



Case Study 5

Phytoscapes Case Study	
Name and Location	<p>Site Name: Phytoscapes</p> <p>Site Location: United States, China</p>
Ecological Enhancement	Enhanced landscape design.
Site Description	<p>Phytoscapes is a concept where phytotechnologies are combined with landscape design at retail facilities. It is a process where a remediation system is “grown” into a site. The phytoscape acts as a prevention tool where small spills and leaks can be handled by the landscape materials before they are possibly even detected by sophisticated equipment. Phytoscapes can include “canary” species which can signal a problem before leak detection equipment in some cases. Phytoscape species are typical landscape quality plants that have shown phytoremediation capabilities. These species are already used by landscape architects. A phytoscape will substitute known phytoremediation capable species for other landscape plants.</p>
Site Reuse Description	Any site can use phytoscapes to promote remediation while at the same time provide ecological enhancement.
Stakeholder Involvement	BP Retail business units, Bovis Lend Lease (Global Alliance design and construction partner), local communities / zoning boards
Site Assessment Approach and Cleanup	<p>Phytoscapes are typically done under the authority of EPA OUST.</p> <p>Phytoscapes generally require less maintenance than current landscape designs. Because phytoscape species tend to be deep-rooted, they can access groundwater as their irrigation source after establishment. Retail site owners can lower water usage. Additionally, several phytoscape species include “no mow” lawn grasses. Maintenance with the phytoscapes will be less onerous.</p>
Reuse	The community will get the same high level of aesthetic landscaping at service station sites. Ecologically can attract birds / butterflies to the region.
Obstacles	Community requirements for specific landscaping.
Costs and Funding	Typical landscaping costs cover the cost of the phytoscapes (simply substituting species)
Economic and	Phytoscapes can typically save money when compared to a traditional



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<p>Other Incentives</p>	<p>landscape design. Irrigation and maintenance costs are lower for phytoscapes.</p> <p>Phytoscapes are very forward thinking. They can be used to show the public that a remediation system can be “grown” into a site to handle or at least minimize potential impacts to soil and groundwater before they even become an issue for a regulatory body. They can help prevent environmental liabilities from forming in the future.</p>
<p>Time</p>	
<p>Other</p>	<p>This is a lesson-learned case study. Information was gathered from several other phytotechnology projects. Additional experiments were conducted, and regional-specific lists of landscape species, capable of remediating gasoline in the event of a release, were compiled.</p>
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