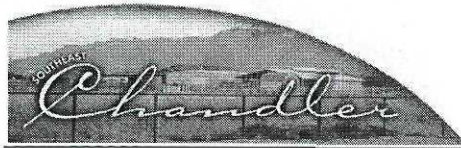


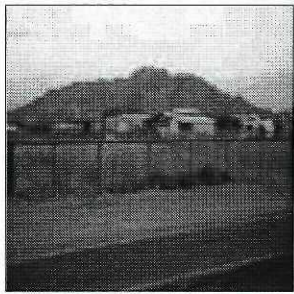


Appendix V — Potential for Urban Agriculture: An Overview



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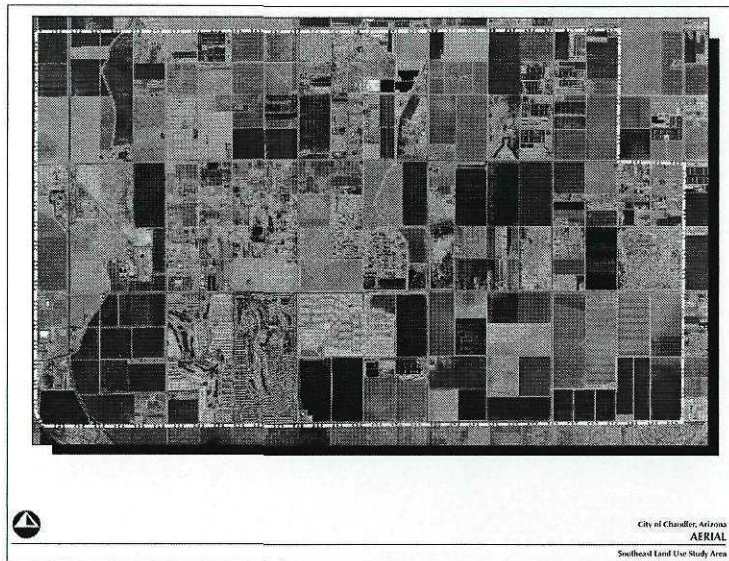
APPENDIX V - POTENTIAL FOR URBAN AGRICULTURE: AN OVERVIEW



“Adopt an area plan for the Southeast Chandler Character Area that preserves the agricultural atmosphere of the community and creates open spaces, community gardens, and a feeling of openness.”

— City of Chandler Land Use Element

For many years, the Dobsons, Riggs, Hangers, and other families have been farming the fertile lands in the Southeast Valley. Like so many metropolitan areas in the United States, agricultural lands at the edge of an urbanizing region are being lost to development caused by a growing population.



Southeast Chandler, as it exists today, is a patchwork of land uses comprised of agriculture, established rural residential, and new suburban subdivisions. (Date of aerial: January 1999.)

Unfortunately, areas like Southeast Chandler — located at the urbanizing edge — also contain most of the unique and prime farmlands in the country. These lands, while productive for agricultural purposes are also well-suited for development: they are relatively flat and have well-drained and loamy soils. Besides attractiveness for development, many other factors (economic, political, environmental, etc.) affect the viability of agriculture urban edge agriculture.

This conversion from agriculture to urbanization in Southeast Chandler is a difficult event for many of the people who have lived, worked, or owned land in the area for a long time. This area of Chandler invokes an emotional response in the multitude of people who have grown attached to it. Given the challenges facing agricultural land in Southeast Chandler, a question that must be asked pertaining to the remaining agricultural lands is: *Can we continue farming those agricultural lands that remain?*



The Farmhouse in Gilbert is an outgrowth of agriculture in the Southeast Valley. Here, old farm buildings (mostly homes) are relocated from agricultural lands converted to urban uses. The farm buildings are then converted for other uses, such as a restaurant. This re-use of old farm buildings could also occur in Southeast Chandler to help support a market for urban agricultural products and to create community focal points.

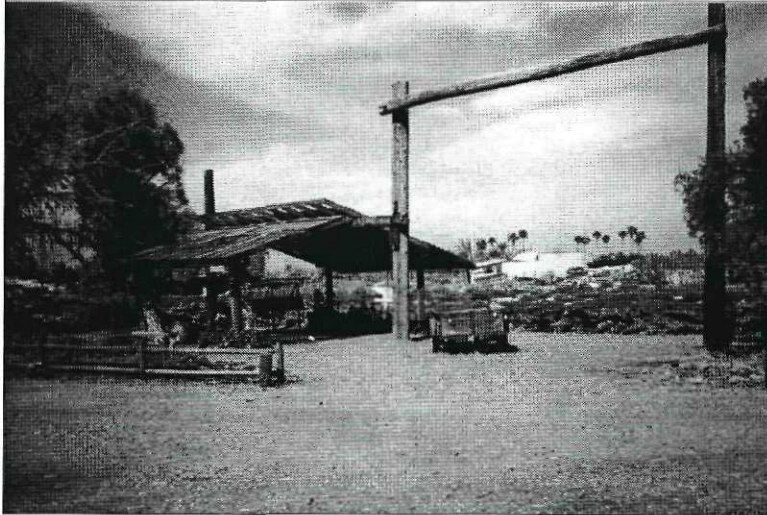


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The answer to this question is both “yes” and “no.” To begin with “no,” much of the acreage in Southeast Chandler is committed for development. Farmers who still maintain agricultural operations on their land in Southeast Chandler generally believe that it is a matter of time until their operations will cease. Based on this perspective, the future of agricultural lands in Southeast Chandler appears grim.

In terms of “yes,” great opportunity exists to continue agricultural operations in Southeast Chandler, but at a smaller scale. Certainly, Southeast Chandler is well-positioned in terms of direct marketing to a large, responsive public in the region who desire locally grown produce. And, Southeast Chandler contains a significant resident population who seek to live a rural lifestyle.



The Farm at South Mountain in Phoenix is an example of very successful urban agriculture.

Residents of urbanizing regions throughout the country, as well as those in highly urban centers, persist in being successful in urban agriculture for reasons such as food security, income production, taste, and health concerns and lifestyle. As we reach the end of the 20th century, however, there is a clear resurgence of interest in urban agriculture. Planning processes like that undertaken to prepare the Southeast Area Plan are representative of this growing importance of retaining some level of agriculture in the urban environment.

Urban agriculture in Southeast Chandler cannot be viewed as a panacea. It is highly unlikely that backyard gardens will replace agribusinesses, and — for reasons of climate as well as of space — it is in many cases highly unlikely that a significant amount of food crops will be grown in Southeast Chandler. There is strong and growing evidence that urban agriculture in Southeast Chandler can have many community-wide benefits, including:

1. Urban agriculture can enhance household food supply.
2. Urban agriculture can continue to embrace the heritage on which Chandler is built.
3. Urban agriculture can provide households with additional income and can be a small source of employment.
4. Urban agriculture can enhance the sense of community and identity for the residents of Southeast Chandler.
5. Urban agriculture can provide youth with an educational opportunities through hands-on experiences.
6. Properly managed, urban agriculture can play an import role in turning the urban waste stream and urban wastewater into resources, rather than sources of serious pollution.



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Section A — Overview

The scope of work for potential farmland preservation was initially conducted with a focus towards discovering if there was support for a rural agricultural district. An agricultural district is a land use designation designed to restrict non-agricultural uses from penetrating and establishing themselves in a given area. The scope of work was intended included identification of soil types, agricultural infrastructure support services and compatible non-agricultural businesses or agritourism.

However, upon completion of Task 1.0, it was discovered that farmers had no desire to continue to farm in the Southeast Chandler Area. In fact, an investment strategy employed by many farmers was and is to sell their existing farm to developers, purchase farmland that will be developed in about 10 to 15 years and wait to repeat the process again. Every farmer interviewed that owned land in Chandler's Southeast Area also had farmland in Pinal County.

Also during Task 1.0, it was discovered that the current rural residents did not express the interest in farmland preservation but in preservation of a rural life style. They were interested in preserving agricultural elements or "soft edges" such as tree lined roads, white board or rail fences, green pastures, and/or trails for horses. Another observation that was perceived during interviews was the sense of community that the residents enjoyed. Elements that helped create that sense of community was a resident's ability to see one's neighbors through fences, neighborly kindness, helping each other, and a perceived lack of government restraints. At no time did any ranchette owner or rural resident consider their property slum, blight or undesirable.

Rural residents expressed little or no concern for the loss of dairies, citrus groves, cotton or alfalfa fields. No one mentioned the attributes of agriculture or its preservation. No mention was made of the fragrance of citrus blossoms, the smell of freshly cut alfalfa, or the symmetry of corn. In fact, agriculture land was viewed as an extension of the rural resident's open space and available for leisure or recreational pursuits.

With this new information gleaned from the interviews, survey questions were able to be tailored to confirm or refute these initial findings and to determine if there was public support for small-scale urban farms in the planning area.

Section B — Density

Developers expressed several concerns about the Area's target density of 2.5 dwelling units per acre. The first concern was the current cost of land and infrastructure and the affordability of a new home. For example, in straight zoning, the average new home would at today's land prices and sub-division improvements cost \$186,000. This would be the entry level home or lowest priced house. At this price level, a prospective home buyer would need an annual income of \$58,280 in order to qualify for a mortgage.

Other developers felt that the 2.5 dwelling units per acre was achievable provided there was a diversity of lot sizes and relief from some of the City's residential development guidelines. For example, in a 160 acre parcel, lot sizes would include an R1-5, R1-7, R1-20, and R1-43. Each lot category would be 25% of the total development or 40 acres each. A developer would initially develop the smaller lots first in order to subsidize the infrastructure of the large lots. The feeling was



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expressed that more R1-7 lots could be enlarged to an R1-20 if the vertical curb cut and sidewalk were to be replaced with a rural ribbon curb and the elimination of the retention basin through the use of on-lot water retention.

In addition, the task force determined that it would support a higher density (3.5 dua) based upon the amount and types of amenities that a developer was willing to provide in a PAD. However, the amount and types amenities have not been determined. Hence, the higher density could not be granted at this time because the value added to the PAD had not been determined.

If the lower target density of 2.5 dua is used instead of 3.5, the City would need to recalculate the impact fees charged for each new home built to reflect the lower density. In addition, the city would need to re-calculate its infrastructure replacement projects based upon the lower density.

Section C — Schools

A final issue discovered during the interviews of Task 1.0, that is not under the jurisdiction of the City but a concern to the community at large, was the issue of schools. Discussions with representatives of the Chandler Unified School District indicate that when the Southeast Chandler Area reaches build-out, it will be necessary for the school district to build another high school, two or three junior high schools and 11 to 13 elementary schools. This represents a potential capital improvement of between \$150 to \$200 million.

Section D — Survey Questions and Results

With a greater understanding of the type and scope of agriculture and agricultural elements that the current residents in the Southeast Area desired, questions were developed to test and determine the accuracy of the interviews, the concepts of small-scale urban farms, and determine the level of support for urban agricultural. Survey questions 20 through 30 related directly toward urban agriculture, economic viability, and sustainability of farms in the urban environment.

Survey questions 20 and 21 were designed to determine if there was any support for agriculture in the urban environment. Question 20 asked if the respondent felt that a few small farms of 5 to 15 acres that grew fruits and vegetables for consumers could prove helpful in achieving a goal of preserving farming activity in Southeast Chandler. An overwhelming 90.3% of those responding said “yes!”

Question 21 then asked the survey respondent if he/she could support a City-sponsored program related to small-scale farming, wherein small farm plots adjacent to city parks and flood plains could be used for farming and educational or small scale employment opportunities? This question had a strong showing of 79.7% in favor of such a plan.

Questions 22 through 25 determined the amount of public support for the economic sustainability and the potential long term viability of farms in the Southeast Chandler area. It is one thing to say that preservation of small-scale farming is desirable but unless the residents of the area support small-scale farming via their economic dollars, farms will fail. These questions were then compared for consistency of the respondents to known market research.



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Questions 22 and 23 identified the most common methods that a small-scale farmer would most likely use to sell his/her farm production. These methods are roadside stands farmer's markets, special events (such as a pumpkin festival or a corn and melon festival), or to independent or specialty grocery stores. When a farmer sells direct to the consumer, the farmer is able to eliminate the food broker and the retailer and capture 90% of the consumer's dollar rather than a paltry 10 cents on the dollar using a broker. Hence, by increasing the amount of revenue received directly from the consumer, a farmer is able to produce less on smaller acreage but receive more in revenue for his/her production. With an increase in revenues and a reduction in expenses, small-scale urban farmers can be financially successful in the urban environment where larger acreage mono-crop farms cannot be successful.

Questions 22 and 23 indicated that the survey respondents have purchased produce at special events (34.3% have, 14.9% most likely), at roadside produce stands (61.5% have 14.6% most likely), and farmer's markets (51.4% have, 23.1% most likely). Question 23 is a verified information gathered in question 22. Rather than asking the respondent "how likely are you to buy fresh produce at the following locations or events," it asked "when was the last time you purchased produce at" one of the following locations. The responses were even stronger (special events 39.4%, roadside stands 79.9%, and farmer's markets 60.3%).

Question 24 was focused towards a concept that is new in the western United States but is fairly well established in the Eastern States and especially in Europe and Japan. The concept is called community supported agriculture (CSA) or subscription farming. Basically, a group of consumers pre-pay a farmer for his/her crop. The crop typically contains between 12 and 20 different fruits, vegetables, and

some flowers. The farmer receives the revenue prior to the growing season rather than at the end while the "shareholder" receives fresh produce in quantities greater than what their money would have purchased at the grocery chain store. It is not uncommon for a "share" to provide sufficient produce to feed a family of five for a week or feed one (1) vegetarian for a week. A typical share costs between \$450 to \$500 for produce from April to early November. A successful CSA program represents 35% to 65% of a small-scale farmer's revenue. The respondents to question 24 either did not understand the concept or were unwilling to take the risk. Over seventy-eight percent (78.3%) said that they were unwilling to pre-pay a farmer for produce.

Question 25 addressed the consumer's primary consideration when purchasing produce. The category of price was deliberately placed first to determine if the respondents to the survey would confirm an emerging trend. They did. Consumers are overwhelming in favor of flavor over price (Flavor 55.0%, Price 32.1%, Appearance 29.8%, and Convenience 12.6%. Totals exceed 100% because of multiple responses.) A tomato grown locally has a tremendous flavor advantage over a tomato that has spent 3 to 5 days on a truck traveling to its destination. In addition, shrinkage and spoilage of produce lost from harvest to consumption is estimated to be 50% of production while shrinkage and spoilage of produce grown locally is only 5%. Consequently, retailers who buy local produce grown by local farmers actually increase their profit because there is less shrinkage and spoilage.

Survey questions 26 and 27 were designed to test the hypothesis that there was support among the farming community to continue farming on the urban edge. These two questions explored the amount of support for purchasing development rights (PDR) from farmers. PDR compensates a farmer for not selling his land for development. Instead,



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a farmer is compensated the difference in price between the development value and the farm value. Typically, a land trust or government entity holds the development rights in perpetuity. Hence, the land is kept in production as a farm while compensating the owner for not developing his/her land. Both of these questions were intended for farmers who own land in the Southeast Chandler Area and their willingness to sell the development rights to a third party, yet still own the land and continue farming. However, the number of respondents who answered these questions far exceed the number of known farmers in the area. Consequently, the data is suspect at best and should be disregarded.

Question 28 was a composite question that permitted the survey respondents to express their opinion as to how a rural or agricultural character in the Southeast Chandler area could be achieved. Of particular note and perhaps with greater accuracy than questions 26 and 27 is the number of respondents (29.3%) who expressed an interest in purchasing the development rights.

Questions 29 and 30 were designed to determine if there would be public financial support for the establishment of small-scale urban farms throughout the Southeast Chandler area and if so how much financial support. These questions were a greater explanation of PDR's and were intended for all respondents of the survey. Of those who responded, 52.5% supported an increase in property taxes to purchase PDR's. This number compares favorably to a survey conducted by Gilbert in January of 1999 wherein 59% of those surveyed stated that preservation of farmland was important and 52% of the 59% (an aggregate of 30% of the respondents) stated that they were willing to raise their property taxes to preserve farmland.

In this survey, question 30 asked the respondents how much would they be willing to raise they taxes. Thirty-five percent (35%) were willing to raise their taxes 0-\$25, 31.5% were willing to raise them \$26 to \$50, 13.4% were willing to raise them \$51-75, 13.6% were willing to raise them \$76-\$100, and 6.5% were willing to raise their taxes more than \$100. In short, 66.6% were willing to raise their taxes \$0 to \$50. Unfortunately, Gilbert's survey failed to ask how much the respondents were willing to raise their taxes. However, Chandler's survey response is consistent with surveys conducted by the American Farmland Trust (AFT). In AFT's surveys, most respondents indicated that they were willing to raise their taxes \$50 a year.

Section E — Summary of Survey & Interviews

There appears to be no support for preservation of large acreage farmland by either the farmers or the current non-farmer residents. However, it is apparent from the data of the survey that there is a strong indication to preserve small-scale urban farming on parcels of land between 5 to 15 acres. Respondents feel that this type of urban farming would help give the Southeast Chandler area an agricultural identity. There appears to be a strong consumer support from residence in the area to patronize farm roadside stands, farmer's markets and special events. In addition, there is a willingness to consider raising property taxes if the increase would be used to purchase development rights to permit the continuance of small-scale farming in the area.