

The New Garden City: An Urban Agriculture Scenario Plan for Wedington, Fayetteville

2030

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ABSTRACT

In the Post World War II (WWII) period, there were two major adversities which arose regarding achieving a sustainable American society as the country began its quest for modernity. Firstly, as the US transitioned into a consumerist society and the low-density suburban development, heavy dependence on the automobile arose. Secondly, agricultural production lost its connection to settlements, with food no longer being produced locally or regionally. Thus it became the industrialized agribusiness model we know today.

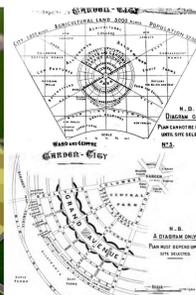
However, global imperatives such as climate mitigation, a call for more equitable models of food distribution, and dietary health concerns, triggered a need for a more innovative system of development to be implemented to counteract the aforementioned adversities.

Urban agriculture is defined as the cultivation within existing cities and suburbs (Andres Duany and DPZ). As a result, the focus of this Capstone is a scenario planning project that looks at the redesign of the Fayetteville, Wedington area by 2030. A case study, which produced a model urban agricultural area. Which reintegrates agricultural practices into the suburban area to create a productive urban landscape in which agriculture is an essential and coherent element of sustainable infrastructure.

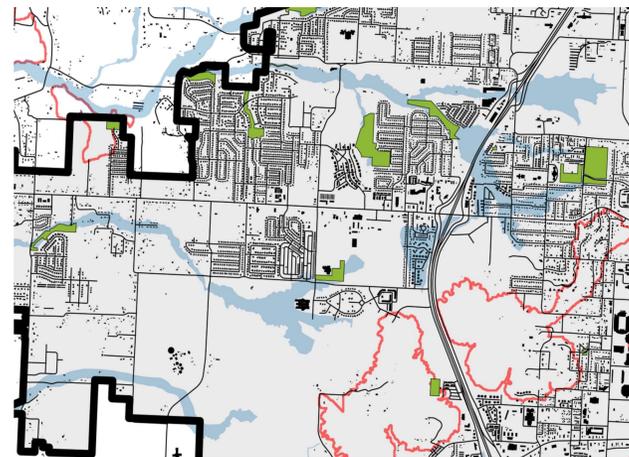
PRECEDENCE

In 1898 Ebenezer Howard sought to develop a form of living to counteract the unsanitary Victorian English city. Howard envisioned creating a totally new town (new town-city) in the middle of the countryside, outside of the city which would be known as Garden City. Howard's plan for the Garden City comprised of 1000 acres of land for living, surrounded by a greenbelt of 5000 acres.

The 1000 acres at the core of the city was to be mixed-use, medium-density that contained employment opportunities, schools, shops, and parks all within a walking distance. Whereas, the green belt would contain farms, and other agrarian institutions.



The model and Plan of Ebenezer Howard's Garden City, 1898
Source: A still from the documentary Urbanized(left)
Sociable Cities: Legacy of Ebenezer Howard, Peter Hall and Colin Ward (right)



The Current urban plan of Wedington, 2012.
Source: UACDC



The urban agricultural plan for Wedington, 2030
Source: Produced by author

PLAN FUNDAMENTALS

For 2030 urban-agriculture plan Wedington will be subdivided into four zones, with each zone having particular agricultural infrastructure. In total 2600 acres of agriculture will be incorporated into the area. The four zones will be: **the urban core-zone** along Wedington Drive, **the general urban zone** which is represented by the new areas of development, **the sub-urban**, and **the rural zone** represented by the green ring around Wedington.

Urban core zone: 1) The area along Wedington Drive will be densified with mixed use development. 2) Parking will be condensed, and former lots will be used for food production. 3)Wedington Drive will be converted to a productive boulevard for the growth of pecans.

General urban zone: 1)100 blocks of new residential development, at a density of 15units per acre, will be placed in this zone to accommodate population growth. 2) Each block will consist of a mixture of house typologies, sharing a communal space for the growth of dynamic garden crops. 3)Apartment buildings will have rooftop gardens and balconies for growing. 4) Community gardens will be distributed throughout the neighborhoods.5) The streets will be shared streets.

Suburban zone: 1) The right-of-ways will be used for nut production. 2) Suburban development will be retrofitted for rainwater harvesting. 3) Front and backyards will be used for the cultivation of garden crops.

Rural zone: 1)This zone will contain farms for large scale agriculture production. There will be apple and berry orchards, farms for vegetable production, chicken farms etc. 2) The urban/rural ecotone will be populated with greenhouse gardens that will provide areas for both community and commercial farming.

SOCIETAL STRUCTURE

Each member of the urban agriculture, Wedington society will have to play a role in the food production for a successful model:

- 1)Each neighborhood will have a property owner's association, that ensures the upkeep of food production by the owner, on private property.
- 2)Members of the Wedington area will have to pay an ecological utility bill to the city. This fee will be used to sustain the production and harvesting of food in public right-of-ways and medians.
- 3)Plots in the community garden will be leased by the city on a 'first-come' application basis. 50% of the plots will be open to middle and upper income families, and the other 50% will be open to low-income families.
- 4)Every school yard will have a greenhouse and/or garden.
- 5)A percentage of the space available in medians and right-of-ways will be given to the University's agricultural department, for experimentation of, crop cultivation in environments sensitive to contamination.
- 6)The land in the green belt will be leased to commercial farmers and the acquisition of labor will be the responsibility of the farmer. The produce will first be sold on the local market with the excess exported to be sold regionally. After the harvest on commercial farms, the public will be allowed to glean.



Images depicting the lifestyle in the urban agr. community. (right) View from new sustainable apartment units to the green house garden and orchards. (left) View within the green house garden. Source: Produced by author.

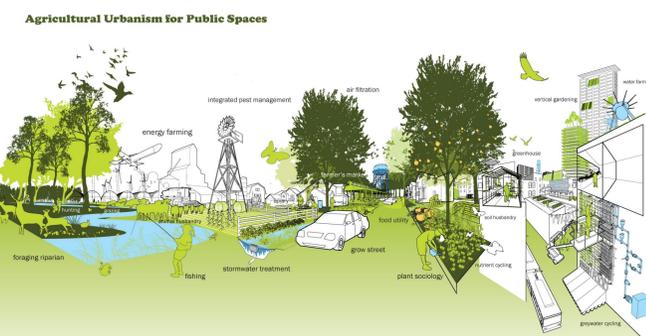
SUSTAINABILITY

Social systems: This project addresses: 1) Equitable food distribution ensuring the continued health and wellness of all people. 2) Direct interaction of people with the production of the food they eat, thus educating people about food.

Natural systems: The current agribusiness food production system is polluting our environment. Growing food locally will: 1) Greatly reduce the distance travelled by food thus reducing toxic emissions 2) Local, organic food production practices will reduce the chemical emission from farming.

Built systems: 1)Densification of the area will reduce urban sprawl, and with mixed-use development, increase walkability. 2)The increase of agricultural soft-scape, and the reduction of hard-scape, will reduce the heat island effect 3) The soft-scape will allow storm-water run-off attenuation, and filtering, as opposed to the impermeable asphalt surface that is usually used.

Managed systems: A major component of this project is looking at agriculture and how it could be more efficiently and sustainably conducted in the future within the limits of a city. It also looks at alternative areas for growing that are not normally utilized such as the right-of-way of roads, medians, rooftops, and balconies of multifamily housing.



This image depicts the Agricultural Urbanism Transect
Source: produced by the University of Arkansas Community Design Center.

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