PREPARED WORKBOOK

Process for Risk Evaluation, Property Analysis and Reuse Decisions

FOR LOCAL GOVERNMENTS CONSIDERING THE REUSE OF CONTAMINATED PROPERTIES

EPA

Acknowledgements

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Table of Contents

Providing Comments on this Workbook i
A Guide to Using this Workbook ii
Disclaimers vi
Acronyms vii

1 Introduction 1
1.1 Purpose 1
1.2 Background 2
1.3 About Risk Management 2
1.4 About Property Redevelopment 3
1.5 Outline of the PREPARED Approach 4

2 Establishing Project Goals 6
2.1 Overview 6
2.2 Key Considerations 6
2.3 Other General Considerations Related to Goals 7
2.4 Specificity of the Project Goals 7
2.5 Revisiting the Project Goals 8
2.6 Preliminary Reuse Assessment 8

3 Property Recovery Actions 13
3.1 Types of Property Recovery Actions 13
3.1.1 Actions that Involve Taking Title to the Property 14
3.1.2 Actions that Do Not Involve Taking Title to the Property 16
3.2 Screening Property Recovery Actions Based on Project Goals 20

4 Conducting Due Diligence 23
4.1 Overview of the Due Diligence Process 23
4.2 Phase I Environmental Site Assessment 25
4.3 Phase II Environmental Site Assessment 27
4.4 Environmental Investigation and Cleanup Action 28
4.5 Determining Regulatory Status 29
4.6 Property Access 30
4.7 Key Questions to Consider When Conducting Due Diligence 31
4.7.1 All Appropriate Inquiries 31
4.7.2 Property History 33
4.7.3 Property Status 34
4.7.4 Property Appraisal 37

4.7.5 Regulatory Status 38
4.7.6 Environmental Conditions 41
4.7.7 Environmental Restrictions 45

5 Redevelopment Obstacles 52
5.1 General 52
5.2 Identifying Redevelopment Obstacles 52

6 Assessing Project Risk 57
6.1 General 57
6.2 Environmental Liability 60
6.3 Financial Risk 58
6.4 Community Issues 58

7 Potential Liability under Federal and State Cleanup Statutes 60
7.1 General 60
7.2 CERCLA 61
7.2.1 Overview of CERCLA 61
7.2.2 Liability under CERCLA 63
7.2.3 CERCLA Liability Defenses, Exemptions, and Policies 64
7.2.4 State Voluntary Cleanup Programs 72
7.2.5 Other CERCLA Considerations 72
7.3 RCRA 74
7.3.1 RCRA (Subtitle C) – Hazardous Waste 75
7.3.2 RCRA (Subtitle D) – Solid Waste Management 81
7.3.3 RCRA (Subtitle I) – Underground Storage Tanks 85
7.4 TSCA (Title I) – PCB and PCB-Containing Wastes and Equipment 89
7.5 Clean Air Act – NESHAP Requirements for Asbestos 93

8 Project Economics and Financial Analysis 96
8.1 General 96
8.2 Pro Forma 97
8.3 Using the Pro Forma Worksheet 99

9 Community Issues 102
9.1 General 102
9.2 Some Key Principles of Community Engagement 104
9.3 Meeting Community Needs through Sustainable Development 108

10 Managing Project Risk 111
10.1 General 111
10.2 Risk Management Tools and Approaches 112
10.2.1 Types of Tools and Approaches 112
10.2.2 Selected Risk Management Tools 117
10.2.2.1 Property Activities 117
10.2.2.1.1 Meeting with Federal and State Regulators 117
10.2.2.1.2 Due Diligence and All Appropriate Inquiries 117
10.2.2.1.3 Environmental Investigation 117
10.2.2.1.4 Cleanup Action Planning 118
10.2.2.1.5 Reasonable Worse Case Scenario Planning 118
10.2.2.1.6 Engaging Stakeholders 118
10.2.2.1.7 Financial Analysis 118
10.2.2.1.8 Timing Municipal Involvement 119
10.2.2.1.9 Interim Cleanup Action 119
10.2.2.1.10 Cleanup Action 120
10.2.2.1.11 Voluntary Corrective Action 121
10.2.2.1.12 Maintenance and Monitoring of Remedial Systems 121
10.2.2.1.13 Institutional Controls 122
10.2.2.1.14 Oversight of the Environmental Contractors 122
10.2.2.1.15 Following Accepted, Good Commercial Practices 122
10.2.2.2 Statutory/Regulatory Protections 123
10.2.2.2.1 Statutory Exemptions and Defenses 123
10.2.2.2.2 Prospective Purchaser Agreements 123
10.2.2.2.3 No Action/ No Further Action Letters and Comfort Letters 124
10.2.2.2.4 Other Determinations of Completion 126
10.2.2.3 Transactional Activities 126
10.2.2.3.1 Escrow Accounts 126
10.2.2.3.2 Purchase Price Adjustments 126
10.2.2.3.3 Grants 126
10.2.2.3.4 Tax Benefits and Credits 126
10.2.2.3.5 Private Investors 127
10.2.2.3.6 Specialized Loans 127
10.2.2.3.7 Redevelopment Authorities 127
10.2.2.3.8 Land Banks 128
10.2.2.3.9 Contractual Provisions 128
10.2.2.3.9.1 Indemnification 131
10.2.2.3.9.2 Representations and Warranties 131
10.2.2.3.9.3 “As is” Provisions 132
10.2.2.3.9.4 Environmental Covenants 132
10.2.2.3.9.5 Assumption, Retention, and Release Provisions 132
10.2.2.3.9.6 Schedule of Included or Excluded Liabilities 132
10.2.2.3.9.7 Post-Signing and Pre-Closing Conditions 133
10.2.2.3.9.8 Fixed Price or Performance-Based Contracts 131

10.2.2.4 Insurance 131
10.2.2.4.1 Comprehensive General Liability Insurance 131
10.2.2.4.2 Pollution Liability Insurance 131
10.2.2.4.3 Errors and Omissions Insurance 132
10.2.2.4.4 Cost Cap Insurance 132
10.2.2.4.5 Secured Lender Insurance 132
10.2.2.4.6 Finite Risk Insurance 132
10.2.2.4.7 Institutional Controls and Post Remedial Care Insurance 133
10.3 Cooperating vs. Non-Cooperating or Defunct Owners – Some Risk Management Considerations 133

11 Selecting a Property Recovery Action 137
11.1 General 137
11.2 Evaluating Redevelopment Obstacles 137
11.2.1.1 Worksheet #5: Identification and Prioritization of Redevelopment Obstacles associated with a Property Recovery Action 138
11.2.1.2 Worksheet #6: Identification of Potential Risks and Actions to Resolve Information Gaps 139
11.2.1.3 Worksheet #7: Identification of Risk Management Tools 139
11.3 Factoring in the Financial Analysis 139
11.4 Project Summary 139

Appendix A 145

***Pro Forma* Worksheet 145**

Appendix B 149

Example Sources-and-Uses Chart 149

Appendix C 151

Examples of Completed Worksheets #5, 6 &7 151

Appendix D 160

Assessing Regulatory Liability: Key Questions 160

Appendix E 190

Additional Resources 190

Providing Comments on this Workbook

This Workbook is designed primarily for municipalities, but tribes, county and state governments, and economic redevelopment entities may also find it useful. It was developed in conjunction with EPA contractors having considerable expertise with both private-sector and public-sector redevelopment projects involving contaminated properties.

EPA New England fully expects that in the course of utilizing this Workbook, municipal officials and other users will be able to offer suggestions for improving the document and worksheets. We welcome that feedback and have created a link at the following Web site where comments can be submitted anonymously: www.epa.gov/region1/brownfields/prepared.

A Guide to Using this Workbook

Who is this Workbook for?

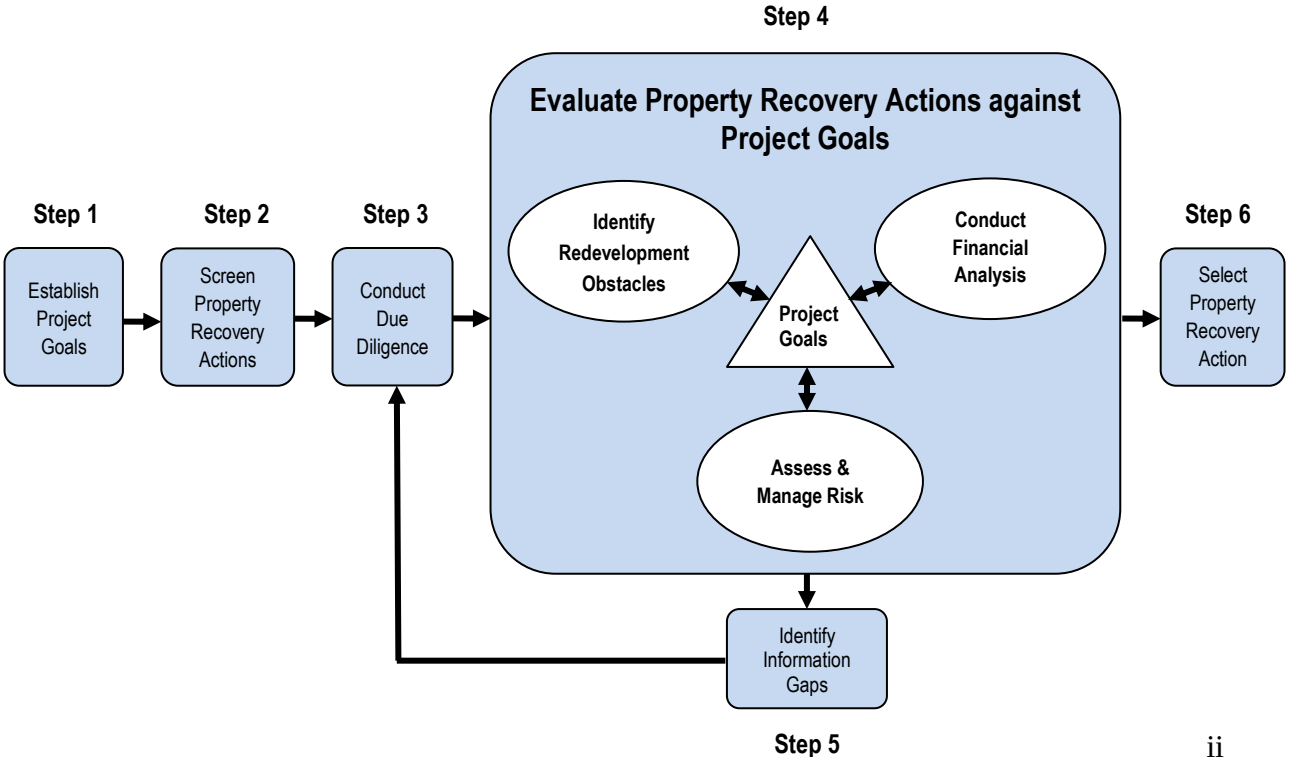
The target audience is municipal officials interested in facilitating the cleanup and redevelopment of contaminated properties. The information in this Workbook should also be useful to tribes, county and state governments, and quasi-governmental entities such as economic development corporations.

What is PREPARED?

Property acquisition is among the actions that local governments might take to bring about a desired reuse. This could involve retaining the property for some long-term public use, or assuming temporary ownership in order to clear title or otherwise prepare the property for transfer to private developers. Other non-acquisition options — such as leasing, transferring tax liens, or providing incentives — might also be used to facilitate redevelopment. Each of these actions, referred to in this Workbook as property recovery actions, carries its own set of risks and issues that must be considered. PREPARED (Process for Risk Evaluation, Property Analysis and Reuse Decisions) is a risk management based approach to help municipalities evaluate potential property recovery actions for specific properties. This evaluation process involves answering the following core questions:

- Will the selected property recovery action achieve the project goals?
- Is the project financially viable and realistic?
- Are the necessary resources available?
- Are the risks acceptable?

The PREPARED approach is outlined below:



How is this Workbook organized?

This Workbook is organized to mirror the PREPARED approach shown above. The following briefly describes each step and indicates where it is discussed in the Workbook. Worksheets are also provided to help document and guide the evaluation process. Blank worksheets are available for download at: www.epa.gov/region1/brownfields/prepared. Web links to additional sources of information are included throughout the Workbook.

Step 1: Establish Project Goals

See Chapter 2: Establishing Project Goals (pages 6-9)

Chapter 2 describes some key considerations in establishing project goals and discusses the purpose and preparation of a preliminary reuse assessment. A preliminary reuse assessment is an analysis of a property's reuse potential that is based on key findings from available studies and other information sources.

- **Worksheet #1: Establishing Project Goals** (page 10)
  This worksheet can be used to help establish reasonable and achievable project goals.

- **Worksheet #2: Reuse Assessment** (page 11)
  This worksheet can be used to summarize key information regarding the reuse potential of a property.

Step 2: Screen Property Recovery Actions

See Chapter 3: Property Recovery Actions (pages 13-20)

Chapter 3 describes some commonly available property recovery actions and discusses the pre-screening of those actions.

- **Worksheet #3: Preliminary Screening of Property Recovery Actions** (page 21)
  This worksheet can be used to document the basis for retaining a property recovery action for further consideration or eliminating it.

Step 3: Conduct Due Diligence

See Chapter 4: Conducting Due Diligence (pages 23-47)

Chapter 4 describes the due diligence process and discusses some key questions to consider relating to the environmental conditions.

- **Worksheet #4: Due Diligence** (page 48)
  This worksheet can be used to summarize key information collected during the due diligence process.

Step 4: Evaluate Property Recovery Actions Against the Project Goals

See Chapters 5-10 and Appendix D (pages noted below)

Step 4 is an iterative process that consists of **identifying potential redevelopment obstacles** (Chapter 5), **assessing potential project risks** (Chapters 6, 7, 8, 9, and Appendix D), and **evaluating potential risk management tools and approaches** (Chapter 10).

Chapter 5: Redevelopment Obstacles (pages 52-54) discusses the identification of potential redevelopment obstacles using the information gathered from the due diligence process.

- **Worksheet #5: Identification and Prioritization of Redevelopment Obstacles Associated with a Property Recovery Action** (page 55)
  This worksheet can be used to identify, prioritize, and summarize the redevelopment obstacles for a given property recovery action.

Chapter 6: Assessing Project Risk (pages 57-59) briefly describes the three sources of project risks considered in this Workbook: environmental liability, financial risk, and community issues.

Chapter 7: Potential Liability under Federal and State Cleanup Statutes (pages 60-95) describes and discusses some key environmental statutes that are commonly associated with the cleanup of contaminated properties and provisions for avoiding or limiting potential liability:

- Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), commonly known as "Superfund" (pages 61-73)
- Resource Conservation and Recovery Act (RCRA) — covers hazardous waste, solid waste, and underground storage tanks (pages 74-88)
- Toxic Substance Control Act (TSCA) — Provisions relating to PCBs (pages 89-92)
- Clean Air Act (CAA) — Provisions relating to asbestos (pages 93-95).

Appendix D (pages 161-189) responds to some specific questions a municipality may have regarding potential liability under each of these federal statutes.

Chapter 8: Project Economics and Financial Analysis (pages 96-101) briefly discusses potential project costs, revenues and other financial considerations. A *pro forma* worksheet (Appendix A) is also provided that can be used as a rough estimating tool by municipalities to assess the financial viability of various redevelopment concepts.

Chapter 9: Community Issues (pages 102-110) discusses the link between local community issues and project risk, and outlines important principles for conducting community engagement. It also describes area-wide planning and sustainable development practices.

Chapter 10: Managing Project Risk (pages 111-136) explains basic risk management principles and describes some potential risk management tools and approaches.

Step 5: Identify Information Gaps

This step recognizes the iterative nature of the information gathering and property recovery action evaluation processes. As the evaluation process in Step 4 proceeds, information gaps are identified, prioritized, and, where appropriate, resolved through additional information gathering. The existence of information gaps will also be a critical consideration in the selection of property recovery actions that takes place in Step 6.

Step 6: Select a Property Recovery Action

See Chapter 11: Selecting a Property Recovery Action (pages 137-140)

Chapter 11 further explains the process for evaluating and selecting property recovery actions utilizing the information obtained through Steps 1 – 5. Worksheets #6 and #7 are provided to help guide and document the evaluation process.

- **Worksheet #6: Identification of Potential Risks and Actions to Resolve Information Gaps** (page 141)
  This worksheet is used to identify potential risks associated with each redevelopment obstacle and identify actions that might be needed to resolve information gaps in order to better understand or minimize these potential risks.

- **Worksheet #7: Identification of Risk Management Tools** (page. 143)
  Worksheet #7 is used after a decision is made that further information gathering efforts to resolve information gaps or better define risks are not necessary, practical, or justified. The worksheet is used to document the remaining risks and identify any risk management tools and approaches that could be utilized to address them.

Disclaimers

General Disclaimer: This document describes a general approach that can be used to evaluate information and guide decisions regarding potential options for facilitating reuse of properties. It does not address all information, factors, or considerations that may be relevant. The word "should" and other similar terms used in this document are intended as general recommendations or suggestions that might be generally applicable or appropriate and should not be taken as providing legal, technical, financial, or other advice regarding a specific situation or set of circumstances. EPA does not offer any guarantees or warranties for or relating to the acquisition of or other involvement in a contaminated or formerly contaminated property.

This document may be revised at any time without public notice.

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Acronyms

AAI	All Appropriate Inquiries
BFPP	Bona Fide Prospective Purchaser
CAA	Clean Air Act
C& D	Construction & Demolition
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CFR	Code of Federal Regulations
CWA	Clean Water Act
DBEDC	Dorchester Bay Economic Development Corporation
DSI	Dudley Street Initiative
ECHO	Enforcement and Compliance History Online
EPA	United States Environmental Protection Agency
ESA	Environmental Site Assessment
ICs	Institutional Controls
LEED	Leadership in Energy and Environmental Design
LUST	Leaking Underground Storage Tank
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MSWLF	Municipal Solid Waste Landfill
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NEPA	National Environmental Policy Act
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NPL	National Priorities List
NHPA	National Historic Preservation Act
PCBs	Polychlorinated Biphenyl
PREPARED	Process for Risk Evaluation, Property Analysis and Reuse Decisions
PRP	Potentially Responsible Party
RACM	Regulated Asbestos-Containing Materials
RAP	Remedial Action Plan
RCRA	Resource Conservation and Recovery Act
SHPO/THPO	State/Tribal Historic Preservation Officer
TAB	Technical Assistance to Brownfields
TAGs	Technical Assistance Grants
TIF	Tax Increment Financing
TSCA	Toxic Substance Control Act
TSD	Treatment, Storage or Disposal
UST	Underground Storage Tanks

1 Introduction

1.1 Purpose

This workbook is designed to provide information that should be useful to local governments interested in facilitating the cleanup and revitalization of contaminated properties not currently owned by the local governmental entity. Although local governments are the primary audience, the information in this document should also be useful to tribes, county and state governments, and quasi-governmental development entities. Throughout the document the terms local government and municipality are used interchangeably.

This workbook:

(1) Describes a ***Process for Risk Evaluation, Property Analysis and Reuse Decisions*** (PREPARED) – a potential risk management framework for evaluating various actions that municipalities might take to bring about the cleanup and redevelopment of contaminated properties.

(2) Discusses some key questions and other factors that should generally be considered in implementing PREPARED.

(3) Summarizes some relevant background information and provides references to other sources of information.

(4) Provides worksheets that can help guide and document the process for a specific project.

The focus of this workbook is on properties that are difficult to redevelop due to concerns regarding the environmental conditions. These properties sometimes require that the municipality involve itself in some manner so as to bring about a desired reuse. The potential actions generally available to municipalities are referred to in this workbook as **property recovery actions**. Property recovery actions may include acquisition approaches and non-acquisition approaches (e.g., transferring tax liens). The property recovery actions discussed throughout this workbook are described in Chapter 3.

Usage of the Term "Contaminated Property"

This workbook uses the term "contaminated property" to refer to properties where contamination is suspected, is known to exist, or where cleanup is complete but residual contamination remains as part of the cleanup strategy (e.g., long-term management of contamination within a protective cover system or "cap").

The risk management framework that is outlined in this workbook provides a general process for evaluating property recovery actions. This framework was developed in conjunction with EPA contractors having expertise in both private-sector and public-sector redevelopment projects involving contaminated properties. It represents one potential methodology that might be used. Municipal officials utilizing this framework should apply their own judgment in deciding if it is appropriate for their specific needs and purposes. Further, while much of the emphasis in this workbook will be on issues stemming from a property's environmental conditions, there are other factors commonly associated with real estate development projects that will also need to be taken

into account. Please refer to page vi for other important limitations and disclaimers that apply to the use of this workbook.

1.2 Background

In an effort to ensure community vitality, a strong tax base, and the health and safety of its citizens, municipalities often face the prospect of acquiring contaminated properties or taking other actions to facilitate reuse. In cases where contamination complicates the reuse of a property, local governments can play a pivotal role in transforming these properties from liabilities to community assets. This often becomes more important when economic slowdowns put downward pressure on real estate markets. In many communities across the country, contaminated properties representing every stage in the cleanup process are being successfully reused as the result of municipal involvement. This includes Superfund sites and other properties with serious environmental issues.

Key Companion Documents

This workbook will frequently refer the reader to two EPA documents for expanded discussion of certain topics:

- ***Revitalizing Contaminated Sites: Assessing Liability Concerns*** *(April 2011) ("Revitalization Handbook")* www.epa.gov/compliance/resources/publications/cleanup/brownfields/handbook/index.html
- ***State Brownfields and Voluntary Response Programs: An Update from the States*** *(November 2009) ("State Program Summary")* www.epa.gov/brownfields/state_tribal/pubs.htm

Despite a more supportive regulatory climate and a greater willingness by the financial and development communities to work with contaminated properties, many municipal officials report that they are not comfortable dealing with potential legal liability and other complications associated with a property's environmental conditions. This is particularly true of smaller cities and towns that often operate with limited in-house staff and budgets. Outside legal counsel and specialized consultants can provide essential expertise, but generally serve only in an advisory capacity. Ultimately, the burden of deciding on a course of action usually rests with municipal officials.

This workbook will not make anyone an expert or avoid the need to obtain competent legal, financial, or technical advice. Having a better understanding of the key questions to ask will, however, help municipal officials identify where expert assistance might be needed, improve communication with those experts, and provide a solid foundation for making decisions.

This workbook will not make anyone an expert or avoid the need to obtain competent legal, financial, or technical advice. Having a better understanding of the key questions to ask will, however, help municipal officials identify where expert assistance might be needed, improve communication with those experts, and provide a solid foundation for making decisions.

1.3 About Risk Management

A decision-making process generally involves an evaluation of risk. A basic premise of this workbook is that project risks involving contaminated properties, like most risks, cannot be entirely eliminated — only managed. Managing risks requires a fundamental understanding of the risks that may exist, the likelihood of those risks occurring, and the

potential consequences if those risks are realized. It also involves prioritizing those risks and taking steps to contain the most significant risks within "acceptable" limits. What is deemed acceptable will depend on a number of factors, such as a municipality's basic goals for the contaminated property and its general sensitivity to risk. This is a determination that must be made by municipal officials based on the needs of the local community.

The discussion of risk in this workbook includes financial risk, civil/environmental liability, and community issues. Generally, these risk categories are interrelated and should be considered together in evaluating a property recovery action. Risk management is typically conducted in an iterative, staged manner. Once risks are identified, potential ways to manage these risks are considered and the risks are reassessed. Risk management for contaminated properties can involve traditional tools such as insurance products and indemnification agreements, or other approaches that might include additional data gathering, delaying acquisition until further cleanup is completed, or using a different method of property acquisition.

1.4 About Property Redevelopment

Redevelopment projects can vary greatly in their complexity and scope; however, the commercial redevelopment process can generally be simplified into four general components:

- **Predevelopment** – Predevelopment activities could involve, for example, identifying and assessing potential reuses, conducting due diligence, obtaining access to the property to conduct environmental studies and other assessments of the property, and identifying potential costs and sources of funding.
- **Securing the Deal** – The deal is secured after the predevelopment activities have yielded a decision to purchase or take control of the property and continue with the project. This typically includes contract negotiations, obtaining financing, establishing cleanup action plans, and acquiring the property.
- **Property Preparation and Development** – This occurs after the planning processes have been completed and approvals are obtained. It may include obtaining construction and environmental approvals; coordinating cleanup and construction activities; securing tenants; and completing the redevelopment signified by the property's sale or lease.
- **Property Management** – This involves a number of tasks involving the long-term management of the property and usually continues after redevelopment activities have been completed. These tasks may include managing the financial aspects, commercial operations, tenant issues, community relations, and any long-term environmental issues, such as operation and maintenance of any cleanup systems and components associated with the property.

Early in the process of evaluating whether to proceed with plans for the redevelopment of a property, a developer will typically attempt to weed out a project with poor or marginal investment potential and identify "deal breakers" that could eliminate the project from further consideration if not addressed. These deal breakers often result from significant data gaps and uncertainties that introduce unacceptable risk into the project. The developer then goes through the process of determining whether the project justifies

spending the additional resources to resolve these risks and to further refine the evaluation. Oftentimes, the answer will be "no," which can be an acceptable outcome. A successful evaluation process is one that leads to a sound decision even if that means that the project is ultimately abandoned.

A similar approach is applied to the evaluation of potential property recovery actions. There are, however, some fundamental differences in how private developers and municipalities might conduct this evaluation process. For example, municipalities may have a variety of property recovery actions available (see Chapter 3), while developers are most often focused on property acquisition scenarios. As a result, municipalities may need to perform a comparative analysis of the costs, risks, and benefits of multiple property recovery actions. Also, unlike private development projects that can be evaluated based on clear, quantifiable metrics (e.g., the return on investment), a municipality's project goals may also be based on more subjective considerations — such as public safety or the need to make the surrounding area more "livable."

A successful evaluation process is one that leads to a sound decision even if that means that the project is ultimately abandoned.

1.5 Outline of the PREPARED Approach

For most municipalities, the decision of whether or not to employ a property recovery action will to a significant degree be based on answers to the following core questions:

- Will the selected property recovery action(s) achieve the project goals?
- Is the project financially viable and realistic?
- Are the necessary resources available?
- Are the risks acceptable?

The overall process described in this workbook for addressing these questions and evaluating property recovery actions is depicted in Figure 1.1.

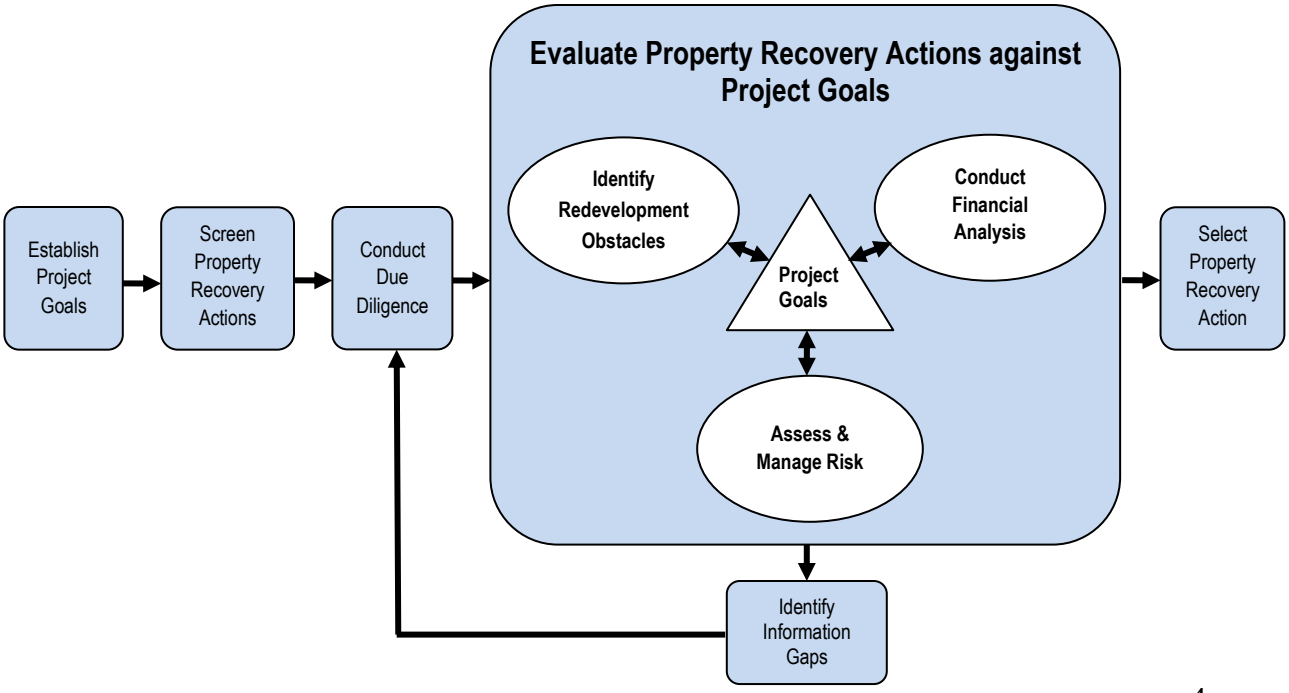

Figure 1.1 – Schematic of PREPARED

Following is a brief summary of these steps:

1) **Establish realistic and achievable project goals** and key parameters for the project (e.g., budgetary constraints, timeframes). This may include conducting a "preliminary reuse assessment" to assess whether the property attributes and underlying economic conditions generally support those goals (see Chapter 2).
2) **Screen-out property recovery actions** that are not likely to achieve the project goals (see Chapter 3).
3) **Conduct due diligence** to obtain relevant property-specific information regarding environmental conditions, regulatory status, condition of buildings and structures, title status, and other key considerations and to qualify for certain liability protections under the federal Superfund statute (see Chapter 4).
4) **Evaluate property recovery actions** through an iterative approach comprised of the following components:
    a. Identify potential redevelopment obstacles (see Chapter 5).
    b. Assess project risks (see Chapters 6, 7, 8, 9 and Appendix D).
    c. Assess the project's financial viability and other financial considerations (see Chapter 8).
    d. Identify risk management tools and approaches (see Chapter 10).
5) **Identify information gaps** to focus and prioritize additional information gathering efforts.
6) **Select a property recovery action** (see Chapter 11) based on the municipality's sensitivity to the potential risks identified through the evaluation process and on other relevant factors.

In addition, worksheets are provided to help the municipality apply the concepts discussed in this workbook to a specific project (see Chapters 2, 3, 4, 5 and 11), estimate cash flow (see Appendix B), and evaluate sources and uses of funds (see Appendix C). Additional discussion of regulatory liability issues (see Appendix D), other sources of information (see Appendix E), and useful EPA contacts (see Appendix F) are also provided.

2 Establishing Project Goals

2.1 Overview

Having a clear understanding of project goals is essential. The goals will directly impact all aspects of the project strategy, including which property recovery actions and risk management tools and approaches are most appropriate. Spending the time initially to carefully frame the goals will also focus the evaluation process and help ensure that resources are used effectively and efficiently (e.g., by identifying critical information needs). The goal-setting process should not be a perfunctory, hastily-considered step.

This Chapter:

- Describes some key considerations in establishing project goals
- Discusses the purpose and preparation of a preliminary reuse assessment

Worksheet #1 is provided to help municipalities in establishing project specific goals. Worksheet #2 can assist in developing and documenting a **preliminary reuse assessment**, which is a document that is often prepared to summarize key issues relating to the future use of a contaminated property. These worksheets are located at the end of this chapter (available for download at www.epa.gov/region1/brownfields/prepared).

2.2 Key Considerations

At a minimum, project goals should include consideration of the following questions:

- What is the desired outcome of the redevelopment?
- How important is the redevelopment?
- How time critical is the redevelopment?

Taken together, these questions will help establish the basic parameters for the project.

What is the desired outcome of the redevelopment?

This question helps clarify the reasons for the municipality taking action and ensures that the stakeholders are operating with a common understanding of the expected endpoint. Vetting the desired outcomes through a local property reuse planning exercise or some other public process is often very beneficial (See discussion of reuse planning in Section 2.6).

Some examples of desired outcomes include:

- Obtaining use of a property for some permanent or longer-term public purpose (e.g., to build or expand public buildings, to create recreation areas)
- Securing access and control for demolishing unsafe or unsightly buildings, improving public infrastructure (e.g., road expansions) or making other improvements
- Facilitating beneficial reuse by a third party

- Influencing the timing and nature of the cleanup and property reuse
- Addressing a threat to public health and the environment

How important is the redevelopment?

The importance of a project will greatly influence the willingness of the municipality to assume project risks and expend resources in order to meet the project goals. For some projects, the municipality may decide that redevelopment is desirable, but not necessary. In others, the project may be a high priority and it becomes more a question of how best to make it happen. Projects that are competing with other local redevelopment projects for resources may also require that the relative priority of these projects be determined.

How time critical is the redevelopment?

The project's urgency should be established at an early stage. Is funding available now that may not be later? Is there a redevelopment opportunity that may be lost if the municipality does not move forward immediately? Is it necessary to control or influence an ongoing cleanup process to ensure that specific health and safety considerations are incorporated?

Other factors impacting the urgency are: What are the risks of not moving forward? Will neighbors be at risk for potential exposure to contaminants? Is there a fire or other health and safety risk? Will the neighborhood continue to decline without municipal involvement?

Considering questions such as these will help ensure that the proper priority is placed on the project and begin to define the timeframes for making decisions.

2.3 Other General Considerations Related to Goals

- Be prescriptive when constraints are real and known (e.g., a budgetary cap on funding).
- Even though not all goals and project expectations can be quantified, include a general statement of intent to keep these criteria up front and help guide the evaluation process.
- Identify pre-existing biases that could rule out certain property recovery actions prematurely. Allow the evaluation process to play out in order to have a solid basis for choosing and eliminating property recovery actions.
- Identify "deal breaker" issues that can indicate the need for more focused evaluation or a reconsideration of project goals.

2.4 Specificity of the Project Goals

Determining the appropriate level of specificity should be part of the goal-setting process. Generally, greater specificity allows for a more directed evaluation process. This may also make it easier for a municipality to get a handle on the potential benefits that could be derived from the project and therefore how much cost or risk it may be willing to incur. Some project goals, however, may be easier to define at the outset than others. For example, in some cases the municipality may have a very specific use and property in mind. In others, there may be a general desire to move a property or multiple properties

toward redevelopment, but the type of redevelopment has not yet been determined. In this situation placing early focus on conducting a preliminary reuse assessment (see section 2.6) may help to narrow down the range of potential reuse options.

2.5 Revisiting the Project Goals

It may become apparent that none of the property recovery actions being considered will satisfactorily meet the project goals, or that the costs and risks are unacceptable. In these situations, it may be worthwhile to revisit project goals to consider whether they can be revised to achieve some other beneficial outcome. For example, if the original goal was to acquire a property as the site of a public building — which the evaluation process proved to be impractical — perhaps locating a recreational area there or facilitating private development could be achievable. The goal-setting process should be fluid enough to allow for reconsideration or refinement based on new information or a better understanding of the property's constraints and possibilities.

2.6 Preliminary Reuse Assessment

A preliminary reuse assessment is an analysis of a property's reuse potential that summarizes key findings from available studies and other information sources. Factoring in this information will help ensure a realistic view of the property and create a better opportunity for achieving a successful redevelopment. Depending on the in-house capability of the municipality, outside expertise may be needed to conduct or interpret the studies. The preliminary reuse assessment can also identify information gaps, which can help inform the due diligence process. Further, it can be important in establishing what is likely to be the highest and best use of the property from both the developers' and the municipality's perspectives and in determining its market value. A preliminary reuse assessment can be prepared at any time in the planning process and updated as new information becomes available. Worksheet #2 can be used to document the results of the preliminary reuse assessment. Potential information sources include:

- **Opportunities and Constraints Analysis**

  This involves an evaluation of the property attributes that positively and negatively impact potential redevelopment. These attributes may include infrastructure, buildings on the property, environmental conditions, zoning, easements or restrictions, traffic, and so forth. The buildings and infrastructure analysis may sometimes need to consider opportunities to reuse these structures in ways that were not originally intended.

- **Environmental Conditions Impact Analysis**

  In an environmental conditions impact analysis, the environmental planner considers how the environmental conditions (including natural features such as wetland areas) could impact or be impacted by redevelopment. The goal is to create synergy by integrating the redevelopment and cleanup to optimize the use of the property and to minimize costs and unacceptable project risks.

- **Market Analysis and Feasibility Study**

  A market analysis is generally needed to evaluate the economic viability of potential redevelopment options. This will also help the municipality determine if the current zoning has become outdated for the market.

- **Community Needs Assessment**

  Idle or underutilized properties may provide an opportunity to improve the neighborhood through uses that reflect neighborhood concerns and needs. Community needs assessments help identify property uses that can best serve the broader social and economic interests of the surrounding community. In addition, uses not identified in the market analysis often become apparent through dialogue with the community.

- **Preliminary Financial Analysis**

  A preliminary financial analysis of potential property uses can help assess the financial viability of various reuse scenarios. Chapter 8 describes a screening tool for developing a "back of the envelope" estimate that can be used for this purpose.

- **Reuse Planning**

  Reuse planning is a process that utilizes the types of information described above to build a realistic vision for the property. The process typically looks at a range of desired redevelopment scenarios. A public planning process that provides for meaningful community engagement will help identify potential community issues and build public support for the proposed project. See Chapter 9 for a discussion of the role and potential benefits of community engagement.

  Consistent with existing guidance, EPA considers the reasonably anticipated future land use of a site throughout the Superfund remedy selection process to help ensure that the final cleanup is protective of human health and the environment. EPA guidance also recommends that, where practical and appropriate, a Superfund cleanup should avoid unnecessary obstacles to reuse. See, for example, EPA's Memorandum, *Considering Reasonably Anticipated Future Land Use and Reducing Barriers to Reuse at EPA-lead Superfund Remedial Sites (March 17, 2010)* available at: www.epa.gov/superfund/programs/recycle/pdf/reusedirective.pdf.

  Additional EPA resources are available under the federal Superfund program to help identify the reasonably anticipated future land use of a site, and under the Brownfields Program to support community-based planning for assessment, cleanup, and subsequent reuse. See EPA's Superfund Redevelopment Initiative www.epa.gov/superfund/programs/recycle and Brownfields Program www.epa.gov/brownfields.

Worksheet #1: Establishing Project Goals

Project Name/Identifier

General Property Description

Number of Parcels:

Tax Map Parcel Number(s):

Address(es):

Parcel Size (Acres):

Current Zoning:

Existing Structures on Parcels (Please list):

Current Appraised Value:

Brief Description of Past Use (e.g., service station, manufacturing facility)**:**

Other:

Project Parameters (*See Sections 2.2, 2.3 and 2.4*)

- What is the desired outcome of the redevelopment?
- How important is the redevelopment?
- How time critical is the redevelopment?
- Describe any known budgetary or other constraints.
- Is this property linked to or part of a larger redevelopment effort? [Y/N/Unknown]. If so, how does that affect the property-specific goals (e.g., timing, budget, necessity, general coordination)?
- Would the future uses be restricted to current zoning? [Y/N/Unknown]. Describe.
- Describe any other relevant factors?

Project Goals

- State the project goals.

Worksheet #2: Reuse Assessment

- What are the potential reuses being considered for the property?

- Are these uses consistent with the existing municipal master plan, zoning, and other planning documents? [Y/N/Unknown]. Describe.

- What is the level of support for these uses from municipal officials? The community? Other key stakeholders?

- Has a community needs assessment been conducted? [Y/N/Unknown]. If yes, summarize key findings.

  Does it support the intended uses? [Y/N/Unknown]. Describe.

- Has an opportunities and constraints analysis been conducted? [Y/N/Unknown]. If yes, summarize key findings.

  Does it support the intended uses? [Y/N/Unknown]. Describe.

- Has a marketing study been conducted? [Y/N/Unknown]. If yes, summarize key findings.

  Does it support the intended uses? [Y/N/Unknown]. Describe.

- Have any other relevant studies been conducted regarding the reuse of the property? [Y/N/Unknown]. If yes, summarize key findings.

- Has an evaluation of the property's suitability for the intended use been done? [Y/N/Unknown]. If yes, summarize key findings, including physical features of the property that would limit or support future uses (e.g., parcel size, topography, road access).

- Has a preliminary financial feasibility analysis of intended future reuses been performed to determine whether those uses are realistic? [Y/N/Unknown]. If yes, summarize key findings.

- Are there interested buyers/developers for the property? [Y/N/Unknown]. Describe.

  If so, what partnering role might they play in assessing, cleaning up or redeveloping the property?

- Are there infrastructure issues that need to be addressed (e.g., access roads, utilities)? [Y/N/Unknown]. Describe.

- Are there other known or anticipated complicating factors or other considerations relating to the redevelopment? [Y/N/Unknown]. Describe.

- Are there significant data gaps that should be prioritized as part of future information gathering efforts? [Y/N/Unknown]. Describe.

- Is there any other relevant information that should be considered? [Y/N/Unknown]. Describe.

3 Property Recovery Actions

3.1 Types of Property Recovery Actions

There are a variety of property recovery actions available to municipalities that can be used to facilitate the redevelopment of contaminated properties. These typically fall into two general categories: acquisition approaches, in which the municipality takes title to the property for some period of time, and non-acquisition approaches. Each action carries its own set of issues that must be understood in order to develop a strategy for managing project risks and, ultimately, achieving a successful project. Some of the more common property recovery actions include:

This Chapter:

- Describes types of property recovery actions
- Discusses the pre-screening of property recovery actions

- Acquisition and long-term ownership
- Acquisition and interim ownership with subsequent transfer to a third party
- Leasing by the municipality
- Acquisition and "simultaneous" transfer to a third party
- Collaboration with the current property owner
- Transfer tax liens
- Incentives to promote redevelopment

In a generalized way, these property recovery actions are organized in descending order of municipal control over the property. Often, this control comes with an increased potential for incurring project risk. This "control vs. risk" relationship is illustrated by Figure 3.1.

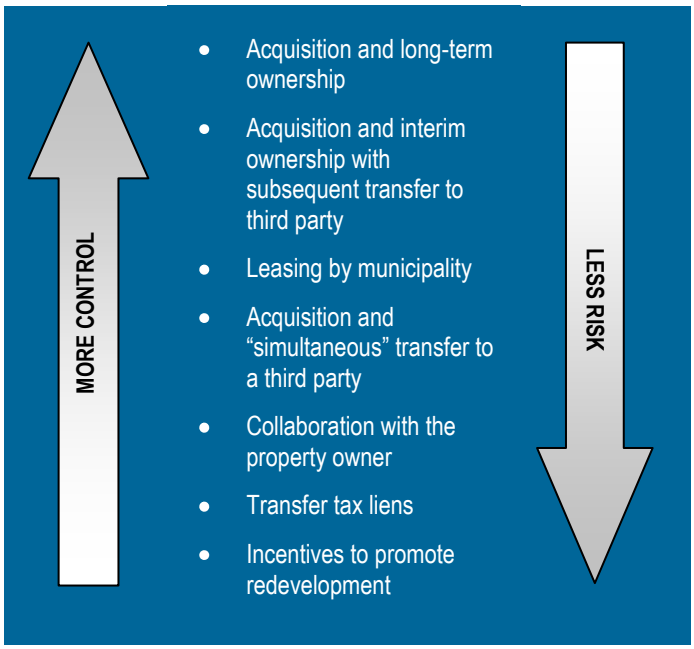

Figure 3.1 – Control vs. Risk Relationship

While the examples identified above do not represent the full spectrum of actions available to a municipality, these actions and the issues they raise are broadly representative of most real-world situations.

Worksheet #3, provided at the end of this chapter, may help municipalities identify potential property recovery actions that may warrant further evaluation (available for download at

www.epa.gov/region1/brownfields/prepared). To establish the proper baseline for evaluating these property recovery actions, municipalities should compare them to a "no action" option in which the municipality does not directly intervene to facilitate redevelopment.

When considering the acquisition of a property, the method of acquisition (e.g., tax foreclosure, escheat, eminent domain, purchase, inheritance, abandonment, donation) may be important. For example, as discussed in Section 7.2.3, this could affect the applicability of certain liability protections under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

3.1.1 Actions that Involve Taking Title to the Property

Acquisition and long-term ownership

Taking title provides control over the property to the title holder. Municipalities often take and retain title to an underutilized property if there is a public reuse planned, such as a park or municipal facility. Ownership may also allow the municipality to have a greater role in the cleanup and reuse of the property. Also, by controlling the land uses, municipalities can better ensure that land use restrictions are being met and cleanup components (e.g., ground water monitoring wells, landfill caps) are properly maintained and not compromised.

While different responsibilities may apply depending on the state and federal laws that are implicated, in general, the specific responsibilities of taking title to a contaminated property may include:

- Responsibility for carrying out the cleanup action on the property
- Responsibility for cleanup action beyond the property boundaries
- Responsibility for responding to third party suits related to the contamination on the property or emanating from the property (unless otherwise protected from these suits through, for example, a settlement agreement with EPA and/or the state)

Other parties, including former owners and operators of the property, may also be responsible for a property's environmental issues.

Acquisition and interim ownership with subsequent transfer to a third party

Acquisition by the municipality followed by a transfer to a third party is a way to involve private developers in the redevelopment process while shielding them from some of the uncertainties and difficulties of property acquisition. Some municipalities have redevelopment authorities or land banks that will take title to properties and hold them while parcels are assembled and redevelopment proposals are evaluated. Typically, the properties are then leased, sold, or transferred to a developer who will implement an agreed upon redevelopment plan. An advantage to the municipality is that the private entity performs the redevelopment and, in many cases, the cleanup action as well. A disadvantage to the municipality is that it may have limited control over the cleanup and the future use of the property.

Case Study: Skirvin Hotel
Municipal Acquisition and Interim Ownership with Subsequent Transfer to a Third Party

Skirvin Hilton Hotel

The Skirvin Hotel in the heart of downtown Oklahoma City was built in 1910 by oilman W.B.Skirvin. The hotel's magnificent architecture and luxurious accommodations made it a landmark that drew numerous dignitaries and celebrities, and greatly enhanced the economic and cultural vitality of the area. The property was later listed on the National Register of Historic Places.

Falling victim to a declining economy brought on in large part by a regional oil bust, the hotel eventually closed in 1988. In the years that followed, the structure lay abandoned and suffered serious deterioration. By 2000, a variety of factors combined to spur renewed interest in restoring the hotel to its former splendor. There were, however, a number of serious issues that would first need to be addressed, including the presence of asbestos, lead paint and other environmental problems. To facilitate the rebirth of the Skirvin Hotel, the City took the unusual step of acquiring the hotel in 2002. Importantly, this provided the City with access to the property and allowed it to conduct the environmental cleanup and other actions needed to prepare the property for redevelopment. The cost for the asbestos abatement and other environmental cleanup activities totaled about $2.3 million, funded in part with a $720,000 loan made by the Oklahoma's Department of Environmental Quality through its EPA Brownfields Cleanup Revolving Loan Fund Grant. Title to the building structure was transferred to the developer selected by the City in September 2005. The City retained ownership of the land.

The Skirvin Hilton Hotel, as it is now called, reopened in 2007. Approximately $56 million in private and public funds was invested in the project. The City expects that all of the $22 million from public funding sources will be recouped. The renovation generated over 400 construction jobs and the four-star rated hotel now employs 225 people. The project has helped provide a much needed stimulus to the area and preserved an important part of the City's heritage. It is widely recognized that without the City's leadership, the infusion of public funds, and the cooperation of numerous public and private sector entities, this outcome could not have been achieved.

More information on the Skirvin Hotel project can be found in facts sheets prepared by EPA-Region 6 (www.epa.gov/region06/6sf/pdffiles/skirvinokcsuccess2007.pdf).

Acquisition and "simultaneous" transfer to a third party

Acquisition and "simultaneous" transfer to a third party is similar to the above approach, except that the municipality and the third party recipient of the property prearrange their agreements for the property, and the property's transfer can be accomplished immediately after the acquisition by the municipality. This has the potential advantage to the municipality of minimizing expenditures and property maintenance responsibilities; however, control limitations may be similar to those where the municipality acquires the property and transfers it to a third party months or even years later.

3.1.2 Actions that Do Not Involve Taking Title to the Property

Leasing by the municipality

In this action the municipality enters into a long-term ground lease with the owner that allows for the development and use of the property (e.g., establishing a library on the property) without taking title. One potential advantage is that the current owner may assume some or all of the responsibility for conducting cleanup and maintaining the remedy components (such as treatment systems or landfill covers). Alternatively, the municipality may agree to take on those obligations. In either case, the terms of the lease would typically need to cover these roles and responsibilities.

Leasing does not necessarily shield the municipality from environmental liability. For example, as discussed later in this workbook, a party leasing a contaminated property may, depending on the circumstances, be liable as an "operator" under certain federal and state environmental statutes. Some courts have also held that long-term leases can be equivalent to ownership for the purposes of establishing liability. A municipality may also incur legal liability for causing or contributing to the environmental contamination as the result of its use of the property or by a party that sublets the property from the municipality. Conducting due diligence to understand the environmental conditions can therefore be as important when leasing a property as it is with acquisition.

Before entering into a lease, a municipality should carefully consider its environmental liability risk, including whether it might qualify for any liability protections under specific statutes.

Collaboration with the property owner

In some situations the property owner may be unwilling or unable to perform environmental investigation, cleanup, or other activities needed to improve the marketability of the property or address health and safety issues, but may allow or work with the municipality to do so. To gain support for this approach, municipal officials may need to build a convincing case that such collaboration is in the best interests of both the property owner and the municipality (Discussed further in Section 10.3).

Collaborative partnerships may be one way to deal with "mothballed" properties (i.e., the owner continues to pay property taxes, but prefers to "sit-on" the property). Cooperative owners can provide property access for environmental assessments and other investigations without involving the municipality in the chain of title. Another advantage

Case Study: Camilla Wood Preserving Company
Municipal Acquisition through Tax Foreclosure

The Camilla Wood Preserving Company Superfund site occupies 40 acres approximately a half-mile south of downtown Camilla in southern Georgia. A wood treating facility was built on the property by the Louis Wood Preserving Company in 1947. The Camilla Wood Preserving Company later operated the facility until 1991, when the facility shut down permanently. EPA designated the site as a federal National Priorities List Superfund site in 1998 after site investigations identified site contaminants that included creosote, dioxins, pentachlorophenol, and polyaromatic hydrocarbons.

A portion of the site is now in reuse as a soccer field.

In 2002, the City of Camilla initiated a community-based reuse planning process for the site utilizing support resources provided by EPA. The resulting reuse plan identified a community park as the most appropriate use of the site. EPA considered the City's reuse priorities when it undertook a cleanup action on a portion of the site in 2006.

That year, the City began efforts to acquire the cleaned up portion of the site. After evaluating different acquisition options, the City determined that involuntary acquisition, which is covered under an explicit CERCLA liability exemption, would provide an important liability protection for the City. Two property tax foreclosure options were considered; one involving a judicial action and the other an administrative proceeding. While a judicial action would provide the City with unhindered title to the property, the lengthy legal process would likely have meant delaying the planned opening of the park — targeted for September 2007. Alternatively, an administrative proceeding would provide the City with title to the property immediately, but the property would be subject to redeemable interests for a 12-month period prior to the planned opening of the community park. In theory, this meant that parties with a legal interest in the property could assert claims regarding ownership. The City decided to move forward with an administrative proceeding. Given that the unpaid property taxes significantly exceeded the market value of the land, the City felt that it was unlikely that any party would step forward. Cooperation between the City and Mitchell County, which was also owed back property taxes, was critical to the foreclosure process. In August 2007, the City successfully took clear title to the property.

The community park with soccer fields and a small RV park opened in September 2007 as planned. Mitchell County's Recreation Department operates the community park and plans to expand the sports complex on the eastern half of the site following future cleanup. It also moved its park management operations to a remaining building on the site. Key factors contributing to the success of the project were: EPA's partnership with the community allowing the site cleanup and reuse to be integrated; the local government's innovative, flexible approach to site acquisition; and the County's cooperation

Additional site background and contact information is available at:
www.epa.gov/region04/waste/npl/nplga/camilaga.htm.

is that the municipality or owner may then become eligible for federal brownfields site assessment grants.

Depending on the nature of activities performed by the municipality, the municipality may need to consider obtaining indemnifications and other agreements with the property owner (See Section 10.2.3.9.1). As with other property recovery actions that lead to direct involvement in activities on the property (e.g., investigation, cleanup, construction), the municipality should consider whether this carries an unacceptable risk of legal liability.

Transfer of tax liens

Where allowed under state law, the municipality may transfer or sell tax liens for the property to a third party who then forecloses on the property and takes title. This action can be used where the property is abandoned or where the current title holder is in arrears on tax payments. State laws governing the "right of redemption" by the owner or other party with a vested interest in the property will also need to be taken into account.

While this process can take a year or longer to complete, it may be worth considering in situations where the municipality can attract qualified developers and exercise sufficient control over development. Many municipalities also auction portfolios of tax liens. Sometimes, however, a party will acquire the portfolio with the intention of taking action on only certain properties in the portfolio. This may actually delay or inhibit redevelopment on the remaining properties.

Incentives to promote redevelopment

Generally, but not always, incentives pose fewer project risks to a municipality, but provide it with less control over the development of the property. The extent that this is true will depend on the specific incentive or incentive package being considered. For example, certain financial incentives, such as those that involve forgiving back property taxes, could carry little environmental liability risks, but may result in significant financial risk and lack support within the community. Still, municipal incentives can sometimes be viewed as a more attractive alternative than property recovery actions that require more direct and active municipal involvement in the contaminated property.

Other examples of municipal incentives are:

- **Zoning and Use Exemptions:** The municipality may increase a property's attractiveness to developers by creating zoning and use exceptions prior to the developer talking title, as that often represents a great source of uncertainty for developers. However, the municipality can run the risk of establishing an unwanted precedent by granting such exceptions.
- **Tax increment financing (TIF):** TIFs can sometimes attract developers to properties that are otherwise financially unappealing. TIFs encourage development of many types of underutilized properties, not just those with environmental issues. As with non-contaminated properties, the development needs to result in an increase in the value of the property for this technique to make economic sense. The municipality should also carefully consider future

Case Study: Whitmoyer Laboratories
Municipal Acquisition for Public Use

Whitmoyer Laboratories manufactured veterinary and pharmaceutical products at this 22-acre site in rural Jackson Township, Pennsylvania from 1934 to 1984. During that time, arsenic compounds and other chemicals were disposed of in unlined lagoons, resulting in the contamination of soils, ground water and surface water. The site was subsequently abandoned. It was added to the Superfund National Priorities List in 1986.

Soccer fields at the new recreation complex

Cleanup under Superfund began in 1993 and included the removal of large volumes of sludge, contaminated soil and other materials; the capping of moderately or lightly contaminated soil on site; and ground water treatment. These activities were funded by two parties whose prior involvement with the facility caused them to incur liability under Superfund (referred to as "Potentially Responsible Parties"). These Potentially Responsible Parties (PRPs) also had responsibility for the long-term operation & maintenance of the cleanup.

Jackson Township officials expressed an interest in redeveloping the property, but were leery of taking any actions that could expose the Township to potential liability and other unacceptable risks. The Township's preferred reuse plan encompassed a variety of recreation and other public uses that would be best accomplished by acquiring the property, which raised particular concerns for the local officials.

EPA and the PRPs worked closely with the Township to facilitate the municipality's acquisition and reuse of the property. An agreement called a Prospective Purchaser Agreement was negotiated between the PRPs, EPA and Jackson Township and signed in 2004. Under the terms of the agreement, the PRPs agreed to fully incorporate the Township's plans for reuse into their cleanup activities. Actions taken by the PRPs included the installation of infrastructure to support the recreational uses (such as sewer, electrical, and water lines), landscaping, and the construction of walking trails and the foundation for a concession stand. The Township, in turn, assumed responsibility for conducting the long-term operation & maintenance activities. The Prospective Purchaser Agreement also established appropriate institutional controls and land use restrictions at the site. [*Note: As discussed in Section 10.2.2.2 , Prospective Purchaser Agreements are available in only very limited circumstances*]

The property transfer was completed in 2005 and the site was turned into a park with three soccer fields, a baseball field, a playground, a picnic area, and walking/jogging trails. The scenic walking trails will be surrounded by 4,000 newly-planted trees, shrubs and plants and provide linkages to local and regional natural resources like the Tulpehocken Creek and historic Union Canal.

A fact sheet describing the site and providing contact information is available at: www.epa.gov/superfund/programs/recycle/pdf/rtu09_whitmoyer.pdf.

obligations and tax revenues to make sure they can afford to grant this type of incentive. See Appendix E for references on tax increment financing.

- **Infrastructure Improvements:** The municipality can make a project more financially attractive by providing infrastructure normally paid for by the developer. Potential negatives with this approach are the lack of control that the municipality has over the development, and the fact that the municipality's investments on new infrastructure will generally have to be made before any tax revenues are realized.

3.2 Screening Property Recovery Actions Based on Project Goals

Once the project goals are established, the municipality should review the property recovery actions to identify which ones warrant further consideration. The first question is whether the municipality needs to intervene at all. If developers are willing to reuse the property in a way that the municipality supports, the municipality may be advised to step out of the way and let the development proceed. On the other hand, if no one has brought forward a proposal that is acceptable to the municipality, more proactive involvement by the municipality may be appropriate.

The screening process eliminates property recovery actions from further consideration when it is apparent that they will not reasonably achieve the project goals. Screening avoids spending resources unnecessarily and provides an early "reality check" for the project.

Worksheet #3 can be used to document the results of this screening exercise. At this point in the evaluation process, due diligence often has not been performed and information on the environmental conditions and other relevant property attributes may not be available. Subsequent chapters will discuss how information gathered through the due diligence process will help municipalities evaluate property recovery actions.

Worksheet #3: Preliminary Screening of Property Recovery Actions		
Action Eliminated	**Action under consideration**	**Property Recovery Actions**
☐	☐	**Acquisition and long-term ownership** • Briefly describe the property recovery action. • Briefly summarize the basis for eliminating or keeping this action under consideration. • If this option is still under consideration, briefly identify significant issues and information needs.
☐	☐	**Acquisition and interim ownership with subsequent transfer to a 3rd party** • Briefly describe the property recovery action. • Briefly summarize the basis for eliminating or keeping this action under consideration. • If this option is still under consideration, briefly identify significant issues and information needs.
☐	☐	**Acquisition and "simultaneous" transfer to a 3rd party** • Briefly describe the property recovery action. • Briefly summarize the basis for eliminating or keeping this action under consideration. • If this option is still under consideration, briefly identify significant issues and information needs.
☐	☐	**Leasing by the municipality** • Briefly describe the property recovery action. • Briefly summarize the basis for eliminating or keeping this action under consideration. • If this option is still under consideration, briefly identify significant issues and information needs.

☐	☐	**Collaboration with the property owner** • Briefly describe the property recovery action. • Briefly summarize the basis for eliminating or keeping this action under consideration. • If this option is still under consideration, briefly identify significant issues and information needs.
☐	☐	**Transfer tax liens** • Briefly describe the property recovery action. • Briefly summarize the basis for eliminating or keeping this action under consideration. • If this option is still under consideration, briefly identify significant issues and information needs.
☐	☐	**Other Property Recovery Action** • Briefly describe the property recovery action. • Briefly summarize the basis for eliminating or keeping this action under consideration. • If this option is still under consideration, briefly identify significant issues and information needs.

4 Conducting Due Diligence

4.1 Overview of the Due Diligence Process

This Chapter:

- Describes the due diligence process and its significance to the redevelopment process
- Discusses the information that can be generated during due diligence

Due diligence for a property transaction is conducted to obtain and verify available information regarding the property attributes and conditions, previous uses and ownership, and other information relevant to its redevelopment. Due diligence is an essential step in evaluating property recovery actions even if a municipality is not planning to take title to a property. The benefits to the municipality include gaining a better understanding of potential redevelopment obstacles and project risks. Another potential benefit is that developers often are more likely to consider properties where the municipality has already completed significant portions of the due diligence process. In addition, environmental due diligence (described below) is conducted to meet the requirements for all appropriate inquiries (AAI). All appropriate inquiries, as defined in Section 101(35)(B) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), must be conducted prior to property acquisition for a property to be eligible for certain liability protections provided under CERCLA. See Chapter 7 for a description of CERCLA liability protections. Worksheet #4 is provided at the end of this chapter to help municipalities summarize key information collected during the due diligence process (www.epa.gov/region1/brownfields/prepared).

Due diligence is an essential step in evaluating property recovery actions even if a municipality is not planning to take title to a property.

An important component of the due diligence process is commonly referred to as "environmental due diligence" and is conducted to identify and/or address:

- Presence and management of hazardous substances and petroleum products on the property
- Conditions indicative of releases or threatened releases of hazardous substances at, in, from, or to a property
- Inspections of environmental conditions at the property, including conditions of buildings and environmental media (e.g., soil, ground water, surface water, sediment) located on the property
- Historical, current, and potential future cleanup action on the property
- Regulatory status of the property
- Current and historical ownership and property access issues
- Potential risks and liabilities associated with the presence of hazardous substances and petroleum products on the property and potential cleanup action needed

While this chapter focuses primarily on environmental due diligence, traditional real estate due diligence is also necessary to understand and evaluate issues such as:

- Property appraisal
- Ownership
- Tax and other debt status
- Legal status (e.g., liens, property survey, leases)
- Suitability for the planned use (e.g., engineering, infrastructure)
- Sales and rental comparables
- Market trends and property values
- Financing strategies and alternatives

Some issues related to real estate due diligence are discussed in this chapter; however, a comprehensive discussion of real estate due diligence is beyond the scope of this document.

The environmental due diligence process typically begins with an all appropriate inquires investigation or a Phase I Environmental Site Assessment (Phase I ESA). There is often confusion about the distinction between the terms "due diligence" and "all appropriate inquiries." See the text box on this page for further discussion

The most common way to conduct a Phase I ESA, and the generally accepted business practice for doing so, is the ASTM E1527-05 Standard Practice. ASTM International (ASTM) — an international standards organization that develops and publishes voluntary consensus technical standards — developed voluntary consensus standards for conducting Phase I and II ESAs.

Due Diligence vs. All Appropriate Inquiries

In this document, the term "due diligence" refers generally to the array of inquiries and activities that a prospective property owner might conduct prior to taking title to a commercial property. Or, in the context of this Workbook, that a municipality might take to evaluate property recovery actions.

The term "all appropriate inquiries" refers to the specific regulations codified at 40 CFR 312 that set out the activities and practices that must be conducted to comply with one of the statutory criteria for obtaining certain liability protections under CERCLA. The All Appropriate Inquiries Rule recognizes the ASTM E1527-05 Phase I Environmental Site Assessment standard as compliant with the AAI regulatory requirements. All appropriate inquiries investigations are described further in Section 4.7.1.

While there is substantial overlap between the two, due diligence conducted for a property is generally broader in scope than what is required for an all appropriate inquiries investigation (including, for example, a Phase II ESA, building structural analysis). From a risk management perspective, these additional inquiries and activities can provide information necessary to more fully assess both the source and magnitude of potential project risks. It is for this reason that this Workbook uses the broader term "due diligence" when describing such information gathering efforts. The term "all appropriate inquiries" is used when specifically referring to the statutory requirements of 40 CFR 312.

Based on the results of an AAI investigation or Phase I ESA, a Phase II Environmental Site Assessment (Phase II ESA) may be necessary to better understand the type and extent of any potential environmental contamination at the property. The following sections describe Phase I and II ESAs and provide additional information on conducting environmental due diligence. Chapter 5 discusses how the information collected during the due diligence process is used to identify redevelopment obstacles and aid in the evaluation of property recovery actions.

4.2 Phase I Environmental Site Assessment

The Phase I ESA is conducted to identify the presence or potential presence of hazardous substances and petroleum products on or underlying a property as well as in or around physical improvements to the property (e.g., buildings and other structures). The Phase I ESA process is described in *ASTM E1527-05 - Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (www.astm.org) and referenced in the *USEPA Standards for Conducting All Appropriate Inquiries* (40 CFR Part 312). See EPA's AAI Web page for more information: www.epa.gov/brownfields/aai/index.htm.

The ASTM *E1527-05* standard provides best practices for conducting a Phase I Environmental Site Assessment of a commercial property. EPA recognizes this standard along with *ASTM E2247-08 - Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process for Forestland and Rural Property* as compliant with the requirements for all appropriate inquiries as defined under CERCLA (42 U.S.C. 9601(35)(B). These requirements are discussed further in Section 4.7.1. The municipality is encouraged to verify that its Phase I ESA meets the requirements of both ASTM E1527-05 and EPA requirements for AAI. A Phase I ESA must meet the requirements of the AAI final rule (40 CFR 312) for a municipality to qualify for protection from liability under CERCLA as an innocent landowner, bona fide prospective purchaser, or a contiguous property owner (discussed in Chapter 7).

If a municipality is purchasing a property for which a Phase I ESA was previously conducted, the ESA should be reviewed and updated to ensure that the most current information on the environmental conditions of the property are included in the final assessment report. To be compliant with the AAI regulation, a Phase I ESA conducted in compliance with ASTM E1527-05 must be reviewed and undated if the Phase I ESA is older than one year at the time of property acquisition. In addition, any AAI investigation (or any AAI-compliant Phase I ESA) that was performed more than 180 days prior to the date on which the property is acquired must include updates to certain aspects of the AAI assessment (e.g., records review, property inspections, interviews and lien searches).

Neither the AAI regulation nor the ASTM E1527-05 standard requires the collection of samples or chemical analysis (although some states may require such at this stage); rather, an AAI investigation or Phase I ESA is conducted to identify "recognized environmental conditions" (or conditions indicative of releases or threatened releases of hazardous substances) on a property. See the text box on the next page for a description of recognized environmental conditions. When conducting an AAI investigation or Phase I ESA, information may also be collected to identify and characterize public health issues (e.g., trash, rodents) and safety issues (e.g., broken windows, damaged fencing) that may require action on the part of the current property owner or municipality. A Phase I ESA (and the AAI regulation) generally involves:

- A visual inspection of the property to identify likely environmental conditions associated with the use, handling, storage, or disposal of hazardous substances or petroleum products on the land (e.g., surface staining, distressed vegetation, trash, disposal areas, and aboveground or underground tanks) or structures (e.g., hazardous substances or petroleum stored or used within buildings or other

structures). To perform the visual inspection or walkthrough, permission to access the property generally must be obtained from the current property owner if one exists, or other actions taken to obtain legal access.

- An observation of the general conditions of adjoining properties. This typically involves a walkthrough of the area surrounding the property to observe activities, conditions, and land use associated with adjoining properties.
- A review of historical sources of information about the property, including a title search and examination of municipal or county planning files to identify the current and historical ownership of the property, prior land usage and permits, environmental liens, and activity and land use restrictions that may be placed on the property (e.g., deed restrictions, easements, environmental covenants).
- Interviews with persons familiar with the property's history including current and past property owners, property managers, tenants, and neighbors.
- A review of regulatory agency files, data bases, and other available information pertaining to the use, handling, storage, disposal, migration, or corrective action of hazardous substances or petroleum on the property and surrounding properties.
- Additional sources of information (e.g., historic aerial photography of the property and vicinity).

What is a Recognized Environmental Condition?

A recognized environmental condition (REC) as defined in ASTM 1527-05 means "the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water of the property." The term includes hazardous substances or petroleum products under conditions in compliance with laws (e.g., permitted discharges).

Under this definition, a recognized environmental condition could not only relate to spills, releases, or other unauthorized disposal of hazardous substances or petroleum products, but also permitted or otherwise authorized discharges or disposal activities.

The Phase I ESA may also include visual inspections or records reviews for other potential environmental issues that may go beyond the general scope of the ASTM Phase I ESA standards, but may be important to the future use, disposition, or redevelopment of the property. An evaluation of the presence of any of the contaminations listed below may be included as part of an ASTM Phase I ESA, at the request of the user, even though such investigations are not routinely conducted during a Phase I ESA.

- Asbestos-containing building materials
- PCB-containing transformers or ballasts
- Lead-based paint
- Potable drinking water (where supplied by wells)
- Mold
- Radon

- Wetlands
- Threatened and endangered species
- Earthquake hazard
- Vapor intrusion (i.e., volatile contaminants entering the air space of a building from underlying soils or groundwater)

The AAI rule and the ASTM E1527-05 Phase I ESA standards require that an ESA be overseen or supervised by an individual who meets the definition of an environmental professional, as provided at 40 CFR 312.10. [Note: the ASTM E1527-05 and E2247-08 standards reference the definition contained in EPA's AAI final rule (40 CFR 312.10)]. Under the AAI final rule an environmental professional is defined as someone who possesses specific education, training, and experience necessary to exercise professional judgment to develop opinions and conclusions regarding conditions indicative of releases or threatened releases of hazardous substances on, at, in, or to a property, sufficient to meet the objectives and performance factors of the AAI rule. Specifically, the environmental professional must:

- Hold a current Professional Engineer's or Professional Geologist's license or registration from a state, tribe, or U.S. territory (or the Commonwealth of Puerto Rico) and have the equivalent of three (3) years of full-time relevant experience; or

- Be licensed or certified by the federal government, a state, tribe, or U.S. territory (or the Commonwealth of Puerto Rico) to perform environmental inquiries as defined in 40CFR312.21 and have the equivalent of three (3) years of full-time relevant experience; or

- Have a Baccalaureate or higher degree from an accredited institution of higher education in a discipline of engineering or science and the equivalent of five (5) years of full-time relevant experience; or

- Have the equivalent of ten (10) years of full-time relevant experience.

A person not meeting the definition of an environmental professional may assist in the investigation if that person's work is conducted under the supervision or responsible charge of a person meeting the definition of environmental professional.

4.3 Phase II Environmental Site Assessment

As noted previously, the Phase II ESA is conducted to further investigate the potential presence of hazardous substances and petroleum products on a property and the extent of any contamination. The Phase II ESA is usually an intrusive investigation that requires collection and analysis of environmental and other media samples (e.g., soil, ground water, electrical equipment, insulation). The Phase II ESA will generally require the execution of an access agreement with the current property owner, if one exists, or other action to gain the access needed to collect the samples.

The Phase II ESA is intended to determine if a hazardous substance or petroleum product is present in an area where an environmental condition was identified. A Phase II ESA may also investigate the extent and severity of any contamination. The *ASTM E1903-97(2002) Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process* provides guidelines for conducting a Phase II ESA. The scope of a Phase II ESA will be specific to the property and to the environmental condition subject to further consideration.

The scope for a Phase II ESA should be developed in consultation with an environmental professional or other individual qualified in environmental investigations and should include:

- Identification of the environmental or other media to be sampled
- Number of samples to be collected
- Analytical method to be used or specific hazardous substances and petroleum products to be evaluated
- Target levels (e.g., state or federal standards, action levels or screening levels) above which potential further action is warranted

The Phase II ESA may need to be conducted in several subphases based on the extent of the identified environmental conditions and financial considerations of the municipality or responsible entity. For example, where there is a significant amount of additional investigation to be conducted, the municipality may want to prioritize specific actions for the Phase II ESA to first address the environmental conditions that will have the most impact on project objectives and property recovery actions. The results of the initial Phase II ESA will then help in determining what additional investigation may be needed.

4.4 Environmental Investigation and Cleanup Action

Environmental Investigation

Environmental investigations typically go beyond the scope of traditional Phase I and Phase II ESAs and are intended to:

- Characterize the nature and distribution of hazardous substances and petroleum products in environmental media
- Evaluate the potential fate and transport of hazardous substances and petroleum products in environmental media
- Assess risks to human health and the environment
- Determine the need for cleanup action
- Conduct appropriate evaluation to identify applicable cleanup actions

Environmental investigations are generally conducted to comply with specific federal or state regulatory cleanup statutes and programs (e.g., Resource Conservation and Recovery Act (RCRA), CERCLA, Underground Storage Tanks (UST), voluntary state cleanup programs). As a result, the scope and extent of the environmental investigation may be driven by the requirements of those statutes and programs.

Environmental investigations typically involve the collection of soil, sediment, ground water, and surface water samples through, for example, the installation of soil borings and monitoring wells. The data collected are used to support the environmental risk assessment and the selection and design of cleanup actions. Depending on the size of the property and potential distribution of hazardous substances and petroleum products in environmental media, the environmental investigation may be conducted in multiple phases. If the intended reuse of the property is known, the environmental investigation can often be tailored to reflect those uses. This can not only streamline the environmental investigation, thereby reducing costs and minimizing delays, but also help ensure that the cleanup will be protective for those intended uses.

Cleanup Action

Cleanup actions generally are designed to reduce or eliminate potential exposures to various constituents of concern, hazardous substances, hazardous wastes, or petroleum products in environmental media. Cleanup actions can range from relatively aggressive approaches such as soil removal and ground water extraction and treatment to less aggressive approaches such as monitored natural attenuation (where line of evidence show that protective cleanup levels will be achieved over a reasonable time frame), passive vapor barriers, and institutional controls (e.g., environmental covenants, land use restrictions) that compliment other cleanup actions involving engineered controls. Often, a combination of cleanup action approaches is used.

Municipalities should carefully consider the impact of reuse plans on cleanup actions for the property. In addition, reuse plans should be compatible with cleanup actions which sometimes introduce physical obstacles (e.g., ground water extraction wells, treatment structures) and other constraints that limit the use of all or portions of the property while the cleanup actions are underway or in place. Discussing reuse plans with the party responsible for carrying out the cleanup (e.g., EPA or the state) can help identify potential conflicts between the redevelopment and cleanup that may be avoided or mitigated — assuming this can be done without compromising the ability of the cleanup to protect human health and the environment or introducing unjustifiable costs.

4.5 Determining Regulatory Status

Assessing the regulatory status of the property is an important objective of due diligence. Issues of environmental liability, regulatory process, and other considerations relevant to redevelopment efforts are all dependent on which federal, state, and local environmental laws could apply based on the environmental conditions, operating practices, and other factors. Proper coordination with the regulatory programs having jurisdiction over the cleanup also depends on having this information.

Federal statutes administered by EPA that are commonly associated with the investigation and cleanup of contaminated property are:

- Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), commonly known as “Superfund”
- Resource Conservation and Recovery Act (RCRA) (Subtitles C, D & I)

- Toxic Substance Control Act (TSCA) — Provisions relating to PCBs
- Clean Air Act (CAA) — Provisions relating to asbestos

These key statutes will be discussed in Chapter 7 and Appendix D of this workbook. There are a number of other federal environmental statutes that may also be relevant to a redevelopment project. For example, the management of run-off from the property could be regulated by the Clean Water Act and any impacts on source water for public water supplies by the Safe Drinking Water Act. Identifying the applicability of these and other statutes should also be a part of the due diligence process. In addition, many states have their own statutes and programs that apply to the cleanup of contaminated properties and state environmental agencies should be consulted regarding potential applicability. Some federal statutes, such as RCRA, provide that states can be delegated authority to implement a state program in lieu of the federal program (although EPA retains its enforcement authority).

The federal Brownfields Program is a grant assistance program authorized under CERCLA to provide funding for the assessment and cleanup of certain contaminated properties so that the properties can be restored to a beneficial reuse. The *Small Business Liability Relief and Brownfields Revitalization Act (Brownfields Amendments)* enacted in 2002 amended CERCLA by providing funds to assess and cleanup brownfields and to enhance state and tribal response programs as well as clarifying CERCLA liability protections. The cleanups using federal brownfields grant money are normally regulated under state voluntary cleanup programs and must comply with all relevant state and federal law.

4.6 Property Access

All government employees — including municipal employees — need to be aware of the serious consequences of entering private property without the proper authority. Since it is necessary to enter onto property in order to conduct due diligence, the municipality (or the entity entering the property) must first contact the owner and request permission to access the site.

More specifically, the municipality will need access to the property to perform the visual inspection associated with a Phase I ESA and to carry out Phase II ESA activities, if a Phase II Environmental Site Assessment also is needed. Although some property owners may verbally assent to entry upon their property, municipalities should consult with their lawyers about the need to obtain such permission in writing. It is not unusual for the process of obtaining site access to include the negotiation and execution of a written agreement granting permission to enter the property for specific purposes. Such written agreements may delineate:

- **Onsite Activities.** The activities to be conducted on the site may include a description of who will be accessing the site, the purpose of the activities to be conducted, and a description of the specific activities to be conducted. In the case of a Phase II ESA, a description of all sampling activities and specific sample locations might also be included.

- **Conditions of the Access.** This may include descriptions of any specific conditions of access to the property, such as the time of day during which access is allowed, notification requirements, non-interference with current operations, and health and safety procedures.
- **Indemnities.** Indemnities may be on the part of either or both parties; however, it is more common for the party requesting access to protect the property owner against actions that could result in death or injury; and for damage or loss of property caused by or resulting from the activities of the party accessing the property.
- **Insurance.** Insurance requirements may include general liability, vehicle liability, and workers compensation. Insurance may be required when activities such as drilling will be conducted.

Property access agreements are generally executed by the entity or individuals entering the property or by those directly responsible for the individuals who will be entering the property. In cases where a viable property owner cannot be identified or where the owner is not willing to allow access, other regulatory authorities may be available to the municipality through public health codes or state environmental regulations.

4.7 Key Questions to Consider When Conducting Due Diligence

The following questions identify some key considerations for municipalities when conducting environmental due diligence. These questions do not represent a comprehensive list of all the considerations that might apply to a property or project.

These questions are provided to enable municipalities to better understand how environmental conditions and other issues could impact the redevelopment of a property, and improve communication with the consultants hired to conduct due diligence. This will help ensure that the due diligence process provides the information a municipality needs to make informed decisions regarding potential property recovery actions and the preparation of a project strategy.

4.7.1 All Appropriate Inquiries

Will the Phase I Environmental Site Assessment meet the requirements for all appropriate inquiries?

Meeting the requirements for AAI is necessary to potentially qualify for certain CERCLA liability protections (See Chapter 7). EPA published a final rule establishing standards and practices for conducting all appropriate inquiries that became effective on November 1, 2006. As noted previously, the AAI final rule recognizes ASTM E1527-05 and ASTM E2247-08 as consistent with the final rule, so that parties that meet these ASTM standards will be in compliance with the AAI final rule for purposes of CERCLA 101(35)(B). EPA's AAI final rule is summarized in a fact sheet titled *All Appropriate Inquiries Final Rule* (*EPA 560-F-05-240, October 2005),* available at: www.epa.gov/brownfields/aai/aai_final_factsheet.pdf , and is also discussed in the "Common Elements Guidance" found in Appendix A of EPA's Revitalization Handbook at www.epa.gov/compliance/resources/policies/cleanup/superfund/common-elem-guide.pdf. AAI

must be conducted or updated within one year prior to the date of property acquisition. Certain aspects of the AAI requirements must be conducted or updated within 180 days prior to acquisition.

Among the required activities and other considerations included in all appropriate inquiries:

- **Definition of an Environmental Professional** – Qualifications for and certification by environmental professionals performing due diligence work
- **Interviews** – Interviews with past and present owners, operators, and occupants of the facility to gather information about hazardous substances on the property
- **Historical Sources of Information** – Previous activities and land uses since first development available from reviews of chain of title documents, aerial photographs, building department records, land-use records, etc.
- **Search for Environmental Cleanup Liens** – Searches for recorded environmental cleanup liens filed under federal, state, or local law
- **Review of Government Records** – Review of federal, state, and local government records (e.g., waste disposal records, underground storage tank records, and hazardous waste handling, generation, treatment, disposal, and spill records).
- **Visual Inspections** – Visual inspection of subject property and adjoining properties
- **Specialized Knowledge or Experience** –Takes into account the prospective purchaser's knowledge about the property and adjoining properties
- **Purchase Price** – Considers the relationship of the purchase price to the value of the property if the property was not contaminated
- **Knowledge of Property** – Commonly known or reasonably identified information about the property
- **Potential for Hazardous Substances** – The degree of obviousness of the presence of hazardous substances and the ability to detect hazardous substances at the property

Documenting the All Appropriate Inquiries Results

While the results of the all appropriate inquiries investigation must be documented in a written report, federal regulations do not specify a particular format for the report, require that it be submitted to EPA or any other government agency, or require that it be retained by the party conducting the all appropriate inquiries investigation.

If, however, the party decides to acquire or lease the property, retaining the written report and any supporting documentation and records is advisable should it later become necessary to demonstrate compliance with CERCLA liability protection provisions.

See *All Appropriate Inquiries Rule: Reporting Requirements and Suggestions on Report Content* (www.epa.gov/brownfields/aai/AAI_Reporting_FactSheet.pdf).

An important part of the AAI investigation is the visual inspection of the property. This requires access to the property and its buildings and other structures. In cases where

access cannot be obtained after all good faith efforts are employed, the AAI rule provides for a limited exemption to the visual inspection requirement that requires the environmental professional to:

- Visually inspect the property by another method (e.g., aerial imagery) or from an alternate vantage point (e.g., walking the property line).
- Document efforts taken to gain access to the property.
- Document the use of other sources of information to determine the existence of potential environmental contamination.
- Express an opinion about the significance of the failure to conduct a visual inspection on the ability of the environmental professional to identify conditions indicative of releases or threatened releases.

4.7.2 Property History

Who were the prior owners and tenants of the property?

In addition to being important sources of historical information, past owners and tenants also may have a regulatory responsibility to conduct investigations or corrective action. Under CERCLA, for example, owners and operators at the time of disposal of hazardous substances may have liability for response costs. In some situations, particularly those involving abandoned properties, past owners or tenants may cooperate in performing, funding, or co-funding due diligence assessments or cleanup. This cooperation may be motivated by a desire to resolve potential federal or state liability. Before entering into these joint efforts, however, the municipality should refer to Chapters 7 and 8 to assess potential legal and financial risks and to Chapter 10 for tools and approaches for managing those risks.

What were the prior land uses and activities on the property?

Historical uses and activities can provide valuable clues regarding the types and locations of potential contaminants on the property and can help focus potential Phase II ESA investigations, reduce costs and provide more reliable results. Good sources of historical information regarding past uses of a property include Sanborn maps, aerial photographs, municipal records, and state and federal regulatory agency records. Prior owners, tenants, or former employees of businesses on the property may also have information that is not publicly available or forthcoming from the current owners.

If the property was once part of a larger parcel, or past operations involved other parcels, that information may also help shed some light on past practices on the targeted property. For example, the property may have been used to store raw materials for a manufacturing facility on a nearby parcel or served as a disposal area for wastes from that facility.

Are previous development plans for the property available?

Previous development plans for the property, even if they were never implemented, can provide useful information on prior or existing property conditions, such as: utility infrastructure, structural integrity of buildings, wetland delineations, physical obstacles to construction. In addition, they may suggest potential redevelopment opportunities that would have undergone some level of financial and market analyses at the time. Although this information should not be used as the sole source of historical information on a

property, especially if it is somewhat outdated, it might be useful in providing preliminary information if property access is not available, or help in focusing future information gathering efforts.

4.7.3 Property Status

What is the ownership status?

A municipality's involvement will not only depend on who holds property title, but also on the owner's intentions regarding the ownership or disposition of the property. In addition, the municipality should assess the owner's willingness (or unwillingness) to work cooperatively with the municipality. In many cases, abandoned, mothballed, or underutilized properties may present a liability for the property owner. Such situations may create opportunities for municipalities to discuss a collaborative arrangement that will allow the current owner to dispose of the property (see Section 10.3 for a discussion of some risk management considerations associated with the ownership status). A working relationship with the owner can facilitate property access for conducting environmental assessments and can potentially avoid adversarial actions.

Is there clear title to the property?

Although title issues are not unique to contaminated properties, it is not uncommon to find that a contaminated property is abandoned or that owners declared bankruptcy or dissolved corporations that held title to the property. The prospect of complicated and time consuming efforts to resolve these ownership issues can be a "deal breaker" for many potential developers that might otherwise be interested in the property. Through foreclosure and other means, municipalities may be able to obtain clear title and remove this potential impediment.

Are there existing or likely liens on the property?

The types of liens that might encumber the property include those associated with: mortgages; contractor or commercial services; federal, state, and local tax delinquencies; and federal and state environmental response actions (i.e., "environmental liens"). If EPA or the state expended resources at a property as the result of environmental investigations, cleanup or other response actions, liens often are perfected (i.e., recorded) on the property to help recover these costs.

For example, CERCLA provides for two types of liens on properties where EPA has conducted "remedial" or "removal" response actions. The first type of lien is for all costs and damages for which the property owner is liable. The second type of lien, the "windfall" lien, is on a facility owned by a non-liable "bona fide prospective purchaser," where EPA has unrecovered response costs at the facility and EPA's response action increases the fair market value of the facility. Depending on the circumstances surrounding the acquisition transaction, municipalities or other entities acquiring the property may be subject to these liens. These and other statute-specific liens are discussed further in Chapter 7 and Appendix D.

Because federal and state governments may not have necessarily perfected liens on certain properties, it may be important to contact EPA and state regulatory agencies to inquire about the potential for these liens and about a process for resolving outstanding liens.

What is the current land use of the property?

The current land use may indicate quite a bit about the property's redevelopment potential. Due diligence should include an assessment of the location, the surrounding community, size, and condition of buildings and other significant structures; available utilities; property access (e.g., roads, rail, bridges, waterways); environmental features that might limit developable space or otherwise restrict usage (e.g., wetlands, natural features, surface water, flood plains); and other relevant factors.

These land uses and physical features also should be evaluated in the context of potential cleanup activities. For example, many states may not allow certain wastes to be placed in on-site landfills or "capped" with protective covers if they are located within flood plains. This may result in the wastes being moved to other on-site locations, potentially occupying land intended for redevelopment purposes, or to be sent at greater expense to an off-site facility. Wetlands and other water bodies can introduce ecological receptors that can influence cleanup. Even existing roads and access routes that may be suitable for the planned redevelopment may not be adequate for hauling large volumes of contaminated soil off-site or bringing clean fill onto the property. All of these can drive up redevelopment costs or create significant obstacles to property reuse.

The evaluation of current land uses should also look for general conditions and operating practices that may indicate underlying environmental problems, such as: poor overall maintenance, signs of waste or debris dumping, areas of spillage, lack of fencing, or other ways to restrict illegal dumping.

What is the current zoning of the property and its relationship to local master plans and other planning studies?

Zoning laws, master plans, and local ordinances play an important role in the establishment of cleanup goals under CERCLA and other federal and state cleanup statutes. Exposure models for assessing human health risks from contamination are based on assumptions about reasonably anticipated future land uses. EPA and the state will typically consider zoning and master plans along with other relevant factors in making future land use assumptions.

Are buildings, structures, or areas of the property of historical importance?

The requirements of the National Historic Preservation Act (NHPA) must be kept in mind if any federal funds or federal permits are used to assess, clean up, or redevelop the property. Common federal agencies that are involved in funding or permitting include EPA, Department of Housing and Urban Development, Department of Commerce, Department of Agriculture – Rural Development Administration, and the U.S. Army Corps of Engineers. Be aware that federal funding or a federal license, permit or approval may trigger compliance with the review and consultation requirements of the NHPA.

Pursuant to Section 106 of the NHPA, the Advisory Council on Historic Preservation (ACHP) has promulgated regulations found at 36 CFR Part 800 that require federal agencies to conduct a review and consultation process to protect historic resources. This process, commonly referred to as "106 Review" should be conducted when two thresholds are met:

- There is a federal undertaking, defined as a project, activity or program funded in whole or in part under the direct or indirect supervision of a federal agency, including those carried out with federal financial assistance, or those requiring a federal license, permit, or approval; and
- That action has the potential to affect properties listed on or eligible for listing on the National Register of Historic Places.

The NHPA established the National Register of Historic Places. Historic properties (or historic resources) are defined as: sites, districts, buildings, structures, and objects listed on *or eligible for* the National Register of Historic Places. In addition, traditional cultural properties (Native American dance grounds, waterways, or campsites) may also be subject to protection.

There are four steps to the Section 106 Review process, which are summarized below. For a more complete description of this process, you should review the ACHP regulations found at 36 CFR Part 800:

Step 1: Initiate Process

The relevant federal agency(ies) should determine whether the proposed project is a federal undertaking. There must be federal involvement for an activity to be considered an undertaking for Section 106 purposes. As described above, a federal undertaking may be federal funding, non-financial federal assistance, or a federal approval such as a license or permit. If it is determined that there is no federal undertaking, the parties have no additional 106 Review obligations.

Step 2: Identify Historic Properties

It should be determined whether the undertaking affects or has the potential to affect historic properties. To make this determination, the municipality should engage the services of a qualified historian or archaeologist to review background information, seek information from knowledgeable parties, and conduct additional studies as necessary. If the undertaking could affect historic properties, the scope of appropriate identification efforts should be determined, and historic properties in the area of potential effects should be identified.

Step 3: Assess Adverse Effects

Determine whether the redevelopment activity will or could potentially have an adverse effect on the property(ies). Examples of adverse effects include:

- Physical destruction of, damage to, and/or removal of all or part of the property;
- Alteration of a property including restoration, rehab, repair, or remedial action that is not consistent with Standards for the Treatment of Historic Properties (36 CFR part 68);
- Change or the character of the property's use or to physical features within the property's setting that contribute to its historical significance; and
- Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's historic features.

The federal agency will make a determination, based on the historian/archaeologist's report and in consultation with the SHPO and/or THPO, regarding the historical status of the resource and the potential for adverse effects. If historic properties will not be adversely affected, the Section 106 Review process is complete. Otherwise, resolution of adverse effects is required.

Step 4: Resolve Adverse Effects

The main focus of this step is to avoid, minimize, or mitigate potential adverse effects. To avoid or minimize an effect on historic resources, the redevelopment may shift in alignment, relocate to a different area of the site, or modify designs or processes. If this is not possible, mitigation may include data recovery, or education (creation of an exhibit) and outreach (pamphlets, reports, etc.).

In this step, the consulting parties, including but not limited to the lead federal agency, the developer, the community, and the SHPO/THPO, consult to resolve adverse effects. On occasion, the ACHP may participate in consultation, particularly when there are issues of concern to Indian tribes. Consultation usually results in a Memorandum of Agreement (MOA) between the lead federal agency, the SHPO and/or THPO, the community, and the developer. The MOA memorializes the measures to avoid, reduce, or mitigate adverse effects on historic resources. If the SHPO/THPO and the federal agency fail to agree on the terms of an MOA, the agency must request the ACHP to join the consultation.

In summary, it is the responsibility of the municipality or community developer to inform the federal agencies involved when an historic resource might be impacted by the funded activity, and to provide the information needed to determine the historical significance of the resource and potential adverse effects. It is the responsibility of the federal agency to determine whether or not the proposed project constitutes a federal undertaking. In addition, in consultation with the SHPO and/or THPO, the federal agency determines whether a historic resource is eligible for the National Register and the scope, if any, of adverse effects. The lead federal agency, the SHPO/THPO, and the developer, as a consulting party, work to reach consensus regarding alternatives to avoid or minimize those adverse effects. If this is not possible, mitigation for the loss of the resource is expected. Implementation of activities to avoid, minimize, and/or mitigate adverse effects are memorialized in an MOA. The ACHP may be consulted if the parties cannot reach agreement, but ultimately, the federal agency involved has the responsibility for the project's compliance with the NHPA.

Additional information on the National Historic Preservation Act can be found at: www.achp.gov/nhpp.html .

4.7.4 Property Appraisal

What is the appraised value of the property?

The municipality needs to have a sense of the current appraised value of the property that reflects its physical and environmental condition. This evaluation should consider current property tax assessments as well as historical sale values. If there are appraisals, especially recent ones, these are useful in determining the appropriate current and future values of the property given potential reuse scenarios.

The value of the property may need to be adjusted to include additional costs associated with the environmental condition of the property and cleanup. Knowledge of these costs can be factored into the purchase price if the municipality intends to acquire the property, or can enhance the property's marketability if the goal is to facilitate redevelopment by a third party. Properties where the cost of cleanup exceeds the market value (i.e., "upside down" properties) typically will require financial or other incentives to be of interest to the real estate community. Chapter 7 discusses how a *pro forma* can be used to evaluate the impact of cleanup costs on a project's financial viability.

If the municipality intends to acquire the property by exercising eminent domain, it should determine if state law allows adjustment of the purchase price to reflect cleanup costs. Otherwise, the municipality may be forced to pay considerably more for the property than its actual discounted value. A May 2008 report by the Northeast Midwest Institute provides a summary of how different states currently address this issue. See *State Programs and Policies to Encourage Local Government Actions to Address Brownfields: How State Liability Protections, Eminent Domain Reforms, and Cost Recovery Authority can Spur Local Government Action to Acquire and Redevelop Brownfields,* available at: www.nemw.org.

4.7.5 Regulatory Status

What federal and state cleanup statutes are likely to apply to the property?

In order to evaluate the risk of incurring legal liability through the acquisition or leasing of contaminated property, a municipality must first understand which federal and state cleanup statutes apply to the property and then whether any relevant statutory exemptions from or defenses to liability exist under those applicable statutes. Such an understanding will also allow the municipality to coordinate with all of the appropriate federal and state cleanup programs that might be involved. Further, this will help the municipality choose consultants having the requisite expertise to perform due diligence and other cleanup work on the property. In making this assessment, it is important to consider the following points:

1. Applicability of Multiple Statutes

It is not unusual for the cleanup of contaminated property to be governed by more than one federal and/or state statute due to the presence of a variety of contaminants. For example, a property may contain underground storage tanks covered by Subpart I of RCRA, PCB contamination regulated by TSCA, and hazardous waste releases regulated by CERCLA or Subpart C of RCRA.

2. Overlapping Statutes

There are other situations where the same contamination may be addressed by overlapping statutory authorities (i.e., more than one statutory authority could be used to require investigation or cleanup of the particular contaminant). For example, the contamination at a particular property — say, a release of various solvents — could potentially be regulated under CERCLA, Subtitle C of RCRA (hazardous waste provisions), a state Superfund program, a state voluntary cleanup program, or a state property transfer statute. In situations where regulatory agencies initiate an action to compel investigation and cleanup, it may not always be evident which authorities will be

invoked. For instance, based on site-specific factors, CERCLA authorities could be used in lieu of or in addition to RCRA corrective action authority at a RCRA (Subtitle C) hazardous waste treatment, storage or disposal facility.

Generally, for priority, problematic, or otherwise "non-routine" sites, EPA and states will often triage the situation and determine how best to accomplish cleanup using the various statutes and authorities available. Rather than trying to guess which of the applicable authorities might be invoked, it is best to consult with EPA and the state agency to understand what they may be contemplating for a particular property.

In some situations where the municipality, developer, or other entity may be willing to voluntarily take on the investigation and cleanup, there may be an opportunity to negotiate an agreement regarding legal risk in connection with the applicable authorities and cleanup program alternatives.

3. Enforcement Discretion

For many different reasons, EPA may not pursue every property owner liable for the costs of a cleanup at a particular site. EPA is able to use its "enforcement discretion" in determining how and when to exercise its statutory authority. Enforcement discretion may be applied broadly through Agency guidance or narrowly to resolve issues at a specific site.

Over the years, EPA has issued a range of guidance explaining how it will use its enforcement discretion in connection with the cleanup of contaminated property. An example under CERCLA is EPA's *Final Policy Toward Owners of Property Containing Contaminated Aquifers* which describes the use of enforcement discretion for properties impacted by ground water contamination from an off-site source.

In general, EPA uses its enforcement discretion in specific situations or under certain circumstances. Where it is exercising its enforcement discretion, EPA will always reserve its rights to enforce under its statutes if the circumstances change.

Have federal- or state-mandated cleanup actions already been or are likely to be conducted at the property?

Knowing whether the property is or was subject to a cleanup action is important for a number of reasons. First, this should prompt the municipality to contact EPA and the state to determine what further plans they may have for the property. For example, if a CERCLA removal action was completed, EPA can discuss whether additional removal actions are contemplated for other releases, or whether the site is being proposed for inclusion on the National Priorities List (NPL) (See Section 7.2.1 for a discussion of the NPL and CERCLA process). Often, the removal action will have addressed the most immediate contamination threats and EPA may be willing to defer any remaining cleanup activities to the oversight of the state voluntary cleanup program.

Second, in cases where EPA completed a removal or other response action, the Agency may be able to provide a "comfort/status letter" describing cleanup status and, to the extent applicable, indicating that it does not anticipate further federal Superfund involvement. Comfort/status letters are briefly discussed in Section 10.2.2.3 and further discussed in Section IV.A of EPA's *Revitalization Handbook.* Comfort letters may be valuable in assessing potential environmental liability for any remaining contamination at the property, and can ease the concerns of prospective developers, lenders, and insurers.

Where further action is planned, knowing that information can help inform the project planning process.

Third, as discussed in Section 4.7.4, EPA and the state may have perfected or plan to place liens on the property to recover costs spent for response actions at the property.

Fourth, if a federal- or state-mandated environmental investigation is underway or planned, this may affect the scope and timing for the municipality to conduct its own Phase II Environmental Site Assessments. Typically, the results of these investigations are publicly available and can be readily accessed by the municipality.

EPA developed an internet-based information system called ECHO (Enforcement and Compliance History Online) that provides useful environmental compliance information on EPA-regulated facilities. ECHO is available at: www.epa-echo.gov/echo. A users guide for ECHO is available at: www.epa-echo.gov/echo/first_time_users.html. In addition, the current status of EPA-regulated sites can be obtained by visiting the Web sites of specific regulatory programs. These Web sites are provided in Chapter 7 for each of the federal statutes covered in that chapter.

Have "potentially responsible parties" been identified for the property?

If a formal action requiring investigation or cleanup of the property was taken or is planned by EPA or a state agency, responsible parties may be identified or are in the process of being identified. While this can be good news in that it could bring resources necessary to clean up the property, the municipality should be aware that this could complicate future dealings involving the property. Negotiations between the regulatory agencies and responsible parties can also introduce significant delays to the process.

Is the municipality already or likely to be a "potential responsible party" under CERCLA for the property or have existing cleanup obligations under other federal or state environmental statutes?

The municipality should consider its existing liability under CERCLA or other environmental statutes early in the process of evaluating property recovery actions. CERCLA and some state statutes operate on a retroactive, strict, joint, and several liability frame work that casts a rather wide liability net. For example, a municipality could be a responsible party under CERCLA if it owned or operated a property during the time in which hazardous substances were disposed of at the property. This could include, for example, situations where the municipality owned, leased, or operated a municipal landfill that at some point accepted hazardous substances, or where the municipality sent hazardous substances to a facility that later became a Superfund site due to improper management of hazardous substances. The creation of a redevelopment authority by a municipality may not shield the municipality from CERCLA liability for a property that the redevelopment authority has acquired. (See discussion of redevelopment authorities in Section 10.2.3.7).

If the municipality has reason to believe that it may have had past or present involvement with the contaminated property, it should get competent legal and technical advice to help assess its potential liability under CERCLA and other environmental statutes (refer to Chapter 7 and Appendix D for statute-specific discussions of liability).

Being a liable party for a property carries the responsibility of contributing to the cleanup, but that responsibility should not prevent a municipality from evaluating the

risks and benefits that might accrue from acquiring the property. There may be certain strategic benefits to the municipality in moving forward with the transaction. For example, if the municipality intends to acquire the property and use it for some public purpose, it may be beneficial to acquire the property prior to the cleanup so that the cleanup can be tailored to the future reuse. Ownership also provides greater control over the actual reuse of the property, so that the municipality can ensure that land use restrictions are being met and cleanup components (e.g., ground water monitoring wells, landfill caps) are not compromised.

Finally, just because the municipality has had past or present involvement with a contaminated property does not necessarily mean that it will be responsible for the costs of conducting a CERCLA cleanup. It should first consider whether EPA has taken or is likely to take a CERCLA response action involving that site. Sites where EPA has taken response actions under CERCLA are identified at: www.epa.gov/superfund/sites/cursites. Generally, EPA will take a CERCLA response action at seriously contaminated properties that are not likely to be addressed through some other action. The vast majority of contaminated properties are addressed through state voluntary cleanup programs or other regulatory programs such as RCRA or TSCA.

4.7.6 Environmental Conditions

What regulatory oversight occurred or is occurring for environmental investigations/studies and cleanup?

Environmental investigations and cleanups mandated through federal and state enforcement actions or automatically triggered by a law or regulation will impose a process of regulatory oversight. In many cases, regulatory agencies will be directly involved in that oversight; in others, such as with state voluntary cleanup programs, primary oversight may occur through a licensed environmental professional.

Regulatory oversight provides some level of assurance that the proper protocols and requirements are being met. Without this, regulatory agencies may not accept the findings and conclusions of investigations should they later be needed to support a cleanup determination. Insurance providers and financial lenders may also be reluctant to accept them. This also applies when utilizing past studies performed by previous owners or other parties. Environmental investigations deemed to be inadequate can usually be augmented through additional studies in the future, but the cost of re-mobilizing the environmental contractors and equipment, combined with other process inefficiencies, often makes this more expensive in the long run.

When conducting environmental investigations without regulatory oversight, it is important to, at a minimum, hire consultants that have extensive expertise with the protocols and other requirements that would apply should regulatory approval be needed. This requires an understanding of which federal and state cleanup statutes might apply.

Has the validity of data and other information or conclusions in previous environmental investigations/studies been evaluated?

While environmental reports previously prepared by other parties can provide valuable background information, they must be carefully scrutinized before utilizing them to draw conclusions regarding current environmental conditions. Even if the original studies

were well designed at the time they were conducted, the information may be outdated and no longer valid. Comparing data in one study to data in another can also be problematic if, for example, the sampling and analytical methodologies used in the two studies were different. There are many other considerations that can result in misleading or incorrect conclusions if not properly taken into account. Phase I and II ESA reports prepared by a municipality's consultants should explicitly address the use and validity of all data used.

Do existing environmental investigations/studies and cleanups address off-site sources of contamination?

Contamination that originates from an off-site source can impact redevelopment and have potential environmental liability implications. Potential liability under various federal cleanup statutes for off-site sources of contamination is discussed in Chapter 7 and Appendix D.

Even if the municipality or other entity is not legally liable for contamination from an off-site source, it is important to consider how this contamination might impact current or future uses. For instance, ground water contamination could render the ground water unusable for some time or, if volatile substances are involved, may create a vapor intrusion issue requiring that buildings be designed or retrofitted to prevent exposure. Restrictions may need to be imposed on soil excavation in order to protect construction workers from exposure to these volatile compounds, which may necessitate hiring specially-trained and licensed construction firms. Other steps could be necessary to ensure that protections from legal liability are not jeopardized from the use of the property or the failure to meet other obligations.

If it is determined through the due diligence process that contamination from an off-site source may be affecting the property, the state environmental agency or EPA should be contacted. If this represents a previously unknown contamination source, these agencies may take action to eliminate or bring that source under control, and compel the responsible parties to conduct cleanup. Depending on the extent to which the property is impacted by that contamination, the timeframe for bringing those source areas under control could be a factor in how the municipality chooses to proceed. If, on the other hand, there is an ongoing cleanup, the agencies may be able to provide information on cleanup status and discuss how it could impact the property's current and future uses.

Have hazardous substances or petroleum products associated with activities on the property been identified on adjacent properties, or are hazardous substances or petroleum products expected to migrate to adjacent properties?

Contamination associated with the property could be or come to be located on adjacent properties. This most commonly occurs when contaminated ground water or surface water migrates from the property, but can also be the result of other activities, such as the operation of manufacturing or processing equipment (e.g., rotary kilns, emergency venting of hazardous materials storage or production vessels, metal grinding equipment). Depending on the circumstances, a municipality may be liable under federal and state statutes for cleaning up this contamination. Potential liability under various federal cleanup statutes for contamination that migrates off-site is discussed in Chapter 7 and Appendix D. There may also be potential civil liability associated with third party damages (e.g., inability to use the adjacent property or associated resources for their

highest and best use, health related claims for exposure to hazardous substances and petroleum products).

Do the existing environmental investigations and cleanup address asbestos, lead-paint and other hazardous materials that were used in the construction of buildings and other structures?

The demolition and renovation of buildings containing asbestos and lead paint require additional procedures to be done safely and in accordance with applicable laws. It should not be assumed that a cleanup that occurs under federal or state regulatory cleanup programs (such as CERCLA or RCRA) will have addressed lead paint, asbestos, or other hazardous materials within a building. For example, under CERCLA response actions, asbestos contained within a building is not always remediated unless there is an actual or threatened release that could pose unacceptable risks to human health and the environment (e.g., a collapsed building that exposes friable asbestos).

Do existing environmental investigations and cleanups address all areas of the property?

As discussed in Section 4.7.5, multiple cleanup statutes could potentially apply to the property; or the environmental investigation or cleanup may not have comprehensively addressed all releases, types of waste, areas of the property, off property releases, etc. This may be the case with "removal" actions conducted under CERCLA (Removal actions are taken for spills or other releases that require a more time critical response, but often additional cleanup may be necessary). It is important for the municipality to understand the limits of the existing environmental investigations and cleanups involving the property.

Are there known or believed to be serious, immediate threats to human health and the environment associated with the environmental condition identified on the property?

In some cases, a threat to human health and the environment may be identified during the due diligence process that requires an immediate response action to prevent exposure by or hazard to area residents or workers on the property such as:

- Fire or safety hazards
- Levels of hazardous substance or petroleum product vapors that could cause an explosion or acute health effects
- Impacts to an active water supply well, water supply line, or surface water intake
- Impacts to surface waters, fish, wildlife, sensitive habitats, or endangered, threatened, or rare species
- Contained (e.g., tanks, drums) hazardous substances that pose a threat of release

Where an immediate threat is identified, regulatory state and federal agencies should be appropriately notified. If the municipality intends to take direct actions through, for example, its health or safety departments, the municipality should coordinate with the regulatory agencies to ensure that the potential risks associated with hazardous substances, petroleum products, or other materials are properly considered. Consultations with state and federal regulatory authorities may reduce the municipality's

exposure for environmental liability issues that could arise due to the initiation of emergency response actions.

For properties where cleanup occurred, are the existing activity and land use assumptions and cleanup goals consistent with planned or intended uses of the property?

Cleanup goals are typically based on land use assumptions made as part of the formal cleanup decision process. If the planned or intended uses at some later date are not consistent with these cleanup goals, it may be necessary to modify cleanup goals and the selected cleanup remedy (if the remedy is still ongoing) or to perform an additional cleanup. Depending on the nature of those modifications and the regulatory program under which cleanup decisions were made, this could involve considerable time and resources.

If a municipality or other entity such as a developer acquires the property and requests modifications to the cleanup, it will be responsible for demonstrating that the proposed modifications will be protective for the new uses. Similarly, the municipality or developer will likely bear the responsibility and expense of implementing the modifications unless applicable federal and state laws provide otherwise.

Are there health studies that suggest a possible link between releases from the property and adverse health impacts on humans?

Information concerning known or suspected current or historical health effects associated with activities on a property provides an insight into potential liability as well as potential cleanup needs for a property. Known health effects will be a major focus of cleanup and other actions on the property. Suspected health effects may be a driver for health monitoring or other studies to be conducted before decisions are made about a property. If a health study was conducted in conjunction with a CERCLA cleanup, coordination with local and state health departments routinely takes place and the results are made publicly available.

Are long-term cleanup action-related treatment systems or other engineered controls in place or planned?

Existing or planned cleanup action-related treatment systems or other engineered controls can have a significant impact on the use of a property. Engineered controls are the physical structures designed to monitor, treat, and prevent exposure to contamination. Examples of engineered controls include:

- Landfill soil caps
- Impermeable covers and liners
- Slurry walls
- Fences
- Bioremediation systems
- Ground water “pump & treat” and monitoring systems

Structures associated with engineered controls can impose physical obstacles and other restrictions that can reduce available space or influence the placement of buildings, roads, utilities, or other features needed for the future use. Providing long-term access for

monitoring and maintenance of engineered controls also must be considered. For certain engineered controls (such as protective caps), monitoring and maintenance could be required indefinitely, and cleanup action treatment systems will need to be maintained and monitored until defined cleanup objectives have been met. If a municipality takes on management responsibilities of a property through acquisition or leasing, it is generally advisable to establish a routine schedule for inspecting engineered controls to identify developing problems before they become more serious. Consideration should also be given to:

- Who is responsible for the long-term monitoring and maintenance of treatment systems or engineered controls, and what controls (e.g., consent orders, environmental covenants, escrow accounts) are in place to ensure that continued monitoring and maintenance is conducted
- The potential short- and longer-term impacts on the use of the property if the cleanup action treatment system or engineered controls fail
- The potential impacts the future use may have on the continued operation of these systems or controls
- The potential liability from claims that the municipality caused or contributed to the failure of a cleanup action treatment system or other engineered control (including the cost of defending against those claims)

If the implementation of a future reuse plan requires the relocation or redesign of existing engineered controls, or requires additional cleanup action, the costs of doing so may be borne by the municipality or other prospective owner of the property. These costs could be relatively minor in the case of planned treatment systems or controls, but could be significant for existing systems or controls. In addition, modifications to existing or planned cleanup action systems or controls will require regulatory approval that may extend the project timeline.

4.7.7 Environmental Restrictions

Are there environmental restrictions implemented or identified for the property?

When contamination remains on a property as part of a completed cleanup remedy or ongoing cleanup operations, institutional controls may be used alone or in combination with engineered controls to ensure protection of human health and the environment.

Other terms, such as “activity and use limitations” are sometimes used to describe these types of controls. Generally, institutional controls are designed to limit land or resource use (e.g., prohibitions on residential use or extraction of ground water) and ensure the integrity of engineered controls (e.g., restrictions on excavating soils above a landfill cap). As with engineered controls, institutional controls must be maintained, monitored, and evaluated for as long as unacceptable risks at a property are present. Institutional controls are generally divided into four categories:

- Proprietary controls (e.g., easement, real covenant, statutory covenant)
- Government controls (e.g., zoning, building permit, land use ordinance)

- Enforcement and permit tools (e.g., consent decree, permit, order)
- Informational devices (e.g., deed notice, government advisory, state registry)

Institutional controls don't always get the attention they deserve. They are an integral part of the overall cleanup and failure to comply with institutional controls can result in contaminant releases that could, for example, endanger human health or the environment, cause the party responsible to incur costs to repair any resulting damage, face lawsuits from injured parties, or even jeopardize eligibility for liability protections under CERCLA and other environmental statutes (discussed further in Chapter 7 and Appendix D). Vague, confusing, or unnecessarily restrictive or inflexible institutional controls can also create significant obstacles to redevelopment. This is more likely to be the case with older cleanups. In more recent years, EPA and the states have been taking a hard look at the issues associated with the use of institutional controls and ways to make them more effective and efficient.

What is an Institutional Control?

An institutional control is a legal or administrative restriction on the use of, or access to, a contaminated property to protect: 1) the health of both humans and the environment; and 2) ongoing cleanup activities and to ensure viability of the engineered controls.

If institutional controls already exist, it is important that the municipality understands the obligations they impose and how they might be viewed by future owners, developers and property users. In some situations, EPA or the state may be willing to modify existing institutional controls to facilitate the appropriate reuse of the property providing the cleanup will not be compromised. Where institutional controls are being considered by the regulatory agencies but have not been finalized, there may be opportunities for municipalities to weigh in on the final form they will take. The EPA institutional control guidance referenced at the end of this section will better prepare local officials to work with EPA and state officials in crafting effective institutional controls.

Irrespective of whether they own or lease the property, municipalities often play a key role in implementing, monitoring, and enforcing certain institutional controls — particularly those that they have the legal authority to implement (e.g., zoning restrictions, building or excavation permits, well construction permits). Municipalities also can work proactively with developers, prospective buyers and tenants, and other parties to ensure that institutional control requirements are understood and properly integrated into the planning and future reuse of the property. The case study of Midvale, Utah on the following page highlights how institutional controls are being effectively implemented for a large redevelopment project at a Superfund site.

Additional information on institutional controls can be found in EPA's interim final guidance *Institutional Controls: A Guide to Implementing, Monitoring, and Enforcing Institutional Controls at Contaminated Sites (November 2010)*: www.epa.gov/superfund/policy/ic/pdfs/PIME-IC-Guidance-Interim.pdf . EPA's institutional controls Web site is: www.epa.gov/superfund/policy/ic/index.htm.

Case Study: Midvale, Utah
Effective Use of Institutional Controls for a Large Redevelopment Project

The 446-acre Midvale Slag Superfund site is located about 12 miles south of Salt Lake City in Midvale, Utah. Smelting occurred on and near the site from 1871 until 1958. These activities resulted in heavy metal and other contamination to the surface water, ground water and soil. EPA conducted extensive cleanup operations that included the consolidation and on-site capping of contaminated soils and other material, and also required institutional controls restricting land use.

Luxury town house complex

The site represented a serious dilemma and an important opportunity for the City. Midvale is a rapidly growing bedroom community for Salt Lake City and much of Midvale's available land for expansion is contained within the site. Using funds provided by EPA, a reuse plan titled the *Bingham Junction Reuse Assessment and Master Plan* was prepared by the City of Midvale in conjunction with the community, landowners, and other stakeholders. This plan envisioned a sustainable community that included residential, commercial, and recreational uses. The City of Midvale subsequently enacted zoning changes to reflect the reuse plan.

Among the primary barriers to implementing this reuse plan were the institutional controls prescribed by the Superfund cleanup that required the implementation of deed restrictions. Because the establishment of these institutional controls predated the reuse planning process, they were based on a now-obsolete industrial use scenario. In many areas of the site, the institutional controls would have prevented the reuse plan from being realized.

Recognizing the importance to the community of revitalizing the site, EPA and the Utah Department of Environmental Quality worked with the City of Midvale and the other stakeholders to establish institutional controls more specifically tailored to the intended reuse, but which continue to ensure that the site will remain protective of human health and the environment. Importantly, the City of Midvale created a full-time position to oversee the implementation and monitoring of the institutional controls. This includes serving as a liaison to the developers, owners, tenants, and general public to help communicate the institutional control requirements and to resolve any related issues that might arise. This position has been instrumental in addressing concerns that might otherwise have been a serious disincentive to redevelopment.

A great deal of redevelopment progress has occurred at the site. As of fall 2010, over 860 residential units have been built, an additional 350 were under construction, and major commercial and office facilities are operating or under construction. Efforts are also underway to restore the Jordan River and riparian areas that transect the site and to complete a linear park that links up with the Greater Salt Lake Area trail system. A light rail that will service this area is also planned.

A fact sheet describing the site and providing contact information is available at: www.epa.gov/superfund/programs/recycle/pdf/midvale.pdf.

Worksheet #4: Due Diligence

Project Name/Identifier

Property Description

- Briefly describe the property including size of property and number of buildings.

All Appropriate Inquiries [Section 4.7.1]

- Have the requirements for all appropriate inquiries been met? [Y/N/Unknown]. Describe.

Property History [Section 4.7.2]

- What are the prior land uses and activities?
- Who were the prior owners and tenants of the property?
- Are there past development or reuse plans prepared for the property that can inform the due diligence or reuse planning process? [Y/N/Unknown]. If yes, summarize relevant information and findings.
- Describe any other relevant factors relating to property history that should be considered during the evaluation and reuse planning process.

Current Property Status [Section 4.7.3]

- What is the ownership status (e.g., private, abandoned, publicly owned)?
- Is there clear title to the property? [Y/N/Unknown]. If no or unknown, describe.
- What is the current land use of the property?
- What is the current zoning and relationship of the property to local master plans and other planning studies?
- Are buildings, structures or areas of the property of historical importance? [Y/N/Unknown]. Describe.
- Are there other relevant factors (e.g., physical condition of structures, access to property, ecological issues) relevant to property status that should be considered during the redevelopment planning?

Property Appraisal [Section 4.7.4]

- What is the appraised value of the property?

- Describe any other relevant factors (e.g., limitations or conditions associated with an appraisal, significant variability in appraisals) relating to property appraisal that should be considered during the redevelopment planning.

Regulatory Status [Section 4.7.5]

- What federal and/or state cleanup statutes are potentially applicable to the property?

- Have federal- or state-mandated cleanup actions already been or are likely to be conducted at the property? [Y/N/Unknown]. Describe.

- Have potentially responsible parties been identified for the property? [Y/N/Unknown]. Describe.

- Is the municipality already or likely to be a potentially responsible party? [Y/N/Unknown]. Describe.

- Describe any other relevant factors (e.g., specific regulatory requirements, permits, violations) relevant to regulatory status that should be considered during the redevelopment planning.

Environmental Conditions [Section 4.7.6]

- Is there a known or suspected environmental condition on the property? [Y/N/Unknown]. If yes, provide a brief summary of each known or suspected environmental condition.

- Are there data gaps either identified or indicated in the Environmental Assessments? [Y/N/Unknown]. Describe.

- What regulatory oversight has occurred or is occurring for environmental investigations/studies and cleanup?

- Has the validity of data and other information or conclusions in previous environmental investigations/studies been evaluated? [Y/N/Unknown]. Describe.

- Do existing environmental investigations/studies and cleanups address off-site sources of contamination? [Y/N/Unknown]. Describe.

- Have hazardous substances associated with activities on the property been identified on adjacent properties or are hazardous substances expected to migrate beyond the property boundaries? [Y/N/Unknown]. Describe.

- Do existing environmental investigations/studies and cleanups address asbestos, lead-paint and other hazardous materials that were used in the construction of buildings and other structures? [Y/N/Unknown]. Describe.

- Do existing environmental investigations/studies and cleanup address all areas of the property? [Y/N/Unknown]. Describe.

- Are there known or believed to be serious, immediate threats to human health and the environment associated with the environmental condition identified on the property? [Y/N/Unknown]. Describe.

- For properties where cleanup has occurred, are the existing activity and land use assumptions and cleanup goals consistent with the planned or intended uses of the property? [Y/N/Unknown]. Describe.

- Are there health studies that suggest a possible link between releases from the property and adverse health impacts on humans? [Y/N/Unknown]. Describe.

- Are long-term cleanup-related treatment systems or other engineering controls in place or planned? [Y/N/Unknown]. Describe.

- Are there other factors (e.g., significant additional assessment requirements, restrictions on obtaining additional information) relevant to environmental conditions status that should be considered during the redevelopment planning? [Y/N/Unknown]. Describe.

Environmental Restrictions [Section 4.7.7]

- Are there environmental restrictions implemented or identified for the property? [Y/N/Unknown]. Describe.

- Describe any other relevant factors (e.g., long-term stewardship requirements, condition of the restriction) relevant to environmental restrictions that should be considered during the redevelopment planning.

Other Information

- Has a cleanup action plan been developed for the property? [Y/N/Unknown]. Describe.

If yes, is the proposed cleanup action consistent with the potential future use? [Y/N/Unknown]. Describe.

- Describe any other relevant factors relevant to the property that should be considered during the evaluation and reuse planning process.

Worksheet Completed By:

Name: Title:

Representing: Date:

5 Redevelopment Obstacles

5.1 General

This Chapter:
Discusses the identification of potential redevelopment obstacles through the due diligence process

Information obtained through the due diligence process enables a municipality to identify potential redevelopment obstacles for a property. These redevelopment obstacles can include those associated with the environmental conditions, as well as those commonly encountered through traditional real estate due diligence (e.g., title encumbrances, easements, inadequate infrastructure). Resolving these obstacles and the project risks they present will be key to addressing the four core questions and completing the PREPARED approach outlined in Section 1.5. Chapter 11 discusses this exercise more fully. Chapters 6 through 10 will help the municipality identify potential sources of project risk and ways to manage those risks.

The redevelopment obstacles will often depend on the property recovery action being considered. Obstacles may, however, be common to more than one property recovery action. Worksheet #5 at the end of this chapter can be used by the municipality to identify and prioritize the redevelopment obstacles applicable to each property recovery action (available for download at www.epa.gov/region1/brownfields/prepared)..

5.2 Identifying Redevelopment Obstacles

There are many combinations of redevelopment obstacles and issues that could apply to contaminated properties. Similarly, the range of actions that a municipality might take to resolve them will vary widely based on the particular circumstances surrounding the property, the municipality's comfort with taking risks, available resources, and other factors.

The process of identifying redevelopment obstacles is iterative. As due diligence proceeds and more information is obtained, certain redevelopment obstacles may be eliminated or revised, or new obstacles may be identified. As obstacles are identified, they should be prioritized on the basis of their impact on the project.

Figure 5.1 lists some common redevelopment obstacles relating to a property's environmental conditions.

Figure 5.1 - Common Redevelopment Obstacles Relating to Environmental Conditions, and Potential Causes or Contributing Factors

REDEVELOPMENT OBSTACLE	POTENTIAL CAUSE OR CONTRIBUTING FACTORS
Delays and costs to resolve complicated or uncertain ownership or title	• Property abandoned, corporation dissolved, multiple property owners, tied up in probate, etc. • Uncooperative owner (e.g., "mothballed" property). • Liens, easements or other encumbrances.
Insufficient information on the environmental conditions and/or uncertain cleanup costs	• Incomplete, outdated, or technically deficient studies. • Past environmental reports, studies, and other information prepared by the owners or other parties are not publicly available. • Inability to gain access for environmental investigations and other studies. • Little or no regulatory oversight on past investigations/cleanups; this raises questions about adequacy and finality (e.g., Will the regulatory agencies require additional cleanup in the future?). • Cleanups to date did not address all regulatory programs and statutes that could apply (e.g., PCBs under TSCA, petroleum products under UST). • Potential off-property sources of contamination (especially ground-water related) could impact property use. Gaining information on these source areas can be difficult and cleanup action may not be within the direct control of the municipality or potential developer. • Technically complex cleanups that are difficult to implement or which may require extensive future modification if the cleanup goals are not being met (e.g., contamination in bedrock fractures).
Delays due to extensive environmental investigation/cleanup activities or uncertainties in the regulatory process	• Complex investigations and cleanups can take many years. • Timeframes can depend on which regulatory programs or statutes are involved. • Administrative requirements can be long and prescriptive (e.g., permitting and associated public participation requirements). • Modification of existing remedies may be necessary if the approved cleanup standards and remedy were based on land use assumptions different from what is now intended.
Uncertain responsibility for operating and maintaining engineering controls	• For existing cleanup, inadequate review of cleanup agreements. • For future cleanup, may be dependent on which federal or state cleanup authority is used.
Uncertain community support for specific reuse proposals or the use of municipal funds and other resources to facilitate private redevelopment projects	• Inadequate community engagement and/or planning.

Physical and operational constraints on property use due to engineered or institutional controls	• Physical obstructions resulting from engineered controls such as treatment equipment, capped areas, monitoring wells, etc. • Land use restrictions on excavation and ground water use, prohibitions on certain use categories (e.g., residential, recreational, child care facilities.), notification requirements. • Many treatment systems operate for very long periods of time (e.g., ground water treatment systems can continue for decades) and engineered controls could remain in place indefinitely. • Future modification to the approved remedy due to design flaws or inability to achieve cleanup objectives may result in disruption to ongoing land use activities (e.g., a parking lot built on a landfill may be torn up in order to repair damage to the protective cover due to erosion or subsidence).
Cleanup costs greatly exceed the fair market value of the property (i.e., "upside down" property)	• Owner is unwilling to perform cleanup action or is unable to do so due to inadequate resources. • EPA and the state have not targeted the property for cleanup under CERCLA, which could provide resources through Superfund or require responsible parties to perform environmental investigations and cleanup.
Uncertain legal liability under CERCLA or other federal and state environmental statutes	• Inadequate project risk analysis.

Difficulty in obtaining affordable financing or insurance for property development	• Inadequate characterization of contamination
	  o Uncertain cleanup costs.
	  o High potential for unanticipated contamination issues.
	• Existing or planned remedies require high maintenance or are otherwise prone to failure.
	• Lack of regulatory agency oversight or approvals.
	• Inadequate plan for managing project risk.
	• Uncertain regulatory process.
	• Lender lacks expertise with environmental statutes, particularly those provisions dealing with lender liability.
	• "Upside-down" properties.

Worksheet #5: Identification and Prioritization of Redevelopment Obstacles associated with a Property Recovery Action

First column: Record a general description of the redevelopment obstacle (See Figure 5.1 for examples). The description should be concise, but include sufficient information to describe the redevelopment obstacle and any specific concerns.

Second column: Assign a priority to the redevelopment obstacle based on the relative importance and risks posed by the obstacle. The following criteria are used in this workbook to define "priority":

- **High** priority obstacles are deal breakers (i.e., necessary to resolve) that would cause the property recovery action to be discarded if the potential liability or risk associated with the redevelopment obstacle are too great and acceptable risk management tools could not be identified to adequately reduce the risks.
- **Medium** priority obstacles would be those that are important, but not critical, to resolve and could cause the property recovery action to be discarded if the potential liability or risk associated with the redevelopment obstacle are too great and acceptable risk management tools could not be identified to adequately reduce the potential liability or risk. A property recovery action would be more likely to be discarded if there are a number of medium risk obstacles.
- **Low** priority obstacles would be those that are not critical to resolve and would not cause the property recovery action to be discarded even if the risk sensitivity could not be reduced through risk management tools.

High priority obstacles are generally evaluated first. If risks associated with high priority obstacles are not acceptable and cannot be adequately addressed by a risk management option, then further evaluation of the property recovery action and associated obstacles may not be necessary.

Third column: Summarize any additional information or details that may be important in understanding or evaluating the redevelopment obstacle (e.g., potential causes or contributing factors, critical information gaps).

Worksheet #5: Identification and Prioritization of Redevelopment Obstacles

Property Recovery Action: _____

Describe potential redevelopment obstacles/issues	*Priority*	*Additional information*

6 Assessing Project Risk

6.1 General

This Chapter:
Briefly describes the types of project risk that could be associated with a redevelopment project

Risk assessment involves the identification and prioritization of risks that could adversely impact the achievement of the municipality's project goals. These **project risks** include **legal liability**, **financial risk**, and **community issues**. There may be additional risks and other considerations not specifically addressed in this workbook that will need to be factored into the evaluation and decision process. The risk management framework that is described should, however, apply equally well in evaluating those issues.

Worksheets #6 and #7 (see Chapter 11) can be used to document potential risks associated with each property recovery action. The bases for assessing these risks will be described in more detail in Chapter 7 (Potential Liability under Federal and State Cleanup Statutes), Chapter 8 (Project Economics and Financial Analysis) and Chapter 9 (Community Issues).

6.2 Environmental Liability

The generic term "environmental liability" is used to describe the various obligations and responsibilities that can result from federal, state, or local environmental statutes — and the regulations and ordinances based on those statutes — as well as common law liabilities that can derive from negligent behavior or activities. Common law liability can also encompass contractual disputes arising through indemnification agreements, service contracts relating to the cleanup and management of a particular property, or other legal agreements. A general introduction to environmental liability can be found in "*A Primer for Local Governments on Environmental Liability*" prepared jointly by the International City/Council Management Association and the Public Entity Risk Institute (available at: www.lgean.org/documents/primer.pdf).

The discussion of environmental liability in Chapter 7 will primarily focus on federal environmental cleanup statutes with some general reference to relevant state laws and programs, such as voluntary cleanup programs and property transfer laws. Common law liability is an area of law well beyond the scope of this workbook; however, the workbook will at times point out where common law could impact the evaluation and decision processes.

[Environmental liability] must be viewed in the context of the entire project – specific facts concerning the project will dictate the significance of environmental liability for a particular property or project.

While environmental liability is a key consideration when evaluating property recovery actions, it must be viewed in the context of the entire project — specific facts concerning the project will dictate the significance of environmental liability for a particular property or project. For example, if the contamination associated with the property is very limited or poses minimal risks to human health or ecological systems, then environmental liability may not result in significant project risks. If, on the other hand, there is

extensive contamination that has not been adequately addressed, then the consequences of taking on environmental liability are much greater and need to be carefully managed. Determining if there is environmental liability is only a first step (albeit an important one) in the evaluation of project risks.

6.3 Financial Risk

Financial risk is present in all development projects. For a private developer, financial risk generally relates to profitability (i.e., whether their investment will be able to provide a reasonable rate of return). For a municipality looking to facilitate the redevelopment of an underutilized or abandoned property, often the main focus is on limiting the amount of municipal funds that are needed and ensuring that those funds are used to maximum public benefit. The financial risk to the municipality is that the necessary funds will be significantly higher than what had been expected or, worse, that despite the municipality's investment the desired redevelopment does not occur. For this reason, a municipality's financial risk is often closely tied to the financial risk of a potential developer; a project that carries a high financial risk to a developer is far less likely to be pursued or ultimately successful. Impaired marketability of a property contributes to the municipality's financial risk, and environmental issues, left unaddressed, can adversely impact marketability.

It is also worthwhile to consider the relationship between a municipality's environmental liability and its financial risk. Chapter 7 discusses a municipality's potential liability under various federal environmental statutes and explains the provisions under which municipalities may minimize or avoid liability. Oftentimes, however, the municipality's real concern boils down to the financial risk resulting from its environmental liability. The issue for the municipality may not be environmental liability per se, rather it is whether that environmental liability results in the municipality's share of the cleanup, redevelopment and other costs exceeding what it is willing to assume. In this regard, financial risk, not environmental liability, may be more likely to influence the municipality's decision on whether or not to proceed with a property recovery action.

For these reasons, understanding the project economics from the perspectives of both the municipality and potential developers is necessary to assess financial risk. Chapter 8 provides an overview of some of the factors that influence project economics and describes a useful tool that can be used to estimate the financial viability of potential redevelopment scenarios.

6.4 Community Issues

As the term is used in this workbook, community issues refer to neighborhood or local concerns regarding the current conditions of the property, or the cleanup and redevelopment being considered. These concerns often relate to environmental justice issues such as the potential social, economic, and/or health impacts of contamination; the effects of economic blight on a neighborhood; or the burdensome effects of redevelopment plans such as increased pollution, traffic, congestion or gentrification. In some cases, the decision not to take action on a contaminated or underutilized property

may itself raise significant community issues by fostering the impression that these issues are not a priority for the municipality.

Addressing community issues first requires identifying those issues. As will be discussed in Chapter 9, community engagement is an important tool for accomplishing this. Community engagement can also be used to communicate the tradeoffs that the municipality may need to balance when making decisions regarding the cleanup and reuse of contaminated property. This contributes to more productive discussions that can help build community support for those actions and reduces the likelihood that community opposition will delay or even derail a project. If the potential for community opposition is high enough, developers and investors could be driven away. The support of the community becomes especially important if the municipality plans to access the property to conduct environmental assessments, acquire or lease the property, or take other actions that might require the municipality to expend public funds or incur significant financial and other risks. To put it simply, a positive project *pro forma* may not mean a thing if the needs and concerns of the community are not being met and the community stakeholders oppose the project.

7 Potential Liability under Federal and State Cleanup Statutes

7.1 General

This Chapter:
Discusses regulatory liability associated with CERCLA, RCRA, and certain provisions of TSCA and the CAA

Assessing potential liability under federal and state cleanup statutes is very fact specific and requires a thorough understanding of the applicable laws, property conditions and operating circumstances. The discussions in this chapter and Appendix D are intended to provide municipalities with a general understanding of environmental liability as it relates to various environmental laws commonly associated with the investigation and cleanup of contaminated properties.

This chapter will focus on key EPA-administered statutes such as CERCLA, RCRA (Subtitles C, D and I), and certain provisions of TSCA and the Clean Air Act (CAA). Because state laws can vary widely, it is not practical for this workbook to discuss state laws and programs in anything other than broad generalities. The EPA manual *State Brownfields and Voluntary Response Programs: An Update from the States* that was referenced in Chapter 1 provides a synopsis of state laws and programs. The questions posed in this section and Appendix D should help guide a municipality's inquiries into state requirements.

Once it is determined that a particular statute could potentially apply to a property, the municipality should consider how a given property recovery action could affect its liability under that statute. This chapter discusses how the federal cleanup statutes might generally be relevant and summarizes key statutory exclusions/defenses and other provisions and policies relating to those statutes. Appendix D provides a response to some specific questions that a municipality may have regarding potential liability under each of the federal statutes discussed in Chapter 7. Table 7.1 is a directory of where these discussions can be found in this workbook.

Table 7.1 – Directory of Statute-Specific Overviews and Discussions

Statute	An overview discussion can be found in:	Responses to specific liability questions can be found in:
CERCLA	Section 7.2. starting on page 61	Appendix D, Section I, starting on page 161
RCRA (Subtitle C)	Section 7.3.1, starting on page 75	Appendix D, Section II, starting on page 171
RCRA (Subtitle D)	Section 7.3.2, starting on page 81	Appendix D, Section III, starting on page 177
RCRA (Subtitle I)	Section 7.3.3, starting on page 84	Appendix D, Section IV, starting on page 180
TSCA (Title I) (PCB only)	Section 7.4, starting on page 88	Appendix D Section V, starting on page 183
CAA – NESHAP (Asbestos only)	Section 7.5, starting on page 92	Appendix D, Section VI, starting on page 186

7.2 CERCLA

Superfund is the name given to the environmental program established to address hazardous waste sites under the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (CERCLA — pronounced SIR-kla). Superfund sites are often excellent candidates for reuse because they have been extensively investigated, remediated, and publicly vetted in a transparent, well-documented process. This helps to minimize uncertainty regarding the environmental conditions, which generally enhances the marketability of a property. In addition, the 2002 Brownfields Amendments to CERCLA and efforts by EPA to clarify and communicate CERCLA liability protections have provided municipalities with important tools for understanding and managing potential CERCLA liability. It should also be noted that federal CERCLA cleanups are conducted at a relatively small percentage of all known contaminated properties. EPA is most likely to take CERCLA action at high priority sites where the cleanup cannot be adequately addressed by state or local programs.

It should also be noted that EPA CERCLA cleanups are conducted at a relatively small percentage of all known contaminated properties. EPA is most likely to take CERCLA action at high priority sites where the cleanup cannot be adequately addressed by state or local programs.

7.2.1 Overview of CERCLA

CERCLA was enacted by Congress on December 11, 1980 in the wake of the discovery in the 1970s of toxic waste dumps threatening public health. The law provides EPA broad federal authority to respond to releases or threatened releases of hazardous substances and pollutants and contaminants that may endanger public health or the environment. It also allows EPA to compel responsible parties to perform cleanups or to reimburse the government for cleanups performed by EPA. CERCLA further establishes a trust fund (known as the "Superfund") to provide for cleanup (e.g., when no responsible party can be identified). The trust fund was initially funded through a tax on the chemical and petroleum industries authorized by CERCLA. That tax authorization has since expired. Currently, CERCLA cleanups that are

Key CERCLA Terms

The following are not legal definitions. They are intended to provide a basic understanding of the general meaning and usage of these terms.

Hazardous substances are those substances specifically designated as hazardous under CERCLA and those which are incorporated from other statutes, including RCRA hazardous wastes and hazardous constituents. CERCLA excludes petroleum from the definition of hazardous substances.

A ***Potentially Responsible Party*** **(PRP)** refers to an entity that may have CERCLA liability for a site.

*[Note: **Responsible party** is used generically throughout this workbook to refer to an entity that has or may have liability under any federal or state statute.]*

not paid for by the responsible parties are funded by Congressional appropriations to EPA (these are generally referred to as "fund-lead" cleanups).

EPA is authorized to implement CERCLA in all 50 states and U.S. territories. Under CERCLA, EPA involves states and ensures community involvement. Superfund site identification, monitoring, and response activities in states typically are coordinated with the state environmental protection or waste management agencies.

The Superfund cleanup process is very comprehensive. CERCLA authorizes two general kinds of response actions:

- **Removal Actions** generally are shorter-term actions taken to clean up or address releases

- **Remedial Actions** generally are longer-term actions that are designed to significantly reduce the dangers associated with releases or threats of releases of hazardous substances that pose an unacceptable risk to human health or the environment. These actions normally are conducted only at sites listed on EPA's National Priorities List (NPL) (See text box this page).

The National Priorities List

The National Priorities List is a list of EPA's national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States. Generally speaking, it includes the most seriously contaminated sites identified for long-term cleanup. The listing process is governed by statute and regulation.

When EPA proposes to add a site to the NPL, the Agency engages in a formal rule-making process which includes public notice in the Federal Register and a period of time during which any member of the public may comment on the proposed listing. In addition to notice in the Federal Register, EPA generally issues notice of the public comment period to the community through local media resources.

EPA must respond to all public comments received during the comment period. Once a site is listed on the NPL, EPA typically issues fact sheets or flyers to provide important information to the community in the vicinity of the site.

The blueprint for the Superfund program is the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), a regulation federal agencies use when responding to hazardous substance releases.

Additional information about the Superfund program is available on EPA's Web site at: www.epa.gov/superfund. For information concerning Superfund liability issues and enforcement, visit EPA's Superfund enforcement Web site at: www.epa.gov/compliance/cleanup/superfund/index.html. Superfund enforcement policy and guidance documents, arranged by topic, are available at: http://cfpub.epa.gov/compliance/resources/policies/cleanup/superfund. A fact sheet titled *CERCLA Liability and Local Government Acquisitions and Other Activities* (December 2010) is available at: www.epa.gov/compliance/resources/publications/cleanup/brownfields/local-gov-liab-acq-fs-rev.pdf.

7.2.2 Liability under CERCLA

Under CERCLA, EPA has the authority to issue administrative orders to parties to compel cleanup for any release of hazardous substances and to enter into settlements to obtain their cooperation in cleaning up a site. The statute explicitly names four groups as potentially liable for the costs of a cleanup:

- Owners or operators of a facility
- Owners or operators of a facility, if they owned or operated the property at the time of disposal of a hazardous substance
- Those who arranged for treatment or disposal of hazardous substances at a facility (in most cases, the generators)
- Transporters of hazardous substances who selected the disposal site

Assessing CERCLA Liability Key Questions

The following key questions related to CERCLA liability are addressed further in Appendix D:

- Could the municipality incur liability under CERCLA by acquiring or leasing a property?
- Could the municipality be liable under CERCLA for contamination that originates from an off-property source?
- How does sub-dividing or parceling a CERCLA site affect liability under CERCLA?
- Even if the municipality is not liable under CERCLA for a particular property, could it be responsible for maintaining institutional controls, engineering controls, or operating on-going treatment systems if it acquires or leases the property?
- Even if the municipality is not liable under CERCLA for a particular property, could it be responsible for reimbursing EPA for "unrecovered" CERCLA response costs if Superfund liens have been placed on the property?
- Could the municipality incur liability under CERCLA by performing environmental investigations, cleanups, building demolition, or physical improvements on a property it does or does not own or lease?
- Are municipalities protected from third parties seeking to recover costs they spent to perform CERCLA environmental investigations and cleanup involving the property?

CERCLA liability is retroactive, joint and several, and strict. Retroactive liability means that parties may be held liable for releases that occurred prior to the enactment of the statute in 1980. Joint and several liability means that any one potentially responsible party may be held liable for the entire cleanup of the site. Strict liability means that liability is without regard to fault or intent. If a party falls into one of the four named categories in the statute, the party is liable whether or not its actions were consistent with industry standards and whether or not its actions were in violation of any existing law. However, defenses to and exemptions from liability are discussed in Section 7.2.3.

EPA has developed an array of enforcement tools to achieve cleanup at Superfund sites. Those tools include administrative orders, consent orders, consent decrees, and other types of settlement documents. When potentially responsible parties cannot be easily identified or located or when they are not able to contribute resources, EPA may clean up the site itself. If EPA performs the cleanup, EPA may act to recover its costs from responsible parties once the response action has been completed.

7.2.3 CERCLA Liability Defenses, Exemptions, and Policies

7.2.3.1 General Discussion

As described in Section 7.2.2, owners of property as well as persons who were owners at the time of the disposal of hazardous substances on the property may be liable under CERCLA for the costs of the cleanup of the property. In order to assess its potential legal risk under CERCLA, a municipality must understand the statutory provisions that allow it to acquire property without incurring CERCLA liability. An important potential benefit of CERCLA liability protections is possible eligibility for federal brownfields grant funding (i.e., potentially liable parties under CERCLA are generally not eligible for brownfields funding). CERCLA liability protections will be discussed in some detail below; however, it may be useful to first highlight some general points.

First and foremost, a municipality should never consider acquiring any property without conducting due diligence on that property prior to acquisition (for more on due diligence, see Chapter 4). There are a number of important risk management reasons for conducting due diligence. For example, due diligence allows a municipality to determine what is known about the extent of contamination on a particular property and to consider the long-term obligations necessary to protect public health and the environment.

CERCLA Provision	Is AAI Required?
"Involuntary Acquisition by a Municipality" Exclusion	No, but recommended
Bona Fide Prospective Purchaser	Yes
Third Party Defense ("Innocent Landowner")	Yes
Contiguous Property Owner	Yes

Figure 7.2 – CERCLA provisions requiring AAI prior to acquisition

Also, due diligence is an important concept under CERCLA. Most of the liability protections under CERCLA require that all appropriate inquiries be performed prior to the acquisition of property (for more on all appropriate inquiries see Section 4.7.1). Figure 7.2 is a summary of which CERCLA provisions discussed in this chapter specifically require that all appropriate inquiries be conducted prior to property acquisition to qualify for protection from liability under CERCLA.

The bona fide prospective purchaser provision enacted in 2002 represents a significant change in CERCLA. It allows a party to purchase property <u>with knowledge of contamination</u> and not be held liable for past contamination under CERCLA as long as that party meets the criteria described in the bona fide prospective purchaser provision. The bona fide prospective purchaser provision is discussed in greater detail below.

Several CERCLA liability protections delineate requirements, often broken into two categories referred to as **threshold criteria** and **continuing obligations**, which must be met to maintain the liability protection. Threshold criteria are the requirements that must be met in order to "qualify" for the liability protection, while continuing obligations are those requirements that may require additional affirmative steps to ensure that the

protections survive over time. Continuing obligations might include requirements to provide access needed to implement and maintain EPA response actions, and to take reasonable steps to prevent releases and limit exposure to previous releases. Threshold conditions and continuing obligations applicable to specific CERCLA provisions are described below. Again, all threshold conditions and continuing obligations must be met if the municipality is to be protected from CERCLA liability. These CERCLA landowner liability protections are also discussed at: www.epa.gov/compliance/cleanup/revitalization/landowner.html.

7.2.3.2 Specific CERCLA liability protections

This section discusses three specific CERCLA liability protections that are especially relevant to municipalities: (1) involuntary acquisition of property by a municipality; (2) bona fide prospective purchasers provision; and (3) the eminent domain provision of the third party defense. A fourth provision, often referred to as an enforcement bar, is discussed in Section 7.2.4. The method of property acquisition will effect which of those protections will apply. See Table 7.3.

Table 7.3 – Applicability of CERCLA Liability Provisions Based on the Method of Acquisition

Key CERCLA Liability Protection Provisions	Methods of Municipal Property Acquisition							
	Tax Foreclosure	Bankruptcy	Escheat	Eminent Domain	Purchase	Inheritance/Bequest	Abandonment	Gift/Donation
Involuntary Acquisition § 101(20)(D)	●	●	●	○			●	
Bona Fide Prospective Purchaser § § 101(40) and 107(r)(1)	●	●	●	●	●	●	●	●
Third Party Defense § § 107(b)(3) and 101(35)(A)			●	●	○	●		
Enforcement Bar § 128(b)	●	●	●	●	●	●	●	●

● – *Could apply to local governments*

○ – *Could apply to local governments under certain circumstances*

1. Involuntary acquisition of property by a municipality

The definition of an owner or operator in CERCLA excludes states or municipalities acquiring property involuntarily. Involuntary acquisitions include property acquisitions through bankruptcy, tax delinquency, abandonment, or other circumstances in which the municipality is acquiring title by virtue of its sovereign function.

The exclusion does not apply to any municipality that has caused or contributed to the release or threatened release of hazardous substances before or after acquisition of the property. Property donated to a municipality, and property acquired by eminent domain, are not considered involuntary acquisitions (however, other forms of liability relief may apply to such acquisitions).

The statute does not require the owner to conduct all appropriate inquiries to receive the benefit of the exclusion from liability for involuntary acquisitions as set forth in the definition of owner or operator. However, there are many other important reasons to perform some level of due diligence prior to property acquisition, leasing, or taking any other property recovery actions.

Involuntary acquisition is described further in Section III.C.1 of EPA's Revitalization Handbook. Also, refer to EPA's fact sheet *The Effect of Superfund on Involuntary Acquisition of Contaminated Property by Government Entities* (December 1995) (www.epa.gov/compliance/resources/policies/cleanup/superfund/fs-involacquprty-rpt.pdf).

2. Bona Fide Prospective Purchaser (BFPP) Provision

The BFPP provision was added to CERCLA through the 2002 Brownfields Amendments and applies even to purchasers who knew or had reason to know of contamination on the property. The BFPP provision protects parties from CERCLA liability as long as they meet certain threshold conditions and continuing obligations. The threshold conditions are:

- The purchaser must conduct all appropriate inquiries prior to acquiring the property;
- The property must be acquired after January 11, 2002;
- All disposal of hazardous substances must have occurred prior to the acquisition; and
- The purchaser must not be potentially liable or have an affiliation with a party that is potentially liable for response costs at the facility.

The purchaser also must meet certain continuing obligations:

- Not impeding the performance of a response action or natural restoration;
- Complying with land use restrictions and not impeding the effectiveness and integrity of institutional controls;
- Taking reasonable steps to prevent releases and to limit exposure to previous releases;
- Providing cooperation, assistance and access;

- Complying with information requests and administrative subpoenas; and
- Providing legally-required notices.

As long as the acquisition occurs after January 11, 2002, the BFPP provision is available to municipalities to provide CERCLA liability protection for acquisition methods that are not considered involuntary acquisitions.

The BFPP provision is described further in Section III.A.3 of EPA's Revitalization Handbook. Appendix A ("Common Elements Guidance") of the handbook provides a detailed discussion of the threshold conditions and continuing obligation requirements. The Common Elements Guidance is available at: www.epa.gov/compliance/resources/publications/cleanup/brownfields/handbook.

Because of the important role that leasehold interests can play in facilitating the cleanup and reuse of contaminated properties, EPA also has issued guidance explaining the applicability of the BFPP liability protection to tenants. The guidance addresses those circumstances in which EPA may exercise its enforcement discretion not to enforce against two categories of tenants. The guidance also discusses how EPA will treat those tenants if the landlord loses its BFPP status during the tenancy. The two categories of tenants are:

- A tenant whose lease gives sufficient indicia of ownership to be considered an "owner" and who meets all of the statutory requirements regarding BFPPs
- A tenant of an owner who is a BFPP

EPA's decision not to enforce CERCLA liability does not preclude the risk of a third party suit.

The EPA guidance titled *Enforcement Discretion Guidance Regarding the Applicability of the Bona Fide Prospective Purchaser Definition in CERCLA §101(40) to Tenants* (January 2009) can be found at: www.epa.gov/compliance/resources/policies/cleanup/superfund/bfpp-tenant-mem.pdf. The factsheet titled *Enforcement Discretion Guidance Regarding the Applicability of the Bona Fide Prospective Purchaser Definition in CERCLA Section 101(40) to Tenants: Frequently Asked Questions* (November 2009), is available at: www.epa.gov/compliance/resources/publications/cleanup/superfund/tenant-bfpp-guide-ref.pdf.

3. Third-Party Defense

CERCLA includes three statutory defenses to liability for cleanup costs: an act of God, an act of war, and an act or omission of a third party — the so-called third-party defense. Among other things, the third-party defense protects municipalities acquiring property through escheat (i.e., the reversion of property to the state upon the death of the owner when there are no heirs), or through the exercise of eminent domain authority.

The third-party defense is a somewhat complicated legal concept. To take advantage of the third-party defense, an owner must demonstrate that:

- The release of hazardous substances has been caused solely by an act of a third party who is not an employee or agent of the owner; and

- The act resulting in the release of hazardous substances has not occurred in connection with a contractual relationship between the owner and third party (the term contractual relationship is defined below).

There are two additional requirements that then must be demonstrated:

- The owner has exercised due care with respect to the contamination; and
- The owner has taken precautions against foreseeable acts of the party that caused the contamination and against foreseeable consequences of those acts.

For the purpose of the third-party defense, CERCLA defines contractual relationship to include documents transferring title or possession of real property. Thus, in general, a purchaser of property is not entitled to use the third-party defense. However, there are several key exceptions to this definition that a municipality should be aware of (see following paragraph). For properties acquired after January 11, 2002, the BFPP provision generally is an easier standard to meet since it applies to purchasers who knowingly acquired contaminated property.

There are three exceptions to that general definition of contractual relationship. In order to meet any of these exceptions, the property on which the facility is located must have been acquired after the disposal or placement of the hazardous substances on, in, or at the facility. Then, the "defendant" making the third-party defense must establish one of the following:

- At the time the defendant acquired the facility the defendant did not know and had no reason to know that any hazardous substance which is the subject of the release or threatened release was disposed of on, in, or at the facility;
- The defendant is a government entity which acquired the facility by escheat, or through any other involuntary transfer or acquisition, or through the exercise of eminent domain authority by purchase or condemnation; or
- The defendant acquired the facility by inheritance or bequest.

For the above-mentioned defenses to liability, there are additional requirements that must be met similar to those for a BFPP. Although a municipality might qualify for any of those three defenses, in practice it is the second defense related to certain types of government acquisitions that is most likely to be available to a municipality.

The third-party defense may be important to municipalities because it applies to eminent domain takings that are not identified as involuntary acquisitions under the exclusion found in the owner/operator definition. If the municipality acquires the property through eminent domain after the disposal or placement of hazardous substances at the facility, it does not have to show that it had no knowledge of the contamination at the time of acquisition. However, it does have to meet the other statutory requirements of the defense.

To protect certain parties from liability, CERCLA contains both liability exemptions and affirmative defenses to liability. A party who is exempt from CERCLA liability with respect to a specific act cannot be held liable under CERCLA for committing that act. A party who believes that it has an affirmative defense to CERCLA liability must prove that defense by a preponderance of the evidence. A municipality that acquires contaminated

property involuntarily may be exempt from CERCLA liability as an owner/operator; that municipality may also have the somewhat redundant option of arguing the third part defense as an affirmative defense.

Additional discussion of the third-party defense can be found in Section III.A.2 and Appendix A (Common Elements Guidance) of EPA's Revitalization Handbook. Due to the complexity of the third-party defense, a municipality should seek legal counsel in interpreting whether it applies to the acquisition being considered.

4. CERCLA Liability Provisions and Policies Applicable to Off-Site Sources of Hazardous Substances

A municipality may find that property under its consideration is impacted by contamination that originates from an off-site source. Most often, this situation occurs when contaminated groundwater flows beneath a site, but it may also occur due to the migration of contaminants in surface water and air.

As explained below, the 2002 Brownfields Amendments offer limited liability protection to contiguous property owners whose property is impacted by off-site sources. EPA's "Contaminated Aquifer" Policy also addresses liability associated from contamination in ground water originating solely from an off-site source.

Generally speaking, landowners qualifying for contiguous property owner liability protection would not be responsible under CERCLA for the cost of cleaning up a groundwater plume solely originating from an off-site source (see text box on this page). But municipalities considering the acquisition or leasing of property underlain by a contaminated groundwater plume from an off-site source must understand how the use and management of the property could affect eligibility for the statutory liability protections offered in the contiguous property owner and BFPP provisions of CERCLA and in EPA's "Contaminated Aquifer" Policy. As an example, if a municipality operates an onsite groundwater well, the operation of the well could influence the migration of

If a Property is Underlain by Contaminated Ground Water Emanating from a Source on a Contiguous or Adjacent Property, Do "Reasonable Steps" Include Remediating the Groundwater?

Generally not. Absent exceptional circumstances, EPA will not look to a landowner whose property is not a source of a release to conduct ground water investigations or install ground water remedial action systems. Since 1995, EPA's policy has been that, in the absence of exceptional circumstances, such a landowner did not have "to take any affirmative steps to investigate or prevent the activities that gave rise to the original release" in order to satisfy the innocent landowner due care requirement. See May 24, 1995 *Policy Toward Owners of Property Containing Contaminated Aquifers* (1995 Contaminated Aquifers Policy). In the Brownfields Amendments, Congress explicitly identified this policy in noting that reasonable steps for a contiguous property owner "shall not require the person to conduct ground water investigations or install ground water remedial action systems," except in accordance with that policy. See CERCLA §107(q)(1)(D). The policy does not apply "where the property contains a ground water well, the existence or operation of which may affect the migration of contamination in the affected area." 1995 Contaminated Aquifers Policy, at 5. In such instances, a site-specific analysis should be used to determine reasonable steps. In some instances, reasonable steps may simply mean operation of the ground water well consistent with the selected remedy. In other instances, more could be required.

Source: EPA's "Common Elements Guidance."

contaminants in the groundwater. Under certain circumstances, the operation of that well could result in the municipality incurring liability for cleanup.

4a. Contiguous Property Owner Provision

The "contiguous property owner" provision was added to CERCLA through the 2002 Brownfields Amendments. It provides another exemption from owner/operator liability under CERCLA. The liability protection applies to owners of land contaminated by a release or threatened release of hazardous substances from property owned by someone else. The landowner cannot qualify for this protection if the landowner knew or had reason to know at the time of acquisition that the property was or could be contaminated by releases of hazardous substances from property owned by someone else. Again, to benefit from the liability protection, threshold conditions and continuing obligations are applicable. The following conditions must be met:

- The landowner does not own the property from which there is a release or threatened release;
- The landowner's property is contiguous to or otherwise similarly situated with respect to the property from which there is a release or threat of release of hazardous substances;
- The landowner did not cause, contribute or consent to the release or threatened release;
- The landowner is not liable or affiliated with any other person potentially liable for the response costs at the site. An affiliation includes any direct or indirect familial relationship or any contractual, corporate, or financial relationship (other than one that is created by a contract for the sale of goods or services). An affiliation may also be created by the reorganization of a business entity that was potentially liable;
- The landowner takes reasonable steps to stop any continuing releases; to prevent any future releases; and to prevent or limit exposure to any hazardous substances;
- The landowner provides full cooperation and access to those authorized to conduct response actions at the site including the access necessary to install, operate, and maintain any partial or complete response action;
- The landowner complies with any land use restrictions established in connection with the response action at the site;
- The landowner does not impede the effectiveness or integrity of any institutional controls established in connection with the response action at the site;
- The landowner complies with any information requests or administrative subpoenas;
- The landowner provides all legally required notices with respect to the discovery or release of hazardous substances at the site; and
- The landowner conducted all appropriate inquiries as it is defined under CERCLA with respect to the property at the time at which the landowner acquired the property.

Note that this defense differs from the BFPP defense because a BFPP may know of contamination at the time of acquisition of the property. In contrast, if a landowner discovers or knows through all appropriate inquiries or otherwise that contamination has migrated onto the property, and has this information at the time of acquisition, the contiguous property owner defense is not available. However, CERCLA § 107(q)(1)(C) explicitly recognizes that the landowner may still qualify as a BFPP even if they do not meet all of the requirements for a contiguous property owner.

EPA believes that Congress did not intend for this provision to be limited only to properties located immediately adjoining the source property. Therefore, through the exercise of its enforcement discretion, EPA will consider extending this liability protection on a case-specific basis to otherwise eligible non-adjoining properties.

EPA's Revitalization Handbook discusses the contiguous property owner provision in Section III.A.4.ii and in the "Common Elements Guidance" included as Appendix A. Two other useful EPA resource documents, "*Interim Enforcement Discretion Guidance Regarding Contiguous Property Owners*" (January 13, 2004) and the "*Contiguous Property Owner Guidance, Reference Sheet*" are available online at: www.epa.gov/compliance/resources/policies/cleanup/superfund/contig-prop.pdf and www.epa.gov/compliance/resources/policies/cleanup/superfund/contig-prop-faq.pdf, respectively. In addition, an EPA memo, *Model CERCLA Section 107(q)(3) Contiguous Property Owner Assurance Letter*, dated November 9, 2009, discusses the factors that EPA will consider in issuing assurance letters and provides a model assurance letter. This memo is available at: www.epa.gov/compliance/resources/policies/cleanup/superfund/cpo-assure-mod-ltr-mem.pdf.

4b. Contaminated Aquifer Policy

Well before the enactment in 2002 of the CERCLA statutory provision on contiguous properties, EPA issued its *Final Policy Toward Owners of Property Containing Contaminated Aquifers*. The policy, issued in 1995, was directed at landowners where groundwater contamination had migrated from a source outside their property. More specifically, the policy applied to hazardous substances contained in groundwater solely as the result of subsurface migration from a source located on another property where the landowner did not cause, contribute to, or aggravate the release of any hazardous substances.

Consistent with that policy, EPA has considered *de minimis* settlements if such a landowner is threatened with lawsuits by third parties. A *de minimis* settlement under CERCLA generally refers to a settlement between EPA and parties who are responsible for only a comparatively small amount and comparatively low toxicity of hazardous substances at a Superfund site. Because *de minimis* settlements are resource intensive for the government, EPA utilizes that settlement tool only under compelling circumstances. These circumstances are described in the documents referenced below.

A detailed discussion of the applicability of the final policy is found in Section III.A.4.i of EPA's Revitalization Handbook, and in the policy issued in May, 1995, which is available at: www.epa.gov/compliance/resources/policies/cleanup/superfund/contamin-aqui-rpt.pdf and in a fact sheet issued in November, 1995, available at: www.epa.gov/compliance/resources/policies/cleanup/superfund/contamin-aqui-fs.pdf.

7.2.4 State Voluntary Cleanup Programs

State response programs, commonly referred to as voluntary cleanup programs (VCPs), play a significant role in assessing and cleaning up brownfields and other lower-risk sites. As Congress recognized in the legislative history of the 2002 Brownfield Amendments to CERCLA, "[t]he vast majority of contaminated sites across the Nation will not be cleaned up by the Superfund program. Instead, most sites will be cleaned up under State authority." Links to state VCPs can be found at: www.epa.gov/swerosps/bf/state_tribal/moa_mou.htm.

As Congress recognized in the legislative history of the 2002 Brownfield Amendments to CERCLA, "[t]he vast majority of contaminated sites across the Nation will not be cleaned up by the Superfund program. Instead, most sites will be cleaned up under State authority."

EPA has historically supported, and continues to support, State VCPs through grant funding to establish and enhance VCPs and non-binding memoranda of agreements with individual states that include general enforcement assurances to encourage the assessment and cleanup of sites addressed under VCP oversight. This approach to VCPs is codified as CERCLA Section 128 by the 2002 Brownfields Amendments. Section 128(b) limits federal enforcement actions under CERCLA Sections 106 and 107 at "eligible response sites" (this is a site similar to a "brownfield site" and defined at CERCLA §101(41)) where a person is conducting or has completed a cleanup in compliance with a state response program. That limitation is often referred to as an **enforcement bar**. There are significant exceptions to the enforcement bar, including when a state requests EPA assistance in the performance of a response action; when contamination has migrated across state lines or onto property subject to the jurisdiction of the federal government; when contamination presents an imminent and substantial endangerment to public health, welfare, or the environment; or when previously unknown information indicates that further remediation is necessary to protect public health, welfare, or the environment. See CERCLA § 128(b). For additional discussion of eligible response sites, see EPA's March 6, 2003 memorandum titled *Regional Determinations Regarding Which Sites are Not "Eligible Response Sites" Under CERCLA Section 101(41)(C)(i), as Added By the Small Business Liability Relief and Brownfields Revitalization Act* (www.epa.gov/compliance/resources/policies/cleanup/superfund/reg-determ-small-bus-mem.pdf).

7.2.5 Other CERCLA Considerations

There are a variety of other CERCLA liability considerations that should be taken into account in assessing environmental liability. These include potential liability for maintaining the integrity of institutional and engineering controls (see Section 4.7.7); the existence, perfection, enforcement, or resolution of Superfund liens under CERCLA Sections 107(l) or 107(r); and protection from third-party lawsuits, such as those by responsible parties seeking contribution under CERCLA §113 to recover costs they spent to perform CERCLA environmental investigations and cleanup involving the property. A number of these issues are discussed in Appendix D. In addition, lenders may be concerned about potential liability under CERCLA if they are involved in the financing of contaminated properties (See text box on the next page).

Lender Liability Considerations

If private financing is needed by a municipality or developer for a redevelopment project, the municipality should consider what effect the environmental and regulatory status may have on that party's ability to secure the funding. Although in recent years the lending community has become far more comfortable dealing with contaminated properties, the level of sophistication and willingness to take on these projects varies somewhat among lenders. Lenders' concerns will often stem from the uncertainties that are associated with the environmental conditions, particularly higher-than-anticipated cleanup costs or extended delays due to environmental investigations, permitting, or cleanup. Specific concerns may include:

- Determining the property's value as loan collateral
- Project viability and the ability of the borrower to repay loans or continue with the project in the face of unanticipated environmentally-related problems
- Liability under CERCLA or other federal and state environmental laws in the event of a foreclosure, and the obligations to maintain the property and address immediate health and safety concerns
- Ability to sell the property following foreclosure

A lender's willingness to finance a project, as well as the financing rates and fees, will be influenced by the level of certainty that the party seeking the loan can bring to the negotiating table. A development proposal that identifies and effectively manages the potential project risks will have an important advantage.

Municipalities should be aware that specific CERCLA liability protections are available to lenders that hold ownership in a CERCLA facility primarily to protect their security interest in the facility, providing they do not "participate in the management of the facility." The CERCLA lender liability protections are described in CERCLA 101(20) and Sections III.D of EPA's Revitalization Handbook, and a fact sheet titled "CERCLA Lender Liability Exemption: Updated Questions and Answers" (July 2007), is available at: www.epa.gov/compliance/resources/publications/cleanup/superfund/factsheet/lender-liab-07-fs.pdf.

The *Underground Storage Tank (UST) Lender Liability Rule* also provides certain exemptions to lenders. These are discussed in Section III.D.3 of EPA's Revitalization. Further information on the UST rule is also available at: www.epa.gov/oust/fedlaws/280_i.pdf.

7.3 RCRA

The Resource Conservation and Recovery Act (RCRA — pronounced "rick-rah") regulates the management of solid and hazardous waste and underground storage tanks (USTs). In many respects, RCRA serves as a compliment to CERCLA by helping to ensure the proper management of wastes that might otherwise result in releases requiring cleanup under CERCLA.

RCRA is composed of three primary programs (or RCRA Subtitles) which may affect redevelopment projects involving contaminated property:

- The hazardous waste program (Subtitle C), which establishes a federal program to manage hazardous waste from "cradle to grave," i.e., from generation to final disposition, and a "corrective action" program to clean up contamination caused by hazardous waste treatment, storage or disposal.
- The solid waste program (Subtitle D), which establishes requirements for the management of non-hazardous solid wastes, such as household garbage and nonhazardous industrial waste, including minimum requirements for municipal landfills.
- The UST program (Subtitle I), which establishes requirements for the management of USTs that contain petroleum or hazardous substances (as defined under CERCLA).

It is important to recognize that a municipality may become subject to RCRA for a contaminated facility by virtue of its ownership or other involvement with the facility. Because RCRA, like many other state and federal environmental statutes, is a complex law with an equally complex body of regulations, municipalities are strongly encouraged to seek experienced counsel and technical consultants before engaging in activities for which RCRA might be applicable.

7.3.1 RCRA (Subtitle C) – Hazardous Waste

7.3.1.1 Overview of RCRA (Subtitle C)

RCRA (Subtitl**e** C) regulates the generation; transportation; and treatment, storage, and disposal of hazardous waste. The 1984 amendments to RCRA known as the Hazardous and Solid Waste Amendments (HSWA, pronounced "hiss-wa"), among other things, gave EPA additional authority to require corrective action at RCRA treatment, storage and disposal facilities (TSD facilities) to investigate and clean up contamination caused by hazardous waste treatment, storage, or disposal.

RCRA (Subtitle C) facilities generally fall into three categories: TSD facilities, generators, and transporters.

TSD Facilities
Owners/operators of operating facilities at which treatment, storage or disposal of hazardous waste occurs generally must obtain a permit for those activities unless the owners/operators qualify for interim status or are otherwise exempt from EPA's permitting requirements. It is useful to distinguish between facilities that operate as commercial TSD facilities from those that undertake hazardous waste management activities in the general course of operating their principal business. Commercial TSD facilities accept hazardous wastes that are generated at an off-site location and treat, store or dispose of these hazardous wastes as their primary function. Commercial TSD facilities are relatively few in number and a municipality would not typically be involved in their redevelopment. Far more common are manufacturing facilities that are classified as TSD facilities because they generate spent solvents, plating sludge, and other hazardous wastes and store or otherwise manage them prior to sending them to a commercial TSD facility. In some cases, these manufacturing facilities may also treat or dispose of their hazardous waste onsite. Occasionally, a manufacturing TSD facility may also manage hazardous waste from other facilities owned by the same parent company.

In addition to these operating TSD facilities, there are many non-operating facilities at which treatment, storage, or disposal of hazardous waste previously occurred. Some of these facilities have hazardous waste management units (see text box of key RCRA terms) that have not yet been thoroughly cleaned up. As will be discussed in the following section, operating and non-operating TSD facilities are subject to cleanup under both **closure/post-closure** and **corrective action** requirements.

RCRA TSD facilities must be registered with EPA and the state regulatory agency (if the state is authorized). Currently there are about 8,000 known TSD facilities nationwide. These TSD facilities are identified at EPA's Web site at: www.epa.gov/correctiveaction. TSD facilities may additionally be regulated as generators.

Generators

Some facilities generate hazardous waste, but do not meet the definition of a TSD facility and therefore do not require a RCRA hazardous waste management permit for those activities. For example, the storage of hazardous waste for less than 90 days generally does not require a RCRA hazardous waste management permit provided certain conditions are met. Generators are none-the-less subject to specific requirements that must be complied with, such as recordkeeping, manifesting, labeling of containers. See generator requirements at 40 CFR Part 262. EPA or the authorized state regulatory agency can identify whether a facility is currently registered as a hazardous waste "generator." It is important to note that a municipality may become a generator if it produces a hazardous waste or causes a hazardous waste to become subject to regulation under Subtitle C — even if the facility was not previously operating as a generator. This might occur, for example, in the course of conducting a cleanup at a facility (e.g., the generation of a hazardous residue from a treatment system). Further, a generator may become subject to RCRA (Subtitle C) requirements as a TSD facility if treatment, storage or disposal occurs or previously occurred at the facility.

Transporters

Transporters must be licensed to transport hazardous wastes, and municipalities would not generally fall into that category. However, if the municipality becomes a generator it would be subject to certain RCRA requirements that apply to the transportation of hazardous waste (such as, manifesting, labeling of containers). Before transporting hazardous waste off-site, the municipality should contact EPA or the authorized state to confirm the compliance status of both the transporter and the TSD facility receiving the waste.

Key RCRA (Subtitle C) Terms

The following are not legal definitions. They are intended to provide a basic understanding of the general meaning and usage of these terms.

Hazardous waste refers to those wastes required to be managed under RCRA (Subtitle C) due to toxicity or other specified hazardous properties (see 40 CFR §261).

Hazardous constituents are chemical compounds whose presence resulted in certain categories of wastes being classified as hazardous under RCRA (Subtitle C). The presence of these hazardous constituents in soils, water, ground water and air indicates a release that may need to be addressed as part of closure/post-closure and corrective action activities. Hazardous constituents are listed in Appendix VIII of 40 CFR §261.

Hazardous waste management facilities, or more commonly, **TSD facilities** (**T**reatment, **S**torage, and **D**isposal), are facilities at which treatment, storage or disposal of hazardous waste takes place. Owners and operators of TSD facilities generally must obtain a permit for those activities.

An ***interim status TSD facility*** is a TSD facility that has not yet had a final determination made on its hazardous waste management permit.

A ***generator facility*** is a facility where hazardous waste is generated and temporarily stored in a manner that does not require a hazardous waste management permit.

A ***hazardous waste management unit*** (HWMU) is an area where treatment, storage, or disposal occurs (e.g., surface impoundment, waste pile).

7.3.1.2 Cleanup and Management of RCRA (Subtitle C) Waste

This section generally describes the federal RCRA (Subtitle C) program and discusses when cleanup may be required under that program. It is important to keep in mind that this represents the minimum requirements. That is, if cleanup is required under the federal RCRA program, it will also be required under an authorized state RCRA program. It may be, however, that the authorized state program also mandates cleanups in other circumstances or the program is otherwise broader in scope, or that the required cleanup standards or program requirements are more stringent (See text box on this page)

Overview of RCRA (Subtitle C) Cleanup Programs

Under RCRA (Subtitle C) certain investigation and cleanup obligations categorically apply to all RCRA (Subtitle C) facilities. There are, however, some differences depending on whether the facility is classified as a permitted TSD facility, interim status TSD facility, or hazardous waste generator. Again, these distinctions may not be as relevant under certain authorized state programs that impose enforceable cleanup obligations on a broader array of contaminated sites.

To understand how cleanup obligations could apply to TSD facilities and generators, it is necessary to consider the requirements of the two RCRA (Subtitle C) cleanup programs: closure/post-closure and corrective action.

1. **Closure/Post-Closure**

Closure involves the decommissioning and cleanup of HWMUs used to treat, store, or dispose of hazardous waste (such as a drum storage area or a lagoon that was historically used to settle metals out of liquid waste). If the cleanup meets certain standards, it is considered a **clean closure** and no further cleanup of that HWMU under RCRA (Subtitle C) is required. If not, the HWMU may need to be managed as a "closed" disposal area and be subject to post-closure requirements that typically involve long-term monitoring and maintenance. TSD facilities and generators must meet closure requirements for all HWMUs and for releases from those units.

Regulation Under Authorized State RCRA (Subtitle C) Programs

When a municipality is considering its potential RCRA (Subtitle C) liability in a state that EPA has authorized to implement a state RCRA (Subtitle C) program under RCRA § 3006, it is important to consult state-specific requirements for cleaning up contaminated properties. As of 2009, EPA authorized 42 states to take the lead in implementing the RCRA corrective action program, which means that the state's authorized RCRA requirements will apply. A state RCRA program can be no less stringent than the federal requirements, although it may be more stringent or broader in scope than the federal requirements. The EPA corrective action Web site noted on page 75 identifies which states are currently authorized for the RCRA corrective action program. Also, EPA's *State Program Summary*, noted on page 2 summarizes the various state programs.

2. **Corrective Action**

Permitted TSD facilities are also categorically subject to corrective action requirements. This means that in addition to completing closure/post-closure activities, the owner/operator of a permitted TSD facility must address all routine and systematic

releases of hazardous waste and hazardous constituents within the facility boundaries (i.e., facility-wide) and emanating from the facility. It is important to emphasize that the definition of facility includes more than just the HWMUs themselves. The environmental investigation and any necessary corrective action will need to encompass the entire facility. These activities take place under the oversight of EPA or the authorized state. Approximately 3,800 sites are undergoing corrective action; more than three times the number of sites found on the Superfund National Priority List. The following EPA Web site lists properties known to be subject to corrective action: www.epa.gov/correctiveaction.

A municipality acquiring or leasing a TSD facility that completed these required investigations will be able to do so with considerable knowledge of the environmental conditions of the entire facility, at least as it applies to hazardous wastes and constituents (i.e., non-RCRA wastes or materials may not have been addressed). However, if closure/post-closure and corrective action requirements were not completed, a municipality acquiring or leasing the property may, in certain circumstances, need to conduct those activities. Further, where hazardous waste will remain onsite in landfills or other disposal areas as part of the "permanent" cleanup, the municipality could potentially assume the responsibility for monitoring and maintaining those areas. Unlike CERCLA, where the responsible parties (including previous owners) may be obligated to perform these activities as long as necessary to ensure protectiveness, the RCRA closure/post-closure obligations transfer to the party owning or operating the facility (EPA does have enforcement authority under RCRA (Subtitle C) to compel past owners to remediate contamination under certain circumstances).

Assessing RCRA (Subtitle C) Liability Key Questions

The following key questions related to RCRA liability are addressed further in Appendix D:

- Could the municipality incur liability under RCRA (Subtitle C) by acquiring or leasing a RCRA (Subtitle C) facility?
- Could the municipality be liable under RCRA (Subtitle C) for contamination that originates from an off-site source?
- Could the municipality be liable under RCRA (Subtitle C) for hazardous waste or hazardous constituents that migrate off the RCRA (Subtitle C) facility?
- How does sub-dividing or parceling a RCRA (Subtitle C) facility affect liability under RCRA (Subtitle C)?
- Could a municipality be responsible for reimbursing EPA or the state for "unrecovered" response costs if it acquires or leases a RCRA (Subtitle C) facility?
- Could the municipality incur liability under RCRA (Subtitle C) by performing environmental investigations, cleanups, building demolition or physical improvements on a RCRA (Subtitle C) facility it does or does not own or lease?
- Are municipalities protected from past owners/operators or third parties seeking to recover costs they spent to perform environmental investigations and cleanup involving a RCRA (Subtitle C) facility?

Although corrective action is not categorically mandated for interim status TSD facilities or generators as it is for permitted TSD facilities (unless closure/post-closure activities require a permit), RCRA provides other authorities that can be used to require environmental investigations or cleanup of RCRA-regulated waste if sufficient cause

exists. Appendix D discusses such authorities and common questions a municipality might have relating to RCRA (Subtitle C) liability.

Financial Assurance Requirements

RCRA (Subtitle C) also requires owners/operators of TSD facilities — except for states and the federal government — to provide financial assurance to cover the estimated future costs of closure/post-closure and, to the extent applicable, corrective action activities. Various mechanisms can be used to provide financial assurance. These mechanisms can include establishing an escrow account, providing a letter of credit from a financial institution, or, where the owner/operator demonstrates financial viability and adequate resources, a corporate guarantee. RCRA (Subtitle C) also requires owners/operators of TSD facilities to provide a specified minimum amount of liability coverage against sudden and, for certain types of management units, non-sudden accidental occurrences arising from operations of the TSD facility. This liability coverage may be through insurance or other specific mechanisms. The existence of these financial assurance and liability coverage mechanisms can sometimes provide a source of funds that EPA or the authorized state can access to address RCRA cleanup issues where, for instance, the property becomes abandoned or the owners insolvent. On the other hand, municipalities acquiring or leasing a TSD facility could be in the position of funding or providing financial assurance or liability coverage for any shortfalls that might exist.

Remedial Action Plans: A Streamlined Process for Corrective Action at RCRA (Subtitle C) Facilities

Cleaning up RCRA facilities may involve the management of large quantities of contaminated soils, water, debris and sludge that contain hazardous constituents. An owner/operator intending to treat, store or dispose of these hazardous remediation wastes (except when the treatment involves the combustion of that waste) may obtain either a hazardous waste management permit or a special form of permit referred to as a Remedial Action Plan. The RAP is tailored more specifically to the type of activities that would be normally associated with site remediation and can help streamline both the permitting and remediation processes. A RAP can be obtained for only those portions of a facility meeting the definition of a *remediation wastes management site* where the treatment, storage or disposal of hazardous remediation wastes will occur. A RAP can be issued at a permitted TSD facility, interim status TSD facility, a facility subject to an EPA or state enforcement order or, importantly, for voluntary cleanups. A facility that becomes subject to RCRA (Subtitle C) requirements solely by virtue of cleanup activities will not be subject to the facility-wide corrective action requirement. This, combined with the streamlined permit and remediation process associated with RAPs, creates an important incentive for self-initiated cleanups. The requirements associated with Remedial Action Plans are described in the Code of Federal Regulations (CFR) Title 40 Part 270, Subpart H.

Financial assurance requirements applicable to closure/post-closure and liability coverage are specified in 40 CFR Part 264, Subpart H for permitted TSD facilities and Part 265, Subpart H for interim status TSD facilities. A useful reference for financial assurance for corrective action is a September 30, 2003 EPA memorandum titled "*Transmittal of Interim Guidance of Financial Responsibility for Facilities Subject to RCRA Corrective Action*" (www.epa.gov/waste/hazard/correctiveaction/resources/guidance/gen_ca/finan9-03.pdf). This memorandum also provides a general overview of financial assurance requirements for closure/post-closure.

Before acquiring or leasing a RCRA (Subtitle C) facility, the municipality should contact EPA or the authorized state to discuss the status of closure/post-closure and corrective action activities and also financial assurance/liability coverage. If the owner/operator still exists, it may be advisable to meet with them to negotiate the transfer or retention of obligations for conducting closure/post-closure and corrective action activities.

To expedite corrective action and facilitate redevelopment of RCRA (Subtitle C) facilities, EPA initiated a number of RCRA cleanup reforms and created the RCRA Brownfields Prevention Initiative. Some of these efforts are described in the EPA fact sheets: *How Can the RCRA Brownfields Prevention Program Help You?* and *Applying RCRA Cleanup Reforms to RCRA Brownfield* (www.epa.gov/rcrabrownfields/pubs.htm). One important reform that can help streamline the corrective action process is the Remedial Action Plan (RAP) described in the text box on the previous page. Other information on these initiatives can be found at EPA's RCRA corrective action Web site (www.epa.gov/epawaste/hazard/correctiveaction). Guidance on RCRA corrective action can also be found at: www.epa.gov/rcraonline. Guidance on RCRA corrective action enforcement can be found at: http://cfpub.epa.gov/compliance/resources/policies/cleanup/rcra/index.cfm.

7.3.2 RCRA (Subtitle D) – Solid Waste Management

7.3.2.1 Overview of RCRA (Subtitle D)

The term **solid waste**, as defined by the RCRA statute, is broad and includes not only traditional nonhazardous wastes, such as municipal garbage and industrial wastes, but also hazardous wastes. As discussed in Section 7.3.1, hazardous wastes are regulated under RCRA (Subtitle C). RCRA (Subtitle D) regulates the disposal of nonhazardous solid wastes and hazardous wastes exempted from the RCRA (Subtitle C) regulations (e.g., hazardous waste received from households and conditionally exempt small quantity generators). See the text box on this page for a description of key terms.

Key RCRA (Subtitle D) Terms

Note: The following are not legal definitions. They are intended to provide the reader with a basic understanding of the general meaning and usage of these terms.

Solid Wastes generally means garbage, refuse, certain types of sludge, and other discarded material resulting from industrial, commercial, mining, and agricultural operations and from community activities. Solid wastes are not limited to wastes that are physically solid and can be liquid, semisolid or containerized gases. See 40 CFR §257.2.

Household wastes are wastes (including garbage, trash and sanitary wastes in septic tanks) that are derived from households (including single and multiple residences, hotels, and campgrounds). See 40 CFR §261.4(b)(1)

A person is a ***conditionally exempt small quantity generator*** in a calendar month if they generate 100 kilograms (about 220 pounds) or less of hazardous wastes or 1 kilogram (about 2.2 pounds) or less of acutely hazardous wastes in that calendar month. See 40 CFR §261.5.

RCRA does not authorize EPA to issue federal permits for the disposal of Subtitle D waste. Instead, state and local governments are the primary planning, permitting, regulating, implementing, and enforcement agencies. However, EPA is required to establish the technical design and operating criteria that states must, at a minimum, include in their own regulations in order for a state Subtitle D program to be federally approved. States can also adopt more stringent requirements if they choose. In states without an approved program, the federal criteria are self-implementing and the owner or operator of a solid waste disposal facility in those states must directly implement the applicable requirements. EPA can conduct compliance inspections and enforcement of the federal minimum criteria if it has determined a state's Subtitle D waste program to be inadequate.

7.3.2.2 Cleanup and Management of RCRA (Subtitle D) Waste

EPA promulgated federal criteria for nonhazardous solid waste disposal facilities in 40 CFR Part 257 and criteria that applies specifically to municipal solid waste landfill (MSWLF) units in 40 CFR Part 258. Both types of facilities are described below. A solid waste disposal facility that does not comply with Parts 257 and 258 is considered an open dump and is prohibited. Solid waste disposal facilities that are in compliance with the applicable regulations are referred to as sanitary landfills. EPA also issued

regulations under the Clean Air Act that apply to emissions from large landfills. In addition, certain criteria under the Clean Water Act and other federal statutes may be applicable.

1. Municipal Solid Waste Landfill Facility (MSWLF) Units

Most municipalities own or operate a municipal solid waste landfill. A municipal solid waste landfill facility unit is a discrete area of land or an excavation that: 1) receives household waste, and 2) is not a land application unit, surface impoundment, injection well, or waste pile, as those terms are defined in 40 CFR §257.2. A MSWLF unit also may receive other types of RCRA Subtitle D wastes, such as commercial solid waste, nonhazardous sludge, conditionally exempt small quantity generator waste, and industrial solid waste. In some states and localities, however, additional restrictions may be imposed on what can be placed into landfills regulated under Subpart D. MSWLFs may be publicly or privately owned.

All MSWLF units that received waste after October 9, 1991 must comply with the federal regulations in 40 CFR Part 258 or authorized state regulations; although certain exceptions apply in limited circumstances. In addition, states with federally approved Subtitle D programs are allowed some flexibility in how they administer those programs to take into account site-specific conditions. Federal MSWLF standards include:

- Location restrictions
- Composite liners requirements
- Leachate collection and removal systems
- Operating practice
- Ground water monitoring requirement
- Closure and post-closure care requirements

Assessing RCRA (Subtitle D) Liability Key Questions

The following key questions related to liability under RCRA (Subtitle D) are addressed further in Appendix D:

- Could the municipality incur liability under RCRA (Subtitle D) by acquiring or leasing a property containing solid waste disposal facilities?
- Could the municipality be liable under RCRA (Subtitle D) for releases from solid waste disposal facilities that originate from an off-site source?
- Could the municipality be liable under RCRA (Subtitle D) for releases from solid waste disposal facilities that migrate off the property?
- How does sub-dividing or parceling a property affect liability under RCRA (Subtitle D)?
- Could a municipality be responsible under RCRA (Subtitle D) for reimbursing EPA or the state for "unrecovered" response costs if they acquire or lease a property at which past cleanup involving solid waste disposal facilities was conducted?
- Could the municipality incur liability under RCRA (Subtitle D) by performing environmental investigations, cleanups, building demolition or physical improvements on a property it does or does not own or lease?
- Are municipalities protected under RCRA (Subtitle D) from past owners/operators or third parties seeking to recover costs they spent to perform environmental investigations and cleanup involving solid waste disposal facilities or releases from those facilities?

- Corrective action provisions
- Financial assurance

The Part 258 standards that apply to MSWLF units are discussed further in the EPA documents: *Introduction to Municipal Solid Waste Disposal Facility Criteria* (September 2005) (www.epa.gov/osw/inforesources/pubs/hotline/training/mswlf05.pdf) and *Criteria for Solid Waste Disposal Facilities – A Guide for Owners/Operators* (March 1993) (www.epa.gov/epawaste/nonhaz/municipal/landfill/criteria/landbig.pdf).

2. Solid Waste Disposal Facilities

The requirements in 40 CFR Part 257 govern those solid waste disposal facilities and practices that do not meet the definition of a municipal solid waste landfill. These include waste piles, industrial nonhazardous waste landfills, surface impoundments, and land application units. The Part 257 regulations consist of two subparts. Subpart A contains requirements that apply to all solid waste disposal facilities not otherwise regulated as a MSWLF under Part 258. Subpart A establishes criteria for siting, designing, and operating these facilities. Subpart B provides disposal standards for non-municipal non-hazardous waste disposal units that receive conditionally exempt small quantity generator waste. These standards include conducting ground water monitoring and implementing corrective action to address contamination resulting from releases from the solid waste disposal facility.

When acquiring or leasing a property, a municipality should consider the possibility that past disposal of solid waste may have taken place, particularly if the property has a history of commercial or industrial use. The municipality could become responsible for making those facilities compliant with RCRA (Subtitle D), including addressing any releases that may have occurred.

Construction and Demolition (C&D) Landfills

A C&D landfill is an example of a solid waste disposal facility that may be particularly relevant to redevelopment activities. These may exist as the result of past use of the property, or the municipality or developer may consider creating one on the property to manage C&D debris. Municipalities should, however, first determine whether state or local governments impose additional siting and other restrictions on this practice.

C&D landfills generally receive roadwork material, excavated material, demolition waste, construction/renovation waste, and site clearance waste. A C&D landfill that receives conditionally exempt small quantity generator waste would also need to comply with Part 257, Subpart B. A C&D landfill that accepts residential lead-based paint waste and does not receive any other household waste would be subject to Part 257 instead of the Part 258 standards for MSWLFs; however, lead-based paint waste from commercial or industrial sites may in certain cases be considered a hazardous waste subject to RCRA (Subtitle C). Similarly, demolition and renovation debris containing regulated asbestos materials could be subject to the asbestos NESHAP (see Section 7.5).

There are a number of other materials often associated with C&D debris that could lead to a solid waste disposal facility being out of compliance with Subtitle D. This, and other information pertinent to the disposal of C&D debris, is described in the EPA document, *RCRA in Focus – Construction, Demolition, and Renovation* (September 2004)

(www.epa.gov/osw/inforesources/pubs/infocus/rif-C%26d.pdf). Additional information on RCRA (Subtitle D) is available at: www.epa.gov/solidwaste.nonhaz and the federal regulations can be found at www.epa.gov/epawaste/laws-reg/regs-non-haz.htm.

7.3.3 RCRA (Subtitle I) – Underground Storage Tanks

7.3.3.1 Overview of RCRA (Subtitle I)

The RCRA (Subtitle I) program regulates certain underground storage tanks (USTs) containing petroleum and hazardous substances. Not all tanks are regulated under the Subtitle I program. To meet the definition of an UST, at least 10% of the combined volume of a tank and associated piping must be located underground. In addition, Subtitle I excludes the following tanks, among others, from the definition of an UST:

- Farm and residential tanks of 1,100 gallons or less capacity holding motor oil used for noncommercial purposes
- Tanks storing heating oil used on the premises where it is stored
- Tanks on or above the floor of underground areas, such as basements or tunnels
- Septic tanks and systems for collecting storm water and waste water
- Flow-through process tanks

Furthermore, the Subtitle I regulations exclude certain USTs from its requirements. Some examples of these excluded USTs are: USTs of 110 gallons or less capacity, emergency spill and overflow USTs, and USTs that hold RCRA hazardous wastes. USTs that store all other hazardous substances as defined by CERCLA are, however, covered by the Subtitle I program. The UST regulations impose certain requirements that apply to hazardous substance USTs that do not apply to petroleum USTs, such as requiring secondary containment.

Due in part to the large number of regulated USTs and the diversity of the regulated community, EPA has worked with states (and local governments) wherever appropriate to implement the UST program. Accordingly, EPA has approved most states' UST programs to operate in lieu of the federal UST program. In states that have not received UST state program approval, both state and federal UST regulations apply. The current status of UST state program approvals for each state is available at: www.epa.gov/oust/wheruliv.htm.

Underground Storage Tank Provisions of the Energy Policy Act of 2005

On August 8, 2005, President Bush signed the Energy Policy Act of 2005. Title XV, Subtitle B of this act (titled the Underground Storage Tank Compliance Act of 2005) contains amendments to Subtitle I of the Solid Waste Disposal Act, the original statute that created the underground storage tank (UST) program. The Energy Policy Act significantly affects federal and state underground storage tank programs, requires major changes to the programs, and is aimed at reducing underground storage tank releases to our environment. The Energy Policy Act contains provisions relating to: operator training, inspections, compliance reporting, public records, financial responsibility and installer certification, secondary containment, and delivery prohibition. The Energy Policy Act also requires the issuance of a Tribal Report to Congress as well as the development of a Tribal Strategy.

Additional information on the provisions and program status can be found at: www.epa.gov/oust/fedlaws/epact_05.htm

Many states also have UST programs that are more stringent or broader in scope than the federal requirements. For example, in some states, tank programs include heating oil and above-ground tanks. In addition to Subtitle I requirements, state and local fire and building codes also apply to underground tanks containing petroleum and other flammable and combustible liquids. Tanks containing petroleum located in proximity to navigable waterways of the United States or adjoining coastlines may also be subject to the Spill Prevention Control and Countermeasures (SPCC) requirements, unless they are fully regulated by EPA's UST regulations. EPA is the lead federal response agency for oil spills occurring in inland waters, and the US Coast Guard is the lead response agency for spills in coastal waters and deepwater ports. See www.epa.gov/oilspill for more information about the SPCC program.

7.3.3.2 Cleanup and Management of USTs and UST Releases

While USTs are commonly associated with gas stations, municipalities may also encounter USTs at other types of commercial and industrial properties. At properties with a long history of such use, complete historical records may not always be available and it is not unusual for a tank or a release from a tank to be discovered during construction activities. To minimize this possibility, there are a number of non-intrusive, geophysical survey techniques (e.g., ground penetrating radar) that can be used to determine the presence of underground structures in areas where they are suspected of being located.

If the municipality is an owner or operator of an UST, the municipality may become responsible under Subtitle I for the removal of out-of-service USTs, and the inspection of the tanks and testing of soils for signs of leakage. If a release is found, the municipality may be liable for investigating and, if necessary, cleaning up the release. While there are no "innocent purchaser" provisions in RCRA (Subtitle I), some state brownfields laws provide relief from state liability for unknown tanks and unknown tank releases for purchasers that conduct appropriate due diligence prior to taking title to a property. The Underground Storage Tank Lender Liability Rule also provides certain exemptions for lenders and other parties that maintain "indicia of ownership" in an UST primarily to protect a security interest. This is discussed further in Section IV of Appendix D.

The regulations in 40 CFR Part 280 establish the federal technical standards and corrective action requirements for owners and operators of USTs. The technical standards cover the design, installation, maintenance, release detection, testing, removal, and remediation of the tank systems, as well as impose financial responsibility requirements. An EPA document, titled *Musts for USTs – A Summary of Federal Regulations For Underground Storage Tank Systems* (July 1995) describes these requirements (www.epa.gov/oust/pubs/index.htm). The full text of the regulations is available at: www.epa.gov/oust/fedlaws/cfr.htm. EPA's Office of Underground Storage Tanks has created the Leaking Underground Storage Tank Corrective Action Compendium, a clearinghouse of information relating to corrective action at LUST sites (www.epa.gov/oust/lust/intro.html). The reuse of UST properties is also discussed in an EPA publication called *Petroleum Brownfields: Selecting A Reuse Option* (October 2009) (www.epa.gov/oust/pubs/pubspbfreuseoption.pdf). Additional information on UST is available at: www.epa.gov/OUST or by contacting EPA and state offices. Regional EPA contacts are listed in Appendix F.

Financial Responsibility

Owners or operators are required to demonstrate financial responsibility for the costs of corrective action and compensation of third parties arising from releases of petroleum from regulated USTs. These requirements were established to help ensure that owners or operators can respond promptly to clean up releases and can compensate third parties for associated bodily injuries or property damages. From the perspective of facilitating the redevelopment of abandoned properties, this financial responsibility represents a potential source of funds that EPA or the delegated state could access to close USTs and clean up releases.

Owners or operators of regulated USTs are required to maintain financial responsibility for both per occurrence and annual aggregate amounts, depending on the number of USTs owned. Either the owner or the operator of the UST must demonstrate financial responsibility. If they are different individuals or organizations, it is the responsibility of the owner and operator to decide which one will demonstrate financial responsibility. Each is responsible if either party fails to comply. Federal and state governments and their agencies that own USTs are not required to demonstrate financial responsibility; however, local governments must do so.

The UST regulations specify a number of options for demonstrating financial assurance, including: environmental impairment liability insurance, financial guarantees, surety bonds, letters of credit, trust funds, and other mechanisms established or authorized by the state. Local governments also have other options available to them that are more tailored to their unique status. These consist of a bond rating test, financial test, guarantee, and a dedicated fund.

Two useful EPA documents on the UST financial responsibility requirements are: *Dollars and Sense — Financial Responsibility Requirements for Underground Storage Tanks (July 2005)*, and *Financial Responsibility for Underground Storage Tanks: A Reference Manual (January 2000)*, available at: www.epa.gov/oust/pubs/index.htm.

Assessing RCRA (Subtitle I) "UST" Liability Key Questions

The following key questions related to UST liability under RCRA (Subtitle I) are addressed further in Appendix D:

- Could the municipality incur liability under RCRA (Subtitle I) by acquiring or leasing a property containing UST systems?
- Could the municipality be liable under RCRA (Subtitle I) for releases from UST systems that originate from an off-site source?
- Could the municipality be liable under RCRA (Subtitle I) for releases from UST systems that migrate off the municipality's property?
- How does subdividing or parceling a property affect liability under RCRA (Subtitle I)?
- Could a municipality be responsible under RCRA (Subtitle I) for reimbursing EPA or the state for "unrecovered" response costs if they acquire or lease a property at which past cleanup under UST was conducted?
- Could the municipality incur liability under RCRA (Subtitle I) by performing environmental investigations, cleanups, building demolition or physical improvements on a property it does or does not own or lease?
- Are municipalities protected under RCRA (Subtitle I) from past owners/operators or third parties seeking to recover costs they spent to perform environmental investigations and cleanup involving UST systems or releases from those systems?

7.3.3.3 The Leaking Underground Storage Tank Trust Fund and Other Potential Funding Sources

Congress created the Leaking Underground Storage Tank (LUST) Trust Fund in 1986 to be utilized by EPA and the states (through a cooperative agreement with EPA) for the administration, oversight, and cleanup of petroleum releases from USTs in certain circumstances. Many states use the LUST Trust Fund to, among other things, oversee corrective action of UST releases and to clean up UST releases where a responsible party cannot be found or is unwilling or unable to conduct cleanup, or which require emergency action. More information on the LUST Trust Fund is available at: www.epa.gov/OUST/ltffacts.htm. Approximately 36 states have created state UST cleanup funds separate from the federal LUST Trust Fund which a municipality can potentially access if it meets the eligibility requirements of the state fund. The Association of State and Territorial Solid Waste Management Officials (ASTSWMO) has published various reports on state funds which can be obtained from: www.astswmo.org/publications_tanks.htm .

Municipalities may be also be eligible for EPA or state brownfields grants to help offset costs associated with the cleanup of certain UST petroleum releases. The Brownfields Amendments of 2002 specifically authorize the use of federal funds for UST sites. Appendix E identifies other general sources of potential funding.

7.4 TSCA (Title I) – PCB and PCB-Containing Wastes and Equipment

7.4.1 Overview of TSCA (Title I)

The Toxic Substances Control Act (TSCA) is comprised of four major sub-divisions or "titles." The following discussion of TSCA will primarily focus on Title I as it relates to the cleanup, management, and disposal of polychlorinated biphenyl (PCB) and PCB-contaminated wastes in a redevelopment context.

Title II of TSCA, which mostly deals with asbestos abatement in schools, is not generally applicable to the redevelopment of the types of properties that are the subject of this workbook. See EPA's Web site at: www.epa.gov/asbestos/pubs/aherarequirements.pdf for additional information on the management of asbestos in schools. Of more direct relevance are the asbestos requirements under the National Emission Standard for Hazardous Air Pollutants (NESHAP). NESHAP is covered in Section 7.5.

Regulating PCBs Under Other Cleanup Statutes

Because the cleanup and management of PCB wastes are not solely regulated under TSCA, a municipality should also consider its potential liability under other applicable federal and state statutes. For example, a PCB waste may be regulated as a hazardous waste or hazardous constituent under RCRA (Subtitle C), which could subject the cleanup to RCRA corrective action requirements. Similarly, EPA will often use CERCLA authorities to clean up a site contaminated with PCBs in situations where, for example, other hazardous substances are present, extensive contamination exists, the property is abandoned or the owner is unwilling or unable to conduct the cleanup, or an immediate response is necessary.

Titles III and IV, which regulate air radon and lead-based paint, respectively, routinely apply to redevelopment scenarios, but most municipalities are familiar with these requirements and they will not be addressed in this workbook. Residential lead-based paint disclosure requirements under Title IV are summarized at: www.epa.gov/lead/pubs/fs-discl.pdf. New lead-safe work practice requirements for renovating, repairing, or painting a home, child-care facility, or school are summarized at: www.epa.gov/lead/pubs/renovation.htm.

In enacting TSCA, Congress specifically directed EPA to regulate the use and disposal, manufacturing, processing, and distribution in commerce of PCBs. In this regard, TSCA legislated true "cradle to grave" (i.e., from manufacturing to disposal) management of PCBs in the United States. Although TSCA provides the primary regulatory framework for controlling PCBs, these compounds are also regulated to some extent under the Clean Air Act, Clean Water Act, RCRA, and CERCLA (see the text box on this page). Title I of TSCA cannot be delegated to the states and therefore jurisdiction remains with EPA. However, a number of states establish their own laws and regulations concerning PCBs.

While PCBs are no longer commercially produced, municipalities that acquire or lease a property may still encounter PCBs in certain equipment or products that were manufactured prior to 1979 (such as transformers, capacitors and other electrical equipment, paints, caulk, and hydraulic fluids), or as contamination arising from past use or disposal. Under TSCA, a property contaminated with regulated levels of PCBs must be cleaned up or decontaminated in accordance with certain specified requirements. Similarly, equipment containing PCBs at regulated levels which is no longer in use or is leaking must be properly disposed of or decontaminated. PCB-containing equipment can only be used in compliance with 40 CFR §761.30.

TSCA is a strict liability statute. Persons "responsible" for addressing PCB contamination under TSCA (Title I) can potentially include past and new property owners and operators, and other parties that caused or contributed to the PCB contamination. This is discussed further in Appendix D Section V. This responsibility also extends to the decontamination or disposal of regulated PCB-equipment.

Assessing PCB Liability Under TSCA (Title I) Key Questions

The following key questions related to PCB liability under TSCA (Title I) are addressed further in Appendix D:

- Could the municipality incur liability under TSCA (Title I) by acquiring or leasing a property containing PCBs or PCB remediation waste?
- Could the municipality be liable under TSCA (Title I) for PCB remediation wastes that originate from a source outside the affected property's boundary?
- Could the municipality be liable under TSCA (Title I) for PCB remediation wastes that migrate off the property?
- How does sub-dividing or parceling a property affect liability under TSCA (Title I) for PCB remediation wastes?
- Could a municipality be responsible under TSCA (Title I) for reimbursing EPA or the state for "unrecovered" response costs if it acquires or leases a property at which PCB-related cleanup was conducted?
- Could the municipality incur liability under TSCA (Title I) by performing environmental investigations, cleanups, building demolition or physical improvements on a property it does or does not own or lease?
- Are municipalities protected from past owners/operators or third parties seeking to recover costs they spent to perform environmental investigations and cleanup involving PCBs or PCB remediation waste?

7.4.2 Cleanup and Management of PCBs under TSCA

The PCB regulations promulgated under TSCA are found in 40 CFR Part 761. The PCB regulations provide several options for cleanup and disposal of PCB remediation wastes. PCB remediation wastes include waste materials contaminated with PCBs as the result of a spill, an intentional or accidental release or uncontrolled discharge of PCBs, or other unauthorized disposal of PCBs (see 40 CFR §761.3). The cleanup and disposal options for PCB remediation waste are briefly described below. Refer to 40 CFR 761.50(b)(3) and 761.61 for the specific requirements.

1. Self-Implementing Cleanup and Disposal Option (40 CFR §761.61(a))

The self-implementing option allows a site owner to conduct the cleanup and disposal of **PCB remediation wastes** according to specified requirements and standards. The first

step is notifying the EPA no less than 30 days prior to the initiation of those activities; if necessary, EPA may require additional or modified requirements. The self-implementing option may not be used to clean up surface or ground waters, sediments in marine and fresh water ecosystems, sewers or sewage treatment systems, private or public drinking water sources or distribution systems, grazing lands, or vegetable gardens.

Under this option, the extent of cleanup will depend primarily upon two factors: 1) the use of the property after the cleanup is completed (characterized as high or low occupancy); and 2) the type of waste material that is contaminated with the PCBs (i.e., bulk PCB remediation wastes (e.g. soils), porous surfaces (e.g. concrete), non-porous surfaces (e.g. metal surfaces), and liquid PCBs).

Areas that are in continuous or semi-continuous use, such as residences or schools, are generally classified as "high occupancy areas." Areas used to a limited extent are considered "low occupancy areas, such as electrical substations or locations in an industrial facility where workers spend small amounts of time (e.g., non-office space where occupancy is transitory)."

Under certain circumstances, depending on the concentration and nature of the PCB remediation waste, and the intended use of the area, the self-implementing option may allow PCB remediation waste to remain on the property covered with a cap meeting certain specifications and requirements. Such a cap must be maintained in perpetuity or until EPA determines that the cap is no longer needed. In addition, a site owner is required to record a notation on the deed (i.e., deed restriction) if ongoing maintenance requirements are part of the cleanup to ensure that any new owner would continue to comply with the requirements.

The self-implementing cleanup provisions do not govern cleanups conducted under other authorities, including but not limited to, actions taken under CERCLA or RCRA. This means that if a property will be addressed under those authorities, the party conducting the cleanup may not be able to utilize this option.

2. Performance-Based Disposal (40 CFR §761.61(b))

This option specifies off-site disposal and/or decontamination requirements for PCB remediation wastes that are not part of a self-implementing cleanup or risk-based disposal approval.

3. Risk-Based Disposal (40 CFR §761.61(c))

A party may seek approval from EPA for cleanup, storage and/or disposal of PCB remediation waste in a manner other than that prescribed for the two options described above. A request for a risk-based approval must demonstrate that the proposed methods will not pose an unreasonable risk of injury to health and the environment, taking into account relevant situation- and site-specific factors (i.e., through a risk assessment). Cleanup and related activities cannot be initiated until EPA issues a written risk-based approval of the proposed activities.

When considering the acquisition or leasing of property that has undergone a prior PCB cleanup, the municipality should consider whether the land use assumptions upon which those cleanups were based are consistent with the intended future use. Certain uses may

require more stringent requirements than what was previously acceptable. Such assumptions are often, but not necessarily always, incorporated into deed restrictions on the property.

EPA has published a manual for addressing the cleanup of PCB remediation waste titled *Polychlorinated Biphenyl (PCB) Revitalization Guidance under the Toxic Substances Control Act (TSCA)* (www.epa.gov/osw/hazard/tsd/pcbs/pubs/pcb-guid3-06.pdf). A PCB "Questions and Answers" Manual that responds to a number of specific technical and regulatory issues is available at: www.epa.gov/osw/hazard/tsd/pcbs/pubs/qacombined.pdf. Other information, including an electronic version of the PCB regulations, can be found on EPA's PCB Web site at: www.epa.gov/pcb.

7.5 Clean Air Act – NESHAP Requirements for Asbestos

7.5.1 Overview of the Asbestos NESHAP

The Clean Air Act (CAA) is the comprehensive federal law that regulates air emissions from stationary sources (e.g., factories, refineries, power plants) and mobile sources (e.g., cars, trucks, buses). The CAA requires EPA to develop and enforce regulations to protect the public from exposure to airborne contaminants that can be hazardous to human health. The National Emission Standards for Hazardous Air Pollutants (NESHAP) requirements for asbestos promulgated under Section 112 of the CAA establishes work practices to minimize the release of asbestos fibers during activities involving the processing, handling, and disposal of asbestos and asbestos-containing material when a regulated facility, such as a building, is being demolished or renovated. NESHAP also regulates asbestos in active and inactive waste disposal sites. These requirements and standards are described in 40 CFR Part 61, Subpart M, available at: www.epa.gov/asbestos/pubs/40cfr61subpartm.pdf. The CAA allows EPA to delegate NESHAP authority to state and local agencies. Even after EPA delegates this responsibility, the Agency retains the authority to oversee delegated programs and enforce NESHAP regulations.

Assessing Asbestos Liability Under NESHAP Key Questions

The following key questions related to asbestos liability under NESHAP are addressed further in Appendix D:

- Could the municipality incur liability under the asbestos NESHAP by acquiring or leasing a property containing asbestos or asbestos-containing materials?
- Could the municipality be liable under the asbestos NESHAP for asbestos that originate from an off-site source?
- Could the municipality be liable under the asbestos NESHAP for asbestos that migrates off the property?
- How does subdividing or parceling a property affect liability under the asbestos NESHAP for asbestos or asbestos-containing materials?
- Could a municipality be responsible under the asbestos NESHAP for reimbursing EPA or the state for "unrecovered" response costs if they acquire or lease a property at which asbestos-related cleanup was conducted?
- Could the municipality incur liability under the asbestos NESHAP by performing environmental investigations, cleanups, building demolition or physical improvements on a property it does or does not own or lease?
- Are municipalities protected under the asbestos NESHAP from past owners/operators or third parties seeking to recover costs they spent to perform environmental investigations and cleanup involving asbestos or asbestos-containing materials?

NESHAP is one of a number of federal laws that govern how asbestos materials must be handled in schools, public buildings, and commercial or industrial buildings. For example, Title II of TSCA, which was briefly discussed in Section 7.4.1, addresses asbestos in schools. Title II also establishes accreditation requirements for persons conducting asbestos inspections and abatement activities in schools, commercial buildings and public buildings. The Occupational Safety and Health Administration

(OSHA) regulates exposure to asbestos in the workplace through the Construction Industry Standards (29 CFR §1926.1101) and General Industry Standards (29 CFR §1910.1001).

Asbestos is also regulated under other federal environmental statutes. For example, asbestos that is released to the environment is regulated as a hazardous substance under CERCLA. Generally, though, unless a building or structure is in danger of collapse or could otherwise release asbestos to the environment, EPA's Superfund program is not typically involved in the asbestos abatement activities. An important exception would be situations where removal of the building or structure is a necessary part of a CERCLA response action (e.g., removal of a building or structure is necessary to provide access to the underlying contamination). Another federal statute regulating asbestos is RCRA. While the federal RCRA (Subtitle C) regulations do not specifically list asbestos as a hazardous waste, EPA does have the authority to require cleanup of asbestos using, for example, Section 7003 of the statute. Further, states may also regulate asbestos under their authorized RCRA programs in a manner that is broader than scope than the federal program, or they may have enacted other laws establishing additional requirements. In addition to the federal and state laws described above, other requirements governing asbestos are sometimes instituted at the local or county level.

7.5.2 Cleanup and Management of Asbestos under the Asbestos NESHAP

The asbestos NESHAP defines a facility, in part, as any institutional, commercial, public, industrial, or residential structure, installation, or building undergoing demolition or renovation, and active and inactive waste disposal sites. Privately-owned residential buildings having four or fewer dwelling units are generally excluded; however, if these buildings are demolished or renovated as part of a commercial or public project (e.g., urban renewal, highway construction, or any commercial or industrial development), they would be regulated. Any facility that will be undergoing demolition or renovation must be first properly inspected for regulated asbestos-containing materials (RACM) regardless of the age of the facility. RACM consist of:

- Friable material containing more than one percent asbestos; or
- Category I non-friable material containing more than one percent asbestos (i.e., asbestos-containing gaskets, packings, resilient floor coverings, resilient floor covering mastic, and asphalt roofing products) that has become friable, or has been or will be subject to sanding, grinding, cutting, or abrading; or
- Category II non-friable material containing more than one percent asbestos (i.e., any material excluding Category I non-friable material) that has a high probability of becoming crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation.

Asbestos NESHAP regulations must be followed for all renovations of facilities with at least:

- 80 linear meters (260 linear feet) of RACM on pipes;
- 15 square meters (160 square feet) of RACM on other facility components; or

- one cubic meter (35 cubic feet) off facility components where the amount of RACM previously removed from pipes and other facility components could not be measured before stripping.

These amounts are known as the "threshold" amounts. Renovations involving less than specified threshold amounts of RACM are not subject to the notification requirements. However, asbestos NESHAP regulations (such as notification) must be followed for all demolitions of facilities whether or not asbestos is present. Importantly, before initiating demolition and renovation activities, the owner or operator must notify EPA or the delegated state or local agencies and remove all RACM from the affected areas at least 10 working days in advance of the project in accordance with the requirements specified in 40 CFR §61.145. Asbestos-containing materials not meeting the definition of RACM do not need to be removed prior to demolition, except where demolition will be by intentional burning. Disposal of RACM is subject to the requirements specified in 40 CFR §61.150, which requires that all RACM be properly disposed of into an asbestos NESHAP approved landfill using a waste shipment record. Many municipal landfills do not accept RACM.

Although EPA does not directly oversee and enforce OSHA regulations, it is important to emphasize that these regulations establish comprehensive requirements relating to demolition, renovation, and other activities involving asbestos. Additional information is available on OSHA's Web site: www.osha.gov/SLTC/asbestos. EPA's Worker Protection Rule (40 CFR Part 763, Subpart G) extends the OSHA standards to state and local employees who perform asbestos work and who are not covered by the OSHA Asbestos Standards, or by a state OSHA plan. The Rule parallels OSHA requirements and covers medical examinations, air monitoring and reporting, protective equipment, work practices, and record-keeping.

Additional information regarding the asbestos NESHAP is available on EPA's Web site: www.epa.gov/asbestos. Because asbestos in older buildings is so commonplace, a number of publications are available that describe accepted demolition, renovation, and disposal practices. Some of these are listed in Appendix E. A list of EPA regional and state asbestos contacts is available at: www.epa.gov/oppt/asbestos/pubs/regioncontact.html.

8 Project Economics and Financial Analysis

8.1 General

This Chapter:

- Discusses potential project costs, revenues and other financial considerations
- Describes the use of a *pro forma* and sources-and-uses chart to conduct a financial analysis

To properly evaluate property recovery actions, municipalities generally need to weigh the financial risks and benefits of municipal involvement in the redevelopment project. This evaluation may include estimating the potential costs to the municipality of undertaking a given property recovery action (e.g., property acquisition costs, environmental investigation costs) and identifying potential sources of revenue and other funding to implement that action and other aspects of the project. In addition, a general understanding of the financial viability of a desired redevelopment can help in assessing whether the project goals are realistic and likely to attract private investment. While a detailed discussion of financial analysis is beyond the scope of this workbook, this chapter and other discussions throughout this document identify some general factors relating to the environmental conditions that might be appropriate to consider as part of a financial analysis.

Real estate developers routinely use a *pro forma* spreadsheet to conduct a financial analysis of a project. Environmental costs are typically included as line items on the spreadsheet. The preparation of a detailed *pro forma* is a very involved process. Accounting for project uncertainties in the *pro forma* can be a particular challenge. This is discussed briefly in Section 8.2.

To assist municipalities in evaluating property recovery actions, an abbreviated *pro forma* worksheet and instructions for completing the worksheet are provided in Appendix A and discussed in Section 8.3 (available for download at www.epa.gov/region1/brownfields/prepared). This *pro forma* worksheet is a rough estimating tool that can be used by municipalities to preliminarily assess, for example:

- the potential financial viability of different redevelopment scenarios
- the relative effect of various cost and revenue assumptions on profitability
- the amount of subsidies or incentives needed to attract a developer

Another tool often utilized by municipalities for redevelopment project is the sources-and-uses chart. A sources-and-uses chart provides a mechanism for identifying and balancing potential expenses, funding needs, and sources of funding. The sources-and-uses chart could be used by municipalities to evaluate property recovery actions that either involve municipal development projects (e.g., a town building or park) or involve facilitating private development. An example of a completed sources-and-uses chart is included in Appendix C. Appendix E identifies resource materials describing some potential sources of funding, including those available through EPA's Brownfields Program.

If the municipality could potentially assume significant financial risk by undertaking a particular property recovery action, the municipality should enlist the services of qualified financial consultants to conduct a more rigorous financial analysis if that expertise is not available in-house — particularly for large and complicated projects.

If the municipality could potentially assume significant financial risk by undertaking a particular property recovery action, the municipal should enlist the service of qualified financial consultants to conduct a more rigorous financial analysis if that expertise is not available in-house—particularly for large and complicated projects.

The preparation of a *pro forma* or sources-and-uses chart requires having some understanding of the intended property uses, as this establishes the basis for determining the potential costs and revenues. The financial analysis should consider all major components of the development process. Figure 8.1 shows the development components that could be associated with each of the property recovery action discussed in Chapter 3 and identifies those components that might typically involve the municipality. Even if a municipality will not be responsible for implementing a given component, it should consider how that component might impact the overall project. For example, if cleanup has already taken place on the property, the municipality may still need to assess how the future use, property management, marketability, financing, or other components of the development process are affected by the environmental conditions.

8.2 Pro Forma

A *pro forma* is used to analyze underlying redevelopment and environmental cost data and revenues involved in purchasing and developing the property. Examples of project costs and revenue streams are shown in Figure 8.2.

Risks that can be quantified as a specific cost can sometimes be factored into the *pro forma* calculations (for example, in the form of premiums for insurance coverage or by increasing the "safety" margin on a particular cost line item). Any risk that cannot be quantified is classified as an 'unquantifiable risk' that will require separate consideration in the decision process. In some cases, an undefined or unquantifiable risk, if it is significant enough and cannot be managed cost-effectively by the developer, may prevent development from occurring. Developers will therefore go to great lengths to identify and manage risk factors to the extent practical. Potential risk factors arising from uncertainty may include, but are not limited to:

- Market risks due to the overall economy
- Changing local market conditions
- Uncertainty in the environmental conditions or cleanup action costs
- Additional financing and insurance requirements due to potential project risks
- Greater than anticipated entitlement or engineering costs to redevelop or reposition the property
- Changing cost factors as a result of a delayed timeframe for development

Table 8.2 - Development Components Typically Associated with Property Recovery Actions

	Phase I ESA	Phase II ESA	Financing[1]	Acquisition	Environmental Investigation	Cleanup Action	Development Construction	Marketing	Property Disposition	Property Management
Municipal Use										
Acquisition with long-term ownership	●	●	●	●	●	●	●			●
Leasing for municipal use	●	○	●		○	○	●			●
Development by Another Party										
Acquisition with interim ownership	●	●	●	●	○	○		●	●	●
Acquisition with "simultaneous" transfer to a third party	●	○	○	●	○			○	●	
Collaboration with the property owner	●	○	○		○	○		●		
Transfer tax lien	●							○		○ [2]
Market/create incentives	●						○ [3]	●		

Guide:

● – Very likely to be performed by the municipality

○ – Somewhat likely be performed by the municipality

Notes:

[1]Refers to financing or funding needed by municipality for acquisition, environmental investigation, cleanup, or construction.

[2]In some situations property title could revert to the municipality if the third party does not meet certain obligations.

[3] For example, where road improvements are to be made.

While developers are used to dealing with changing market conditions and redevelopment-related construction issues, uncertainty regarding the environmental conditions is often less understood. Generally, the more certainty a municipality can bring to a property (e.g., through environmental investigations), the better positioned it will be to attract development. In some cases, the developer may expect some form of government assurance or risk-sharing before moving forward with a project.

Section 8.3 describes how a municipality might use the *pro forma* worksheet to evaluate potential redevelopment scenarios.

Redevelopment Costs	• **Cost of land** • **Infrastructure/property development costs** • **Building construction costs** • **Soft costs, such as legal fees, permit fees, architectural drawings** • **Costs of capital – interest and fees**
Environmental Costs	• **Investigation and cleanup action** • **Legal or consulting fees** • **Maintenance of institutional or engineering controls** • **Environmental liability insurance**
Revenue Streams	• **Selling the property ready for development** • **Dividing the property into parcels for sale** • **Constructing and selling individual buildings or units within building** • **Constructing and leasing buildings or units within building** • **Creating and selling/leasing pad sites** • **Tax revenue** • **Other revenue (e.g., advertising signage, renewable energy production, cell towers)**

Figure 8.2 - Examples of Project Costs and Revenue Streams

8.3 Using the Pro Forma Worksheet

The *pro forma* worksheet provided in Appendix A allows the user to prepare "back-of-the envelope" financial estimates to assess how a developer might look at various redevelopment scenarios. The worksheet also helps evaluate the general impact of various cost and/or revenue assumptions. It will not substitute for a detailed financial analysis, is not applicable to complex projects, and should not be used to make investment decisions. Where the municipality does not have the in-house expertise to appropriately utilize the *pro forma* worksheet, it should obtain consultants or other parties with that expertise.

The *pro forma* worksheet provides default values (such as per square-foot construction costs and lease revenues for various types of reuse) that can be used to calculate each line item. These default values are examples of the types of values to be input and may not reflect current economic and market conditions or account for regional variations from national averages. Local real estate brokers, economic development officials, lending institutions, or developers should be able to provide appropriate values for a particular geographic area. A range of values can be used where estimates are uncertain.

It is important to understand and evaluate all assumptions included in the analysis, particularly those that can dramatically affect results. For example, a small change in the capitalization rate (whereby the income stream is capitalized to calculate a value for a property) can quickly cause the project to become less financially viable. Also, keep in

mind that the rate of return in the *pro forma* worksheet does not reflect the number of years the project will take. Developers, investors, and lenders use discounted cash flow and other methods to adjust for the time value of money.

The *pro forma* worksheet will provide an estimate of profitability, but just because the project appears to be profitable, does not necessarily mean that developers will be willing to acquire and redevelop the property. Individual developers and investors will have their own view of what is considered an acceptable return on investment that takes into account project risk. As a general rule, higher project risk carries the expectation of higher potential returns. Developers will also utilize other tools such as market analysis, highest and best use studies, and other investment-related information to determine the viability of a project.

There are a variety of ways that the *pro forma* worksheet can help guide the evaluation process including:

- A municipality can assess whether a desired reuse is financially viable assuming the property is free of contamination. This "best case" scenario will provide a baseline for estimating the minimum amount of public incentives or other assistance that might be needed to make the property marketable. Based on that analysis, the municipality can begin to make some judgment as to whether certain reuse options are impractical, whether additional resources to conduct a Phase II ESA would be justified, how to prioritize information gathering efforts, and so forth.

  Even before verifiable information on the environmental conditions is available, the municipality can build on those baseline estimates by making certain assumptions regarding the environment conditions (such as, that asbestos insulation will be present in all or certain buildings). This can help in assessing the relative contribution of those added costs should they prove to be true.

- If the Phase I ESA determines that the property has already been extensively investigated and that information is available, or the municipality has conducted its own Phase II ESA, the *pro forma* worksheet can be used to estimate how various cleanup alternatives could affect the costs and profitability of reuse scenarios should those costs be passed on to the developer of the property.

  Likewise, where cleanup has already occurred, the financial analysis can take into account the associated costs that might be passed on, such as operation and maintenance costs, settlement of environmental liens, and any costs to modify the existing cleanup if necessary to accommodate a proposed reuse.

- Added interest costs resulting from protracted delays in construction, rehabilitation, and remediation activities can be considered.

- The impact of parceling the property under different scenarios can be evaluated. For example, it might be that the revenue generated by selling off portions of the property could be used to finance cleanup or property improvements on the other portions.

- Municipalities can estimate the revenues they would receive from a project. Real estate taxes and permit fees can be estimated based on the size and type of the

redevelopment project. Retail rents generally reflect sales volume and can be interpolated to calculate sales tax revenue.

The *pro forma* worksheet line items should be recalculated as additional information becomes available. Used appropriately, the *pro forma* worksheet can be a useful tool for developing a preliminary understanding of those factors that are likely to influence the marketability of a property. As noted, however, it is important to recognize the limitations of the *pro forma* worksheet.

9 Community Issues

"In communities that are under economic stress, particularly low-income areas that have experienced long periods of disinvestment and decay, successful revitalization takes more than a focus on individual properties. Revitalization requires a hard look at the surrounding area in order to establish a comprehensive area-wide plan that identifies reuses that both meet the needs of the local community and that incorporate the elements of public improvements and infrastructure that are necessary to attract private investment."

—Mathy Stanislaus
Assistant Administrator
Office of Solid Waste and Emergency Response
Environmental Protection Agency

9.1 General

This Chapter:

- Discusses the importance of community engagement in the risk management process
- Outlines some key community engagement principles
- Describes benefits of area-wide planning and sustainable development practices

Community involvement is a legal requirement in most federal and state environmental programs. One of the first federal environmental statutes — the National Environmental Policy Act (NEPA) — set out formal requirements for the public's role in implementing the statute. The public participation process delineated in NEPA became the model on which public participation requirements for state and federal cleanup programs were based. Over the years, the inherent benefits of public participation in the cleanup and redevelopment of contaminated properties have been repeatedly affirmed.

As municipalities consider the financial and environmental risks involved in redeveloping contaminated property, they must not lose sight of the central role that community issues play in the risk management process. By defining and addressing community issues up front, municipalities establish realistic goals and build public support for the project. This reduces the potential for unnecessary delays, additional costs, and other pitfalls that could undermine the project. In this respect, addressing community issues can be an important way to reduce or otherwise manage certain project risks.

As municipalities consider the financial and environmental risks involved in redeveloping contaminated property, they must not lose sight of the central role that community issues play in the risk management process.

Community engagement is the mechanism by which developers, local authorities, and regulatory agencies communicate with community stakeholders during the various stages of a cleanup and redevelopment project. Community stakeholders affected by contaminated and derelict properties include local residents, organizations, and businesses. Because they live and work in the area, these stakeholders understand the needs of the community and will be able to raise potential issues and provide useful insights regarding the property and the revitalization efforts under consideration. Community engagement is also an opportunity for a developer or local government to educate local residents and learn about their views

towards neighborhood planning concepts such as transit-oriented development, traffic-calming, and low-impact development.

Testimonials: Benefits of Community Engagement

The experiences of government and community stakeholders repeatedly confirm the importance and benefits of community engagement in revitalizing contaminated and derelict properties and bringing new life to cities and towns. These experiences demonstrate that:

● ***Involving communities helps "redefine, rebuild, respirit, and recivilize"***

"[O]ut of the devastation of Detroit, we are at the point here today where we can really redefine, rebuild, respirit, and recivilize the city…What is harder to see behind the physical devastation is the new spirit that is arising in the city and finds its expression chiefly in the explosion of meetings that has taken place…Here in Detroit, we started by building a common vision." – Environmental Justice, Urban Revitalization, and Brownfields: the Search for Authentic Signs of Hope

● ***Early engagement anchors project goals and builds support***

"Brownfields projects have much greater success when the local community first identifies the potential reuse of the idled, contaminated property. This end-use approach can help focus the environmental remedial response, attract private investors and public resources, and build the community consensus to see the project through." – Unlocking Brownfields: Keys to Community Revitalization

● ***Inclusion of burdened groups fosters positive relations and avoids delays***

"Engage in meaningful dialogue and you will minimize delays from public misunderstanding and criticism." – Lessons Learned about Superfund Community Involvement

● ***Dialogue on revitalization, especially with youth, also benefits other initiatives addressing violence, substance abuse, and crime***

"When you look at crime and violence in communities, it is all linked. Yet what it comes down to is the reality of how to overcome these things. The psychological impact on young people…must be filtered into our public dialogue as we talk about revitalization." – Environmental Justice, Urban Revitalization, and Brownfields: the Search for Authentic Signs of Hope

See Appendix E for full citations to the above testimonials.

Although the appropriate level of community engagement will vary from project to project, setting up opportunities to talk with community stakeholders is important even if the redevelopment project is not expected to be controversial. Community engagement can foster productive relationships between the government, community, and the developer, resulting in partnership-based planning and redevelopment that can benefit all parties and increase the likelihood of a successful project.

By devoting careful attention to community issues and concerns, a municipality also creates an atmosphere of cooperation that can extend to future projects. Conversely, it can take years for a municipality to restore its credibility in a neighborhood that believes its interests were ignored in previous development projects. Furthermore, developers are far more likely to be attracted to an area where the local government and other

stakeholders have a demonstrated history of constructive involvement with redevelopment projects, as this may reduce a potentially significant source of risk for them.

EPA recognizes the importance of community engagement relating to its cleanup activities at contaminated properties. A recent EPA effort to promote and improve the practice of community engagement is described in the text box on this page. Other useful resource materials on community engagement are listed on page 107 and Appendix E.

EPA's Community Engagement Initiative

EPA's Office of Solid Waste and Emergency Response (OSWER), which provides policy, guidance and direction for the Agency's emergency response and waste programs, launched a Community Engagement Initiative in 2010. This initiative is designed to enhance OSWER and regional offices' engagement with local communities and stakeholders (e.g., state and local governments, tribes, academia, private industry, other federal agencies, non-profit organizations) to help them meaningfully participate in government decisions on land cleanup, emergency preparedness and response, and the management of hazardous substances and waste. For more information on this initiative, please visit www.epa.gov/oswer/engagementinitiative.

9.2 Some Key Principles of Community Engagement

Successful community engagement is often the result of the municipality's and developer's willingness to work with community stakeholders to recognize and integrate specific community objectives into a redevelopment project. These objectives frequently involve issues of health and safety, job creation, affordable housing, and community character and identity. The following principles should guide a municipality in laying the foundation for a collaborative relationship with all stakeholders in a project:

- Envision the project as a long-term investment in the community
- Engage the community early and throughout
- Ensure that meetings are accessible and accommodate community needs
- Ensure that a community has the information and resources to participate in a meaningful way
- Establish a transparent and credible process, and provide timely follow-up
- Establish realistic expectations for project goals and community participation

The discussion below explains these principles and suggests ways to put them into practice.

Envision the project as a long-term investment in the community

The municipality should consider how a specific project might be part of a broader, integrated area-wide strategy for eliminating environmental and economic barriers and supporting the neighborhood's long-term health and vitality. When municipalities approach the redevelopment project as a way to help revitalize a neighborhood rather than simply reuse a particular property, they are more likely to be successful at garnering and retaining community support. An area-wide revitalization strategy signals a commitment to the future welfare of the community. Area-wide planning also provides

Case Study: Community Engagement in Dudley Village, Dorchester, MA

Mixed use project

The Dudley Village is a mixed use, transit-oriented housing development which has transformed a previously high crime area into a family-friendly community. It consists of five buildings containing 50 units of affordable rental housing and roughly 6,500 square feet of commercial space. The Village is the product of a collaborative development effort between two local nonprofit organizations, the Dorchester Bay Economic Development Corporation (DBEDC) and the Dudley Street Neighborhood Initiative (DSNI).

The $20 million redevelopment initiative required 23 sources of financing and took 5 years to complete. Throughout the process, the community retained substantial control, and even veto power, over the redevelopment plans. The developers kept costs down while still successfully integrating the community's vision and sustainable design using multiple strategies. First, they hired an architecture firm committed exclusively to building low-cost housing. Second, they worked closely with the state's Department of Neighborhood Design (DND) along with other state and local agencies. Third, they addressed the community's needs using innovative and efficient technologies.

The state and local government played a critical role in completion of the project. Both the state and city of Boston granted DBEDC millions of dollars to be paid back over a period of years. Also, when additional money for "green" photovoltaic projects became available, state and local authorities identified Dudley Village as the appropriate recipient. Finally, state grant money and clean energy rebates also paid for the installation of solar photovoltaic panels and a rooftop monitoring system.

The development addresses the community's needs in variety of ways. First, in keeping with its transit-oriented mission, the complex is within a quarter of a mile from a public commuter rail station. Additionally, it shares community space and resources, including computer and community rooms, a technology training center, and green space, with an adjacent apartment complex. Third, most of the units are available at a price no greater than 60 percent of the median income of the Dudley community. The Village also addresses the community's health and cost concerns by incorporating efficient and sustainable structures and appliances such as: dual flush toilets, rooftop solar photovoltaic panels, water conserving fixtures, high-performance insulation, and high efficiency heating.

In short, the Dudley redevelopment effort is a powerful example of how community engagement has yielded positive benefits for both the community and local government. Specifically, the community's rejuvenation has assisted local officials by reducing crime rates, thereby saving on the cost of additional police necessary to patrol the previously high-crime area. Thus, Dudley Village serves as a model for a transit-oriented, sustainable development which can result from collaborative efforts across government, non-profit, and community groups to revitalize both a community and its economy.

For additional information on Dudley Village and other transit-oriented developments, see Encouraging Transit Oriented Development: Case Studies that Work, www.epa.gov/dced/pdf/phoenix-sgia-case-studies.pdf.

opportunities for integrating large-scale infrastructure systems (e.g., transportation and utility systems) and creating other synergies and efficiencies. In addition, developers and investors will often be more likely to invest in a particular property if it is part of a larger revitalization effort designed to transform an economically stagnant or deteriorating area. Municipalities and developers can further demonstrate their commitment to the local community by providing opportunities for local businesses and residents to obtain work related to the revitalization project. Such local job creation also helps to build community support for the project.

For additional discussion of area-wide planning and other community investment strategies, see the text box on page 110.

Engage the community early and throughout

Early engagement demonstrates that community input is valued and not just an effort to gain acceptance for the project after key decisions have been made. Early engagement also reduces project costs and delays by helping to identify community concerns and issues before the project moves too far forward. And finally, involving community stakeholders throughout the process allows parties to work through the issues in a systematic manner so that all parties are vested in a successful outcome.

Ensure meetings are accessible and accommodate a community's needs

When planning stakeholder meetings, the goal must be to provide equal and fair access to all by eliminating barriers to community participation. The actual measures taken should be tailored to the individual community's needs. The municipality should consider factors such as appropriate notice, the time of day, the availability of public transportation and child care, access for the disabled, and the need for translators for non-English speakers. Community-based groups are often closely aligned with certain sectors of the community and can help in mobilizing community members to participate in the stakeholder process.

Making extra efforts to reach out to the community and encourage participation sends an important message that is likely to influence public perception even before the first meeting is held.

Ensure that a community has the information and resources to participate in a meaningful way

Consensus building functions best when all the parties involved have a basic grounding in the issues and topics being discussed. Taking the time to provide stakeholders with the information necessary to better understand the key topics and issues will generally lead to more informed and productive discussions.

For stakeholder education efforts to be effective, the information must be from a source that is viewed as trusted and neutral. In addition, this information should be appropriate for the intended audience and should be presented in a way that is not condescending to any group of stakeholders. And finally, the information and resources available to

stakeholder groups should be commensurate with the complexity of the topics and issues being considered.

Environmental cleanup is one topic area that involves technical and regulatory issues that can be challenging to understand and communicate. To assist stakeholder groups in addressing complex environmental issues, EPA offers some resources to communities and other stakeholder groups. For example, for Superfund sites, EPA makes available Technical Assistance Grants (TAGs) to provide communities with independent consultants who can review technical documents relating to cleanup activities and help communicate that information. Information on TAGs can be found at www.epa.gov/superfund/accomp/news/tag.htm. Another important EPA resource is the Technical Assistance to Brownfields (TAB) Communities Program, which provides a broad range of support services to municipalities and other stakeholders. For additional information on TAB, see EPA's Technical Assistance to Brownfields (TAB) Communities Program (January 2009) (www.epa.gov/brownfields/tools/tab_bifold.pdf).

Additional Resources for Conducting Community Engagement

For an **example of a model plan** on public participation, see

- www.greenlink.org/assess/pdfs/modelplan.pdf

For **case studies** on engaging communities in the redevelopment of contaminated properties, see

- www.epa.gov/evaluate/pdf/ejevalcs.pdf
- www.epa.gov/superfund/programs/reforms/docs/leslrncomplete.pdf
- www.epa.gov/brownfields/policy/comben.pdf

For **funding sources**, see

- a list of federal programs supporting redevelopment in disadvantaged communities (Appendix 1) (www.nemw.org/images/stories/documents/toolboxdisadvantagedcommunities.pdf)
- links to current EPA Brownfields Program grants and funding sources (www.epa.gov/brownfields/grant_info/index.htm)

See Appendix E for additional references on funding and community engagement.

Establish a transparent and credible process, and provide timely follow-up

While it may not always be possible to arrive at a clear consensus on a given issue or set of issues, it is very important that the processes for soliciting input and making decisions be transparent, credible, and understood.

When issuing decisions, municipalities should be sure to communicate to the community how input was utilized. If community input is not incorporated into the redevelopment plans, the municipality should explain why. A municipality or developer should also consider informing all stakeholders of important decisions first so that stakeholders do not feel blind-sided upon learning of those decisions through the media.

Other efforts to ensure transparency could include providing a note-taker at stakeholder meetings to document what was discussed and to serve as a reference point in future discussions. After the meeting, notes or minutes should be circulated and reviewed for accuracy. Timely and straight-forward responses to any questions raised will help clear up potentially minor misunderstandings before they escalate into major conflict.

Establish realistic expectations for project goals and community participation

The project goals and vision — whether they originate from the municipality or the community — must be realistic and ultimately achievable. It is therefore important to identify any constraints that might shape the project goals and vision, and communicate them as early as possible in the community engagement process. Chapter 2 describes various studies, such as a "market analysis" and "opportunities and constraints analysis," that are typically conducted for this purpose. Among the other constraints that may need to be considered are regulatory requirements and available municipal resources. In some cases, the municipality's or community's ability to influence the nature and timing of a redevelopment might also be limited if, for example, the property is likely to remain in private hands.

These underlying realities and competing trade-offs will provide the context in which final decisions will be made. They will also help identify opportunities where flexibility to accommodate reasonable community needs and expectations might be possible — and minimize the frustration and distraction of pursuing those that are not.

9.3 Meeting Community Needs through Sustainable Development

A municipality's approach to cultivating a long-term relationship can take many forms. One approach is to invest in the well-being of a community through sustainable and equitable development. As used in this manual, the concepts of sustainable development and equitable development emphasize community engagement in the environmental, social, health, and economic issues shaping a community's long-term welfare. Community revitalization and continued stability are natural outgrowths of a healthy physical environment.

The incorporation of environmentally sustainable and equitable development practices into redevelopment projects can provide many advantages to a community. For example, redeveloping an infill site rather than building a new development on open space is a development practice that is more sustainable and provides positive community benefits. Additional sustainable practices include using renewable energy; constructing buildings that are energy-and water-efficient; utilizing low impact development techniques; integrating natural systems with the built environment; reusing existing building materials and equipment; mixing land uses; improving pedestrian access and linkages to public transportation systems; and implementing local food production strategies.

Not surprisingly, many of the above examples often align with a community's immediate goals by encouraging resource sharing, social interaction, affordable housing and local employment to help retain residents, and community cohesion. The environmental improvements will benefit the community as well. For example, redevelopments with strong pedestrian access and public transit links reduce air pollution while fostering community interaction. Building designs which incorporate environmentally responsible practices such as waste minimization and recycling, wastewater conservation and reuse, and chemical/toxic-free building materials both conserve natural resources and serve as

valuable educational opportunities. On-the-ground strategies for implementing sustainable development should be explored within the context of each community. Environmental certification programs are one tool for incorporating sustainable design into redevelopment. These programs can be an effective means of generating community pride through a community's achievement of certification requirements while generating local environmental benefits. Further, by providing straight-forward guidance on how to implement greener design, well-recognized certifications enable communities to understand and participate in neighborhood improvements.

EPA has several certification programs pertaining to green building design, including ENERGY STAR®, WaterSense® and Indoor airPLUS. Additional information on green building design can be found at www.epa.gov/greenbuilding. The IndoorairPlus program is described at www.epa.gov/indoorairplus. Other environmental certification programs have been developed by non-governmental organizations, such as the U.S. Green Building Council's internationally-recognized Leadership in Energy and Environmental Design (LEED®) standards (see www.usgbc.org). LEED rating systems address a number of sustainable building practices, including the LEED Neighborhood Development Certification, which incorporates concepts of green building design, smart growth, and new urbanism. By evaluating sustainable development practices within the context of a community, the program enables a municipality to address many common community concerns such as pedestrian and traffic safety, air and water quality, and affordable and accessible housing options. For information on the LEED® for Neighborhood Development Certification program, see www.usgbc.org/DisplayPage.aspx?CMSPageID=148
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In the past decade, many governmental entities have developed a variety of toolkits for communities committed to sustainable development. EPA's Green Communities program provides a toolkit based on a five-step environmental planning framework (see www.epa.gov/greenkit/index.htm). Massachusetts offers a Smart Growth/Smart Energy Toolkit containing modules on Brownfields, Environmental Justice, Low Impact Development (LID), and Transit-Oriented development (See www.mass.gov/envir/smart_growth_toolkit/pages/SG-modules.html).

For additional toolkits, see Appendix E. For EPA programs and resources related to sustainability, see www.epa.gov/Sustainability/.

EPA's Approach to Area-Wide Planning Involving Contaminated Properties

Federal resources for contaminated properties are typically delivered site-by-site to assist with assessment, cleanup, and the subsequent reuse of properties. The burden of a single large, blighted and/or contaminated site, or multiple blighted and/or contaminated sites concentrated within an area (such as a neighborhood, district, city block, or corridor), can weigh down an entire community. Using an area-wide planning approach to identify the assessment, cleanup, and reuse needs of an area can be more effective than focusing on individual sites in isolation of the adjacent or surrounding community.

EPA's Office of Solid Waste and Emergency Response, which manages Superfund and other federal environmental cleanup programs, recognizes the benefits of an area wide planning approach. In 2010, EPA's Office of Brownfields and Land Revitalization created a Brownfields Area-Wide Planning Pilot Program. The goal of the pilot program is to work in partnership with local communities (governments, nonprofits, and other community-based organizations) to help create a shared vision for brownfields-impacted areas, and to ensure that brownfields assessment and cleanup decisions are informed by the planned reuses for the sites and supporting area-wide revitalization strategies. The approach recognizes that revitalization of the area surrounding the brownfield site(s) is just as critical to the successful reuse of the property (or properties) as cleanup and redevelopment of an individual site.

Under the pilot program, EPA is assisting selected applicants with developing an area-wide plan for a brownfields-impacted area, which includes:

- Planning to identify future uses for brownfields properties
- Creating a set of area-wide strategies which will help ensure successful assessment, cleanup, and reuse of the brownfield site(s) within the brownfields-impacted area
- Developing strategies for facilitating the reuse of existing infrastructure, including taking into account potential infrastructure investments needed to accommodate alternative future uses of brownfields properties
- Determining next steps and identifying resources needed to implement the area-wide plan

More information on EPA's Brownfields Area-Wide Planning Pilot Program can be found at www.epa.gov/brownfields/areawidegrants.htm. For additional guidance on strategies, programs, and policies to build a green community, see Appendix E and www.epa.gov/greenkit/index.htm .

10 Managing Project Risk

10.1 General

This chapter discusses some general approaches and tools for managing project risks. As indicated in Section 1.3, risk is a function of the likelihood and consequences of an adverse event. This is shown graphically in Figure 10.1. As the figure further illustrates, in assessing risk both factors need to be considered together. For example, Point A (high likelihood, high consequence) is a high risk event, while Point B (high likelihood, low consequence) and Point C (low likelihood, high consequence) represent only low risk events.

This Chapter:

- Discusses basic risk management principles
- Provides information on the application of risk management tools and approaches

Risk management is the art of assessing, at least on a qualitative or comparative level: How likely is it? What could happen if it occurs? And what can be done to minimize either or both? Incomplete or unreliable information complicates these determinations. As a practical matter, risk management usually comes down to managing uncertainty. For example, when crossing the street, a pedestrian evaluates the frequency and speed of the cars, the distance to be traveled, his own agility, conditions of the road, and other relevant information before making that decision. Put a blindfold and earplugs on that same person and place him on the side of a street without any further information, and the decision to cross becomes a much different matter.

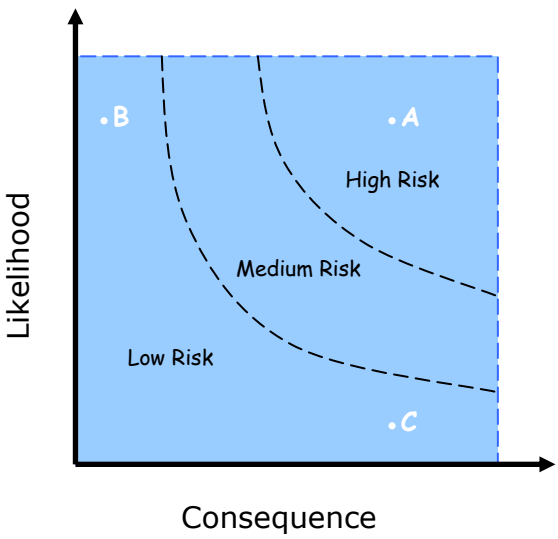

Figure 10.1 – Risk Relationship

Uncertainty in the context of redevelopment can be associated with information that is potentially available, but unknown (e.g., data gaps in sampling and analysis), and with information that must be inferred or "guessed at" because it involves an event that has not yet occurred and is not fully within one's control (e.g., Will EPA take an enforcement action? Will an abutting property owner sue?). These categories of uncertainty are often interdependent. For example, the greater the understanding of the environmental condition at a property, the easier it will be for the municipality to predict whether EPA or the state might require further investigation or cleanup of the property.

Section 10.2 discusses various risk management tools and approaches that can be useful as part of an overall risk management strategy. Some tools, such as insurance products or contractual provisions, can provide important benefits, but should not be used as a substitute for careful analysis and proactive strategies that reduce uncertainties and get at the source of potential risks. There are no band-aid approaches to risk management.

It is also important to realize that no one tool or approach will provide absolute protection. Employing multiple layers of protection will often be necessary — with specific tools and approaches reinforcing or building on others. For example, indemnification agreements can be most effectively negotiated if the parties have a clear understanding of the risk they are attempting to transfer. Indemnification agreements may also need to contain specific escrow or insurance provisions that back up the indemnification provisions. Similarly, insurance underwriters may be more likely to provide broad pollution coverage and charge the lowest premiums for environmental conditions that are well-characterized and controlled.

In addition, each of the tools and approaches has distinct limitations that must be understood in order to be used effectively. For example, indemnification agreements can be used to clarify responsibilities between the municipality and another party, such as the property owner and developer; however, the indemnification agreements will not necessarily shield the party being indemnified against CERCLA liability (Municipalities should seek expert legal advice regarding the use of indemnities and should be aware that, depending on the circumstances of their use, they may also undercut the ability to meet the requirements of some CERCLA liability defenses). As another example, insurance products can limit a municipality's financial exposure with respect to the specific circumstances defined by the coverage, but may be inappropriate as a long-term solution and difficult to obtain for smaller-scale projects. Insurance products may also be prohibitively expensive in some cases.

Section 10.3 discusses how the evaluation of property recovery actions and preparation of a risk management strategy might be shaped by whether or not there is a viable property owner that may be willing to work cooperatively with the municipality.

Worksheets #6 and #7 (see Chapter 11) are provided to help in reviewing potential risk management tools and approaches that might be useful for a given property recovery action.

10.2 Risk Management Tools and Approaches

10.2.1 Types of Tools and Approaches

Determining what risk management tools and approaches to use in any particular circumstance will depend on the municipality's needs and sensitivity to risk. Risk management tools and approaches can generally be separated into those that:

Understand/Quantify Risk

Understanding the risks involved in a transaction or a course of action is the foundation of risk management. Information gaps can hinder the ability to adequately define and quantify project risk — and can in themselves introduce risk — and efforts to close the most significant of those information gaps will often be the first focus in managing risk. Where significant information gaps exist, the municipality will need to assess whether the costs and risks of obtaining that information are justified.

Quantification of a risk by considering the potential economic costs attributable to that risk allows that risk to be accounted for in the project *pro forma*. Not all risks can be reduced to purely economic terms, however. In those situations, the risks may need to be evaluated on a qualitative basis.

Control Risk

Some risks can be controlled by taking actions to eliminate or reduce the source of the risk. A simple example of risk control is conducting a cleanup action. Or, a municipality can control liability risk by ensuring that the municipality meets the criteria for qualifying for and maintaining statutory liability exemptions.

Transfer Risk.

Risks that the municipality cannot control cost-effectively can sometimes be transferred to third parties through mechanisms such as indemnification agreements and contracts of insurance. For example, if the municipality ends up with a statutory obligation to remediate contamination at a property, these mechanisms can potentially reduce its financial exposure. But again, it is critical to understand the limitations of the risk transference mechanisms.

Risk management tools applicable to property recovery actions can generally be further categorized as relating to:

- Property activities
- Federal and state regulatory exemptions
- Transactional activities, including contract provisions
- Insurance

Some risk management tools and approaches associated with each of these categories that are available to municipalities are identified in Figure 10.2 and described in Section 10.2. The uses and limitations of some of these tools are further described on EPA's Insurance and Brownfields Redevelopment web page (www.epa.gov/brownfields/insurebf.htm#about). This includes the May 2006 web seminar, "*Risk Management Tools for Addressing Environmental Risks in Property Transactions*." Other useful resources available on that Web site are: "*Environmental Insurance and Risk Management Tools Glossary of Terms*," and "*Environmental Insurance and Risk Management Tools in Brownfields Cleanup and Redevelopment*."

Figure 10.2 is not comprehensive; nor is the inclusion of a tool or approach intended to suggest that its use is preferable to other tools and approaches that might be available. Further, Section 10.2 provides only a basic introduction to these tools and approaches and should not be relied on to make decisions regarding their use in a particular circumstance.

One of the most important steps that a municipality can take is to consult with EPA and state agencies with respect to the environmental status of the property.

Before discussing specific risk management tools and approaches, it is useful to again emphasize that gathering information and reducing data gaps should be the risk manager's first objective. To that end, one of the most important steps that a municipality can take is to consult with EPA and state agencies with respect to the environmental status of the property. EPA and the states understand the legal and technical complexities associated with the cleanup and reuse of contaminated properties, and are sympathetic to the challenges that municipalities face in tackling them. They have developed an excellent track record of working closely with municipalities to bring

properties burdened by environmental issues back to the public tax rolls. Appendix F identifies various Web sites where useful EPA and state contact information is available. EPA's State Program Summary provides additional contact information for state agencies.

Figure 10.2 - Selected Risk Management Tools and Approaches

Categories of Risk Management Tool	Understand and Quantify Risk	Control Risk	Transfer Risk
Property Activities (Section 10.2.2.1)	Meeting with EPA and State Regulators (Section 10.2.2.1.1)	Timing Municipal Involvement (Section 10.2.2.1.8)	
	Due Diligence/All Appropriate Inquiries (Section 10.2.2.1.2)	Interim Cleanup Action (Section 10.2.2.1.9)	
	Environmental Investigation (Section 10.2.2.1.3)	Cleanup Action (Section 10.2.2.1.10)	
	Cleanup Action Planning (Section 10.2.2.1.4)	Voluntary Cleanup (Section 10.2.2.1.11)	
	Reasonable Worst Case Scenario Planning (Section 10.2.2.1.5)	Monitoring and Maintenance of Remedial Systems and Structures (Section 10.2.2.1.12)	
	Engaging Stakeholders (Section 10.2.2.1.6)	Institutional Controls (Section 10.2.2.1.13)	
	Financial Analysis (Section 10.2.2.1.7)	Oversight of the Environmental Contractors (Section 10.2.2.1.14)	
		Following Accepted, Good Commercial Practices (Section 10.2.2.1.15)	
Statutory/Regulatory Protections (Section 10.2.2.2)		Statutory Exemptions and Defenses (Section 10.2.2.2.1)	
		Prospective Purchaser Agreements (Section 10.2.2.2.2)	
		No Action/ No Further Action letters (Section 10.2.2.2.3)	
		Other Determinations of Completion (Section 10.2.2.2.4)	

Categories of Risk Management Tool	Understand and Quantify Risk	Control Risk	Transfer Risk
Transactional Activities (Section 10.2.2.3)		Escrow Accounts (Section 10.2.2.3.1)	Indemnification (Section 10.2.2.3.9.1)
		Purchase Price Adjustment (Section 10.2.2.3.2)	Representations and Warranties (Section 10.2.2.3.9.2)
		Grants (Section 10.2.2.3.3)	"As Is" Provision (Section 10.2.2.3.9.3)
		Tax Benefits and Credits (Section 10.2.2.3.4)	Covenants (Section10.2.2.3.9.4)
		Private Investors (Section 10.2.2.3.5)	Assumption, Retention, and Release Provisions (Section 10.2.2.3.9.5)
		Specialized Loans (Section 10.2.2.3.6)	Schedule of Included or Excluded Liabilities (Section 10.2.2.3.9.6)
		Redevelopment Authorities (Section 10.2.2.3.7)	Post-Signing and Pre-Closing Conditions (Section 10.2.2.3.9.7)
		Land Banks [Section 10.2.2.3.8]	Fixed Price or Performance-Based Contracts (Section 10.2.2.3.9.8)
Insurance (Section 10.2.2.4)			Comprehensive General Liability (Section 10.2.2.4.1)
			Pollution Liability (Section 10.2.2.4.2)
			Errors and Omissions Insurance (Section 10.2.2.4.3)
			Cost Cap (Section 10.2.2.4.4)
			Secured Lender (Section 10.2.2.4.5)
			Finite Risk (Section 10.2.2.4.6)
			Institutional Controls and Post Cleanup action Care Insurance (Section 10.2.2.4.7)

10.2.2 Selected Risk Management Tools

10.2.2.1 Property Activities

10.2.2.1.1 Meeting with Federal and State Regulators

Unless a municipality is already an owner or responsible party for the property, there is probably little downside for the municipality in discussing potential property recovery actions with the regulatory agencies. These discussions can help identify potential pitfalls and other considerations that might keep the municipality from making costly and avoidable mistakes. These agencies have considerable expertise in the environmental laws and programs that might relate to a particular project and, although they cannot provide specific legal and technical advice, they can help explain and guide municipalities through the regulatory process. If the agencies have had direct involvement with the property, they should also be able to discuss the nature of that involvement, known environmental conditions, the need for additional studies and cleanup, future plans for the property, potential EPA and state environmental liens, and so forth. In addition, they may be able to point the municipality towards funding and other resources that can be used for reuse planning, environmental assessment, and cleanup. To make the most of these discussions, municipal officials should first carefully consider the material contained in this workbook and how it might apply to their project.

10.2.2.1.2 Due Diligence and All Appropriate Inquiries

As described in Chapter 4, due diligence helps a municipality to define the potential issues, costs, and risks associated with a property. Eliminating data gaps through due diligence can significantly reduce uncertainty.

An all appropriate inquiries investigation is necessary to potentially qualify for certain liability protections under CERCLA (see Sections 4.7.1 and 7.2.3).

10.2.2.1.3 Environmental Investigation

Under many cleanup programs, Phase I and II Environmental Site Assessments are conducted to determine whether serious environmental issues exist or could exist on the property. Environmental investigations typically go beyond Phase I and II ESAs and provide the basis for making actual cleanup decisions. As a result, environmental investigations generally provide a higher level of confidence that the environmental conditions have been adequately characterized. This reduces uncertainty regarding the cost and duration of cleanup activities, the likelihood of unanticipated events complicating the cleanup, and other factors that could have an adverse impact on a redevelopment project. For these reasons, developers and investors are generally more willing to consider properties where environmental investigations have been conducted. Environmental Investigations are discussed in more detail in Section 4.4.

10.2.2.1.4 Cleanup Action Planning

Cleanup action planning that takes into account reasonably anticipated future land use often allows the cleanup and private-party property development efforts to be better coordinated. This can provide a number of risk management benefits, including:

- ensuring that future use of the site does not undermine the protectiveness of the cleanup
- minimizing unnecessary impediments to reuse
- reducing the costs of both cleanup and redevelopment by addressing them in the same construction event
- designing buildings and other planned redevelopment infrastructure to be compatible with cleanup activities

The preliminary reuse assessment, described in Section 2.6, can be a useful resource document to help inform the cleanup action planning process.

10.2.2.1.5 Reasonable Worse Case Scenario Planning

Reasonable worse-case scenario planning is essentially the answer to: "what is the worst thing that could happen by moving forward with a particular property recovery action?" This process helps the municipality to better understand the upper limits of its potential risk and liability. Further, it helps to focus management efforts on the environmental issues that could have a large impact on the project schedule and costs. Reasonable worst case analysis can also help determine appropriate insurance limits.

The worst case scenario should be based on available information with reasonable, but conservative, assumptions about the risks and liabilities that may be encountered. In some cases several scenarios may need to be evaluated to more fully assess potential risks.

10.2.2.1.6 Engaging Stakeholders

As discussed in Chapter 9, proactive stakeholder engagement will help ensure that community issues are identified and addressed early in the redevelopment process. Reuse planning that involves community stakeholders is a primary strategy for understanding and addressing neighborhood and environmental justice issues prior to soliciting requests for proposals from developers. Developers typically want to understand the interests of the neighborhood so they can determine without great expense whether their development idea will be acceptable. In addition, once stakeholders have bought into a neighborhood or community plan, they can be influential advocates for achieving that vision.

10.2.2.1.7 Financial Analysis

As discussed in Section 6.3 and Chapter 8, financial risk is an essential consideration for a municipality involving itself in the cleanup and reuse of a contaminated property. Some level of financial analysis, commensurate with the magnitude of financial risk,

should be performed. That financial risk will likely depend on the property recovery action and the specific nature of the activities contemplated.

10.2.2.1.8 Timing Municipal Involvement

The timing of municipal involvement is a strategically important determination that can dramatically impact project risk. Sometimes a situation necessitates a more immediate response by the municipality. In other situations, the municipality may have the time to allow certain events to play out or to take additional steps to identify and manage risks before proceeding with a potential acquisition or other property recovery action. Examples of such steps include:

- Allowing EPA- or state-mandated assessments or cleanup activities to proceed, thereby reducing uncertainty regarding a property's environmental conditions
- Performing comprehensive investigations that more completely characterize risks
- Working with the community and other stakeholders to gain consensus around future uses of the property
- Developing a plan for phased cleanup and redevelopment activities on larger properties
- Identifying potential funding sources for cleanup, demolition, infrastructure replacement, and other activities
- Negotiating partnership agreements with the current owners or potential developers

The municipality should also consider the possibility that delaying or foregoing action on a property, even if the property is still privately owned, could in itself create unacceptable risks for the municipality.

10.2.2.1.9 Interim Cleanup Action

In some cases, it may be necessary or beneficial to undertake an interim cleanup action to address imminent hazards on a property. Examples of these interim actions include the removal of abandoned drums, the cleanup of spills, and the construction of security fences.

Performing interim cleanup actions to address the worst environmental problems or stabilize the environmental conditions at the site will also make the property more marketable and possibly allow a developer to obtain financing and insurance at more favorable rates. Interim actions can also be used to control cleanup costs (e.g., reducing the volume of material to be treated or removed by taking steps to prevent the further spread of contamination). Interim cleanup actions may also help guard against claims that a municipality caused or contributed to a release through its inaction. For reasons such as these, a municipality may sometimes consider initiating interim cleanup actions at a property. Before taking any interim cleanup actions, however, a municipality should ensure that it understands any risks associated with the action, including the incurrence of liability. The interim actions must be taken in a manner that does not worsen the environmental conditions at the site. Also, the action must be in compliance with federal, state, and local environmental requirements. To provide proper coordination between

federal, state, and local authorities, most federal and state environmental cleanup programs require proper notification prior to conducting interim cleanup actions.

After the completion of an interim cleanup action, additional environmental investigation, monitoring, and/or further cleanup action may be needed before a comprehensive "final" cleanup is achieved.

10.2.2.1.10 Cleanup Action

As discussed in Section 4.4, a cleanup action is primarily conducted to reduce or eliminate real or potential exposures to hazardous substances and other regulated materials. From a development standpoint, cleanup actions can help manage project risk by reducing uncertainty associated with the environmental conditions. The extent to which this is true will depend on the specific nature of the cleanup action.

If a municipality is contemplating conducting a cleanup action or evaluating a property at which cleanup actions have already taken place, it is important to consider how those cleanup actions are likely to influence redevelopment efforts. Cleanup actions that remove all contaminants are generally more desirable to developers, but are not always technically feasible or cost effective. Long-term management of some waste in place is therefore often a reality for many properties (See Section 4.7.6, "*Are long-term cleanup action-related treatment systems or other engineered controls in place or planned?")*. With effective planning between the entity conducting the cleanup action and the entity seeking to facilitate the redevelopment of the property – which in some cases may be the same entity – potential barriers to redevelopment and therefore project risks can be minimized.

Many factors can impact how well a cleanup action reduces project risk. Apart from non-cleanup related issues (e.g., the economy), these may include permanence (e.g., Have contaminants been completely removed? Have they been converted to a physical or chemical form that effectively prevents leaching or reduces toxicity?). Other factors include the need for long-term operation and maintenance (see Section 10.2.2.1.12), the need for institutional controls (see Section 10.2.2.1.13), the time it takes to complete the cleanup action, and any physical barriers that might limit future uses (e.g., treatment buildings, monitoring wells).

It should be noted that for CERCLA cleanups, EPA does not have the authority to conduct or to require responsible parties to conduct actions that are solely intended to provide enhancements or betterments to the property. An example of a potential enhancement might be the construction of a parking lot that is not needed to implement the cleanup. An EPA memorandum titled, *Considering Reasonably Anticipated Future Land Use and Reducing Barriers to Reuse at EPA-lead Superfund Remedial Sites* (March 17, 2010), further discusses when actions taken to facilitate reasonably anticipated future land use may be within the scope of CERCLA authority (available at: www.epa.gov/superfund/programs/recycle/pdf/reusedirective.pdf). With proper planning it may be possible for the municipality or developer (if one already exists) to fund and/or construct enhancements in coordination with the cleanup activities.

10.2.2.1.11 Voluntary Cleanup

Many states have voluntary cleanup programs (VCPs) to encourage and facilitate the cleanup of brownfields properties. The specific details of these programs vary from state to state, but they are often designed to provide more flexibility to parties performing investigation and cleanup activities. This flexibility potentially allows such parties greater control over the conduct and scheduling of those activities and helps to reduce the associated costs.

Further, at certain sites being addressed under a state VCP, the 2002 Brownfields Amendments provide that EPA may not take a CERCLA enforcement action against parties at the site, absent special circumstances (See discussion of "eligible response sites" in Section 7.2.4.). This provision creates an important incentive for performing voluntary cleanups of brownfields under state VCP oversight.

EPA may enter into a non-binding memorandum of agreement (MOA) with individual states that clarifies the general roles and responsibilities of each agency regarding cleanups under the state VCP. While an MOA, or absence of an MOA, does not alter EPA's or a state's legal authority, the MOA may provide the general public and development community with some confidence that EPA and the state agency are working in a coordinated manner.

10.2.2.1.12 Maintenance and Monitoring of Remedial Systems and Structures

Many contaminated properties can have residual contamination after the completion of a cleanup action. To ensure continued protection of human health and the environment, engineered controls (such as pavement that acts as a cap over contaminants) and monitoring (such as measurements of contaminant levels in ground water or indoor air) are often required. The engineered controls generally necessitate some sort of maintenance. For example, where pavement will be serving as a soil barrier or cap, periodic inspection for cracks and repaving are common maintenance activities.

Site monitoring serves to verify the results of environmental investigations, reveal trends in contamination levels, and monitor the performance of remedial systems and structures. Site monitoring may include the collection and analysis of ground water, soil, air, or other media. Generally, the cleanup action plan or closure report will identify the required maintenance and monitoring activities.

Likely and known maintenance and monitoring requirements should be identified early on in planning for the redevelopment. This includes determining which parties will be responsible for fulfilling these requirements. If a municipality takes on management responsibilities of a property through acquisition or leasing it should prepare a plan for meeting any obligations it might have regarding the operation, maintenance, and monitoring of the remedial systems and structures. This includes establishing a routine schedule for inspecting engineered controls and conducting monitoring to identify deficiencies and other developing problems before they become more serious.

Failure to perform the required maintenance or monitoring can allow the property conditions to deteriorate and endanger human health and the environment, and result in potential liability (See discussion of continuing obligations under CERCLA in Section 7.2.3). In addition, most post closure environmental insurance policies require

fulfillment of maintenance and monitoring requirements as a condition of coverage. Failure to properly conduct maintenance and monitoring can result in denial of insurance coverage claims.

10.2.2.1.13 Institutional Controls

Institutional controls typically include easements, environmental covenants, or deed notices, which notify property users and future owners as to the presence of residual contaminants that remain after the completion of the cleanup action and of any restrictions on future uses of the land, surface water and ground water (See Section 4.7.7 for further discussion of institutional controls). Generally, the cleanup action plan or the closure report for the cleanup action will identify the required institutional controls.

As with maintenance and monitoring requirements, considering likely or known institutional control requirements early in the redevelopment process can help the municipality anticipate potential issues and plan for effective implementation. This includes determining which parties will be responsible for fulfilling them. Municipalities can play a direct role in ensuring compliance with institutional controls because the municipality has access to the public records, and regulates zoning and the issuance of building permits.

Failure to follow the institutional controls can allow exposures that endanger human health and the environment, and result in potential liability (See discussion of continuing obligations under CERCLA in Section 7.2.3). In addition, many post-closure environmental insurance policies include a requirement to implement and maintain the institutional controls as a condition of coverage.

10.2.2.1.14 Oversight of the Environmental Contractors

Performing appropriate oversight of the site assessment, cleanup action, and construction contractors can potentially help reduce the municipality's common law liability should something go awry with the redevelopment. The municipality can include work out and mediation clauses in its contracts if there is doubt as to the contractor's ability to fully perform the agreed obligations. Also, the contracts can be staged or drafted with contingency clauses to reduce uncertainty on complicated development projects. Forward commitment contracts can sometimes be used to provide the certainty that a municipality needs to proceed with a project while providing flexibility should conditions change as the project progresses.

10.2.2.1.15 Following Accepted, Good Commercial Practices

The municipality can minimize the risk of contractual and negligence-based liability by following accepted good commercial and customary practices and by fulfilling the terms of the contracts to which it has agreed.

10.2.2.2 Statutory/Regulatory Protections

10.2.2.2.1 Statutory Exemptions and Defenses

Statutory exclusions and defenses can often be the first layer of protection for municipalities or other entities considering the acquisition or leasing of a potentially contaminated property because they are embodied directly into the law. Although sometimes subject to interpretation and legal challenges, they can provide a solid foundation for building a risk management strategy. Government enforcement discretion policies, while they do not carry the same weight as statutory exclusions and defenses and do not bind private parties, can also provide important protections for the municipality.

As discussed in Chapter 7, Potential Liability under Federal and State Cleanup Statutes, liability protections may or may not apply to a specific property depending on the method of acquisition and other site-specific facts. A clear understanding of potential statutory liabilities and the available exemptions and defenses to them is needed for the municipality to evaluate the various types of acquisition and control options. It is also critical to fully understand the threshold conditions and continuing obligations that are necessary to qualify for and maintain these liability protections.

10.2.2.2.2 Prospective Purchaser Agreements

Since the passage of the Brownfields Amendments in 2002, a person may acquire property knowing that it is contaminated and not incur liability under CERCLA as long as the purchaser meets and continues to comply with all of the requirements of a bona fide prospective purchaser as delineated in the statute (See Section 7.2.3.2 for further description of the BFPP provision)**.** As a result of the bona fide prospective purchaser provision, most prospective purchasers no longer need to seek prospective purchaser agreements with EPA.

Since 2002, EPA will consider entering into a prospective purchaser agreement only in very limited circumstances. In a memorandum, *Bona Fide Prospective Purchasers and the New Amendments to CERCLA* (May 31, 2002), EPA identifies only two such circumstances:

- Where there is likely to be a significant windfall lien (discussed further in Appendix D Section I) and the purchaser needs to resolve the lien prior to purchasing the property (e.g. to secure financing)
- Where a PPA is necessary to ensure that the property transaction will be completed and where the project will provide substantial public benefits to, for example, the environment, or to a local community because of jobs created, or revitalization of long blighted, under-utilized property, or promotion of environmental justice

Under those limited circumstances, the Agency will consider the following guidelines in evaluating whether or not to enter into an agreement:

- Significant environmental benefits will be derived from the project in terms of cleanup, reimbursement of EPA response costs, or new use, and there is a significant need for a PPA in order to accomplish the project's goals.
- The facility is currently involved in CERCLA litigation and there is a very real possibility that a party who buys the facility would be sued by a third party.
- There are unique, site-specific circumstances not otherwise addressed by the guidance when a significant public interest would be served by the property transaction and the transaction will not otherwise occur without issuance of a PPA.

The May 31, 2002 EPA memorandum is available at: www.epa.gov/compliance/resources/policies/cleanup/superfund/bonf-pp-cercla-mem.pdf.

A BFPP may sometimes want to perform cleanup work at a contaminated site which exceeds the "reasonable steps" required in order to maintain its BFPP status. For sites of federal interest, under certain limited circumstances, EPA and the U.S. Department of Justice may be willing to enter into an agreement with a BFPP to perform a cleanup action. This agreement is generally referred to as a "BFPP doing work" agreement. A BFPP may choose to perform cleanup rather than to wait for a potentially responsible party or government to do it for a variety of reasons including:

- Providing better coordination of cleanup activities and redevelopment plans
- Negotiating a lower purchase price from the seller by undertaking cleanup work that the seller would otherwise be responsible for
- Conducting the cleanup more cost-effectively
- Settling a Windfall Lien by agreeing to perform all or part of a necessary cleanup
- Recovering costs from responsible parties under appropriate circumstances

EPA and the U.S. Department of Justice issued a memorandum describing these BFPP Work Agreements titled, *Issuance of CERCLA Model Agreement on Consent for Removal Action by a Bona Fide Prospective Purchaser* (November 27, 2006), available at: www.epa.gov/compliance/resources/policies/cleanup/superfund/bfpp-ra-mem.pdf.

If there are concerns about state environmental liability, the appropriate state regulators should be contacted to determine the availability of prospective purchaser agreements under state law.

10.2.2.2.3 No Action/ No Further Action Letters and Comfort Letters

Frequently, the fear of potential CERCLA liability is cited as an obstacle to the redevelopment of contaminated sites. EPA often receives requests from landowners and other parties interested in a particular contaminated property asking that the Agency provide assurance that the party is not liable under CERCLA or that the Agency will not take an enforcement action against the party. Since the passage of the 2002 Brownfields Amendments to CERCLA, which provide explicit liability protections to landowners not responsible for the contamination, EPA has considered responding to such requests only in very limited circumstances.

Two types of letters frequently sought by prospective purchasers are comfort letters and no action assurance letters. It is very rare for the Agency to issue a no action assurance letter. Comfort letters may be considered for site-specific reasons supporting Agency policy and initiatives.

No Action Assurance Letters: EPA has long had a policy against giving definitive assurances outside the context of a formal enforcement proceeding that the government will not proceed with an enforcement response for a specific individual violation of legal requirements. However, the Agency has recognized two general situations in which no action assurances may be appropriate:

- When it is expressly provided for by an applicable statute (e.g., CERCLA 107(a)(3) and recent guidance on no action assurance letters for property owners); or
- In extremely unusual circumstances, when an assurance is clearly necessary to serve the public interest AND no other mechanism can address the public interest adequately.

Comfort Letters / Status Letters: In November, 1995, EPA issued a general policy on the use of comfort/status letters (commonly referred to simply as "comfort letters") for parties interested in cleanup and reuse. Comfort letters are provided solely for informational purposes and do not resolve issues of liability at the site.

The comfort letter policy does not change EPA's long-standing practice of not becoming involved in typical private real estate transactions. Comfort letters relate only to EPA's intent to exercise its response and enforcement authorities under CERCLA at a specific property based upon information known to EPA at the time of the issuance of the letter. EPA will consider issuing a comfort letter under the following circumstances:

- There is a realistic perception or probability of incurring Superfund liability;
- The comfort letter will facilitate the cleanup and redevelopment of a brownfield property;
- There is no other mechanism to adequately address the party's concerns; and
- EPA has sufficient information about the property to provide a substantive basis for the comfort letter.

Sample comfort letters are provided in EPA's *Policy on the Issuance of Comfort / Status Letters* dated November 8, 1995 (www.epa.gov/compliance/resources/policies/superfund/comfort-let-mem.pdf). EPA has also issued guidance, a model settlement document, and a sample comfort/status letter on windfall liens (www.epa.gov/compliance/resources/policies/cleanup/superfund/interim-windfall-lien.pdf).

EPA policy materials demonstrate that the agency has consistently limited assurances under section 107(q)(3) to contiguous property owners who meet the criteria of section 107(q)(1)(A). See *2004 Interim Enforcement Discretion Guidance Regarding Contiguous Property Owners* at page 10 (www.epa.gov/compliance/resources/policies/cleanup/superfund/contig-prop.pdf) and the 2009

Model CERCLA Section 107(q)(3) Contiguous Property Owner Assurance Letter (www.epa.gov/compliance/resources/policies/cleanup/superfund/cpo-assure-mod-ltr-mem.pdf).

10.2.2.2.4 Other Determinations of Completion

A number of states provide certificates or other documents to verify when cleanup requirements under voluntary cleanup programs or other regulatory programs have been adequately met. Each state will impose its own limitations on the scope of the document and in the nature of any disclaimer and re-opener language; however, in general these determinations can provide some level of "closure" and comfort to the various parties with a potential financial stake in the property and its redevelopment (e.g., lenders, insurers, investors, tenants). State determinations of compliance do not resolve issues of federal liability at the site.

10.2.2.3 Transactional Activities

10.2.2.3.1 Escrow Accounts

Escrow accounts can be used to cover issues not resolved in the purchase and sale of a property. Whatever purpose the escrow agreement has usually occurs after the closing. This may include escrow funds for remediation, long-term monitoring, fees associated with closure, and so forth.

10.2.2.3.2 Purchase Price Adjustments

If the buyer agrees to complete remediation or meet some other obligation in the future related to the remediation or other activity identified during the due diligence, the seller can offer an adjustment to the purchase price rather than pay for that expense directly.

10.2.2.3.3 Grants

Although not normally thought of as a risk management tool, grants can reduce the municipality's financial exposure or provide the funds necessary to the successful completion of the project. Municipalities may be eligible for certain types of EPA brownfields grants, including property-specific grants for Phase I and Phase II ESAs, even though they are not the owners of a property.

10.2.2.3.4 Tax Benefits and Credits

Federal and state tax incentives exist to help reduce the financial risk associated with redeveloping brownfields properties. The Federal Brownfields Tax Incentive (BTI) is one such example. The BFI was passed as part of the Taxpayer Relief Act of 1997 (Public Law 105-34) and codified through Section 198(a) of the Internal Revenue Code. The incentive allows a taxpayer to fully deduct the costs of environmental cleanups in the year the costs were incurred rather than spreading them over a period of years. Additional information on the BTI, including fact sheets and case studies, is available at: www.epa.gov/brownfields/tax/. A number of states have also created tax incentives specifically targeted to brownfields properties. State brownfield program coordinators should be contacted for information regarding those incentives.

10.2.2.3.5 Private Investors

Investors put money into a redevelopment project in return for a share of the profits from the project. Because their money is fully at risk, private investors carefully consider the risks associated with redeveloping contaminated properties. Many private investors understand that it is generally in their best interests to work with municipalities to help ensure a successful outcome and, therefore, may help the municipality identify areas of potential risk that the municipality had not anticipated or fully understood. At the same time, the interests of the private developers and the municipality may not always be aligned, so the municipality should be cautious of overly relying on that advice and assistance.

Private investors also often provide the initial, partial financing that provides enough certainty that other more traditional financing sources can feel comfortable financing the remaining amount.

10.2.2.3.6 Specialized Loans

Loans are generally secured by collateral that the lender can seize if the borrower defaults on the loan. Redevelopment projects for contaminated properties have historically been perceived as too risky for traditional bank loans but there are lenders that have established expertise in these projects. They are often familiar with the governmental and private grants that can help fund a project and they understand contaminated properties and cleanup action projects. Like the private investors discussed in 10.2.2.3.5, some of the specialized lenders can help guide the municipality's evaluation process because of their experience with these types of projects.

In some cases, these specialized lenders will provide early, partial financing that gives enough certainty that other more traditional lenders can feel comfortable financing the remaining amount.

10.2.2.3.7 Redevelopment Authorities

In general, redevelopment authorities are public administrative units charged with redeveloping blighted areas within a particular jurisdiction. Many were created initially in response to the post-World War II housing shortage and the availability of federal money to address urban renewal. The specific powers of a redevelopment agency are spelled out in the enabling legislation from which it derives its authority. Examples of specific powers include buying and selling property, acquiring property through the exercise of eminent domain, granting tax concessions to encourage commercial and/or residential development, receiving loans and grants from the federal government, borrowing money, and entering into contracts.

It is not unusual for a municipality to transfer property that it owns to the redevelopment authority for that same jurisdiction. Based on the enabling legislation, there can be important legal and policy reasons to make such a transfer. However, if a municipality is liable under CERCLA as an owner/operator at the time of disposal or as a generator or transporter, it does not lose its status as a liable party by transferring the property to a redevelopment authority. Similarly, the redevelopment authority may not be able to qualify as a bona fide prospective purchaser if it is found to be affiliated with a liable

party (for example, the municipality transferring the property) through any corporate, contractual, or financial relationship other than the relationship created by the mechanism transferring title to the property.

Under CERCLA, a redevelopment authority may also be liable as the current owner of contaminated property, or as the owner/operator at the time during which hazardous substances were disposed of at the property, or as the generator or transporter of the hazardous substances disposed of at the property.

A redevelopment authority may also find itself liable under CERCLA if EPA concludes that the redevelopment authority and a liable municipality are one and the same entity. In reaching that conclusion, EPA will look closely at the enabling legislation creating the redevelopment authority as well as at other factors specific to the situation including the level of control the municipality exerts over the redevelopment authority. See Section 7.2.3 and Appendix D for an explanation of potential liability protections under CERCLA.

10.2.2.3.8 Land Banks

An increasing number of states and municipalities are passing legislation to develop land banks. Land banks may be an effective tool in redeveloping and reusing properties in areas suffering from abandonment and blight. Land banks differ from redevelopment authorities. Generally speaking, redevelopment authorities are created to use significant governmental powers to develop or redevelop particular properties for a particular purpose. In contrast, land banks are created to acquire the growing number of privately or public-owned urban parcels that are not being reclaimed or redeveloped by market forces.

Land banks are governmental or non-governmental entities created to assemble, temporarily manage, and develop vacant, abandoned and tax-delinquent properties in order to convert them to a productive use. While most land bank properties may not be contaminated, municipalities should be aware of the potential for contamination prior to acquiring the property.

Whether a municipality acquiring a land bank property qualifies for liability protection under the CERCLA involuntary acquisition exemption, bona fide prospective purchaser provision, third party defense, or other statutory provisions will be determined on a case-by-case basis depending on the specific facts at issue. See Section 7.2.3 and Appendix D for an explanation of the liability protections under CERCLA.

For additional information on land banking, see *Land Revitalization Fact Sheet, Land Banking* (www.epa.gov/LANDREVITALIZATION/download/fs_land_banking.pdf). Additional information can be found on the U.S. Department of Housing and Urban Development Web site at www.hud.gov/offices/cpd/about/conplan/foreclosure/landbanks.cfm.

10.2.2.3.9 Contractual Provisions

Reducing exposure to common law liability begins with following the accepted, good commercial practices of due diligence. Performing proper oversight of contractors can

also help reduce the municipality's common law liability. Representations, warranties, indemnification agreements, and other specific contractual language between the responsible parties, redevelopers, cleanup action contractors, and the municipality can sometimes further reduce the municipality's financial exposure when conducting due diligence, environmental investigations, cleanup action, and construction. This contractual language can, for instance, define conditions for taking possession of the property by the municipality, describe schedules, and identify and assign liability responsibilities. Municipalities can be either a buyer or a seller depending on the property recovery action selected. The following are examples of contractual provisions that may apply to contaminated properties. These provisions are most commonly included in transactional agreements (e.g., lease, purchase and sales agreement, etc); although some may also be applicable to other agreements. For example, indemnifications are often found in service contracts for conducting due diligence, cleanup action, or the operation and maintenance of equipment. Private contracts may transfer financial responsibilities between parties but do not affect statutory liability. Additional information on some relevant contractual provisions can be found at: www.epa.gov/brownfields/insurance/insurebf.htm#about. The municipality should consult with legal counsel when evaluating the uses and benefits of contractual provisions. The following descriptions are intended to better inform discussions with legal counsel, and should not be relied upon to make decisions regarding their applicability to a given set of circumstances.

10.2.2.3.9.1 Indemnification

An indemnification in a contract can sometimes be used to obtain a release from liability for certain future legal claims, liabilities, and lawsuits, and also for compensation for any loss it may incur. This can include liabilities associated with known environmental conditions or possibly an unknown environmental condition that may have been associated with prior use of the property. As with many contractual agreements, the value of the indemnity is only as good as the financial viability and longevity of the party giving the indemnity. Municipalities should seek expert legal advice regarding the use of indemnities and should be aware that, depending on the circumstances of their use, they may undercut the ability to meet the requirements of some CERCLA liability defenses.

10.2.2.3.9.2 Representations and Warranties

Representations and warranties can be used to define certain facts and provide assurances about the property or its environmental condition (e.g., all underground storage tanks have been removed and no further action is warranted). Specific remedies or consequences can be included if the representations and warranties are not accurate or not fulfilled (e.g., the seller or responsible party will remove an underground storage tank discovered subsequent to the property transfer and conduct any corrective action required by the regulatory agency). Again, as with many contractual agreements, the value of the representations and warranties is only as good as the financial viability and longevity of the party giving the indemnity.

10.2.2.3.9.3 "As Is" Provisions

An "as is" provision can sometimes be used to avoid liability by the seller for defects in the land and liability for potential contamination. In this case, the buyer could be accepting liability for known, or possibly unknown, contamination on a property. The use of an "as is" provision requires a good understanding of the risks and liabilities associated with the property. This provision is typically used where the buyer determines that the potential risk and liabilities are well defined, acceptable, and economically feasible.

In accepting an "as is" provision, the municipality is relying on the representations and warranties of the seller. It is important to note that an "as is" provision does not always completely relieve the seller of its duty to disclose defects in the property to the buyer. Under many state laws, the seller is required to disclose known facts that may adversely affect the value of the property.

10.2.2.3.9.4 Environmental Covenants

A covenant can sometimes be used to obligate one party to engage in or refrain from specific actions, such as a deed restriction prohibiting certain types of activities or construction on a property by the property owner or lessee. Many states have implemented environmental covenants, which are agreements between the regulatory agency and a responsible party that define responsibilities for long-term stewardship of engineering and institutional controls (See *Institutional Controls*, Section 10.2.2.1.13). These covenants may include property owners or lessees of a property. Additional information on environmental covenants and the Uniform Environmental Covenants Act is: www.environmentalcovenants.org.

10.2.2.3.9.5 Assumption, Retention, and Release Provisions

The buyer and seller of a property can allocate risk or liability for certain conditions through a provision where the buyer accepts, or the seller retains, responsibility for known or unknown environmental conditions and releases the other party from liability for current and future claims arising from the specified conditions. This approach is typically used to allocate risk of future liability for a currently existing but unknown condition. The provision should be structured to ensure that the seller is protected from risk or liability caused by future buyers of the property or tenants of the property.

10.2.2.3.9.6 Schedule of Included or Excluded Liabilities

Where the buyer and seller have agreed to the transfer or retention of certain liabilities, the contract should include a schedule or list of liabilities that are going to be assumed by the buyer or retained by the seller.

10.2.2.3.9.7 Post-Signing and Pre-Closing Conditions

Post-signing and pre-closing conditions are agreements between the parties of a property transfer that allow certain actions to be taken or certain conditions prior to closing or during some pre-determined timeframe after signing an intent to purchase. Typically these provisions can provide an opportunity for the buyer or seller to back out of deal,

adjust the purchase price, or other remedies if conditions are not met. These provisions can be used to allow a buyer to conduct environmental investigations or other activities and terminate or modify a transaction if certain unacceptable conditions or thresholds are found. These conditions can also include cost sharing provisions for environmental investigations and property access agreements.

10.2.2.3.9.8 Fixed Price or Performance Based Contracts

Fixed price and performance based contracts can be used to control financial risk by reducing uncertainty in the cost of assessment and cleanup action activities. For example, fixed price and performance based contracts with environmental cleanup contractors can help clearly define the costs of assessment and cleanup action activities. These types of contracts are routinely used in the construction industry and increasingly in the environmental field.

10.2.2.4 Insurance

Obtaining insurance coverage for certain risks may be worth considering if a municipality is actively managing the property or leading the redevelopment effort. Alternatively, or in addition, the municipality can ask to be named as an additional insured on developers' and cleanup action contractors' environmental liability policies.

The following are examples of insurance provisions that may apply to contaminated properties. These and other insurance products are discussed in more detail at: www.epa.gov/brownfields/insurance/insurebf.htm#about. The underwriting of contaminated properties is a specialized and evolving area of insurance and municipalities should consult with a qualified expert and legal counsel to discuss the benefits and limitations of these products for a given set of circumstances.

10.2.2.4.1 Comprehensive General Liability Insurance

Comprehensive general liability insurance generally provide broad protection against situations in which an entity must defend itself against lawsuits or pay damages for bodily injury or property damage from third party claims. These claims are enforced and interpreted based on state law. Comprehensive general liability insurance can be used to address general redevelopment issues and other potential liabilities; however, it has become more restrictive over time and rarely covers environmental liabilities.

10.2.2.4.2 Pollution Liability Insurance

Pollution liability insurance can sometimes be used to protect the municipality against third party claims for bodily injury, property damage, and off-site and on-site cleanup costs. In addition, it can be used to provide some protection against newly discovered contaminants, natural resource damage claims, regulatory reopeners, and other contamination-related costs. These policies are typically short-term, averaging one to five years and often not more than ten. Regulatory reopener coverage usually begins when the project has achieved a "No Further Action" status and extends coverage for ten years.

A specialized form of pollution liability insurance is contractor's pollution liability insurance. This type of insurance covers contractors against the possibility that their activities on the property will make the pollution worse or cause third parties to be harmed. It is usually purchased on an annual basis by the contractors providing cleanup action services. For large, complex projects, contractor's pollution liability insurance can be purchased on a project basis, with limits dedicated to the specific project. It is important for the municipality to make sure that all of the contractors and subcontractors involved in the project have adequate pollution liability insurance limits and that they maintain this coverage throughout the project and for some period after completion.

10.2.2.4.3 Errors and Omissions Insurance

Errors and omissions insurance can sometimes be used to protect the municipality from errors in professional services. Generally, this insurance is purchased on an annual basis by the consultant or attorney providing services to the redevelopment project. The municipality should make sure that the professionals involved in a project have adequate errors and omissions insurance coverage that is maintained throughout the project and for some period after completion.

10.2.2.4.4 Cost Cap Insurance

Cost cap insurance can sometimes be used to reduce financial risk by providing the insured an upper limit on the costs of cleanup action. Costs over budget are paid by the insurer, with limitations. Cost cap insurance can addresses issues such as cost overruns for cleanup action expenses, changes in regulatory standards/laws, and newly discovered contaminants. Policies are based on the cleanup action cost plan and terms typically based on the anticipated length of the cleanup action.

10.2.2.4.5 Secured Lender Insurance

A secured lender insurance policy can sometimes be used to provide coverage to the lender for the outstanding loan balance in the event of a default on projects where environmental contamination exists. Typically, a secured lender policy allows the insurer to either pay off the outstanding loan balance or pay for cleanup action costs and certain other damages.

10.2.2.4.6 Finite Risk Insurance

Finite risk insurance can sometimes be used to transfer broad financial liabilities from the insured to the insurer. Typically, the insured pays the insurer the entire expected cost of the cleanup action — plus a risk premium to cover potential cost overruns, unanticipated cleanup action, and third party liability — before redevelopment begins and the insurer assumes financial responsibility for the cleanup action. In many finite risk policies, the insurer also provides oversight of the cleanup action program. This type of insurance is generally applied to longer-term and more costly cleanup actions. These policies can also be negotiated in a manner that allows the return of unspent monies at the end of the project.

10.2.2.4.7 Institutional Controls and Post Remedial Care Insurance

These insurance provisions may potentially be used to reduce financial risk associated with institutional controls (see Section 10.2.2.1.13) and post-remedial maintenance and monitoring activities (see Section 10.2.2.1.12). The insurance would typically cover cost overruns related to the design and establishment of the institutional control and damages resulting from an error in the design or establishment of the institutional control, an error or omission on the part of the parties maintaining the control, or failure of the control. The policy terms are typically renewable in multi-year increments, based on the anticipated length of the post cleanup action monitoring and maintenance. See Section 4.7.7 for a general discussion of institutional controls.

10.3 Cooperating vs. Non-Cooperating or Defunct Owners – Some Risk Management Considerations

Facing potential cleanup and other property preparation costs that could exceed the fair market value of the property, owners will often abandon or mothball properties. Many buildings and other structures are allowed to deteriorate, creating health and safety issues and casting blight on the surrounding area. For these reasons, redeveloping these properties or, at a minimum, removing deteriorating structures is in many cases a priority for municipalities. As discussed below, the property recovery actions and risk management strategy for addressing these properties could differ somewhat depending on whether or not there is an existing owner who may be willing to work cooperatively with the municipality.

Properties with Cooperating Owners

Owners of mothballed properties may have an incentive to improve the property or remove unusable structures in order to reduce their maintenance costs or insurance premiums, improve their "corporate image," or reduce liability from potential fires or other safety hazards. For many owners, however, a variety of concerns may trump these potential benefits. These concerns include:

- Prohibitive demolition or property preparation costs.
- Environmental investigations might identify contamination issues and trigger action to address those issues under federal, state, or local laws.
- Lack of expertise in dealing with environmental liability and cleanups.
- Transferring the property could lead to uses that aggravate existing environmental conditions and cause the owner to incur greater liability and expense.

By recognizing that these types of concerns exist, it may be possible for the municipality and property owner to work collaboratively to advance the interests of both parties. This cooperation could enable the municipality to gain access for conducting due diligence, avoid a contentious and time consuming eminent domain taking, or avoid altogether the burden and risk of acquiring the property or taking on the demolition and cleanup activities. It may even be possible to fashion an agreement or structure financial incentives so that the municipality has some control over the future use and timing of property development. A comprehensive plan with clear benefits to the municipality can

help build support among those within the community and town administration concerned with using public resources to bring about improvements on private property. A cooperative arrangement with the property owner, along with the property access that may entail, may also help the municipality and property owner become eligible to receive federal and state brownfields funding to offset the environmental investigation and cleanup costs.

Parceling or subdividing a property is an option that can sometimes help address some of the property owner's concerns and provide other strategic benefits in facilitating redevelopment. These benefits may include:

- Freeing up areas of the property for earlier development.

- Creating a source of revenue through the sale of a portion of the property, which can then be used to clean up other contaminated areas or improve the safety, appearance, or marketability of the remaining areas (e.g., by demolishing buildings or making other improvements).

- Helping to ensure that the components of a "permanent" cleanup remedy (e.g., an area capped with a protective cover) remain protective by retaining control over the use of those areas. In some cases, it may be possible to utilize these areas in a manner that ensures protectiveness while supporting the reuse of the surrounding properties (e.g., by installing a parking lot or pocket park over the areas).

Evaluating the potential use of parceling requires not only the knowledge of the environmental conditions for the entire property, but also its affect on legal liability, which may differ depending on the applicable statutes. Appendix D discusses parceling on a statute-specific basis.

Where the municipality agrees to conduct or participate in environmental investigations, building demolitions, cleanup, or undertake other activities on the property, the municipality will need to assess whether that involvement could subject it to unacceptable legal, financial, and other risks. The municipality should also consider whether risk management tools, such as those outlined in this chapter, might be appropriate.

In conducting these types of activities, the municipality must be careful that doing so does not worsen conditions and subject it to liability under environmental laws, or negligence and other common law liabilities. Even building demolition can carry some environmental liability risk if not carefully planned and executed. For example, demolition may release asbestos from insulation into the air or surrounding soils. The removal of building foundations or slabs could alter ground water flow or allow contaminants in the underlying soil to leach into ground water or migrate to the surface. Burying demolition debris and other materials on the property could create additional sources of contamination or create a pathway for volatile contaminants to migrate to the surface. Other issues could arise from the temporary placement of contaminated demolition debris, which if not conducted properly could create a contaminant release.

Before proceeding with on-site activities, the municipality will need to have sufficient understanding of the property's environmental conditions in order to develop measures to

minimize the potential for causing or contributing to a release. Keeping the building slab or foundation in place might be one way to avoid releasing underlying contaminants or altering ground water flow. Placing demolition debris on an impermeable surface and covering the debris piles to control airborne releases could also help prevent releases. Other measures could include analyzing soils below areas that will be used for debris storage to support a defense against potential future claims that the storage activities caused or contributed to a release.

Properties without Owners or with Non-Cooperating Owners

Gaining access at abandoned properties or those with an uncooperative owner in order to assess environmental conditions, let alone conduct demolition and cleanup, can be problematic. In situations where a fire or other public safety threat exists, most municipalities and states have the authority to enter the property to address those specific issues, but these authorities may be limited and not extend to other areas of the property. Unfortunately, very few states have laws in place to enable municipalities to access a property to perform an environmental assessment or conduct cleanup, or to allow it to seek cost recovery for those activities. The May 2008 report by the Northeast-Midwest Institute referenced in Section 4.7.4 identified only a few states where this is currently the case. Again, where access is available, the municipality needs to consider the environmental liability and other project risks associated with undertaking any activities on the property.

If, after conducting a Phase I Environmental Site Assessment on an abandoned property there is reason to believe that significant contamination issues do exist, it is advisable to notify EPA or the state. This may be necessary to protect the health and safety of the community and could potentially help the municipality avoid legal and political risks. There may be other advantages, as well. If EPA or the state believes that there is a sufficient basis for these concerns, the Agency may initiate its own investigation into the environmental conditions. These agencies can use various authorities to obtain information relevant to that investigation and, if necessary, to gain access to the property. Further, should the situation dictate, they may be able to take steps to address these issues or compel the responsible parties to do so. While this may not always occur in the timeframes desired by the municipality due to federal and state resource constraints, procedural issues, and other reasons, the end result might be that the cleanup and revitalization of the property moves forward with less direct involvement by the municipality.

If the property is a high priority for the municipality, and obtaining access for investigation, building demolition, or cleanup is not a viable option, acquisition may be the only available means of dealing with abandoned properties. There are no absolute guidelines for making this decision. It will depend on how much information is known about the environmental conditions and other pertinent factors, how risk averse the municipality is, whether the potential project risks can be adequately managed, and other considerations specific to that situation.

As has been discussed throughout this workbook, it is important to consider which federal and state environmental statutes may apply. For example, under certain state and federal environmental statutes and state property transfer laws, some level of environmental investigation and, if necessary, cleanup might be automatically triggered

and transferred to the municipality upon acquisition or leasing. Even if the primary intent of the municipality is to acquire the property so as to demolish buildings or make other improvements, the municipality may find that it must then address other areas of the property as well. Remember, too, that the type of acquisition (e.g., eminent domain taking, property tax foreclosure, direct acquisition) may affect liability protections under federal and, possibly, state environmental statutes (Discussed further in Chapter 7 and Appendix D).

Acquiring a property that has already been investigated or remediated will reduce the uncertainty and therefore make the project risks more predictable. A property where these activities have occurred, even where some contamination remains on the property as part of the permanent remedy, can often be a preferable option for acquisition than one where the environmental conditions are largely unknown. This will also depend on whether the investigation and cleanup was comprehensive and occurred under the proper level of oversight. It must again be emphasized that some long-term "continuing obligations" will often need to be met in order to preserve liability protections under CERCLA and other applicable statutes that are discussed in Chapter 7 and Appendix D.

A municipality considering the acquisition of a property may be able to access federal and state funds or other resources to cover some of the costs of environmental assessment and cleanup. EPA's Brownfields Web site (www.epa.gov/brownfields/index.html) is a great starting point for identifying potential sources of assistance. Contact information for EPA's national and regional offices is also provided in Appendix F.

A municipality may also want to consider whether parceling the property after acquisition could offer some of the advantages discussed above.

11 Selecting a Property Recovery Action

11.1 General

As discussed in Section 1.5, a selected property recovery action generally should affirmatively answer four core questions:

- Will it achieve the project goals?
- Is the project financially viable and realistic?
- Are the necessary resources available?
- Are the risks acceptable?

This begins with a consideration of the redevelopment obstacles associated with a given property recovery action.

This Chapter:

- Summarizes the process for evaluating property recovery action
- Describes worksheets for documenting the property recovery action evaluation
- Describes information to be included in a final Project Summary

As the examples in Chapter 5 suggest, redevelopment obstacles are often the result of inadequate information. Reducing this uncertainty will often eliminate the obstacle or at least minimize the risk that it presents to a project. The selection of a property recovery action will, therefore, typically include an evaluation of redevelopment obstacles in an iterative process consisting of three key steps:

1) Identify redevelopment obstacles for that property recovery action.

2) Identify potential risks associated with each redevelopment obstacle and take actions to resolve information gaps to minimize uncertainty.

3) Identify risk management tools to address the uncertainty and other risks that remain.

The results of this redevelopment obstacle evaluation process, combined with the appropriate financial analysis, will form much of the bases for addressing the four core questions noted above.

11.2 Evaluating Redevelopment Obstacles

Figure 11.1 depicts a decision flow diagram for evaluating redevelopment obstacles. The decision process is dividing into three sections — each differentiated by a unique color — that are linked to these three key steps. A separate worksheet is associated with each section (i.e., Worksheets # 5, 6, & 7). This chapter describes how these three worksheets can be used to guide the evaluation process.

Blank worksheets and instructions for Worksheets 6 & 7 are provided at the end of this chapter (available for download at www.epa.gov/region1/brownfields/prepared). To illustrate how Worksheets # 5, 6, & 7 might be utilized, Appendix C includes partially-

completed worksheets for a hypothetical scenario. A set of worksheets would be completed for each property recovery action being considered. It is also advantageous to evaluate "no action" option against which the risks and benefits of the other property recovery actions can be compared. In some circumstances, "no action" may carry more project risks and other drawbacks than taking a more proactive property recovery action.

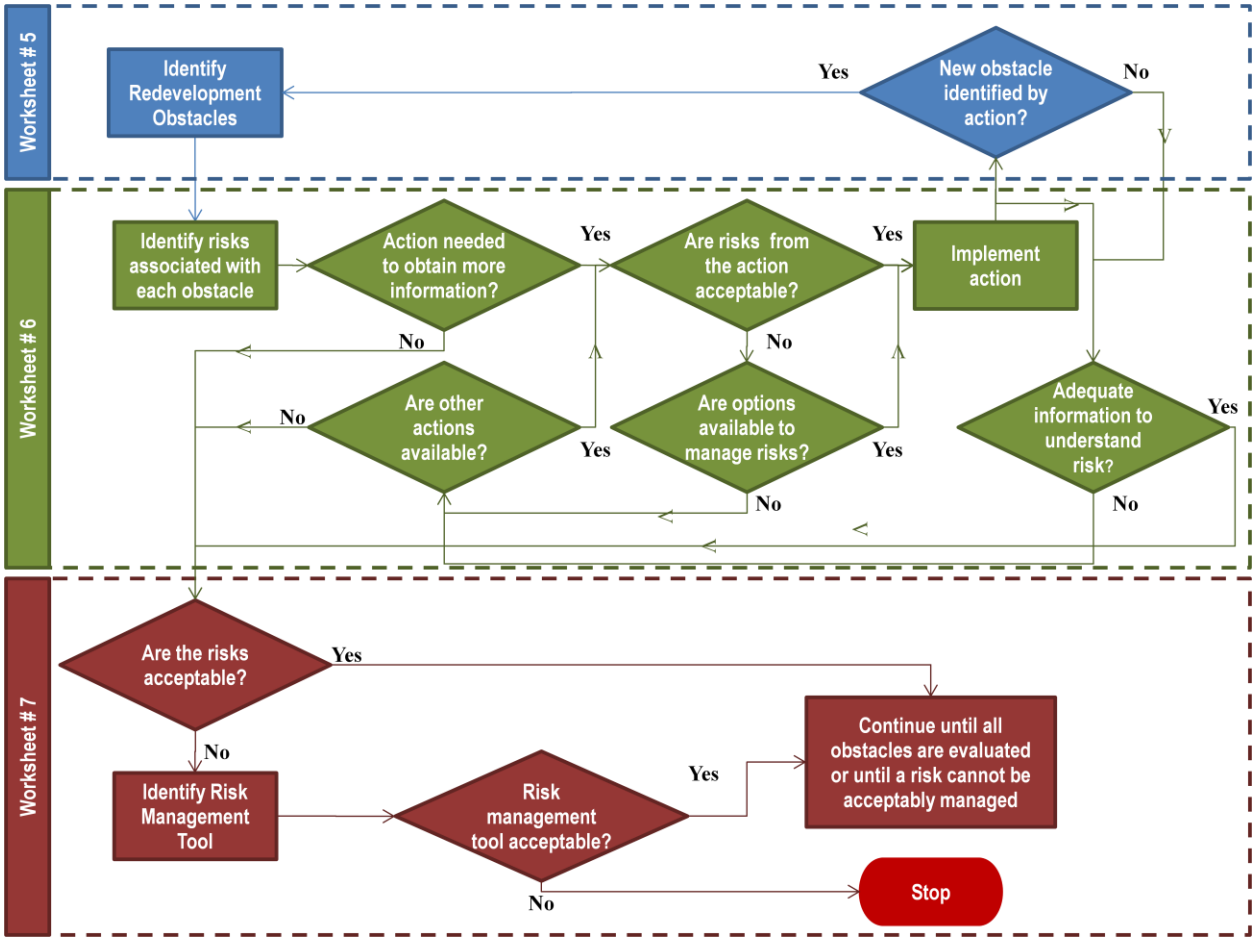

Figure 11.1 - Redevelopment Obstacle Evaluation Process

11.2.1 Worksheet #5: Identification and Prioritization of Redevelopment Obstacles associated with a Property Recovery Action [Blue Section]

Worksheet #5 (described in Chapter 5) serves to document the redevelopment obstacles associated with a property recovery action and other useful information needed to understand and describe each obstacle. In most cases, the process of identifying redevelopment obstacles begins after the Phase I Environmental Site Assessment since this usually represents the first systematic effort to gather and evaluate information on the property.

Worksheet #5, as with the other worksheets described in this section, are dynamic documents that will be revised as new information is obtained. For example, actions taken to address key information gaps (as depicted in the green section of Figure 11.1), may result in certain redevelopment obstacles being resolved and new ones being identified. These new redevelopment obstacles would then be cycled through the evaluation process.

11.2.2 Worksheet #6: Identification of Potential Risks and Actions to Resolve Information Gaps [Green Section]

Additional information is often needed to clarify or, in some cases, eliminate or minimize the risks associated with a redevelopment obstacle. In many cases, actions taken to obtain this information, such as a Phase II Environmental Site Assessment or Phase III Environmental Investigation, may in themselves present potential risks to the municipality (e.g., significant costs, environmental liability, contractual liability). Worksheet #6 is provided to help the municipality document potential risks associated with each redevelopment obstacle, evaluate actions that could be taken to resolve information gaps, and identify tools and approaches to manage the risks associated with taking those actions (e.g., insurance provisions, third party indemnification, access agreements).

11.2.3 Worksheet #7: Identification of Risk Management Tools [Cranberry Section]

Once all planned actions have been taken to resolve information gaps and better define risks, a determination should be made by the municipality as to whether the remaining risks for each redevelopment obstacle are acceptable. Worksheet #7 can be used to document those remaining risks and identify any risk management tools and approaches that could be utilized to address them.

11.3 Factoring in the Financial Analysis

The financial analysis (see Chapter 8) is also an iterative process that is integral to and should be conducted concurrent with the redevelopment obstacle evaluation process. The financial analysis will help define the potential costs to the municipality and financial risks associated with the project. In addition, risk management tools and approaches, such as insurance products, can further add to the project costs and will need to be included in the financial analysis.

11.4 Project Summary

Once a property recovery action has been selected, a project summary may be needed to document key information and help educate municipal decision-makers and the community about the project. The format, size, and content could vary depending on the needs and preferences of the municipality. The following is an example format that reflects the approach outlined in this workbook and addresses the four core questions identified in Section 1.5:

- **Project goals**

  Describe the project goals — including key parameters (e.g., budgetary constraints, time frames) — and the process used to establish them. Provide a brief overview of the preliminary reuse assessment findings that relate to the feasibility of these goals.

- **Property recovery action selected**

  Describe the property recovery action selected for the project. If more than one property recovery action was deemed to be acceptable, provide a basis for the selection of the preferred action. Describe how the selected property recovery action will achieve the project goals.

- **Project viability**

  Describe the results of the financial analysis; including an assessment of the current value of the property and financial viability of any redevelopment projects planned or intended for the property.

- **Cost to the municipality**

  Identify the significant cost items and estimated total cost to the municipality of implementing the project. Describe potential sources of revenue and other funding to balance these costs.

- **Risk issues**

  Identify the potential short- and long-term liabilities that the municipality may be exposed to.

- **Risk mitigation strategy**

  Describe the risk management tools and approaches selected to address the identified liabilities.

- **Project benefits**

  Describe the benefits to the municipality of proceeding with the project. This could include a summary of any financial benefit (e.g., income, cost savings) to the municipality.

Information presented on the worksheets prepared during the evaluation process will serve as backup information for the property recovery action selection.

Worksheet #6: Identification of Potential Risks and Actions to Resolve Information Gaps

First column: List the obstacles identified on Worksheet #5.

Second column: List the corresponding priorities.

Third column: Describe the potential uncertainties and other risks that are associated with each redevelopment obstacle based on the municipality's current understanding of the property. More than one risk may be associated with a redevelopment obstacle and each should be listed separately. Where the same risk is associated with several different redevelopment obstacles, the risk should be listed with each obstacle.

Fourth column: Indicate whether any actions are needed to resolve information gaps or better define a risk (e.g., Phase I or Phase II Environmental Site Assessment, additional site investigation, negotiations with owners or responsible parties). Enter "No" if no additional actions are needed or "Yes" if additional actions are needed.

Fifth column: If "Yes" is entered into the fourth column, describe the potential actions needed or planned.

Sixth column: Describe any risk management tools or approaches (e.g., access agreements, insurance instruments) that may need to be considered before the required action is implemented.

Seventh column: Enter any comments or additional information concerning the implementation of the action.

Once planned actions to resolve information gaps and better define the risks are taken, Worksheet #5 and Worksheet # 6 should be reviewed and updated to include additional or revised obstacles, risks, causes and contributing factors, or other changes that might be appropriate based on that new information.

Worksheet #6: Identification of Potential Risks and Actions to Resolve Information Gaps

Property Recovery Action:_____

List the redevelopment obstacles (from Worksheet # 5.	*Priority*	*Identify project risks associated with redevelopment obstacles.*	*Are actions planned to resolve data gaps?*	*Identify potential actions planned to resolve data gaps.*	*Identify potential risk management tools & approaches needed to implement these actions*	*Comments*

Worksheet #7: Identification of Risk Management Tools

Worksheet # 7 is provided to help the municipality document the potential risk management tools for each identified redevelopment obstacle.

First column: List the obstacles identified on Worksheet # 6 for which no additional actions to obtain information are needed or planned (i.e., a "No" is entered into the fourth column of Worksheet # 6). Upon completion of the evaluation, all obstacles identified on Worksheet # 5 and Worksheet # 6 should be identified on Worksheet # 7.

Second Column: List the priorities (as identified in the second column of Worksheets # 5 and # 6).

Third column: List the potential uncertainties and other risks that are associated with each redevelopment obstacle (as identified in the third column of Worksheet # 6).

Fourth column: Provide a brief description of the risk management tools or approaches available to address the identified risks for each redevelopment obstacle. The description should be concise but include sufficient information to describe the risk management tool or approach. When identifying risk management tools and approaches:

- One risk management tool/approach may address several obstacles or risks. In these cases, the risk management tool/approach should be identified with each redevelopment obstacle or risk.
- More than one risk management tool/approach may be required to address an individual redevelopment obstacle or risk. In these cases, each tool/approach should be identified.

Fifth column: Indicate whether the risks associated with that redevelopment obstacle have been adequately addressed. Enter "Yes" if the risk, considering selected risk management tools/approaches, is acceptable or "No" if the risk, considering selected risk management tools/approaches, is not acceptable.

Sixth column: Enter any comments or additional information concerning the redevelopment obstacle or risk management tool/approach selected.

Worksheet #7: Identification of Risk Management Tools

Property Recovery Action: _____

List redevelopment obstacles for which no further action is planned to resolve data gaps (Indicated by a "no" in column 4 of Worksheet # 6).	*Priority*	*Identify potential risks associated with redevelopment obstacles (from column 3 of Worksheet #6)*	*Identify potential risk management tools or actions to address potential risks*	*Are Risks Acceptable?*	*Comments*

Appendix A

Pro Forma Worksheet

Step-by-Step Approach to Preparing the Pro Forma Worksheet

A. The purchase price is inserted in cell A1. This can be the offered sales price, a negotiated amount, or it may be based on an appraisal. It is also possible that the underlying land title will not change, thus there may be no purchase price and this cell will be zero. In addition, liens or defaults may exist which need to be remedied.

B. Environmental cleanup action costs are input into cells B1 through B3. These costs may be defined already as part of the cleanup plan or they may need to be estimated. Cell B4 will add these three lines together.

C. If new construction is involved in the project, complete lines C1 through C5. Estimate the square feet to be constructed and the cost per square foot by building type. Leave unused building categories blank or delete those lines. Worksheets detailing costs will likely be needed to identify and support the various cost elements in the *pro forma*. Costs can include site clearing and preparation, foundation work, structural and exterior work, mechanicals, and interior finishing. Ongoing maintenance costs and upfront infrastructure costs may require funding prior to construction or during the development phase before there are revenues to cover them. Two such examples are fencing and mowing.

D. Existing buildings are more complicated. Asbestos removal and other preparation may be required. Costs can include demolition or partial demolition with renovations. These projects generally have more unknown or hidden costs and are therefore riskier. Estimated demolition costs are input in cells D1 and D2. Insert renovation costs per square foot by building type into lines D3 through D6.

E. This particular *pro forma* shows two separate development areas. The project may have one or several distinct areas requiring data. Thus, development areas can be added or subtracted. Cell E1 totals the hard costs for all building types.

F. Soft costs are calculated as a percentage of hard costs. These are shown in line F1. Additional due diligence is required on these types of projects, thus there may be more investigative costs. These can include: reuse analysis, negotiating access rights and project visioning. By this point in the overall evaluation process, some of these soft costs and cleanup action costs have been incurred, thus estimating 20% for soft costs overall for the developer is not an unreasonable estimate. Soft costs for all standard development projects include site plans, engineering, legal, soil testing, architectural plans and marketing plans. A detailed breakdown between disciplines is not needed at this point.

G. Carry costs represent interest calculated on cash invested or borrowed for development of the property. Interest on the initial purchase will be calculated from the date of transfer, whereas interest on development is calculated based on an average over time. The interest rate should reflect current rates with some adjustment based on the overall risk of the project.

H. What are the sources of financing? Who is going to cover the costs, especially the earlier costs? How much cash will be needed to promote redevelopment and who will bear the burden of this cost? There may be different levels of financing in different phases. Ensure that these questions are considered.

I. The purchase price, cleanup action, hard and soft construction costs and carrying costs are totaled at H1. This cell should represent the total anticipated cost of development.

J. The other half of analyzing the financial viability of a project involves determining its end value. One approach to this is to use the property's appraised value; this can be based on market comparisons or the property's potential reuse. Note that this type of valuation can be impacted by environmental conditions, decreasing accuracy or making it altogether impossible to compare to other properties. The second approach is to determine the property's anticipated revenue stream. Rents, for example, can be estimated per square foot and projected with escalations over time by type of building. This information is gathered and input in lines J1 through J4.

K. Net operating income can be derived by subtracting operating expenses from rental rates. Obtain operating expenses and management fees on a per square foot basis using industry standards by building type. Vacancy rates are figured by building type and local market conditions as well as type of tenants anticipated. In some cases, it may be necessary to include amounts for longer term cleanup action expenses, ongoing special cleanup action and maintenance costs, reserves and/or environmental insurance. If these are necessary, the J6 cell will calculate an adjusted net operating income. Otherwise, cell J5 will serve this function.

L. The capitalization rate is used to calculate a rough project valuation. The rate used is based on the market and risk involved. Consult with industry professionals.

M. Cell K1 calculates the project's estimated completed value less development costs. A cash return on investment is also calculated.

Pro Forma Worksheet

Real Estate Pro Forma for Redevelopment Project								
Directions:	**Enter information in cells outlined in red, as appropriate**							
PROJECT COSTS								
Purchase Price						**$0**	A1	Acquisition Price, may be based on appraised value minus remediation
Remedial Action Costs For Project			**Remedial Action (Area 1)**			**$0**	B1	Cost of implementing remedial action (e.g., soil or water cleanup)
			Remedial Action (Area 2)			**$0**	B2	Cost of implementing remedial action (e.g., soil or water cleanup)
			Remedial Action (Area 3)			**$0**	B3	Cost of implementing remedial action (e.g., soil or water cleanup)
			Total for Remedial Action			**$0**	B4	Total Remedial Action Cost (B1+B2+B3)
Hard Costs								
Development Area 1								
New Construction								
Retail	Square feet	0	Cost/sf	$60	$0		C1	Construction cost per sf for retail
Industrial	Square feet	0	Cost/sf	$50	$0		C2	Construction cost per sf for industrial
Office	Square feet	0	Cost/sf	$100	$0		C3	Construction cost per sf for office
Residential	Square feet	0	Cost/sf	$60	$0		C4	Construction cost per sf for residential
Parking	Parking Spots	0	Cost/unit	$1,200	$0		C5	Construction cost for parking per space
	Total Hard Costs (Development Area 1)					**$0**	C6	Total Construction Cost Area 1 (C1+C2+C3+C4+C5)
Development Area 2								
Existing Building								
Asbestos Removal	abatement of materials in building				$0		D1	Lump sum cost of asbestos removal
Demolition	Square feet	0	Cost/sf	$25	$0		D2	Demolition cost per sf
Renovation Costs								
Retail	Square feet	0	Cost/sf	$50	$0		D3	Renovation cost per sf of retail
Industrial	Square feet	0	Cost/sf	$30	$0		D4	Renovation cost per sf of industrial
Office	Square feet	0	Cost/sf	$80	$0		D5	Renovation cost per sf of office
Residential	Square feet	0	Cost/sf	$50	$0		D6	Renovation cost per sf of residential
New Construction								
Retail	Square feet	0	Cost/sf	$60	$0		D7	Construction cost per sf of retail
Industrial	Square feet	0	Cost/sf	$50	$0		D8	Construction cost per sf of industrial
Office	Square feet	0	Cost/sf	$100	$0		D0	Construction cost per sf of office
Residential	Square feet	0	Cost/sf	$60	$0		D10	Construction cost per sf of residential
Parking	Parking Spots	0	Cost/unit	$1,200	$0		D11	Construction cost per parking space
	Total Hard Costs (Development Area 2)					**$0**	D12	Total Rehab and Construction Cost Area 2 (Total D1 thru D11)
Total Hard Costs for Development Areas 1 and 2								
						$0	E1	Total Construction Costs Areas 1 + 2 (C6+D12)
Soft Costs								
	% of hard costs and remediation costs			20%		**$0**	F1	Softs costs 20% of construction costs (20% of E1)
CARRY COSTS								
						$0	G1	Interest costs on land acquisition for two years
	Purchase Price		$0		$0			(A1 X % per year X 2 years)
	Months		24					
	Rate		8.50%					
	Soft + Hard Costs + Remediation		$0		$0			Interest Costs on construction, rehab and remediation
	Months		24					(B4+E1+F1 X % per month X # of months
	Rate		8.50%					
TOTAL DEVELOPMENT COSTS								
						$0	H1	Total of all development costs (A1+B4+E1+F1+G1)
PROJECT VALUE								
Net Operating Income								
	Industrial Sq.Feet	0	$$ / sf	$5.50	$0		J1	Total industrial sf X estimated net lease rate per year
	Office Sq Feet	0	$$ / sf	$18.00	$0		J2	Total office sf X estimated net lease rate per year
	Retail Use Sq Feet	0	$$ / sf	$15.50	$0		J3	Total retail sf X estimated net lease rate per year
	Residential per 2000 sf	0	$$ / sf	$21,600.00	$0		J4	Total residential units X estimated annual rent
	Net Operating Income				**$0**		J5	Total of annual net rental income (J1+J2+J3+J4)
	Less Vacancy	5%			$0			
	Less Long Term Remediation Operating Expenses				$0			
	Less Environmental Insurance				$0			
	Adjusted Net Operating Income				**$0**		J6	Net Operating cincome minus vacancy %,
Capitalization Rate								minus cost of ongoing remdiation, minus cost of environmental insujranc
					8.00%			
PROJECT VALUE COMPLETED AND OCCUPIED								
						$0	K1	Adjusted NOI divided be capitalization rate reflecting yield and risk
PROFIT								
						$0		Project completed value minus total of all development costs (K1 - H1)
Cash on Cash Return								
						0.0%		Profit as % of Total Development Cost

Appendix B

Example Sources-and-Uses Chart

Sources-and-Uses Chart (Sample)

USES OF FUNDS

Acquisition		$250,000
Transaction Costs		$35,000
Total Acquisition Costs		$285,000
Hard Costs		
Construction		$1,300,000
General Conditions		$150,000
Profit and Overhead		$400,000
Demolition/Property Improvement		$50,000
Remediation		$250,000
Hard Cost Contingency	10%	$215,000
Total Building Loan Hard Cost		$2,365,000
Project's Soft Costs		
Borrower's A/E Fee		$285,000
Bank Engineer		$20,000
Developer Owner's Representative		$65,000
Bank Legal		$50,000
Developer Legal		$65,000
Accounting		$35,000
Environmental Phase I		$8,000
Environmental Phase II and III		$60,000
Other Environmental Professional Fees		$30,000
Survey		$10,000
Title Insurance		$7,000
Appraisal		$9,000
Bank Commitment Fee		$20,000
Construction Interest		$86,000
Insurance		$30,000
Real Estate Taxes[1]		$24,000
Building Permits		$20,000
Other		$15,000
Letter of Credit/Bond Fee		$18,000
Soft Cost Contingency	10%	$85,700
Other		$5,000
Total Building Loan Soft Costs		$947,700
Developer Fee		$100,000
Operating and Lease-up Reserve		$60,000
TOTAL USES OF FUNDS		$3,757,700

SOURCES OF FUNDS

Construction Sources of Funds

1st Construction Loan	$720,000
2nd Construction Loan	$0
Developer Equity	$125,000
Equity from Federal Tax Credits[1]	$230,000
Equity from State Tax Credits[1]	$75,000
Grant Source #1	$15,000
Grant Source #2	$0
Other	$1,165,000
Deferred Developer Fee	$35,000
TOTAL CONSTRUCTION SOURCES	$2,365,000

Permanent Sources of Funds

Ist Permanent Mortgage	$2,700,000
2nd Permanent Mortgage	$465,000
Developer Equity	$125,000
Equity from Federal Tax Credits[1]	$230,000
Equity from State Tax Credits[1]	$75,000
Grant Source #1	$15,000
Grant Source #2	$147,700
Other	$3,757,700
Deferred Developer Fee	$0
TOTAL PERMANENT SOURCES	$3,757,700

Note: [1]Applicable to private development projects

Appendix C

Examples of Completed Worksheets #5, 6 &7

Examples of Partially Completed Worksheets 5, 6 &7

Overview

The following exercise is intended to illustrate how a municipality might utilize the worksheets for a particular project. The assumptions, issues, and other considerations presented have been simplified and in practice there may be considerably more complexity involved. Worksheets 1 through 4 have not been completed for this scenario; although, a general discussion of the goals and some key findings of the due diligence process are described in the scenario summary. Also, the Sources-and-Uses Chart and the *Pro Forma* worksheet — which would be used concurrently with Worksheets 5, 6, and 7 — are not factored into this exercise.

The amount and type of information that a municipality includes on the worksheets will depend on how the municipality intends to use them and may differ from that shown on the completed worksheets. Some may choose to add only the most essential findings and information, while others may also find it useful to document additional background information.

It is important to remember that the use of the worksheets is an iterative process in which each of the worksheets would be updated and revised as new information is obtained and decisions are made by the municipality as to next steps. This exercise shows how the first pass through that process might play out. Also, only one property recovery action is being evaluated—in this case, *collaboration with the current property owner*. In practice, a municipality might evaluate two or more property recovery actions at the same time.

Scenario Summary

Local officials have been long concerned with the deteriorating condition of a 3-acre property located on the fringe of its commercial district. The buildings are in serious disrepair and represent a potential fire and safety threat, and also have a detrimental effect on the economic vitality of the surrounding district. The municipality would like to have the property returned to productive use or, if that is not practical, for the buildings to be demolished.

The municipality attempted to conduct a Phase I Environmental Site Assessment of the property; however, the extent of the Phase I ESA was limited by the owner's refusal to provide access.

Some key findings of the Phase I ESA are:

- The property is currently assessed for $800,000 without taking into account any environmental cleanup costs, building demolition, and other costs to prepare the property for redevelopment.

- Property taxes are in arrears for $540,000. No other liens have been recorded
- Based on visual examination from the property boundary, the buildings may be structurally unsound and beyond rehabilitation.
  - The status of the fire protection system is unknown.
  - The perimeter fence is not adequately maintained and has been breached in several locations.
- Environmental conditions/status:
  - Based on the age of the buildings and statements from former employees, asbestos is expected to be present in the boiler plant and on heating pipes throughout the property.
  - Above ground and underground tanks were historically used for heating oil, lubricating oil, and gasoline. Information provided by the state's Department of Environmental Protection (DEP) indicates that a heating oil tank is still present on the property; however, other tanks were closed in accordance with the regulatory requirements.
  - The facility is registered as a RCRA small quantity generator (primarily solvents, lubricating and other waste oils, cleaning solutions, paints). The last state RCRA inspection was in November 2002. Paperwork violations were noted and resolved.
  - No other outstanding compliance issues were reported by EPA and the DEP.
- Other general findings:
  - The access road to the facility is in serious disrepair.
  - Sewer service was brought to the property in 1934 when industrial/commercial use of the property began.

Property Recovery Action(s) Being Considered

The property recovery action that will be evaluated is **collaboration with the current property owner**. Although the owner did not allow access for the Phase I ESA or agree to be interviewed regarding property conditions, municipal officials think it may be possible to work out a mutually-beneficial strategy for moving the property toward redevelopment. At this point, municipal officials view this approach as preferable to property recovery actions that could involve property acquisition.

Worksheet #5: Identification and Prioritization of Redevelopment Obstacles associated with a Property Recovery Action

Property Recovery Action: Collaboration with the Property Owner

Identify redevelopment obstacles and other key considerations	Priority	Additional information
Lack of clear title	High	Owner still exists, but property taxes in arrears for $540,000
Environmental conditions are not fully known	High	Phase 1 ESA conducted, but property access not allowed. Asbestos is expected to be present in boiler plant and on heating pipes throughout facility. No releases or outstanding environmental compliance issues reported to EPA or State DEP. A 10,000 gallon tank containing heating oil may be in use. Other above ground and underground tanks used for lubricating oil and gasoline were closed in accordance with regulatory requirements in 2005. Notified as a RCRA small quantity generator (primarily solvents, waste oils, cleaning solutions, paints). Last state inspection was November 2004. Paperwork violations noted and resolved.
Environmental status is not fully known	High	Facility subject to RCRA hazardous waste requirements as a small quantity generator Subject to UST regulations. Building demolition could be subject to asbestos NESHAPs Phase I ESA was incomplete and did not include a visual property inspection to identify other potential regulatory issues.
Access road to the property is in serious disrepair and may require resurfacing	Medium	DPW estimates $200,000 for road upgrade.
Buildings are seriously deteriorated	Medium	Unlikely to be acceptable for renovation. Status of fire protection systems is not known. Potential for fire, or release of asbestos if collapse occurs. Need access to evaluate building condition.

Strategy for Proceeding with this Action

The primary issues mostly stem from inadequate information on the environmental conditions and physical condition of the buildings. The municipality's initial strategy depends on getting the owner to provide additional information on the environmental conditions and allowing access for additional Phase I ESA activities, structural analysis of the buildings, and, if necessary, a Phase II ESA. To do this, the municipality may need to demonstrate how it would be in the owner's best financial interest to work with the municipality, including possible cost-sharing or other incentives (See Section 10.3, Properties with Cooperating vs. Non-Cooperating or Defunct Owners – Some Risk Management Considerations). In addition, depending on the sophistication and resources of the owner, the municipality and its consultants may need to help educate the owner with respect to potential environmental regulatory issues, risk management options, potential for federal or state brownfields program assistance, and so forth. Since the completion of the Phase I ESA would not involve intrusive environmental investigation activities (e.g., soil borings, installation of ground water wells), the cost and risk to the owner and municipality would generally be low. The decision to proceed with a Phase II ESA would likely be made after the additional Phase I ESA activities are performed.

Before committing too many resources to this project, the municipality and property owner may want to discuss future plans for the property to ensure that they have the same general expectations. If not, there may be an opportunity to finding common ground. For example, while the two parties may have different views on the type of reuse preferred, they may be able to at least agree on the necessity of demolishing the buildings. A preliminary financial analysis of the viability of potential redevelopment options and costs to implement this property recovery action may help inform those discussions.

Worksheet #6: Identification of Potential Risks and Actions to Resolve Information Gaps

Property Recovery Action: Collaboration with the Property Owner

List the redevelopment obstacles (from Worksheet # 5.	Priority	Identify project risks associated with redevelopment obstacle.	Are actions planned to resolve information gaps?	Identify potential actions planned to resolve information gaps.	Identify potential risk management tools & approaches needed to implement these actions	Comments
Lack of clear title	High	Disincentive for developers due to potential delays to resolve tax lien and to clear title	No	N/A	N/A	Recorded liens have been identified. No past environmental response actions have been reported by EPA and state DEP.
Environmental conditions are not fully known	High	(1) Unable to estimate cleanup costs and impact on redevelopment. (2) Potential for unexpected costs and project delays (3) Higher insurance premiums (increased financial risk) (4) More difficult to get financing and attract investors	Yes	Contact owner about on-property access for completion of Phase I ESA and potential Phase II ESA	Obtain verbal or written permission for access to the property to complete the Phase I ESA and agree on use and distribution of information collected. Delineate respective responsibilities.	Develop a case (with possible City incentives) on how this would be in the owner's best interests.

Redevelopment obstacles with a "no" in this column would be added to Worksheet #7.

List the redevelopment obstacles (from Worksheet # 5.	Priority	Identify project risks associated with redevelopment obstacle.	Are actions planned to resolve information gaps?	Identify potential actions planned to resolve information gaps.	Identify potential risk management tools & approaches needed to implement these actions	Comments
Environmental regulatory status is not fully known	High	Town could potentially take on liability for environmental cleanup.	Yes	Contact owner about on-property access for completion of Phase I ESA and potential Phase II ESA	Obtain verbal or written permission for access to the property to complete the Phase I ESA and agree on use and distribution of information collected. Delineate respective responsibilities.	(See above)
Access road to the property is in serious disrepair and may require resurfacing	Medium	Potential disincentive for developers. Cost of resurfacing public access road adds to financial risk for the city.	No	N/A	N/A	A preliminary cost estimate prepared by the DPW is considered adequate to assess potential financial risk.

List the redevelopment obstacles (from Worksheet # 5.	Priority	Identify project risks associated with redevelopment obstacle.	Are actions planned to resolve information gaps?	Identify potential actions planned to resolve information gaps.	Identify potential risk management tools & approaches needed to implement these actions	Comments
Buildings are seriously deteriorated	Medium	(1) Demolition costs add to financial risk for city or developer. (2) Potential for legal liability and political risk if the city allows buildings to deteriorate and catch fire and release asbestos. (3) Potential for environmental and civil liability due to release of asbestos and other hazardous substances during demolition and on-site staging of construction debris.	Yes	(1) If owner agrees, conduct analysis of building integrity, rehab potential, extent of asbestos, etc. (2) Evaluate potential legal liability and political risks if city does not intervene. (3) To be determined as part of demolition planning.	(1) Obtain verbal or written permission for conducting analysis and agree on use and distribution of information collected. Delineate respective responsibilities. (2) City Law Department review. (3) Obtain consultants with appropriate environmental and legal expertise.	

Worksheet #7: Identification of Risk Management Tools

Property Recovery Action: Collaboration with the Property Owner

List redevelopment obstacles for which no further action is planned to resolve information gaps (Indicated by a "no" in column 4 of Worksheet # 6).	*Priority*	*Identify potential risks associated with redevelopment obstacle (from column 3 of Worksheet #6)*	*Identify potential risk management tools or actions to address potential risks*	*Are Risks Acceptable?*	*Comments*
Lack of clear title	High	Disincentive for developers due to potential delays to resolve tax lien and to clear title	None	Yes	Assumes the owner and municipality will resolve the property tax lien as part of an overall agreement between the municipality and the property owner.
Access road to the property is in serious disrepair and may require resurfacing.	Medium	Potential disincentive for developers. Cost of resurfacing public access road adds to financial risk for the city.	None	Yes	Assumes road repair will be addressed as part of an overall agreement between the municipality and the property owner.

Appendix D

Assessing Regulatory Liability: Key Questions

Section I
CERCLA 42 U.S.C. §9601 et seq. (1980)

Assessing CERCLA (Superfund) Liability – Key Questions

Below are some key questions that a municipality might ask relating to its potential liability under CERCLA. It is not a comprehensive listing of all the questions that should be considered. Nor should the responses be taken as legal advice for a specific set of factors that might apply in a given situation. Please refer to additional disclaimers on page vi of this document.

Could the municipality incur legal liability under CERCLA by acquiring or leasing a property?

There are several key statutory provisions under which a municipality may acquire property without incurring CERCLA liability (Also described in EPA's fact sheet titled *CERCLA Liability and Local Government Acquisitions and Other Activities* (December 2010) (www.epa.gov/compliance/resources/publications/cleanup/brownfields/local-gov-liab-acq-fs-rev.pdf).

1. Involuntary acquisition of property by a municipality (CERCLA §101(20)(D))

The definition of an **owner or operator** in CERCLA excludes states or municipalities acquiring property involuntarily. Involuntary acquisitions include bankruptcy, tax delinquency, abandonment, or other circumstances in which the municipality is acquiring title by virtue of its sovereign function. The exclusion does not apply to any municipality that has caused or contributed to the release or threatened release of hazardous substances before or after acquisition of the property. Property donated to a municipality and property acquired by eminent domain are not considered involuntary acquisitions.

It is not necessary to conduct all appropriate inquiries to receive the benefit of the definitional exclusion from liability. However, it is highly recommended that some level of due diligence be performed prior to property acquisition, leasing, or taking any other property recovery actions. For example, due diligence will reveal encumbrances on the property, including the existence of any Superfund liens that run with the land.

Involuntary acquisition is discussed further in Section III.C.1 of EPA's Revitalization Handbook (www.epa.gov/compliance/resources/publications/cleanup/brownfields/handbook).

2. Bona Fide Prospective Purchaser Provision (CERCLA §107(r) & 101(40))

The BFPP provision was added to CERCLA through the 2002 Brownfields Amendments and applies even to purchasers who knew or had reason to know of contamination on the property. The BFPP provision protects parties from CERCLA liability as long as they meet certain threshold conditions and continuing obligations. The threshold conditions are:

- The purchaser must conduct appropriate Inquiries prior to acquiring the property;
- The property must be acquired after January 11, 2002;
- All disposal of hazardous substances must have occurred prior to the acquisition; and
- The purchaser must not be potentially liable or have an affiliation with a party that is potentially liable for response costs at the facility.

The purchaser also must meet certain continuing obligations:

- Not impeding the performance of a response action or natural restoration;
- Complying with land use restrictions and not impeding the effectiveness and integrity of institutional controls;
- Taking reasonable steps to prevent releases and to limit exposure to previous releases;
- Providing cooperation, assistance and access;
- Complying with information requests and administrative subpoenas; and
- Providing legally-required notices.

As long as the acquisition occurs after January 11, 2002, the BFPP provision is available to municipalities to provide CERCLA liability protection for acquisition methods that are not considered involuntary acquisitions.

The BFPP provision is described further in Section III.A.3 of EPA's Revitalization Handbook. Appendix A ("Common Elements Guidance") of the handbook provides a detailed discussion of the threshold conditions and continuing obligation requirements. The Common Elements Guidance is available at: www.epa.gov/compliance/resources/publications/cleanup/brownfields/handbook.

Because of the important role that leasehold interests can play in facilitating the cleanup and reuse of contaminated properties, EPA also has issued guidance explaining the applicability of the BFPP liability protection to tenants. The guidance addresses those circumstances in which EPA may exercise its enforcement discretion not to enforce against two categories of tenants. The guidance also discusses how EPA will treat those tenants if the landlord loses its BFPP status during the tenancy. The two categories of tenants are:

- A tenant whose lease gives sufficient indicia of ownership to be considered an "owner" and who meets all of the statutory requirements regarding BFPPs
- A tenant of an owner who is a BFPP

EPA's decision not to enforce CERCLA liability does not preclude the risk of a third party suit.

See the EPA guidance titled *Enforcement Discretion Guidance Regarding the Applicability of the Bona Fide Prospective Purchaser Definition in CERCLA §101(40) to Tenants* (January 2009) (www.epa.gov/compliance/resources/policies/cleanup/superfund/bfpp-

tenant-mem.pdf). See, also, the factsheet titled *Enforcement Discretion Guidance Regarding the Applicability of the Bona Fide Prospective Purchaser Definition in CERCLA Section 101(40) to Tenants: Frequently Asked Questions* (November 2009) (www.epa.gov/compliance/resources/publications/cleanup/superfund/tenant-bfpp-guide-ref.pdf.

3. Third-Party Defense (CERCLA §107(b) (3) &101(35)(A))

CERCLA includes three statutory defenses to liability for cleanup costs: an act of God, an act of war, and an act or omission of a third party — the so-called third-party defense. Among other things, the third-party defense protects municipalities acquiring property through escheat (i.e., the reversion of property to the state upon the death of the owner when there are no heirs), or through the exercise of eminent domain authority.

The third-party defense is a somewhat complicated legal concept. To take advantage of the third-party defense, an owner must demonstrate that:

- The release of hazardous substances has been caused solely by an act of a third party who is not an employee or agent of the owner; and
- The act resulting in the release of hazardous substances has not occurred in connection with a contractual relationship between the owner and third party (the term contractual relationship is defined below).

There are two additional requirements that then must be demonstrated:

- The owner has exercised due care with respect to the contamination; and
- The owner has taken precautions against foreseeable acts of the party that caused the contamination and against foreseeable consequences of those acts.

For the purpose of the third-party defense, CERCLA defines contractual relationship to include documents transferring title or possession of real property. Thus, in general, a purchaser of property is not entitled to use the third-party defense. However, there are several key exceptions to this definition that a municipality should be aware of (see following paragraph). For properties acquired after January 11, 2002, the BFPP provision generally is an easier standard to meet since it applies to purchasers who knowingly acquired contaminated property.

There are three exceptions to that general definition of contractual relationship. In order to meet any of these exceptions, the property on which the facility is located must have been acquired after the disposal or placement of the hazardous substances on, in, or at the facility. Then, the "defendant" making the third-party defense must establish one of the following:

- At the time the defendant acquired the facility the defendant did not know and had no reason to know that any hazardous substance which is the subject of the release or threatened release was disposed of on, in, or at the facility;
- The defendant is a government entity which acquired the facility by escheat, or through any other involuntary transfer or acquisition, or through the exercise of eminent domain authority by purchase or condemnation; or
- The defendant acquired the facility by inheritance or bequest.

For the abovementioned defenses to liability, there are additional requirements that must be met similar to those for a BFPP. Although a municipality might qualify for any of those three defenses, in practice it is the second defense related to certain types of government acquisitions that is most likely to be available to a municipality.

The third-party defense may be important to municipalities because it applies to eminent domain takings that are not identified as involuntary acquisitions under the exclusion found in the owner/operator definition. If the municipality acquires the property through eminent domain after the disposal or placement of hazardous substances at the facility, it does not have to show that it had no knowledge of the contamination at the time of acquisition. However, it does have to meet the other statutory requirements of the defense.

To protect certain parties from liability, CERCLA contains both liability exemptions and affirmative defenses to liability. A party who is exempt from CERCLA liability with respect to a specific act cannot be held liable under CERCLA for committing that act. A party who believes that it has an affirmative defense to CERCLA liability must prove that defense by a preponderance of the evidence. A municipality that acquires contaminated property involuntarily may be exempt from CERCLA liability as an owner/operator; that municipality may also have the somewhat redundant option of arguing the third part defense as an affirmative defense.

Additional discussion of the third-party defense can be found in Section III.A.2 and Appendix A (Common Elements Guidance) of EPA's Revitalization Handbook. Due to the complexity of the third-party defense, a municipality should seek legal counsel in interpreting whether it applies to the acquisition being considered.

Could the municipality be liable under CERCLA for contamination that originates from an off-property source?

The 2002 Brownfields Amendments offer limited liability protection to contiguous property owners whose property is impacted by off-site sources. EPA's "Contaminated Aquifer" Policy also addresses liability associated from contamination in ground water originating solely from an off-site source.

Contiguous Property Owner Provision

The contiguous property owner provision was added to CERCLA through the 2002 Brownfields Amendments. It provides another exemption from owner/operator liability under CERCLA. The liability protection applies to owners of land contaminated by a release or threatened release of hazardous substances from property owned by someone else. The landowner cannot qualify for this protection if the landowner knew or had reason to know at the time of acquisition that the property was or could be contaminated by releases of hazardous substances from property owned by someone else. Again, to benefit from the liability protection, threshold conditions and continuing obligations are applicable. The following conditions must be met:

- The landowner does not own the property from which there is a release or threatened release;

- The landowner's property is contiguous to or otherwise similarly situated with respect to the property from which there is a release or threat of release of hazardous substances;
- The landowner did not cause, contribute or consent to the release or threatened release;
- The landowner is not liable or affiliated with any other person potentially liable for the response costs at the site. An affiliation includes any direct or indirect familial relationship or any contractual, corporate, or financial relationship (other than one that is created by a contract for the sale of goods or services). An affiliation may also be created by the reorganization of a business entity that was potentially liable;
- The landowner takes reasonable steps to stop any continuing releases, to prevent any future releases, and to prevent or limit exposure to any hazardous substances;
- The landowner provides full cooperation and access to those authorized to conduct response actions at the site including the access necessary to install, operate, and maintain any partial or complete response action;
- The landowner complies with any land use restrictions established in connection with the response action at the site;
- The landowner does not impede the effectiveness or integrity of any institutional controls established in connection with the response action at the site;
- The landowner complies with any information requests or administrative subpoenas;
- The landowner provides all legally required notices with respect to the discovery or release of hazardous substances at the site; and
- The landowner conducted all appropriate inquiries as it is defined under CERCLA with respect to the property at the time at which the landowner acquired the property.

Note that this defense differs from the BFPP defense because a BFPP may know of contamination at the time of acquisition of the property. In contrast, if a landowner discovers or knows through all appropriate inquiries or otherwise that contamination has migrated onto the property, and has this information at the time of acquisition, the contiguous property owner defense is not available. However, CERCLA § 107(q)(1)(C) explicitly recognizes that the landowner may still qualify as a BFPP even if they do not meet all of the requirements for a contiguous property owner.

EPA believes that Congress did not intend for this provision to be limited only to properties located immediately adjoining the source property. Therefore, through the exercise of its enforcement discretion, EPA will consider extending this liability protection on a case-specific basis to otherwise eligible non-adjoining properties.

EPA's Revitalization discusses the Contiguous Property Owner provision in Section III.A.4.ii and in the "Common Elements Guidance" included as Appendix A. Two other useful EPA resource documents, "*Interim Enforcement Discretion Guidance Regarding Contiguous Property Owners*" (January 13, 2004) and the "*Contiguous Property Owner*

Guidance, Reference Sheet" are available online at: www.epa.gov/compliance/resources/policies/cleanup/superfund/contig-prop.pdf and www.epa.gov/compliance/resources/policies/cleanup/superfund/contig-prop-faq.pdf, respectively. In addition, an EPA memo, *Model CERCLA Section 107(q)(3) Contiguous Property Owner Assurance Letter*, dated November 9, 2009, discusses the factors that EPA will consider in issuing assurance letters and provides a model assurance letter (www.epa.gov/compliance/resources/policies/cleanup/superfund/cpo-assure-mod-ltr-mem.pdf).

Contaminated Aquifer Policy

If at the time of acquisition the landowner was aware of releases from property owned by someone else affecting his property, the landowner is ineligible for protection as a contiguous property owner under CERCLA 107(a). However, if the contamination affecting his property is found only in ground water, the landowner may be covered by a different enforcement discretion policy addressing contaminated aquifers that was issued by EPA in May, 1995.

Known formally as the "*Final Policy Toward Owners of Property Containing Contaminated Aquifers*," the policy applies to hazardous substances contained in ground water solely as the result of subsurface migration from a source located on another property. As with the contiguous property owner provision, for this policy to apply, the owner cannot otherwise be a liable party under CERCLA; cannot have had certain delineated relationships with the person causing the release; and cannot have caused, contributed to, or made the contamination worse. The threshold criteria to qualify for this enforcement are discussed more completely in Section III.A.4.1 of EPA's Revitalization and in the May 1995 memo available at: www.epa.gov/compliance/resources/policies/cleanup/superfund/contamin-aqui-rpt.pdf.

The May 1995 memo also discusses the circumstances under which EPA might enter into a settlement agreement with the landowner to protect him from third parties seeking contribution for response costs. Because such settlements are resource intensive for EPA, the Agency will only consider doing them when compelling reasons exist.

How does sub-dividing or parceling a CERCLA site affect legal status under CERCLA?

Typically, CERCLA sites are defined by the extent of contamination and do not necessarily conform to property boundaries. Therefore, subdividing or parceling a specific portion of a site would not change the legal status of those parcels under CERCLA, i.e., the subdivided parcels would continue to be part of the CERCLA site. A municipality or other party acquiring such parcels would be liable as the current owner under CERCLA unless the municipality met the requirements of one of the liability protections such as the bona fide prospective purchaser provision.

While completing the cleanup of a site may take decades, many National Priority List (NPL) sites include substantial areas that have been cleaned up more quickly. Also, in some cases, particularly sites that were placed on the NPL in the earlier days of Superfund, the site boundary may have included areas that were later found to be uncontaminated. EPA has developed a process that allows areas requiring no further cleanup action to be deleted from the definition of the NPL site (i.e., "partial deletion").

In general, to implement that process, EPA makes a determination that all appropriate response actions at the site have been implemented; and the appropriate state must also concur with that determination.

Any person including individuals, businesses, entities, states, local governments, and other federal agencies may submit a petition requesting a partial deletion from the NPL site. EPA will evaluate the request and make a determination whether to proceed. A partial deletion of a portion of a Superfund site from the NPL can help to increase the site's marketability since it indicates that that portion of the site has been properly addressed under CERCLA.

Partial site deletion does not affect cost recovery efforts or the ability of EPA to take future enforcement actions. Superfund liens and windfall liens may still apply to property that has been subdivided or delisted.

Even if the municipality is not liable under CERCLA for a particular property, could it be responsible for maintaining institutional controls, engineered controls, or operating ongoing treatment systems if the municipality acquires or leases the property?

Because the all appropriate inquiries investigations would have identified the presence of contamination, the municipality would not qualify for liability protection as an innocent landowner or contiguous property owner. For the purposes of this question, it will be assumed that the municipality did meet the statutory requirements at the time of acquisition that apply to a BFPP. For the BFPP provision, continuing obligations include compliance with land use restrictions and institutional controls and taking "reasonable steps" with respect to hazardous substance releases. As discussed in Section III.B.1 of the Common Elements Guidance, EPA believes that the 2002 Brownfields Amendments require bona fide prospective purchasers to "implement institutional controls even if the restrictions or institutional controls were not in place at the time the person purchased the property." This could include recording deed notices or giving notice of any institutional controls to a subsequent purchaser of the property. The Common Elements Guidance provides further clarification of those potential obligations.

As previously discussed, a municipality or other party acquiring (or leasing) a property must take "reasonable steps" with respect to hazardous substances affecting the property to qualify as a bona fide prospective purchaser. EPA believes that in enacting the bona fide prospective purchaser provision and other landowner liability protections, Congress did not intend to create, as a general matter, the same types of response obligations that exist for a CERCLA liable party; however, it appears clear that the new landowner does have a responsibility to address potential dangers associated with these hazardous substances.

The Common Elements Guidance provides examples of what might constitute "reasonable steps," including, in one example, the responsibility for potentially maintaining a "cap" or other containment system and to conduct repairs in the event of a breach, deterioration, or other situation affecting its performance. There are a number of factors that could affect the specific nature of the municipality's obligations, such as whether EPA or the state has entered into a consent decree with other parties regarding the operation and maintenance of engineering controls, contractual agreements between

the landowner and other parties, and whether the responsible party still exists or is capable of carrying out those obligations. Refer to the Common Elements Guidance, Appendix B, for further discussion.

It is recommended that municipalities exercise appropriate care with respect to property that they have acquired "involuntarily."

Even if the municipality is not liable under CERCLA for a particular property, could it be responsible for reimbursing EPA for "unrecovered" response costs if liens have been placed on the property?

CERCLA provides for two types of liens to help EPA recover its costs of addressing contaminated property: traditional "Superfund liens" pursuant to CERCLA § 107(l) and "windfall liens" pursuant to CERCLA § 107 (r). CERCLA provides that EPA has a Superfund 107(l) lien for all costs and damages for which a party is liable on property owned by that liable party which is the subject of a Superfund cleanup. A windfall lien applies only to property that is or may be owned by a bona fide prospective purchaser. The windfall lien is designed to prevent an entity from realizing an unfair windfall from the ownership of a property that has been cleaned up using federal taxpayer dollars. EPA's potential cost recovery from a windfall lien is limited either to the increase in fair market value of the property attributable to the cleanup or to the United States' unrecovered response costs, whichever is less.

Both the Superfund lien and the windfall lien can be released or waived upon satisfaction before the purchase of the site. The satisfaction amount may be negotiated with EPA. EPA may seek cash consideration, performance of work, or a combination of such consideration in connection with the lien releases and waivers. In situations where a BFPP has acquired property subject to a perfected Superfund 107(l) lien, EPA expects that the 107(l) lien will be resolved with EPA as part of the transaction between the liable party and the BFPP through a direct payment to EPA. If the Superfund 107(l) lien is not resolved and the BFPP purchases the property at a reduced price due to the lien encumbrance, EPA may attempt to recover its costs through an *in rem* action against the property or through a settlement with the BFPP.

BFPPs should contact the appropriate EPA regional office regarding the existence of a Superfund lien or windfall lien on the property or, if no lien currently exists, EPA's intent to perfect a lien on the property.

In those situations where EPA is likely to pursue a windfall lien, EPA has the authority to settle the windfall lien with the BFPP at the time of the transaction. A model settlement agreement has been developed by EPA and the U.S. Department of Justice (DOJ) to facilitate the resolution of windfall liens. Where, based on its guidance, EPA is unlikely to pursue a windfall lien, it is EPA policy not to become involved in private real estate transactions. However, for certain site-specific reasons, EPA may be willing to address the windfall lien concerns of BFPPs through the issuance of comfort/status letters.

EPA has prepared the following guidance in connection with Superfund 107(l) liens: *Guidance on Federal Superfund Liens*, September 22, 1987 (www.epa.gov/compliance/resources/policies/cleanup/superfund/fed-sflien-mem.pdf) and

Supplemental Guidance on Federal Superfund Liens, July 29, 1993 (www.epa.gov/compliance/resources/policies/cleanup/superfund/guide-liens-rpt.pdf). EPA has issued guidance, a model settlement document, and sample comfort/status letters on windfall liens available at: www.epa.gov/compliance/resources/policies/cleanup/superfund/interim-windfall-lien.pdf. EPA guidance and a model notice letter on the timing and administrative procedures for filing notice of a windfall lien on a property can be found at: www.epa.gov/compliance/resources/policies/cleanup/superfund/wf-admin-mem.pdf.

Could the municipality incur liability under CERCLA by performing environmental investigations, cleanups, building demolition or physical improvements on a property it does not own or lease?

A party that performs an activity that results in the release or threat of release of any hazardous substance, pollutant, or contaminant runs the risk of incurring operator liability under CERCLA. For example, done improperly, building demolition could release asbestos and lead into the air and soil; physical improvements could disturb soil, which may result in the release of contaminants. If a municipality is contemplating such activity on property it does not own, it should first contact state and federal authorities to determine whether regulatory programs cover the activity and whether government oversight is required.

CERCLA does provide liability protection for municipalities acting in emergency situations. CERCLA Section 107(d)(1) excludes from liability any person (including municipalities) rendering care, assistance, or advice in accordance with the NCP with respect to an incident creating a danger to public health or the environment as the result of the release or threat of release of hazardous substances. An exception arises if the person acts negligently. CERCLA Section 107(d)(2) also exempts from liability any local government taking action in response to an emergency created by the release or threatened release of hazardous substances generated by or from a facility owned by another person. The only exception arises if the costs are a result of gross negligence or intentional misconduct on the part of the local government.

Are municipalities protected from third parties seeking to recover costs they spent to perform CERCLA environmental investigations and cleanup involving the property?

If a municipality is not liable under CERCLA for the costs of the cleanup of a property, then the municipality should not be vulnerable to a third-party suit for contribution to the costs of a cleanup under CERCLA. Being able to defend against third party suits is one more reason for a municipality to acquire contaminated property in a manner that confers CERCLA liability protection and then to perform the continuing obligations necessary to maintain the specific liability protection.

If a municipality is potentially liable for the costs of the cleanup at a property, it may be possible for the municipality to enter into a settlement agreement with EPA. Settlement agreements are negotiated contractual agreements in which the parties exchange consideration of value. Where the law allows for contribution protection, a person (including a municipality) who has resolved its liability to the United States through an administrative or judicial settlement is not liable for claims for contribution for matters

addressed in the settlement document. Settlement agreements under CERCLA generally include contribution protection language for "matters addressed" in the settlement.

Prospective purchaser agreements are one form of settlement agreement. However, EPA believes that the Brownfields Amendments in 2002 granting liability protection to bona fide prospective purchasers eliminated the need for most prospective purchaser agreements. EPA has since identified a narrow range of circumstances serving a public interest in which it will consider entering into prospective purchaser agreements. See *Bona fide Prospective Purchasers and the New Amendments to CERCLA*, Memorandum from Barry Breen, dated May 31, 2002. The memo is found at www.epa.gov/compliance/resources/policies/cleanup/superfund/bonf-pp-cercla-mem.pdf.

Under EPA's Environmentally Responsible Redevelopment and Reuse (ER3) initiative, prospective purchaser agreements may be considered if the liable party is willing to take green/sustainable actions at the site. A fact sheet titled *Environmentally Responsible Redevelopment and Reuse (ER3): Frequently Asked Questions and Answers* (December 2005) (www.epa.gov/compliance/resources/policies/cleanup/superfund/er3-faqs-05.pdf).

Section II
RCRA 42 U.S.C. §6901 et. Seq. (1976)
Subtitle C: Hazardous Waste Management

Assessing RCRA (Subtitle C) Liability – Key Questions

Below are some key questions that a municipality might ask relating to their potential liability under RCRA (Subtitle C). It is not a comprehensive listing of all the questions that should be considered. Nor should the responses be taken as legal advice for a specific set of factors that might apply in a given situation. Please refer to additional disclaimers on page vi of this document

The following responses are based only on the requirement of the federal RCRA (Subtitle C) program. A municipality should also consult with the appropriate state agency to determine how state requirements might apply. In addition, it is important to recognize that there are circumstances where EPA may use CERCLA authorities at a RCRA facility. The same CERCLA liability considerations relevant to any CERCLA site also apply to the property.

Could the municipality incur legal liability under RCRA (Subtitle C) by acquiring or leasing a RCRA (Subtitle C) facility?

There are a variety of RCRA statutory authorities that can be used to require investigation and cleanup at a RCRA (Subtitle C) facility. As discussed previously, some of these authorities are triggered automatically, as is the case with closure/post-closure and corrective action at permitted TSD facilities, while other authorities are more discretionary and can be used by EPA or authorized states to require investigation or cleanup if necessary and appropriate. To understand potential RCRA (Subtitle C) liability it is important to distinguish between closure/post-closure and corrective action:

1. Closure/Post-Closure

If a facility operated a hazardous waste management unit (HWMU) to treat, store or dispose of hazardous waste, the owners/operators are required to "close" and, if necessary, conduct post-closure care of that HWMU. If closure/post-closure has not been completed prior to the transfer of the property, the new owner and operator may be required to complete closure/post-closure.

Assuming that it is not the intention of the new owner to continue operating the HWMUs, which would require a hazardous waste management permit (or "operating" permit), a post-closure permit may still be required. As a new owner, the municipality would need to apply for the post-closure permit or, if one already exists, have it transferred to the municipality.

In some cases, the municipality may decide to enter into a separate agreement with another entity regarding the implementation of closure/post-closure and financial

assurance responsibilities. The municipality and the other entity should first discuss with EPA or the authorized state how best to address the issuance or implementation of the closure/post-closure permit. For example, if the owner and the operator are different entities the discussion may be about whom the closure/post-closure permit should be issued to. In this situation, if the previous owner agrees to conduct the closure/post-closure activities and maintain the financial assurances required under RCRA, the closure/post-closure permit could be issued to the municipality as the owner and the previous owner as the operator. As the owner of the property, however, the municipality would be responsible for completing the requirements of an owner should the previous owner default or cease to exist. In another scenario, the municipality could lease a portion of the property that contains a HWMU undergoing closure/post-closure (e.g., a landfill), thereby potentially making the municipality an "operator" of that unit and requiring them to become a co-signatory on the closure/post-closure permit. Or, if the municipality is considering temporarily ownership of a property prior to transferring title to a third party, it may be necessary to work out whether the municipality needs to be a co-signatory to the closure/post-closure permit.

Alternatively, EPA or the authorized state may at their discretion issue an "enforceable document" as defined in 40 CFR §270.1(c)(7) in lieu of a post-closure permit as appropriate. This provides the regulatory agencies greater latitude in selecting an enforcement mechanism that is most appropriate for a given set of circumstances.

2. Corrective Action

Section 3004(u) of RCRA requires that when corrective action cannot be completed at a TSD facility prior to the issuance of a hazardous waste management permit, the permit must contain a schedule of compliance for conducting necessary corrective action. Section 3004(v) of RCRA extends those requirements to releases extending beyond the facility boundaries. The permit would also include closure and, if necessary, post-closure requirements. If a municipality acquires or leases a property with plans to operate the HWMUs, a somewhat unlikely situation, the municipality would generally be required to have the permit transferred to it as the new owner or operator.

More commonly, the municipality would acquire or lease a property with the intention of closing the HWMUs if that has not already been done. In this situation, EPA or the authorized state may, as described above, determine that a post-closure permit is required or utilize an "enforceable document" such as a Remedial Action Plan in lieu of the post-closure permit. The post-closure permit or enforceable document would also require that corrective action be conducted if necessary.

RCRA also contains other provisions that can be used to require corrective action at any facility where hazardous waste has been treated, stored, or disposed, including transporters and interim status TSD facilities. A brief summary of relevant RCRA authorities is included below. In some cases, other authorities, such as CERCLA or state statutes, may also be used at RCRA facilities.

Could the municipality be legally liable under RCRA (Subtitle C) for contamination that originates from an off-site source?

Generally, the owner/operator would not be responsible under the federal RCRA (Subtitle C) program for contamination that originates from an off-site source or can be demonstrated to be a background condition. As a practical matter, however, it can sometimes be difficult to demonstrate that certain contaminants originated from an off-site source or are solely the result of naturally-occurring conditions, especially if those chemicals may have been used at the property. In other situations, there may be a commingling of ground water plumes that makes it technically difficult to distinguish the source of the contamination. The burden to demonstrate that these contaminants are not present as the result of facility operations rests with the owner/operator. Regardless of the source of the contamination, all unacceptable health and environmental risks should be addressed prior to making use of the property.

The municipality should also ensure that its use and management of the property would not contribute to the environmental problems associated with off-site sources by, for example, altering the flow of ground water through the use of a ground water extraction well. Contributing to environmental problems associated with off-site sources could affect a municipality's liability under RCRA (Subtitle C).

Could the municipality be liable under RCRA (Subtitle C) for hazardous waste or hazardous constituents that migrate off the property?

Section 3004(v) of RCRA specifies that RCRA permits require corrective action to be taken beyond the facility boundary where necessary to protect human health and the environment unless the owner/operator demonstrates to EPA or the authorized state that, despite their best efforts, they are unable to obtain the necessary permission to undertake such actions. The owner/operator is not relieved of all responsibility to clean up a release that has migrated beyond the facility boundary where off-site access is denied. Onsite measures to address such releases will be determined on a case-by-case basis. Likewise, for non-permitted facilities, EPA can issue orders to require corrective action beyond facility boundaries in certain circumstances. EPA and the authorized state will typically apply a similar standard when using other RCRA authorities.

How does sub-dividing or parceling a RCRA (Subtitle C) facility affect legal liability under RCRA (Subtitle C)?

For the purposes of implementing corrective action, a facility is defined as, "…all contiguous property under the control of the owner or operator seeking a permit under Subtitle C of RCRA. This definition also applies to facilities implementing corrective action under RCRA section 3008(h)." See 40 CFR §260.10. This means that a facility would consist of the entire area contained within the contiguous parcels, even if the HWMUs only occupied a portion of the total area. So, for example, if a manufacturing company owned a 100-acre parcel and operated a hazardous waste storage area within a building on that parcel, the entire 100 acres would be considered part of the RCRA (Subtitle C) facility. If the company also owned a contiguous 20-acre parcel, that parcel would also be included.

There are occasions where subdividing the RCRA facility into separate parcels is desirable from the standpoint of facilitating reuse or expediting cleanup of one or more parcels (or, as described in the example above, a facility may already be comprised of separate parcels). This might involve the title transfer or leasing of existing parcels, or the subdivision of an existing parcel, to another party. Generally, where cleanup under RCRA (Subtitle C) for a parcel or parcels is completed for unrestricted use, EPA or the authorized state may modify an enforcement order or permit to no longer require corrective action or the maintenance of financial assurances for those parcels. Where cleanup is not completed or the cleanup is completed for restricted use, it may be permissible for EPA or the authorized state to modify the order or permit such that the respective responsibilities of the parties for completing corrective action and maintaining financial assurance are clearly defined. It is advisable that the parties involved in the transfer or leasing transactions discuss the regulatory implications with EPA or the authorized state before proceeding. Further discussion of parceling at RCRA corrective action facilities can be found in EPA's *Final Guidance on Completion of Corrective Action Activities at RCRA Facilities*, dated February 13, 2003 (www.epa.gov/epawaste/hazard/correctiveaction/resources/index.htm).

Could a municipality be responsible for reimbursing EPA or the state for "unrecovered" response costs if they acquire or lease a RCRA (Subtitle C) facility?

If an owner/operator is unwilling or unable to conduct monitoring, testing, and analysis in order to ascertain the nature and extent of contamination, RCRA Section 3013 provides EPA the authority to conduct those activities and to seek reimbursement for those incurred costs. If the municipality were to become an owner/operator through acquisition, leasing or other means, they could be required to conduct those activities and reimburse EPA for unrecovered costs that EPA incurs or incurred on those activities.

There are, however, only a limited set of circumstances where EPA or the state would rely solely on RCRA authorities and resources to conduct cleanup or other response actions at a RCRA (Subtitle C) facility that is not being adequately addressed by the owner or operator or where the property has been abandoned. In part, this is because, unlike CERCLA, the federal RCRA program does not have access to a dedicated federal fund comparable to "Superfund."

In order to carry out these response actions, EPA or the state would typically first look to access any financial assurance funds that were required of the owner/operator. If available funds are insufficient, EPA might utilize CERCLA authorities to accomplish cleanup or defer to the state's use of other authorities when that would be more appropriate. If CERCLA funds are involved, EPA would seek PRP contribution or reimbursement for those expenditures as it would for any other CERCLA site.

Could the municipality incur legal liability under RCRA(Subtitle C) by performing environmental investigations, cleanups, building demolition or physical improvements on a RCRA (Subtitle C) facility they do not own or lease?

This question arises from a situation where the municipality secures permission from the facility owner to access the property to conduct such actions, or utilizes some other authority (such as public safety laws) to gain that access. If the municipality causes or contributes to the contamination through its handling, storage, treatment or disposal of

solid or hazardous waste, the municipality could be liable for any "imminent and substantial endangerment" presented by the contamination. See RCRA Section 7003(a).

Are municipalities protected from past owners/operators or third parties seeking to recover costs they spent to perform environmental investigations and cleanup involving a RCRA (Subtitle C) facility?

There are no provisions in RCRA for a party filing suit against another party to recover costs or require contribution for RCRA (Subtitle C) cleanups. While it is conceivable that a third party could assert a claim under CERCLA, the municipality would be eligible for any liability protections under CERCLA for which they qualify. A municipality could also be liable under tort or contract theories.

Excerpts of Some Key RCRA Statutory Provisions

Section 3013(a)

"If the Administrator determines, upon the receipt of any information that (1) the presence of any hazardous waste at a facility or site at which hazardous waste is, or has been, stored, treated, or disposed of; or (2) the releases of any such wastes from such facility or site may present a substantial hazard to human health or the environment, he may issue an order requiring the owner or operator of such facility or site to conduct such monitoring, testing, analysis, and reporting with respect to such facility or site as the Administrator deems reasonable to ascertain the nature and extent of such hazard."

Under certain circumstances, EPA can use RCRA Section 3013 to issue orders to the "most recent previous owner or operator…who could reasonably be expected to [have] knowledge of the presence of hazardous waste at the facility or site]."

Section 7003(a)

"Notwithstanding any other provisions of this Act, upon receipt of any information that the past or present handling, storage, treatment, transportation, or disposal of any solid waste or hazardous waste may present an imminent and substantial endangerment to health or the environment, the Administrator may bring suit on behalf of the United States in the appropriate court against any person (including any past or present generator, past or present transporter, or past or present owner or operator of a treatment, storage, or disposal facility) who has contributed or who is contributing to the alleged disposal to restrain such person from such handling, storage, treatment, transportation, or disposal to order such person to take such other actions as may be necessary, or both."

Section 3004(u)

"Standards promulgated under this section shall require, and a permit issued after the date of enactment of the Hazardous and Solid Waste Amendments of 1984 by the Administrator or a State shall require corrective action for all releases of hazardous waste or constituents from any solid waste management unit at a treatment, storage, or disposal

facility seeking a permit under this subtitle, regardless of the time at which such waste was placed in such unit. Permits issued under section 3005 shall contain schedules of compliance for such corrective action (where such corrective action cannot be completed prior to the issuance of the permit) and assurances of financial responsibility for completing such corrective action."

Section 3004(v)

"As promptly as practicable after the date of enactment for the Hazardous and Solid Waste Amendments of 1984, the Administrator shall amend the standards under this section regarding corrective action required at facility for the treatment, storage, or disposal of hazardous wastes listed or identified under section 3001 to require that corrective action be taken beyond the facility boundary where necessary to protect human health and the environment unless the owner or operator of the facility concerned demonstrates to the satisfaction of the Administrator that, despite the owner's or operator's best efforts, the owner or operator was unable to obtain the necessary permission to undertake such action."

Section 3008(h)(1)

"Whenever on the basis of any information the Administrator determines that there is or has been a release of hazardous wastes into the environment from a facility authorized to operate under section 3005(e) of this subtitle, the Administrator may issue an order requiring corrective action or other such other response measures as the Administrator deems necessary to protect human health or the environment or the Administrator may commence a civil action in the United States district court in the district in which the facility is located for appropriate relief, including a temporary or permanent injunction."

This authority is commonly used to compel "interim status" facilities to investigate and remediate contamination.

Section III
RCRA 42 U.S.C. §6901 et. Seq. (1976)
Subtitle D: Solid Waste Management

Assessing RCRA (Subtitle D) Liability – Key Questions

Note: Below are some key questions that a municipality might ask relating to their potential liability under RCRA (Subtitle D). It is not a comprehensive listing of all the questions that should be considered. Nor should the responses be taken as legal advice for a specific set of factors that might apply in a given situation. Please refer to additional disclaimers on page vi of this document

The following responses are based only on the requirement of the federal RCRA (Subtitle D) requirements. A municipality should also consult with the appropriate state agency to determine how state requirements might apply. In addition, it is important to recognize that there are circumstances where EPA may use other RCRA statutory authorities to address releases of solid or hazardous wastes or CERCLA authorities if hazardous substances are involved. The same liability considerations relevant to any RCRA hazardous waste facility or CERCLA site also apply to the property.

Could the municipality incur legal liability under RCRA (Subtitle D) by acquiring or leasing a property containing a solid waste management facility?

A municipality that becomes the **owner or operator** of a solid waste management facility through acquisition or leasing would be responsible for ensuring compliance with the applicable requirements in Parts 257 and 258. A facility or unit not meeting these requirements is considered an open dump, which is prohibited under RCRA section 4005.

Could the municipality be legally liable under RCRA (Subtitle D) for contamination that originates from an off-site source?

Generally, the owner/operator would not be responsible under the federal RCRA (Subtitle D) program for contamination that originates from an off-site source or can be demonstrated to be a background condition. As a practical matter, however, it can sometimes be difficult to demonstrate that certain contaminants originated from an off-site source or are solely the result of naturally-occurring conditions, especially if those chemicals may have been used at the property. In other situations, there may be a commingling of ground water plumes that makes it technically difficult to distinguish the source of the contamination. The burden to demonstrate that these contaminants are not present as the result of facility operations rests with the owner/operator.

The municipality must also ensure that its use and management of the property would not contribute to the environmental problems associated with off-site sources by, for example, altering the flow of ground water through the use of a ground water extraction well.

Could the municipality be liable under RCRA (Subtitle D) for releases from solid waste disposal facilities that migrate off the property?

The owner/operator of a non-municipal non-hazardous waste disposal unit and a MSWLF would be responsible for addressing all regulated releases from that unit, including those that migrate off the property.

How does subdividing or parceling a property affect legal liability under RCRA (Subtitle D)?

If a property is subdivided and a municipality then acquires a parcel, the municipality would become an owner/operator with respect to the solid waste disposal facilities located on the parcel acquired by the municipality. If the municipality instead leases the parcel, it could become an operator with respect to the solid waste disposal facilities located on the parcel if it is "responsible for the overall operation of the facility or part of the facility." See 40 CFR§§257.2 and 258.2.

If the municipality were to acquire property on which a solid waste disposal facility is located, and then subdivide the property and lease the parcel that contains the solid waste disposal facility to another party, the municipality would still be an owner with respect to that disposal facility. If the municipality were to sell the parcel to another party, that party would generally become the "owner" of the solid waste disposal facility within the meaning of 40 CFR Parts 257 and 258.

Could a municipality be responsible for reimbursing EPA or the state for "unrecovered" response costs if they acquire or lease a property at which past cleanup involving solid waste disposal facilities was conducted?

EPA could potentially undertake response actions at a solid waste disposal facility under RCRA statutory authorities or CERCLA (if hazardous substances are involved), but generally regulation of Subtitle D facilities is implemented at the state or local level. If CERCLA funds are involved, EPA would seek PRP contribution or reimbursement for those expenditures as it would for any other CERCLA site.

Could the municipality incur legal liability under RCRA (Subtitle D) by performing environmental investigations, cleanups, building demolition or physical improvements on a property it does not own or lease?

This question arises from a situation where the municipality secures permission from the facility owner to access the property to conduct such actions, or utilizes some other authority (such as public safety laws) to gain that access. Generally, the municipality would not be considered an owner/operator within the meaning of 40 CFR Parts 257 & 258; however, if the municipality causes or contributes to the contamination through, for example, its handling of solid or hazardous waste, the municipality could potentially be liable under other RCRA authorities or federal statutes.

Are municipalities protected from past owners/operators or third parties seeking to recover costs they spent to perform environmental investigations and cleanup involving solid waste disposal facilities or releases from those facilities?

There are no provisions in RCRA for a party filing suit against another party to recover costs or require contribution for RCRA (Subtitle D) cleanups. While it is conceivable that a third party could assert a claim under CERCLA if hazardous substances are involved, the municipality would be eligible for any liability protections under CERCLA for which they qualify. A municipality could also be liable under tort or contract theories.

Section IV
RCRA 42 U.S.C. §6901 et. Seq. (1976)
Subtitle I: Underground Storage Tanks

Assessing RCRA (Subtitle I) Liability – Key Questions

Note: Below are some of the key questions that a municipality might ask relating to its potential liability under RCRA (Subtitle I). It is not a comprehensive listing of all the questions that should be considered. Nor should the responses be taken as legal advice for a specific set of factors that might apply in a given situation. Please refer to additional disclaimers on page vi of this document

The following responses are based only on the requirement of the federal RCRA (Subtitle I) program. A municipality should also consult with the appropriate state agency to determine how state requirements might apply. In addition, it is important to recognize that there are circumstances where EPA may use CERCLA authorities to address releases of hazardous substances from an UST system. The same CERCLA liability considerations relevant to any CERCLA site also apply to the property.

Could the municipality incur legal liability under RCRA (Subtitle I) by acquiring or leasing a property containing UST systems?

A municipality that acquires the property would become an **owner** for the regulated UST systems in use at the time of acquisition, and also an **operator** if it has control of, or responsibility for, the daily operation of the UST system. The municipality could also potentially be an operator of the UST system if it leases the property. As an owner or operator, it would need to comply with the relevant requirements contained in 40 CFR Part 280 or the requirements of an approved state.

The question of liability for UST systems and releases from those USTs that have been closed or abandoned prior to acquisition or leasing can be more complex. Generally though, in this scenario a municipality would not normally be an owner/operator under the federal UST regulations and would not be required to conduct closure, or corrective action for releases as long as the abandoned UST is empty (consistent with 40 CFR 280.70) prior to November 8, 1984 and is, therefore, not "in use." A previous owner or operator could be required to comply with the closure and corrective action requirements if that person can be found. It must be emphasized, however, that States are not constrained by the federal definition of owner/operator. Some States, for example, hold landowners as well as current and previous tank owners responsible for proper closure and removal of old tanks, as well as any contamination discovered.

Specific scenarios and questions regarding potential responsibilities under UST are discussed at EPA's Office of Underground Storage Tanks Web site: www.epa.gov/oust/compend.

Could the municipality be legally liable under RCRA (Subtitle I) for releases from UST systems that originate from an off-site source?

Responsibility for such releases under the federal UST program would generally rest with the owners and operators of the UST system that was the source of the release. The municipality might incur liability under CERCLA (if hazardous substances are involved) or other environmental statutes if they cause or contribute to the contamination by for example, altering the flow of groundwater through the use of a groundwater extraction well.

Could the municipality be liable under RCRA (Subtitle I) for releases from UST systems that migrate off the municipality's property?

A municipality meeting the definition of an owner/operator would generally be responsible for all releases from an UST system, including any releases that extend beyond the property boundary. The UST regulations also include specific requirements for owners and operators of UST systems to investigate whether the UST system is the source of off-site impacts, when directed to do so by the implementing agency. These impacts include the discovery of regulated substances (such as the presence of free product or vapors in soils, basements, sewers and utility lines, and nearby surface and drinking waters) that have been observed by the implementing agency or brought to its attention by another party (See 40 CFR §280.51).

Who is an Owner or Operator under RCRA (Subtitle I)?

Owner means "(a) In the case of an UST system in use on November 8, 1984, or brought into use after that date, any person who owns an UST system used for storage, use or dispensing of regulated substances; and (b) In the case of any UST system in use before November 8, 1984, but no longer in use on that date, any person who owned such UST immediately before the discontinuation of its use."

Note: EPA interprets the term "in use" to mean the presence of regulated substance in the underground storage tank. To determine whether regulated substance is present, EPA would use the definition of empty described in 40 CFR 280.70 (see Memorandum from Carolyn Hoskinson to UST/LUST Regional Division Directors, "Clarification of LUST Eligibility and Grant Implications," March 17, 2010 (www.epa.gov/oust/oust_eligibility_letter_031710_finalsigned.pdf).

Operator means "any person in control of, or having responsibility for, the daily operation of the UST system."

Source: 42 U.S.C. §9001 and 40 CFR §280.12

How does subdividing or parceling a property affect liability under RCRA (Subtitle I) for UST systems or releases from UST systems?

If a property is subdivided and a municipality then acquires a parcel, the municipality would become an owner, and potentially an operator, with respect to any UST systems located on the acquired parcel that are in use at that time. The municipality leasing the parcel could be an operator if it has control of, or responsibility for, the daily operation of the UST system.

If the municipality were to acquire a property on which an UST system is located and then subdivide the property and sell or lease the portions that contain the regulated UST

systems to another party, the municipality would still be liable for releases and regulatory violations that occurred while it was an owner/operator.

Can a municipality be responsible under RCRA (Subtitle I) for reimbursing EPA or the state for "unrecovered" response costs if they acquire or lease a property at which past cleanup under UST was conducted?

Congress created the federal LUST Fund to: (1) oversee and enforce corrective action taken by a responsible party who is the owner or operator of the leaking UST systems, and (2) finance cleanups of UST releases in certain circumstances, including where the owner or operator is unknown, unwilling, or unable to respond, or which requires emergency action. To receive money from the Trust Fund, States must enter into a cooperative agreement with EPA stating how the fund will be used and administered. This includes a requirement to seek cost recovery from the owners and operators of the UST systems. A municipality that is not an owner or operator would generally not be liable for those costs. EPA's cost recovery guidelines are summarized in the document, *Cost Recovery Policy for the Leaking Underground Storage Tank Trust Fund* (May 24, 1994) (www.epa.gov/oust/directiv/d961010a.htm).

Currently about 36 States have established separate state UST cleanup funds that are not funded through the federal LUST Fund and are therefore not subject to the federal cost recovery requirements. Each State establishes its own conditions for using its state fund and seeking cost recovery; which can vary considerably by State. The Association of State and Territorial Solid Waste Management Officials has summarized these state-specific funds on its Web site (www.astswmo.org/publications_tanks.htm).

Could the municipality incur legal liability under RCRA (Subtitle I) by performing environmental investigations, cleanups, building demolition or physical improvements on a property it does not own or lease?

Responsibility under RCRA (Subtitle I) generally applies to the owner or operator of the UST systems. If the municipality causes or contributes to a release as the result of its actions at the property, it could, however, be potentially liable under CERCLA (if hazardous substances are involved) or other environmental statutes.

Are municipalities protected under RCRA (Subtitle I) from past owners/operators or third parties seeking to recover costs they spent to perform environmental investigations and cleanup involving UST systems or releases from those systems?

There are no provisions in RCRA (Subtitle I) allowing a party to sue another party to recover costs or require contribution for UST system closure or cleanups. While it is conceivable that a third party could assert a claim under CERCLA (if hazardous substances are involved), the municipality would be eligible for all of the liability protections provided for under CERCLA for which they qualify.

Section V
TSCA 15 U.S.C. §2605
Title I: Control of Toxic Substances
(Provisions Applicable to PCB)

Assessing PCB Liability under TSCA (Title I) – Key Questions

The following questions represent some of the key questions that a municipality might ask relating to their potential PCB liability under TSCA (Title I). It is not a comprehensive listing of all the questions that should be considered. Nor should the responses be taken as legal advice for a specific set of factors that might apply in a given situation. Please refer to additional disclaimers on page vi of this document

The following responses are based only on the requirements of TSCA (Title I). A municipality should also consult with the appropriate state agency to determine how state PCB requirements might apply. In addition, it is important to recognize that PCBs can be regulated under other federal statutes, such as CERCLA and RCRA. The municipality should also consider their liability under those statutes.

Could the municipality incur liability under TSCA (Title I) by acquiring or leasing a property containing PCBs or PCB remediation waste?

Depending on the circumstances, a municipality could be liable for the cleanup of PCB waste on property that it acquires or leases. A spill or other release of PCBs at regulated levels is considered to be "disposal" of PCBs, which is prohibited on land under TSCA. Persons "responsible" for cleaning up an unlawful disposal of regulated levels of PCBs may include, among others, the party who caused the contamination as well as any new owner or lessee who fails to take steps to address continuing releases. The cleanup responsibility might also extend to other environmental media affected by the spill or other release, such as surface and ground water. A municipality also could be liable for the "use" of property contaminated with regulated levels of PCBs or PCB-containing equipment without first complying with the PCB "use" provisions of 40 C.F.R. 761.30, which generally require disposal, decontamination or containment of PCBs.

Could the municipality be liable under TSCA (Title I) for PCB remediation wastes that originate from a source outside the affected property's boundary?

Generally, the person "responsible" for illegal disposal of regulated levels of PCBs would be liable for cleaning up PCB remediation wastes that originate from an off-site source. Under certain circumstances, the "responsible" person could include a new owner. Once again, the municipality would need to ensure that it does not worsen or aggravate the contamination through the use of the property that it owns or occupies. It can sometimes be difficult to demonstrate that the PCB contamination originated from an off-property source, particularly if PCBs have historically been used at the property. Note that

regulations restricting the "use" of PCB-contaminated surfaces, materials, and equipment would apply regardless of whether the municipality caused or contributed to PCB contamination that originated off-site.

Could the municipality be liable under TSCA (Title I) for PCBs and PCB remediation waste that migrate off the property?

A municipality that acquires or leases a property which is the source of PCB contamination could be responsible for the cleanup of continuing releases that migrate off the property (see discussion above). A municipality might also become liable if it causes or contributes to a release by, for example, altering the ground water flow through the use of ground water wells or by damaging a protective cap put into place to contain the PCB contamination.

How does sub-dividing or parceling a property affect liability under TSCA (Title I) for PCB remediation wastes?

Generally, if the property is subdivided and a municipality acquires or leases a parcel that is not contaminated with PCBs, it would not be liable under TSCA (Title I) for PCB contamination occurring only on the other portions of the original property.

Under a different scenario, if the municipality were to acquire a property contaminated with PCBs, and then subdivide the property and sell or lease the contaminated portions to another party, such a sale or lease would not necessarily shield the municipality from TSCA liability for the contaminated portions.

Could a municipality be responsible under TSCA (Title I) for reimbursing EPA or the state for "unrecovered" response costs if it acquires or leases a property at which PCB-related cleanup was conducted?

Where a property contaminated with PCBs is abandoned, or a responsible person lacks the resources to do required cleanup work, and EPA then conducts a cleanup under CERCLA at that property, under certain circumstances EPA may seek to recover response costs from a subsequent owner. However EPA does not have dedicated TSCA funds for conducting an investigation or cleanup of PCBs comparable to the CERCLA "Superfund."

Could the municipality incur liability under TSCA (Title I) by performing environmental investigations, cleanups, building demolition or physical improvements on a property it does not own or lease?

A municipality could become a responsible person under TSCA if, for instance, it causes or contributes to PCB contamination in the course of conducting cleanup, building demolition or other activities involving the property.

Are municipalities protected from past owners/operators or third parties seeking to recover costs they spent to perform environmental investigations and cleanup involving PCBs or PCB remediation waste?

There are no express provisions in TSCA allowing a party to sue another party to recover costs or require contribution for TSCA (Title I) cleanups. While it is conceivable that a third party could assert a claim under CERCLA, the municipality would be eligible for any liability protections under CERCLA for which they qualify. Also, a municipality in this situation potentially could be subject to civil or tort liability under statutes or common law of the State where it is located; TSCA does not have any effect on such cases.

Section VI
Clean Air Act 42 U.S.C. §7401 et seq. (1970)
Asbestos NESHAP

Assessing Asbestos Liability under the Asbestos NESHAP – Key Questions

The following questions identify some of the key questions that a municipality might ask relating to its potential liability under the asbestos NESHAP. They are not a comprehensive listing of all the issues that should be considered. They should not be construed as legal advice applicable to any specific facts associated with a particular situation. Please refer to additional disclaimers on page vi of this document

The following responses are based on the requirements of the federal asbestos NESHAP. A municipality should also consult with the appropriate state agency to determine how state or local asbestos requirements might apply. In addition, it is important to recognize that asbestos is regulated under other federal statutes such as CERCLA, RCRA, and TSCA Title II (pertaining to asbestos in schools). In the context of a particular property, then, the municipality should also consider potential asbestos-related liabilities under those laws, among others.

Could the municipality incur legal liability under the asbestos NESHAP if it acquires or leases a property containing asbestos or asbestos-containing material?

A municipality is most likely to become subject to the asbestos NESHAP as the result of demolition or renovation activities or through the disposal of regulated asbestos-containing materials (RACM) on the property. Other activities regulated by the asbestos NESHAP include the manufacture, fabrication, spraying, milling and other uses of asbestos or asbestos-containing products and materials, activities in which a municipality would not ordinarily be involved. A municipality may, however, become involved in the redevelopment of properties where such regulated industrial activities previously had taken place and may, as a result, become exposed to current liability relating to RACM on the site.

In the case of demolition and renovation activities, a municipality would be responsible for ensuring compliance with the asbestos NESHAP if it is an owner or operator of a demolition or renovation activity. This means any person who owns, leases, operates, controls or supervises a regulated facility, or the demolition or renovation operation itself, is responsible. A person may also be responsible as an owner or operator through its affiliation with another entity that, itself, is an owner or operator. As an owner/operator, a municipality would be responsible for compliance including, among other things, the prevention of any release of asbestos from regulated demolition or renovation activities and the proper disposal of RACM. Although the asbestos NESHAP requirements do not expressly prohibit onsite disposal of asbestos, most states severely restrict or prohibit the practice. Even where onsite disposal is a possibility, the long-term operational and

management obligations that follow often will make this an unattractive option at most properties.

Occasionally, a municipality may acquire or lease a property with an asbestos waste disposal site already located on it. If this disposal site is regulated under the asbestos NESHAP, a survey plot and record of the location and quantity of asbestos-containing waste should be on file with the EPA or the delegated state or local authority. The municipality would become an owner or operator of the waste disposal site and be subject to the requirements of 40 CFR § 61.151. In general, the owner or operator would be responsible for, at a minimum, the following:

- Taking steps to prevent emissions, including maintenance of any required protective cover;
- Posting warning signs and fencing around the perimeter of the site;
- Notifying EPA or the delegated agency at least 45 days prior to excavating or otherwise disturbing any asbestos-containing material; and
- Maintaining a notice in the deed describing the presence and location of the RACM.

If asbestos-containing materials are found on the site in areas other than in an asbestos NESHAP compliant disposal site, the municipality should notify the EPA, state and local agencies to determine what asbestos requirements could apply. Unless the origin of the asbestos-containing materials is known (e.g., from a regulated demolition operation), it may by difficult to determine whether the materials currently are regulated under the asbestos NESHAP. It is very likely, however, that even if the materials are not covered by the asbestos NESHAP, they could be regulated under state and/or local requirements which frequently are more stringent than federal requirements and applicable to much smaller quantities of asbestos.

It is worth noting that, in unusual situations where EPA finds that circumstances involving asbestos present (or may present) an imminent and substantial endangerment to human health or the environment, EPA can exercise certain authority (as applicable under the CAA, TSCA, CERCLA, RCRA and other statutes) intended to address such threats. Under an imminent and substantial endangerment scenario, EPA could order a party to address conditions causing or contributing to the endangerment by, for example, requiring the abatement of asbestos-containing materials that are or may be releasing dangerous levels of airborne asbestos fibers.

Could the municipality be legally liable under the asbestos NESHAP for asbestos that originates from an off-property source?

Although determining liability under the asbestos NESHAP is highly fact specific, EPA is generally less likely to take enforcement action for asbestos releases that originate from an off-property source when the municipality is not an owner or operator of any of the asbestos NESHAP-regulated activities that permitted the release. The municipality would still be responsible for properly managing RACM on the property generated from a regulated activity even if it originated from an off-property source (e.g., demolition debris brought in from another property).

As a practical matter, it may be difficult for a municipality to demonstrate that asbestos originated entirely from an off-property source, especially if asbestos is present on the property owned or leased by the municipality.

Could the municipality be legally liable under the asbestos NESHAP for asbestos releases that extend beyond the property boundaries?

A municipality that is an owner or operator of a demolition or renovation activity or any other regulated activity under the asbestos NESHAP would generally be responsible for all asbestos releases from those activities that occur while it is an owner or operator, including any releases that extend beyond the property boundaries.

How does subdividing or parceling a property affect legal liability under the asbestos NESHAP for asbestos or asbestos-containing materials?

Two scenarios will be discussed:

Scenario 1: The property is subdivided prior to acquisition or leasing by the municipality

If a property is subdivided and a municipality acquires or leases a parcel, the municipality would become an "owner or operator" with respect to any asbestos-NESHAP-regulated activities that take place on that parcel while the municipality owns or leases the parcel. This would include regulated asbestos waste disposal sites or continuing releases that existed at the time that the parcel was acquired or leased by the municipality.

Scenario 2: The property is subdivided by the municipality after acquisition

If the municipality acquires a property and then subdivides and sells a parcel, the municipality would not generally be responsible under the asbestos NESHAP for regulated activities that take place on the parcel sold, provided the municipality is not otherwise an owner or operator for those regulated activities (for example, by leasing the parcel from the new owner when a renovation or demolition operation occurs). The municipality could still be potentially responsible for RACM that was not properly disposed of while it owned or operated the property and for any continuing releases that existed while it owned or operated the property.

If the municipality retains ownership and leases the property to a party who then conducts regulated activities, the municipality would still be an owner or operator under the asbestos NESHAP for those activities.

In imminent and substantial endangerment situations, EPA could use federal authority to require a municipality to take action such as conducting an asbestos cleanup if, for example, the municipality caused or contributed to conditions at the site.

Could a municipality be responsible under the asbestos NESHAP for reimbursing EPA or the state for "unrecovered" response costs if it acquires or leases a property at which asbestos-related cleanup was conducted?

EPA does not have dedicated funds under the Clean Air Act for conducting investigations or cleanups of asbestos releases comparable to the CERCLA "Superfund." If a property contaminated with asbestos is abandoned or the responsible persons lack the resources to do the work, EPA and the state would likely consider using other statutory authorities and resources, such as CERCLA, and seek to recover their response costs under those statutes, as deemed appropriate.

Could a municipality incur legal liability under the asbestos NESHAP by performing environmental investigations, cleanups, building demolitions or physical improvements on a property it does not own or lease?

The asbestos NESHAP would apply to owners or operators of those activities specified in 40 CFR Part 61, Subpart M, which include demolition or renovation activities involving regulated facilities. A municipality could become an owner or operator of demolition or renovation activities if it owns, leases, operates, controls or supervises the facility being demolished or renovated or the demolition or renovation operation, or both. Even for those activities not specifically regulated under the asbestos NESHAP, the municipality could still potentially incur liability under Clean Air Act or other federal statutes as a result of any actions that, for example, cause or contribute to an asbestos release.

In some cases, a state or local government agency may issue an order to demolish a building or other structure because the facility is structurally unsound and in danger of imminent collapse. Generally, the issuance of the order, by itself, would not cause the State or local government to become an owner or operator for demolition or renovation activities under the asbestos NESHAP.

Are municipalities protected under the asbestos NESHAP from past owners/operators or third parties seeking to recover costs they spent to perform environmental investigations and cleanup involving asbestos or asbestos-containing materials?

There are no provisions in the Clean Air Act allowing a party to sue another party to recover costs or require contribution for asbestos cleanups. While it is conceivable that a third party could assert a claim under CERCLA, the municipality may be able to take advantage of applicable liability protections under CERCLA for which they qualify.

Appendix E

Additional Resources

Conducting Due Diligence (Chapter 4)

ASTM E1527-05 - Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, November 2005 (www.techstreet.com/cgi-bin/detail?product_id=1246825)

ASTM E1903-97(2002) Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process, January 2002 (www.techstreet.com/cgi-bin/detail?product_id=1092564).

EPA Fact Sheet on Guidelines for Hiring an Environmental Professional (www.epa.gov/brownfields/aai/HiringEP_Addendum_factsheet.pdf) .

Institutional Controls: A Guide to Implementing, Monitoring, and Enforcing Institutional Controls at Superfund, Brownfields, Federal Facility, UST and RCRA Corrective Action Cleanups, February 2003 (www.epa.gov/superfund/policy/ic/guide/index.htm).

Institutional Controls Bibliography: Institutional Control, Remedy Selection, and Post-Construction Completion Guidance and Policy, OSWER 9355.0110, December 2005 (www.epa.gov/superfund/policy/ic/guide/index.htm).

Institutional Controls: A Citizen's Guide to Understanding Institutional Controls at Superfund, Brownfields, Federal Facilities, Underground Storage Tank, and Resource Conservation and Recovery Act Cleanups, EPA-540-R-04-003, OSWER 9355.0-98, February 2005 (www.epa.gov/superfund/policy/ic/guide/index.htm).

Institutional Controls: A Site Manager's Guide to Identifying, Evaluating and Selecting Institutional Controls at Superfund and RCRA Corrective Action Cleanups, EPA 540-F-00-005, OSWER 9355.0-74FS-P, September 2000 www.epa.gov/superfund/policy/ic/guide/index.htm).

The International City/County Management Association Web site on land-use controls (www.lucs.org/).

State Programs and Policies to Encourage Local Government Actions to Address Brownfields: How State Liability Protections, Eminent Domain Reforms, and Cost Recovery Authority can Spur Local Government Action to Acquire and Redevelop Brownfields, May 2008, Northeast-Midwest Institute (www.nemw.org).

Potential Liability under Federal and State Cleanup Statutes (Chapter 7)

A Primer for Local Governments on Environmental Liability (www.lgean.org/documents/primer.pdf).

EPA Revitalizing Contaminated Sites: The Revitalization Handbook Addressing Liability Concerns (www.epa.gov/compliance/resources/publications/cleanup/brownfields/).

State Brownfields and Voluntary Response Programs: An Update from the States, September 2008, Publication Number: EPA-560-R-08-004 (www.epa.gov/brownfields/pubs/st_res_prog_report.htm).

CERCLA Liability and Local Government Acquisitions and Other Activities, December 2010, Publication Number: EPA-330-F-10-002 (www.epa.gov/compliance/resources/publications/cleanup/brownfiels/local-gov-liab-acq-fs.pdf).

Community Issues (Chapter 9)

General

EPA, Building Vibrant Communities: Community Benefits of Land Revitalization (2009) (www.epa.gov/brownfields/policy/comben.pdf).

EPA, Lessons Learned about Superfund Community Involvement: EPA Superfund Response Staff Tell How Public Involvement Has Helped Clean Up Sites (October 2009) (www.epa.gov/superfund/programs/reforms/docs/leslrncomplete.pdf) .

EPA, Office of Solid Waste and Emergency Response, Community Engagement Initiative Proposed Action Plan (Draft) (www.epa.gov/oswer/docs/cei_action_plan_12-09.pdf).

EPA, Toward an Environmental Justice Collaborative Model: An Evaluation of the Use of Partnerships to Address Environmental Justice Issues in Communities, Evaluation Report (January 2003) (www.epa.gov/evaluate/pdf/ejevalrpt.pdf).

EPA, Toward an Environmental Justice Collaborative Model: Case Studies of Six Partnerships Used to Address Environmental Justice Issues in Communities (January 2003) (www.epa.gov/evaluate/pdf/ejevalcs.pdf).

National Association of Local Government Environmental Professionals and Northeast-Midwest Institute, Unlocking Brownfields: Keys to Community Revitalization (www.csu.edu/cerc/documents/UnlockingBrownfields.pdf) .

National Environmental Justice Advisory Council, Environmental Justice, Urban Revitalization, and Brownfields: the Search for Authentic Signs of Hope, A Report on the "Public Dialogues on Urban Revitalization and Brownfields: Envisioning Healthy and Sustainable Communities" (1996) (www.epa.gov/compliance/resources/publications/ej/nejac/public-dialogue-brownfields-1296.pdf).

National Environmental Justice Advisory Council, The Model Plan for Public Participation (November 1996) (www.greenlink.org/assess/pdfs/modelplan.pdf) .

Northeast-Midwest Institute, Brownfields Redevelopment Toolbox for Disadvantaged Communities (December 2008) (www.nemw.org/images/stories/documents/toolboxdisadvantagedcommunities.pdf).

Northeast-Midwest Institute, Community Involvement in Brownfields Redevelopment (March 2003) (www.nemw.org/images/stories/documents/CommunityInvolve.pdf) .

Sustainability and Green Design

American Planning Association, Policy Guide on Planning for Sustainability (April 17, 2000) (www.planning.org/policy/guides/pdf/sustainability.pdf).

DSIRE: Database of State Incentives for Renewables and Efficiency (www.dsireusa.org/) .

EPA, Green Building (www.epa.gov/greenbuilding/)

EPA, Green Communities (www.epa.gov/greenkit/index.htm).

EPA, Mid-Atlantic Brownfields & Land Revitalization, Sustainable Cleanup and Redevelopment (www.epa.gov/reg3hwmd/bf-lr/sustainablereuse.htm).

EPA, Smart Growth Implementation Assistance (www.epa.gov/smartgrowth/sgia.htm).

EPA, Sustainability (www.epa.gov/Sustainability/).

Massachusetts Executive Office of Energy and Environmental Affairs, Smart Growth/Smart Energy Toolkit Modules (www.mass.gov/envir/smart_growth_toolkit/pages/SG-modules.html).

Massachusetts Executive Office of Housing and Economic Development, Smart Growth Initiatives (www.mass.gov/?pageID=ehedterminal&L=3&L0=Home&L1=Community+Development&L2=Community+Planning&sid=Ehed&b=terminalcontent&f=dhcd_cd_smartgrowth_smartgrowth&csid=Ehed).

U.S. Green Building Council, LEED Project Certification (www.usgbc.org/DisplayPage.aspx?CMSPageID=64).

Area-Wide Planning

EPA, Office of Brownfields and Land Revitalization, Brownfields Area-wide Planning Pilot Program (www.epa.gov/brownfields/areawide_grants.htm).

Peter B. Meyer, Accounting for Differential Neighborhood Economic Development Impacts in Site-Specific or Area-Based Approaches to Urban Brownfield Regeneration (1998) (http://cepm.louisville.edu/Pubs_WPapers/PDF_Docs/site-vs-area.pdf).

Funding Sources

EPA, Brownfields Grants (www.epa.gov/brownfields/grant_info/index.htm).

EPA, Community Action for a Renewed Environment (www.epa.gov/care).

EPA. Educational Campaign on Policy Barriers to Redevelopment of Vacant Properties (www.epa.gov/dced/grants/opei0703.htm).

EPA, Environmental Education Grants (www.epa.gov/enviroed/grants.html).

EPA, Environmental Justice Small Grants (www.epa.gov/oecaerth/environmentaljustice/grants/ej-smgrants.html).

EPA, Healthy Communities Grant Program (www.epa.gov/region1/eco/uep/hcgp.html).

EPA, Superfund Technical Assistance Grants (TAGs) (www.epa.gov/superfund/accomp/news/tag.htm).

EPA, EPA's Technical Assistance to Brownfields (TAB) Communities Program (www.epa.gov/brownfields/tools/tab_bifold.pdf) .

Managing Project Risk (Chapter 10)

EPA Web site, About Environmental Insurance and Brownfields (www.epa.gov/brownfields/insurance). This Web page has links to numerous documents and training materials on risk management and insurance, including:

Environmental Insurance Research

State Brownfield Insurance Programs, 2006. Northern Kentucky University. December 2006.

Environmental Insurance Products Available for Brownfields Redevelopment, 2005 Northern Kentucky University. February 2006.

Update: State Brownfield Insurance Programs, 2005 Northern Kentucky University. February 2006.

Brownfields Insurance for Public Sector-Led Development Projects: Experience and Methods. Northern Kentucky University/University of Louisville. May 2005.

State Brownfield Insurance Programs, 2004. Northern Kentucky University/University of Louisville. December 2004.

Models of Government-Led Brownfield Insurance Programs. Northern Kentucky University/University of Louisville. October 2002.

Environmental Insurance and Public Sector Brownfields Programs: Factors Affecting Pursuit of Insurance as a Redevelopment Tool. Northern Kentucky University/University of Louisville. November 1999.

Environmental Insurance Products Available for Brownfields Redevelopment. Northern Kentucky University. November 1999.

Long-Term Management and Insurance

- Environmental Insurance and Risk Management Tools in Brownfields Cleanup and Redevelopment.
- Environmental Insurance Helps Ensure Redevelopment, Success Story Fact Sheet July 2003.

- Environmental Insurance Policy Coverage and Terms.
- Environmental Insurance and Risk Management Tools. Glossary of Terms.
- Environmental Insurance for Brownfields Redevelopment: A Feasibility Study. Department of Housing and Urban Development
  July 2000.

Appendix F - EPA Contacts

Land Revitalization Coordinators

Headquarters: www.epa.gov/oswer/landrevitalization/contactus.htm

Regional Offices: www.epa.gov/oswer/landrevitalization/contactus.htm

Brownfields

Headquarters: www.epa.gov/brownfields/hqcntct.htm#anchor11

Regional Offices: www.epa.gov/brownfields/corcntc.htm

States/Tribes: www.epa.gov/brownfields/state_tribal/state_map.htm

Superfund Redevelopment

Headquarters: www.epa.gov/superfund/programs/recycle/contact/index.html

Regional Offices: www.epa.gov/superfund/programs/recycle/contact/redevelopment.html

Underground Storage Tanks

Headquarters (General): www.epa.gov/brownfields/hqcntct.htm#anchor10b

Headquarters (Program Areas): www.epa.gov/swerust1/oustcont.htm

Regional Offices: www.epa.gov/swerust1/regions/index.htm

States/Territories: www.epa.gov/oust/states/statcon1.htm

Tribes: www.epa.gov/oust/pubs/ustindiancountrydirectory1109.pdf

RCRA Corrective Action (Hazardous Waste)

Headquarters: Contact regional office

Regional Offices: www.epa.gov/epawaste/hazard/correctiveaction/contacts/index.htm

States/Tribes: www.epa.gov/epawaste/wyl/stateprograms.htm

TSCA (PCBs only)

Headquarters: www.epa.gov/epawaste/hazard/tsd/pcbs/pubs/contactus.htm

Regional Offices: www.epa.gov/epawaste/hazard/tsd/pcbs/pubs/coordin.htm

NESHAP (Asbestos only)

Headquarters: www.epa.gov/asbestos/pubs/contactus.htmlHQ

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