Brownfields to Healthfields

Transforming Community Health through Sustainable Development

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April 22, 2015
What do you when you’re in brownfields redevelopment in a down economy?

A: Change careers.
B: Wait it out. It should get better soon.
C: Plan for the future & adapt, integrate and sustain.
D: Go back to school & get an Accounting degree.
Plan for the Future and adapt, integrate and sustain!

- 150+ Meetings & Forums
- 1,300+ Web Users
- 11,500+
- 9,700 Big Ideas
Brownfields to Healthfields

Framework
Land Use and Design Principles

- Infill development
- Restoration and more efficient use of brownfields
- Support the character and vision of the surrounding area

Find new ways to redevelop brownfields!
Brownfields & VACANT LAND Initiatives

To promote development of vacant parcels or redevelopment of underutilized parcels within the developed area of the city that are consistent with the character of the area or with the area’s transitional objectives.

PHX Renews...

President Clinton at PHX Renews for the Clinton Foundation’s 9th Annual Day of Action! 650 student volunteers from around the world.
Brownfields & FOOD Initiatives

- Maricopa County Food Systems Coalition
  - 60 individuals representing 50 organizations
  - Create a sustainable, efficient, resilient food system

Brownfields redeveloped for:
- Community Gardens
- Urban Farms
- Farmer’s Markets
Brownfields & HEALTH Initiatives

- FitPHX
- Development of health policy

Brownfields redeveloped for:
- Health Care Facilities
- Mobile/Temporary Health Care Facilities
Brownfields to Healthfields is BORN!

- **Healthfields:**
  - Contribute to community health
  - Hospital, health clinic
  - Community gardens
  - Urban agriculture
  - Farmer’s markets
  - Parks, sports fields, fitness facilities
  - Walking and riding trails, open space
Submitted Brownfields to Healthfields Grant to EPA for:
- Completion of city-wide inventory
- Site identification & prioritization
- Assessments
- Health Monitoring

Food Deserts in Phoenix Council Districts
Started City-wide Inventory

- Focused on identifying potential *healthfields* redevelopment opportunities

Community Gardens and Farmers Market Locator
Arizona Healthfields Initiative

Dave Laney, Cardno ATC
U.S. Healthfields

During the last 14 years:

Brownfields health clinics & hospitals in these states:

- Florida (2001)
- New Hampshire
- Pennsylvania
- Colorado
- Oregon
- Minnesota
- California
Willa Carson Health Resource Center
Clearwater, FL
Brownfields Transformation (Abandoned Gas Station to Health Clinic)

Challenges
- Abandoned Contaminated Gas Station
- Abandoned Gas Station with Out-of-State Property Owner
- Environmental Issues
  - 4 USTs
  - Hydraulic Lift
  - 450 Tons of Contaminated Soil

Results
- Instilled Environmental Justice
- Established Trust and Credibility with Local Community
- National Brownfields to Public Health Model
- Serves over 3,500 Uninsured per Year
- Location for HealthCare Provider for Underserved / Uninsured Community
Challenges

- Petroleum Contamination Off-Site – Former Blue Star Cab Company
- Petroleum Contamination On-Site – Boiler Room
- Abandoned Historic African American Hospital Environmental Issues

Tools

- Federally Qualified Health Center (FQHC) Partnership
- EPA Brownfields Assessment Funding
- Broad-Ranging Partnership

Results

- Provide Residents with Immediate Access to Quality Healthcare
- Provide Economic Anchor for Redevelopment of the Area
- National Phoenix Award Winner
During the last twenty-five years:

- Brownfields community gardens & farmers markets in these cities:
  - Bridgeport, CT since 1989
  - Lawrence, MA since 1999
  - Denver, CO since 2002
  - Sacramento, CA since 2002
  - Shelton, CT since 2005
  - Philadelphia, PA since 2007
  - Somerville, MA since 2007
  - Chicago, IL since 2010
  - Portland, OR since 2012
Introduction

Communities nationwide use brownfields funding to assess and clean sites for a variety of uses, including community gardens and farmers markets. Brownfields are properties that are vacant or abandoned due to concerns about real or perceived contamination on the property. Using funds from EPA, states, tribes and other sources, communities can assess sites and clean brownfields, creating safe spaces where people can grow their own food, or buy locally-grown food. The cleanup and redevelopment process helps to ensure safe and healthy garden and market areas.

People are becoming more aware of the types of food they eat, where it is grown, and how it is transported to their local market. The availability of such information encourages some consumers to seek locally-grown food. Backyard and community gardens allow people to grow their own food locally. Farmers markets give many residents access to locally-grown food and provide outlets for local farms.

While there is no national estimate of the total number of urban or community gardens, organizations such as the American Community Garden Association estimate that there are over 20,000 community gardens in the United States; however, there may be many more gardens and gardens in development that are not yet counted. Approximately 50% of these gardens are located in urban areas, providing a valuable resource for residents and the environment.
Baltimore City: Food Deserts, Brownfields, Supermarkets and Farmers Markets

- Food Deserts*
- Brownfield Sites, 2010
- Supermarkets (Chain Stores)
- Farmers Markets
- Park

* Food Deserts are defined as block groups that are more than 1/4 mile from a major supermarket AND 40% or more of their population’s household income is below $25,000 (roughly 125% of the Federal Poverty Level for a family of four). Source for Poverty Measure: US Census 2000. Distance to a supermarket was measured from the center of each block group, following the street grid to the supermarket.
Arizona Healthfields Initiative

- Local Government
- State Government
- Federal Government
- Non-Profits

Healthfields
Arizona Healthfields Initiative

- **Assistance to communities:**
  - Free Technical Expertise
  - Access to Grants, Low-Interest Loans, Private Investment
  - Information About Health Risks
  - Information About Redevelopment Options
Why Arizona Healthfields Now?

- Offer long-term sustainable solutions that address:
  - Economic Development
  - Community Health
  - Environment
Healthfields for a Sustainable Economy

- **Within next 10 years:**
  - 10 of the 20 fastest growing occupations will be healthcare related
  - Healthcare jobs are expected to grow by 14.3% - more than any other industry
  - There is expected to be 20.5 million jobs in the healthcare industry
Healthfields for a Sustainable Economy

- Aging population will increase healthcare demand
- 78 million post WWII baby boomers are turning 65, the youngest will be 65 in 2029
- Those over 65 have 3 times as many office visits per year
Healthfields for a Sustainable Economy

- Phoenix is ranked No. 1 in the US for healthcare jobs
- Increased Urban Agriculture
  - Growth for farmer
  - Creates a more sustainable local food system
- Increased Farmer’s Markets/Food Hubs
  - Incubator for small businesses
Healthfields for Sustainable Community Health

- **Addresses challenges:**
  - Inadequate healthcare in medically underserved areas & health disparities
  - Food Deserts / Low Supermarket Access Areas & food insecurity
  - Poor neighborhood cohesion & stability
Healthfields for a Sustainable Environment

- Identify, assess and remove environmental contaminants
- Replace underutilized, abandoned, and/or contaminated property and structures
- Create new beneficial use
How To Create Healthfields In Your Community

- Arizona Healthfields Initiative (AHI)
  - List of services offered
  - Form to request information or assistance
  - Contact information for AHI partners
Environmental Toxicology Program

Jennifer Botsford, Arizona Department of Health Services
Environmental Public Health

- assessing, understanding, and controlling the impacts of PEOPLE ON THEIR ENVIRONMENT and the impacts of THE ENVIRONMENT ON THEM.

Adapted from: http://ocw.jhsph.edu/courses/EnvironmentalHealth/PDFs/Lecture1.pdf
Environmental Cleanup Sites

- **Superfund Sites**
  - Large
  - Take years to clean up

- **Brownfield Sites**
  - Various sizes
  - Has potential to be re-used after cleanup

- **Other Sites**
  - E.g., school, private wells, farms, fish advisories
Environmental Toxicology Program

- **Respond to communities**
  - where people might be exposed to hazardous substances in the environment
- **Determine how hazardous a site is or has been**
- **Recommend actions**
  - that need to be taken to safeguard the health of community residents
- **Educate communities**
  - statewide about hazardous chemicals and substances
What is Risk?
What is Risk?
Risk Assessment

- The likelihood of adverse health effects
  - How the chemical enters the body
  - How much someone is exposed to
  - How often someone is exposed
  - How long someone is exposed

- What health effects a chemical can cause?
  - Refer to scientific studies
Health Effects

Chemical

Health Effect 1

Health Effect 2

Health Effect 3

Chemical 1

Chemical 2

Chemical 3

Same Health Effect
Severity of Adverse Health Effects

- Death
- Disease
- Minor Symptoms
- No Symptoms

Adapted from: http://ocw.jhsph.edu/courses/EnvironmentalHealth/PDFs/Lecture1.pdf
Sensitive Populations

- Infants and children
- Pregnant women & fetuses
- Elderly people
- Immunocompromised individuals
- Highly exposed individuals
Combine relevant information, weighing the evidence, to draw public health conclusions:

- Hazard
- Unknown
- No Hazard
ADHS Partners

- School Gardens
- Childhood Lead Poisoning Prevention Program
- Health Data
- Community Profiles Dashboard
Goal: to enable fresh produce to be safely served in school cafeterias from their on-site school garden

- Arizona Food Code
- Sanitation (e.g. location to septic systems, garbage dumpsters, wells, animals, etc.)
- Soil Testing (lead and arsenic)
Lead Poisoning Prevention Program

- Prevention
- Health Education and Follow-up
  - Phone: Families, physicians, labs
  - Home inspections: consistently elevated cases with an unknown source
- Surveillance

Are you expecting a child or have a young toddler at home?
Is your home LEAD safe?

Lead poisoning can cause permanent developmental, hearing, behavioral, and learning problems.

We can be exposed to lead through a wide range of sources.

Complete this checklist to find sources of lead in your home.

Was your home built before 1978?

Lead-based paint is hazardous when it peels.
Health Data

- Hospital Discharge Data
- Birth and Death Data
- Lead Poisoning
Community Profiles Dashboard

Mortality (per 100,000 Persons) | All cancer | 2013

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<tr>
<th>Indicator</th>
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<tbody>
<tr>
<td>Mortality (per 100,000 Persons)</td>
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<tr>
<td>Infant Mortality (per 10,000 Live Births)</td>
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<td>Natality (per 1,000 Live Births)</td>
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Statistically compared to Arizona rate. Rate was calculated using national death rate: Mortalities per 100,000 persons in Arizona: 928.1 Mortalities per 100,000 persons in Arizona: 928.1
External Partners

- **ATSDR**: The Agency for Toxic Substances and Disease Registry
- **EPA**: Environmental Protection Agency
- **ADEQ**: Arizona Department of Environmental Quality
- **Local Government**: Cities, Counties