PORTLAND BROWNFIELD ASSESSMENT
FINAL REPORT

December 18, 2012

Prepared for:

City of Portland
Bureau of Planning and Sustainability

E.D. Hovee & Company, LLC
Economic and Development Services

ECONorthwest
ECONOMICS • FINANCE • PLANNING

REDEVELOPMENT ECONOMICS

MAUL FOSTER ALONGI

ACKNOWLEDGMENTS

Advisory Committee

Gil Wistar, Oregon Department of Environmental Quality

Karen Homolac, Business Oregon

Willie Wilcoxin, Port of Portland

Lise Glancy, Port of Portland

Richard Vincent, Port of Portland

Miranda Bateschell, Oregon Metro

Bruce Allen, Portland Development Commission

Andy Reed, Portland Development Commission

Jenn Bildersee, Portland Bureau of Environmental Services

Stacey Castleberry, Bureau of Development Services

Dan Eisenbeis, City of Portland Government Relations

Rich Goward, Jr., Portland Office of Management and Finance

Jodie Inman, Portland Water Bureau

Nanci Klinger, Portland Office of the City Attorney

Jonna Papaefthimiou, Office of Mayor Sam Adams

Matt Grumm, Office of Commissioner Dan Saltzman

Corky Collier, Columbia Corridor Association

Bernie Bottomly, Portland Business Alliance

Carly Riter, Portland Business Alliance

City of Portland—Bureau of Planning and Sustainability

Tyler Bump, Project Manager/Economic Planner

Tom Armstrong, Supervising Planner

Steve Kountz, Senior Economic Planner

Kevin Martin, Technical Services Manager

Derek Miller, Geographic Information Systems Analyst

ACKNOWLEDGMENTS (CONTINUED)

Consultant Team

Seth Otto, Maul Foster & Alongi, Inc.

Jim Darling, Maul Foster & Alongi, Inc.

Michael Stringer, Maul Foster & Alongi, Inc.

Jacqueline Gruber, Maul Foster & Alongi, Inc.

Eric Hovee, E. D. Hovee & Company, LLC

Andrea Logue, E. D. Hovee & Company, LLC

Evans Paull, Redevelopment Economics

Abe Farkas, ECONorthwest

Lorelei Juntunen, ECONorthwest

Anne Fifield, ECONorthwest

David Orleans, Willis Environmental Practice

This project was funded in part through a grant from the Construction Excise Tax Program, administered by Metro Regional Government. Metro's Community Development and Planning Grants support planning projects that enable great communities to develop and thrive. The grants are awarded to local governments to pay for planning activities in targeted areas that will support development for future employment and housing. The grants leverage in-kind local contributions. Funding for the grants comes from a regional excise tax on construction permits.

The findings and recommendations in this report do not necessarily reflect the views or policies of Metro.

CONTENTS

ACKNOWLEDGMENTS I

ACRONYMS AND ABBREVIATIONS IV

1 INTRODUCTION 1
1.1 KEY FINDINGS 3

2 APPROACH 5
2.1 BROWNFIELD INVENTORY AND TYPOLOGIES 5
2.2 FINANCIAL FEASIBILITY ANALYSIS 6
2.3 PUBLIC BENEFIT 7
2.4 POLICY OPTIONS 7

3 BROWNFIELD TYPOLOGIES 9
3.1 TYPOLOGIES 9
3.2 INVENTORY OF POTENTIAL BROWNFIELDS 13

4 ECONOMIC ANALYSIS 14
4.1 ECONOMIC TRENDS AND FORECAST 14
4.2 FINANCIAL FEASIBILITY ANALYSIS 16
4.3 CLOSING THE FINANCIAL GAPS IN ACHIEVING REDEVELOPMENT GOALS 18
4.4 BARRIERS TO REDEVELOPMENT 18

5 PUBLIC BENEFITS ANALYSIS 21
5.1 EMPLOYMENT 21
5.2 TAX REVENUE POTENTIAL 22
5.3 ENVIRONMENTAL AND SMART GROWTH BENEFITS 23

6 POLICY TOOLS 24
6.1 STATEWIDE TAX INCENTIVES 25
6.2 CITYWIDE INSTITUTIONS 27
6.3 SUPERFUND POLICIES 29
6.4 CUMULATIVE BENEFIT OF POLICY TOOLS 31
6.5 RETURN ON INVESTMENT 31
6.6 POLICY IMPLICATIONS 33

7 IMPLEMENTATION 35
7.1 INDUSTRIAL FOCUS 35
7.2 SYNERGIES 35

APPENDIX A
INVENTORY AND EXISTING CONDITIONS ANALYSIS REPORT

APPENDIX B
FINANCIAL ANALYSIS REPORT

APPENDIX C
PUBLIC BENEFIT REPORT

ACRONYMS AND ABBREVIATIONS

CERCLA	Comprehensive Environmental Response, Compensation and Liabilities Act
DEQ	Oregon Department of Environmental Quality
EOA	Economic Opportunities Analysis
MOA	memorandum of agreement
NPL	National Priority List
PDC	Portland Development Commission
Portland	City of Portland
PPA	Prospective Purchaser Agreement
R2V	remediation to redevelopment value
ROI	return on investment
TIF	Tax Increment Financing
USEPA	U.S. Environmental Protection Agency

1 INTRODUCTION

The cleanup and redevelopment of brownfield properties is a key strategy for meeting economic, environmental, and social goals for the City of Portland (Portland). Continued economic development within the Urban Growth Boundary requires adaptive reuse of and infill redevelopment for urban properties. Portland's Economic Opportunity Analysis (EOA) projects a shortfall of industrial land supply within the City of Portland in the next 25 years and estimates that brownfield properties account for about one-third of the growth capacity in Portland's industrial, commercial, and other employment areas. However, brownfields face significant, but not insurmountable, challenges in the marketplace. Recent trends indicate that most of Portland's brownfield land will continue to sit idle despite increasing economic growth and demand for new real estate development.

Brownfields Defined

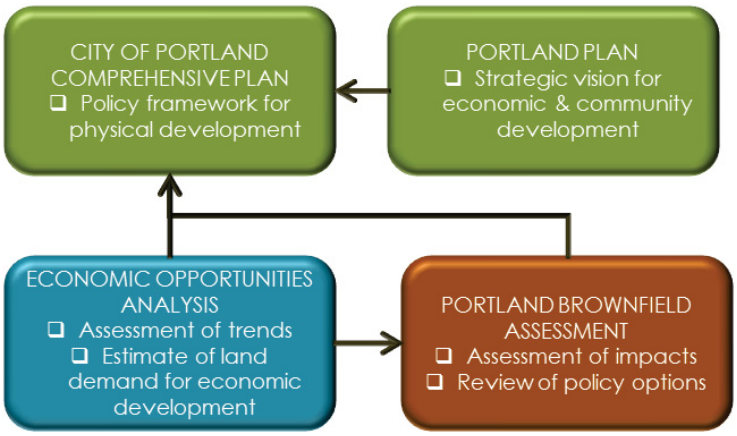
The term "brownfield" refers to real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of hazardous substances.

The Portland plan and comprehensive plan update provide opportunities to shape how Portland will develop over the next 25 years. In order to provide adequate land supply to capture economic development opportunities, effective public policy to encourage redevelopment of brownfield properties will be needed. To support those policy decisions, Portland has undertaken this Portland Brownfield Assessment to examine the financial and economic development characteristics of brownfield redevelopment, with a particular focus on industrial lands. Brownfield sites are traditionally characterized by real or potential environmental contamination concerns, but the driver for redevelopment of brownfields is their potential value when redeveloped. With the guidance of an advisory panel of public- and private-sector experts, the Portland Brownfield Assessment report has:

- Evaluated the scale and financial challenge of brownfields in Portland
- Forecasted the public benefits of redevelopment of these properties
- Reviewed a suite of policy tools and reforms that can enhance the redevelopment of brownfields

The results of the Portland Brownfield Assessment summarized in this report are intended to inform policymakers and stakeholders; form the basis for sound economic policies; and provide a framework for future urban infill and economic development in Portland.

Figure 1-1. Interconnection of Planning Efforts



Public Role in Promoting Brownfield Redevelopment

The federal Superfund Law and the Oregon Cleanup Law provide the regulatory framework for cleanup of contaminated sites, based on the principle that responsible parties must pay for remediation. This enforcement-based approach has been effective in addressing many of the most highly contaminated sites, but has its drawbacks. In many cases, the fear of liability for cleanup has had a chilling effect on new investment in properties that have experienced historical uses typically associated with contamination. Many potentially contaminated properties are owned by small businesses that do not have the financial resources to conduct expensive cleanups or that may have ceased operations years ago. These two factors have led to increasing numbers of vacant properties that contribute to blighted conditions.

Many brownfield properties are remediated with support from new investors: innocent parties that seek to redevelop the property. National and local experience with brownfields in the last 30 years has shown that these properties are more likely to be remediated within a shorter time frame and to meet or even exceed cleanup standards when they are part of a redevelopment effort. Incentives, combined with a predictable and efficient regulatory framework, have led to more cleanups than enforcement alone. This proactive approach can increase the rate of brownfield redevelopment to achieve policy goals and can play an integral role in meeting Portland's land demand needs over the 25-year planning horizon.

City of Portland and Metro Brownfield Studies

Portland and Metro have undertaken concurrent studies of brownfield property economic impacts and policy solutions. Both of these studies incorporate financial feasibility analysis of brownfield projects and review of potential policy tools and reforms to promote cleanup and redevelopment of these brownfield properties. While the two studies complement one another through a robust inventory effort and an in-depth review by stakeholders, industry practitioners, and policymakers, there are still important distinctions between the studies, including:

Geographic Scale: The Portland study focuses on issues related to the city, in particular employment lands, while the Metro study incorporates the three-county area in a broader context, including property types.

Focus of Economic Analysis: The more focused scale of the Portland study requires a narrower categorization of market areas and conditions.

Policy Objectives: The Portland study is more focused on economic development and employment-related objectives, while the Metro study places a greater emphasis on land use and community development goals.

1.1 Key Findings

Scale of the Brownfield Problem

- There are approximately 910 acres of potential brownfield properties in Portland. This includes approximately 558 industrially zoned acres, which could offset the projected 720-acre shortfall of industrial land forecasted for the next 25 years.
- It is estimated that the total cleanup costs of all potential brownfield properties in Portland is approximately $240 million. The burden of these costs places nearly all types of development (in all market areas) underwater financially, where the value of the project is less than the cost of development.
- With potential federal Superfund liability costs added, the total cost of remediating affected properties within the Portland Harbor Waterfront is estimated to increase to as much as $24 per square foot of site area—more than three times the market value of unconstrained industrial land.

Potential Economic & Community Benefits of Brownfield Redevelopment

- Redevelopment of all potential brownfields identified in Portland could potentially result in 31,000 new jobs and over $40 million in additional annual Portland tax revenues.
- The potential for added industrial land availability, assuming 100 percent brownfield redevelopment, would be about 335 acres of extra land capacity, reducing the industrial lands shortfall by 45 percent, from a 740-acre to a 405-acre deficit.

- High-density development in downtown accounts for nearly 50 percent of both potential employment and Portland tax revenue, but represents only 6 percent of total brownfield acres.
- Redevelopment of brownfields in industrial areas accounts for approximately 30 percent of future potential jobs.

- It is estimated that full build-out of the inventory of potential infill brownfields would represent a reduction of 39,000 metric tons of CO^2 annually, relative to expanded suburban greenfield development through reduced employee commuting— the equivalent of taking 9,200 cars off the road every year.
- Infill development on brownfields has the potential to avoid $115 million to $180 million in public infrastructure investment that would be necessary if new greenfield sites were developed.

Innovative Policy Solutions

- Existing financial incentives are not sufficient to overcome the financial feasibility gap of a large number of brownfields.
- Potential new incentives such as Remediation Tax Credits, Job Creation Tax Credits, Property Tax Abatement, Brownfield Land Bank, and Pooled Environmental Insurance have great potential, with each potentially facilitating redevelopment of about 150 acres.
- Public investment in new brownfield incentives is estimated to have a positive return on investment (ROI), as high as $10 returned in state and local tax revenue for every $1 invested.
- Incentives for redevelopment in industrial areas have the potential to revitalize a large amount of land area, but with relatively low increase in Portland tax revenues. The tax revenues generated to Multnomah County and the State of Oregon (state income tax, Multnomah Business Income Tax and non-city property tax) for industrial redevelopment are significant and support a rationale for shared investment in this area as a regional economic asset.

2 APPROACH

The Portland Brownfield Assessment included four main tasks:

1. Estimate the number of potential brownfield properties in Portland and categorize them by land use and market typologies.
2. Assess market conditions and barriers to brownfield redevelopment.
3. Estimate the public benefits of brownfield redevelopment.
4. Identify a public policy toolkit to promote brownfield redevelopment.

The methods used to conduct these interrelated tasks are summarized in the following section. More detailed descriptions of methods and results are provided in the appendices to this report.

2.1 Brownfield Inventory and Typologies

To understand the brownfields challenge for Portland, it is important to quantify the scale of the issue. It is inherently difficult to precisely count the number of brownfields in a community. While properties that are vacant or underutilized can be seen, it is often not apparent if there are concerns related to contamination in soil or groundwater. Landowners are often very reluctant to notify public agencies about potential contamination because of anxiety over legal liability, cleanup costs, and stigma that may impact property value. Given these challenges, an extensive effort was made to develop an inventory of potential brownfield sites to provide a foundation of information on which to conduct economic analysis and develop policy, while at the same time not creating negative perceptions at the parcel level.

The inventory was developed through the following steps:

1. Identify Vacant and Underutilized Lands—The Buildable Lands Inventory was used to identify properties with development capacity, based on comparison of existing to maximum allowed floor area ratio. Note that the inventory focused on commercial and industrial lands and did not include residential properties.
2. Cross Reference with Reported Contaminated Sites—The Oregon Department of Environmental Quality (DEQ) maintains databases of known contaminated sites and properties with reported leaking underground storage tanks. Parcels with development capacity that were also on the state databases were identified as potential brownfields.

3. Historical Records Research—Research was conducted in historical business directories to explore whether underdeveloped parcels were formerly used for industrial or commercial activities commonly associated with hazardous materials, such as gas stations, dry cleaners, and chemical plants. Properties that were both currently underutilized and associated with historical uses that may have left contamination were identified as potential brownfields.

The inventory was used to define typologies in order to organize and assess common market and environmental characteristics of brownfields in Portland. The traditional approach for categorizing brownfield properties has been to focus on the contamination issues. However, experience with revitalization of these properties demonstrates that it is market forces that typically drive cleanup and redevelopment of brownfield properties. Therefore, an integrated approach that considers both market potential and contamination provides a more accurate and meaningful categorization.

R2V

The R2V is positive for properties that have a high enough potential value to offset the costs of remediation (common in the Pearl District), and it is negative for properties with low market value and high cleanup liability (common in industrial areas).

The fundamental guiding principle underlying the brownfield typologies is that the potential for redevelopment of a property is driven primarily by market factors and that the type and level of contamination must be considered in the context of property value. The relationship between redevelopment potential and cost to remediate is the "remediation to redevelopment value" (R2V). This relationship is the basis for financial feasibility analysis conducted in subsequent tasks of the Portland Brownfield Assessment.

The categorization of the brownfield typologies took into account a number of characteristics, including market location, zoning, future use potential, historical use, and contamination issues.

2.2 Financial Feasibility Analysis

To assess the market potential for redevelopment of brownfields in Portland, a range of prototypical development scenarios were modeled for properties in the different typologies. Pro forma estimates of development costs, likely rents, and property values were created for each of the prototypes.

The critical test of financial feasibility for the prototypical redevelopment scenarios lies in the relationship of project *cost to valuation*. This is different from R2V, as defined above, because remediation costs are not included and therefore are not a factor. If the valuation upon completion and resulting occupancy exceeds the cost of development, the project is viewed as feasible. In situations where valuation is less than cost, the project is viewed as having a "financial feasibility gap."

Financial pro forma spreadsheets were developed to compare the cost of developing a property (including land acquisition, hard and soft development costs, and site remediation) to the market value of the completed building as an indicator of feasibility. It evaluated a mix of building types as appropriate for zoning and employment geography. The pro forma analysis also incorporated a range of typical cleanup costs based on local and national data sources.

2.3 Public Benefit

Based on the results of the pro forma analysis, the potential public benefits of redevelopment of the entire inventory of brownfield properties were forecasted. The public benefit analysis included the following key elements:

Employment—Jobs associated with different uses and density of potential projects were calculated based on Portland metropolitan research and standard economic models.

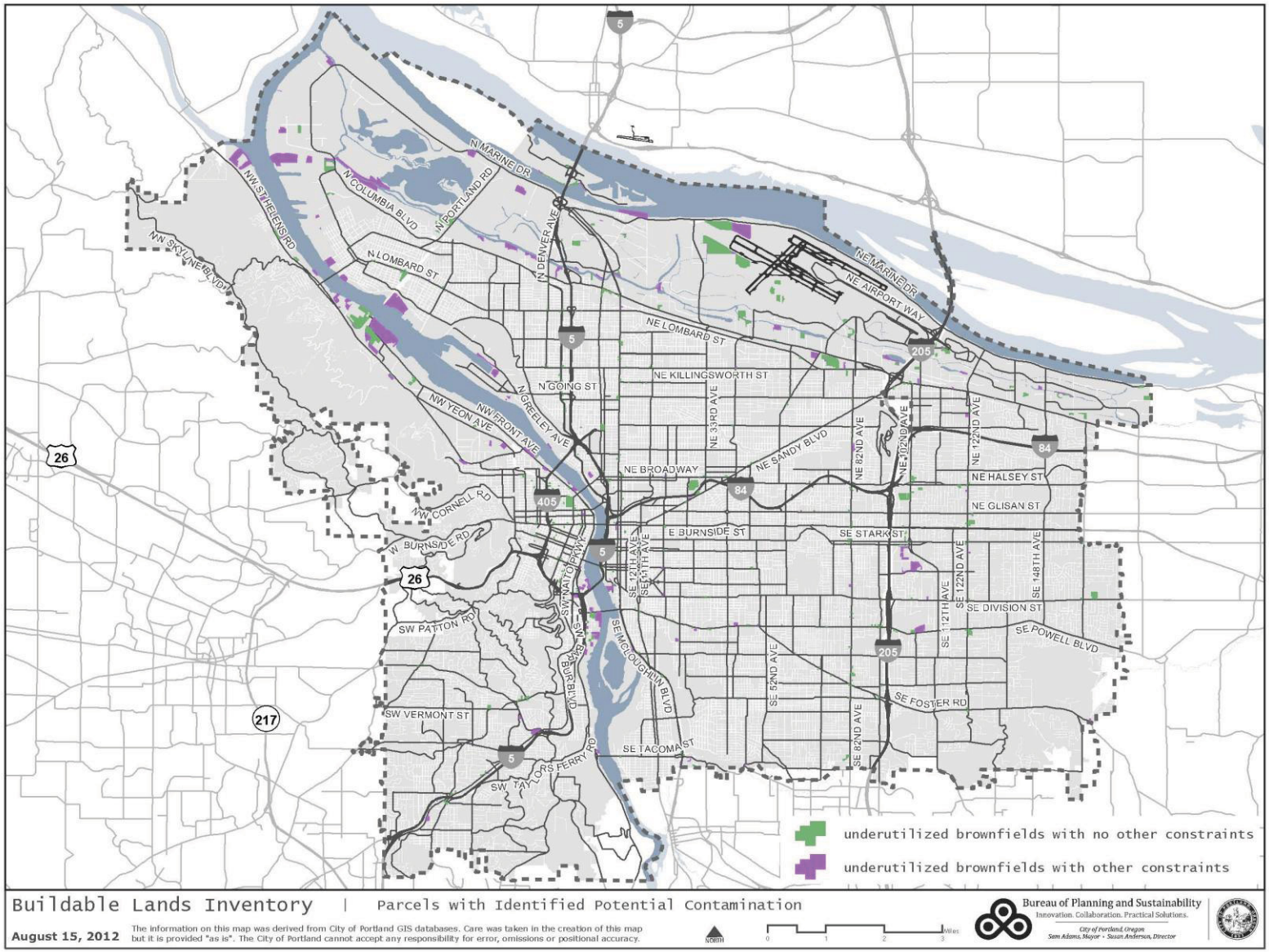
Tax Revenue—Estimates of employment capacity and of tax revenue generation from the development scenarios were based on current rates for Portland, Multnomah County, and the State of Oregon for property taxes, corporate taxes, and personal income taxes.

Environmental and Growth Management—Using estimates from published local and regional studies, forecasts were made of implications of brownfield redevelopment for greenhouse gas emissions, land consumption, and infrastructure costs.

2.4 Policy Options

A review of national best practices for promoting brownfield redevelopment was conducted. These policy tools were tailored to Portland and combined with other locally originated concepts to create a suite of options for consideration. The policy tools were reviewed and prioritized by the advisory panel. An ROI analysis was conducted on the priority tools to compare their potential impacts.

Figure 2-1. Brownfield Inventory Map



3 BROWNFIELD TYPOLOGIES

3.1 Typologies

While all brownfield sites share the common characteristics of either real or perceived environmental contamination as well as underutilization, not all sites are the same. Understanding the different types of brownfields will allow policymakers to refine and target tools to support successful revitalization of these properties. Brownfield typologies also serve as an analytical tool for evaluating the range of impacts that different categories of sites have on the region. Grouping brownfields by certain key criteria facilitates the evaluation of challenges faced by these impacted sites and helps prioritize potential solutions to address the unique issues faced by discrete groups of properties.

Based on analysis of land use and environmental factors, the following types of brownfields have been categorized for Portland (see Figures 3-1 and 3-2).

1. **Downtown High Density**—Characterized as former industrial and commercial operations in an area of increasing high-density development. High property values drive redevelopment and often result in conversion to commercial and residential mixed-use properties. Examples: Pearl District, South Waterfront, Downtown.
2. **Mixed-Use Hub**—Significant neighborhood centers that contain a mix of uses and represent historic and planned town centers. Redevelopment typically results in commercial and mixed-use projects with more density. Examples: St. Johns, Gateway.
3. **Main Street Commercial**—Commercial corridors characterized by mixed uses and smaller-scale commercial activity. Redevelopment of this type of brownfield typically results in conversion to commercial and mixed-use projects with more density. For purposes of financial analysis, this typology has been subdivided into Main Street East and Main Street West, with 82nd Avenue serving as the boundary. This subdivision was made in order to reflect the substantially different market conditions in East Portland. Examples: SE Hawthorne, NW 23rd, NE Alberta, sections of SE 82nd, SE 122nd.
4. **Central City Industrial**—Large-scale industrial operations typically including historical and current manufacturing activities. Redevelopment is driven by changing land use patterns and increased land values through zoning. Redevelopment of this brownfield type generally results in industrial and flex space. Examples: Central Eastside Industrial, Albina.

5. **Standard Industrial**—Variety of industrial uses, ranging in size and intensity and located in multiple areas in Portland. Redevelopment typically is constrained by location, land value, and regulatory requirements such as environmental overlays and industrial sanctuary. Examples: Johnson Boulevard, Brooklyn/Milwaukie Rail Yard.

Portland Harbor Superfund

In 2000, the U.S. Environmental Protection Agency (USEPA) designated the Portland Harbor a Superfund site. The Superfund site is defined by contamination in sediments on the bottom of the Willamette River and extends approximately from the Steel Bridge at River Mile 12 to Evraz Oregon Steel Mills at River Mile 2. While the Superfund designation is focused on sediments, it creates potential for federal environmental liability for adjacent properties and inland properties with stormwater discharges to the harbor as potential sources of contamination.

The Superfund designation creates a special case for brownfields because of the uncertainty regarding costs, regulatory closure, and the involvement of the USEPA. In recognition of this special case, two brownfield typologies related to the Superfund have been defined for properties immediately adjacent to sediment contamination areas and for properties that contribute stormwater runoff to the harbor.

6. **Superfund Shadow**—Properties located upland from the Portland Harbor Superfund area. These sites may be impacted by the Superfund designation and therefore are limited in their redevelopment potential. Redevelopment would result in industrial and flex space uses, but is hindered by regulatory uncertainty. Examples: Areas within NW Industrial and the Portland Harbor.
7. **Portland Harbor Waterfront**—Sites located on the Portland Harbor with direct connection to the areas identified as having sediment contamination. Sites in this type are typically large-scale and current or former heavy industry operations. Examples: Portland Harbor sites from Columbia River South to the Fremont Bridge (approximately).

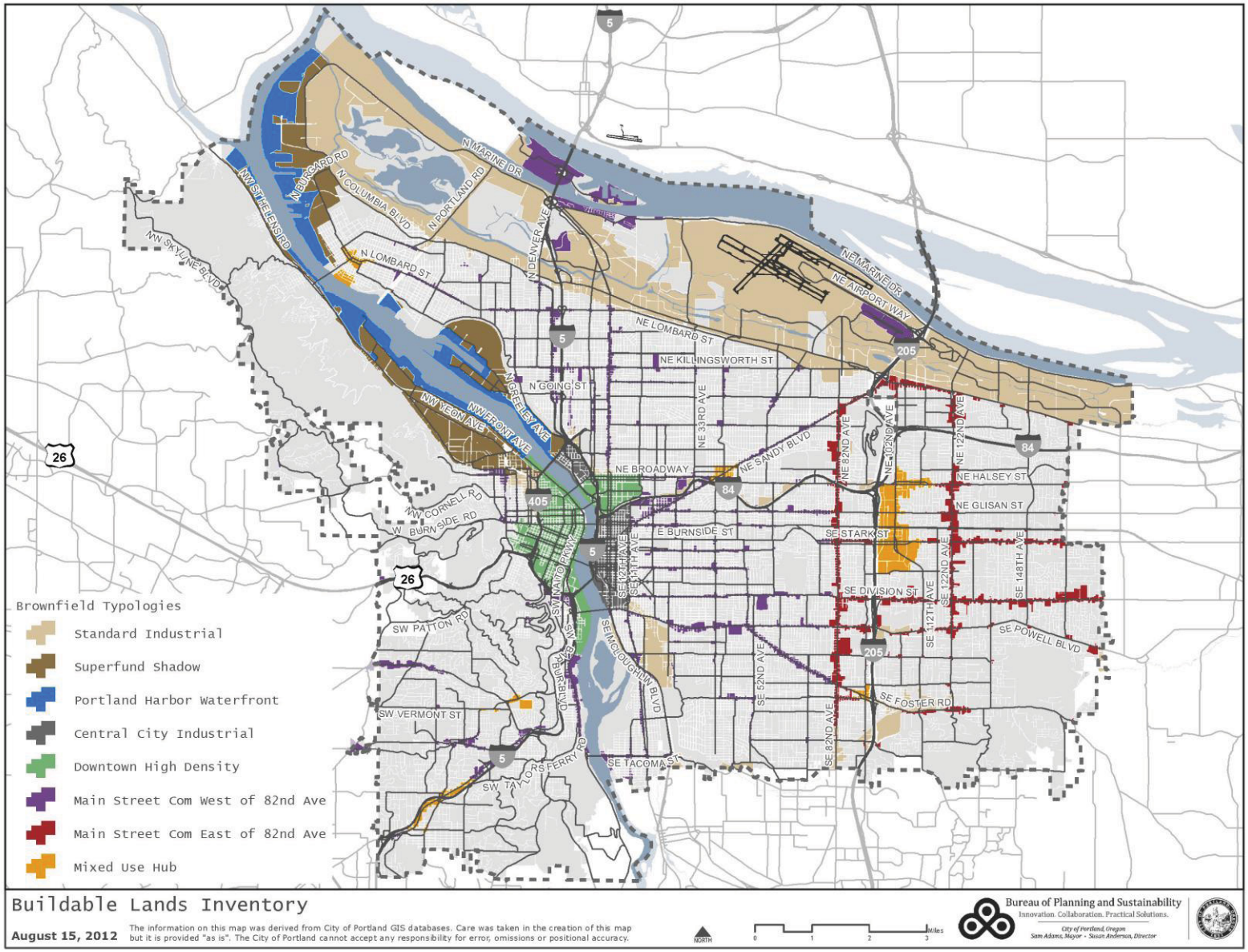
Metro Brownfield Study Typologies

A concurrent study of brownfields led by the Metro regional government has developed typologies for the same purpose: understanding the issues of brownfields on a regional scale. The Metro typologies were considered in this Portland Brownfields Assessment, and the summary figure below indicates how they relate to Portland typologies. In general, the smaller geographic extent of Portland lends itself to a more detailed understanding of typologies than areas addressed by the Metro study.

Figure 3.1 Portland Brownfield Typologies

	Portland Typology	Metro Typology	Historical Use	Employment Geography	Potential Future Uses
COMMERCIAL	1. Downtown High Density	Types 1 and 2	Automotive, Dry Cleaner, Manufacturing, and Chemical	Central City	Commercial, Mixed Use, Multifamily
	2. Mixed Use Hub	Types 1 and 2	Automotive and Dry Cleaner	Town Center, Gateway Regional Center	Commercial, Mixed Use, Multifamily
	3. Main Street Commercial	Types 1 and 2	Automotive, Dry Cleaner, Manufacturing, and Chemical	Neighborhood Commercial	Commercial, Mixed Use, Multifamily
INDUSTRIAL	4. Central City Industrial	Type 3	Automotive, Manufacturing, and Chemical	Central City	Industrial, Flex Space
	5. Standard Industrial	Type 3	Automotive, Manufacturing, and Chemical	Columbia Harbor and Dispersed Industrial	Industrial
	6. Superfund Shadow	Type 3	Automotive, Manufacturing, and Chemical	Columbia Harbor	Industrial
	7. Portland Harbor Waterfront	Type 3	Automotive, Manufacturing, and Chemical	Columbia Harbor	Industrial

Figure 3-2. Brownfield Typologies Map



3.2 Inventory of Potential Brownfields

It is estimated that there are approximately 910 acres of potential brownfield properties in commercial and industrial areas of Portland (see Figure 3-3). While most of these sites are concentrated in current and/or historically industrial areas, brownfields are found in nearly every neighborhood in Portland. The brownfield inventory identified properties constrained not only by contamination, but also by other factors such as infrastructure, access, or environmentally sensitive areas.

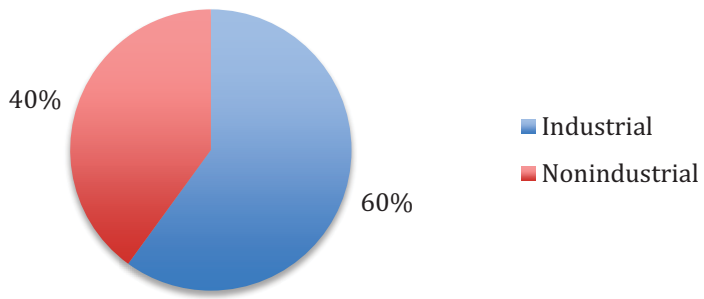
Figure 3-3. Number of Brownfields in Each Typology

Typology/Zone/Site Type	Contamination Only	Multiple Constraints	Total
Downtown High Density	42.9	51.5	94.4
Mixed Use Hub	31.8	26.2	58
Main Street Com E of 82nd	48	9.6	57.6
Main Street Com W of 82nd	87.6	49.5	137
Central City Industrial	3	1.1	4.2
Standard Industrial	249.2	76.7	325.9
Superfund Shadow	53.7	25.1	78.8
Portland Harbor Waterfront	37.5	116.4	153.9
Total Acres	**553.7**	**356**	**909.7**

Source: Portland Bureau of Planning and Sustainability; August 8, 2012.

Approximately 356 acres (39 percent) of the properties are impacted not only by contamination, but by other site constraints as well, including inadequate infrastructure or other physical site characteristics. Portland's industrial areas (including the Standard Industrial, Superfund Shadow, and Portland Harbor Waterfront typologies) comprise nearly 559 acres, or more than 60 percent, of the employment lands brownfield total.

Figure 3-4. Brownfield Acreage



4 ECONOMIC ANALYSIS

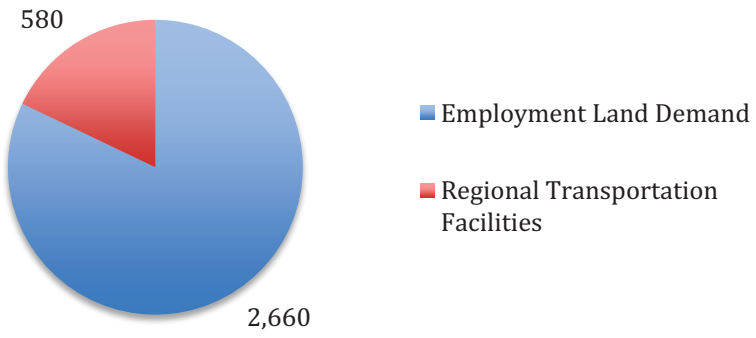
Brownfield projects are no different than any complex real estate development projects that can be subject to a wide range of entitlement issues and other constraints. Like all real estate projects, they are driven by market conditions and financial ROI. To provide context for the specific analysis of brownfields, a broad assessment of economic conditions and trends in Portland was conducted (Section 4.1). To provide a property-specific perspective, a financial feasibility assessment was conducted for prototypical development scenarios (Section 4.2).

4.1 Economic Trends and Forecast

As of 2010, Portland had an in-city employment base of 370,000 jobs. In-city employment is projected to experience a net increase of approximately 147,000 jobs over the 2010-35 period. The pace of job change represents an annual average growth rate of 1.3 percent, and Portland expects to capture 27 percent of the metropolitan region's employment growth.

The EOA translates this forecast employment growth into demand for additional employment-related development and land. After accounting for jobs that locate in residential areas (schools, home occupations, nonconforming uses), there is an estimated demand for 2,660 acres of employment land in Portland, with over half of it in industrial areas. An additional 580 acres of land for regional transportation throughput facilities is required—bringing the 25-year total industrial-commercial need to 3,240 acres.

Figure 4-1. Total Land Demand for Industrial, Commercial, and Transportation Uses (Acres)



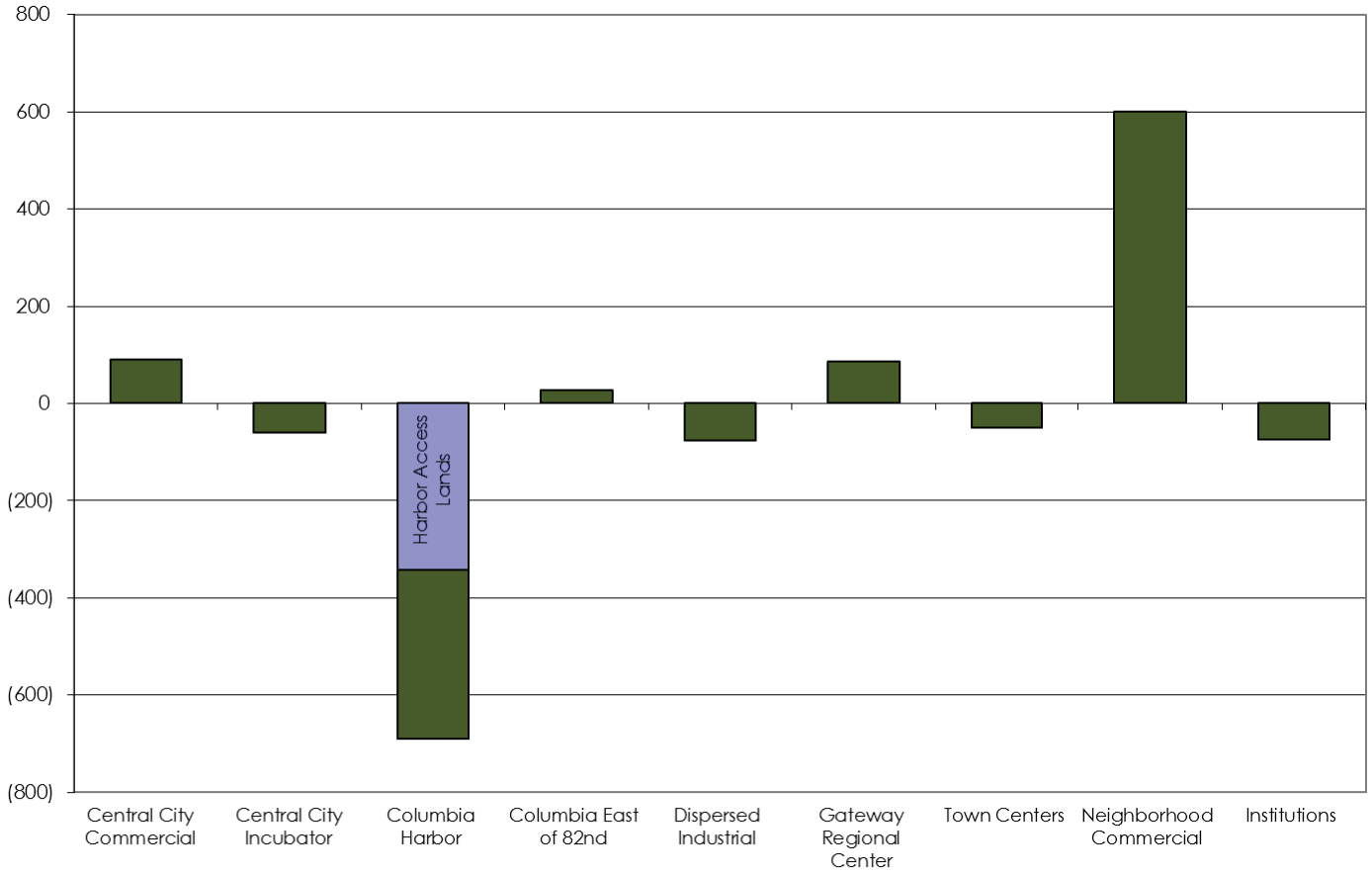
Industrial and Commercial Land Supply

Compared to forecast employment land demand of 3,240 acres, the EOA indicates the total estimated employment land supply to be 3,094 acres. This leaves a net deficit of as little as 146 acres, assuming that land is fully interchangeable between industrial and commercial uses. However, the extent of land shortage is potentially much greater, as land is not distributed on the basis of where the demand is greatest.

Projected demand for industrial land exceeds existing buildable land supply by **720 acres**.

The shortage of land for Portland's industrial areas has been estimated at 720 acres. Taken as a combined group, Central City and other commercial areas appear to have a surplus of employment land through 2035.

Figure 4-2. 2035 Employment Acreage Surplus/(Deficit) by Geography



Source: E. D. Hovee & Company, LLC and Portland Bureau of Planning and Sustainability.

Potential Brownfield Contribution to Employment Land Supply

The draft EOA anticipates that an estimated 90 percent of Central City brownfield acreage may redevelop because of strong market support over a time horizon to 2035. Non-Central City commercial properties are expected to have redevelopment rates at 50 percent through 2035 and industrial properties redevelopment rates of 40 percent.

At these ratios, close to 440 acres of the citywide 910-acre brownfield inventory would be assumed to redevelop over the EOA time horizon, leaving more than 470 acres not redeveloped as late as 2035.

The added contribution that full (100 percent) redevelopment could offer is most significant for industrial properties. The potential for added industrial land supply, assuming 100 percent brownfield redevelopment, would be about 335 acres of extra land capacity, reducing the industrial lands shortfall by 45 percent, from a 720-acre to a 385-acre deficit.

4.2 Financial Feasibility Analysis

While the economic analysis demonstrates a long-range demand for commercial and industrial land, the potential for brownfield redevelopment to meet this demand is largely driven by the R2V of individual properties. Simply put, businesses and developers are not likely to invest in real estate projects that cost more than they are worth. To assess financial feasibility of brownfields across Portland, pro formas were prepared for a range of development alternatives—commercial office/retail, industrial business park/warehouse-distribution, and/or mixed use—as applicable to each of Portland's seven brownfield typologies. With each pro forma, it has been possible to quantify the extent to which remediation of brownfield sites on industrial and commercial property is financially feasible in the context of current market trends and ultimate site value. The analysis quantifies the potential feasibility gap associated with costs of brownfield remediation and then, for affected harbor area properties, the additional costs associated with Superfund Shadow or Portland Harbor Waterfront properties.

Results of specific development prototype feasibility testing are then aggregated to assess overall cost and feasibility implications across the full citywide employment-related brownfield inventory of 910 acres.

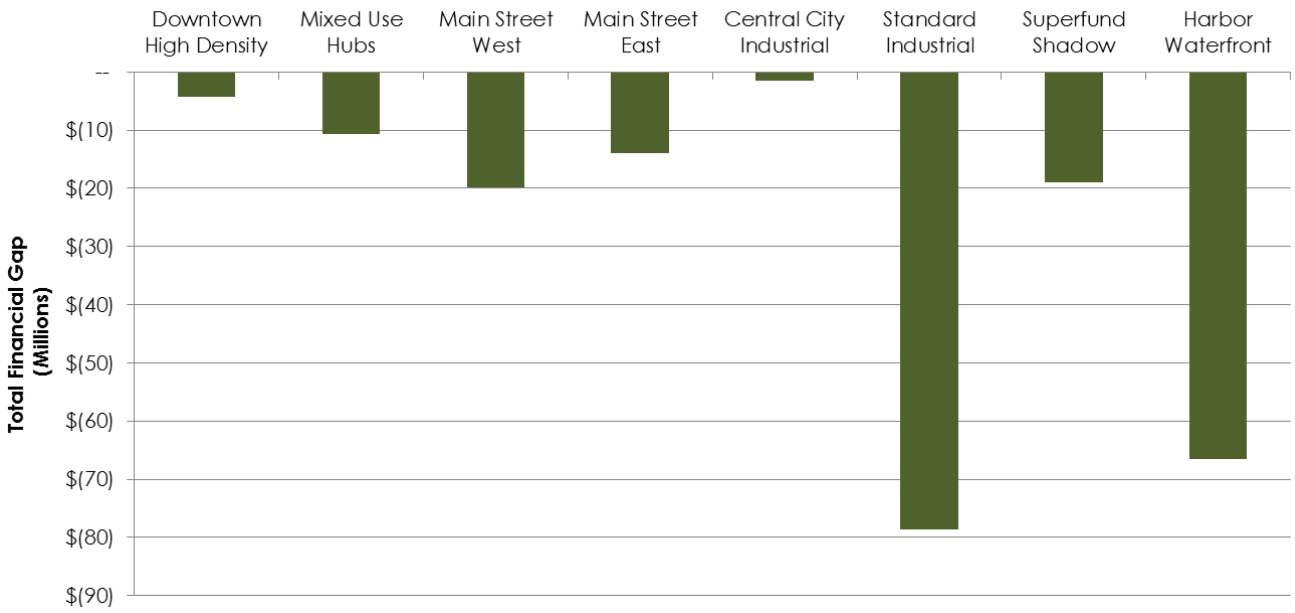
Financial Feasibility Gap Results by Typology

- Generally, environmental cleanup costs have a stronger overall influence on feasibility than the costs associated with market variables (i.e., rents, development costs, location).
- The total feasibility gap (or amount by which properties are financially underwater) is estimated at $214 million across all

employment brownfield typologies, or $307 million when Superfund costs are included for affected properties. These costs are about 9 to 12 percent less than total cleanup cost because some development types can absorb a portion of remediation cost without the need for financial incentives or offsets.

- High-value locations with high allowed density development are much more likely to be market feasible. For example, properties in downtown Portland can often absorb average remediation costs and their redevelopment can still be financially viable. The feasibility gap for downtown high-density typology is a total of $4 million spread over 94 acres of property (see Figure 4-3).

Figure 4-3. Estimate of Total Financial Feasibility Gap by Typology



Source: Portland Bureau of Planning and Sustainability, Maul Foster & Alongi, Inc., and E. D. Hovee & Company, LLC
Note: Financial gap does not include potential Superfund liability.

- Mixed-use developments in some typologies such as Main Street East are often financially infeasible because construction costs outweigh potential rents achievable with current market conditions. The addition of remediation costs only exacerbates those scenarios. However, these development types make up a small portion of total potential brownfields in Portland.
- Redevelopment of industrial brownfields is generally challenging because cleanup costs often exceed the redeveloped property value, which is limited by the lower density of development.
- The financial gap for the Portland Harbor Waterfront is nearly $67 million. Taken together, industrial properties (associated with typologies 4 through 7) account for a combined 77 percent of the

overall feasibility gap associated with on-site remediation. This increases to an estimated 84 percent of the gap affecting brownfield constrained properties, if potential Superfund-related liability is included.

4.3 Closing the Financial Gaps in Achieving Redevelopment Goals

Reaching complete build-out of the brownfield inventory is not a realistic goal, so interim targets of reaching redevelopment of 50 percent, 70 percent, and 90 percent of these properties were evaluated to establish a context for the level of public investment that may be needed to put these sites into productive use. These targets align with analysis conducted in the EOA to examine the potential for brownfields to meet the forecasted industrial land supply shortfall within the Urban Growth Boundary.

The analysis indicates that a large number of properties included in the brownfield inventory can be redeveloped with a relatively modest investment (Table 4-1). Achieving higher levels of redevelopment likely will result in a diminishing-returns scenario. Closing the estimated financial feasibility gap on 50 percent of the brownfield acreage requires approximately $36 million. That investment doubles to achieve an additional 20 percent of redevelopment, then doubles again to achieve 90 percent. The analysis indicates that there is a large amount of "low-hanging fruit" in projects that could become financially feasible with some level of public investment. The increasing costs to achieve higher levels of redevelopment are largely driven by the assumed high costs of cleanup associated with a relatively small number of individual properties.

Table 4-1. Financial Gap to Reach Target Levels of Redevelopment

% of Total Acres	Number of Acres	Total Financial Gap	% of Total Financial Gap	Jobs	Portland Tax Revenue (Annual)	Total State & Local Tax Revenue (Annual)
50%	408	$36,371,000	17%	23,000	$31,760,000	$170,385,000
70%	572	$74,860,000	35%	26,000	$35,103,000	$194,107,000
90%	735	$158,820,000	74%	30,000	$40,397,000	$224,235,000
100%	817	$214,296,000	100%	31,000	$42,511,000	$238,698,000

Note: The financial gap shown here excludes costs associated with Superfund sites.

4.4 Barriers to Redevelopment

While the financial feasibility gap is a fundamental barrier to redevelopment of brownfields, these properties face a number of other, interrelated challenges.

Financial—Financial feasibility is the controlling factor that determines project success or failure. The additional direct costs of remedial actions and

the indirect increased carrying costs associated with longer timelines make cleanup and redevelopment of many brownfield properties financially infeasible without some public intervention. Factors that enter into the calculation include: competition with greenfield sites, cost overruns, timing, limited public and private financial resources for conducting investigation and cleanup, and other non-brownfield constraints.

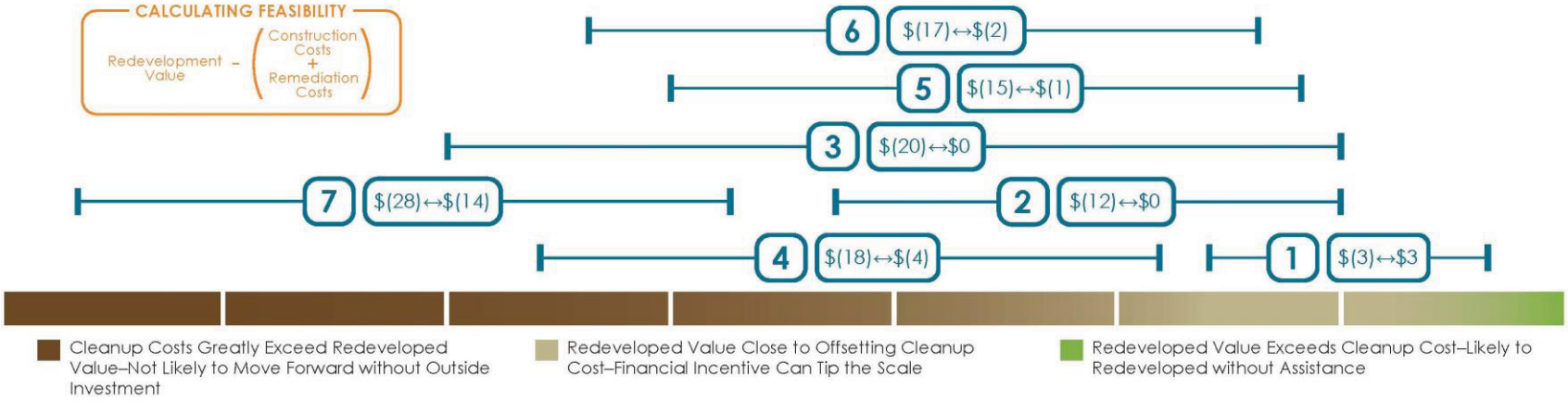
Uncertainty and Risk—Redevelopment of a contaminated property inherently involves uncertainty and risk related to potential extent of contamination, lack of predictability in regulatory decisions, and potential for federal liability. Uncertainty is a serious liability in the development context, because it has the potential to affect the development timeline, funding sources, and even site design and engineering costs. This uncertainty discourages development, sometimes more than the actual cost of cleanup. Issues that influence uncertainty in the Portland context include: fear of the regulatory environment, the Superfund overlay in the harbor, and the transaction costs of the regulatory process.

Regulatory Process—A few states have excellent reputations for making the brownfield regulatory process predictable and customer friendly. Some perceptions of the Oregon process include: overly constrained land use regulations, uncoordinated or even conflicting permitting processes, and lack of a timely pathway to liability settlement.

Figure 4-4

PORTLAND BROWNFIELD ASSESSMENT
FINANCIAL IMPACT SUMMARY

BROWNFIELD TYPOLOGY FINANCIAL FEASIBILITY GAP
($ PER SQUARE FOOT)



TOTAL GAP AND BENEFITS FOR ALL BROWNFIELDS IN PORTLAND

BROWNFIELD TYPE	ACRES	TOTAL FINANCIAL GAP	JOB POTENTIAL	TAX REVENUE POTENTIAL CITY OF PORTLAND	TAX REVENUE COMBINED
1 Downtown High Density	94	$ (4)MM	14,000	$ 21 MM	$ 104 MM
2 Mixed Use Hubs	58	$ (10) MM	2,600	$ 3 MM	$ 16 MM
3 Main Street	194	$ (34) MM	5,300	$ 5.9 MM	$ 32 MM
4 Central City Industry	4	$ (1) MM	280	$ 400 K	$ 2 MM
5 Standard Industry	326	$ (79) MM	5,700	$ 7.4 MM	$ 52 MM
6 Superfund Shadow	79	$ (24) MM	1,400	$ 1.8 MM	$ 12.5 MM
7 Harbor Waterfront	154	$ (154) MM	1,900	$ 2.7 MM	$ 19 MM
TOTAL	**910**	**$ (307) MM**	**31,000**	**$ 42.5 MM**	**$ 238.5 MM**

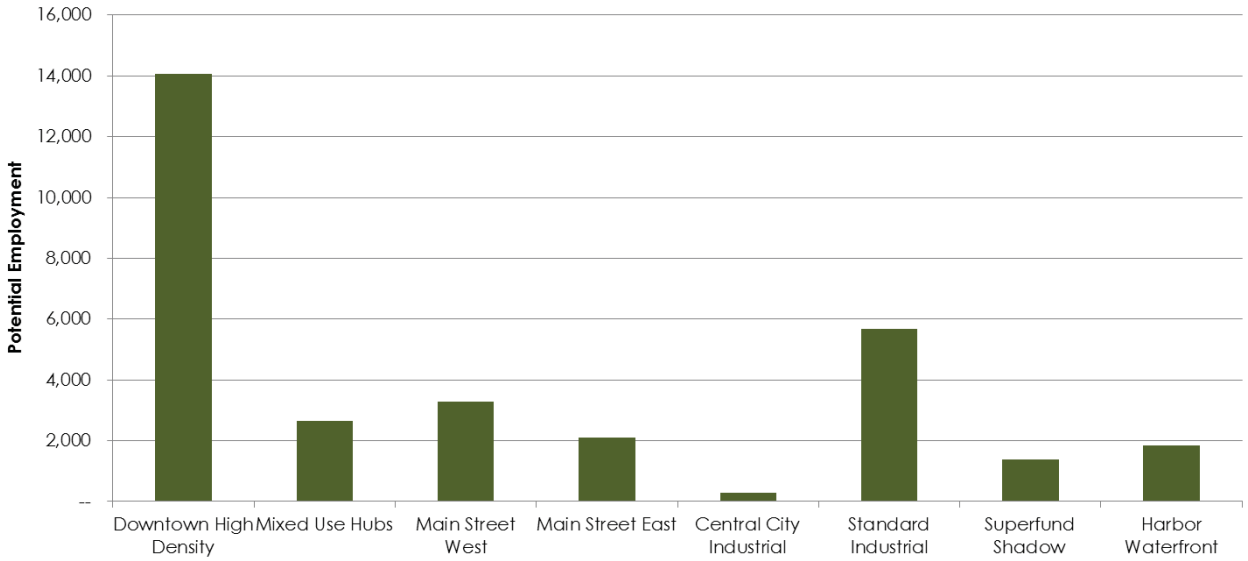
5 PUBLIC BENEFITS ANALYSIS

Putting underutilized, contaminated property back into productive use has multiple economic, environmental, and social benefits. Building on the pro forma analysis of prototypical brownfield redevelopment scenarios, an estimate of the economic and environmental benefits of redevelopment of the inventory of potentially contaminated sites has been calculated. While it is clearly unlikely that 100 percent of the brownfields will redevelop within any reasonable planning horizon, this analysis provides a sense of the scale and potential represented by these properties.

5.1 Employment

Redevelopment of the full inventory of brownfield properties has the potential to provide over 31,000 gross jobs. This would generate an estimated $1.4 billion in annual payroll potential for the affected sites. The number of jobs provided through each brownfield typology is driven both by employment density and by the number of acres in that category (Figure 5-1). Downtown High Density provides nearly 45 percent of the job potential. Another 8,300 jobs (27 percent of the total) may be oriented to Mixed-Use Hubs and Main Street areas. The industrial typologies account for approximately 9,200 (30 percent of total) potential jobs. Industrial jobs account for much of the total projected payroll because of relatively high wage rates and large acreage of properties represented in the brownfield inventory.

Figure 5-1. Employment Potential

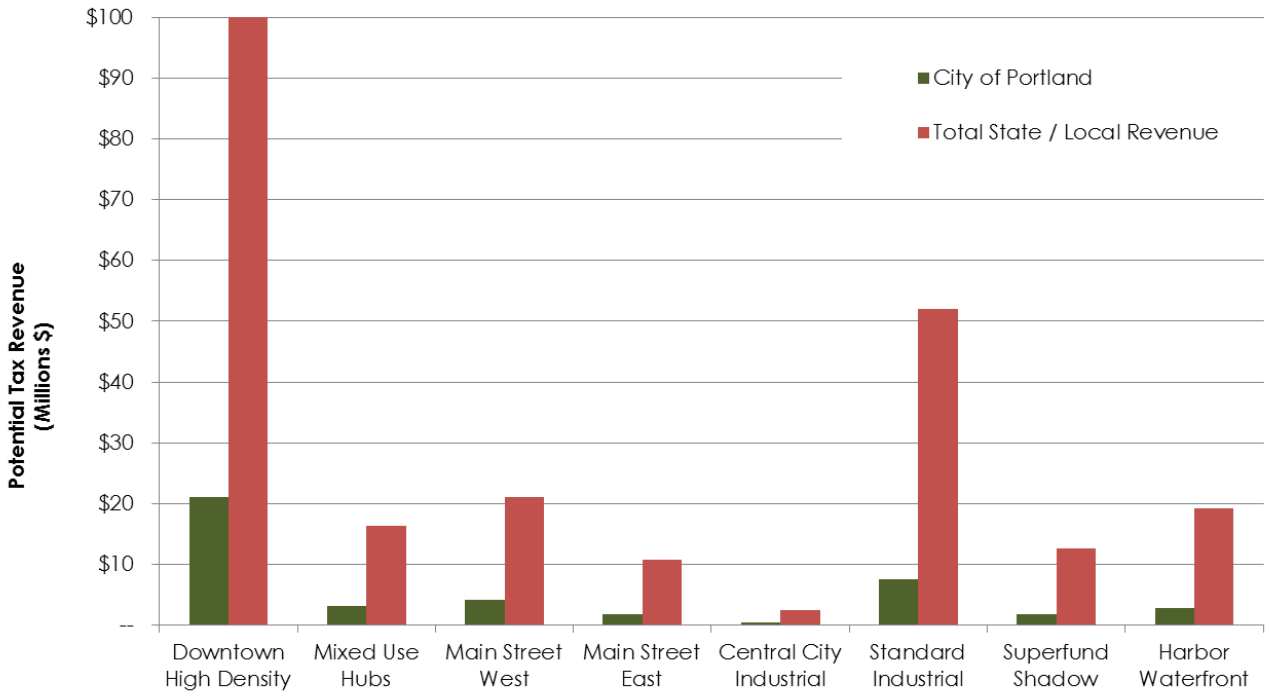


Note: Employment represents gross jobs based on building floor area and use type.

5.2 Tax Revenue Potential

Full redevelopment of the entire brownfield inventory also has the potential to generate approximately $240 million per year in potential state and local income and property and business tax revenues (estimated in 2012 dollars). Annual tax revenues for Portland account for approximately $42 million of that total (see Figure 5-2). Since tax revenues are largely driven by business and personal income taxes, the implications for typologies are similar to the employment figures. The high density of high-paying jobs in downtown annually drives over $20 million in Portland taxes and over $100 million in combined state and local tax revenues. Industrial typologies provide Portland approximately $12 million in tax revenues and over $86 million in combined state and local taxes.

Figure 5-2. Total Annual Tax Revenue by Brownfield Typology



Redevelopment of brownfields in Portland directly contributes annual tax revenues to Portland, county, state, and other tax authorities, so it is possible to compare the estimated cost of closing the financial feasibility gap through public investment to the estimated tax revenue generated by the redeveloped parcels (see Table 4-1). This analysis provides a general understanding of the benefits of redeveloping brownfield sites relative to the level of public investment. **In practice, of course, the tax revenues that result from redevelopment could not explicitly fund brownfield remediation.** Portland has many constraints on its ability to expend its tax revenues, and multiple demands for tax dollars. This analysis simply provides some context for considering how expenditures on brownfield incentives might compare to benefits over time.

The analysis indicates that Portland would see a net gain after less than ten years if it invested in remediated brownfields in the commercial typologies. The payback period for industrial sites is longer; the Portland Harbor Waterfront has a large financial gap and generates relatively low Portland tax revenues, so it takes over four decades for Portland to regain any investment in remediation.

These findings indicate that while Portland may be able to realize substantial ROIs in higher-value commercial brownfield properties, a regional or statewide investment is more appropriate for supporting remediation of industrial properties around the harbor. While this may appear financially advantageous for Portland, it is also important to consider that the EOA and the financial feasibility analysis (Section 4.2) indicate that the downtown commercial typology brownfields are also likely to develop without any public investment.

Table 5-1. Payback Period

TYPOLOGY	YEARS	
	PORTLAND TAX REVENUE	TOTAL STATE & LOCAL TAX REVENUE
1. Downtown High Density	< 1	< 1
2. Mixed Use Hubs	4	< 1
3a. Main Street West	6	< 1
3b. Main Street East	9	2
4. Central City Industrial	4	< 1
5. Standard Industrial	13	2
6. Superfund Shadow	13	2
7. Portland Harbor Waterfront	43	4

Note: This analysis excludes costs attributable to Superfund sites. Including Superfund costs would increase the payback period for the Superfund Shadow and Portland Harbor Waterfront typologies.

5.3 Environmental and Smart Growth Benefits

In addition to economic benefits, brownfield remediation and redevelopment can help protect the environment directly through cleanup of contamination and often through the associated impacts of compact, infill land development.

Redevelopment of brownfields can help Portland achieve its greenhouse gas reduction goals. By encouraging infill development in areas with a mix of

uses and transportation options, redevelopment of these properties represents a reduction in vehicle miles traveled when compared to suburban development. It is estimated that full build-out of the inventory of potential brownfields would represent a reduction of 39,000 metric tons of CO^2 annually, relative to sprawl development—the equivalent of taking 9,200 cars off the road.

Redevelopment of brownfields typically allows buildings to connect to existing infrastructure rather than requiring construction or expansion of roads and water and sewer lines. This use of existing infrastructure can result in significant savings to local governments. Based on national studies, it is estimated that infill development on brownfields in Portland has the potential to save $115 million to $180 million in public infrastructure investment compared to typical greenfield development.

6 POLICY TOOLS

An effective policy framework is critical for promoting brownfield redevelopment and capturing the potential economic, environmental, and social benefits described above. There are two major components to existing policy in Oregon: regulatory and financial.

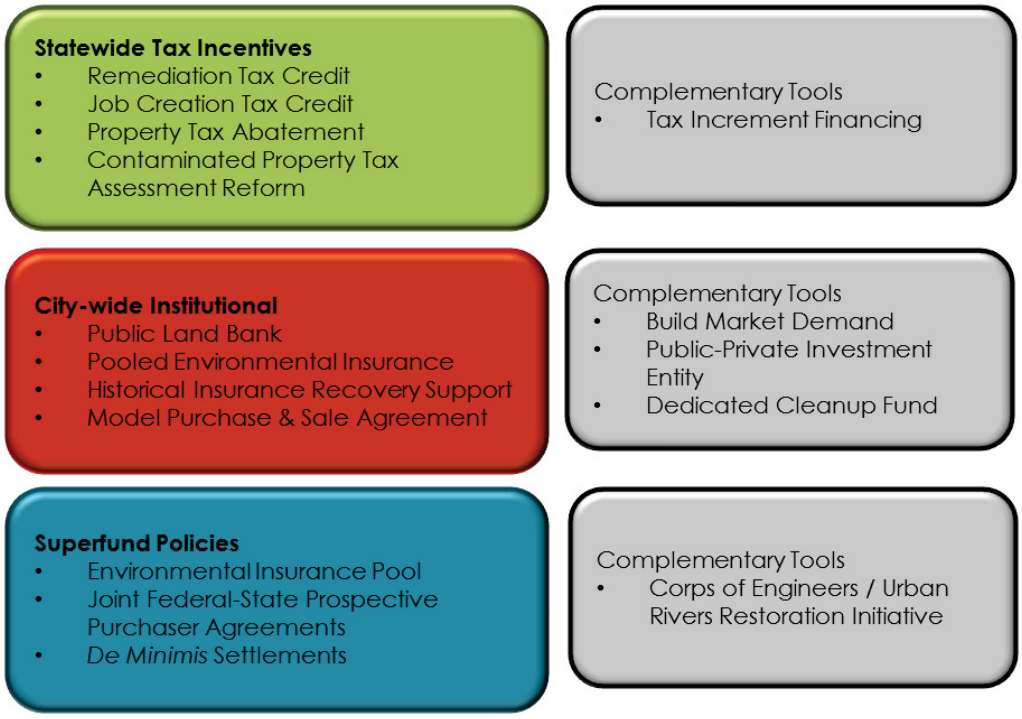
Regulatory Framework—The DEQ regulates cleanup of most contaminated properties, with the USEPA playing the lead role for areas designated as federal Superfund sites. The Oregon Cleanup Law establishes a risk-based approach to cleanup that allows flexibility for remediation to align with redevelopment of property. A Prospective Purchaser Agreement (PPA) program has been established that provides certainty of liability settlement for innocent developers of properties. This program is generally considered to be very effective, but is used by an average of only eight sites per year.

Financial Incentives—Portland and the State of Oregon offer several grant and loan programs to support assessment and cleanup of brownfield properties. However, these programs have limited capacity, so while they can play a critical role on individual projects, they are not able to have broad impact across the market. For example, the largest program is the Oregon Brownfield Redevelopment Fund, which provides low-interest loans and some grants for site assessment and cleanup. The program was recapitalized in 2008 with $9 million in state appropriation, which is just a quarter of the estimated $36 million needed to close the financial feasibility gap to redevelop 50 percent of the brownfield inventory just in Portland, not accounting for the rest of the state.

A set of innovative policy options that can accelerate brownfield redevelopment to achieve Portland's economic and community development

goals has been developed through a review of best practices in other cities and states across the country and collaborative discussions with the advisory group of stakeholders and experts. The policy tools have been prioritized by the advisory group and bundled to demonstrate synergies between options and lay the foundation for an implementation strategy. The policy tools are briefly described below and explained in more detail in the Financial Analysis Report, included as Appendix B. Tools prioritized by the advisory group are described below, with other tools assessed in the study listed as "complementary tools."

Figure 6-1. Priority Policy Tool Bundles



6.1 Statewide Tax Incentives

Tax policy provides a way to improve the financial feasibility of brownfield redevelopment projects in a way that is predictable for developers and that requires relatively little administration by public agencies. As the financial analysis demonstrated, the fundamental challenge to brownfield redevelopment is that the costs of cleanup often exceed the value of a property. Implementation of tax policy changes would require state legislative action. The demonstration of the large potential increase in tax revenues associated with job creation on brownfields in Portland alone presents a strong case for investment by the state.

Two taxation policies have been prioritized: a remediation tax credit and reform of the existing property tax assessment for contaminated lands.

Additionally, a job creation tax credit or a property tax abatement policy could be developed for brownfields.

Remediation Tax Credits allow property owners and developers to decrease their business or personal income taxes by a percentage of the documented costs of conducting a cleanup. To ensure that this incentive makes a true difference in financial feasibility, applicants could be required to present a pro forma for a project to demonstrate real need in order to be eligible. In order to manage the short-term impacts on the state budget, limits could be set on the amount of credit available on an individual project or for all projects in a fiscal year. Making the tax credits transferable would allow nonprofit and public entities to use the tool.

A **Job Creation Tax Credit** could be targeted to brownfield redevelopment projects that create a certain number of new, family-wage jobs. This incentive could be particularly beneficial to industrial projects that typically create higher-wage jobs than retail developments.

A **Redeveloped Brownfield Tax Abatement** gives landowners a reprieve for payment of property taxes for a set period of time after a development is constructed. The Portland Development Commission (PDC) currently manages the Enterprise Zone that offers property tax abatements for industrial developments in a designated area. To promote redevelopment of brownfield properties for industrial uses, the abatement could be expanded to a longer duration and offered to qualifying sites outside the designated Enterprise Zone.

Contaminated Property Tax Assessment policy in Oregon is currently considered a disincentive to cleanup. The state administrative rule regulating assessment for property taxes establishes a method for reducing the value of contaminated land by the cost of the environmental liability. This policy can result in a substantial decrease in property tax payments on a brownfield property. While the market value of a property is certainly impaired by contamination, the tax assessment should include a time limit to encourage owners to address the problem. Coupling a sunset on the assessed value reduction with a tax credit on remediation would minimize financial impacts to property owners while promoting cleanup.

Complementary Tax Tools:

- Tax Increment Financing (TIF) can be a powerful tool for promoting urban redevelopment; however, Portland is reaching its statutory limits for use of this incentive. Several options could be explored to tailor TIF to more effectively target brownfields or to expand capacity. It would be necessary to change state TIF-enabling legislation in order to facilitate the brownfields-TIF connection. (See discussion immediately below.)

6.2 Citywide Institutions

Portland's brownfield program and PDC have played major roles in redevelopment of a number of contaminated properties, including supporting redevelopment of the Pearl District and the South Waterfront. The capacity of public agencies to promote brownfield revitalization could be bolstered through a set of policy tools that strengthen or create new institutions focused on cleanup and redevelopment. These tools include establishing a land bank, establishing an environmental insurance pool, supporting claims on historical insurance policies, and creating Model Purchase and Sale Agreements for contaminated property transactions.

Brownfield Land Bank—A Brownfield Land Bank creates an entity with the resources and long-term perspective to acquire and reposition brownfield properties without putting additional liabilities on Portland's balance sheet. The Brownfield Land Bank would operate with a clear mission and long-term plan for community revitalization. To be effective in repositioning contaminated lands, it should have special powers, such as protection from environmental liability, authority to clear title, and ability to issue bonds and use TIF. The land bank would require initial capitalization to acquire a portfolio of properties and financial support for the initial years, but should achieve financial self-sufficiency within five to ten years through sale of properties to the private market.

If it were granted special authorities in the use of TIF, the land bank could be a frontline tool. One example could be to allow exceptions to debt limitations and the ability to use TIF for noncontiguous parcels outside urban renewal areas. TIF may be the most effective mechanism for addressing more difficult and upside-down properties, such as port and industrial properties. In order to be most effective, a land bank should be enabled with an environmental liability exemption on acquired properties.

Environmental Insurance—A number of private insurers provide policies that protect against discovery of unknown environmental contamination and potential for contribution claims or third-party personal injury suits. These insurance policies can be critical risk management tools in facilitating a brownfield land transaction, but they can also be costly or difficult for smaller projects to obtain. Portland could establish a pooled environmental insurance program through preselecting insurers and establishing common terms to reduce transaction costs. Portland could also potentially subsidize the premiums for environmental insurance policies to promote certain types of projects that meet multiple policy goals. A specialized environmental insurance pool could be established to address risk related to Superfund liability. That concept is discussed below in Section 6.3.

Historical Insurance Recovery Support—Before the mid-1980s, commercial general liability policies did not contain exclusions for liabilities caused by environmental damage. Since federal and state law has made

liability for environmental contamination retroactive, cost recovery may be pursued from historical insurance policies that were in place when pollution occurred and that covered the property owner, operators, or other potentially liable parties. It takes technical expertise and resources to make a claim on a historical insurance policy, but case law makes Oregon one of the most favorable states in the country for these actions, and they are becoming standard practice. Portland could provide technical support to property owners submitting a claim on historical insurance policies for environmental impacts. This relatively minor investment in staff or contractor resources could potentially generate millions of dollars to support assessment and cleanup of contamination.

Model Purchase and Sale Agreement—The legal transaction of contaminated property is a complicated and risk-laden operation. Portland could reduce transaction costs and uncertainty by creating a Model Purchase and Sale Agreement that includes indemnification terms and standard transfer issues such as due diligence period, timing of cleanup, warranties, and inspection periods. Such a model agreement would require few city resources to develop and could be useful for a large number of transactions. Portland might also consider creating models for continuing obligations agreements, contaminated media management plans, and tailored easements and equitable servitudes.

The environmental insurance pool, historical insurance support, and Model Purchase and Sale Agreement all would be valuable tools to support the efforts of a Public Land Bank or the acquisition of contaminated property by Portland, PDC, or the Port of Portland. As a group, these policies provide substantial tools to manage risk, reduce transaction costs, and leverage outside funding to promote brownfield cleanup and redevelopment.

Brownfields-Focused TIF—Although Portland has limitations in using this tool, TIF is the most powerful tool in the local economic development toolshed, and it would be a mistake to ignore its potential. A strong rationale could be developed for making exceptions to debt limitations for brownfields that are producing little or no tax revenue. Other TIF changes, for example allowing noncontiguous brownfield properties outside urban renewal districts, could work to maximize the TIF-brownfields connection. This more flexible brownfields-focused TIF tool could work in conjunction with the Brownfield Land Bank to address the more difficult and upside-down industrial sites. Additionally, TIF could be a repayment source for a brownfields-focused HUD 108 loan pool, effectively turning loans into grants. TIF also could be used as a subsidy source to pay for the Superfund-focused environmental insurance program referenced above.

Complementary Tools:

- Building Market Demand—Business Oregon and PDC actively market properties. Their efforts could be expanded to emphasize brownfield properties that represent important regional assets.
- Public-Private Entity—The Community Investment Initiative represents an innovative approach that is emerging to leverage public and private resources to address infrastructure needs and property constraints, including brownfields.
- Dedicated Cleanup Fund—A bond measure or other revenue source could establish a fund to support site assessment, cleanup, and integrated planning for redevelopment of brownfields. A brownfields revolving loan fund can also be created without a new revenue source by using HUD 108 authority.

6.3 Superfund Policies

The financial feasibility analysis demonstrates that the potential Superfund liability has a dramatic negative impact on industrial property in the Portland Harbor. There are many complex issues related to the Portland Harbor Superfund designation, such as the technical analyses of risk and remediation options, and legal arguments over allocation of costs, which are beyond the scope of this project. There are also a number of large-scale strategies for resolving the harbor issue, such as implementation of interim actions to support Superfund delisting or seeking a major federal budget appropriation to offset costs, which are very important for policymakers to explore but which are also beyond the scope of this study.

The policies proposed in this section focus on risk management and creating certainty to promote property transactions and investment in redevelopment of upland properties around the harbor. To protect this regional economic asset, Portland and the state could work with the USEPA to modify Superfund policies to allow upland property owners to expeditiously reach regulatory closure and remove a dark cloud over land transactions and redevelopment on industrial lands. These policy proposals are targeted toward upland properties that are considered to be in the "Superfund shadow"; they are not on the waterfront, but could be connected to sediment contamination in the harbor through the stormwater system. As the owner and operator of the stormwater system, Portland has some interest in reducing these potential sources of historical and ongoing contamination.

Pooled or Subsidized Environmental Insurance—To address Superfund Shadow upland properties, Portland could allow project proponents to make a payment to the government as closure for tailing environmental liability, specifically. The government could in turn use those funds to buy insurance policies to cover a pooled group of sites. To be eligible for the insurance pool, participants would be required to complete upland cleanup actions and

implement stormwater best management practices. If the USEPA or other potentially liable parties seek a contribution from that party, the claim would be directed to the environmental insurance policy. If Portland offered a tax incentive equivalent to the extra cost of the environmental insurance, the result would be the effective nullification of the disincentives for investment that are attributable to the Superfund designation.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) de Minimis Settlements—The concept behind this policy is simply for the USEPA to use its existing authority to provide expedited settlement agreements for owners of properties that are likely to cause only minor or insignificant impacts to the Portland Harbor.

Federal PPAs—The DEQ manages a highly effective PPA program that allows innocent buyers of property to enter into an agreement with the state that defines cleanup requirements and limits liability before they actually take title. The USEPA also has the authority under CERCLA to execute PPAs. To make implementation of this tool efficient, the USEPA could establish a memorandum of agreement (MOA) with the DEQ that recognizes and provides federal support for state PPAs executed for properties around the harbor that meet certain conditions. The eligibility criteria could include source control and completion of cleanup actions, and could even incorporate application of sustainable stormwater solutions such as rain gardens and pervious pavements.

It is important to note that such an MOA would work only for non-National Priority List (NPL) sites. However, to initially eliminate the stigma of a site's Superfund status, Portland could use the current delisting process, or the equivalent determination process for acquiring a USEPA decision that a site is not part of an NPL site..

One potentially promising avenue to creation of a template for PPA agreements is the use of green infrastructure to reduce stormwater-related contributions to sediment contamination.

Complementary Options

- Corps of Engineers Urban Rivers Restoration Initiative—An innovative approach to cleanup of an urban waterway is under way on the Passaic River in northern New Jersey in which the U.S. Army Corps of Engineers is taking a lead role in planning for remediation and restoration of the river. Engaging the Corps of Engineers through an MOA with the USEPA could shift the paradigm of the cleanup to a large public works project, establish a more collaborative process, and position the remediation for a large federal appropriation through the Water Resources Development Act.

6.4 Cumulative Benefit of Policy Tools

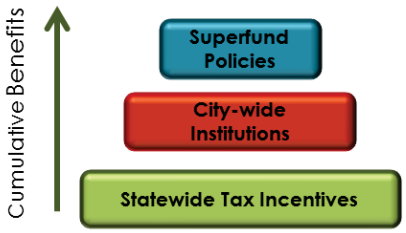


Figure 6-2. Cumulative Benefits of Policies

Implementation of the policies in the three bundles would have an additive effect. The tax incentives would be applicable to brownfield properties across the state. Contaminated properties in Portland would benefit from those tax incentives and also utilize the environmental insurance pool and Historical Insurance Recovery Support. Additionally, the properties that have the largest financial gap, those associated with the Portland Harbor Superfund site, would capitalize on all those tools and the additional policies that create certainty and lead to settlement of federal liability.

It is not likely that one policy tool will resolve the range of issues and the financial barriers for all brownfield sites in Portland. Adoption of a set of mutually supportive tools will have a more dramatic impact in putting these properties back into productive use.

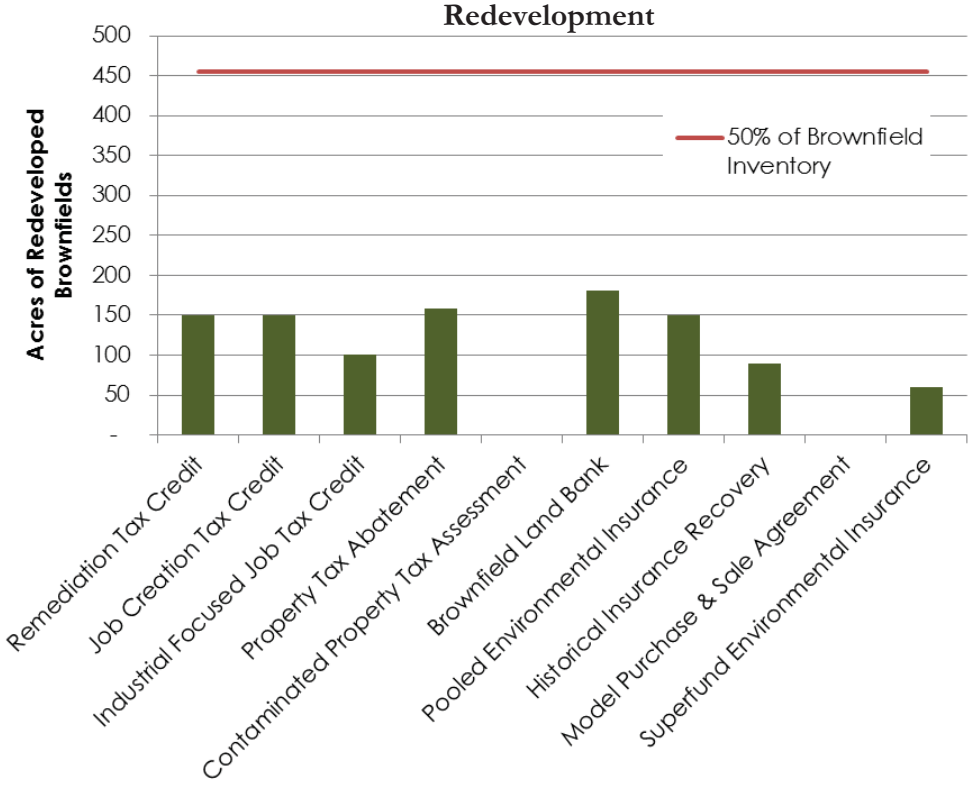
6.5 Return on Investment

An ROI analysis was conducted to compare the relative impacts of these tools. Because the policies have not yet been fully developed and it is uncertain what eligibility criteria, geographic constraints, or other factors might affect their influence on redevelopment outcomes, the results should be considered order-of-magnitude estimates. The analysis examined how many acres of brownfield property are likely to be redeveloped through application of the particular policy tool and the corresponding employment and tax revenue benefits associated with that redevelopment. A ten-year period was used for the analysis, with tax revenues estimated for one year (to conservatively account for absorption rate for bringing a property to market).

Key Findings

- No single policy incentive likely will be sufficient to catalyze redevelopment of all the brownfields or even achieve the 50 percent target. The Remediation Tax Credit, Job Creation Tax Credit, Redeveloped Brownfield Property Tax Abatement, Pooled Environmental Insurance, and Public Land Bank appear to have the largest potential impact, with each accounting for about 150 acres of brownfield redevelopment (see Figure 6-3).

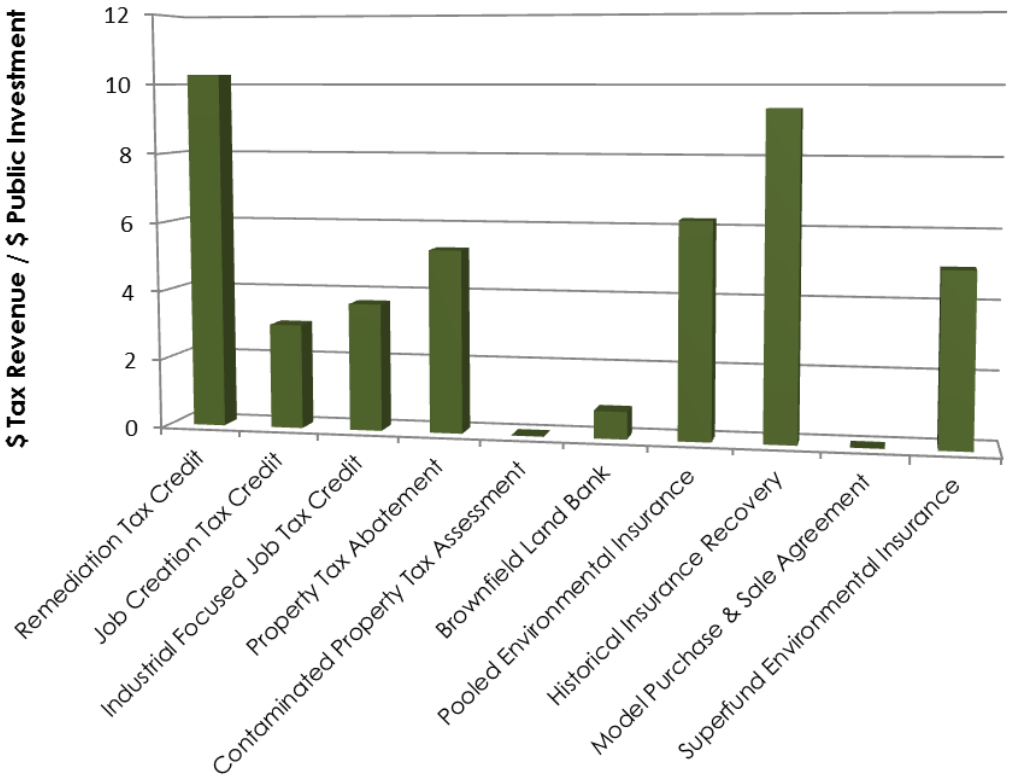
Figure 6-3. Potential for Policy Tools to Catalyze Brownfield Redevelopment



- The Remediation Tax Credit, Pooled Environmental Insurance, and Historical Insurance Recovery Support programs provided the greatest return on total tax revenues relative to public investment. Each approaches a $10 return in annual state and local tax revenue for every $1 invested in the brownfield incentives (see Figure 6-4).
- Differences in tax return relative to public investment are driven by the mechanics of the policy. Some, such as the Remediation Tax Credit, essentially provide funds to fill the financial feasibility gap. The Historical Insurance Recovery Support program leverages outside funding sources. The Public Land Bank has a relatively low ROI because funds are used for acquisition as well as gap financing. An acquisition strategy, although more expensive, facilitates the redevelopment of more difficult and upside-down properties, including port and industrial properties.
- Much of the employment and tax revenue benefit of brownfields is focused in office, commercial, and mixed-use development in strong markets. These areas are also the most likely to redevelop with little to no public investment.
- Brownfield incentives have the potential to reduce the projected industrial land supply shortfall, but will require significant investment with relatively low increase in Portland tax revenues. However, the tax revenues generated to Multnomah County and the State of

Oregon for industrial redevelopment are substantial and support a rationale for shared investment in Portland industrial lands as a regional economic asset.

Figure 6-4. Rate of Return on Public Investment



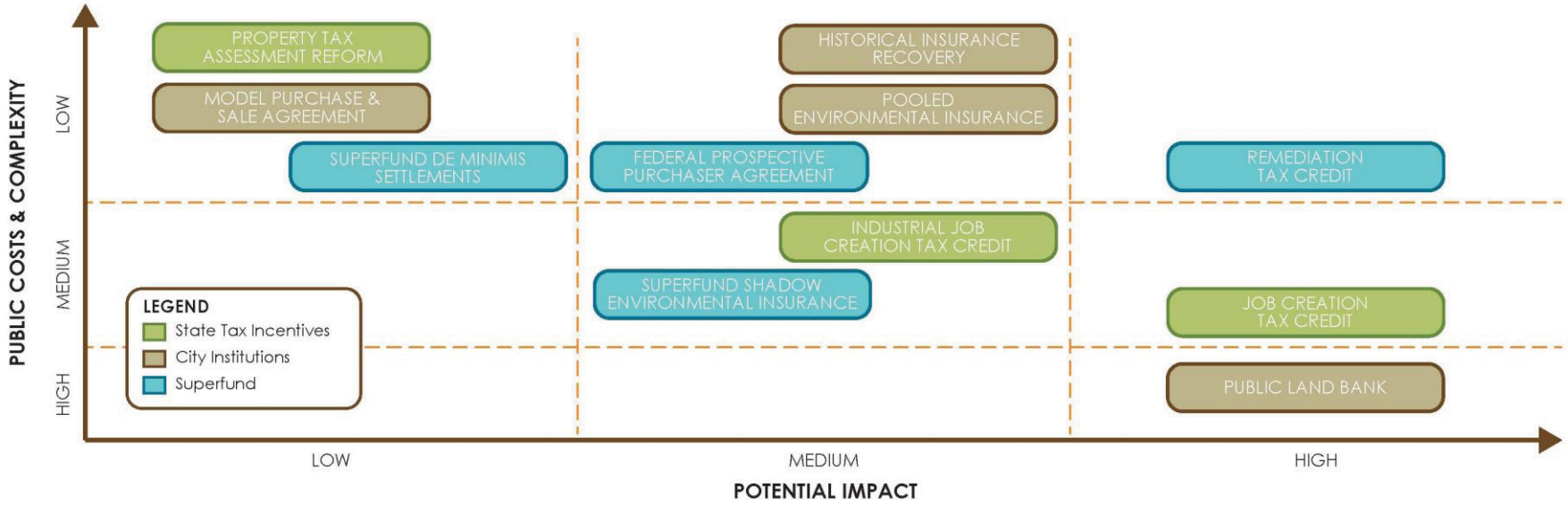
6.6 Policy Implications

In setting policy, the potential financial returns of a policy should be considered with a number of other factors, including costs and complexity to implement. Figure 6-5 provides a conceptual graphic of how the brownfield policy options align in terms of potential impact and public cost and complexity. The highest-rated policies are the Remediation Tax Credit and Historical Insurance Recovery Support. The Public Land Bank has a high potential impact over a long-term time horizon, but likely will require significant investment of public resources for it to be successful. Several low-cost, low-impact policies, such as creating a Model Purchase and Sale Agreement, represent actions that Portland may want to take to build momentum for larger endeavors.

Figure 6-5

PORTLAND BROWNFIELD ASSESSMENT

PUBLIC BENEFIT & RETURN ON INVESTMENT SUMMARY ANALYSIS



POLICY ROI SUMMARY

POLICY TOOL	ACRES	JOBS	TOTAL COST	PORTLAND TAX REVENUES	TOTAL STATE & LOCAL TAX REVENUES	TAX REVENUE/COST	$ PUBLIC INVEST./ ACRE	$ PUBLIC INVEST./ JOB
Remediation Tax Credit	150	9,800	$7,221,000	$13,970,000	$ 74,237,000	10	$ 48,000	$ 700
Job Creation Tax Credit	150	9,800	$24,557,000	$13,969,500	$ 74,237,000	3	$ 163,000	$ 2,500
Industrial Focused Job Tax Credit	100	1,600	$4,028,000	$2,133,500	$ 14,840,500	4	$ 40,000	$ 2,500
Property Tax Assessment Reform	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Public Land Bank	180	8,000	$55,000,000	$6,525,300	$ 43,456,400	1	$ 305,000	$ 6,900
Pooled Environmental Insurance	150	1,850	$2,500,000	$ 2,271,400	$ 15,584,850	6	$ 17,000	$ 1,400
Historical Insurance Recovery	90	2,200	$2,000,000	$2,725,700	$ 18,701,800	9	$ 22,000	$ 910
Model Purchase & Sale Agreement	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Superfund Environmental Insurance	60	1,500	$2,500,000	$1,813,300	$ 12,466,20	5	$ 42,000	$ 1,670

7 IMPLEMENTATION

Developing a strategy for implementation of an effective package of brownfield policy tools requires consideration not only of the potential fiscal ROI, but also of political, program development, and procedural factors. A summary of these factors is provided in Table 7-1.

7.1 Industrial Focus

There is a particular focus on tools that could help meet the forecasted 720-acre shortfall of industrial land supply in the next 20 years. Most of the policy tools can be designed to focus on industrial properties by limiting eligibility to lands in industrial zones or other specifically designated areas. The Remediation Tax Credit is estimated to have the potential to promote redevelopment of approximately 70 acres of land in the Standard Industrial typology, but only 17 and 8 acres of land in the Superfund Shadow and Portland Harbor Waterfront typologies, respectively. The Remediation Tax Credit is assumed to support redevelopment of properties that are relatively close to financial feasibility. To address more challenging properties, a combination of targeted tools may be needed, such as:

- The Brownfield Land Bank has the potential to be a powerful tool to target individual properties or designated areas.
- Historical Insurance Recovery Support can be a critical tool for bringing outside resources to offset the costs of site assessment and cleanup.
- Pooled Environmental Insurance tailored to address potential Superfund liability could have a transformative impact on the perception of risk associated with properties in the Superfund Shadow.

7.2 Synergies

There is potential for synergy between the proposed policies. For example, the effectiveness of a Public Land Bank would be greatly enhanced by brownfields-focused TIF, a Remediation Tax Credit, and/or Pooled Environmental Insurance to offset the costs of addressing contamination and other project feasibility gaps.

Table 7-1
PORTLAND BROWNFIELD ASSESSMENT
POLICY TOOL SUMMARY

Policy Tools	Advantages	Disadvantages	Considerations	Enacting Agency
		TAX INCENTIVES		
Remediation Tax Credit	• Provides a financial incentive for private and public sectors. • Dependable and predictable. • Implementation and administration can be streamlined. • Strong potential impact and return on public investment. • Broadly applicable for many brownfields.	• Short-term impact to state budget. • May be critiqued as a financial windfall for potentially responsible parties.	• Fewer administrative constraints are more attractive for private sector. • Limits on credit amount per project or per year can constrain impact. • Define eligible costs and eligible entities. • Important to make credits transferable.	State (Statutory Change)
Job Creation Tax Credit	• Incentive directly tied to economic benefit. • Does not require establishing a new tax or fund. • Broadly applicable for many types of brownfields. • High potential for promoting brownfield redevelopment.	• Implementation and administration may be cumbersome. • Relatively low potential return on public investment. • May be critiqued as a financial windfall for potentially responsible parties.	• Consider limited eligibility to industrial projects. • Eligibility criteria and reporting requirements may make it unappealing to private sector and difficult to administer.	State (Statutory Change)
Property Tax Abatement	• Builds on existing Enterprise Zone tax abatement program. • Provides a financial incentive for private and public sectors. • Dependable and predictable.	• Short-term impact to local tax revenues.	• Coordinate with PDC on policy development and operation.	Portland (Ordinance)
Tax Increment Financing Reform	• Expands a financial incentive program that has a track record of effectiveness. • Provides funding source to support public-private partnerships and leverage outside investment. • Works in conjunction with other tools, such as the land bank, environmental insurance pool, and/or a HUD 108 brownfields loan pool.	• Current market conditions create risk that incremental tax revenue generation will not meet expectations.	• Leverage outside funding, such as HUD Section 108, to support financial capacity. • Tailor to complement other tools such as environmental insurance.	State (Statutory Change)

Table 7-1
PORTLAND BROWNFIELD ASSESSMENT
POLICY TOOL SUMMARY

Policy Tools	Advantages	Disadvantages	Considerations	Enacting Agency
Contaminated Property Tax Assessment Reform	• Removes a perceived financial disincentive to cleaning up contaminated properties. • Potentially increases local tax revenues.	• Reforms may encounter resistance from affected property owners.	• Review legal constraints to changing property valuation rules. • Couple with Remediation Tax Credit to limit impact on property owners.	State (Administrative Rule)
		INSTITUTIONAL		
Brownfield Land Bank	• Potential to become financially self-sustaining over time. • Provides patient capital and long-term vision. • Establishes an alternative to local governments taking title of contaminated properties through tax foreclosure. • Potential to leverage state and federal grants. • High potential to promote brownfield redevelopment.	• Requires substantial initial public investment in challenging budget climate. • Relatively low projected ROI rate.	• Define focus (geographies, types of properties). • Effectiveness would be greatly supported by Remediation Tax Credit and Pooled Environmental Insurance.	Portland or State (Statutory Change)
Pooled Environmental Insurance	• Makes a proven risk management tool more broadly available. • Pre-negotiated policy terms reduce transaction costs and time frames. • High potential benefit for relatively low public investment.	• Public investment to subsidize premiums needed to maximize effectiveness.	• Coordinate with private environmental insurance industry to refine proposal. • Connect public subsidy for premiums to TIF.	Portland or State (Policy Change)
Historical Insurance Recovery	• Potential to bring substantial new resources to support site investigation and cleanup. • High potential return on public investment.	• Successful settlement of claims is not guaranteed. • Potential opposition from insurance carriers.	• Structure program to recoup public costs upon settlement of insurance claims. • Contract services or build capacity internally.	Portland or State (Policy Change)
Model Purchase and Sale Agreement	• Low-cost solution to help facilitate a large number of property transactions.	• Likely to have limited quantifiable impact.	• Coordinate with specialized attorneys and regulatory agencies in crafting model agreement. • Separate model agreement for sites with potential Superfund liability.	Portland

Table 7-1
PORTLAND BROWNFIELD ASSESSMENT
POLICY TOOL SUMMARY

Policy Tools	Advantages	Disadvantages	Considerations	Enacting Agency
Dedicated Cleanup Fund	• Increases financial capacity for conducting cleanups. • Provides state or local control of funds in contrast to competing with priorities of federal funding. • Large potential impact. • Potential to support other tools such as Brownfield Land Bank.	• Challenging economic and political conditions for establishing a new tax or issuing large bonds. • Competition with other funding priorities (e.g., infrastructure, education, salmon recovery).	• Consider wide range of potential revenue sources (bond, targeted commodity fee, etc.).	Portland or State (Statutory Change)
SUPERFUND				
Superfund Insurance Pool	• Empowers Portland to provide risk management to facilitate transactions impacted by uncertainty of Superfund liability.	• Portland takes on greater responsibility and risk associated with Superfund liability. • Policy designed for a special type of brownfield, so not applicable across city.	• Coordinate with insurance industry and regulatory agencies to refine proposal.	Portland
Federal Prospective Purchaser Agreement	• Builds on successful model of Oregon State PPAs. • Creates incentive without direct public financial investment.	• Requires commitment and staff resources of USEPA.	• Pursue MOA between state and USEPA rather than process for individual sites.	USEPA and State
De Minimis Settlement	• Provides certainty and closure. • Creates incentive without direct public financial investment.	• Requires commitment and staff resources of USEPA.	• Potential for broad applicability of this tool.	USEPA
Corps of Engineers Urban River Restoration Initiative	• Positions project for federal funding. • Potential for more collaborative and expedited cleanup process.	• Requires USEPA to share more control over the cleanup process. • Portland Harbor may be too far into the Superfund process for a structural change to be viable.	• Viability of federal funding through Corps of Engineers versus appropriation under Superfund.	USEPA and Corps of Engineers

APPENDIX A

INVENTORY AND EXISTING CONDITIONS ANALYSIS

APPENDIX B

FINANCIAL ANALYSIS REPORT

APPENDIX C

PUBLIC BENEFIT REPORT