Brownfields Prevention Transformed

Deborah Orr
Orr.Deborah@epa.gov
EPA Region 5
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Region 5 Message

- Municipalities can take easy steps toward preventing Brownfields by being proactive.
- By helping companies in your community, it is possible to identify potential problems and intervene before sites develop into Brownfields.
- Prevention partners activities lead to project benefits.
Steps Local Governments can consider:

- Incorporate Brownfields Prevention into inspections;
- Incorporate Brownfields Prevention into your assessment of properties;
- Consider using ordinances;
- Work with your State agency; and
- Incorporate Brownfields Prevention in your Comprehensive Plan
Desired Results

- Local governments will be exposed to ideas that can be used to help manufactures and commercial enterprises leave a cleaner footprint on their cities, counties and villages.
- This can be accomplished by building on lessons learned from peers.
Region 5 Challenge

- Embrace this initiative
- Add to the dialogue
- Become a partner
Speakers

- Reggie Greenwood, Director, Economic Development, South Suburban Mayors and Managers Association, Illinois

- David Chandler, Senior Business Analyst, Center for Neighborhood Technology, Illinois
Market-Oriented Brownfields Prevention

“Working Ourselves Out of a Job”

Brownfields 2008 Conference
Chicago’s South Suburbs

- 44 suburbs in southern metropolitan Chicago
- Older industrial suburbs: 1,000s of brownfield acres
Assets for Redevelopment

- 187 sites with >20 acres of developable land
- Enhanced by freight infrastructure, workforce, established industry
Model Brownfield Prevention Ordinance

• All facilities dealing with hazardous materials or reprocessing construction/demolition materials
• Required to submit a pollution prevention plan and pay a brownfield prevention fee, or pay larger fees and not submit a plan in some cases
• Required to have adequate pollution insurance
Model Ordinance Implementation

Ordinance has not been adopted by any municipalities
• Additional disincentive to investment
• Administrative task for strapped municipalities
• Need for larger applicable jurisdiction
Elements of an Effective Program

• Frame in the popular context of sustainable ‘green’ development
• Link prevention to development & management standards
• Begin compliance in the approval process
• Offer incentives to participate in state & local programs
• Plan to sustain prevention practices
Build on the ‘Green’ Movement

- Green is “here to stay”
- “Large industrial users ‘demand green’
• Develop a Pattern Book to shape future development along the Calumet River Corridor.

• Illustrate example applications that highlight different pattern book techniques
  – Mixed Use Downtown
  – Industrial / River
  – Commercial
  – Residential
  – Recreation / Open Space
• The development should follow sustainable best practices and should focus on:
  – Urban Planning and Design Principals
  – Environmental Design
  – Alternative Energy
  – Development Techniques for Brownfield Sites
Calumet River Corridor
Green River Pattern Book

An Illustrated Guide to Energy, the Environment, and Sustainable Design

South Suburban Mayors & Managers Association and
Chicago Southland Economic Development Corporation
Calumet River Corridor
Green River Pattern Book

Location efficiency evaluation in site selection
Environmental Design
Calumet River Corridor Green River Pattern Book

• Permeable Paving
• High Albedo Paving
• Green Roof
• Native Landscaping
• Dark Sky Lighting
• Bio Swale
• Irrigation Efficiency
• River Edge Buffers
Brownfield Prevention Techniques

Site Development

Central Points and Short-term Stormwater Retention

- Stormwater
- Water
- Soil
- Sediment
- Recycling
- Energy

Description:
Fill of excess from parking lots and roads, building rooftop drainage tanks, cisterns, vegetated roofs and other rainwater harvesting systems all contribute to point and non-point stormwater pollutants. To reduce flow and load, stormwater pollution from point and non point sources, educate the community about the benefits of stormwater harvesting, maximize natural areas and incorporate green elements to prevent contamination between stormwater and groundwater.

Potential Benefits:
- Source is through seepage of stormwater infrastructure requirements.
- Stormwater management systems minimize runoff from rooftops and streets.
- Can be used for existing development or to create new development with rainwater harvesting, providing stormwater control of new development.

Evapotranspiration

- Watering the soil and air transport of dust and minimize pollutants entering stormwater
- Evaporation and transpiration strategies and techniques can be implemented to control dust and vegetation.

Material Pavement

- Pavement and non-pavement areas
- Water
- Sediment
- Recycling
- Energy

Description:
Many construction activities create dust and erode pollutants that can be transported and cause other negative impacts. Evapotranspiration, water vapors and dust can cause dust and erosion.

Potential Benefits:
- Block the pollution and air transport of dust and minimize pollutants entering stormwater
- Evaporation and transpiration strategies and techniques can be implemented to control dust and vegetation.
## Brownfield Prevention Techniques

### Building Design

<table>
<thead>
<tr>
<th>Government/Industry Building Design and Construction</th>
<th>Spill Prevention</th>
<th>Responsible Manufacturing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Features:</strong></td>
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</tr>
<tr>
<td>- Roof</td>
<td>- Spill containment systems</td>
<td>- Responsible purchasing processes</td>
</tr>
<tr>
<td>- Walls</td>
<td>- Spill control systems</td>
<td>- Ensure minimizing environmental impacts and provide cost savings for businesses</td>
</tr>
<tr>
<td>- Floors</td>
<td>- Spill cleanup procedures</td>
<td></td>
</tr>
<tr>
<td>- Entrance/Exit Points</td>
<td>- Spill control systems</td>
<td></td>
</tr>
<tr>
<td>- Storage</td>
<td>- Spill cleanup procedures</td>
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<td>- Reduced cost and increased productivity</td>
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<td>- Enhanced environmental performance</td>
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<td>- Increased worker safety</td>
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**Description:**
- The use of roof, wall, and floor systems in buildings can help prevent brownfields. New or renovated buildings should be equipped with effective spill containment systems to prevent leaks and spills. Spill control systems, such as containment berms and spill response equipment, should be installed at the building site to prevent the spread of contaminants. Spill cleanup procedures, including chemical spill response, should also be available on site.

**Potential Benefits:**
- Reduced cost and increased productivity
- Enhanced environmental performance
- Increased worker safety

**Spills can have a cumulative effect that quickly become the number of pollutants in a roadway system. Brownfields are an issue through regular inspections and use of current clean-up procedures, containment systems, storage, waste handling techniques and waste disposal methods.**

**Abatement/Remediation:**
- Spills can be a major threat to the environment, and proper abatement and remediation procedures are essential to prevent further contamination of the site. Proper containment and cleanup of spills can prevent the spread of contaminants and reduce the risk of injury and property damage. Spill response equipment, such as containment berms and spill response kits, should be available on site to quickly respond to spills and prevent further contamination.

**Abatement/Remediation Benefits:**
- Reduced risk of injury and property damage
- Improved safety and health
- Reduced cost and increased productivity

**Conclusion:**
- The prevention and abatement of brownfields is essential to protect the environment and public health. Effective spill containment systems, cleanup procedures, and containment berms can help prevent the spread of contaminants and reduce the risk of injury and property damage. Proper abatement and remediation procedures are essential to prevent further contamination of the site and ensure a safe and healthy environment for future generations.
### Brownfield Prevention Techniques

#### Management

<table>
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<th>Environmental Management Systems (EMS)</th>
<th>Federal and State Programs</th>
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<td>- Operating manuals and training materials provide guidance for the management of brownfield sites. The manual includes information on the environmental management of brownfield sites and provides strategies for preventing and managing brownfield sites.</td>
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#### Description

- The manual is designed to provide guidance for the management of brownfield sites and includes strategies for preventing and managing brownfield sites.

- The Environmental Management System (EMS) is a systematic approach to minimizing environmental impacts and maintaining the integrity of the environment. The EMS includes policies, procedures, and other management practices to prevent and manage environmental impacts.

- Federal and state programs are available to assist in the cleanup and remediation of brownfield sites. These programs offer financial assistance and technical assistance through the Environmental Protection Agency (EPA).
Sustainable Industrial Development Strategies
Dolton

Industrial development can provide many opportunities to incorporate sustainable elements. This example site is located in Dolton, along the banks of the Calumet River. Industrial developments in this corridor will serve as example industrial development for Chicago and the Midwest.

Components of this sustainable design focus on site design and stormwater management but also incorporate responsible manufacturing. A range of tools relating to sustainable design and management can be accommodated on any industrial site. A range of tools have been applied to this site as an example of sustainable techniques that can be applied but there are many combination of techniques that can be used on similar site throughout the Calumet River Corridor.
Begin Compliance in the Approval Process

Municipal Entitlement Process

- Provide Green River Handbook with entitlement process package
- Offer consulting on sustainable development with project review

Application & Design Standards Received

Application & Plans Submitted

Planning Department Review

Planning Commission Review

Environmental Consultation

Secure Any Necessary State Permits

Approved With Sustainable Design & Management Commitments
Environmental Consultation Team

• SSMMA (as liaison)
• Illinois EPA, Office of Pollution Prevention (P2)
• Illinois Waste Material Recycling Center (IL WMRC)
• Energy Utility Consultants
Local Incentives for Handbook Compliance

- Streamlined approval process
- Savings through technical assistance
- Access to special funds
- Tax benefits
Sustain Prevention Practices

Periodic monitoring visits linked to:
• Ongoing technical assistance
• New incentive programs
• Industrial retention programs
• Renewal of tax benefits
Ford Supplier Park, Chicago

Almost a model for market-driven sustainable redevelopment
After viewing the links to additional resources, please complete our online feedback form.

Links to Additional Resources

Feedback Form