wages and salaries. Twenty thousand workers are employed directly by the port's four main industries: the cruise, shipping, transportation, and phosphate/chemical industries. The total annual economic impact on the local economy is $13 billion.

The Tampa Port Authority has a well-functioning Workforce Board and One-Stop Career Center. The Tampa Bay Workforce Alliance (TBWA) is the local Workforce Investment Board

for the Tampa/Hillsborough County area. Previously known as the Private Industry Council, which administered the Job Training Partnership Act, the TBWA is the administrative entity for Region 15.

Port Redevelopment

Contamination, both real and perceived, has significantly inhibited the successful redevelopment of this area. Several brownfields properties are located on a federally recognized Outstanding Waterway and national estuary. Water quality in this area is of critical concern. These sites, all located in economically disadvantaged areas of the community, have reduced property values and limited employment opportunities. The assessment and cleanup of these brownfields properties, which are surrounded by predominantly minority neighborhoods, will help promote environmental justice.

The port makes careful stewardship of the environment a priority and is committed to the restoration, improvement and protection of Tampa Bay. The port created an award-winning mitigation site. This 276-acre wetland has high and low salt marshes, mangrove swamps, tidal channels, and salt flats. The mitigation site, on Pendola Point, has been established as a natural preserve to offset the impact of filling in sixty acres at William Hooker's Point Berthing Facility.

Vision and Goals

Brownfields redevelopment is identified as a goal in the Tampa Port Authority Master Plan, last updated in August 2000. The TPA's brownfields redevelopment program began with the designation of its property as a State Brownfields Area in January 2001. The following year, the city of Tampa's EPA Brownfield Target Area was expanded to include the port properties. The port is located within the City of Tampa Enterprise Community and Federal Enterprise Community. The port is also part of another designated area—the Federally Significant Estuary within a Florida Outstanding Waterway. With all of these designations, brownfields redevelopment has a critical role in the economic and environmental health of the immediate Tampa Bay community.

The port's main goal is expanding port commerce while minimizing the adverse environmental impact of development. Preliminary environmental assessments have been conducted on several project sites in order to rank them for cleanup and redevelopment. Sites that have redevelopment potential or potential end users have received top priority. Brownfields redevelopment will support waterborne commerce in the port through increased capacity and the expansion of existing and new port businesses. Import and export businesses are at the forefront of the expansion plans, which will undoubtedly expand overall tonnage and value of cargo currently realized by the port.

Redevelopment Initiatives

Hookers Pt.-Port Ebor, Berth 250–252

The sixty-acre site was contaminated and is now almost completely cleaned up with the exception of about 500 cubic yards of soil contaminated with oil that is being bioremediated with the use of microbes. With a $1 million grant from the U.S. Department of Commerce's Economic Development Administration, the port has reconstructed 1,200 linear feet of bulkhead on the site. Plans for the site include development of a shipyard and warehouses. The site is expected to be operating between 2006 and 2010.

The port has gone beyond environmental requirements on this site by installing an advanced stormwater treatment system with baffle boxes. The boxes remove sediment and suspend particles and associated pollutants from the stormwater before it is released.

Port Ybor Redevelopment

This site encompassing more than thirty-three acres is currently vacant, and the soil and groundwater are contaminated with petroleum, solvents, and metals. Past uses included an iron works, submarine building, general industrial, warehousing, recycling facility, machine shops, marine repair, asphalt and recycling facility, oil tanks, pickling tanks and metal working facilities.

The Tampa Port Authority has conducted extensive assessment activities on the Port Ybor property to prepare the site for redevelopment. It is anticipated that an additional $50,000 of assessment funding will be required to complete the assessment of petroleum impacts to the property and $150,000 for nonpetroleum assessment. The proposed development will contain five buildings including a general cargo warehouse and several office and commercial buildings. This redevelopment, projected to generate about 1,100 new jobs, will rejuvenate a long neglected and underused area of Tampa.

Tampa Scrap Processors, Inc.

This ten-acre site, submerged until 1976, operated as a scrap yard with an automotive shredder on the site from 1980 to 2000. Currently, the site is vacant. The soil is contaminated with petroleum, solvents, and metals. The site is being prepared for redevelopment for a port-related land use that will likely include general cargo. Redevelopment will create welcome new jobs since the property has been abandoned because of environmental issues and stigma. The Tampa Port Authority has completed a Phase I Environmental Assessment under the City of Tampa Brownfields Program for this property. Once the environmental predevelopment activities are completed, the TPA will make the property available to a leaseholder. The leaseholder will make the necessary improvements to the property to complete the redevelopment.

Tampa Bay Shipbuilding & Repair Co.

Tampa Bay Shipbuilding and Repair Company currently employs over 300 people on a forty-acre site that has had shipbuilding and repair activities on it since World War II. Additional job creation is anticipated through expansion to areas where the soil and groundwater are currently contaminated with petroleum, solvents and metals. The resources for this expansion will come from Tampa Bay Shipbuilding and Repair. The Tampa Port Authority will assist by providing environmental and economic development assistance for this project. TPA has entered into a Brownfields Site Rehabilitation Agreement for the assessment and remediation of the Tampa Bay Shipbuilding and Repair Company property. There is a limited site assessment that is currently ongoing. It has been funded through the City of Tampa Brownfields Program. Because of the extensive shipbuilding and repair operations on the site since World War II, an additional assessment to delineate petroleum contamination is anticipated.

Key Stakeholders in Redevelopment

- City of Tampa
- Port Authority of Tampa
- Florida Department of Environmental Protection
- Various federal agencies involved in brownfields redevelopment
- Various private investors

Financial and Technical Assistance

Incentives under the *Florida Brownfields Program* include:

- Private development partnerships
- Voluntary cleanup tax credit for up to 35 percent of cleanup costs
- State Brownfields Loan Guarantee Program
- Expedited regulatory review
- Brownfields Job Bonus Refund (up to $2,500 per employee)
- Risk-based cleanup
- Low interest loans for clearance of liens and back taxes on brownfields properties
- Lender and cleanup liability protection

Tax incentives and credits under the *City of Tampa Enterprise program* include:

- Community contribution tax. Allows a 50 percent tax credit for donations to qualified local development projects.
- Enterprise Zone jobs tax credit. Allows 10 percent tax credit on wages paid to new employees from qualified target groups.

- Enterprise Zone property tax credit. Equal to 96 percent of ad valorem taxes paid on eligible new or expanded property for five years (up to $50,000 annually).
- Credit against sales tax for job creation. Allows a 10 percent tax credit on wages paid to new employees in eligible target groups.
- Sales tax exemption for building materials used in an Enterprise Zone. Allows a refund on sales taxes paid for building materials used to rehabilitate Enterprise Zone property.
- Sales tax exemption for business property used in an Enterprise Zone. Allows a refund on sales taxes paid for business property used exclusively in an Enterprise Zone property.

Port of Toledo

Toledo, Ohio

Depth of Channel: 27 feet
Cargo: 11.5 million short tons per year (the average for 1999 to 2002 season)
Major Activities: Primary inbound cargo- iron ore and general cargo. Primary outbound cargo- grain and coal.
URL: http://www.toledoportauthority.org

Northwest Ohio is an intermodal region that is linked to the nation and the world through a network of transportation systems (air, highway, rail, pipeline, and water). The port of Toledo, located on Lake Erie in Northwest Ohio, is the largest international tonnage seaport of the Great Lakes. Between 1999 and 2002, an average of 11.5 million short tons of cargo moved through the port annually. Iron ore, general cargo, grain, and coal comprise the port's primary cargo. Two major issues that affect the port's ability to do business are: (1) the size of the St. Lawrence Seaway, which restricts vessel size; and (2) seasonality, which restricts the shipping season. Additionally, 20 percent of all dredging in the Great Lakes occurs in Toledo Harbor.

The Toledo–Lucas County Port Authority (T-LCPA) is a regional leader in economic development, is promoting Northwest Ohio as a transportation hub and working to increase the economic impact of the seaport, airport, and rail terminal. The T-LCPA has recognized that a holistic approach that combines economic development with environmental standards is necessary to strengthen the local economy, revitalize the waterfront and surrounding neighborhoods, and create additional opportunities for port facilities.

Port Redevelopment

The T-LCPA has been proactive in addressing the problems caused by proliferating brownfields properties in Northwest Ohio. The city of Toledo, as the region's urban core, is particularly affected by brownfields. As the industrial, manufacturing, and commercial center of the region since the city was founded in 1837, Toledo now has a high percentage of the area's brownfields within its borders. With little undeveloped land, the city is hindered by its inability to reuse these properties. Brownfields can weaken the ability of the city to realize revenue and create jobs. Many sites along the city's riverfront and shipping channel are contaminated. Because many of the older Toledo neighborhoods literally "grew up" around former factories, those neighborhoods now have abandoned or vacant brownfields sites as their most significant feature.

Goals

The T-LCPA created a program to focus specifically on brownfields, their impact on the community and regional economy, and the innovative strategies that could be implemented to redevelop them. The goal of the Northwest Ohio Brownfield Restoration Initiative is to enhance efforts to increase port use by improving the economy and environment of the region and by remedying the problems that have led to the proliferation of brownfields on the site. The initiative addresses the restoration and reuse of contaminated properties (whether urban, suburban, or rural), across the region, thereby enhancing the transportation-based economic benefits that T-LCPA operations provide.

To accomplish those goals, the Toledo–Lucas County Port Authority has created partnerships for:

- Developing an inventory database of brownfields properties in the region
- Assessing the level and type of contamination present
- Acquiring brownfields properties
- Prioritizing properties based on their reuse potential
- Undertaking remediation efforts using the latest environmental technology
- Marketing properties to developers and businesses.

Redevelopment Initiatives

The Marina District

The T-LCPA has targeted brownfields sites in the city of East Toledo's Marina District. Specifically, the port authority has focused on four abandoned or underused properties with land use histories. The properties were once used for rail lines, a steel mill, an oil refinery, a construction and demolition debris/stockpiling facility, a marina, and a coke oven gas line. T-LCPA's objective has been to clean up the waterfront of East Toledo and to redevelop the land into an entertainment, residential and commercial complex. To meet this objective, the T-LCPA worked to determine the extent of contamination at the four key sites so that cleanup could proceed within the framework of the state's voluntary action program. The T-LCPA also effectively involved the community throughout the process, making a particular effort to engage low-income, minority populations that might otherwise not have participated in decisions about port use.

The Toledo Shipyard

The Toledo Shipyard was first opened in 1893, primarily as a shipbuilding facility. By 1985, the shipyard had suffered extensively from absentee ownership. It had no capacity to conduct shipbuilding and was in a serious state of deterioration. To save the shipyard as an economic generator, the T-LCPA assumed ownership. In 1992, the T-LCPA leased the facility to the Manitowoc Marine Group, the largest ship construction and repair company on the Great Lakes. Since 1985, the T-LCPA and Manitowoc have invested more than 6.5 million dollars in essential facility upgrades. The vision for the future of the Toledo Shipyard is for it to retain its position as a provider of ship care service and industrial maintenance services in the region and to upgrade the existing facilities to enable new vessel construction.

Key Stakeholders in Redevelopment

Local Government

- City of Toledo
- Lucas County
- Regional Growth Partnership

State Agencies

- Ohio Department of Environmental Quality

Federal Agencies

- Economic Development Administration
- U.S. Army Corps of Engineers
- U.S. Coast Guard
- U.S. Department of Housing and Urban Development
- U.S. Department of Transportation
- U.S. Department of Labor
- U.S. Environmental Protection Agency

Nonprofits

- Community Development Corporation
- Local community groups and neighborhood associations

Private Sector

- T-LCPA markets cleaned up properties to numerous private sector partners and tenants, including Owens Corning Industries

Stakeholder Coordination Efforts

The Toledo–Lucas County Port Authority, the city of Toledo, Lucas County, the Regional Growth Partnership, and other stakeholders in redevelopment efforts in the region (including the port of Toledo) have joined together to form the

Brownfields Working Group. In addition, the Northwest Ohio Brownfields Legislative Consortium has been formed. The consortium includes T-LCPA, the city of Toledo, Lucas County, the Chamber of Commerce, the University of Toledo, and the Regional Growth Partnership.

Financial and Technical Assistance

T-LCPA uses revenue bonds to finance the purchase and cleanup of brownfields sites. It then leases the sites to tenants. The lease revenues pay off the bond debt. Through these revenue bonds, the T-LCPA creates a steady income stream while maintaining ownership and long-term control of the waterfront properties. The T-LCPA is using acquisition and ownership as a major strategy for its brownfields initiative. In addition, the T-LCPA participates in the Toledo Brownfields Working Group, which brings critical partners together to leverage funding sources and coordinate grant application proposals.

Financial and technical assistance is provided by the Ohio Voluntary Clean Up Program (Clean Ohio Revitalization Fund), the Ohio Urban Redevelopment Loan Program, and the following federal agencies: U.S. EPA (Brownfields assessment funding and Green Buildings initiative), U.S. Army Corps of Engineers (responsible for maintaining shipping channels on Maumee River), Economic Development Administration (Economic development planning grant), U.S. Department of Labor (workforce development and training grant), U.S. Department of Housing and Urban Development, U.S. Department of Transportation, and the U.S. Coast Guard.