



Del Rio Area

Brownfields Planning Project



Del Rio Area Brownfields Planning Project

What are Brownfields?

- **“Real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or *potential* presence of a hazardous substance, pollutant, or contaminant.”**
--EPA definition

Hazardous Substance Sites

Examples:

- Plating Shops
- Landfills
- Salvage Yards
- Dry Cleaners
- Mine-Scarred Lands
- Illegal Drug Labs



Petroleum Sites

Examples:

- Gas Stations
- Fuel Terminals
- Tank Farms
- Oil Fields



Why do Brownfields remain undeveloped?

- **Environmental conditions -- known & unknown**
- **Cost and time required to investigate and cleanup**
- **Liability concerns & cost of obtaining liability protections**
- **Higher cost of capital, financing for project**
- **Cost of obtaining insurance**
- **Higher level of community involvement**
- **Development considerations/constraints**

Why redevelop brownfields?

Create Opportunities for Communities

- **Est. 450,000-600,000 brownfields nationwide**
- **Promote economic development**
- **Create jobs**
- **Revitalize neighborhoods**
- **Increase property and sales tax revenues**
- **Protect health and the environment**
- **Improve quality of life**

Federal Brownfields Initiatives

- **EPA is leader in brownfields initiatives**
- **Awarded \$787.1 million in grants and loans, resulting in:**
- **\$16.3 billion in cleanup/redevelopment funding**
- **68,963 jobs in cleanup, construction, & redevelopment**



City of Phoenix

Phoenix Brownfields Land Recycling Program

- **1998: Program began with EPA grant**
- **City commitment: General & Bond funds**
- **Voters approved \$4 million brownfields bond funding in 2006**
 - Currently, \$3 million available July 1, 2012
 - \$1.6 million for grants to private sector for cleanup, infrastructure improvements, fees
 - \$1.3 million for city departments to use for acquisition, investigation, and cleanup.

RESULTS...



City of Phoenix

- **\$293 million Private sector investment**
- **275 acres of previously contaminated land restored**
- **3,000 jobs created or maintained**
- **Public sector investment has redeveloped:**
 - 21 sites for parks, museums, community centers.

The logo for the Del Rio Area features a stylized, glowing green and blue crescent shape on the left, resembling a river or a moon. To its right, the words "Del Rio Area" are written in a bold, green, sans-serif font.

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Brownfields Planning Project

“A redevelopment plan that incorporates the community’s vision will likely garner greater community and political support for the project.”

-American Planning Association

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GOAL

- **Create a brownfields area plan that will:**
 - Guide the redevelopment of brownfield sites within the area
 - Prioritize sites for short-term vs. long-term cleanup and redevelopment potential
 - Inform assessment and cleanup
 - Integrate sustainable development and green building
 - Develop strategies for facilitating reuse of existing infrastructure
 - Identify resources and next steps needed to implement plan

Position brownfield sites for future EPA and other federal agency funding

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\$175,000 EPA Brownfields Area-Wide Planning Pilot Program Grant (Dec.2010-Dec. 2012)

- **City Team:**

- Office of Environmental Programs
- Planning
- Parks and Recreation
- Community and Economic Development
- Neighborhood Services



- **Other Experts**

- Planning & Environmental Consultants

- **Community:**

- Residents, businesses within and surrounding project area
- Advisory Group (ad hoc, informal, volunteer)

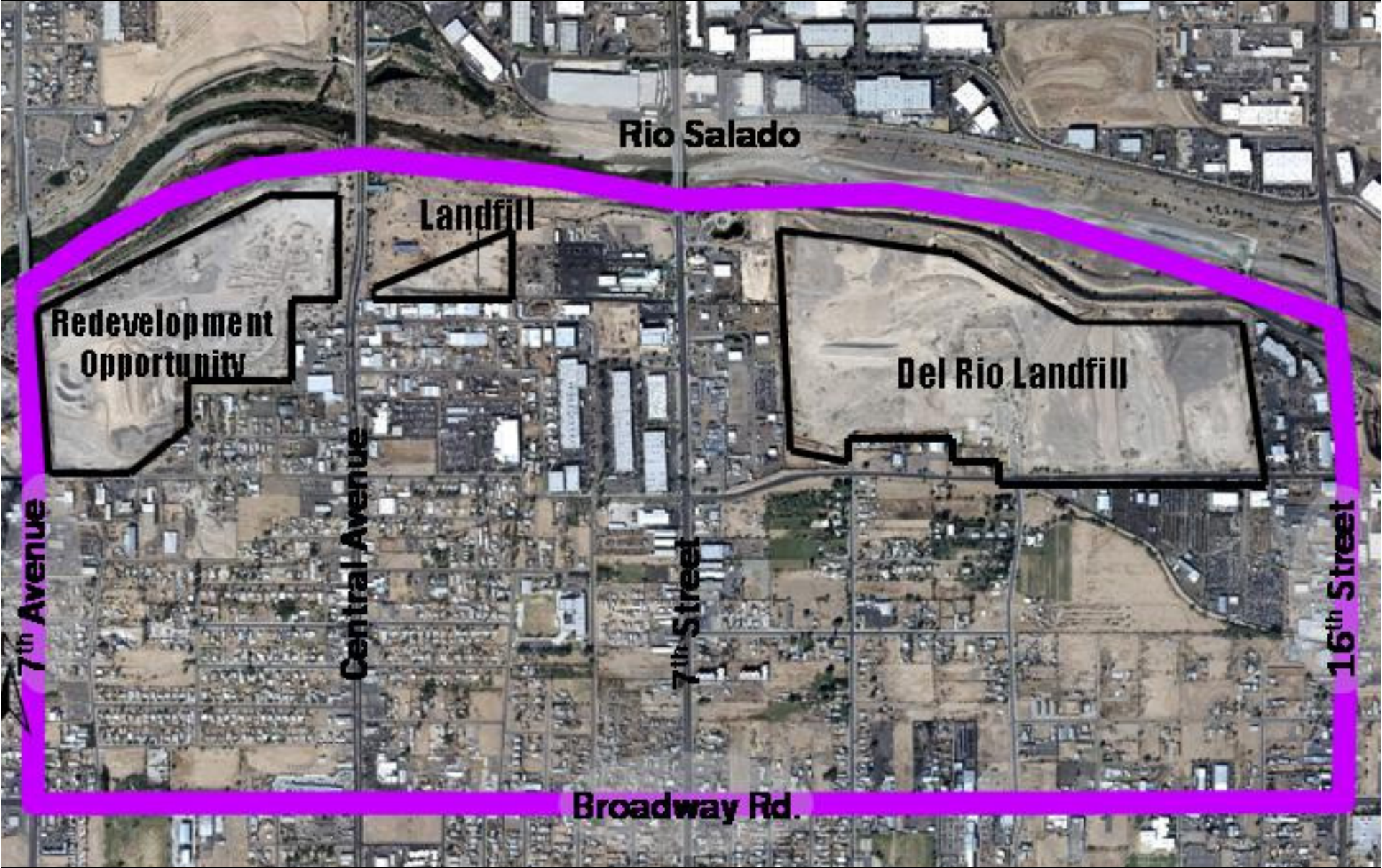
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Brownfields Planning Project

- **Del Rio Area Brownfields Advisory Group**

- Joe Banks, III, Ironco Enterprises LLC
- Myla Bobrow, RFI Operating Group
- Dr. George Brooks, NXT Horizon Group
- Tim Drexler, Ace Asphalt
- Chadwic Gifford, Catalyst Holdings
- Stephen E. Glueck, South Mountain/Laveen Chamber of Commerce
- Monica Moreno, Moreno Welding
- Sarah Porter, Rio Salado Audubon Center
- Margarita P. Singh-Smith, Property Owner
- Victor Vidales, RE/MAX New Heights Realty
- George Young, South Mountain Villager

Project Area



What do we know about the 3 sites?

- **Del Rio Landfill**

- Owned by city of Phoenix
- Approx. 130 acres, 20 acres is not landfill (formerly Rio Salado Park)
- Landfill closed in 1980 in accordance with federal, state regulations.
- Soil cap was placed on site.
- Five groundwater wells are monitored on the Site
- Methane gas collection & discharge system is maintained at the Site



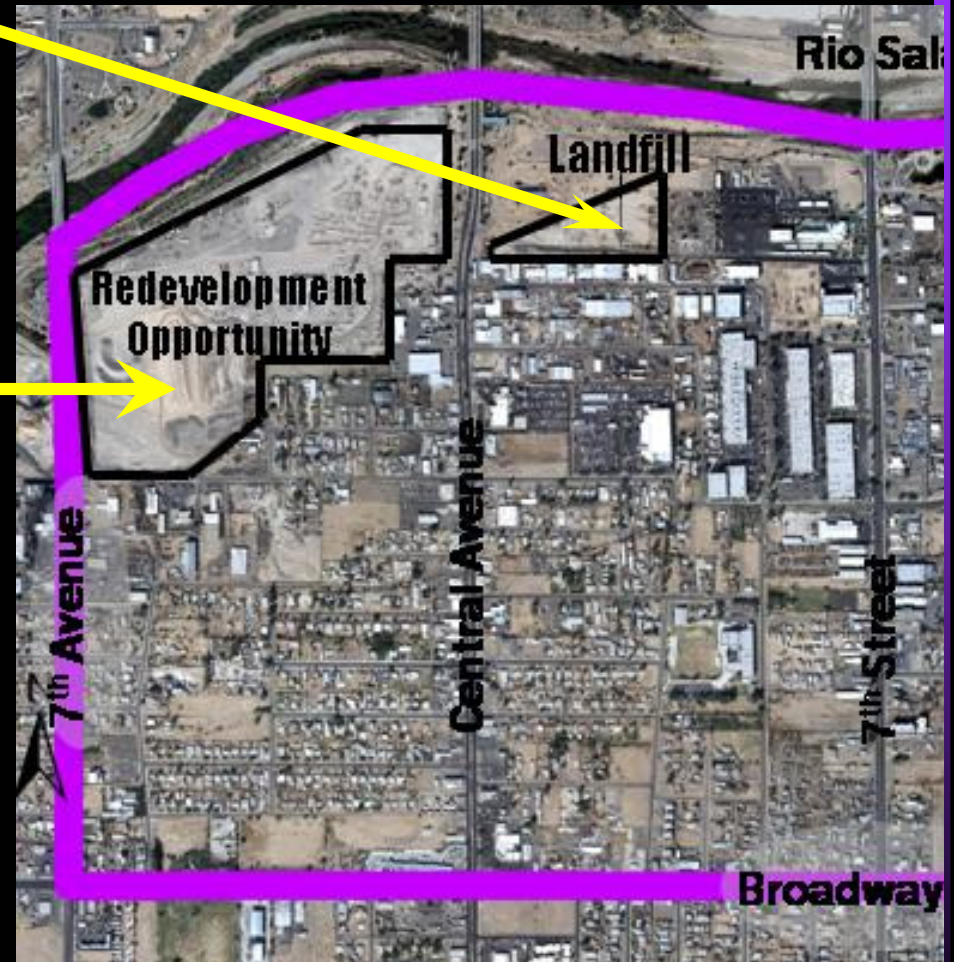
Del Rio Landfill

- **2009 - \$200,000 brownfields bond funds for**
 - Feasibility evaluation for redevelopment of landfill as a park.
 - Preliminary grading plan
 - Evaluation of stockpiled soil
 - Demolish park structures



What do we know about the 3 sites?

- **Site #1, east of Audubon Center**
 - Privately-owned property
 - Approx. 10 acres
 - Details of landfill unknown
- **Site #2, west of Central Ave.**
 - Privately-owned property
 - Approx. 70 acres
 - Sand and gravel mining site
 - Details of landfill unknown



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Brownfields Visioning Workshops

- **We want you to --**
 - Provide ideas and vision for reuse of three identified properties
 - Develop concepts, designs, themes for proposed uses.
- **Sept. 27 – Results Presented**





Brownfields Planning Project

Del Rio Area Summary Report

- Results of Brownfields Visioning Workshops
- Report will serve as basis for preparation of the Brownfields Area Plan.

Report Presented to Community in Nov./Dec. 2011

The logo features the text "Del Rio Area" in a large, green, sans-serif font, with a green swoosh underline. Below it, "Brownfields Planning Project" is written in a smaller, blue, sans-serif font.

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Brownfields Planning Project

Compile Potential Redevelopment Opportunities (PRO) List

- October 2011 – January 2012
- Prepare listing of PROs aka brownfields
- Provide data to public in planning meetings

Need help in identifying other brownfields sites

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Brownfields Planning Project

Brownfields Planning Meetings

- **January – April 2012**
- **Develop brownfields plan:**
 - Preferred redevelopment alternatives
 - Prioritization of sites for short-term vs. long-term cleanup and redevelopment potential.
 - Integration of sustainable development and green building approaches.
 - Resources (financial and other) needed to promote cleanup and redevelopment.
 - Next steps needed to implement plan.

Public Input Needed!





Landfills Overview

Landfills...

- **Est. 100,000 closed landfills in U.S.**
- **More than 6,000 have closed in past 20 years.**
- **Present opportunities for redevelopment.**



Rio Salado Habitat Restoration Project

Landfill Redevelopment Challenges...

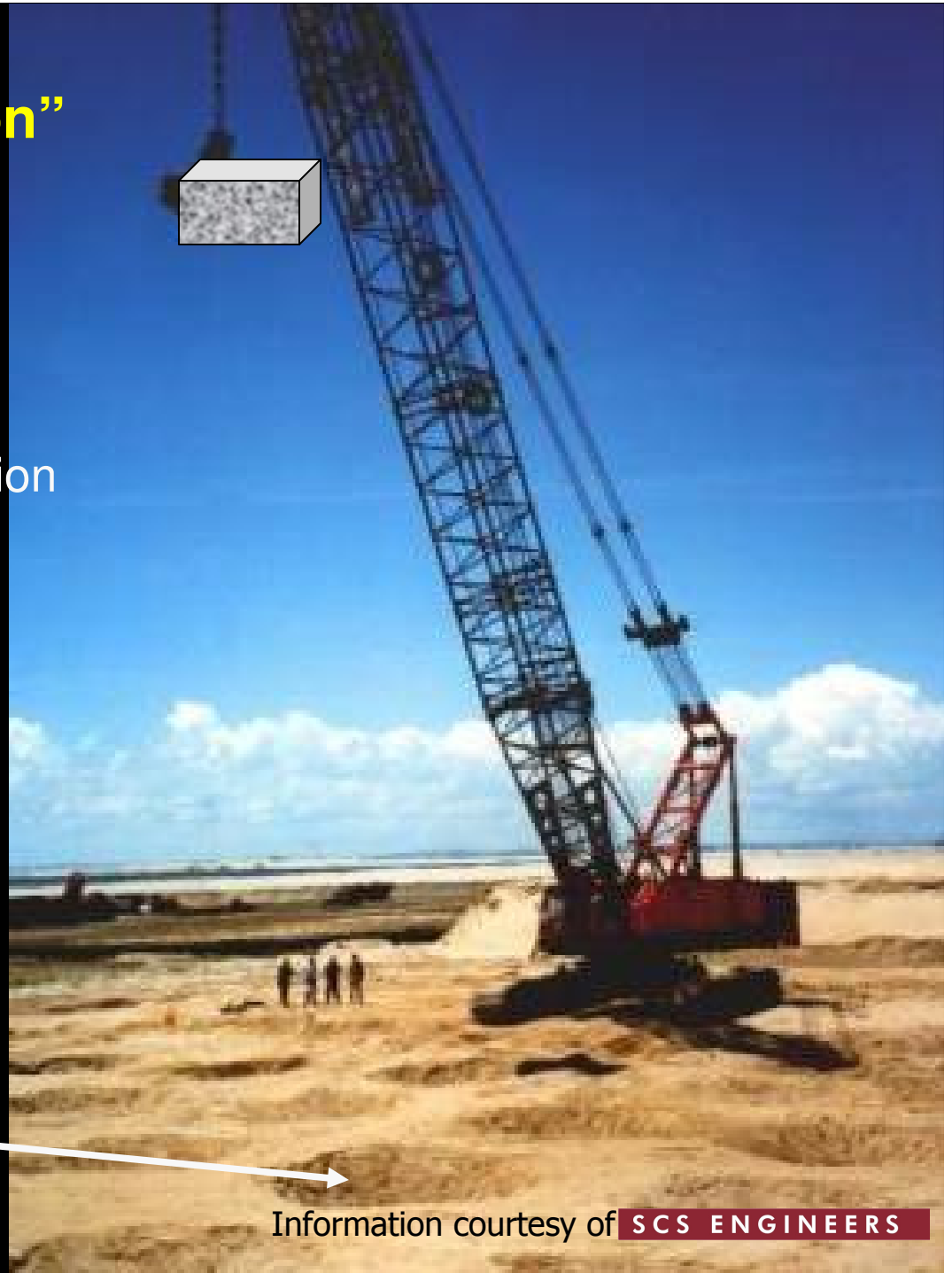
- **Landfill Gas (LFG)**
 - Methane and other gases
 - Migration, control and monitoring
 - Requires corrective action for safe use of site
- **Leachate**
 - Groundwater contamination
 - Contamination of surface water
 - Mitigation, control, monitoring
- **Geotechnical and Structural**
 - Compression due to waste decomposition
 - Construction unsuitability (requires studies)
 - Foundations
 - Settlement

Building Foundation & Utility Support Design Alternatives

- **Deep foundations (driven piles, drilled piers, grade beams, structural slabs)**
- **Reinforcement (geogrids, etc.)**
- **Ground improvement (surcharge, deep dynamic compaction)**
- **Waste removal and replacement with structural fill (partial or complete)**

“Deep Dynamic Compaction”

- Brute force approach
- Areas should be level
- Depth of improvement ~25 to 30 feet in MSW
- Good for near surface stabilization
- Difficult on slopes



Craters to be filled

Information courtesy of **SCS ENGINEERS**

Landfill Gas Mitigation

- **Type of development is important**
 - Any occupied structure must be protected
 - Commercial development may be more suited to active controls (maintenance infrastructure)
 - Residential development can be challenging
- **Nature of fill is important**
 - Small quantity of older fill, can still produce gas, but probably in small volumes

Construction over Landfills Costs More

- **Add \$12 to \$25 per square foot of building for**
 - Structural slabs and deep pile foundations for typical retail or office park development
- **Add \$2.50 to \$6.00 per square foot of building for**
 - Passive gas protection system
- **Add higher cost for maintenance of parking areas.**

Examples

- **Rio Salado Equestrian/Maintenance Facility, Phoenix, AZ**
 - Former landfill to recreational maintenance facility
- **19th Avenue/Greenway, Phoenix, AZ**
 - Former landfill to retail
- **Cave Creek Golf Course, Phoenix, AZ**
 - Former landfill to golf course
- **Rio Nuevo North, Tucson, AZ**
 - Former landfill to commercial office
- **Tempe Marketplace, Tempe, AZ**
 - Former landfill to destination shopping center
- **Tempe Center for the Performing Arts, Tempe, AZ**

Examples

- **Grijalva Park at Santiago Creek, Orange, CA**
 - 27 acre landfill to park , gym, aquatic center, skate park, community center (structures on 5 acre capped area)
- **Lakeside MarketPlace, Acworth, GA**
 - 36 acre landfill to big box retail
- **MathWorks Field on Oak Street , Natick, MA**
 - 22 acre landfill to park with baseball/soccer
- **King County Houghton Ballfields, King County, WA**
 - 40 acre landfill to athletic fields
- **LAKE ARCHWAY, Virginia Beach, Virginia**
 - 16 acre landfill to residential
- **Sai Tso Wan Recreation Ground, Hong Kong, China**
 - Recreational facility built on a restored landfill

Summary

- **Landfills have been developed for a wide range of land uses**
- **Challenges of settlement, foundation design and gas control can be resolved.**
- **Type of development guides mitigation.**
- **Costs of developing on landfills is higher.**
 - Each site is unique
 - Type of landfill (MSW,CD), age, location, proposed development, budget considerations

PLEASE REMEMBER...

- **Brownfields are properties that are not being developed because of environmental contamination**
- **Del Rio Project is a planning project only and is a great starting point towards cleanup and redevelopment**
- **We want you to continue to be a part of this project!**

STAY INVOLVED...

- **6 p.m., Sept. 27 – Results of Visioning Workshop Presented**
- **January 2012 – Planning meetings begin**
- **Keep up to date with the project by:**
 - Visiting website
 - Subscribe to electronic mail list
 - Give us your phone #, email, or mailing address
 - Talk with Advisory Group members
 - Call or email Project Manager!

Follow us on Twitter @phxenvironment

- **Del Rio Area Brownfields Planning Project**
Website: phoenix.gov/environment, click on
Brownfields Land Recycling Program

Official Site of the City of Phoenix - Del Rio Area Brow...

City of Phoenix OFFICIAL WEB SITE

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Transportation
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City Government
Employment
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Phoenix 2009 All-America City

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- Green Phoenix
- Sustainability Program
- Air Quality
- Climate Change
- Water Quality

Land Stewardship

- Brownfields Land Recycling Program**
- Del Rio Area Brownfields Planning Project**

- Subscribe to Del Rio Area Brownfields Planning Project
- Contact Del Rio Staff
- Program Description
- What's New With Brownfields
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Brownfields Visioning Workshop-The Results, Sept. 27, 6 p.m., Rio Salado Audubon Center, 3131 S. Central Ave.

If you live, work or are interested in what's happening in the South Mountain community, help shape the future and participate in this important planning project. Attend this workshop and see the results of the work done in all the previous workshops. Another opportunity to give your input on future uses of the brownfield properties identified for this project. Scroll down for more details. [View the workshop flyer.](#)

About the Project

In December 2010, Phoenix was awarded a two-year, \$175,000 grant from the U.S. Environmental Protection Agency's Brownfields Area-Wide Planning Pilot Program to conduct brownfields planning activities. The goal of the project is to create a brownfields area plan that will help guide the redevelopment of brownfield sites within the area, direct the assessment and cleanup of sites, and identify resources available to assist with redevelopment. The project is built on public participation and will need input from citizens who live and/or work within the Del Rio and surrounding areas. *Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.* To learn more about the project, view the [Community Information Session presentation](#).

Project Area

The project area, identified as the Del Rio Area, includes land between 7th Avenue and 16th Street, from the Salt River south to Broadway Road. There are at least three known brownfield sites in this brownfields impacted area: 1) Former Del Rio Landfill, 2)

Trusted sites 100%

Project Contact

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phoenix.gov/greenphoenix/land/brownfields/delrio