

Building Sustainable Cities Through Community Gardening

**Erin Erikson & Bob Randall, Ph.D.,
Urban Harvest, Inc.**

Gulf Coast Green -- Session 2: Friday June 20



Urban Harvest

Growing gardens. Enriching lives.



Community Gardens

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Questions related to specific materials, methods, and services will be addressed at the conclusion of this presentation.

Course Description

We will provide an overview of:

- 1. The types of possible community gardens and the most prolific types in Houston.**
- 2. The issues that cities face and how community gardens in urban areas can alleviate these problems.**
- 3. Particular community gardens in Houston, and some innovative ways they are constructed.**

Learning Objectives--At the end of this program, participants will be able to

- 1. Use the criteria that define a food desert to identify areas of Houston with low access to fresh food.**
- 2. By comparing the design of several gardens, be able to determine the structural needs of community gardens.**
- 3. Be able to distinguish between successful versus unsuccessful community garden models based on a comparison of models.**
- 4. Be able to use statistical analysis to explain the positive impact of community gardens.**

Building Sustainable Cities Through Community Gardening

- 1. Community Gardens and the Urban Food Problem***
- 2. Identifying food deserts where fresh food is absent in Houston.**
- 3. How urban community gardens can alleviate fresh food deserts.**
- 4. Matching community garden design to communities using a comparative analysis of results.**
- 5. Popular community gardens in Metro-Houston and innovative ways they are constructed.**
- 6. Measurement of the results.**

Community Gardens and The Urban Food Problem

**The Gulf Coast's humid sub-tropic
bioregion allows all sorts of food
crops to be grown year-round.**

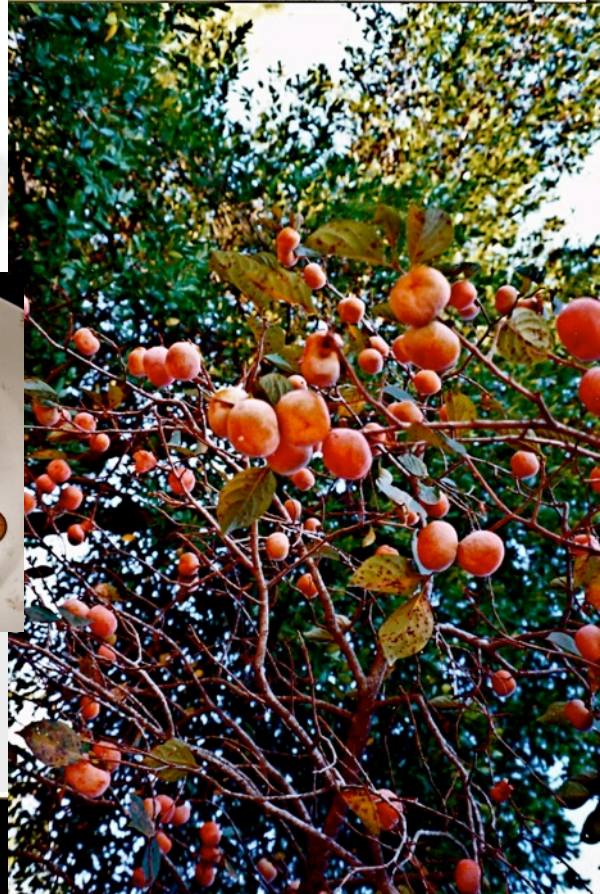










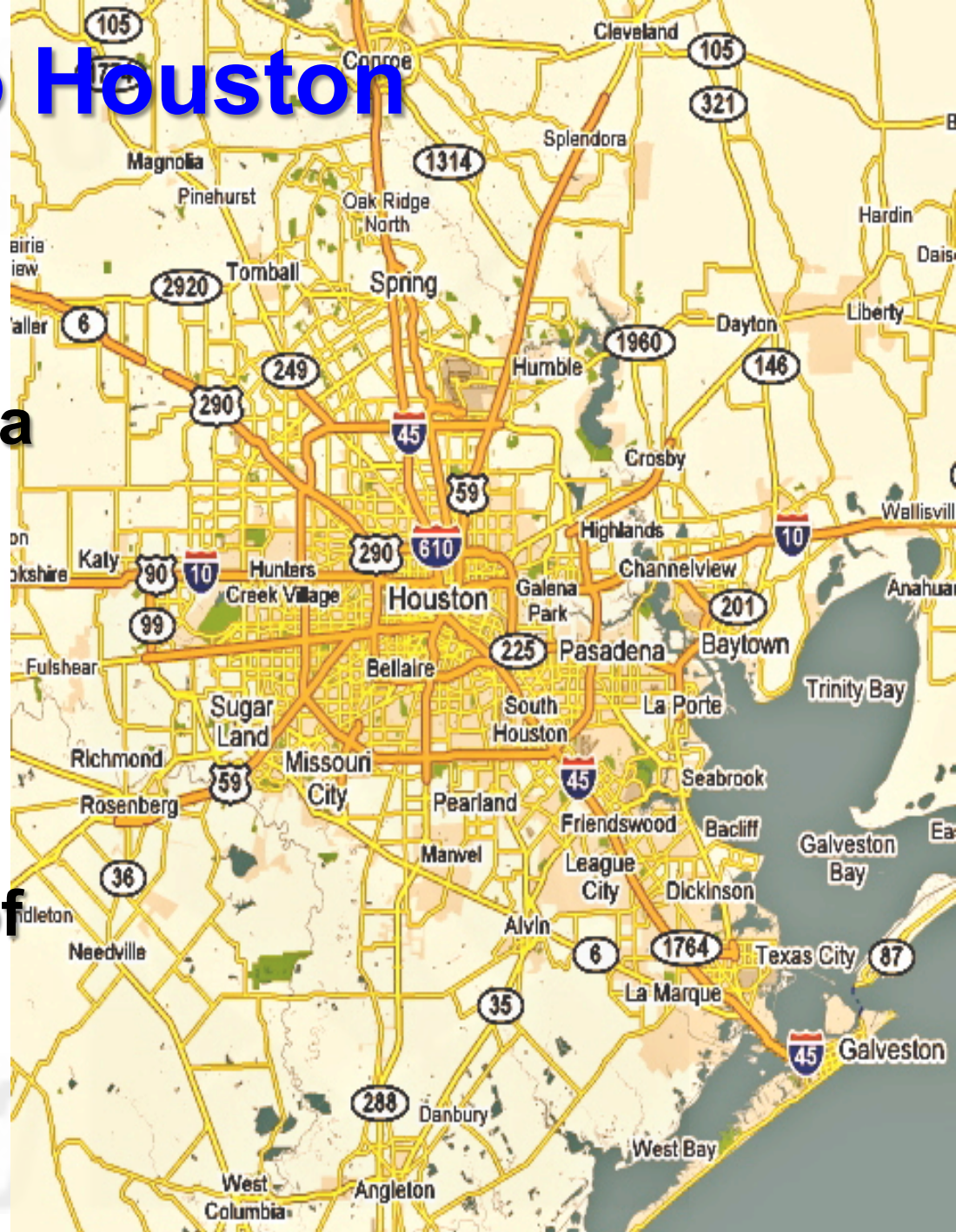




**But, for the Most Part, our
“Fresh” Produce all Comes from
Other States or Nations**

Metro Houston

- ▶ 4th largest city (2.2 million people).
- ▶ 5.8 million metro area residents.
- ▶ Over 100 miles in diameter.
- ▶ Less than half the population density of Los Angeles.



Houston's "Food" System



- Fuel-intensive food system consumes roughly ***16,000 tons*** of food daily and enough food to fill a pro football stadium every two weeks.
- The poorest 3.8% of our 5.8 million residents do not get enough calories and ***would form a line 63 miles long.***

**But
everyone is potentially at risk.**

**Food prices and quality
are vulnerable to future
shortages in fossil fuels,
to drought from climate change, carbon
taxes to reduce greenhouse gasses, or
a falling dollar exchange rate.**

***We don't know when
these will affect our food supply,
but they probably will.***

Then There is the Diet Problem

- Texans eat too much sugar, salt and fat and do not eat enough fresh fruits, vegetables & whole grains.
- This leads to obesity and many chronic diseases including heart disease, stroke, diabetes, and more.
- For food to be tasty and healthy, and consumed in quantity, people need **easy** access not just to produce,
- But to the **best tasting and freshest** varieties since these need the least salt, sugar and fat.
- BUT...

Nutritional Benefits of Local Production

- Unfortunately, the tastiest and most nutritious fruits, vegetables and edible herbs *ship poorly and spoil quickly.*
- So to make food tasty and marketable, distance-shipped, less tasty foods often have fats, sugars, salt or chemicals added.
- **Big Ag gives you BLACKBERRY JELLY DONUTS instead of fresh blackberries**



Big Ag Food Program

- *Air freight the tasty and nutritious vegetables and fruits and sell them at high price\$.*
- Ship most produce thousands of miles by land or sea.
- Choose varieties not for flavor, but for shelf life, shipping and packing qualities; and
- Ability to grow in salt degraded soils, and
- To harvest all at once.
- *They use VERY low cost labor & land.*



The Unpredictable Climate Problem

- **Some 19% of US fossil fuel is used in food production and distribution.**
 - ***This system cannot last.***
- **Local organic could **slow climate change** by encouraging soil sequestration of carbon and reducing greenhouse gasses.**
- **So we need a Plan B for our food supply!**

Building Sustainable Cities Through Community Gardening

1. The Food Problems of Cities
2. The Community Garden Solution
3. *Identifying food deserts where fresh food is absent in Houston.*
4. How urban community gardens can alleviate fresh food deserts.
5. Matching community garden design to communities using a comparative analysis of results.
6. Popular community gardens in Metro-Houston and innovative ways they are constructed.
7. Measurement of results.

Urban Harvest's Four-Pronged Effort to Get a Plan B Local Food System

- 1. Encourage the development of Farmer's Markets by offering food farmers reasonable incomes.**
 - Do this by facilitating direct sales to customers and by banning out of area production.**
- 2. Use adult classes and fruit tree sales to encourage land owners to make their own land productive.**
- 3. Provide food gardening education through outdoor classrooms at schools.**
 - Do this for students, teachers, and parents.**
- 4. Help community groups start and maintain food gardens in neighborhoods.**

What is a Community Garden?

- **At one time, community gardens were only seen as places where groups of people gardened together.**
- **In the last 30 years, this definition has broadened.**
- ***Any garden managed by families, individuals, or an organization is a community garden provided its main purpose is to improve either the group or a wider community.***

Why Community Gardening?

- ***PEOPLE NEED EDUCATION*** on what they can do with land, and what results different choices bring.
- **CG's are public so people visit and see land being used in a *productive, creative and sustainable* manner.**
- **They may use the garden to learn how.**
- **Thus Community Gardens fight *horticultural illiteracy* by providing a library!**

- CG's *inspire* people to improve their own land, spread *knowledge* of how to do it well, & for people who need a *place* to garden, provide a place.
- CG's also help *people get to know each other*, to cooperate, and to provide daily discussions on neighborhood issues, so they *build effective neighborhoods*.
- This is especially important in the culturally diverse modern city where there are few effective ways to interact regularly with one's demographically diverse neighbors.

Who This Helps

- ***Everyone benefits*** from the having “schools” to counter horticultural literacy.
- ***School & other youth gardens*** have ongoing nature lessons for children. This interests them in science, knowledge, & green industry careers and makes them more productive.
- For ***income challenged residents***, gardening education helps make HIGH quality produce cheaply available.
- Market gardening provides a possible income source for ***many***. It has low capital investment, high demand, & incomes 2-4 times minimum wage.

Building Sustainable Cities Through Community Gardening

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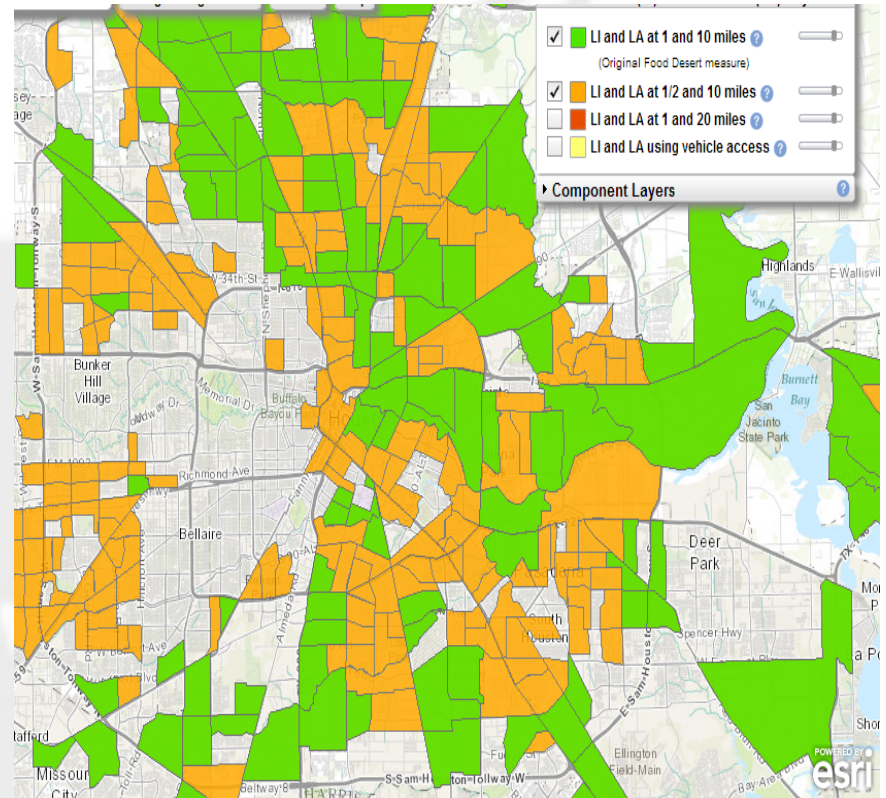
Food Deserts in Houston

Food deserts are defined as urban neighborhoods and rural towns without ready access to fresh, healthy, and affordable food.

As of 2011, there was 1 supermarket for every 8,600 people. In Houston the ration is 1 store for every 12,000 people.

For Example: Sunnyside has 1 grocery store for 22,000 people.

Over 440,000 Houstonians reside in food deserts.



USDA's Food Desert Map of Houston

Food Desert vs. Food Swamp

Why food deserts?



Grocery stores tend to cluster in high income areas.

Owners of grocery stores want each store to be self-sustaining. Tax breaks have incentivized grocery stores into food deserts. Chains have created discount grocery stores. Example: HEB created Joe V's.

Some theorize: Would putting in grocery stores even be the answer?



Food swamps: A geographic area where the overabundance of high-energy foods (for example, caloric snacks sold at convenience stores) inundate healthy food options.

Fresh food options need to be available to counteract unhealthy diets.

There also needs to be education to encourage people to make better choices.

How can Community Gardens help Combat Food Deserts?

Many non profits are working on innovative ways to help alleviate poor food access.

Urban Harvest has a program that is in collaboration with the City of Houston to build community gardens in food deserts. So far we have built 2 gardens in the Sunnyside area.

We have 23 gardeners who are growing food for themselves, to giveaway, and to sell.

This is not a solution to the problem on its own. It's a piece of the puzzle.

Community gardens build a strong network of community members who are invested in healthy food initiatives.



What One Needs to Start A *Successful* Community Garden

1. There needs to be *a group* that wants to do it.
 - *Many people do not realize that for vegetables, their entire group is committing to a few hours garden work a week nearly every week for several years.*
 - *A community fruit orchard requires less regular labor.*
 - *The group must build a Leadership Committee of at least 5 unrelated adults who all know what needs doing and meet at least monthly to review, plan, and improve.*
 - *The group needs to have fun together.*

What One Needs to Start A *Successful* Community Garden

2. There needs to be available *both* gardening and community gardening education resources.
 - *Not everyone will take classes.*
 - *Most will learn from a person in the garden who knows something, provided they have good “people skills.”*
 - *So gardens need people with diverse abilities.*
 - *Preference for dedicated, hardworking, organized, reliable, with good people skills.*
 - *May need to place a knowledgeable volunteer in the garden.*

What One Needs to Start A *Successful* Community Garden

- 3. A garden site designed to**
 - (a) minimize maintenance troubles while**
 - (b) achieving whatever is the main goal of the garden**
 - (c) and supported in this goal by whoever controls use of the site.**
- 4. Construction design and phasing of construction need to be in synch with both funding and the experience level of the gardeners.**
 - It is easy to take on too much too soon!**

A Good Community Garden Site

- Useable for ***FIVE*** years minimum.
- A large area (100 by 300') is best, but any size area will do if well designed.
- To simplify maintenance, all features should be in a contiguous area.
- Close to where the gardeners enter the property.
- Easy water access throughout the garden.
- Inviting gate and sign.
- Nice place to sit or to visit with someone.
- Enjoy Being There

A Good Community Garden Site

- **Restroom access.**
- **Convenient and thief-proof tool storage.**
- **Personal security not a big issue for lone gardeners.**
- **Fenced/Locked Against Varmints & Vandals**
- **Away from street if possible or appropriately landscaped for beauty and privacy.**
- **Areas for Compost Storage and for Mulch Delivery**

A Good Community Garden Site

- **For vegetables and fruits, areas that are mostly sunny (8 hr. plus) all year.**
- **For habitat and beneficials garden, areas that are both shady and sunny with a water feature.**
- **Long direction of beds should be north-south if possible.**
- **Protection from north winds.**
- **High plant diversity desirable.**
- **Irrigation system only if there is strong evidence of long term maintenance ability.**

Designing the *Community* in Community Gardens: Neighborhood Allotments

- In allotment gardens, individuals and families agree to a garden's rules and rent a plot.
- They do what they want with the harvests.
- Some allotments restrict garden participation to people who satisfy some criterion such as residence or affiliation.
- Most allotment gardens are self-managed and maintained by the gardeners, but some have paid staff that help or manage.

Designing *Successful* Neighborhood Allotments

- Allotment gardens need to have *a stable, well-organized group that meets regularly and works well together.*
- Its leadership needs to be proactive about the recruitment and socialization of newcomers.
- It communicates well with all gardeners and operates by consensus.
- It builds community through fun events.

Designing *Successful* Neighborhood Allotments

- **The leadership group pays bills and handles finance.**
- **It troubleshoots problems and plans improvements.**
- **It monitors land use arrangements well so that leasing agreements (such as appearance, compartment, insurance, taxes and use) are honored.**



Meredith Gardens



Alabama Gardens



Allotment



Levy Park CG

Designing the *Community* in Community Gardens: Donation Gardens

- **Donation Gardens grow fresh produce for individuals in need of emergency food assistance.**
- **Volunteers grow food in order to donate to an agency such as a women's shelter or food pantry.**
- **Typically, these are staffed by individuals who do not themselves need the food, but enjoy the exercise, the food gardening learning opportunity, or just the camaraderie and fellowship.**
- **Organized groups such as religious congregations and Master Gardeners often sponsor or staff them.**

Designing *Successful* Donation Gardens

- For donation gardens to be successful, they must achieve the goal of helping the hungry.
- So leadership needs to be in regular communication with emergency food distributors about:
 - quantity,
 - quality,
 - types of food preferred, and
 - possible harvests.

Designing *Successful* Donation Gardens

- **As well, an ongoing effort must be made to make sure that the sponsoring agency's leadership strongly supports the effort.**
- **Both the overt and tacit goals of the sponsor need to be met without taking too many of their resources.**
- **This is especially true if the sponsor is the only source of garden labor.**
- **If that is so, regular efforts must be made to get the sponsor to guarantee a sufficient labor force of at least five unrelated adults.**



Designing the *Community* in Action Agency Community Gardens:

- Action agency gardens are designed to achieve key goals of the managing agency.
- They thus have highly varied potential purposes.
- A Native American Literacy Project was designed to highlight culturally important Native American foods.
- A senior center in a park provided nutrition, exercise, and fellowship.

Designing the *Community* in Action Agency Community Gardens:

- **A 5th Ward Youth Garden was designed to provide income earning education to elementary students who did not have employed adults in their life.**
- **A restaurant started a garden to be able to buy fresh food from behind the restaurant.**
- **A non-profit started a series of farms to train African refugees in market gardening.**
- **A wholesale nursery started a community garden as outreach to the neighborhood and as a learning effort to study how residents grow plants.**

Designing the *Community* in Action Agency Community Gardens:

- Organizations including hospitals and rehab centers have **Enabling and Therapy** gardens and greenhouses to provide:
- Injury rehabilitation,
- Therapy for addiction, mental or physical illness,
- Enabling opportunities for the physically challenged.



Designing *Successful* Agency Gardens

- They fail if their main goal is not achieved. So initial design needs to be very intelligent.
- Inadequate horticultural knowledge will doom even the most brilliant site designs.
- These gardens also thrive if there is sufficient labor and fail badly when there isn't enough.
- They frequently are understaffed, with undeserved communities struggling the most because such agencies aren't paying volunteers to do this and low income neighbors can't afford to work for \$0.

1996 Adult Education Garden

Community Action Agency Gardens



**Shelter Garden
for Women**



**Market Farming
Refugee Training**



Courtesy of *Plant It Forward Farms*

Designing the *Community* in Outdoor Classroom Community Gardens:

- **Public schools in Texas are mainly held accountable for obtaining good attendance and good statewide test scores.**
- **This requires effectively teaching statewide curriculum objectives in science, math, and other subjects.**
- **Gardens can be and are for any level from pre-school to university.**

Designing the *Community* in Outdoor Classroom Community Gardens:

- **To be successful, a garden at a school needs to be a big aid for teachers trying to do this.**
- **And this needs to be evident to administrators and many teachers.**
- **If it engages students in learning by connecting lessons to results, both attendance, behavior and learning all flourish, so test results do too.**
- **At an abstract level, private schools have similar needs to public schools since they too need to teach curriculum, and engage students in hands on learning.**

Designing the *Community* in Outdoor Classroom Community Gardens:

- But religious schools, Montessori schools, and special needs schools often have behavioral objectives that are considered as important or more so than test scores.
- So there are outdoor classrooms designed to teach charity;
- To make students earth stewards; or
- To help students develop mental, social or physical skills needed for living.

Designing *Successful* Outdoor Classroom Gardens

- Need to get *both* the Principal and Vice-Principal behind it.
- Need to have *a minimum of three teachers or other staff* fairly enthusiastic and able to work regularly.
- A clear plan for maintenance not dependent on one teacher.
- This includes *summers and vacations*.
- A plan to have at least one skilled gardener at the start, and several after 2 years.

Designing *Successful* Outdoor Classroom Gardens

- Ideally hire an Urban Harvest employee or other *experienced* outdoor classroom person both for design and for training the curriculum-to-garden connection.
- Efforts made to develop a parent support group with representatives chosen from each grade.
- Most schools have a rapid turnover of volunteers, students, and both teaching and administrative staff.
- Thus easy to maintain designs, and regular recruitment and training are necessities.
- Most outdoor classrooms need a robust nature garden.

Outdoor Classroom Gardens

Lamar High School



RICE UNIVERSITY



Helping Youth Learn





Parents' Gardening Club

Building Habitat & Science Curriculum



Wildscape

1996

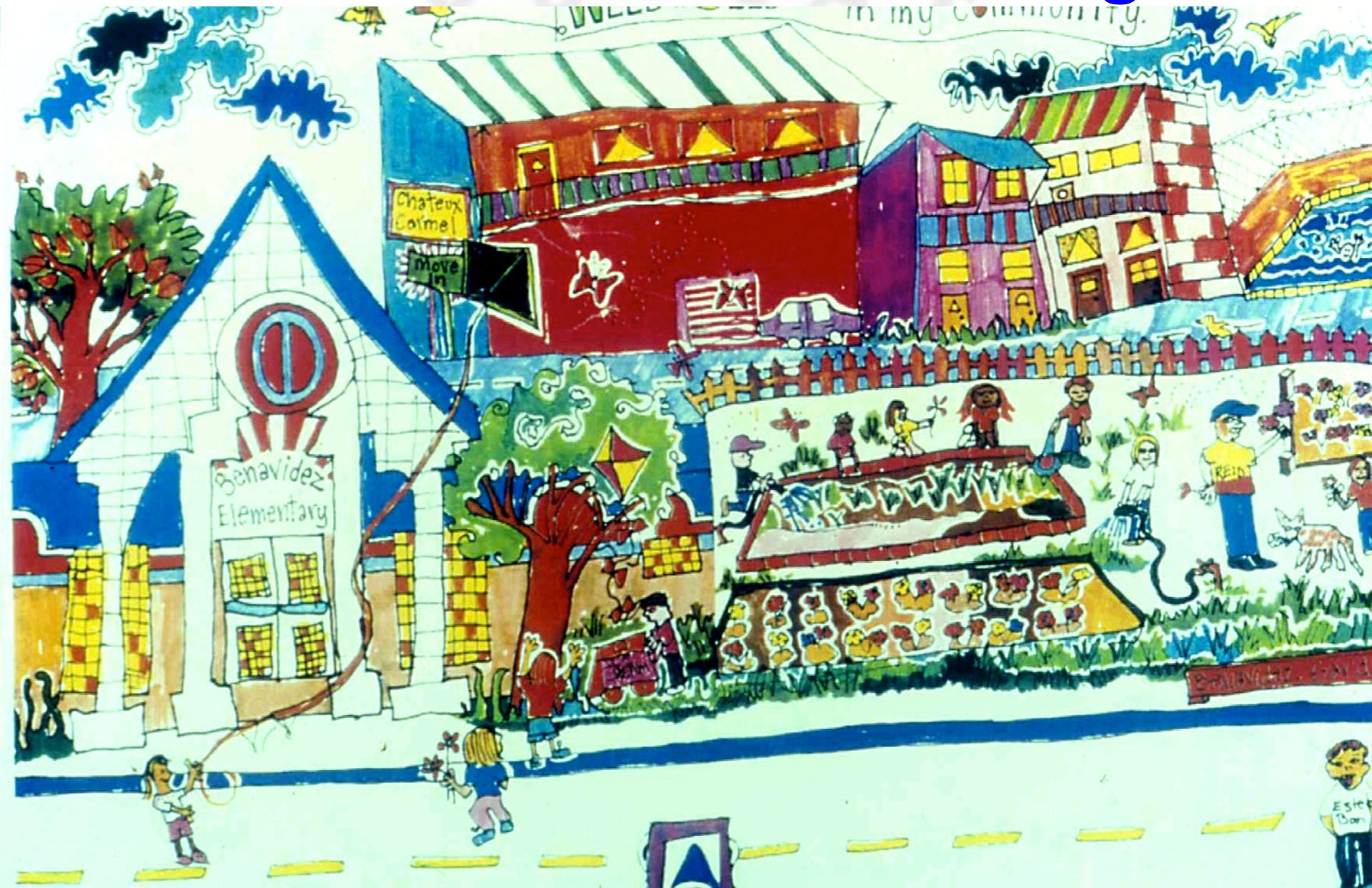


2002



Benavidez Elementary

Benavidez Girl's Drawing



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Casa Juan Diego

Casa Juan Diego Community Garden is located in the Rice Military area.

A donation garden which was started in 1996.

The food grown at Casa Juan Diego is given to the people the organization serves: immigrants, refugees, and the poor.

The garden was built on a parking lot. Over the years they have built it up with compost and leaves in the pathways.

Use metal edging and rebar for the garden beds. Using a thinner material allowed them to fit more beds into a small space.



Alabama Community Gardens

Alabama Gardens started in 1985.

The garden is an allotment garden with 57 beds.

Alabama also donates food to SHAPE Community Center and to neighbors in the community.

They converted a shed into a “museum” that chronicles the history of the garden through pictures, newspaper articles, letters, etc.

Alabama Gardens has a large community area in the garden. They regularly have BBQs and events in the garden.



Kolter Elementary



Westbury Community Garden

Westbury Community Garden is an excellent model of creating the community before the garden.

Largest community garden in Houston

They have committees for different jobs around the garden: volunteer, outreach, leadership committees

The WCG website is a great resource for new gardens on how to organize:

[http://
westburycommunitygarden.org/](http://westburycommunitygarden.org/)



Wesley Community Center

Built in 2010 and located in Northside Village.

It is adjacent to their Food Distribution Co-op.

Produce grown in this garden supplements food baskets for community members.



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Measurement of Success

100 Urban Harvest Affiliate Community Gardens

Know What You Grow Program

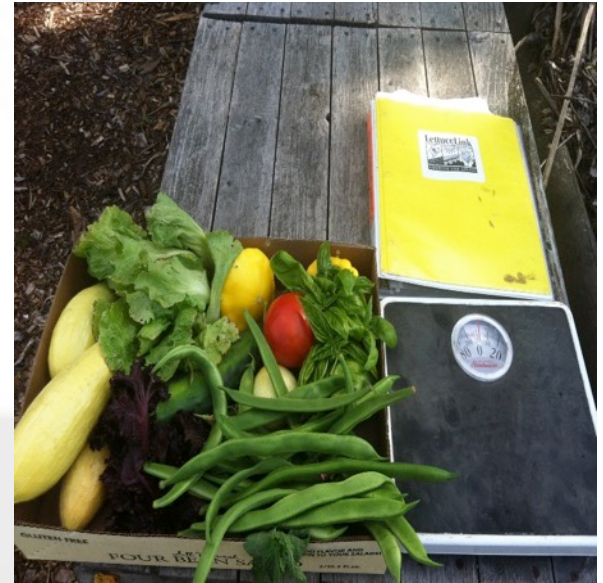
- Placing scales in community gardens
- Getting gardens to record how much of what vegetable or fruit they are growing
- Over 50,000 pounds of food was donated last year

Over 125 complimentary spots in Urban Harvest Gardening Education Classes were used by community gardeners in 2014.

Our Facebook group has 115 members:

- The facebook group allows Urban Harvest to connect directly with gardeners
- Allows gardeners to connect directly with each other

Creating a community of community gardens!



Thank you for your time!

QUESTIONS??

**This concludes The American Institute of Architects
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