600 NE Grand Ave.
Portland, OR 97232-2736

Metro | *Agenda*

Meeting: Metro Council Work Session
Date: Tuesday, June 26, 2012
Time: 2 p.m.
Place: Council Chambers

CALL TO ORDER AND ROLL CALL

2 PM	**1.**	**ADMINISTRATIVE/CHIEF OPERATING OFFICER COMMUNICATIONS**	
2:15 PM	**2.**	**REGIONAL BROWNFIELDS SCOPING PROJECT FINDINGS – INFORMATION / DISCUSSION**	**Miranda Bateschell, Metro** **Seth Otto, Maul Foster & Alongi** **Jim Darling, Maul Foster & Alongi** **Lorelei Juntunen, EcoNW**
3:15 PM	**3.**	**COUNCIL BRIEFINGS/COMMUNICATION**	

ADJOURN

Agenda Item No. 2.0

REGIONAL BROWNFIELDS SCOPING PROJECT FINDINGS

Metro Council Work Session
Tuesday, June 26, 2012
Metro, Council Chamber

METRO COUNCIL

Work Session Worksheet

Presentation Date: June 26, 2012 Time: 2:15pm Length: 60 minutes

Presentation Title: Regional Brownfields Scoping Project Findings

Service, Office, or Center: Planning & Development Department

Presenters (include phone number/extension and alternative contact information):
Miranda Bateschell, Senior Planner, x 1817
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Lorelei Juntunen, EcoNW, 503.222.6060, juntunen@econw.com

ISSUE & BACKGROUND

The project team has just completed the first phase of work for the regional brownfields scoping project focused on data collection and analysis. **At the work session, the team will share the preliminary findings and ask the Metro Council for initial policy direction.** This is the first step of the policy discussion at which staff is looking for the Council to shape the direction of the next phase of the project. The second step of the policy discussion with the Metro Council will include a more detailed cost and benefit analysis for the policy and tool options that support that policy direction.

As you will recall, a Metro Council budget amendment for FY2011-12 directed staff to conduct an analysis of the regional brownfield problem. **The goal of the regional scoping project** is to assess the need for brownfield restoration and redevelopment in our region, and outline a range of solutions and best practices that could be applied in the metro area. The final report will illustrate and estimate the extent of brownfields in the region's 2040 design types and outline potential initiatives for regional implementation. Metro's primary role is to provide critical information and potential solutions to our local partners to guide local communities and enable policy decisions.

Attached is a preliminary working draft of the brownfield challenges and solutions documented to this point in the project. To prepare for the discussion **please review**:

- Scope of the project, **p. 2-3**
- Categorization of brownfield redevelopment typologies, **p. 12-13**
- Policy options, beginning on **p. 24**

At the work session, the project team will provide a brief overview of the estimation of the extent of brownfields in the region and the financial, economic, and environmental impacts and opportunity costs of these sites at the regional level. Only a brief description of the policy options will be included with time being reserved for discussion. The team will ask the Metro Council to **consider the implications of these findings and the policy options for addressing the region's brownfield issues and challenges**.

As you will note, the data gap analysis and socio-economic analysis are not yet documented in the draft report because the findings that will be presented are preliminary (85% complete). Input from the work session, MPAC, MTAC, and the technical review team established for this project (which includes representatives from: Business Oregon, DEQ, the Columbia Corridor Association, the cities of Portland and Tigard, PDC, and the private sector), will be incorporated into presenting these findings in the final draft report.

OPTIONS AVAILABLE

At this point in the project, staff is not seeking a decision from the Metro Council, but rather, initial policy direction on the array of potential tools and policies aimed at removing barriers to and increasing brownfield redevelopment. **The potential solutions** and policy tools for consideration **are presented in a matrix (pages 24-26 of the report)**. A summary for each tool is included following the matrix and covers the challenge the solution addresses and implementation actions. The solutions are grouped into four categories corresponding with the key challenges experienced at brownfield redevelopment sites: (1) Financial / Capacity, (2) Managing Risk, (3) Linking Cleanup and Redevelopment, and (4) Regulatory Process.

IMPLICATIONS AND SUGGESTIONS

Different policy options will have varying resource needs and engagement strategies. For the work session discussion, the matrix does include for each policy tool **initial implications:** the brownfield typologies that would benefit, the level of government(s) that would need to participate or lead, and whether a state legislative change would be required. However, **more detailed costs and benefits will be presented** at a later Metro Council work session **in either August or September**.

Given the costs and benefits are yet to be determined for the prioritized policy options, staff does not have a recommendation for action at this time. This is the first step of exploring, through a regional dialogue, the scope of brownfields in the region and what regional solutions are needed to redevelop these sites. Beginning the conversation now is important given the conclusion of Metro's investments through the Brownfields Recycling Program and in preparation for the Climate Smart Communities policy discussions, future growth decisions and the Community Investment Initiative recommendations.

QUESTION(S) PRESENTED FOR CONSIDERATION

1. What challenges, if any, seem the most appropriate to focus on at the regional level?
2. What policy tools and investment tools stand out (regionally significant, seem relatively easy/difficult, effective elsewhere)?
3. Will the research staff is completing now provide the Council with an adequate level of information to provide direction at the next step?
4. What type of feedback do you want from local partners on these policy options?

At the next work session, when you will have the cost and benefit findings, staff will be asking for Council direction on whether staff should prepare proposals, complete with budget and resource impacts, for moving forward on certain brownfields solutions.

LEGISLATION WOULD BE REQUIRED FOR COUNCIL ACTION: NO

BROWNFIELD CHALLENGES & SOLUTIONS
REGIONAL BROWNFIELD SCOPING PROJECT
DRAFT REPORT

Prepared for
METRO

June 20, 2012
Project No. 0075.04.01

Prepared by
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CONTENTS

ACKNOWLEDGEMENTS

Placeholder

ACRONYMS AND ABBREVIATIONS

BES	Bureau of Environmental Services, City of Portland
BPS	Bureau of Planning & Sustainability, City of Portland
CERCLA	Comprehensive Environmental Response, Compensation and Liabilities Act
CWSRF	Clean Water State Revolving Fund
DEQ	Department of Environmental Quality
DLCD	Department of Land Conservation and Development
ECSI	Environmental Cleanup Site Information
EFU	Exclusive Farm Use Zone
EOA	City of Portland's Economic Opportunities Analysis
EPA	Environmental Protection Agency
EZ	Enterprise Zone
GIS	Geographic Information Systems
Harbor ReDI	Portland Harbor Redevelopment Initiative
ICP	Independent Cleanup Pathway
NFA	No Further Action
MPAC	Metro's Policy Advisory Committee
MTAC	Metro's Technical Advisory Committee
OAR	Oregon Administrative Rule
OFA	Oregon Facilities Authority
ORS	Oregon Revised Statute
PAH	Polycyclic Aromatic Hydrocarbon
PCB	Polychlorinated Biphenyl
PDC	Portland Development Commission
PPA	Prospective Purchaser Agreement
RLIS	Regional Land Information System (Metro Data Resource Center)
SNAP	Small Nonprofit Accelerated Program Bond
STAMP	Site Technical Assistance for a Municipal Project, National Brownfield Association
TIF	Tax-Increment Financing
TGM	Transportation and Growth Management
TOD	Transit-Oriented Development
TRT	Technical Review Team
UGB	Urban Growth Boundary
URA	Urban Renewal Area
USEPA	United States Environmental Protection Agency
VCP	Voluntary Cleanup Pathway
VHDZ	Vertical Housing Development Zone

1 INTRODUCTION

1.1 Context

The Portland metropolitan region and surrounding jurisdictions have a national reputation for progressive land use and transportation policy.. The region faces increasing pressure to plan for population growth over the current planning horizon. According to the 2009-2030 Urban Growth Report, Metro expects the Portland area population to grow from about 1.9 million people in 2000 to between 2.9 to 3.2 million residents by the year 2030[1]. Jobs will follow a similar trajectory by rising from approximately 973,000 jobs to between 1.2 and 1.7 million jobs over the same planning horizon.

This increasing population and economic development will need to be accommodated within the limits of the Urban Growth Boundary (UGB), or require additional expansion of the UGB into the Urban Reserve areas. As growth continues, available land within the existing Urban Growth Boundary is diminishing, and portions of the remaining vacant and underutilized land are constrained by environmental contamination (brownfield) issues, creating additional pressure to expand the UGB. Given the significant gap in available brownfield data, Metro's Buildable Lands Inventory (BLI) currently cannot account for brownfield conditions and the level to which these constraints limit their viability for redevelopment. Understanding and taking action to encourage the redevelopment of these "brownfield" properties will be important for meeting growth challenges and achieving the region's land use and sustainability goals.

1.2 Significance of Brownfields

Brownfields Defined

According to the US EPA, the term "brownfield site" means **the real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.**

Brownfield properties exist across the metropolitan region and include former gas stations and dry cleaners as well as larger industrial sites. Brownfields are an unrealized regional asset for their potential to facilitate economic development while meeting environmental goals. At the local level, these properties are often blighted areas that detract from the quality of neighborhoods and pose potential threats to human and environmental health.

Efforts to redevelop land in existing

[1] Metro. Urban growth report. January 2010. http://www.oregonmetro.gov/index.cfm/go/by.web/id=29959

urbanized areas are often hampered by the perception or actual existence of environmental contamination left by current or former land uses. These potentially contaminated properties are more expensive to redevelop and have higher associated risks which discourage redevelopment. The result is that many brownfield sites fail to achieve their highest and best use and, instead, serve as barriers to economic development and the creation of vibrant communities.

Redevelopment and reuse of these sites is necessary to meet the goals set forth in the region's 2040 Growth Concept and to utilize existing resources before adding land to the UGB. Despite the expense associated with redeveloping brownfields, these properties can provide substantial public returns on investment. Since brownfields are typically located in areas with existing infrastructure, they provide the opportunity for local governments to maximize the utility of existing capital facilities. Redevelopment of these underutilized properties also generates greater tax revenues by increasing the value of the redeveloped and neighboring properties.

1.3 Scope of Planning Study

The current study is a first attempt to grasp the scale and impact of brownfields at the regional level and to present policy options that help address the various aspects of the issue. In order to develop targeted policy options that promote brownfield redevelopment, more information is needed about the actual scale and impact of brownfield properties in the Metro region. The Oregon DEQ maintains databases of sites that have entered into the State cleanup program. However, it is generally assumed that these databases represent only a fraction of the likely contaminated sites in the region. It is also assumed that the brownfield sites represent a significant lost opportunity for the communities within the Portland region, for the various reasons stated above.

The objectives of the Regional Brownfield Scoping Project are to:

- Examine case study brownfield projects to understand the character of these sites, identify the challenges they face, and examine keys to successful cleanup and redevelopment

- Categorize types of brownfield redevelopment sites into typologies that will facilitate in-depth analysis of the most significant factors that aid or prevent site redevelopment in the current policy, resource, and market context

- Quantify the scale and extent of brownfields in the Portland metropolitan area through the adaptation of the existing DEQ environmental site index and through original research to estimate the potential population of unknown contaminated sites.

- Estimate the socio-economic impact / opportunity cost of these properties remaining underutilized

- Clarify and prioritize barriers to brownfield redevelopment to inform prioritization of potential policy solutions and incentives

- Survey existing and potential policy tools to facilitate brownfield cleanup and redevelopment based on best practices across the country

- Assess costs and benefits of priority policy tools

By conducting this research and analysis, the Regional Brownfields Scoping Project hopes to achieve the following outcomes:

- Clarify for policy makers what is known about brownfields in the region and what can be done to improve information about the region's brownfield needs and opportunities.

- Clarify the merits of investing in brownfields and the type of resources and actions needed to effect brownfield redevelopment.

- Enable the Metro Council and the Community Investment Initiative Leadership Council to craft a strategic focus for prioritizing brownfield cleanup - whether an increased regional effort is appropriate, what strategies might be most successful, and how the work would be funded.

- Position local elected leadership with information for use in productive engagement with other stakeholders regarding the opportunity costs for not addressing brownfield needs and making decisions to address those needs.

A Technical Review Team has been created which meets regularly to act as a sounding board for this planning study. The Team's breadth and depth of expertise in brownfields issues, in both the public and private sectors, has been critical in identifying brownfield challenges as well as generating meaningful potential policy solutions.

Over the past fifteen years, there have been a series of policy studies focused on cleanup and redevelopment of brownfields in the Portland metropolitan region. These studies began with Portland being awarded a grant from the EPA that recognized the city as a brownfield showcase community in 1998. That effort led to the establishment of the Portland Brownfield Program within the city's Bureau of Environmental Services. The Metro regional government soon established their own brownfield program.

Designation of the Portland Harbor as a Superfund Site in 2001 led to a series of further studies especially focused on promoting redevelopment of industrial properties for continued industrial use.

Previous Brownfield Studies

1988— Portland Brownfield Initiative

2004— Brownfield/Greenfield Development Cost Comparison Study

2007—National Brownfield Association Study

2009-2010— Portland Plan Economic Opportunities Analysis

This Regional Brownfield Scoping Project builds on these previous planning efforts and aligns with broader land use and community development plans, including the 2040 Growth Concept and the Community Investment Initiative. Previous planning and research efforts led by Metro, the cities and counties within its jurisdiction, the Port of Portland, and the Portland Development Commission (PDC) have been utilized in this current effort to efficiently and effectively conduct analysis of brownfield impacts and opportunities.

2 UNDERSTANDING BROWNFIELDS

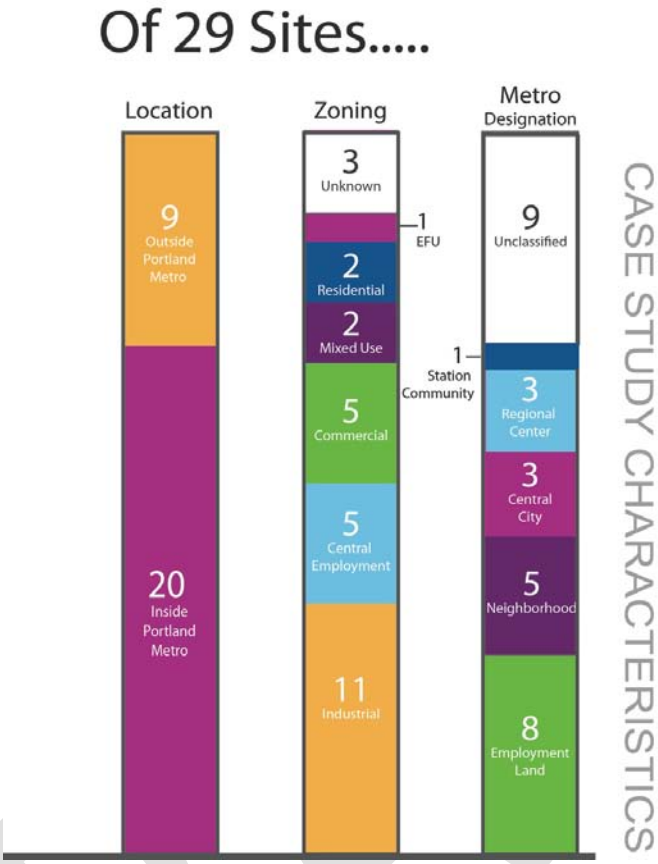
2.1 Case Studies Overview

To provide on-the-ground experience as a foundation for this Regional Brownfield Scoping Project, research was conducted on select case study brownfield projects in the metro region and across the state. The study collected quantitative data on costs of cleanup and economic impacts of redevelopment, along with qualitative information on lessons learned, common challenges, and characteristics of successful projects.

Based on input from the Technical Review Team, Metro staff, and the consulting team, a set of 29 representative brownfield properties were identified and examined as case studies. Site selection was conducted on a statewide scale to draw from a greater regional perspective and to illustrate the full breadth of opportunities and challenges. Careful consideration was taken to incorporate a wide range of site characteristics, including size, location, use, and redevelopment strategy.

Preliminary public records research was conducted for each of the sites. Sources references included the Oregon Department of Environmental Quality (DEQ) database of contaminated sites, Metro's regional land use information system (RLIS), and city and county database websites. More detailed information was collected through interviews and written surveys of people directly involved with the case study projects including private developers, owners, and public agency staff.

Data Summary—The case study analysis evaluated 29 contaminated sites, more than half of which yielded qualitative survey responses and personal perspectives. A summary of general site characteristics are listed in the table below. A complete report of methodology, site descriptions, and findings can be found in the appendix attached.



Survey Limitations—Several challenges emerged during the case study research. First, understanding the trends of brownfield cleanup projects generally involves collecting sensitive and sometimes confidential information. Even after cleanup, property owners are often reluctant to divulge information that is not already in public record. Financial data was particularly difficult to collect.

The complexity and number of parties involved in a cleanup project makes acquiring a full picture difficult. In ideal cases, both public and private sector entities were engaged to provide feedback. However, private property owners were often difficult to contact or reluctant to participate. Public agency staff were more responsive to information requests, but had limited time and resources to volunteer for completing surveys.

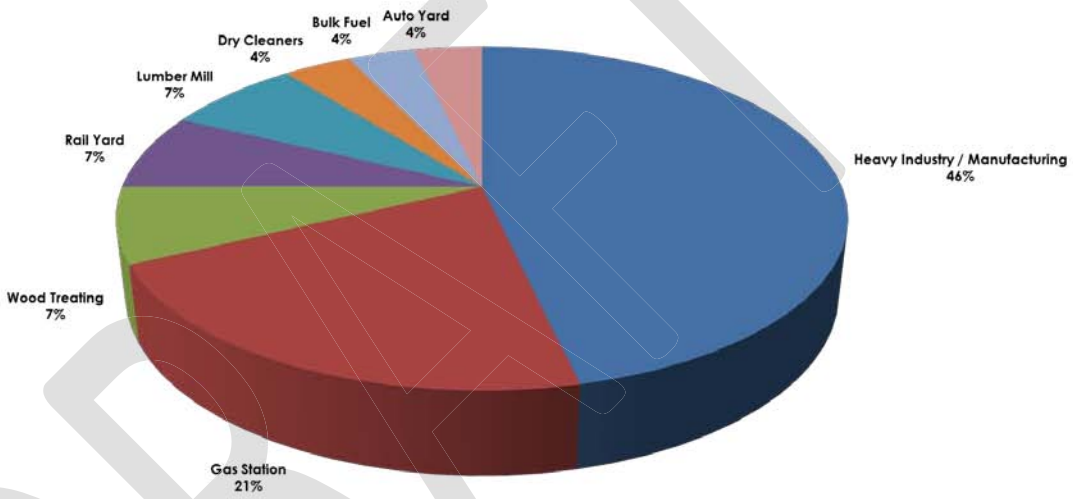
2.2 Case Study Findings

The case study research provided valuable, consistent, and informative results despite the inherent limitations. These case studies provide important information to characterize brownfield properties, the challenges they face, and key factors that lead to successful cleanup and redevelopment.

2.2.1 Brownfield Contamination

Contamination on brownfield properties is commonly related to historical activities that occurred before the passage of modern environmental laws. The case study projects represent a wide range of past uses and contamination types that are representative of the industrial history of the Portland Metro region. The most common historical uses on the case study properties were heavy industry/manufacturing and gas stations, representing 46% and 21% of the case study sites respectively (See figure 2-1). The industrial/manufacturing category broadly includes processing of raw materials and chemicals, machining, and fabrication.

Figure 2-1. Historical Uses of Case Study Properties



Contamination on the identified brownfield properties is commonly found in soil, but can also occur in groundwater and river sediments. The most common contaminants in soil in the case study projects were petroleum, metals, polycyclic aromatic hydrocarbons (PAHs), and polychlorinated biphenyls (PCBs). The hazardous materials are associated with the use of heavy machinery and automobiles. Petroleum and PAHs can be released from storage tanks, spills, or leaks from machinery. Metals contamination in soil can occur from the friction of machinery parts.

Common contaminants in groundwater include petroleum and petroleum-related compounds including PAHs along with volatile organic compounds (VOCs) and solvents. These compounds tend to be soluble and leach into groundwater, while metals tend to bind to the soil. The prevalence of these contaminants is consistent with the DEQ database of contaminated sites and aligns with findings of similar studies in Washington State and nationwide.

2.2.2 Cleanup of Brownfields

The case study projects are representative of the range of complexity and cost of brownfield remediation. The self-reported time to complete site assessment and cleanup varied from 1 to 23 years, with an average of 8.3 years and a median of 5.5 years (16 of 29 sites reporting). The median duration aligns well with analysis of the DEQ database of contaminated sites that indicates an average of 4.5 years to complete the cleanup process in the agency's Oregon Northwest region (as compared to 5.5 years in the Eastern and 3.5 in the Western regions) . The duration of the cleanup process can be elusive to pin down because many sites have long histories and periods of activity and inactivity. It is noteworthy that many sites in the DEQ database do complete the cleanup process in less than 2 years. Survey respondents were asked to identify what they perceived to be the longest step in the cleanup process. The most common responses were: site assessment, conducting the actual cleanup action, negotiations with the regulatory agency, and securing financing.

Like the duration of the cleanup, the reported costs of cleanup also ranged widely from $46,000 to over $60,000,000 for one very large and complex site. Remediation of the six gas station case study sites ranged from $50,000 to $1,200,000 with an average and median cost near $500,000.

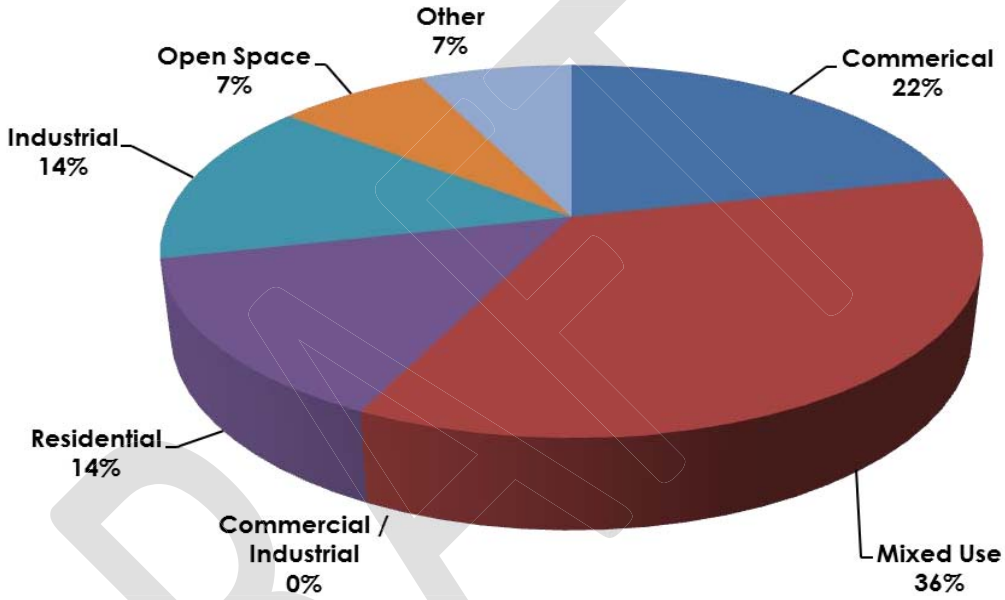
Brownfield Success Story: Port City, Portland
Successful Public Financing

The Port City site is a former battery recycling facility impacted by lead contaminants in the soil. The small 0.3 acre site was redeveloped into offices for the Port City Development Center, an organization which provides employment and other community development services. Financial assistance for the project was provided through the Portland Brownfield Program.

2.2.3 Redevelopment of Brownfields

Approximately half of the case study projects have successfully been redeveloped to a new use. The most common redevelopment uses were mixed use and commercial (See figure 2-2). It is important to note that over 50% of the redevelopment projects represent a change in use type and zoning. These use changes were predominantly from an industrial to a commercial or mixed use.

Figure 2-2. Redevelopment Uses of Case Study Properties



The change in use from industrial to commercial and mixed use appears to be a major factor in the financial feasibility of brownfield projects. The financial impact of change in use type is reflected in analysis of the cost of cleanup relative to the value of the property. Though sufficient data to conduct this analysis was limited to just four case study projects, the findings have important implications. The cost of cleanup exceeded the value of the land in its historical use by 13-192% in three of the case studies (See table 2-2). The cleanup cost was only 3% to 43% of the land value after redevelopment. The potential to generate sufficient value to offset the cost of remediation is fundamental to the financial feasibility of brownfield projects. The change of use appears to be a common and effective strategy that creates value and drives redevelopment of brownfields. This analysis underscores the difficulty of redeveloping industrial brownfields for continuing industrial use.

Table 2-2. Remediation to Redeveloped Value

Case Study Project	Cost of Environmental Cleanup as a Percentage of the Land Value Before Remediation	Cost of Environmental Cleanup as a Percentage of Land Value After Remediation and Redevelopment
1	67%	30%
4	36%	7%
6	13%	1%
7	134%	6%
8	162%	3%
9	192%	43%

In cases where change of use has been successful, the case study projects demonstrate the potential for brownfield redevelopment to drive employment in areas outside of industrial uses. Job creation figures self-reported in the case study totaled over 10,000 jobs (both construction and permanent jobs). For individual brownfield sites, the responses ranged from 2 to 700 permanent new jobs per site (with greater numbers projected for the future on sites not yet fully built out). These numbers translate to an average of 23 jobs per acre and median of 10 jobs per acre. The job creation figures compare favorably with Oregon State Department of Land Conservation and Development estimates for commercial and light industrial employment density, of 12-20 and 10-15 jobs per acre, respectively.

2.2.4 Lessons Learned and Keys to Success

Several key themes emerged from interview and qualitative survey responses from the case studies regarding lessons learned and keys to success.

Financing—Cleanup and redevelopment projects require significant capital and the projects frequently hinge on access to financing. For the case studies, this often involved accessing public grants or loans, claims on historical insurance policies, or finding a commercial lender that was knowledgeable about brownfields. Difficulty securing financing was commonly cited as a limiting factor for projects.

Coordination and Teamwork—Several case studies point to the importance of the property seller, buyer, regulatory agency, and other stakeholders working together toward a common goal as key to success. This often included early involvement and understanding by the regulatory agency of financial limitations. In contrast, tension and disagreement between these parties was cited as reasons why projects were typically delayed.

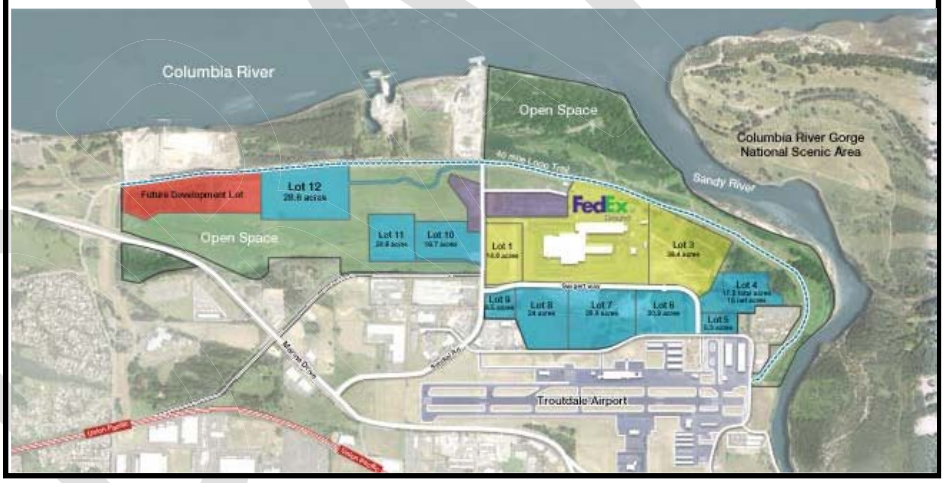
Land Use Transition--Transition from industrial use to commercial or mixed use was fundamental to the financial success of many projects. The change in use drives a higher land value that can then offset the remediation costs. Maintaining historically industrial sites as a similar land use is a challenge. Since industrial properties tend to have a constrained value per

square foot, the financial gap between cleanup costs and redeveloped value can be significant. Therefore, the study takes a critical eye toward identifying solutions to address the need for maintaining industrial and employment lands in the region.

Liability and Risk—Defining the extent of contamination and remediation cost along with strategies to minimize risk was critical to the success of several projects. Risk management tools provided through the Voluntary Cleanup Program, Prospective Purchaser Agreements, and the willingness of the DEQ or Business Oregon to dedicate resources was key to the success of several case study projects

Brownfield Success Story: Troutdale Reynolds Industrial Park
Redevelopment through Public-Private Partnership

The Troutdale Industrial Park has been a huge success and nationally recognized for the collaboration between public and private partners. The property was formerly the site of an aluminum plant and was purchased by the Port of Portland via a Prospective Purchaser Agreement (PPA). The effort required the remediation of 700 acres of industrial property. Since its redevelopment, Fed Ex has established a warehouse onsite, becoming the first industrial tenant on the newly restored property, employing 800 workers. Once fully built out, the port estimates the project will yield nearly 3,500 jobs.



2.3 Typologies

Based on the case studies and the DEQ database of known and suspected contaminated sites, a system of categorizing types of brownfield properties was developed. The purpose of the typologies was to develop a logic tool that balances the unique aspects of specific brownfield sites while grouping them by similar traits.

The typologies were designed to integrate historical uses with the market potential for future land uses, acknowledging the reality that redevelopment often drives the cleanup process. The typology incorporates the location of the site using the region's 2040 Growth Concept urban design types as a proxy for typical redevelopment, market potential, and land uses typically found in those locations. In addition, Types 2 and 3 are further distinguished by a basic calculation of improvement to land value taken from the Metro buildable lands inventory. Industrial properties shown to have a positive ratio, indicating favorable conditions for redevelopment, are grouped in Type 2. Industrial properties shown to have a negative ratio are grouped in Type 3. Sites are also characterized by acreage, since the size of the site can affect development potential and cleanup costs. The typologies are described below and summarized in Table 2-1.

Type 1—Small Commercial Sites. Common historical uses were gas stations, repair shops, and dry cleaners, characterized by small parcel size and located along highways, arterials, and commercial centers. These properties are commonly redeveloped for commercial, mixed use, offices, and multi-family residences. The small size of these sites is often a challenge to redevelopment, because they often cannot generate enough value to balance remediation costs. This typology is the most numerous in the Metro region, with sites located in centers, corridors, and employment areas.

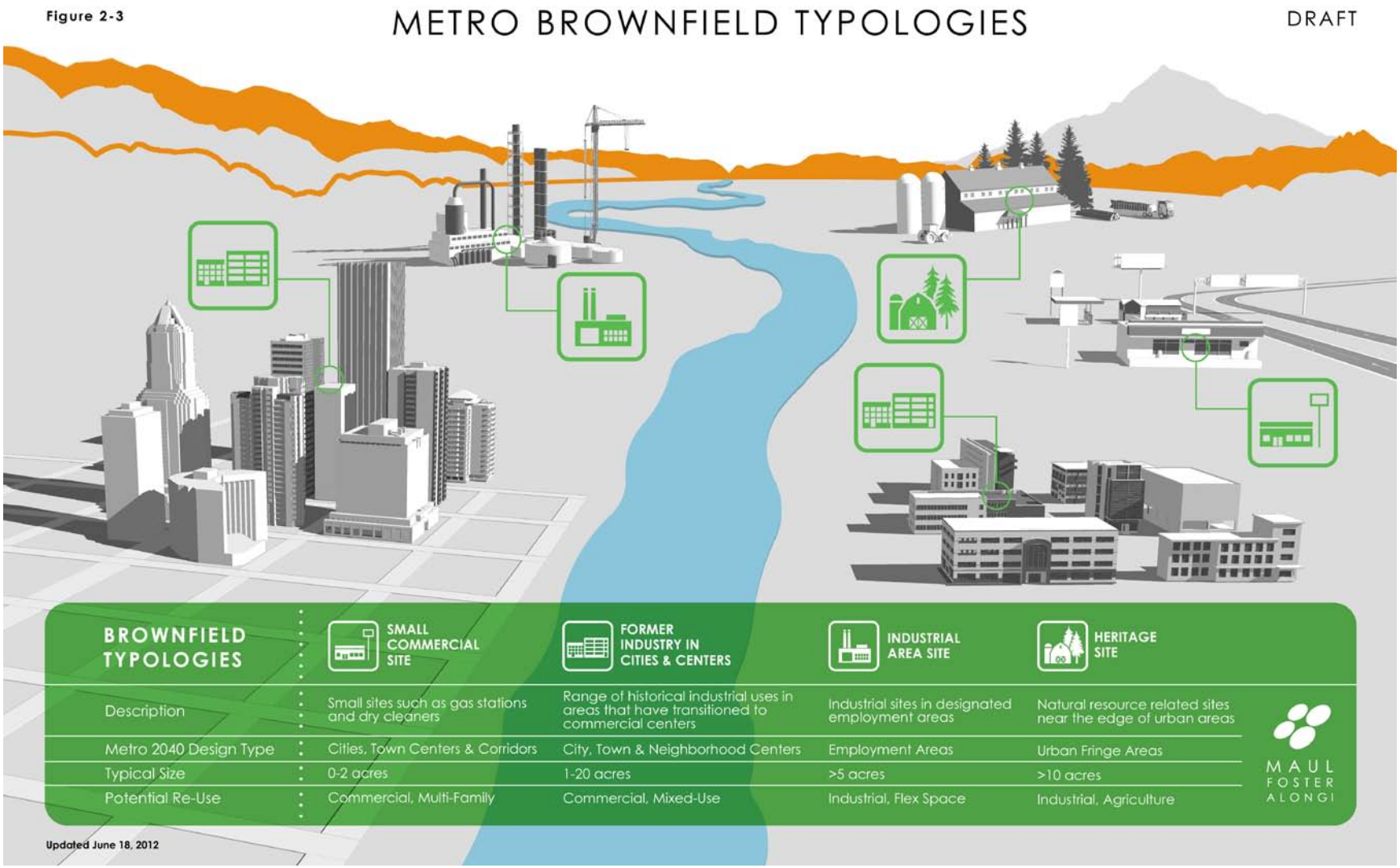
Type 2—Formerly Industrial Properties in City and Town Centers. These properties range in size and historically housed various uses in areas that have transitioned from industrial to office, retail, and mixed use centers. Change of zoning and use often drives redevelopment of these properties. The potential for redevelopment of these properties is driven largely by location and density. Sites in highly attractive, high density areas, such as the Pearl District often are redeveloped by the private sector. This type of brownfield faces greater financial challenges in areas with weaker real estate markets.

Type 3—Industrial Area Sites. These properties are located in areas with an industrial past that continues today, particularly through regulatory controls such as Metro's Title 4 restrictions and local employment sanctuary

overlays. The types of historical uses vary, but they share constraints on land value and future use that can be a challenge to redevelopment of these properties.

Type 4—Heritage Sites. Properties associated with rural natural resource extraction industries and agriculture. These properties are typically large and located on the edge of urban growth boundary, especially within urban and rural reserves. Structural economic changes can make these properties difficult to redevelop. There are relatively few of these types of brownfields in the Metro region, but they individually can occupy large areas and can have significant regional impacts.

Figure 2-3 Brownfield Typologies



2.4 Data Gap Analysis

Placeholder

2.5 Socio-Economic Analysis

Placeholder

3 CHALLENGES TO BROWNFIELD CLEANUP AND REDEVELOPMENT

To develop effective public policy, it is important to first understand and characterize the challenges that need to be addressed. The following list of challenges has been informed by the real world experience of the case study projects, previous brownfield studies, and the professional experience of the Technical Review Team and the consulting team. For the purposes of this study, the challenges facing cleanup and redevelopment of brownfield have been organized into four categories. Some challenges cut across these categories and some solutions address multiple issues, but the categories provide a useful organizing framework.

- **Financial Capacity**—Like any other real estate project, redevelopment of a brownfield property needs to generate more value than cost to be financially feasible. The costs associated with assessment and remediation of contamination can be considerable. If the remediation costs exceed the property's redeveloped value, the project is not financially feasible. This financial issue is typically the primary challenge facing these properties.

- **Risk and Uncertainty**—Every development project carries risks associated with the market, construction budget, and schedules. Brownfields carry the additional risk associated with contamination and environmental liability. It is inherently difficult to fully characterize the extent of contamination underground, so there is always a level of uncertainty in a cleanup project. The unique strict joint and several liability regime for contaminated sites in federal and Oregon cleanup laws, places an owner or developer in the difficult position of being legally liable for the entire cost of cleanup even if they did not cause the contamination. Once a party in the chain of title, they become vulnerable to lawsuits or contribution claims for the contamination. This set of circumstances creates a high level of risk associated with brownfield properties.

- **Disconnect between Cleanup and Redevelopment**—Cleanup and redevelopment are inextricably linked for brownfield properties. It can be a challenge to synchronize both the land use and environmental regulatory processes, which can lead to inefficiencies, higher costs, and conflicts.

- **Regulatory Process**—Oregon conducted a major reform of its cleanup law and regulations in the mid-1990s to create a policy framework that is more flexible and responsive to brownfield needs. However, there continue to be circumstances in which projects face challenges often related to predictability, timing, and costs. There can be a serious disconnect between the timing pressures of the market and the regulatory response times required to process permits and decisions.

There are a number of other impediments to brownfield cleanup and redevelopment that derive from these primary challenges. The State of Oregon and Metro have developed programs and policies to address some of these challenges, but a number of key issues remain that inhibit public and private efforts to remediate and redevelop brownfield properties. The following table provides an overview of existing policy tools and continuing challenges, organized according to the above categories.

TABLE 3-1: EXISTING POLICIES & CONTINUING CHALLENGES

EXISTING POLICY	CONTINUING CHALLENGES	CITED IN PREV. STUDIES*			
FINANCIAL CAPACITY		1	2	3	4
Public Funding Programs Oregon DEQ, Business Oregon, and the City of Portland each manage grant and/or loan programs that can support environmental assessment and cleanup.	**Cleanup Costs & Limited Program Capacity** Budgets for public funding programs are relatively small, and demand for assistance far exceeds current financial capacity. In addition, some of programs restrict funds to only public sector use or may only be applied to specific project components such as site investigation, type of contaminant, or remedial cleanup actions.	✓	✓	✓	✓
	Land Supply and Competition Undeveloped greenfields or properties without environmental constraints provide significant competition for brownfield development. If a business can develop another suitable property at a lower cost, it will be difficult to attract it to a brownfield.	✓	✓		
	Carrying Cost The additional time required to conduct a cleanup can significantly impact a project budget because of the payments on large loans for cleanup and construction. These carrying costs exacerbate the financial challenge of redeveloping contaminated properties.		✓		
Tax Increment Financing (TIF) TIF is a tool that can support urban redevelopment projects. Eligible expenses include site redevelopment and pre-development activities, including environmental remediation.	**Limitations of TIF Funding** TIF and associated urban renewal districts are restricted by Oregon law, which limits the percentage of land in a city that can be designated for urban renewal. Urban Renewal Areas (URAs) inside a City may exceed neither 15% of a city's total area nor 15% of its assessed valuation. In small jurisdictions, that amount is capped at 25% of land or assessed valuation. For cities close to maximum capacity, using TIF funding for cleanup efforts may be a limited option. There are also significant political hurdles and ramifications associated with creating a TIF district.				
Tax Abatement Program Property tax abatements, including local Enterprise Zones or Oregon's Vertical Housing Program, allow cities or counties to temporarily reduce property taxes.	**Geographic Applicability** Tax abatement programs are often enforced through the use of specific zones (i.e. Enterprise Zone), which put limitations on the tool's geographic applicability. .				

TABLE 3-1: EXISTING POLICIES & CONTINUING CHALLENGES

*Note: Previous Reports: 1) Portland Brownfield Initiative; 2) Brownfield-Greenfield Cost Comparison; 3) National Brownfield STAMP; 4) City of Portland EOA

EXISTING POLICY	CONTINUING CHALLENGES	CITED IN PREV. STUDIES			
MANAGING RISK		1	2	3	4
Voluntary Cleanup Program (VCP) The VCP provides a streamlined regulatory process for cleanup with limited state oversight and private party control over scope and schedule. State review of a cleanup results in a No Further Action letter that typically provides adequate assurance for commercial lenders.	**Liability Release in VCP** The No Further Action does not provide a legal settlement of liability. The lack of a timely pathway to liability settlement can occasionally deter property developers from investing in contaminated sites. However, most prospective developers and owners view the NFA as a de facto resolution of liability.				
Prospective Purchaser Agreement (PPA) Legally binding agreement between DEQ and a prospective purchaser, which limits the purchaser's liability under state law for environmental cleanup in exchange for providing a "substantial public benefit." The PPA provides certainty about requirements for cleanup and liability protection before a buyer commits to owning a property.	N/A—Recent reforms enacted in 2011 have improved the PPA and the program appears to be effective. Though this program is effective, it is not a panacea and by itself will not eliminate enough risk for enough sites to induce redevelopment of the region's many brownfields.				
CERCLA	**Superfund Overlay** The Portland Harbor was designated a National Priority List site in 2001. The Superfund designation has added a significant layer of complexity and uncertainty to the redevelopment of properties on the waterfront and properties that contribute stormwater runoff to the harbor. The risk of federal liability discourages potential developers of brownfield properties. State approval of a cleanup does not resolve this potential federal liability. In addition, property owners of small sites have limited opportunities for early exit. Sites connected to the river via stormwater will be held accountable throughout the entire process regardless of the actual extent of associated responsibility.		✓	✓	✓

TABLE 3-1: EXISTING POLICIES & CONTINUING CHALLENGES

Note: Previous Reports: 1) Portland Brownfield Initiative; 2) Brownfield-Greenfield Cost Comparison; 3) National Brownfield STAMP; 4) City of Portland EOA

EXISTING POLICY	CONTINUING CHALLENGES	CITED IN PREV. STUDIES			
CLEANUP AND REDEVELOPMENT DISCONNECT		1	2	3	4
Oregon State Growth Management Act In the 1970s, Oregon adopted a series of growth management laws and established a statewide planning program to oversee the efficient use of land through local zoning, comprehensive plans, and urban growth boundaries. These policies provide a framework for encouraging brownfield restoration and urban infill development.	**Lack of Specific Brownfield Language** Growth management policies do not explicitly recognize the problem of brownfields. The omission results in a missed opportunity for local governments to fully utilize brownfield redevelopment as a tool to promote urban infill and economic revitalization. Include brownfield language into state goals and add components to comprehensive plans that address brownfield properties in the buildable lands analysis, land use, or economic development.				
On-Going Planning Efforts Efforts like the Harbor Redevelopment Initiative recognize the lack of industrial and employment lands, and encourage brownfield redevelopment as a tool for efficient land use and centralization of job opportunities.	**Lack of Agency Coordination** Uncoordinated or potentially conflicting efforts from multiple agencies can cause time delays or implementation challenges. This is further confounded by challenges to implementation resulting from lack of resources and project champions, the Superfund overlay, and lack of incentives for private development.	✓			
Education and Outreach Metro and the City of Portland have included educational components into existing programs and funding services. The agencies support both owners and buyer education.	**Lack of Brownfield Knowledge and Fear of the Process** Despite on-going efforts, most brownfield owners and buyers are unaware of the cleanup process or the tools available to them. This issue is worsened by the fact that most property owners only go through the process once, creating a consistent need for education at the beginning of each process. More outreach and educational efforts for potential purchasers and developers are necessary, but efforts to reach these audiences have had limited success. **Limited Information** It is difficult for prospective buyers or developers to access accurate information on potentially contaminated properties without. Lack of information often leads to exaggerated perceptions of the level of contamination and costs.	✓	✓	✓	✓

Note: Previous Reports: 1) Portland Brownfield Initiative; 2) Brownfield-Greenfield Cost Comparison; 3) National Brownfield STAMP; 4) City of Portland EOA

TABLE 3-1: EXISTING POLICIES & CONTINUING CHALLENGES

EXISTING POLICY	CONTINUING CHALLENGES	CITED IN PREV. STUDIES			
REGULATORY PROCESS		1	2	3	4
Oregon Cleanup Law The Oregon Cleanup Law (Oregon Revised Statute 465) is the primary law regulating remediation of brownfields in the state. It establishes the procedural and technical requirements for remediation of contaminated properties. The Cleanup Law incorporates several fundamental policies designed to promote cleanup and redevelopment of brownfields. The most important of these are a risk-based approach to cleanup, the VCP, and Prospective Purchaser Agreements.	**Perception of Cleanup Process** There is a perception in the private sector that agency decisions are too often unpredictable and slow. Owners of contaminated sites are commonly reluctant to discuss environmental issues with regulatory staff for fear of triggering legal obligations, fines, or liability **Tension between predictability and flexibility.** Many developers want a more defined process to provide greater certainty, while others want more flexibility in the process to accommodate the unique nature of their project. **Duration of the Cleanup Process** Analysis of the DEQ database of contaminated sites indicates that many sites complete the cleanup process in less than 2 years, but that the average cleanup process in the Northwest region lasts approximately 4.5 years. Across the state, the average time for a site to go through the VCP is slightly under 4 years. These timeframes align with the median duration of 5.5 years for the case study projects. It is challenging for developers to meet the timing demands of market opportunities when cleanups take so long to complete. **Incentive to Delay** There is a perception that there may be a benefit to waiting to cleanup and redevelop a property. Tax structures often disincentivize cleanup actions and some owners hope that the process may be modified in the future to be easier or less costly. Despite this perception, environmental regulations are continually becoming more rigid.	✓			

Note: Previous Reports: 1) Portland Brownfield Initiative; 2) Brownfield-Greenfield Cost Comparison; 3) National Brownfield STAMP; 4) City of Portland EOA

4 POLICY OPTIONS

There are a number of potential policy tools that could be adopted to address the challenges of brownfield cleanup and redevelopment. The Portland metro region can look to policies that have proven effective for other states and local governments, can look for ways to improve existing policies and programs, and can revisit and refine recommendations from previous brownfield initiatives in the Portland area. This report section presents a set of potential policy tools based on review of best practices nationwide, meetings of the Technical Review Team, input from local brownfield experts, and previous planning studies.

These policies are presented for discussion purposes and will be reviewed and prioritized by TRT and Metro Council, MTAC, and MPAC.

The solutions are organized in categories to align with the challenges described in Section 3:

- Financial Capacity (F1-F15)
- Managing Risk (M1-M5)
- Linking Cleanup and Redevelopment (L1-L5)
- Regulatory Process (R1-R3)

It is important to note, that there is likely no silver bullet: no single policy tool will resolve the complex brownfield issues facing the region. Rather these tools can be prioritized and packaged to provide a coordinated set of policies that are mutually supportive, targeted to specific types of brownfields, and designed to resolve the problems in the current regulatory and incentive framework.

The discussion of policy options is crafted to provide a brief overview and summary analysis of the tools including the following elements:

Challenge—Describes what brownfield challenges the tool addresses

Solution—Briefly describes the policy tool

Mechanics—Outlines how the tool works and how it can be implemented in the Portland metro region

Considerations—Outlines key issues or concerns to address in implementing the tool

Implementation Actions – Key next steps in developing the policy

Lead and Support – Identifies which agencies should take a lead or supporting role in pushing to achieve the proposed policy solution

Typologies Targeted—Indicates which brownfield typologies will most likely benefit from the tool

The tools are summarized in the following table and are individually described in narrative.

Metro Brownfield Policy Tools Matrix

Tool	Description	Typology				Level of Gov.	Previously Proposed
		Small Commercial	Industry in Centers	Employment Area Sites	Heritage Sites		
FINANCIAL/CAPACITY							
F1. Target Policies to Priority Areas	Use existing policies and objectives to leverage the cleanup of specific properties. Conduct outreach to property owners of sites which impact multiple public programs. (i.e. Metro-designated town centers, urban renewal areas, enterprise zones)					Local	
F2. Tax Credit for Remediation	Consider expanding the use of tax incentives, such as income tax credits for dollars spent on site investigation and environmental cleanup.					State	Legislative
F3. Clean Water State Revolving Funds	Use Clean Water State Revolving Funds to finance brownfield cleanup and site preparation for projects that demonstrate a clean water benefit.					State	
F4. Integrated Planning & Site Assessment Grants	Establish a publically funded Brownfield Integrated Planning Grant to conduct environmental assessments and support site-specific redevelopment strategies.					State or Local	
F5. Community Investment Initiative	Building on models being explored in Metro's Community Investment Initiative, create a new entity to combine public and private funds and foster unique joint venture opportunities.					Local	Report (2)
F6. Public Equity in Sites	Make it easier for public development organizations to provide gap financing for projects in exchange for securing an equity interest in the property.					State or Local	
F7. Property Tax Abatement	Modify tax abatements associated with Enterprise Zones and urban infill programs to extend the duration of tax abatements in any area and make brownfield remediation for industrial development more viable.					State Policy Change; Local Implementation	
F8. Reform Contaminated Property Tax Assessment	Modify tax assessment valuation rules to include time restrictions on the value reduction associated with a cleanup liability to discourage moth-balling					State	
F9. TIF Reforms	Modify policy to make TIF a more effective tool for promoting brownfield cleanup and redevelopment. Use policy mechanisms to create better tie-ins between tax increment financing and brownfield projects to incentivize redevelopment.					State Policy Change; Local Implementation State	
F10. Pooled Bonding	Allow localities to use bond proceeds to purchase a pool of general obligation bonds to fund cleanup projects (i.e. SNAP program).					State Policy Change; Local Implementation	

Metro Brownfield Policy Tools Matrix

Tool	Description	Typology				Level of Gov.	Previously Proposed
		Small Commercial	Industrial Sites in Centers	Industrial Area Sites	Heritage Sites		
F11. Job Credits	Provide a tax break to developers based on the number of jobs provided by a completed development.					State	Legislative
F12. Historical Insurance Support	Provide technical support to assist work parties in making claims on historical insurance policies.					State or Local	
F13. Community Reinvestment Act	Expand the purview of the Community Reinvestment Act to incorporate brownfield remediation as an eligible investment for developing contaminated, underutilized properties.					State- and/or local-initiated action for Federal reform	
F14. Dedicated State Cleanup Tax	Establish a dedicated fund for cleanup and redevelopment of brownfields. The revenues or the fund should be generated from a source that has both a nexus with contamination and the potential to generate a substantial revenue stream.					State	
MANAGING RISK							
M1. Pooled Environmental Insurance	Establish a program that would decrease the transaction costs and reduce the cost of purchasing environmental insurance to covers risk.					State or Local	Report (2)
M2. Model Purchase and Sale Agreement	Create a model agreement with indemnification language and distinctions between upland and in-water liabilities along with standard transfer issues such as due diligence period, timing of cleanup, warranties, and inspection period.					State or Local	Report (3)
M3. Model Prospective Purchaser Agreement	Create model language for legally binding Prospective Purchaser Agreements to streamline the process and encourage their use.					State	Report (3)
M4. Public Land Bank	Establish a land bank to acquire contaminated properties, manage and finance cleanup and redevelopment, and sell property back into the private market.					State Legislation; implemented at State or Local level	
M5. Worst First Site Approach	Use public leadership to acquire complex contaminated sites and break stigma of remediation and redevelopment.					State or Local	

Metro Brownfield Policy Tools Matrix

Tool	Description	Typology				Level of Gov.	Previously Proposed
		Small Commercial	Industrial Sites in Centers	Industrial Area Sites	Heritage Sites		
LINKING CLEANUP AND REDEVELOPMENT							
L1. Use by Right/ Regulatory Flexibility	Local governments could apply a zoning code overlay to contaminated sites or create a brownfield inventory list for priority sites that would allow developers and property owners to develop the site with greater regulatory flexibility.					Local	Report (1)
L2. Brownfield Guidebook	Provide more effective resources to educate land owners and prospective buyers about the cleanup and redevelopment process and the resources available to assist these projects.					State or Local	Report (1)
L3. Build Market Demand	Develop programs to link more risk tolerant investors and developers with brownfield properties.					State or Local	Report (2, 4)
L4. Universal Database	Create an open system to share environmental information across projects. This system could include analytical data on groundwater flow, contaminant concentrations, along with beneficial use determinations.					State or Local	Report (1)
L5. One Stop Shop	Create a system for inter-agency coordination for permitting and funding brownfield projects.					State and Local	Report (1)
REGULATORY PROCESS							
R1. Formalize Presumptive Remedies and Standards	Establish guideline documents for simple cleanup sites with common redevelopment uses.					State	Report (1)
R2. CERCLA Prospective Purchaser Agreements	EPA provide Prospective Purchaser Agreements, jointly with Oregon DEQ to provide certainty and liability protection to innocent purchasers of contaminated properties under federal Superfund Law.					Federal	
R3. CERCLA De Minimis Settlements	EPA provide expedited settlement agreements for owners of properties that likely cause minor impacts to the Harbor.					Federal	

Previously Proposed Report References:
1). Portland Brownfield Initiative
2). Brownfield-Greenfield Cost Comparison
3). National Brownfield Association STAMP Recommendations
4). City of Portland Economic Opportunity Analysis

FINANCIAL

Typologies Targeted

Type 1—Small Commercial

Type 2—Industry in Cities and Town Centers

Type 3—Industry in Employment Areas

Type 4—Heritage Sites

F1. Target Policies to Priority Areas

Challenge—The successful cleanup and redevelopment of a brownfield is driven by a number of factors beyond the cost of cleanup, such as market potential, timing, location, and amenities. Redevelopment typically occurs on an ad hoc basis, driven as much by opportunity and happenstance as by a coordinated and concerted effort.

Solution—Metro implements a number of policies and programs to promote infill development, such as the Transit Oriented Development program. As an overarching policy, brownfield properties that also meet the objectives of these other programs can be targeted with a coordinated package that leverages multiple funding sources to stimulate catalyst projects.

Mechanics—This policy tool can be implemented by funding agencies through minor changes to internal guidelines. Using the inventory of historical property uses, identify potential brownfield properties located in areas of prioritized public investment. Coordinate between Metro departments to create a strategic approach to conduct outreach and work with property owners to support cleanup and redevelopment of those targeted brownfields.

Considerations

- Creating criteria to prioritize financial incentives to properties in targeted areas while maintaining equitable distribution of resources
- Establishing management and coordination structure with minimal administrative demands

Implementation Actions

- Identify the suite of Metro programs and policies that align with brownfields redevelopment
- Map geographic areas of focus for Metro's land use and economic development programs
- Identify brownfield properties within those targeted areas
- Focus brownfield recycling program resources in those targeted areas

Lead and Support

FINANCIAL

Typologies Targeted

Type 1—Small Commercial

Type 2—Industry in Cities and Town Centers

Type 3—Industry in Employment Areas

Type 4—Heritage Sites

F2. Tax Credit for Remediation

Challenge—There is limited public financial support for cleanup and redevelopment of brownfields.

Solution—Provide an income tax credit for costs of conducting site investigation and environmental cleanup. Income tax credits have become a popular brownfield incentive in states across the country. The reasons are that, in comparison to grant and loan programs:

- A tax credit program is a more predictable source of funding—it can be counted on in the initial consideration of project feasibility
- Tax credit programs offer a substantial inducement for private investment; whereas grant programs are often limited to public and non-profit developers
- A tax credit is not subject to annual appropriations and is therefore more likely to be maintained even when other programs are being cut

Mechanics—Establishing a brownfields income tax credit would involve a statewide statutory change. The mechanics of how tax credit programs operate in other states vary among the 13 states that have adopted this type of policy.[2] The major policy points include:

- Cap on the overall total financial capacity of the program
- Limits to credit available for an individual project
- Transferability of the tax credit
- Eligible costs (limited to cleanup or inclusive of site preparation or other redevelopment expenses)
- Needs testing;
- Links to certain public benefits, such as job creation or investment in distressed areas.

Generally, the programs that offer the possibility of greater subsidy of redevelopment costs (not just cleanup) also have more needs testing and overall program caps, and, consequently, the tax credit is far from automatic. New York, Connecticut, Iowa, and Missouri are in this category.

[2] Redevelopment Economics, Chart of State Brownfields Tax Credits, see http://www.redevelopmenteconomics.com/yahoo_site_admin/assets/docs/State_Tax_Credits_chart_7-11.208190334.pdf

At the other end of the spectrum are state programs that are fully automatic but are limited by per project ceilings (Mississippi, Colorado, Illinois, Florida, and Kentucky), and are therefore unable to offer a substantial inducement for larger more complex cleanups.

Several states (Wisconsin, New York, and New Jersey) do not make their credits transferable, which means that non-profits cannot benefit, and many developers with limited tax liability cannot take advantage of the incentive.

Massachusetts is the only state that offers a brownfields tax credit with the combination of being: 1) fully automatic; 2) fully transferable; and 3) not subject to per project ceilings. The Massachusetts program is also a model in that unrestricted use cleanups are rewarded (a 50 percent credit for unrestricted-use cleanups versus a 25 percent credit for restricted use cleanups). The program is also restricted geographically to Massachusetts designated Economically Distressed Areas.[3]

A draft report on the impact of the Massachusetts Brownfields Tax Credit (BTC) being prepared by Redevelopment Economics outlines the impacts of 44 completed projects (representing between 50 and 65 percent of all tax credit projects):

- $54 million in tax credits have helped leverage $2 billion in brownfields investments, a leverage ratio of $37/other funds to $1/BTC. All BTC investments are in state-designated Economically Distressed Areas (a statutory requirement) so all investments assist struggling communities and neighborhoods.

- The state's investment in BTCs is repaid six times over in only ten years of operation. That is, state tax revenues derived from initial construction and from ten years of the on-going impacts of businesses locating at BTC sites exceed the initial BTC investment (taxes waived) by a factor of more than six to one.[4]

The other tax credit program which has well documented benefits is the Missouri Remediation Tax Credit Program. An analysis of 50 sites that had received the tax credits found that those projects represented $2.2 billion in investments and created over 11,000 jobs.

Considerations—State government fiscal constraints are likely to make any new tax incentive difficult to implement. There are two potential responses to fiscal concerns.

[3] See: http://www.mass.gov/dep/cleanup/bfhdout2.htm

[4] This calculation counts only direct impacts (not multiplier-derived impacts) and does not count the retail businesses attracted to BTC sites.

- Conduct fiscal analysis that would forecast the costs versus benefits of a brownfields tax credit.

- Structure the credit so that only projects that produce net positive fiscal benefits to the state are eligible. Missouri does this through an application process that includes an independent impact analysis. New Jersey accomplishes the same objective by not granting the credit until a post-development accounting demonstrates positive fiscal benefit to the state.

- BTC has the potential to be a good match for the objectives of the Community Investment Initiative, addressed below.

Implementation Actions

- Conduct financial analysis of potential tax credit including impacts on state budget and forecasted benefits from promoting brownfield redevelopment

- Decide on key elements of tax credit structure, such as eligibility and limits. This work could be conducted as a follow up to the Regional Brownfield Scoping project with the current Technical Review Team for or through another forum.

- Draft proposed legislation and review with appropriate state agencies and legislative committees

Lead and Support

FINANCIAL

Typologies Targeted

Type 1—Small Commercial

Type 2—Industry in Cities and Town Centers

Type 3—Industrial in Employment Areas

Type 4—Heritage Sites

F3. Clean Water State Revolving Funds

Challenge—Oregon has relatively limited public sector funding available to support brownfield projects.

Solution—Clean Water State Revolving Funds (CWSRF) could be used to support brownfields cleanups (and, potentially, for site preparation activities such as demolition and clearing).

Mechanics—This would require an administrative, not statutory policy change. EPA allows states to use CWSRF funds for brownfields cleanups as long as there is a documented clean water benefit.[5] Participating states need to establish brownfields cleanups as eligible in the "Intended Use Plan" for non-point source water quality issues. This has not been established in Oregon. CWSRF loans can be offered at low interest rates through the linked deposit program or even at zero interest, if directly through the State. Fourteen states have expanded their intended use plans to include brownfield cleanups

The first step is to designate brownfields cleanups as an eligible use of CWSRF funds in the state's "Intended Use Plan." There is some variation in how other states have implemented this policy. Ohio, Pennsylvania, Virginia, and New Mexico have been cited in the literature as having successful CWSRF-Brownfields programs. The Ohio Program has been recently revamped and provides a useful model for Oregon.[6] The program now funds site preparation, as well as cleanups, due to use of "Program Income" (re-loaned dollars) from CWSRF. The program details are as follows:

- Eligible uses of funds include not just cleanups, but also, demolition and site preparation
- Eligible applicants include public and private entities
- Loan processing is fast, just 60 to 90 days
- Interest rates are not above 2%

Considerations—There may be concerns that opening up the CWSRF program to brownfields would mean less funding for critical water infrastructure programs and therefore less progress in reaching water quality objectives. An analysis should be carried out that demonstrates the direct and indirect clean water benefits of brownfields cleanups. That is, brownfield cleanups can be demonstrated to lower pollutants from both the direct

[5] US Environmental Protection Agency, Brownfield Remediation Through The Clean Water State Revolving Fund, 2001

[6] See: http://development.ohio.gov/Urban/BLP.htm

cleanup of contaminants, and from the lowered run-off impacts of dense infill redevelopment compared to greenfield development.

Implementation Actions

- Coordinate with DEQ Water Quality Program to explore potential to adopt this policy change
- Conduct fiscal and environmental cost and benefits analysis of potential policy change
- Decide on key policy elements such as eligible costs and eligible applicants
- Update CWSRF Intended Use Plan to include brownfields

Lead and Support

FINANCIAL

Typologies Targeted

Type 1—Small Commercial

Type 2—Industry in Cities and Town Centers

Type 3—Industrial in Employment Areas

Type 4—Heritage Sites

F4. Integrated Planning & Site Assessment Grants

Challenge—Local governments often lack resources to perform adequate due diligence and planning to acquire or redevelop brownfields in their communities. Existing site assessment grant programs help to address this need, but only support environmental investigation. This can create the situation where an owner learns that their property has an expensive environmental liability, but has no strategy to offset that cost.

Solution—The State or local governments could establish a publically-funded Brownfield Integrated Planning and Site Assessment Grant. The grant would be used to conduct environmental site assessments to understand cleanup needs, and also fund studies to support a site-specific redevelopment strategy. These planning studies could include: market assessment, architectural and engineering analysis of existing buildings, land use analysis, infrastructure assessment, geotechnical assessment, site planning, and property appraisal. These studies would be integrated with the environmental assessment to develop plans that create a viable redevelopment vision and strategy for a property.

Mechanics—The grant program could be managed by existing brownfield programs such as Metro's Brownfield Recycling Program or Business Oregon. Grants would be awarded on a competitive application basis that could incorporate criteria to ensure the projects align with other Metro policy goals (as described in tool F1).

Policy Tool Examples

Washington State—The State of Washington has created an Integrated Planning Grant program as a pilot initiative that provides up to $200,000, with no match requirement, to local governments to conduct due diligence and create a strategy for cleanup and redevelopment of contaminated sites before investing local funds. In the first three years since the program was initiated approximately thirteen communities have received or applied for the grants. These projects have focused both on properties currently owned by local governments and on vacant lands being considered for public acquisition to promote redevelopment.

Adair Village, Oregon—With a grant from Business Oregon, the City of Adair Village has embarked on a pilot project to create a redevelopment plan for a former mill site that integrates cleanup and adaptive re-use of the property. The plan incorporates market analysis, community involvement, land use planning, and strategy for risk management and funding. Without the leadership of the City of Adair Village, the contaminated site would have likely remained in a blighted condition for years to come.

Considerations

- Funding source for the grant program
- Minimizing grant match requirements to reduce the barrier to entry
- Strategically focus grants on smaller sites, well-located sites with existing infrastructure, or sites with minimal environmental issues to have the most impact
- Do not require local governments to be an owner, nor allow a potentially liable party to be eligible for grant funds

Implementation Actions

- Identify funding source such as EPA Assessment grants and Business Oregon revolving loan fund subgrants
- Determine most appropriate agency to manage the grant program
- Establish grant program guidelines including applicant eligibility, allowed costs, and grant evaluation criteria
- Develop a legislative proposal

Lead and Support

FINANCIAL

Typologies Targeted

Type 1—Small Commercial

Type 2—Industry in Cities and Town Centers

Type 3—Industrial in Employment Areas

Type 4—Heritage Sites

F5. Community Investment Initiative

Challenge—The metro region has an estimated $27 to $40 billion infrastructure hurdle over the next two to three decades, and the area is lacking in sufficient industrial lands to accommodate future growth[7]. Brownfields are recognized as having a special set of infrastructure-related challenges, and remediating them could create a huge return on property tax revenues, job creation and other benefits. Overcoming this challenge will take a new mix of public and private resources to more effectively see the redevelopment of these compromised sites.

Solution— Create a public-private funding partnership entity that invests in infrastructure and brownfield remediation to provide viable returns to each participating sector. This concept has been proposed by the Community Investment Initiative, a group of public and private sector leaders seeking mechanisms to overcome infrastructure challenges, including those related to brownfield remediation.

Mechanics—The public-private partnership for infrastructure funding concept is still under development by the Community Investment Initiative. The details of how the concept could be implemented, including how the funding entity would be structured and how projects would be prioritized have not yet been determined.

Considerations

- Creating a viable public-private entity will require restructuring resources and creatively packaging funds to meet project needs, as well as securing commitments from various private sector institutions/businesses to allocate funds for infrastructure
- While ranking high among infrastructure needs, brownfields would have to compete for funds, and decision making criteria have yet to be established
- Coordination with state infrastructure funding programs in addition to local government and private sector contribution

Implementation Actions

- Continued work of the Community Investment Initiative, including further analysis of structural and operational issues to set up a regional infrastructure entity

[7] Metro. 2008. Regional Infrastructure Analysis. http://library.oregonmetro.gov/files/regionalinfrastructureanalysis.pdf

- Establish criteria for prioritizing projects for funding

Lead and Support

FINANCIAL

Typologies Targeted

Type 2—Industry in Cities and Town Centers

Type 3—Industry in Employment Areas

Type 4—Heritage Sites

F6. Public Equity in Brownfield Sites

Challenge—Brownfield sites are often financially upside down and developers often don't have patient capital. Public subsidy of brownfields is typically through financial grants or low interest loans that provide only limited direct return on investment. The public return on investment typically comes through increased tax revenues generated through redevelopment of the property

Solution—Government entity takes an equity interest in the property to offset its remediation investment and recognizes the ongoing potential revenue stream or the marginal increase of property value in the event of a sale. This scenario is in line with the orientation of the region's Community Investment Initiative (CII).

Mechanics—Make it easier for public development organizations like the Portland Development Commission or a regional infrastructure entity such as that being proposed by the CII, to provide gap financing for projects in exchange for securing an equity interest in the property. The advantage to the developer is that it lowers net investment in the property, so decreases front end investment. The advantage to the public entity is greater return on the capital invested in the project. The public entity could create a revolving equity fund through its investment.

Considerations

- Encumbrances of public dollars in private projects
- Extended return time on public investment
- Financial disclosure of private parties
- Public perception concerns about inappropriate use of public funds or "handouts" to developers

Implementation Actions

- Conduct further analysis of the potential implication of this policy
- Legal review of constraints on lending of public credit to private parties

Lead and Support

FINANCIAL

Typologies Targeted

Type 1—Small Commercial

Type 2—Industry in Cities and Town Centers

Type 3—Industry in Employment Areas

Type 4—Heritage Sites

F7. Property Tax Abatement

Challenge—Current tax abatement programs are limited and not adequate to overcome the financial challenges of many brownfield properties.

Solution—Utilize some of the key criteria existing for rural enterprise zone tax abatement and apply these to brownfields throughout the state. Seek enabling legislation to secure a tax abatement term for up to 15 years for brownfields that can be placed back into industrial uses. The length of the tax abatement will be based on criteria that have yet to be identified (e.g., amount of investment, job creation and/or retention, etc.).

Mechanics—Changes to the current tax abatement policy would require state legislative action. The state and many local jurisdictions offer property tax abatement to stimulate certain types of redevelopment and economic development. Oregon offers the Enterprise Zone as one mechanism that abates property taxes on economic development improvements within designated areas of a community. Abatements last for 3 to 5 years in urban areas and up to 15 years in rural areas. As a further inducement to redevelop brownfields, it may be beneficial to extend the duration of those abatements to 15 years in any area to help make brownfield remediation for industrial development more viable.

Considerations

- Assessment of costs and benefits to public and private sector from the proposed policy change, such as job creation and tax revenue impacts from returning fallow land into productive uses, and property tax losses for the abatement period
- Administrative guidelines of the abatement program, such as eligible projects, duration of the abatement, and penalties for failure to perform
- Flexibility of tax abatement program to meet needs of various types of sites and coordination with other assistance programs

Implementation Actions

- Explore potential options for structuring the abatement program
- Conduct cost/benefit analysis of expanded abatement program based on several models for key elements such as project eligibility, abatement period, and types of redevelopment
- Draft legislative proposal

Lead and Support

FINANCIAL

Typologies Targeted

Type 2—Industry in Cities and Town Centers

Type 3—Industry in Employment Areas

Type 4—Heritage Sites

F8. Reform Contaminated Property Tax Assessment

Challenge—Currently, owners of contaminated sites are able to secure significant reductions in their property taxes based on the impact contamination has on a site's value for development purposes. These deep reductions in taxes can last a long time and a site may not be remediated for decades. This situation not only adds to the burdens of local governments and schools by diminishing their financial resources and consequently their services, but also tends to hamper development potential for nearby properties. Tax reductions in their current form provide a disincentive for cleanup and redevelopment.

Solution—Revise the current property tax assessment criteria for contaminated sites by setting time limits for the value reduction whereby lack of remedial action by the property owner results in diminishing tax reductions over time. An additional, or alternative, solution would require that the value of the tax reduction be dedicated to covering the costs of the property cleanup.

Mechanics—The administrative rule establishing procedures for assessing property taxes includes a methodology for valuing contaminated properties (OAR 150-308.205-(E)). This methodology currently discounts the assessed value of contaminated properties based on the estimated cleanup cost, redevelopment constraints, and financing implications. The administrative rule could be amended so that this discount diminishes over time.

Considerations

- Establishing a reasonable period for the discount that is long enough to be realistic for property owners to conduct remedial actions, but short enough to discourage mothballing of property
- Explore how this program can be bundled with other assistance programs that enable property owners to access funds and/or reduce ongoing liability for clean up
- Engaging private sector owners and/or businesses to incorporate their perspective and gain support for this reform

Implementation Actions

- Conduct further analysis of the impact of the current policy on the remediation and redevelopment status of properties and fiscal impact on tax revenues

- Coordinate with Oregon Department of Revenue and the private sector on structuring key elements of contaminated property assessed value methodology, including time limits.

- Conduct administrative rule update process.

Lead and Support

FINANCIAL

Typologies Targeted

Type 1—Small Commercial

Type 2—Industry in Cities and Town Centers

Type 3—Industry in Employment Areas

F9. Tax Increment Financing Reforms

Challenge—Limited public funds are available to support cleanup and redevelopment of brownfields. Tax Increment Financing (TIF) has been an important financial tool to support a number of brownfield projects in the Portland metro region. There is potential for TIF to be refined to be a more effective tool for promoting brownfield cleanup and redevelopment

Solution—Modifications to the existing TIF policy that could provide greater support to brownfields include

- Making brownfields outside of urban renewal areas eligible
- Exempt brownfield projects from land and tax base TIF limits
- Use TIF to support credit enhanced borrowing
- Augment local TIF revenues with state funds
- Use TIF to support an environmental insurance pool

Mechanics—Most of the potential modifications to TIF would require legislative changes or revising criteria for property tax evaluations. However, some proposals might be advanced through administrative mechanisms. Several specific potential modifications for using TIF for brownfields redevelopment in Oregon are presented below.

Urban Renewal Plan Exception. The urban renewal-related requirements dictate that TIF is used only for area redevelopment, not for the redevelopment of isolated or small individual/brownfield sites. Some states, such as Wisconsin, make an exception so that brownfields sites can use TIF without the urban renewal plan requirement. In Oregon a statutory change would be required to create a similar exception, but the result would mean that numerous brownfield sites could potentially make use of TIF. More subtle, limited changes to support isolated or small sites could include: 1) limiting brownfield TIF to sites that have been vacant for a certain time period; and/or, 2) limiting brownfield TIF expenditures to cleanup and site preparation, not infrastructure or vertical development.

Land / Tax Base Limitation. The limitation that localities may not designate TIF districts for more than 15 percent of their land or 15 percent of their assessable base in TIF districts may hamper TIF redevelopment, particularly in Portland. Several states have made exceptions to debt limitations for brownfield TIF projects. For example, sites eligible for Wisconsin's Environmental Remediation TIF program are not subject to the general requirement that TIF districts not exceed 15 percent of the equalized value.
Alternative Borrowing Sources to Assist with Upfront Costs. Private bond

market TIFs normally assist vertical development because that is the point where potential investors see a predictable revenue stream. Brownfield sites, however, usually need extensive upfront investment so alternative or "credit enhanced" borrowing would help make the brownfields-TIF connection work. The City of Portland already has in place an alternative TIF borrowing source—the Direct TIF Loan Program.[8] Other options from other states include:

- Pennsylvania TIF Loan Guarantee Program, which backs local TIF projects that meet certain state objectives, up to $5 million per project

- Michigan's Brownfields Redevelopment Loans (for cleanup) and Revitalization Revolving Loans (for demolition and site preparation) are designed to work with TIFs. They feature flexible repayment terms, such as no payments due for the first five years and two percent interest rates.

- Connecticut's Brownfields Redevelopment Authority, which provides both an alternative borrowing source, and a state guarantee.

State Revenues Dedicated to Assist Projects that Meet State Objectives. Oregon does not currently dedicate state revenues to supplement local TIFs. Sometimes dubbed "super TIFs," the pledge of state revenues can make a very significant difference in gap financing, and the logic of the state committing funds to support projects that meet state objectives is indisputable. One of the best examples is Kentucky's support for "Signature Projects," defined as mixed use redevelopment projects that involve a minimum $200 million investment and can be demonstrated to create net positive economic and fiscal impacts to the State.

TIF and Environmental Insurance. Consideration should be given to developing a proposal to link TIF with environmental insurance. See discussion in the Pooled Environmental Insurance section (M1).

Considerations

- Examine the potential to make proposed modifications in a way that has limited fiscal impact

- There are considerable political hurdles and widespread misgivings about the use of TIF. Opening the legislative discussion on TIF allows for the potential for additional and/or alternative impacts to the TIF program.

[8] See: http://www.pdc.us/bus_serv/finance-pgms-detail/direct-tif.asp

Implementation Actions

- Refine proposed TIF modifications through the Technical Review Team and discussion with other stakeholders
- Conduct financial analysis of the costs and benefits of proposed TIF modifications
- Draft proposed legislative amendments

Lead and Support

FINANCIAL

Typologies Targeted

Type 1—Small Commercial

Type 2—Industry in Cities and Town Centers

Type 3—Industry in Employment Areas

Type 4—Heritage Sites

F10. Pooled Bonding

Challenge—Issuing bonds is an important tool for funding infrastructure and development projects. Brownfield sites that lend themselves to redevelopment can significantly increase the return on investment for private parties (e.g., commercial conversion of former industrial sites), and can successfully access bonding as a funding source. While others, such as industrial to industrial redevelopment projects, and many smaller brownfield sites owned by entities with lesser resources, cannot.

Solution—Small brownfield sites owned by entities with limited resources and larger sites that have expensive remediation may find assistance through pooled tax-exempt revenue bonds. It may be possible to issue revenue backed tax-exempt bonds for remediation of a number of challenged sites if these can be bundled in a manner that provides a viable revenue stream to repay the bonds. This may mean variable rates of participation in the repayment schedule by different site owners.

Mechanics—State and local jurisdictions have the ability to issue tax-exempt (as well as taxable) revenue backed bonds for a variety of purposes. These bonds do need to be repaid in some form by the projects to which they are applied. The state, through the Oregon Facilities Authority (OFA), currently pools bonds (SNAP bonds) for smaller scale non-profit entities. This program can be a useful model for a brownfield focused bond pool.

The pooled bonding effort would need several elements to be successful:

- Local area with multiple brownfield sites
- Strong case that it is in the public interest to remediate the sites
- Viable bond repayment revenue stream

Considerations

- Potential for the Community Investment Initiative public-private partnership entity to lead, if it's formed
- Avoid general obligation bonding that holds the local jurisdiction or state liable.
- Potential revenue streams from the bundled projects to service debt (it could come through a variety of sources, e.g., land lease payments, sale and/or refinance proceeds, rental payments from end users, increased tax payments, etc.)
- Limitations on lending of public credit to private parties

Implementation Actions

- Explore with the state and willing local jurisdictions, interest in running a demonstration effort for pooled brownfield remediation bonding.

Lead and Support

FINANCIAL

Typologies Targeted

Type 2—Industry in Cities and Town Centers

Type 3—Industry in Employment Areas

Type 4—Heritage Sites

F11. Jobs Tax Credit

Challenge— Redevelopment of brownfield properties requires substantial upfront investment to assess the nature and extent of contamination, develop a cleanup plan, and conduct the remedial actions. This financial challenge often leads to properties lying abandoned or underutilized for years.

Solution—Provide a tax credit to developers based on the number of jobs provided by a completed development.

Mechanics—This policy would require state legislation for implementation. In 2011, Oregon legislators considered a bill that would provide job tax credits for completed projects[9]. If the legislation had been approved, participants in the DEQ Voluntary Cleanup Program (VCP) would receive a $1,000 credit per job for a taxpayer who creates 25 or more jobs during a removal or remedial action.

Similar suggested legislation has proposed that participants of the VCP receive a $5,000 tax refund for each new job created that exceeded average annual county wage and a $2,500 tax refund for each new job that didn't. The incentive would only apply for full-time jobs created in Oregon.

The job credit would be approved following the verification of jobs and awarded as a refund paid out of taxes paid by entities to the State, including corporate taxes. Refunds would be distributed annually with no more than 25% of the approved total bonus refund to be paid in a single fiscal year. DEQ would be responsible for certifying eligible tax payers for the credit prior to redevelopment.

This proposal is similar to jobs tax credits that have proven to be effective in other states. Florida, for example provides a $2,500 tax refund for each new job created in a designated brownfield redevelopment area.

Considerations

- Any tax credit measure will need to consider the financial impact to the state as a primary concern
- Limiting applicability of jobs tax credits to designated areas, such as Urban Renewal Areas

[9] House Bill 2949, 76th Oregon Legislative Assembly, 2011 Regular Session

Implementation Actions

- Conduct analysis of costs and benefits of the jobs tax credit proposal, incorporating several options for the magnitude of the tax credit and criteria for project eligibility

- Prepare legislative proposal

Lead and Support

FINANCIAL

Typologies Targeted

Type 1—Small Commercial

Type 2—Industry in Cities and Town Centers

Type 3—Industry in Employment Areas

Type 4—Heritage Sites

F12. Historical Insurance Recovery Support

Challenge—Site investigation and cleanup costs can be expensive. Historical insurance policies provide a potentially significant source of funding to support these efforts, but they can be challenging to access.

Solution—Provide technical support to assist parties in making claims on historical insurance policies.

Mechanics—In the past, Oregon DEQ provided technical support to guide parties through the process of submitting a claim on historical insurance policies. The state or Metro could fund staff to provide this service again.

Before the mid-1980s, commercial general liability policies did not contain exclusions for liabilities caused by environmental damage. Therefore, 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. Historical insurance recovery requires a commitment of time and resources, but is becoming a standard industry practice. Oregon state law and court decision precedents make it one of the most favorable states in the nation for substantiating environmental claims on historical insurance policies.

Making a claim on an historic insurance policy requires substantiating information of a liability and proof of coverage during the period of the environmental contamination. It is typically recommended to work with an attorney to make an historical insurance claim, but there also can be a large amount of document research needed to provide proof of coverage

Considerations

- Funding for staff (could be a fee for service payable upon settlement with the insurance carrier)
- Potential opposition from insurance carriers

Implementation Actions

- Determine appropriate agency to manage the program and staff
- Decide on appropriate funding mechanism
- Seek approval for program and staff

Lead and Support

FINANCIAL

Typologies Targeted

Type 1—Small Commercial

Type 2—Industry in Cities and Town Centers

Type 3—Industry in Employment Areas

Type 4—Heritage Sites

F13. Community Reinvestment Act Modification

Challenge—Current public and private resources available to address remediation are limited. Expanding the potential funding base cannot come from the public sector alone.

Solution—It may be possible, through federal action, to expand the purview of the Community Reinvestment Act to incorporate brownfield remediation as eligible investments. This policy change would promote investment of more private funds at favorable terms to help address site remediation and redevelopment.

Mechanics—For decades, lending institutions have been encouraged to make investments in economically disadvantaged areas in order to gain rights to extend their domains through acquisitions, branching, and mergers. The Community Reinvestment Act, passed in 1977, requires lending institutions to make investments in these distressed areas at terms that enable the areas to improve. Expansion of the coverage of this Act would require federal legislation. Metro and the State of Oregon can play an important role in promoting this policy change through discussions with lending institutions, coordination with other cities, regional governments, and states, and working with federal legislators.

Considerations

- For lenders to take interest, they'll need to see remediation tied to redevelopment so their lower interest loans can be repaid. It may be possible to link these two elements—cleanup and participation in the actual redevelopment, for additional lender security
- Change at the federal level takes more time, but the potential pool of funds can be significant

Implementation Actions

- Initiate discussions with lending institutions (e.g., the Federal Reserve, Office of the Comptroller of the Currency, etc.) to explore potential for expanding Community Reinvestment Act benefits for investing in brownfield remediation and site redevelopment.

Lead and Support

FINANCIAL

Typologies Targeted

Type 1—Small Commercial

Type 2—Industry in Cities and Town Centers

Type 3—Industry in Employment Areas

Type 4—Heritage Sites

F14. Dedicated State Cleanup Fund

Challenge—Oregon State grant and loan programs for brownfields are limited in their financial capacity. These programs are either capitalized by federal grants or appropriated through the state general fund. Tipping fees at waste disposal facilities do provide a dedicated source of revenue for environmental programs, but they are limited.

Solution—Oregon or the Portland region could establish a dedicated fund for cleanup and redevelopment of brownfield properties. The revenues for the fund should be generated from a source that has both a nexus with contamination and the potential to generate a substantial revenue stream.

Mechanics—The federal government and some states have implemented taxes or fees dedicated to environmental cleanup. The federal CERCLA originally included the Superfund Tax on hazardous materials to support cleanup of priority sites. The Superfund Tax applied to certain chemical and pesticides, but notably excluded petroleum. The Superfund Tax expired in 1996 and has not been reinstated. Washington State's cleanup law that was passed by voter initiative included a fee on the wholesale value of hazardous substances, including petroleum, at a rate of $7 per $1,000 of wholesale value. The funds are used to support hazardous waste cleanup and prevention activities. The hazardous substance tax has generated over $100 million per year in revenues in the last five years. This high level of funding has been driven almost entirely by the high price of oil.

The Oregon constitution includes a provision that prohibits the use of a fuel tax for any purpose other than transportation, so this particular model would have limited effectiveness in the state. There may be other products or services that could be used as a tax revenue stream to support brownfield cleanup and redevelopment.

Considerations

- Establishing eligibility requirements for funds
- Equitable distribution of funds
- An oil tax is not a sustainable source of funds

Implementation Actions

- Identification of potential products or services to generate tax revenue stream
- Prepare legislative proposal

Lead and Support

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M1. Pooled Environmental Insurance

Challenge—A high level of risk and uncertainty is inherent in cleanup of contaminated properties, based on a number of factors, including:

- Cost of cleanup
- Potential discovery of unknown contaminants
- Claims by other potentially liable parties
- Third-party injury claims
- Regulatory changes in the future that may alter cleanup standards and reopen a completed cleanup

Solution—The State of Oregon, Metro or the City of Portland could establish a program that would decrease the transaction costs and reduce the cost of purchasing environmental insurance that covers these risks.

Mechanics—Environmental insurance is a tool for transferring the financial responsibility for certain risks or costs that may be present in contaminated property transactions. There are a number of environmental insurance products on the market. The two most prevalent are pollution legal liability and cleanup cost cap insurance.

Pollution legal liability insurance typically protects the insured against pollution-related losses associated with previously unknown conditions, including cleanup costs and third-party property damage or bodily injury claims. These policies can also cover regulatory re-openers, reduction of property value, and business interruption losses. These policies are highly flexible and provide a financial backstop that can facilitate loan approvals and capital investment.

Cost cap policies are designed to pay for unanticipated remediation project costs that exceed original project estimates. These policies are typically most cost effective for cleanups that cost over $10 million. Currently these policies are difficult to obtain on the market, however they are a powerful tool for managing one of the largest financial risks related to brownfield projects.

There are several options for a public role to facilitate the use of environmental insurance that could be effective for addressing brownfield challenges in the Metro area. These include:

Pre-Selected Insurers—To reduce the transaction costs of environmental insurance and make it more accessible for smaller sites, the state or Metro could pre-select brokers or insurance carriers. This type of program could

offer cost cap insurance, pollution legal liability insurance, or blended risk policies. The insurers would establish standard guidelines and template policies to make the process of drafting and executing a policy more efficient. For the privilege of having business directed to the insurers, they could agree to a discounted premium cost (the states of Wisconsin, California, and Ohio programs both provide 10% discounts).

Another approach to reducing the premium costs is for the state or Metro to subsidize the insurance premiums. For example, Massachusetts covers 50 percent of the premium costs of eligible projects (with a $50,000 limit for private projects and $150,000 limit for publicly sponsored projects).[10] The California program is also authorized with a 50 to 80 percent subsidy, but the subsidy aspect has not been funded for several years.[11]

In 2009, the Massachusetts program reported that, over the 10-year life of the program, $6.6 million in state funds had assisted 330 projects with an upside potential of 27,000 jobs and $4.1 billion in new investment. The Ohio, California, and Wisconsin programs are both more recent and less aggressive; so impact numbers are likely more limited.

Public Insurance Pool—In this model, the state or Metro would allow project proponents to make a payment to the government as closure for tailing environmental liability. The government could in turn use those funds to buy insurance policies to cover a pooled group of sites. This method of contribution to reach closure is similar in principle to the current program addressing contaminated sediments in the Columbia Slough. A pooled insurance model could be particularly effective in the Portland Harbor. The program could allow for small contributors to the Portland Harbor Superfund site (those only connected to the Harbor through stormwater discharge) to reach closure ahead of the final federal settlement. Upon completion of upland cleanup actions and implementation of stormwater best management practices, the parties would pay a premium that funds the environmental insurance. If the EPA or other potentially liable parties seek contribution from that party, the claim would be directed to the environmental insurance policy.

Considerations

- Connection to TIF or Tax Abatement—One way to pay for environmental insurance under any of the above options, is to craft a TIF or tax abatement program that is designed to offset some or all the extra cost of the environmental insurance. For example, if the determination is that the highest priority is the

[10] See: Massachusetts Brownfields Access to Capital Program - http://www.bdcnewengland.com/brownfields-redevelopment/brac-benefits-eligibility/
[11] See: http://www.calepa.ca.gov/Brownfields/Fair.htm

extra risks associated with business investment in the Superfund-impacted area, a TIF or tax abatement program could be crafted so that a public sector commitment (TIF or tax abatement) could automatically receive funding if the proposed project meets certain criteria. To limit the budgetary impact of such a program, the subsidy could be limited to the Superfund-related risks and would not include cost-cap insurance.

- Local government willingness to be associated with CERCLA liability
- Market availability of an environmental insurance product of this type
- Demand and potential use of the insurance pool
- Criteria for eligible applicants
- The degree to which the standardization that is required for the pooling works against program participation

Implementation Actions

- Further analysis of potential models for pooled environmental insurance
- Discussion with insurers on feasibility and interest in the program
- Discussion with property owners and businesses to inform them of the concept and survey interest level
- Refine program framework to craft into legislative proposal

Lead and Support

M2. Model Purchase and Sale Agreement

Challenge—Purchase and sale agreements between buyers and sellers of contaminated properties can be a time-intense and variable process.

Solution—Create a model agreement with indemnification language and distinctions between upland and in-land water liabilities along with standard transfer issues such as due diligence period, timing of cleanup, warranties, and inspection period.

Mechanics—A model purchase and sale agreement could include:

- A menu of available government incentives that could apply to offset environmental remediation and infrastructure improvements, and implementation of green building and sustainability initiatives:
- Provide practical indemnification language for addressing past and future liabilities
- Provide language that differentiates and addresses upland and in-water environmental liability and cleanup
- Provide language that will address standard transfer issues (e.g. price, inspection period, down payment, due diligence period, reps and warranties, timing of cleanup and closing)

Considerations

Appropriate lead agency to develop model document

- Need for appropriate legal review of the model agreement
- Distribution and accessibility of the model agreement

Implementation Actions

- Determine lead agency to develop the model agreement
- Convene workgroup of appropriate experts (environmental, real estate, legal) to prepare model agreement

Lead and Support

M3. Model Prospective Purchaser Agreement

Challenge—Contamination or the threat of contamination on a specific property can eliminate the potential for transaction of the property and cause the site to remain untouched.

Solution—DEQ could create model language for legally binding Prospective Purchaser Agreements to streamline the process and encourage their use.

Mechanics—This proposal is an internal policy operation that does not involve statutory or administrative rule changes. PPAs limit the purchaser's or lessee's liability under state law for environmental cleanup at the property in exchange for providing a "substantial public benefit (ORS 465.327). From the purchaser's perspective, the PPA is a risk management tool that provides certainty about the requirements for cleanup and protection from potential claims. With these protections, a purchaser can have greater certainty about cleanup costs and liability for past releases. PPAs can also satisfy lender concerns and make it easier for a project to obtain outside financing.

Although PPAs are already an existing tool in Oregon, the complicated and time intensive nature may make the option less attractive to both the public agency and the prospective parties. Model prospective purchaser agreement language would help expedite the negotiation process between DEQ and the purchaser, provide predictability and consistency between sites, and reduce procedural delays.

A model PPA would provide a template to identify the following:

- Innocent purchaser
- Future use of site
- Significant public benefit

Considerations

- Model agreement for each of the different types of PPA

Implementation Actions

- Coordinate with DEQ to review existing PPA templates
- Convene workgroup of appropriate experts (environmental, real estate, legal) to prepare model agreement

Lead and Support

M4. Public Land Bank

Challenge—Brownfield properties often remain vacant, underutilized, or even abandoned because there is no buyer with patient capital and long-term vision. Local governments are typically reluctant to step in and acquire these properties because of the potential legal liability and financial implications.

Solution—Establish a regional or statewide land bank to acquire brownfield properties and position them for redevelopment

Mechanics—Land banks can provide an entity with the resources and long-term perspective to acquire and reposition constrained properties. Land banks are usually created to manage the orderly disposition of property that has come under local government ownership, most often through tax delinquency. The disposition process is governed by community plans rather than the short-sighted tendency of local agencies to try to "get the properties off our books." The orientation toward community planning means that many land banks also selectively acquire properties in order to address blight or to assemble properties that can be redeveloped under the unified plan.

Brownfields are a sub-set of these vacant properties. However the brownfields-land bank connection is not necessarily an easy one. Land banks may be reluctant to acquire brownfields for several reasons:

- Some land banks have a mission to address vacant housing and have little experience in brownfields or in commercial redevelopment;
- There may be liability concerns;
- There may be concerns that the agency will not be able finance cleanup costs.

There are successful examples of land banks addressing brownfields, particularly in Michigan and Cleveland, (both areas where the prevalence of abandoned manufacturing facilities combined with weak markets has probably led to significant tax foreclosure acquisition of brownfields).

Michigan land banks have made use of a state authority to use tax increment financing for brownfields. That is, all land bank properties were, in effect, designated as brownfields in order to qualify for tax increment financing.[12] Then, large batches of properties were included in non-contiguous TIF districts, and the sale of the most marketable properties created a revenue source to finance improvements to the more difficult properties.

[12] Michigan land banks are sometimes cited as "brownfields success stories." Readers should understand that Michigan land banks are primarily addressing vacant residential property that got branded as "brownfields" in order to qualify for TIF.

Suffolk County, New York recently announced a plan to address brownfields through a newly enacted state land bank authority. The key change that facilitated the brownfields-land bank connection was the ability to sell properties for less than the tax lien.

Other observers working on making the brownfields-land bank connection have concentrated on eliminating the liability concerns and on providing a funding source for remediation.

Considerations

- Potential legal limitations on the special powers of land banks in Oregon
- Local capacity and opportunities for land banks to be successful
- Identifying the proper agency to take a lead role

Implementation Actions

- Further analysis of the legal framework for land banks in Oregon
- Refine proposal of special authorities and powers of a land bank
- Identify appropriate level of government under which to operate
- Prepare proposal for legislation

Lead and Support

Type 3—Industry in Employment Areas

Type 4—Heritage Sites

M5. Worst Site First Approach

Challenge—The majority of the acreage of brownfields in the metro region is composed of a relatively small number of large contaminated properties. The scale of these projects can make them difficult to finance and complete. Additionally, the most complex and most contaminated properties are the ones that are least likely to be remediated and redeveloped by the private sector without public support.

Solution—Use public leadership to acquire and remediate highly contaminated sites that suffer from market constraints and break stigma of remediation and redevelopment.

Mechanics—This is an overarching policy tool that has implications for existing programs and proposed policies such as funding, land banks, and tax incentives. Local governments and public agencies could strategically utilize limited public resources to target cleanup projects that are located on large sites, contain complicated contamination issues, or require extensive remediation.

Consideration

- Liability protections to shelter local governments from the risk associated with these contaminated sites
- Appropriate entity to acquire properties (potentially land banks)
- Funding sources to support cleanup
- Potential perception of public bail out of private industry

Implementation Actions

- Conduct cost and benefit analysis of this approach compared to alternatives, such as Targeting Policies to Priority Areas (F1).

Lead and Support

Type 1—Small Commercial

Type 2—Industry in Cities and Town Centers

Type 3—Industry in Employment Areas

Type 4—Heritage Sites

L1. Regulatory Flexibility

Challenge—Contaminated or potentially contaminated properties face difficult redevelopment barriers and must be particularly profitable to off-set incurred cleanup costs. Development regulations may add additional land use limitations on already constricted sites.

Solution—Provide increased flexibility in allowing broader land uses for underutilized sites so that alternate uses can be considered if the cost of achieving a given use is an impediment to revitalization.

Mechanics—Local governments could apply a zoning code overlay to contaminated sites or create a brownfield inventory list for priority sites that would allow developers and property owners to develop the site with greater regulatory flexibility. The flexibility would allow a greater scope of outcomes and increase the changes that a site could be developed profitably.

Local planning staff could coordinate with DEQ to implement strategies to achieve regulatory flexibility and remedial actions that are cost effective and balance a project pro forma. Regulatory flexibility measures could waive permit and impact fees and provide: streamlined permitting, wider ranges of approved uses, development standard exemptions, and /or density bonuses on brownfield properties.

Considerations

- Regulatory considerations would need to still meet broader land use policies for an area while providing leniency with more detailed requirements
- Potential perception of unfairness from other property owners

Implementation Actions

- Further analysis of regulatory implications of this policy change
- Prepare model ordinance language that could be adopted by local jurisdictions

Lead and Support

L2. Brownfield Guidebook/Toolkit

Challenge—Landowners and developers are often unaware of resources available to support brownfield redevelopment and are typically wary of speaking openly with regulatory agencies for fear of liability.

Solution—Provide more effective resources to educate land owners and prospective buyers about the kinds of contaminants associated with different land uses, the costs of cleaning them up, and the redevelopment process and the resources available to assist these projects.

Mechanics—The Metro Brownfield Program, City of Portland Brownfield Program, and DEQ Brownfield Program are all engaged in education and outreach activities. One identified challenge to their efforts is the lack of a toolkit or manual that provides a concise but comprehensive guide to the cleanup and redevelopment process and the resources available to support these projects. Several models exist for this type of resource guide including one recently produced by the American Planning Association that provides a national perspective, and one published by the Washington State Department of Ecology in partnership with the Tacoma-Pierce County Health Department that is more locally focused.

Considerations

- Target audience(s) and level of detail of the guidebook(s)
- Engagement of stakeholders in guiding content
- Level of focus (statewide or Metro region)

Implementation Actions

- Identify appropriate agency to lead effort (potentially conduct as a joint effort between State, Metro, and City of Portland)
- Identify funding sources such as EPA State and Tribal Response Program funds
- Convene workgroup of various stakeholders to inform development of the guidebook

Lead and Support

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L3. Build Market Demand/Eliminate Stigma

Challenge—Brownfields represent a perceived higher risk real estate investment. They tend to be attractive to investors with higher risk tolerance.

Solution—Develop programs to link more risk tolerant investors and developers with brownfield properties.

Mechanics—A program to build market demand could function like an extension of Oregon's Industrial Site Certification program and Prospector site database. Metro and/or Oregon Business could develop a listing service that targets brownfield sites with development potential. The New Jersey Site Mart[13] and Pennsylvania Site Search[14] websites provide useful examples. The government agency would maintain the listing and actively market and promote these sites to prospective investors and business site selectors. Brownfields could be one subset of sites currently in the Industrial Site Certification and Prospector programs, or it could be a stand-alone initiative.

Specialized workshops or events could be held with developers that have experience with brownfields to introduce them to available brownfield properties that are considered to have strong market potential or that may be catalyst sites that support neighborhood revitalization efforts.

One special focus of this effort could be creating an easily accessible compilation of existing environmental information on properties in the Portland Harbor. The perception of potential contamination in this area often exceeds the reality of known issues. Providing access to environmental studies may help dispel stigma and misperceptions and provide potential purchasers with enough confidence to invest in this area.

Considerations

- Providing easily accessible information on incentives and tools available to assist with cleanup and redevelopment of brownfields together with the inventory of sites.
- Screening for eligibility to be on the list
- Level and types of background information to provide on the sites.
- To encourage property owners to list their sites, provide additional incentives available only to sites on the inventory, such as tax

[13] See http://www.njbrownfieldsproperties.com/Default.aspx

[14]See http://pabrownfields.pasitesearch.com/

incentives, regulatory flexibility, or eligibility for environmental insurance.

- Capacity for active marketing of the sites

Implementation Actions

- Coordinate with Business Oregon to link this proposal with the Industrial Site Certification program and Prospector site database

- Conduct outreach to property owners, real estate brokers, developers, and business site selectors to survey interest and willingness to participate in the program

- Identify funding sources to support the program

Lead and Support

L4. Universal Database

Challenge—Fully understanding the environmental issues at a brownfield property often requires collection and analysis of data around a larger area beyond the parcel boundary. Dynamics of groundwater flow in particular often demands study of a catch basin or larger area. While several projects in an area may collect groundwater data, it is challenging to access and share the information.

Solution—Create an open system to share environmental information across projects. This system could include analytical data on groundwater flow, contaminant concentrations, along with beneficial use determinations. Sharing this information across projects could result in a more refined understanding of complex systems and greater cost effectiveness.

Mechanics—Parties are required to submit data to the DEQ when conducting a site investigation or cleanup project under their jurisdiction. The database of information could be opened to limited access for retrieval of information.

The Regional Brownfield Scoping project has created such a database for the Portland metro region. This database could serve as an example for other regions throughout the state.

Considerations

- Liability issues related to making contamination data on a specific property publicly available
- Professional liability reservations about use of data collected by another investigator
- Some payback to those who are "first in" to the system? They are taking on a burden those others won't have to.

Implementation Actions

- Determine appropriate agency to build and maintain this database (DEQ, Metro, or City of Portland)
- Identify funding source to support development of the database
- Coordinate with DEQ to structure and populate the database

Lead and Support

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L5. One Stop Shop

Challenge—Successful redevelopment of brownfields requires navigation of state regulatory processes for cleanup along with permitting processes for construction. The multiple regulatory agencies involved may have different or competing interests. All of these regulatory processes occur within a time sensitive financing framework.

Solution—Create a system for inter-agency coordination for permitting and funding brownfield projects.

Mechanics—This proposal is an internal policy change and does not involve changes to laws or regulations. Create a Brownfield "team" with representatives from Metro, Cities, DEQ, and Business Oregon that coordinates permitting and funding activities for eligible projects. Pennsylvania's Brownfield Action Team program provides a useful model. The team would meet with the project proponent at an early stage of the process to outline the permit requirements, potential financial incentives, and a schedule for a project. The team would then meet periodically through the planning and permitting process to resolve any conflicting requirements and expedite review of the project. These types of meetings currently do occur opportunistically. This policy would formalize and advertise this system to make it a common practice.

Considerations

- Establishing a system of coordination without creating significant administrative burden
- Eligibility criteria. Could include:
  - Location in urban renewal area or similar special districts
  - Readiness of project to proceed
  - Project consistency with local planning and zoning

Implementation Actions

- Initiate coordination with staff from different agencies to explore feasibility of the proposal
- Refine operational framework and seek agreement from executive leadership of agencies

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REGULATORY

Typologies Targeted

Type 1—Small Commercial

Type 2—Industry in Cities and Town Centers

Type 3—Industry in Employment Areas

Type 4—Heritage Sites

R1. Formalize Presumptive Remedies and Standards

Challenge—There is an opportunity for routine cleanup projects to be expedited through using standardized remedies and standards. DEQ often takes an expedited approach to common types of sites, but these guidelines and methods are not formalized.

Solution—Establish guideline documents for simple cleanup sites with common redevelopment uses.

Mechanics—DEQ staff with guidance from a stakeholder committee could develop these guidance documents, building on existing technical manuals. The guidance documents should provide enough certainty of expectations to allow routine cleanup projects to more expediently move through the administrative process. Note, these sites would still be required to meet all appropriate regulations and cleanup standards.

Considerations

- Degree to which existing technical guidance already addresses this issue
- Potential for standardized remedies to lead inadvertently to inflexibility
- Potential need for administrative rule-making to fully implement the policy.

Implementation Actions

- Review existing technical guidance documents to identify areas where standards are most developed and areas that may lack guidance
- Convene stakeholder group to provide perspective to the agency on where presumptive remedies and standards may be the most useful

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REGULATORY

Typologies Targeted

Type 3—Industrial in Employment Areas

R2. CERCLA Prospective Purchaser Agreements

Challenge—Liability issues are often ranked near the top of concerns when developers and other professionals are asked about the various impediments to brownfield redevelopment[15,16]. The risk of assuming strict, joint, and several liability discourages potential developers of brownfield properties.

Solution—EPA could provide Prospective Purchaser Agreements, jointly with Oregon DEQ to provide certainty and liability protection to innocent purchasers of contaminated properties under federal Superfund Law. Proactive use of this tool could be encouraged around Portland Harbor to promote property transactions in the face of the Superfund designation.

Mechanics—EPA has the authority under CERCLA to execute Prospective Purchaser Agreements. The 2002 Brownfield Amendments included a Bona Fide Prospective Purchaser (BFPP) defense tool with the purpose of providing a legal liability defense based on an innocent party conducting adequate due diligence and taking appropriate care and precautions on a property. EPA intended that the BFPP defense would serve the same role as Prospective Purchaser Agreements without requiring significant agency involvement. However, the BFPP defense has been challenged in court and appears to have limitations rooted in the subjective definition of the due care provisions[17].

In recognition of the special circumstances around the Portland Harbor, EPA could make a policy decision to enter into prospective purchaser agreements in this area. Eligibility for a prospective purchaser agreement could be limited to properties not located immediately adjacent to areas of contaminated sediments. To make implementation of this tool efficient, EPA and DEQ could establish a model prospective purchaser agreement for properties in the Harbor area based on existing state templates (See Policy M3). The prospective purchaser agreement would need to be executed by both EPA and DEQ to provide sufficient liability protection.

Considerations

- This change in policy may need to be made at the highest levels of EPA and require a significant effort to make the case to policy makers

[15] U.S. Conference of Mayors. Recycling America's land: a national report on brownfields redevelopment. Vols. I-IX. 1993–2010.
[16] Wernstedt, K., P. B. Meyer, A. Alberini, and L. Heberle. Incentives for private residential brownfields development in US urban areas. Journal of Environmental Planning and Management 49(1):101-119. 2006.
[17] See Ashley II of Charleston, LLC vs. PCS Nitrogen. That decision sets a high bar for compliance with the due diligence and due care requirements that are connected to the BFPP defense.

- Commitment of EPA staff resources to execute the agreements in a timely manner

Implementation Actions

- Coordinate with stakeholders to assess interest in making this policy change

- Develop strategy to promote policy change at EPA

Lead and Support

REGULATORY

Typologies Targeted

Type 3—Industrial to Industrial

R3. CERCLA De Minimis Protection

Challenge—The designation of the Portland Harbor as a Superfund Site has added a significant layer of complexity and uncertainty to redevelopment of properties on the waterfront and properties that contribute stormwater runoff to the harbor. There is uncertainty regarding remedial actions that may be required and assignments of liability.

Solution—EPA provides expedited settlement agreements for owners of properties that likely cause minor impacts to the Harbor.

Mechanics— The EPA can provide de minimis settlements for parties that have a small share of cleanup liability. To date, EPA has been reluctant to provide these settlements in the Portland harbor. Broader use of this existing tool could expedite cleanup and redevelopment of a large number of properties that are located within the contributing area to the Superfund site, but that have had small impacts are only linked to the harbor through the municipal stormwater system.

Considerations

- This change in policy may need to be made at the highest levels of EPA and require a significant effort to make the case to policy makers
- Commitment of EPA staff resources to execute the agreements in a timely manner

Implementation Actions

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Materials following this page were distributed at the meeting.

REGIONAL BROWNFIELD SCOPING PROJECT

Preliminary Findings

Metro Council Work Session

June 26, 2012

MAUL FOSTER ALONGI

Purpose and key questions

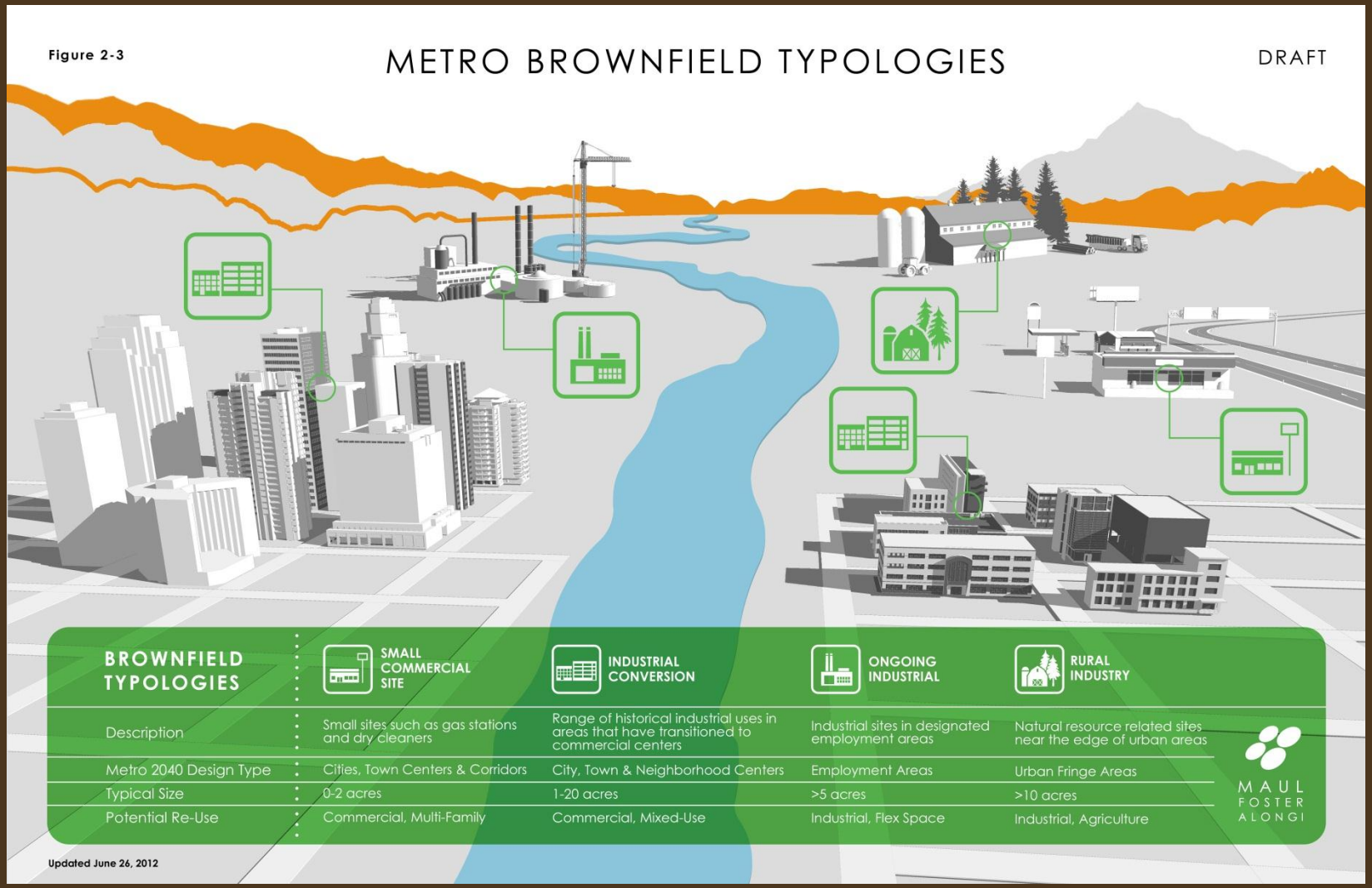
Purpose: estimate extent of the brownfield challenge & benefits of addressing it.

- How many brownfields?
- Range of costs to clean up?
- What are the broad-based benefits of remediation?
- What are the implications for growth management policy?
- What tools can be applied to address the challenge?

Tasks

- Task 1: Develop Brownfield Typologies
- Task 2: Scale of the Problem & Socio-Economic Analysis
- Task 3: Outline Potential Solutions
- Task 4: Impact of Solutions

1. TYPOLOGIES



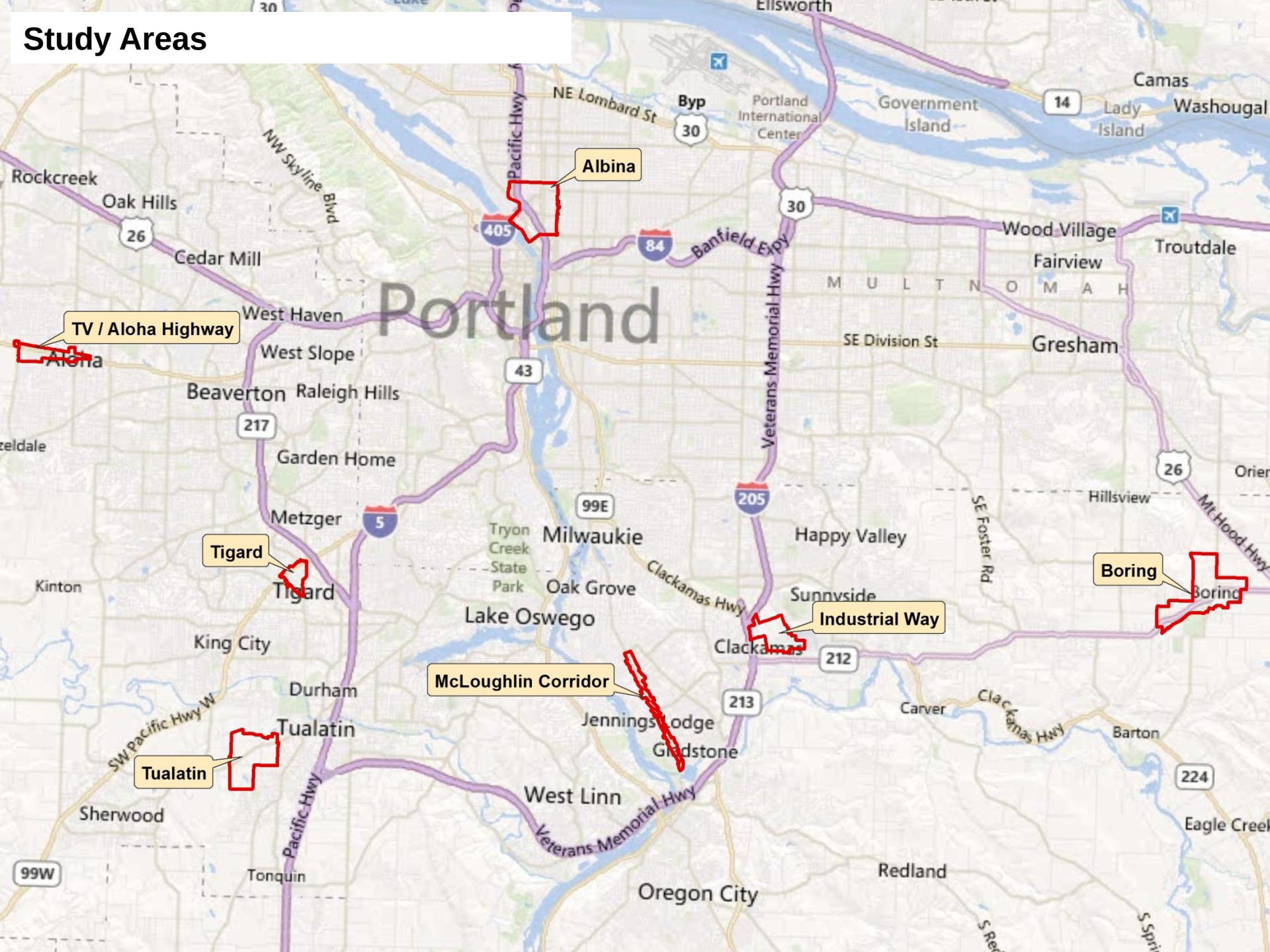
Methodology

- Define Study Areas & Extents
- Filter Sites:
  - Identify DEQ Sites
  - Select by Zoning and Vacant Lands
  - Select Underutilized Properties
- Historical Research
- Field Verification
- Determine Status
- Apply Typologies

Study Areas

Study Areas	Historic downtown 1900 – 1930s	Newer town center 1950s – 1990s	Historic main street 1900 – 1920s	Corridor 1930 – 1950s	Corridor 1960 – 1980s	Employment 1900 – 1920s	Employment 1930 – 1950s	Employment 1960 – 1980s	Rural agricultural and resource-based Industries	Multnomah Co.	Clackamas Co.	Washington Co.	Urban grid form	Suburban form	Metro investment	Local redevelopment incentives or initiatives	Underserved populations
Downtown Tigard	X		X									X	X		X	X	
McLoughlin Corridor (S. of Mil.)				X							X			X	X	X	X
Aloha / TV Hwy		X			X							X		X		X	X
Albina (City of Portland)						X				X			X		X	X	X
Johnson Road / Industrial Way							X				X			X		X	X
Tualatin / Sherwood Employment								X				X		X	X		
Boring									X		X			X			

Study Areas


Albina
TV / Aloha Highway
Tigard
Tualatin
Industrial Way
Boring
McLoughlin Corridor
Portland
Beaverton
Gresham
Milwaukie
Lake Oswego
Oregon City
West Linn
Tualatin
Tigard
Aloha
Hillsboro
Happy Valley
Clackamas
Troutdale
Wood Village
Fairview
Camas
Washougal
Sherwood
King City
Durham
Tonquin
Redland
Barton
Carver
Jennings Lodge
Gladstone
Oak Grove
Tryon Creek State Park
Rockcreek
Oak Hills
Cedar Mill
West Haven
West Slope
Raleigh Hills
Garden Home
Metzger
Kinton
Sunnyside
Hillsview
Eagle Creek
Pacific Hwy
Veterans Memorial Hwy
Clackamas Hwy
Banfield Expy
SE Division St
SE Foster Rd
Mt Hood Hwy
NW Skyline Blvd
NE Lombard St
Byp
Portland International Center
Government Island
Lady Island
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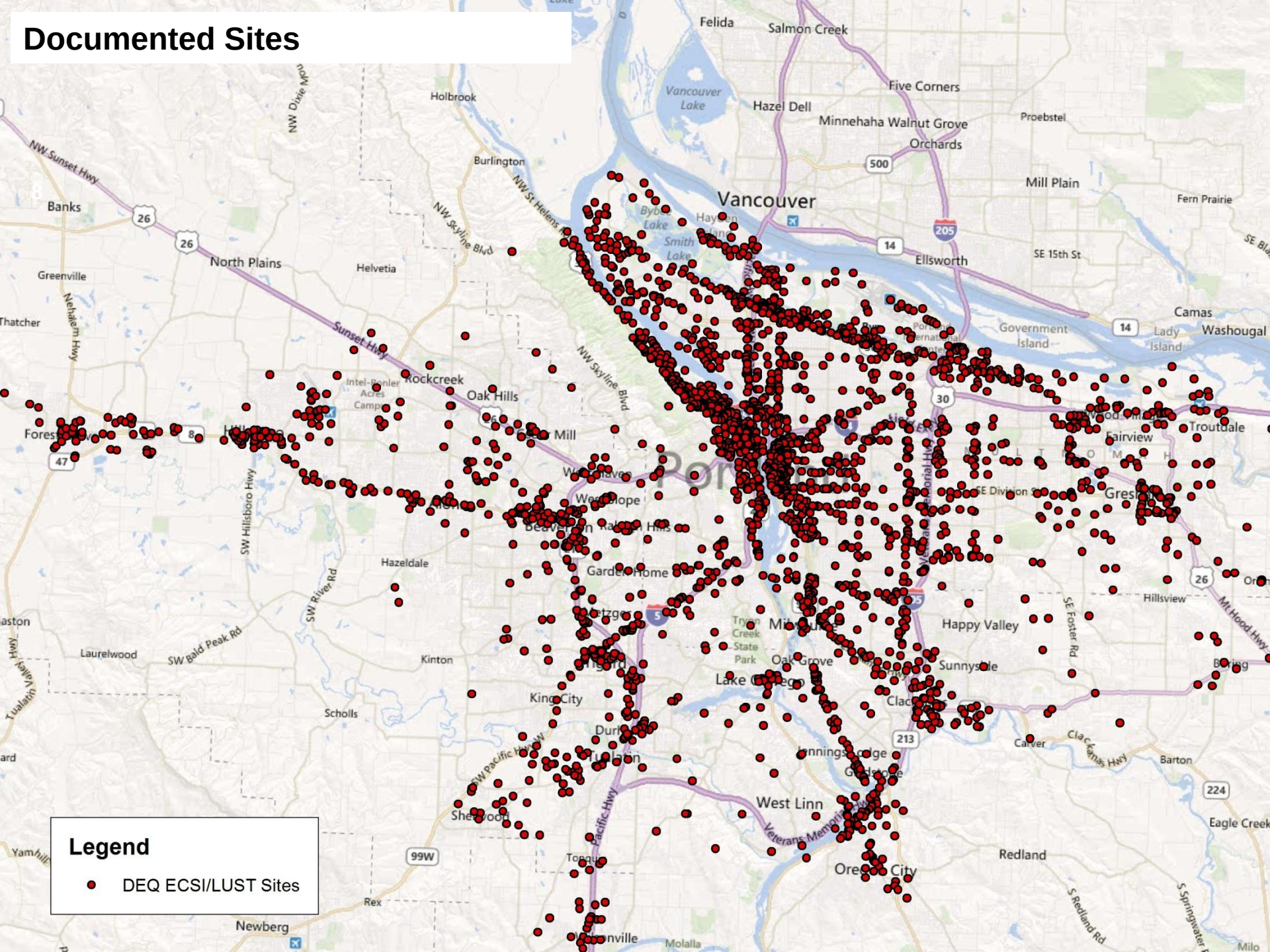
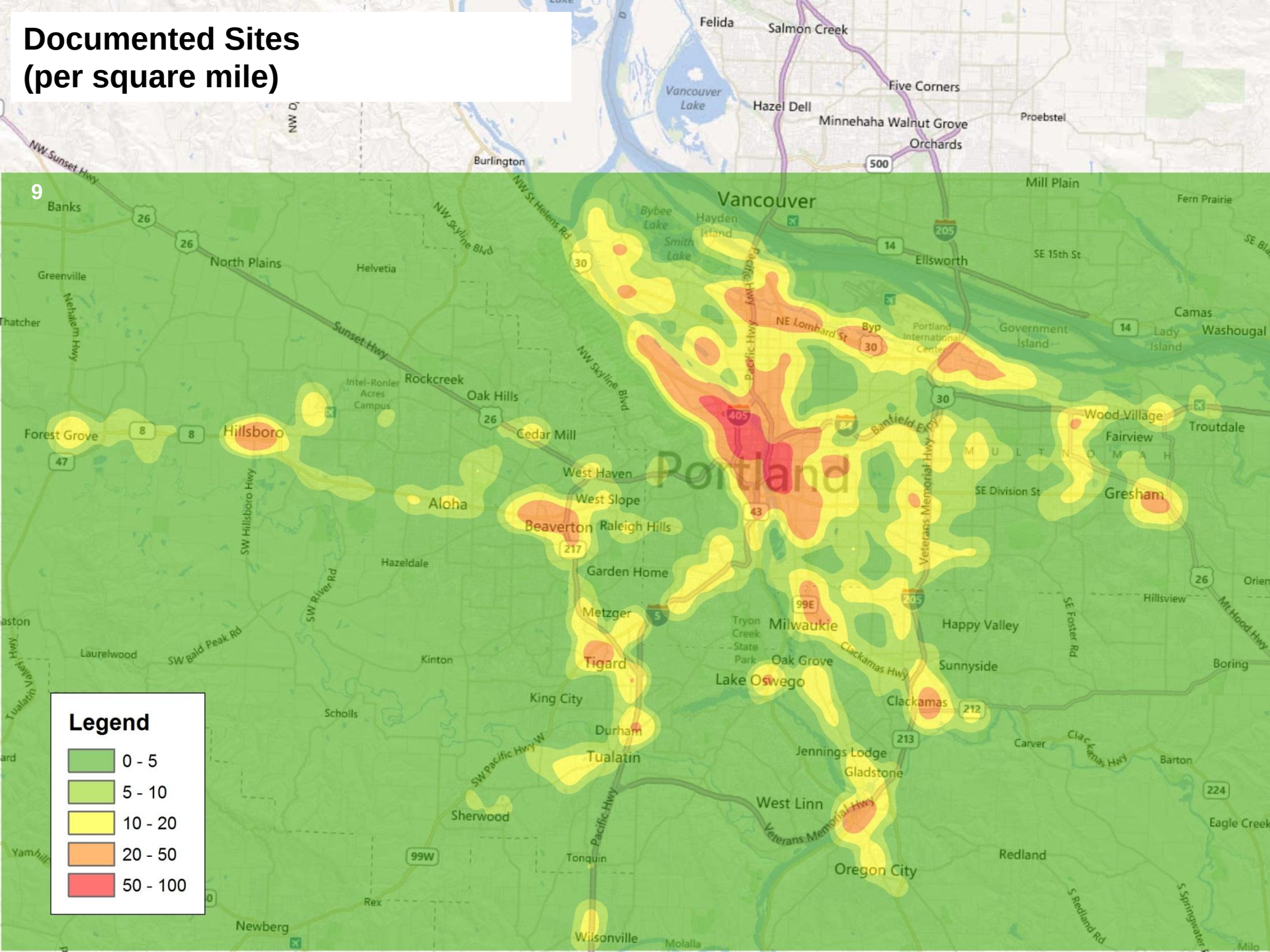
99E
205
212
213
224
14
99W

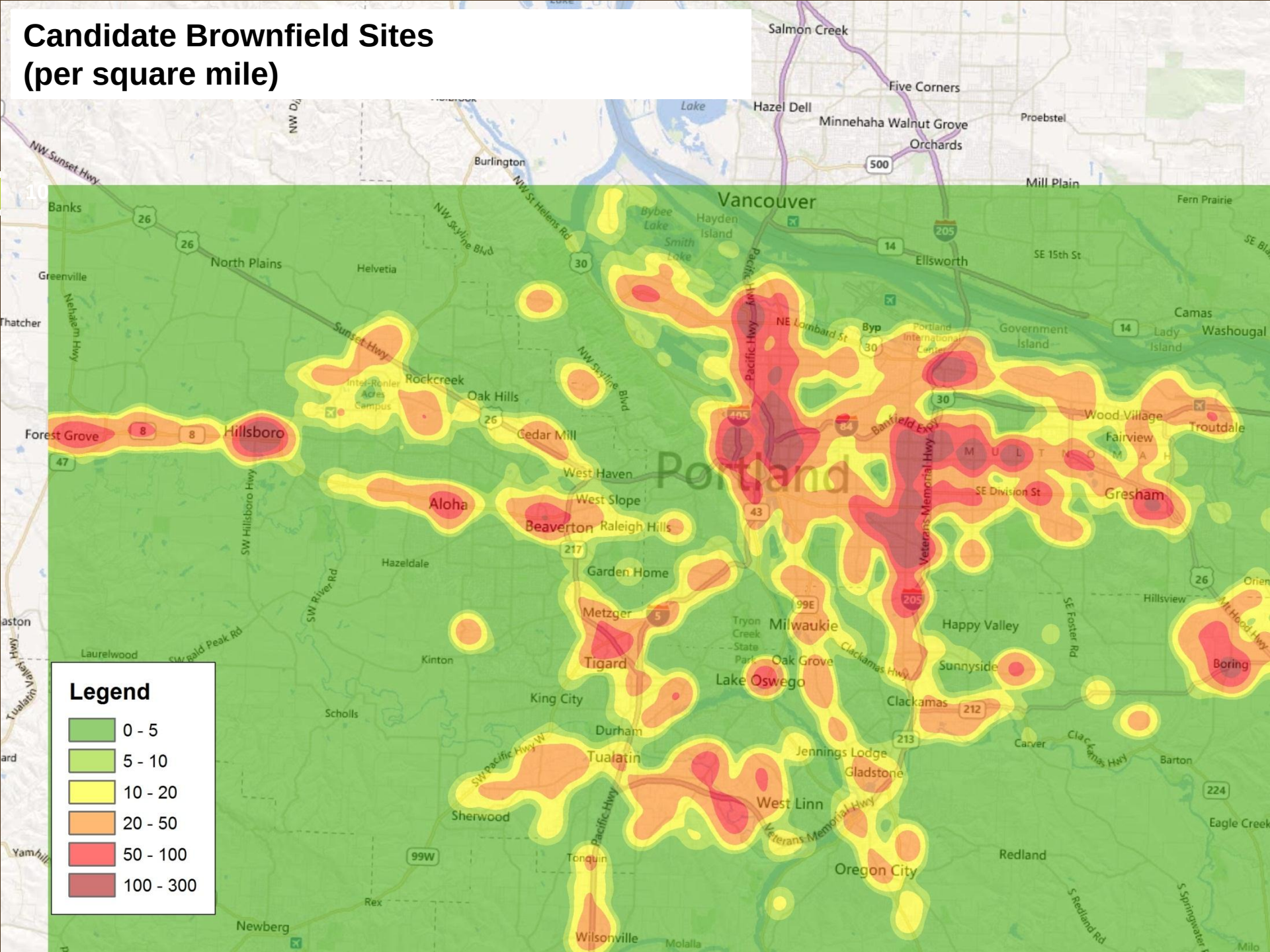
Documented Sites



Documented Sites (per square mile)



Candidate Brownfield Sites (per square mile)



2. SCALE OF THE PROBLEM

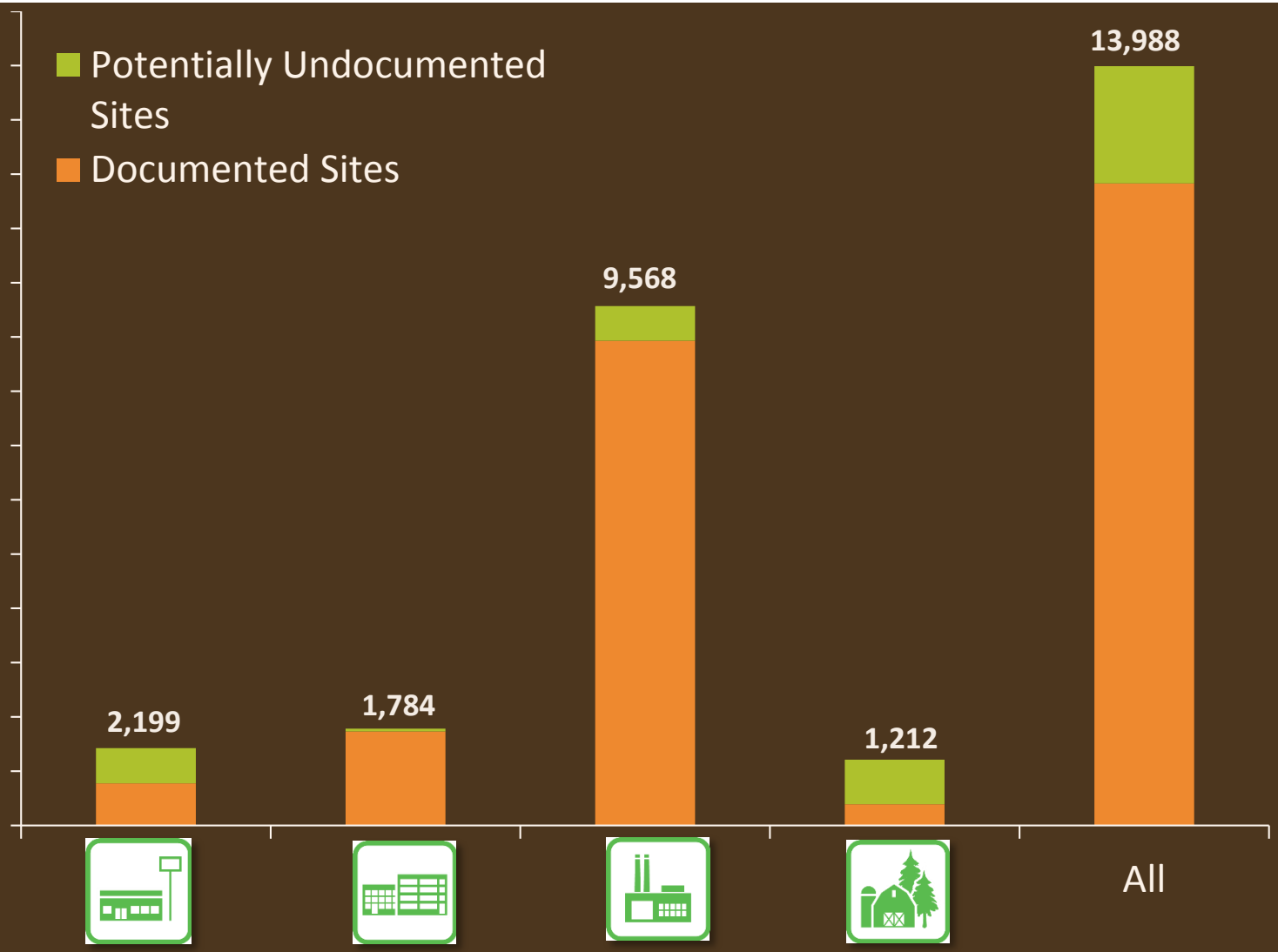
Typology	Documented Sites*		Potentially Undocumented Sites		Total Estimated Brownfield Sites	
	# Parcels	Acres	# Parcels	Acres	# Parcels	Acres
 Small Commercial	1,137	775	1,424	649	2,561	1,424
 Industrial Conversion	204	1,733	36	51	240	1,784
 Ongoing Industrial	982	8,931	153	637	1,135	9,568
 Rural Industrial	26	389	319	823	345	1,212
TOTAL	**2,349**	**11,828**	**1,869**	**2,160**	**4,281**	**13,988**

*Documented Sites: DEQ ECSI and LUST

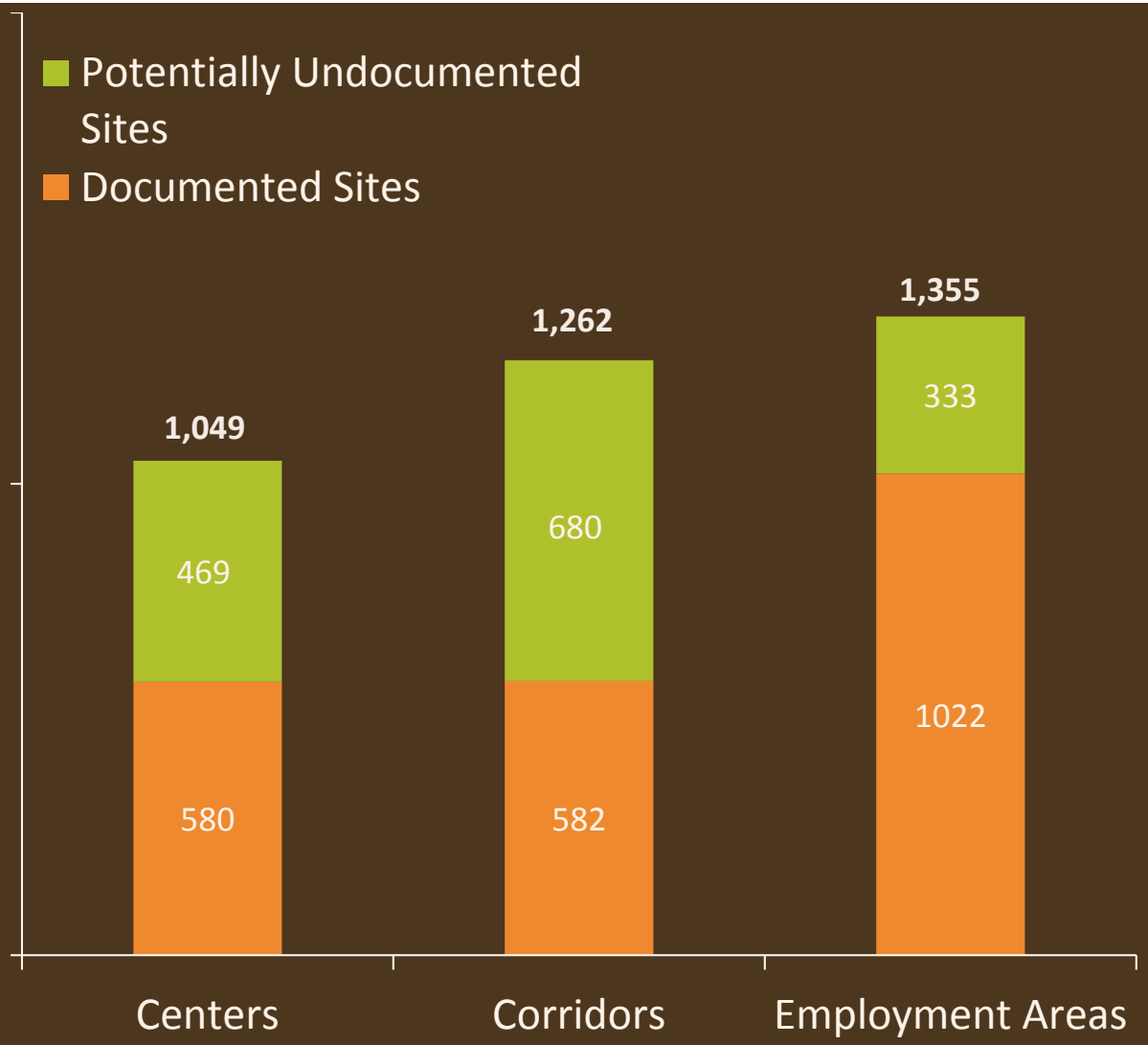
Total ECSI/LUST sites in the metro region =2,643

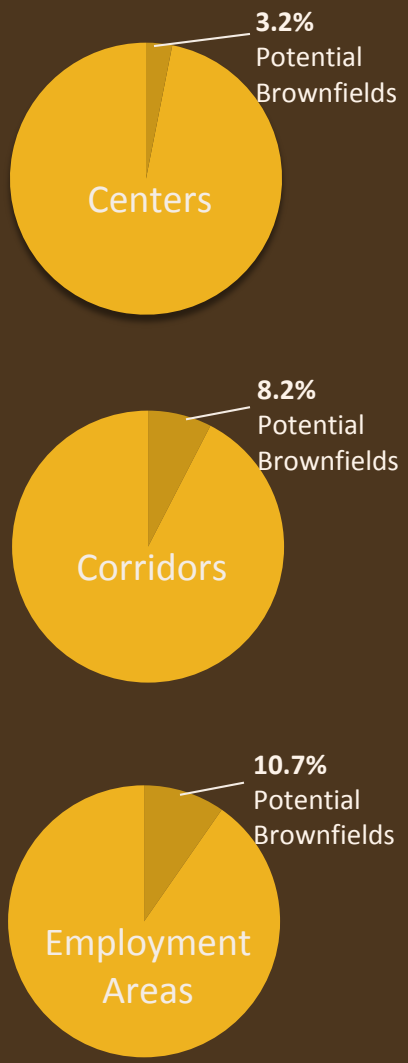
Total Potential Brownfield Sites

Total Potential Brownfield Acreage

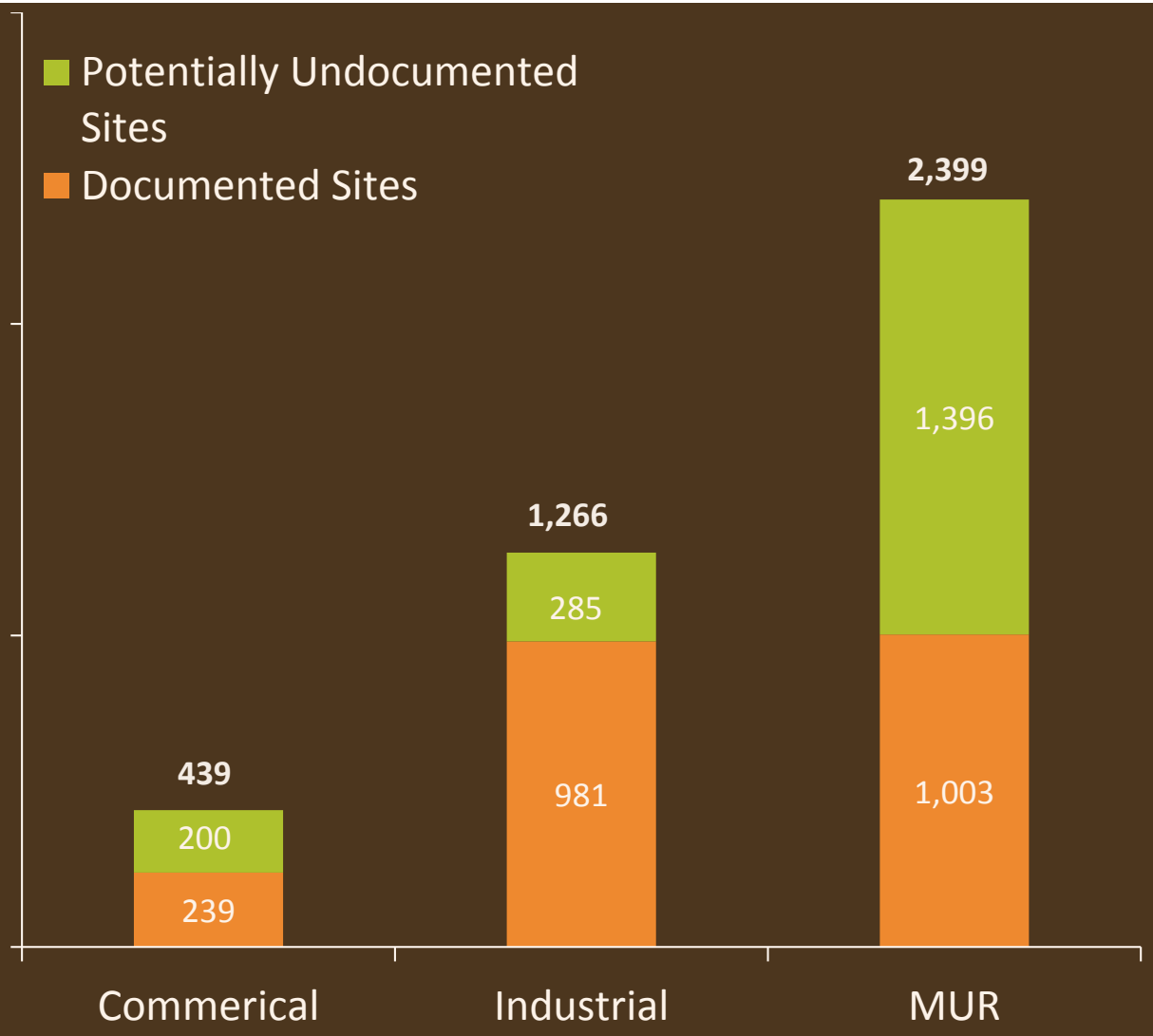


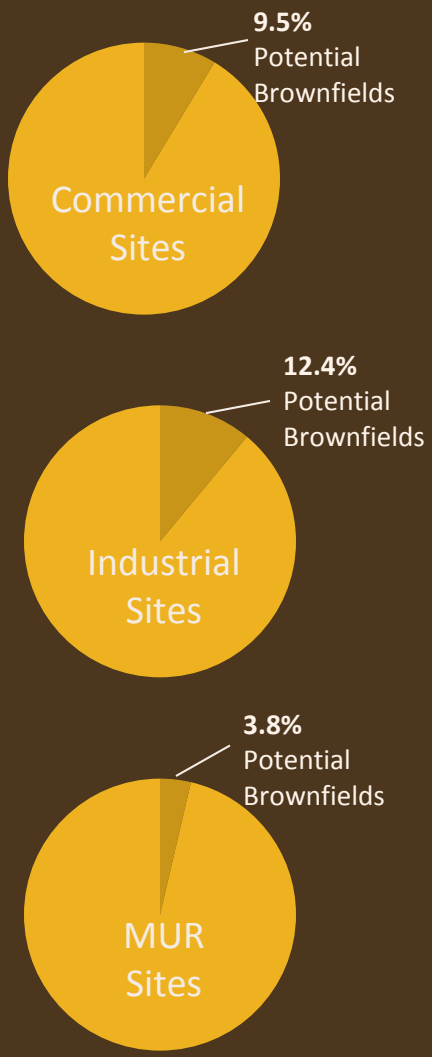
Total Potential Brownfield Sites by 2040 Design Types





Total Potential Brownfield Sites by General Zoning Class





2. SOCIO-ECONOMIC ANALYSIS

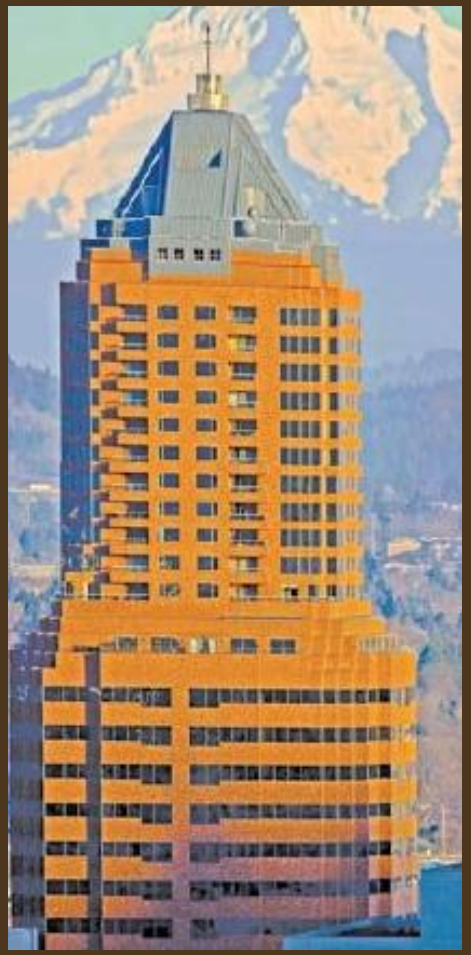
- Purpose:
  - Order-of-magnitude, region-wide look at brownfield capacity in socio-economic indicators
  - Can investments in brownfields:
    - Lead to greater refill rates and fiscal outcomes?
    - Support social and equity outcomes?
    - Improve environmental outcomes?

2. SOCIO-ECONOMIC ANALYSIS

Fiscal & redevelopment indicators: Methods

1. What's there now?
2. What could be there in the future?
3. How much value from redevelopment? How many jobs? How much tax revenue?
4. Is development "feasible"?

2. SOCIO-ECONOMIC ANALYSIS



Fiscal and redevelopment indicators

- With 100% redevelopment:
  - 58 million sq ft of new development
  - $6 -$8 billion in new AV ($2012)
- Could accommodate:
  - 142 new KOIN Towers
  - 18% to 59% of total 20 year employment demand identified in UGR

2. SOCIO-ECONOMIC ANALYSIS

Fiscal and redevelopment indicators:

Preliminary net results across 3-county region

- Increase of up to 5% over current 3 County AV
- 4-5% additional initial property tax collection
- Space for ~20,000 more jobs
- 2% increase in income tax generation from three counties

2. SOCIO-ECONOMIC ANALYSIS

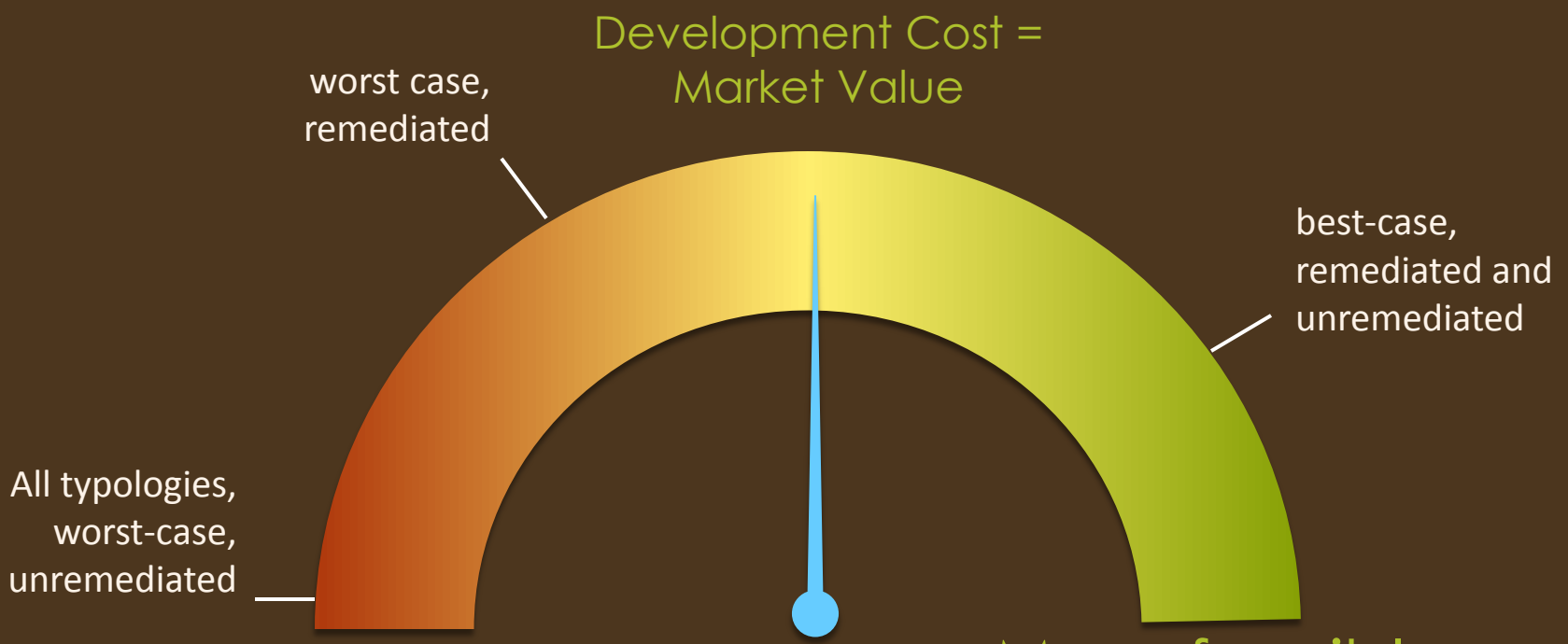
Clean up as a % of development costs:

- Brownfield costs have a greater effect on feasibility for low cost developments
- Uncertainty in costs is major deterrent

Costs per acre	Low clean-up: $59,000	High clean up: $696,000
Low development: **$1.5 M**	4%	46%
High development: **$68 M**	1%	10%

2. SOCIO-ECONOMIC ANALYSIS

Feasibility Indicator:

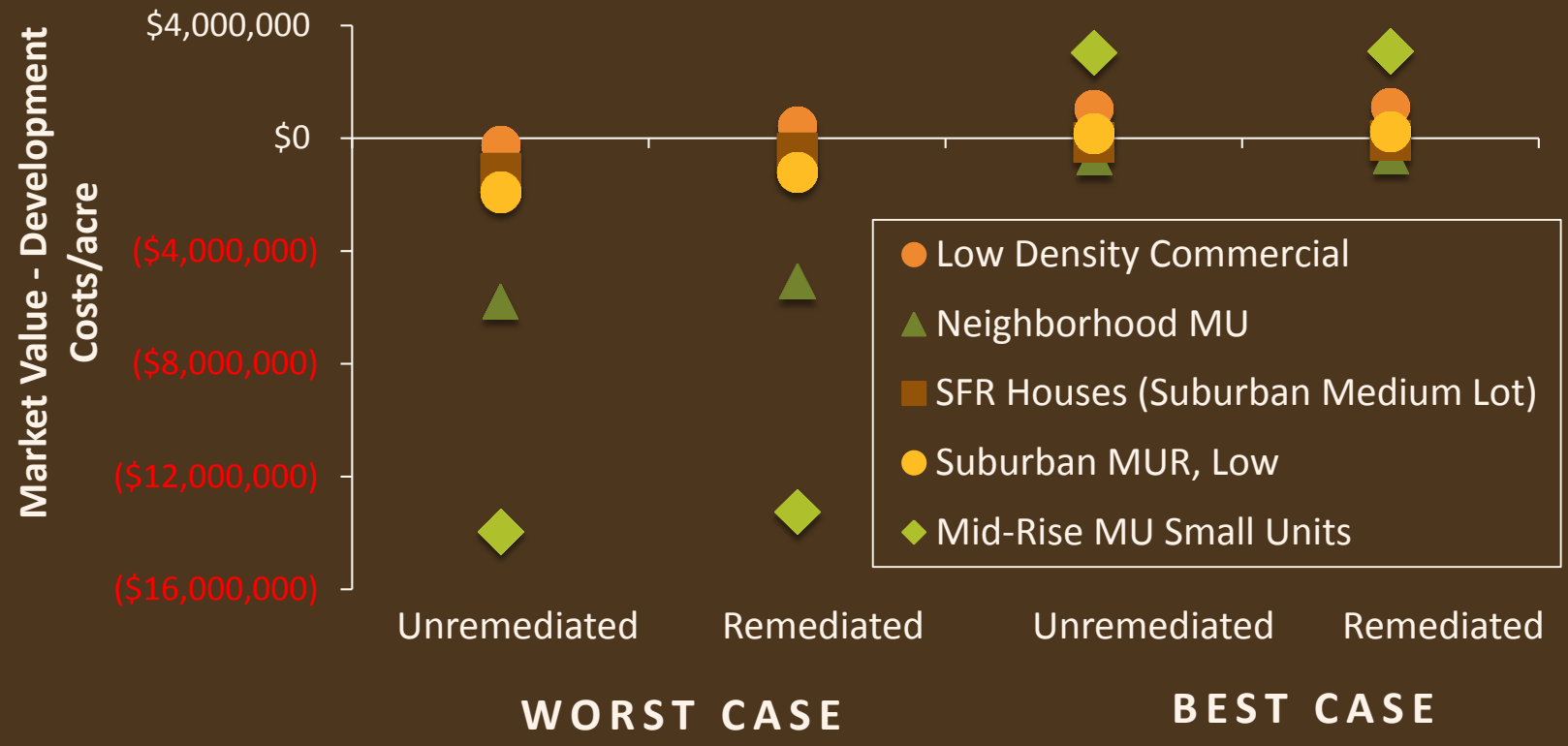


2. SOCIO-ECONOMIC ANALYSIS

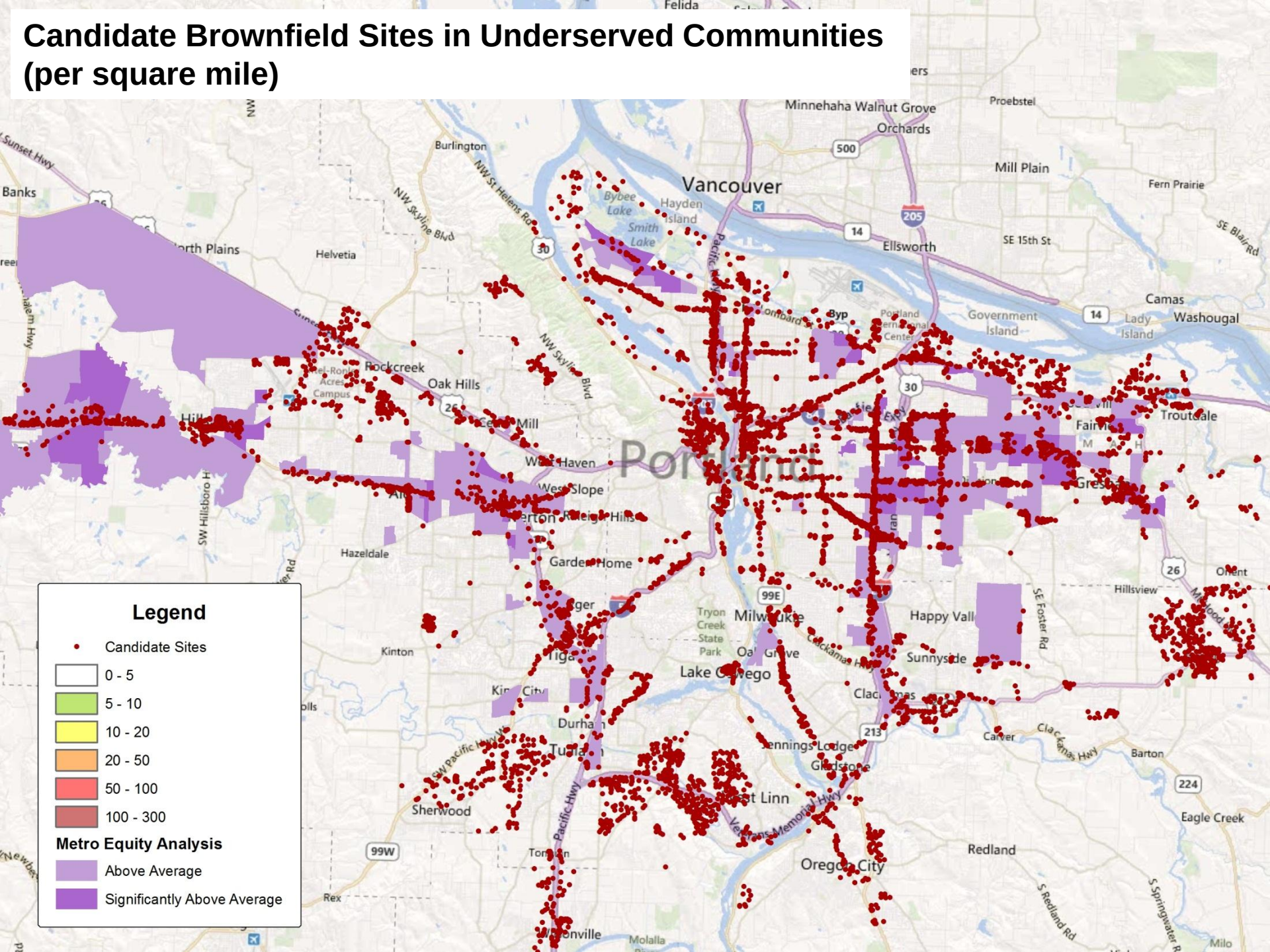
Fiscal and redevelopment indicators:

Preliminary net results across 3-county region

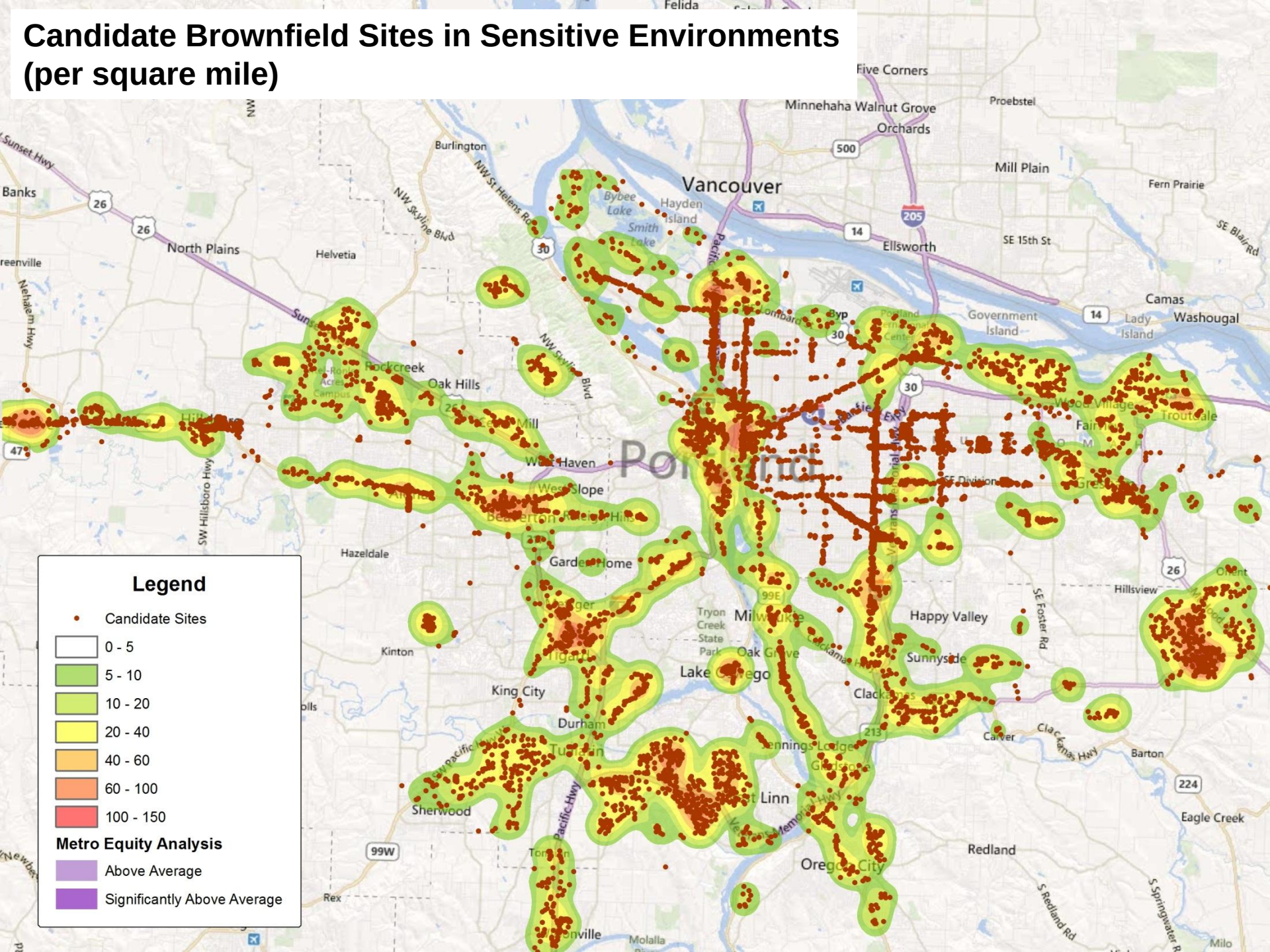
Market value less development costs, per acre, by prototype



Candidate Brownfield Sites in Underserved Communities (per square mile)



Candidate Brownfield Sites in Sensitive Environments (per square mile)



Key Findings

- Documented acreage = 80%
- Most urban industrial sites are documented, in contrast to rural industrial sites
- Considerable benefit from brownfield redevelopment
- Market matters more
- 3 x sites near underserved populations
- Nearly all sites in environmentally sensitive areas

Figure 2-3

METRO BROWNFIELD TYPOLOGIES

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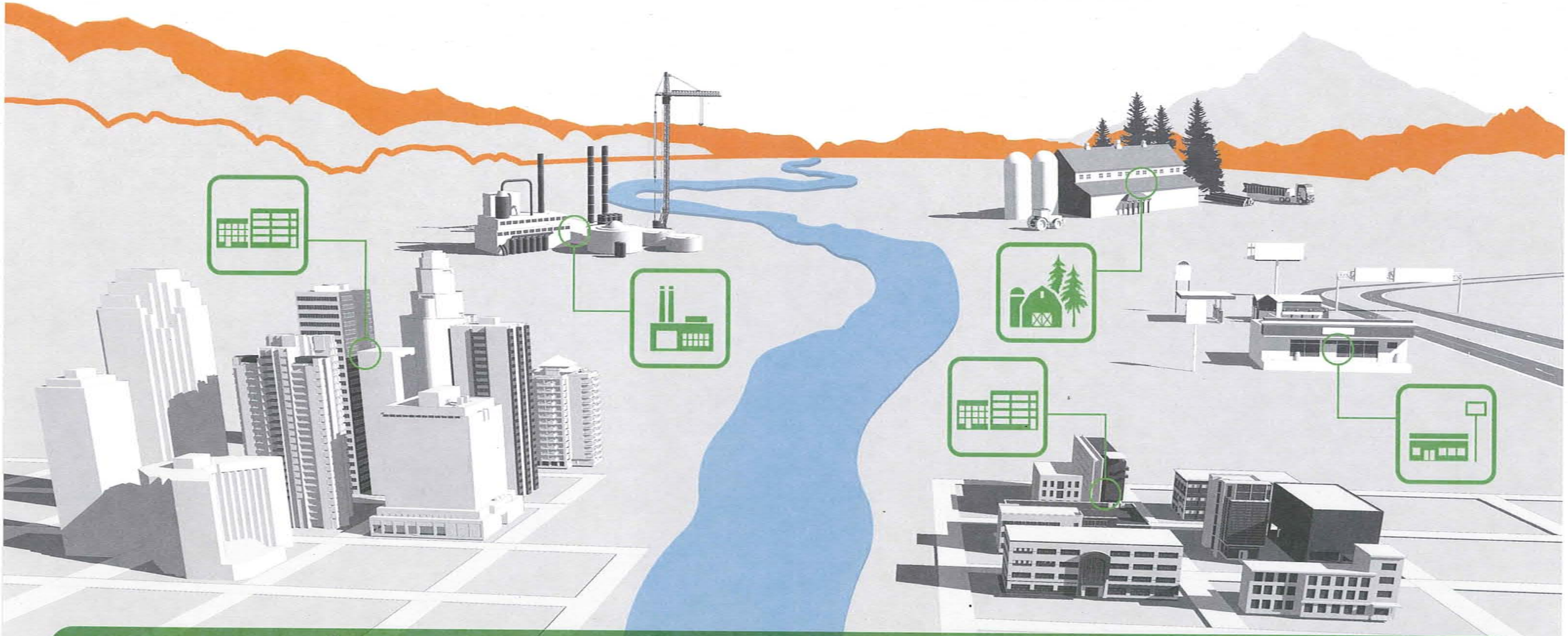

BROWNFIELD TYPOLOGIES	SMALL COMMERCIAL SITE	INDUSTRIAL CONVERSION	ONGOING INDUSTRIAL	RURAL INDUSTRY
Description	Small sites such as gas stations and dry cleaners	Range of historical industrial uses in areas that have transitioned to commercial centers	Industrial sites in designated employment areas	Natural resource related sites near the edge of urban areas
Metro 2040 Design Type	Cities, Town Centers & Corridors	City, Town & Neighborhood Centers	Employment Areas	Urban Fringe Areas
Typical Size	0-2 acres	1-20 acres	>5 acres	>10 acres
Potential Re-Use	Commercial, Multi-Family	Commercial, Mixed-Use	Industrial, Flex Space	Industrial, Agriculture

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Updated June 26, 2012