RED FIELDS TO

green fields

Transforming a Desert City

Public Parks & Open Spaces

Introduction

In 1881 the City of Phoenix emerged from the Arizona desert as a small agricultural community that encompassed less than a square mile. In a little over a century, Phoenix has developed into the 6th most populous city in the United States, The metro area has experienced explosive population growth; it has grown from 330,000 residents in the mid-20th century to almost 4.2 million by the 2010 census. The City of Phoenix also encompasses nearly 520 square miles.

The 1920s began the chapter of natural resource conservation because leaders understood the long-term value that could be created when natural open spaces are preserved. This forward-thinking leadership gave Phoenix's residents the South Mountain Preserve, which is now the largest municipal park in the United States. This investment has continued and Phoenix's residents now enjoy more than 38,500 acres of natural open space. Phoenix's leaders and residents have also understood the importance of traditional parks and the City owns and operates over 4,700 acres of park land, which accounts for 9 percent of total open space land in Phoenix. Red Fields to Green Fields would build upon this legacy, providing residents with improved access to traditional city parks and increased connectivity between a comprehensive network of open space corridors and urban trails that would stitch its various neighborhoods together.

Phoenix's explosive growth has brought with it many new families and businesses but has challenged the City's ability to keep up with open space preservation and development. Phoenix has also been particularly hard hit by the real estate crisis; suffering from one of the highest foreclosure rates in the country. In some neighborhoods more than half of the houses are in distress, foreclosed or vacant. Commercial properties have extremely high vacancy rates and values have fallen precipitously. However, the Greater Phoenix Area was listed as one of eight urban areas defined as 'comeback kids' in a recent Urban Land Institute study. Criteria included: attract talented workers and new investment, offer a variety of housing options, capitalize on natural resources as amenities.

Phoenix has some significant challenges as it moves into the 21st century but embedded in these challenges is an once-in-a-lifetime opportunity to transform Phoenix by creating a network of public open space. Phoenix's desert landscape is consistently ranked as the City's top asset in public opinion surveys. Transforming the City's Red Fields into Green Fields will leverage this tremendous asset, increasing quality of life and revitalizing the economy, thus growing a healthier, more livable and prosperous Phoenix.

A "Red Field" property can be physically or financially distressed, or both, and has negative value -- civically, environmentally, and economically. Red Fields can also be brownfields -- sites impacted by the environmental concerns, such as asbestos containing materials, underground storage tanks, or contaminated soil or water.

Problem #1:

Distressed Real Estate

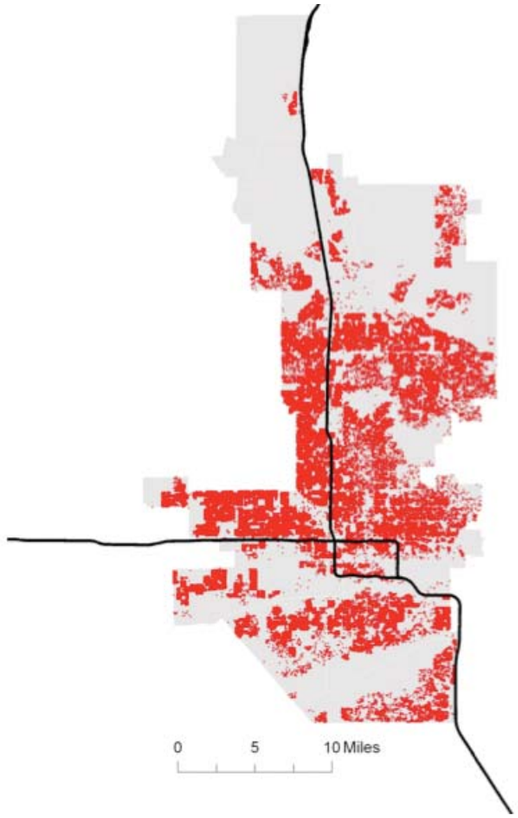
Distressed Real Estate: Vacancy

The Phoenix real estate market has been weakened by the economic recession. The office market vacancy rate for the last quarter in 2010 was 21.3%, compared to the national average 12.6%. The Phoenix industrial market ended the fourth quarter 2010 with a vacancy rate of 15.5%, compared to a national average of 10.1%. Many residential and commercial projects have been foreclosed and remain partially built. Numerous plots of land previously slated for development remain vacant.

Distressed Real Estate: Foreclosures

Before the recession, Phoenix boasted extraordinary growth in owner-occupied detached houses. In 2007, the top of the Phoenix housing market, the median price for a single family home resale was $220,000 and the median price for a new construction single family home was $308,825. In 2010 these median prices fell by 120% and 21% to $100,000 and $255,100 respectively.

Currently, up to 51% of the homes in Arizona have negative equity; their owners owing more than the house is worth. Neighborhoods like Maryvale have an extraordinary number of small residential properties in distress, with some non-inflation-adjusted home values at pre-1980s levels.



Problem #2:

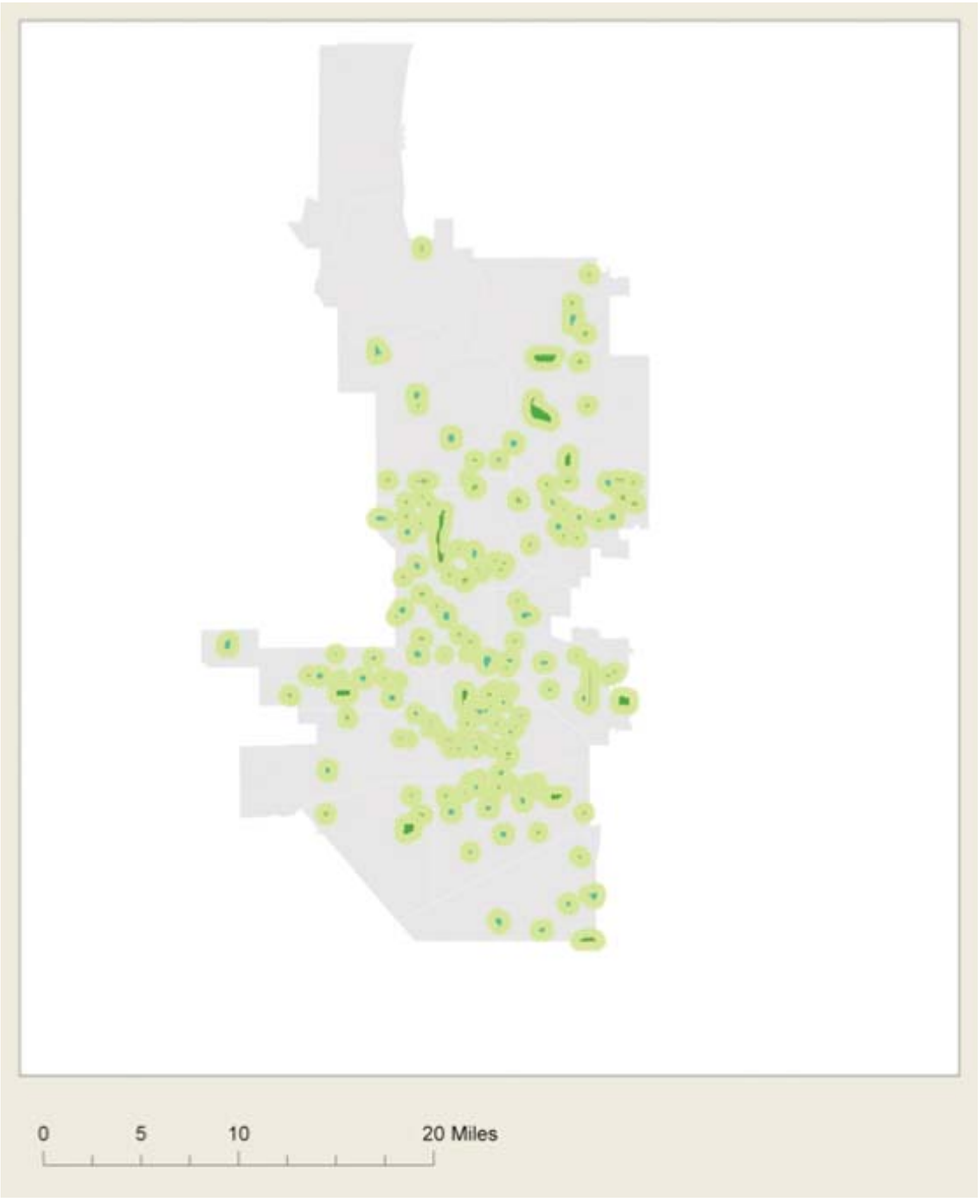
Traditional Neighborhood Park Supply

Park Supply

Phoenix residents value natural resources and have voted repeatedly to invest in the municipality's green infrastructure. Today the City of Phoenix enjoys more than 38,500 acres of preserved natural open space. In 2010, the Trust for Public Land ranked Phoenix fifth highest among intermediate-low population density cities for acres of park land per 1,000 residents, with 27.8 acres per resident. However, at over 4,700 acres, traditional parks account for just 9 percent of total open space land in Phoenix. The City has 1.3 traditional city parks per 10,000 residents, according to the Trust for Public Land — 70th place among the 75 largest cities in the country, and well below the national average of 3.9 parks per 10,000 residents.

Think of all the outlets of creative artistic expression in a city — music, live performances, murals, sculpture, gardens — these are all found readily in parks.

Parks within Phoenix City Limits with a 1/2 mile buffer



Problem #3:

Health

The Brown Cloud

Since the early 1990s, residents of the Valley of the Sun have been looking for some relief of their own. The “Brown Cloud”, as it has come to be known, shrouds the Phoenix area in pollutants nearly year-round resulting in the American Lung Association giving Maricopa County its lowest grade for air quality in both ozone and particulates in 2005.

According to the Association’s “State of the Air 2005” report, over 2.6 million, or 79%, of the county’s residents are at high risk for respiratory complications due to air quality. Among those at risk are residents with asthma, bronchitis, cardiovascular disease, and diabetes.

Source: http://bluewater-greentree.com/phoenix-az-lots-of-pollution-advisories-expected-this-winter-p509-141.htm

Dust

Dust pollution from construction, vehicle traffic, rock and gravel operations and other activities have been the most challenging air quality issue in recent years.

- Replacing retired cropland with permanent grass cover controls erosion and benefits the wildlife population. This reduces windblown dust and has been effective in reducing soil erosion in the areas most prone to wind erosion.

- Dust Control Program – The city has implemented one of the most aggressive municipal dust control programs in the valley. Between 1999 and 2006, the city has invested nearly $19 million in dust control programs:
  - Paved 70 miles of roads
  - Completed 264 miles of an on-going asphalt treatment program for alleys
  - Transitioned to a full fleet of more efficient street sweepers which are designed to reduce dust
  - Designed an innovative vacuum system to reduce dust from crack seal operations
  - Trained nearly 3,600 city staff and 175 private contractors (2000-2007)
  - Stabilized 12 acres on the banks of the Salt River
  - Conducted inspections of more than 300 City properties and applied dust control treatments as necessary
  - Maintained an aggressive enforcement of unpaved parking lots and vacant lots, issuing nearly 7,000 violations in 2007

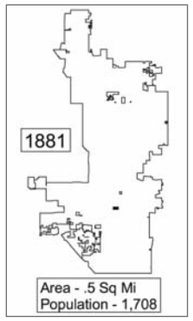
Problem #4:

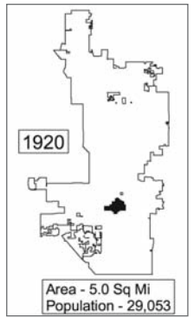
Effects of Rapid Growth

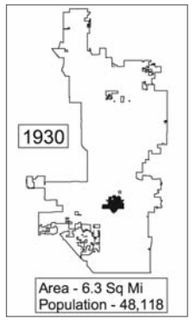
Rapid Growth: Sprawl

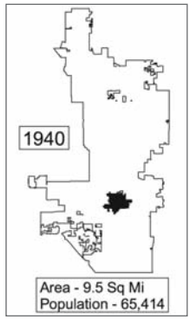
Phoenix's exceptionally rapid growth over the past half-century brought much prosperity, but also created social and environmental problems. The sheer size and relatively low density of Phoenix stress available resources and cause barriers to access for some parks and open spaces. Long distances, busy streets, perceived lack of safety, and inadequate or unshaded sidewalks and bike lanes are barriers to access, particularly for children and residents without cars.

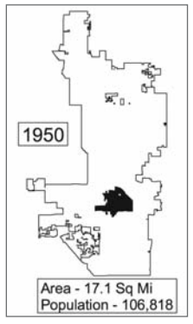
Phoenix Growth

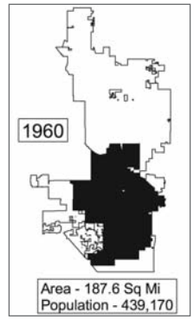


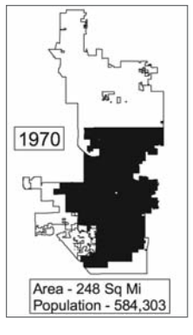


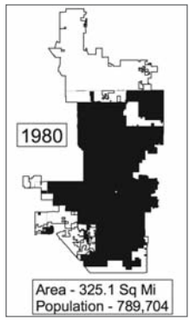


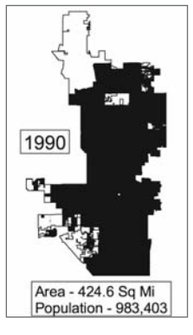


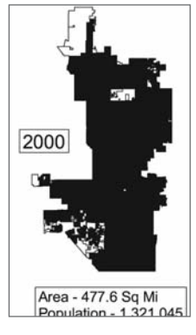












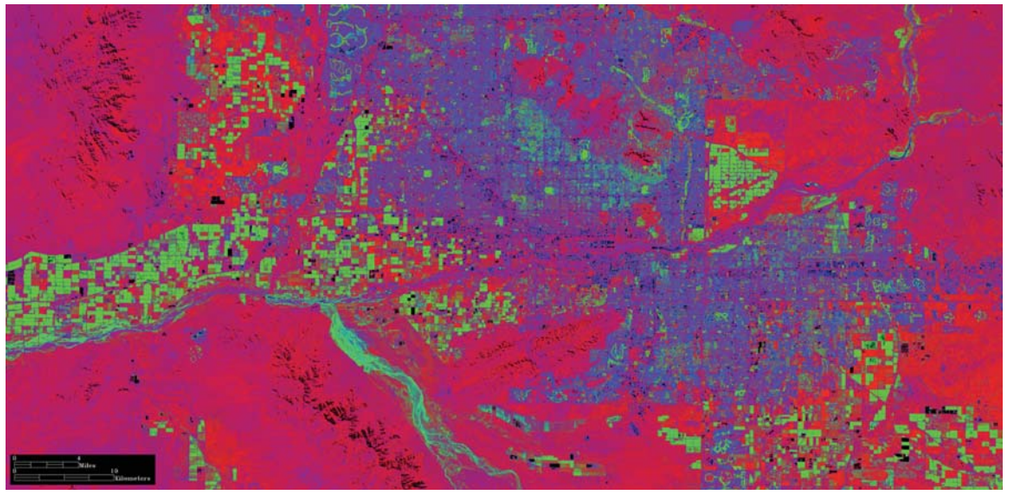
Source: US Census Bureau. "1800 through 2000 Census Data." Washington D.C. April 1, 2000

Rapid Growth: Heat Island Effect

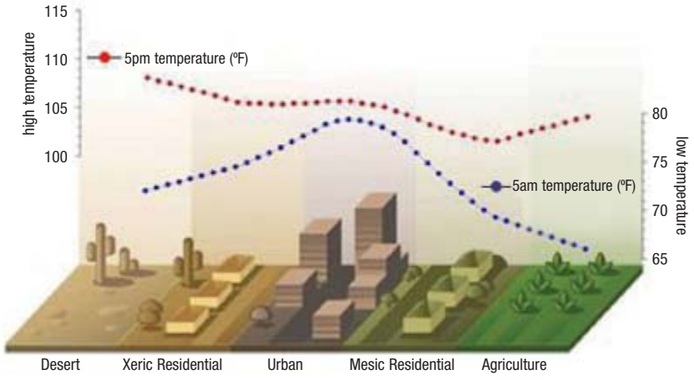
Urban growth has also meant a loss of agricultural land and wildlife habitat. Added urban area has increased the effects of the urban heat island, decreasing personal comfort and increasing energy demand. In the summer, urban heat island can add 9 degrees of temperature, and exposed concrete in the sun can be nearly 30 degrees hotter than nearby trees. The Phoenix area has seen its nighttime temperatures rise dramatically, resulting in Phoenix being up to 15 degrees warmer than the adjacent desert and farmland. (Golden and Kaloush from Tree and Shade Master Plan). The Phoenix area also struggles with air pollution. According to the 2011 ranking of the American Lung Association, Phoenix ranks second in year-long pollution, 24th for short term dust pollution and 19th for ozone.

- Causes:
  - — Prevalence of dark and dense building material in the environment (i.e. roadways and buildings)
  - — Presence of cars and mechanical equipment that inject heat into the environment
- Effects:
  - — In Phoenix the Urban Heat Island Effect (UHI) is greatest during the evening hours
  - — Over the past 70 years the evening temperature in Downtown Phoenix has increased 12°F
  - — This increase has diminished the natural evening cooling found in desert areas resulting in increased energy use and gradual daytime heat saturation during summer months
  - — The presence of hard surfaces reduces the ability of the landscape to hold moisture – resulting in diminished shade and further increases in temperature

NASA Heat Map of Phoenix



Temperature Differential



Outdoor Surface Temperatures

Renaissance Plaza, June 15, 2007 at 1:30PM

105°	106°	111°	121°	121°	135°
Glass/ Aluminum Storefront	Plants/ Trees in Sun	Granite Pavers in Shade	Granite Pavers in Sun	Exposed Concrete in Shade	Exposed Concrete in Sun


COMMUNITY

The Benefits of Parks & Open Space

Red Fields to Green Fields Phoenix will reinvigorate the City by transforming vacant land into green parks, green connections, and enhanced natural preserves. Parks and open space have been proven to be economic drivers. Recreation is a particularly strong economic driver in Arizona. A recent study shows that outdoor recreation is responsible for 87,000 jobs in the state. The creation of parks and open spaces will help Phoenix leverage its natural assets, create jobs and promote economic activity and tourism. Open space significantly adds to the quality of residents' life in environmental, social and health spheres as well.

Economic

- Increase property values
- Spur private investment
- Increase tourism
- Increase tax base
- Decrease long term infrastructure costs

Environmental

- Preserve land and critical habitat
- Improve water quality
- Improve air quality
- Reduce green house gas emissions
- Decrease urban heat island
- Decrease energy use

Social

- Decrease national health care costs
- Promote active lifestyles
- Improve mental health
- Improve quality of life
- Reduce individual recreation spending
- Increase community engagement and involvement
- Prevent and reduce crime

Parks and other pedestrian places are essential to a city's happiness.


What if we invested
$4.1 billion in Phoenix
to transform Red Fields
to Green Fields?

We could create new neighborhood parks that would drive reinvestment and provide access to green space for all residents.

We could connect new and existing parks and open space with neighborhoods and transit lines to build a network that is greater than the sum of its parts.

Opportunity Tool Kit

Land is available at a lower cost

With the high number of foreclosures, properties are available for historically low prices. Some available land has been discounted by as much as 90% from pre-recession prices, providing an extraordinary opportunity to acquire parcels key to building a connected, comprehensive parks and open space network.

Leveraging Existing Infrastructure: Projects, Programs and Partnerships

Projects & Plans

- Rio Salado Environmental Restoration Project and Beyond the Banks
- Discovery Triangle
- Regional Sun-Circle Trail System
- Metro Light-Rail
- Palomino Rental Renaissance
- Rio Salado Beyond the Banks Plan
- Del Rio Regional Park Plan
- Tree and Shade Master Plan
- Papago Park Master Plan
- Maryvale Core Village Plan

Partnerships

- Phoenix Parks and Conservation Foundation
- Phoenix Community Alliance
- Discovery Triangle Development Corporation
- West Phoenix Revitalization Area and Community Advisory Board

Phoenix Red Fields to Green Fields will leverage existing infrastructure in terms of projects, plans and partnerships to create a more connected and vibrant community.

Opportunity #1: Discovery Triangle

Discovery Triangle

Transit & Parks

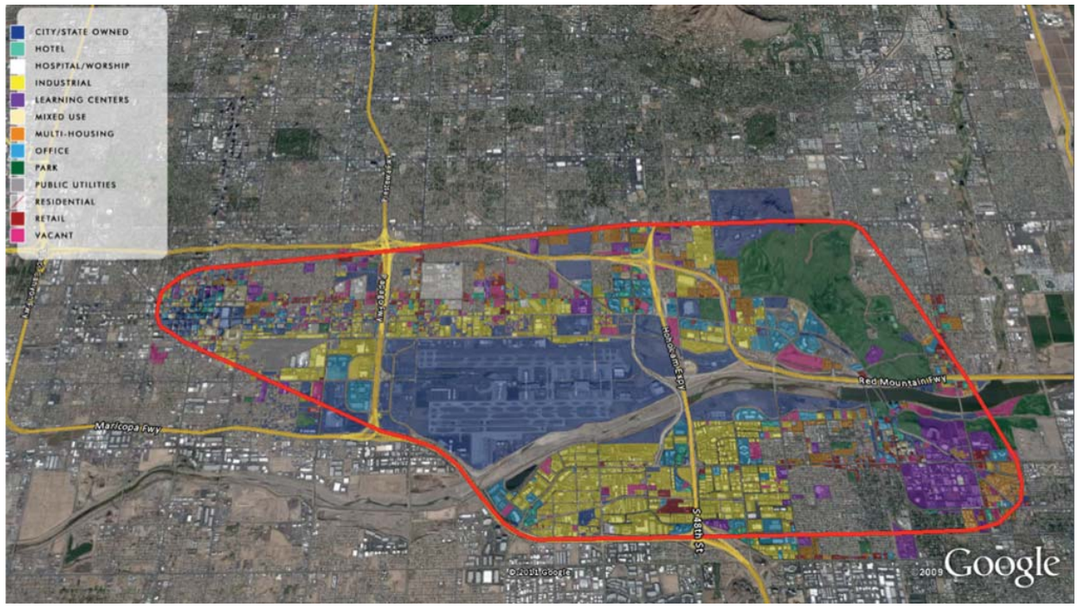
The Discovery Triangle is a 25-square-mile economic growth area that connects the area between downtown Phoenix in the west, the Arizona State University campus in Tempe in the southeast, and Papago Park in the northeast. This area boasts more economic opportunities and amenity-rich, quality-of-life enhancers than any other region in the Southwest.

The Discovery Triangle capitalizes on existing infrastructure, transportation corridors and hundreds of cutting-edge companies by connecting assets to foster a spirit of innovation. Its inclusion of top-tier higher educational institutions provides the source for a well-educated work-force, while its immediate proximity to Phoenix Sky Harbor International Airport provides a gateway to the world. Balanced by nature, arts, culture, professional sports and a variety of affordable housing options, its quality-of-life appeal is a huge attraction to all types of businesses ranging from large corporations to budding entrepreneurial ventures.

The Discovery Triangle initiative is operated by the Discovery Triangle Development Corporation (DTDC), a not-for-profit public-private partnership. It is working extensively with residents, professionals, educators, public officials and more than 100 organizations committed to improving quality of life in the region.

Due to its central location, regional connectivity and the presence of a light rail transit line, it is an area with huge potential for business and transit-oriented development.

Placing parks near each of the light rail stops will encourage investment and create a green urban transit corridor, complementing and connecting the ecological corridor along the Rio Salado Habitat Restoration Area.



Opportunity #2: Rio Salado

Rio Salado

Wetland Restoration

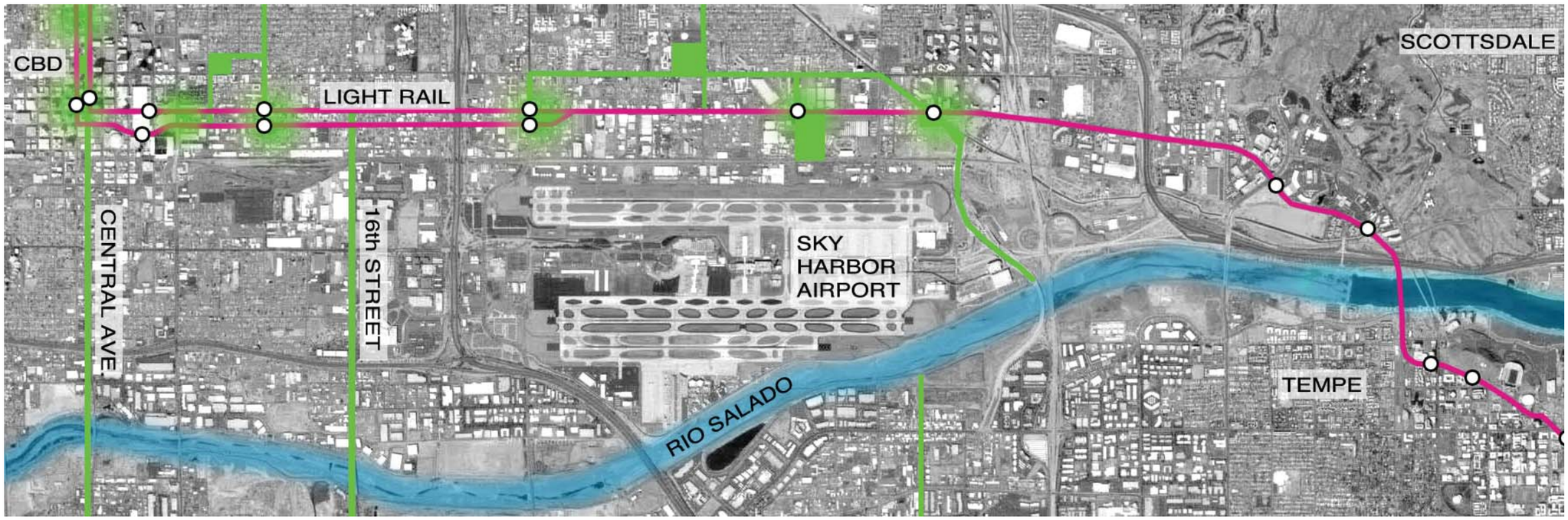
- The five-mile Rio Salado Habitat Restoration Project is to restore the native wetland and riparian habitats that were historically associated with the Salt River Phoenix, which once flowed year-round through what is now Phoenix. Dams built for flood control and irrigation destroyed the natural habitat and in turn devalued the surrounding area.

- Today, the riverbank is restored and features paths and resting spots for bikers and pedestrians. However, the restored habitat is surrounded by declining industrial structures and foreclosed homes.

- The Rio Salado Beyond the Banks Area Plan strives to protect the investment in the Rio Salado Habitat Restoration Project by maximizing its long term benefits to the community and increasing the potential value of the properties adjacent to the river.

Rio Salado

Wetland Restoration



Red Fields to Green Fields gives Phoenix the opportunity to create a series of connections linking Rio Salado, the heart of urban Phoenix, and potentially hundreds of miles of regional trails. Investment in improved right of ways, abundant new street trees and urban trails can connect Rio Salado with Downtown Phoenix, the light rail line and Discovery Triangle, and Phoenix's Mountain Preserves.

Rio Salado

Del Rio Landfill

- The Del Rio Landfill (DRL) Park Redevelopment Project is located on the south bank of the Salt River. The site is approximately 156 acres in size, and land-filled areas occupy approximately 103 acres of the site. The site was operated as a landfill from 1971 until November 1980 and accepted approximately 2.5 million tons of municipal and industrial solid waste.

- The Redevelopment Project Master Plan includes soccer and baseball fields, shade ramadas, an operations building, parking areas, a recreation center, a skateboard park, lighted basketball courts, a playground, a splash pad, an equestrian center, a BMX track and plaza, a mesquite bosque, an open turf area, and a scenic overlook and restrooms.

Rio Salado Park/Del Rio Landfill

Conceptual Master Plan

Opportunity #3: Maryvale

Maryvale

Open Space System

Maryville, established in 1957, is contained by the West Phoenix Revitalization Area (WPRA). The community is home to over 200,000 residence and is characterized by many large industrial parks built along Grand Avenue and the Union Pacific railroad line. Rapid explosion of residential construction in the decades following World War II accompanied the booming industries developing along the railway line. The diverse collection of neighborhoods within the WPRA varies from an historic housing district along the eastern border, to new residential communities in the west. The mix of housing in between spans the decades with a large proportion built between the 50s and 70s.

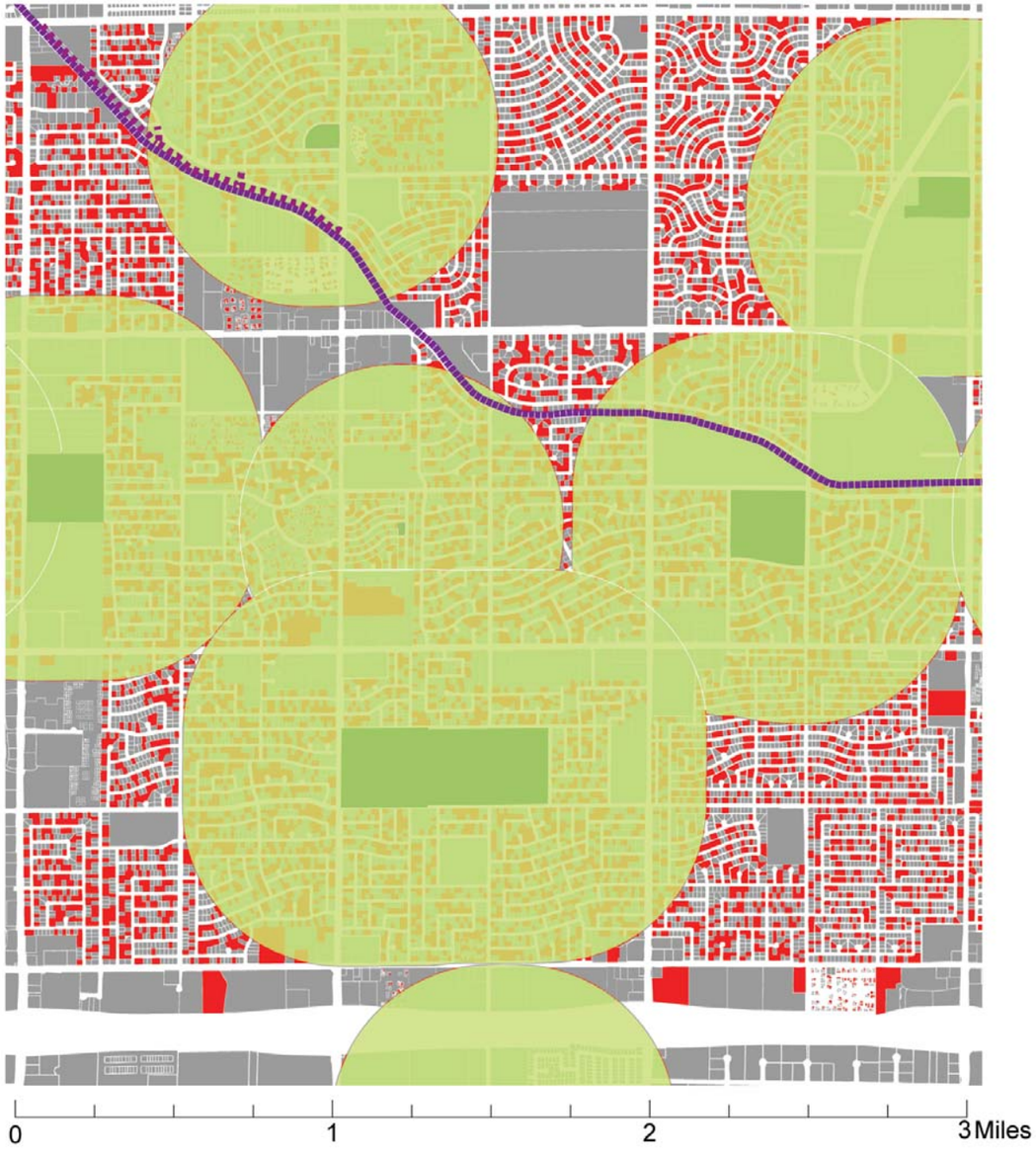
Over time, this vibrant community began to experience symptoms of decline with increased population density, rising crime rates, decreasing per-capita incomes, and disproportionate rates of unemployment. In response, in 2004, the City Council directed city staff to develop and implement a comprehensive, multi-departmental strategy to create sustainable improvements in the area. The West Phoenix Revitalization Community Advisory Board, the City Council and City Departments have made significant positive investment in infrastructure development and programming in the area.

Red Fields to Green Fields gives Maryville the opportunity to create linkages from smaller neighborhoods to the Grand Canal.

Small and midsized foreclosed and distressed properties could be assembled to create new neighborhood parks complementing the existing open space system. These neighborhood parks could be connected through walkable right of ways and urban trails along the canals creating a network of urban open spaces.

Red Fields Converted Into Green Fields

1/2 Mile Service Areas



Opportunity #4: Palomino

Palomino

Red Fields

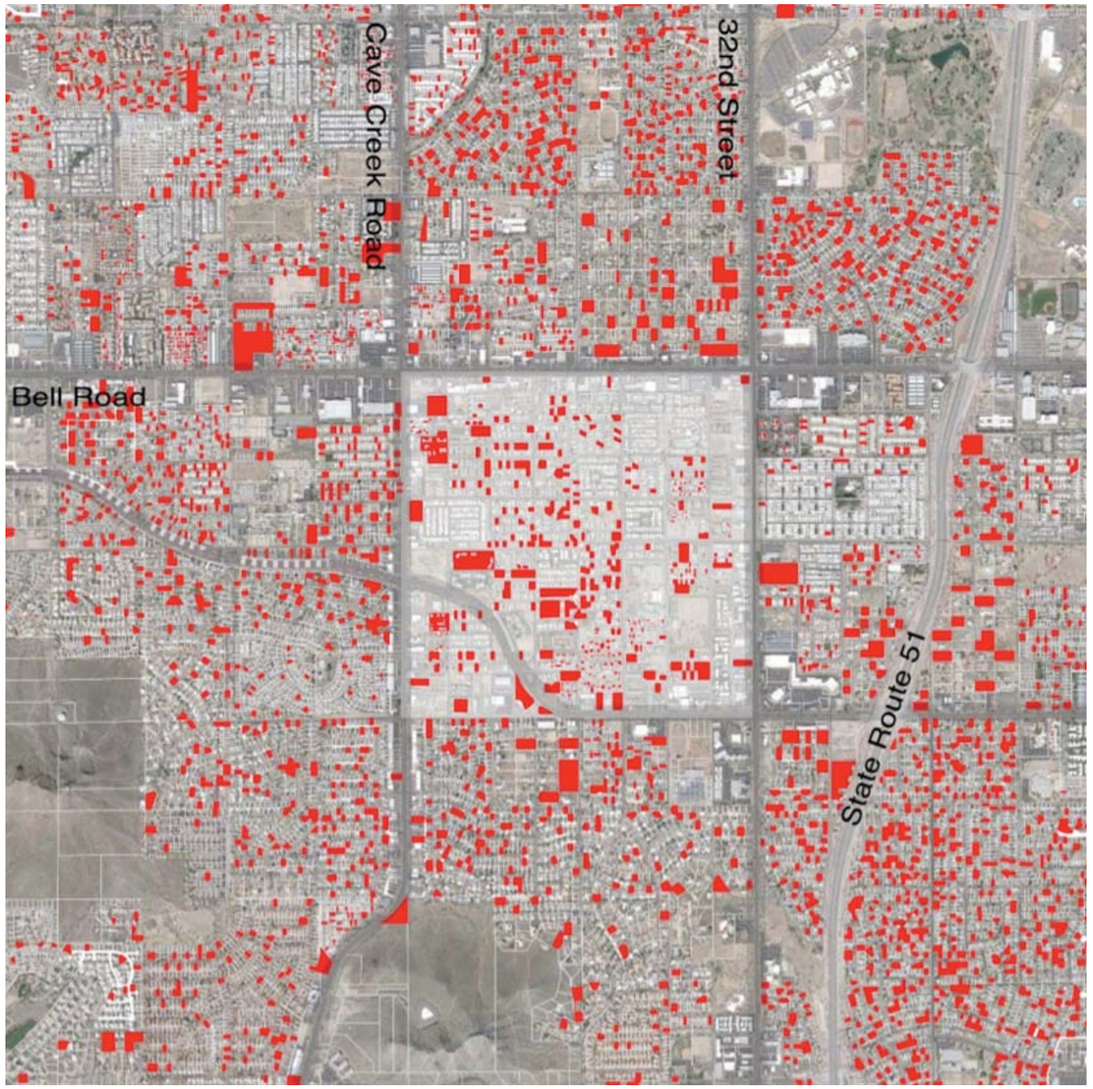
- 1 square mile in Northeast Phoenix

- In the 1980s:
  - — The average household income decreased from 71% of the citywide average to 59%

- From 2000 – 2010:
  - — The number of single family homes decreased by 50%
  - — The number of apartment units increased by over 1000%

- Programs to re-establish the neighborhood:
  - — The **Palomino Rental Renaissance Program** works with residents, landlords and property managers to address problems associated with rental properties such as criminal activity, improper maintenance, and traffic.
  - — **Neighborhood Services Department** coordinates efforts to reduce blight associated with the proliferation of weed-infested vacant lots that were used as dumping grounds for old mattresses, broken furniture, trash and other debris.

Palomino Red Fields



Palomino

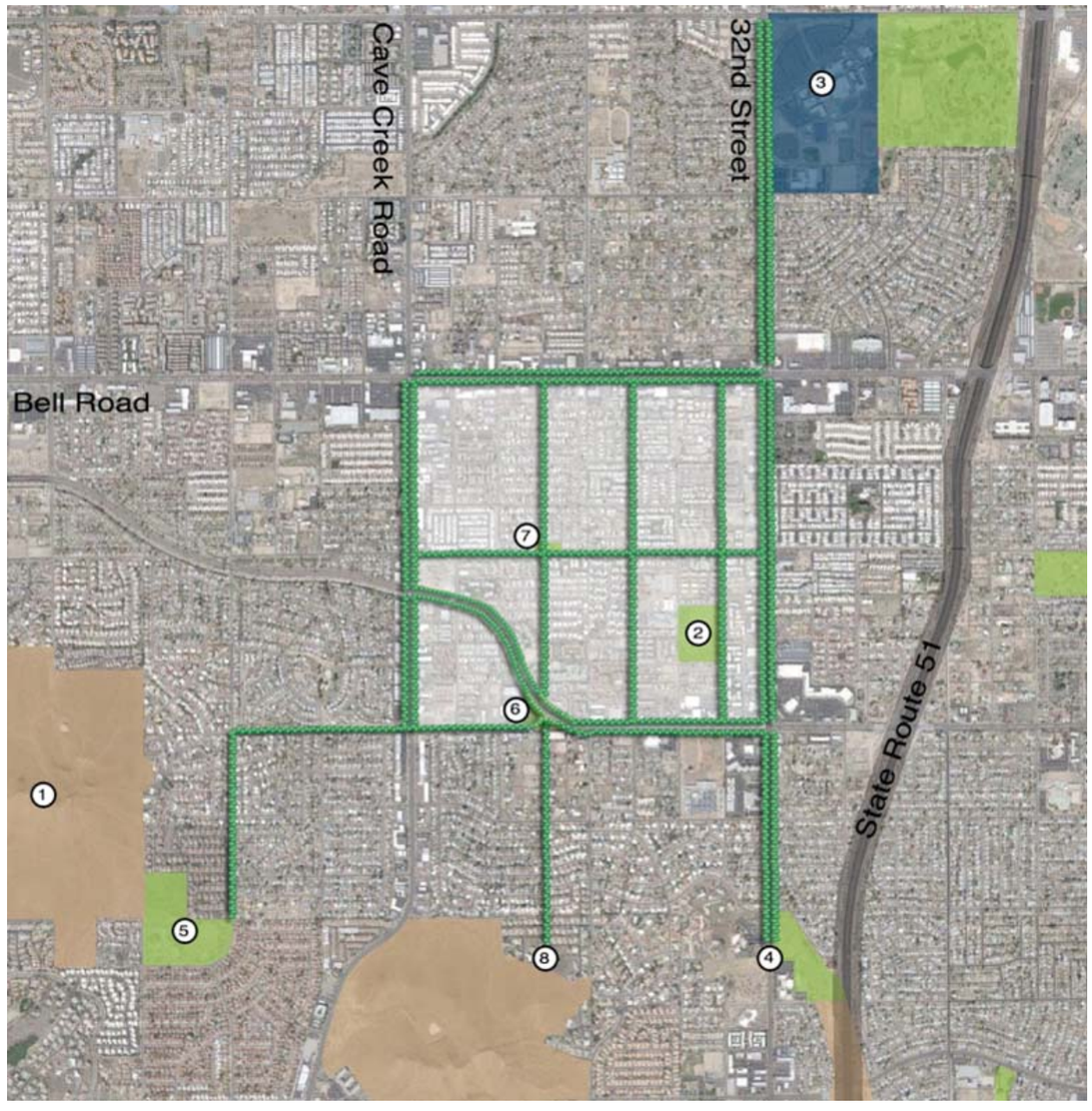
Green Linkage Plans

Benefits:

- Increased accessibility and connectivity to adjacent neighborhoods
- Improved existing street right-of-ways and walkability
- Increased open space and access to:
  - Lookout Mountain Preserve
  - Venturoso Park
  - Indian Bend Wash

Increased recreational opportunities for residents can improve the perception of neighborhood and property values.

Green Linkage Plans



Estimating the Economic Impacts

The City of Phoenix could anticipate positive impacts with an investment through public/ private partnerships. Turning Red Fields into Green Fields would yield sizeable increases in employment, land values, and production of goods and services for the City. If $4.1 billion were invested, the results could potentially yield:

- 49,100 jobs
- $6 billion total output
- $.5 billion tax dividends
- $3.8 billion value added

Estimating the Environmental Impacts

Turning Red Fields into Green Fields will likewise yield significant environmental services and benefits. With the aid of the U.S. Forest Service, a new modeling tool, called iTree Eco, can help estimate the impacts of planting greenspace on once impermeable surfaces. The City of Phoenix will be capable of monitoring a variety of ecosystem services from their newfound greenfields. Measurable environmental benefits include:

- Reduced energy costs
- Improved air quality
- Strengthened quality of place
- Stimulation of the local economy
- Reduced storm water runoff
- Improved social connections
- **Return on investment is $2.23 for every $1 invested in trees**

Red Fields to Green Fields

Phoenix has an unprecedented opportunity to create the next great American city, joining the ranks of New York, Los Angeles and Chicago. However, this will take coordination, planning and implementation. This document presents a roadmap to developing a healthier, more livable and connected desert city.
A connected, well-planned and designed open space network is the keystone to creating sustainable infrastructure because it achieves many goals of the city with one single investment.

Acknowledgements

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