



# Recommendations and Best Practices: City of Goodyear Demonstration Garden

Kayce Flowers

Andy Stein

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# Goals of the Goodyear Demonstration Garden

- Education and recreation
- Solutions to problems of arid cities
- Showcase techniques for water reduction
- Revitalize Goodyear's historic core
- Develop local partnerships







# History of Site

- The proposed location is a Superfund site
  - Superfund site = uncontrolled or abandoned place where hazardous waste is located
  - Crane Co. is using water remediation to protect potable sources for the City of Goodyear
- Located in the Historic District
- 25 X 700M





# Best Practices

Dictionary Definition	Research Based Definition
<p>Shown by research and experience to produce optimal results and is established or proposed as a standard suitable for wide spread adoption.</p>	<p>The term “best practice” is subjective and usually refers to a practice that has been used widely but does not necessarily have quantitative research supporting it.</p>



# Project Scope

To document **best practices** that will help the City of Goodyear create, “a beautiful, sustainable landscape design that will become an amenity for the neighborhood, a home for long-term research on impacts of landscape design, a resource for future landscape policy-making, and an asset for economic redevelopment.” (City of Goodyear City Council Staff Report, 2014).



# Research Questions

1. How have other demonstration sites/streetscapes been utilized in arid/semi-arid environments?
2. What are the community benefits of using blighted areas for demonstration gardens?
3. What are the best strategies to reduce the urban heat island (UHI) effect using water efficient infrastructure?



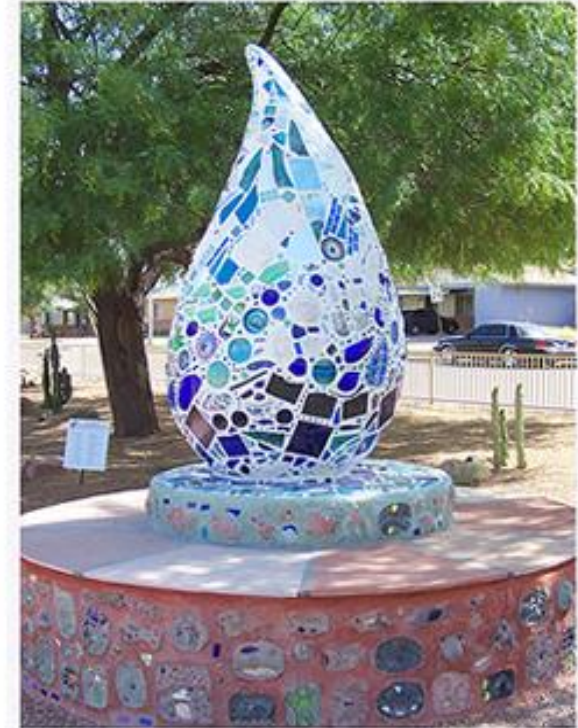


# How have other demonstration sites/streetscapes been utilized in arid/semi-arid environments?

- Education
- Community engagement
- Art in the garden



Glendale Xeriscape Garden : The Watershed by Juanita Hull-Carlson



Chandler Xeriscape Garden : Use Water Wisely A Desert Diamond by Juanita Hull-Carlson



# What are the community benefits of using blighted areas for demonstration gardens?

- Case Studies
  - Concentrated Photovoltaic in Questa, NM
  - Year-round recreational and watershed research facility in DuPage, IL



Groundbreaking of the solar energy project on May 13, 2010.

EPA Superfund Redevelopment Initiative





# What are the best strategies to reduce the urban heat island effect using water efficient infrastructure?

- TREES!
  - Type/variety
  - Placement
  - Soil types
  - Urban benefits

## KEY TREES – PHOENIX



LACEBARK ELM  
*Ulmus parvifolia*  
height 40'-60'  
canopy 35'-40'



TEXAS HONEY MESQUITE  
*Prosopis spp*  
height 12'-20'  
canopy 35'-45'



ARIZONA ASH  
*Fraxinus velutina*  
height 35'-45'  
canopy 30'-40'



DESERT IRONWOOD  
*Olneya tesota*  
height 20'-40'  
canopy 40'-80'



PALO VERDE  
*Parkinsonia spp*  
height 13'-20'  
canopy 30'-50'



DESERT WILLOW  
*Chilopsis linearis*  
height 15'-40'  
canopy 30'-50'



CHINESE PISTACHE  
*Pistacia chinensis*  
height 45'-65'  
canopy 35'-45'



ALEPPO PINE  
*Pinus halepensis*  
height 50'-80'  
canopy 75'-85'



LIVE OAK  
*Quercus virginiana*  
height 40'-60'  
canopy 50'-80'



EUCALYPTUS / GUM  
*Eucalyptus spp*  
height 50'-90'  
canopy 40'-65'



# Recommendations

- Continue to build local partnerships
- Continue to set a precedence for research on Superfund sites in Arizona to help create a Best Practice
- Use a mixture of the recommended trees as a resource for UHI research



Thank you!

