



Memorandum

TO: Sally Campbell, Executive Director, Envision Central Texas

FROM: John Fregonese, Glen Bolen- Fregonese Calthorpe Associates

SUBJECT: Building a Preferred Scenario: 2003

DATE: November 11, 2005

During the last four years Envision Central Texas has engaged thousands of residents from the five-county Central Texas Region to envision their future. During this time Fregonese Calthorpe Associates was asked to develop a range of future growth scenarios and assess the public's response to them. Some highlights of the scenario planning process include:

- A series of workshops attended by over a thousand people in all areas of the Central Texas Region.
- Three scenarios and a "base case/current trends" model were built and thoroughly tested using public input received from the workshops, population forecasts and infrastructure data.
- A 2003 survey that included responses from over 12,000 area residents from all five counties on their preferences and concerns about the scenarios. The findings from this survey were summarized and considerable areas of consensus were identified.
- The issuance of *A Vision for Central Texas* report in May 2004 by the ECT board detailing growth options and their fit with the preferences of area residents.

As a concluding step to the visioning process which produced *A Vision for Central Texas*, ECT decided to use the previously modeled scenarios and the public feedback described in the report to create a 'Preferred Scenario: 2003' for the region. To achieve this goal, ECT engaged Fregonese Calthorpe Associates to develop a "preferred scenario" using results from the four published scenarios, weighted by the regional response to these

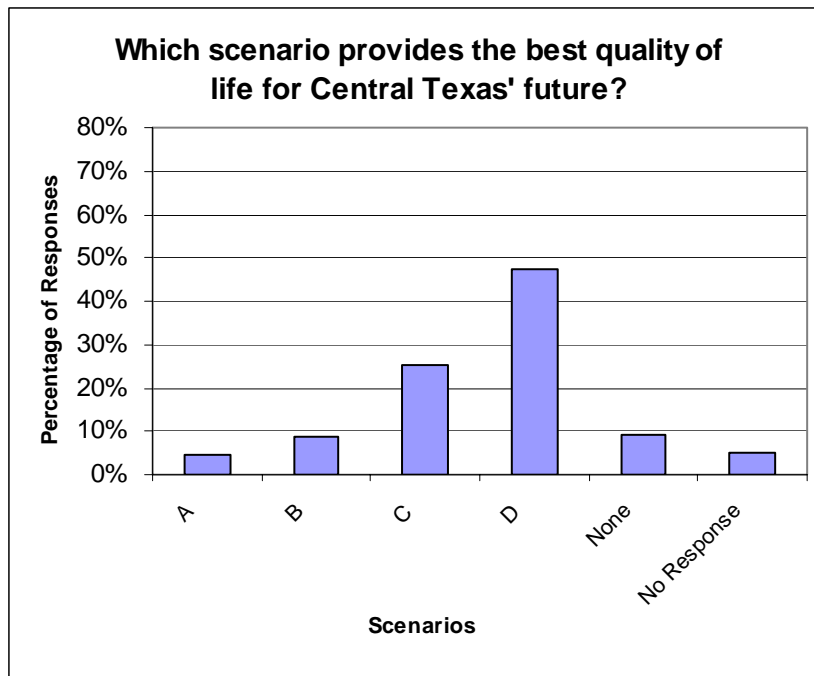
scenarios by the public. This memo will describe the responses to the scenarios, and how this input provides direction for development of a Preferred Scenario: 2003.

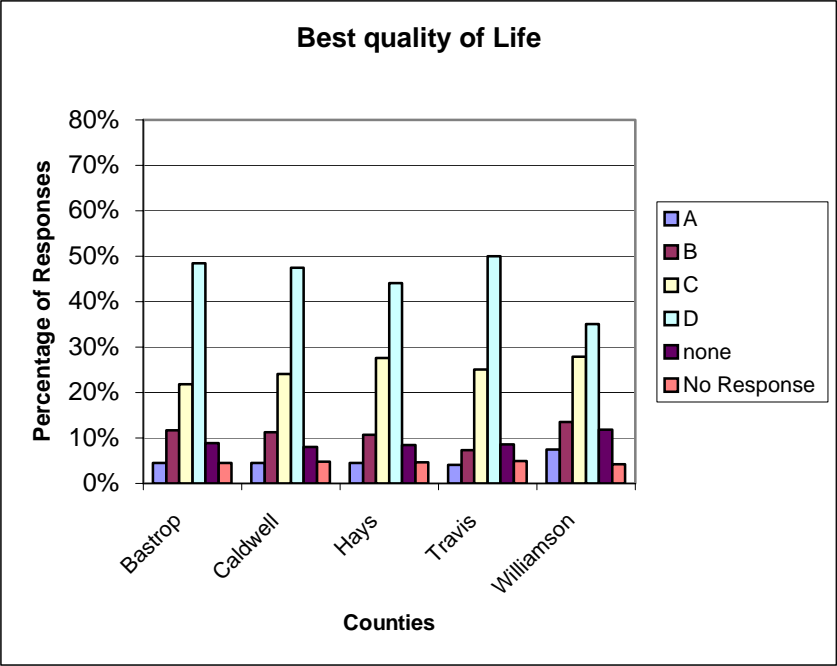
The public survey was structured to test the preferences of area residents in relation to the many diverse aspects presented within each scenario. Participants were asked to comment on a range of issues from how efficiently land was used in the scenarios, to stating their preferences for housing types, affordability and impacts on the aquifer.

The purpose was to learn from the public which scenario elements were most important to residents, and should therefore move forward in a preferred scenario, and which did not have public support. This information was gathered so that it can be used to shape a preferred scenario that will be more successful than any of the others individually.

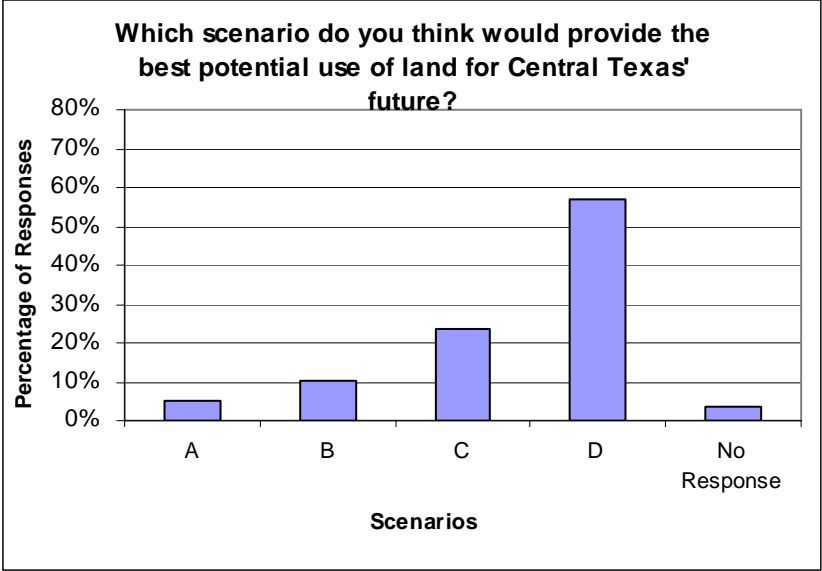
Participants were also asked to identify a scenario they felt would achieve the highest quality of life. There was not a “*which scenario do you like best*” question per se, but rather “*which scenario would provide the best overall quality of life for Central Texas’ future?*”

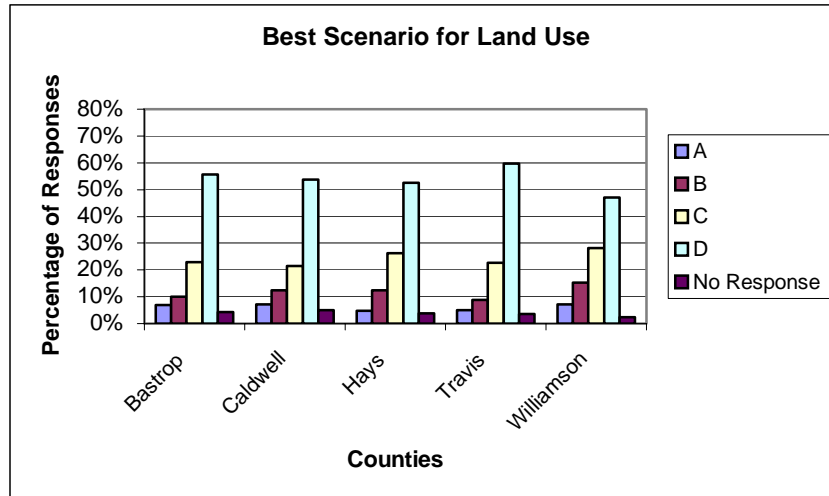
The overall response to this question showed that residents preferred Scenario D to Scenario C with 47% and 25% approval respectively. At the county level, the support for Scenario D was weakest in Williamson County with a 35% approval compared to 28% approval for Scenario C. The strongest support for Scenario D came from Travis County, which had 50% approval. It is also interesting to note that 9% of respondents chose “I do not like any of these scenarios.”





Overall, 57% of respondents chose Scenario D when asked “Which scenario do you think provides the best potential use of land?” In response to this question by county, the range for those who preferred Scenario D was from a low of 47% in fast-growing Williamson County to a high of 60% in the more urban Travis County.





What can we infer from the results?

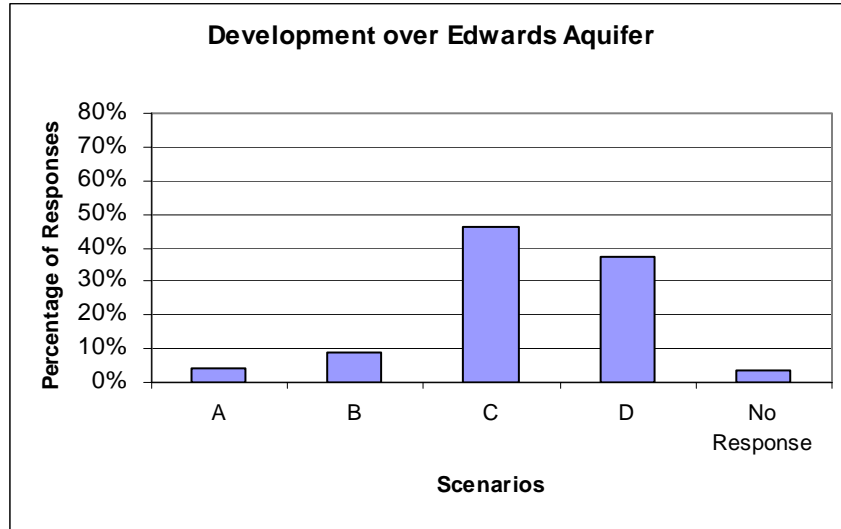
By and large we were impressed with the amount of consensus revealed by the survey and while there are considerable areas of agreement, Scenario D cannot be declared an outright popular favorite because there is a consistent minority who are more comfortable with Scenario C. Overall, Scenario C had 24% approval and was within a range of 21% in Caldwell County to 28% in Williamson County. Those who preferred Scenario C did not agree with all aspects of Scenario D and thus would not agree that D is in fact the “Preferred Scenario.” Nearly one quarter of the respondents preferred Scenario C, which is a notable minority.

Overall, the Scenarios A and B had minor approval at 10% or less. Scenario B had an approval range from 9% in Travis County to 15% in Williamson County. Scenario, A which was the “base case-current trends” scenario, was only chosen by 5 to 7% of the respondents.

Both C and D were on the more conservative range of the spectrum as far as amount of land developed, acres over the aquifer developed and level of investment required. The question related to development on the aquifer recharge land received the highest rating of all the survey questions as being a “very important” issue. Both Scenario C and D included development on only a fraction of the aquifer land as compared to Scenarios A or B. From the response we can safely say that keeping further development off of the aquifer would be well-supported policy by the public.

Scenario	Land over the Edwards Aquifer developed (of a total of 226 sq. miles)
A	56.7 square miles
B	30.2 square miles
C	.1 square miles
D	.6 square miles

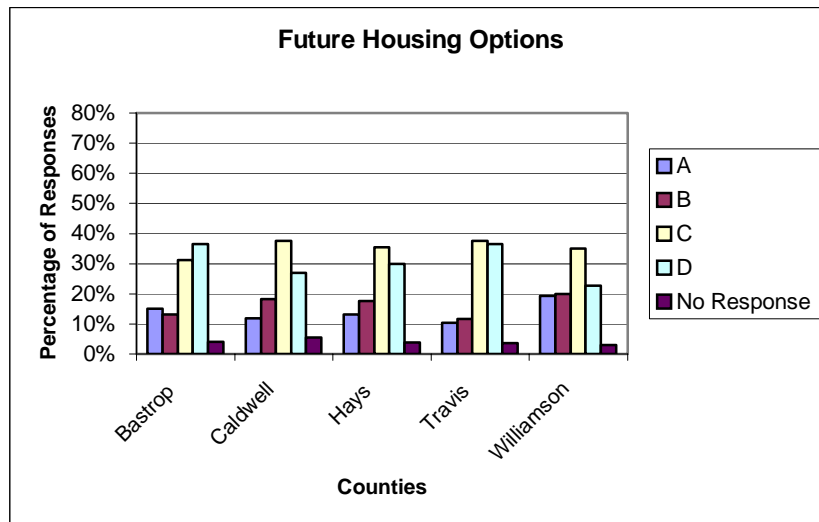
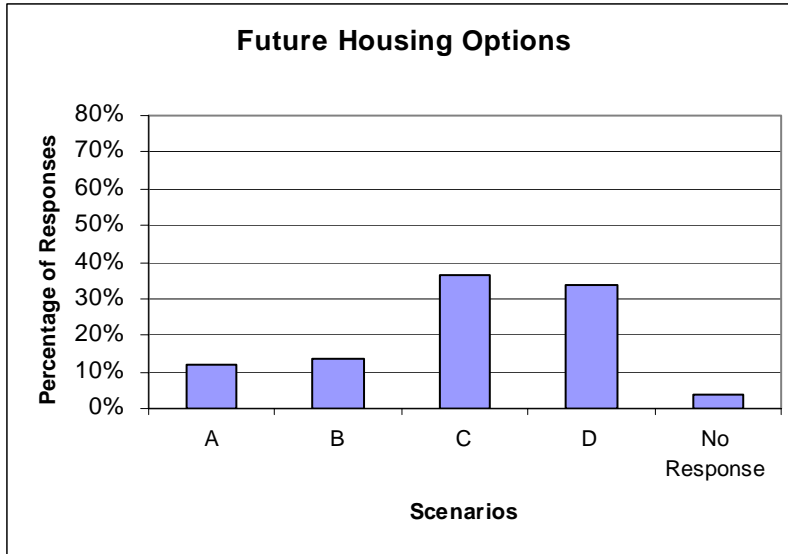
When asked “which scenario do you like best regarding future development over the Edwards Aquifer?” Scenario C was favored over D by 46% to 37% respectively.



There was a notable difference in the housing mix between the scenarios. While this question was not rated as highly important to people (38% “high” importance, 47% “medium” importance) the scenarios that provided a greater mix compared to current policy were preferred.

Scenario	Housing mix: percent single family versus apartments, townhouses and condos
A	63/37
B	63/37
C	59/41
D	58/42

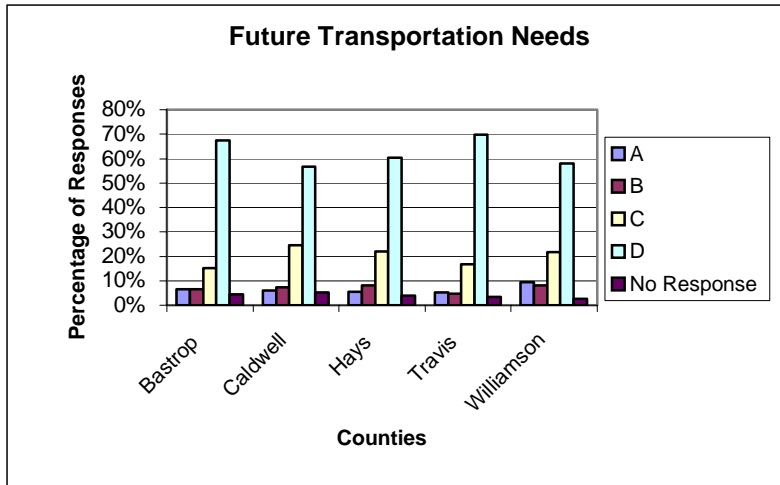
When asked “which scenario would provide the best future housing options?” the results were nearly even between Scenario C and D - 37% and 34% respectively. Consequently policies that provide a greater range of future housing options would be broadly supported.



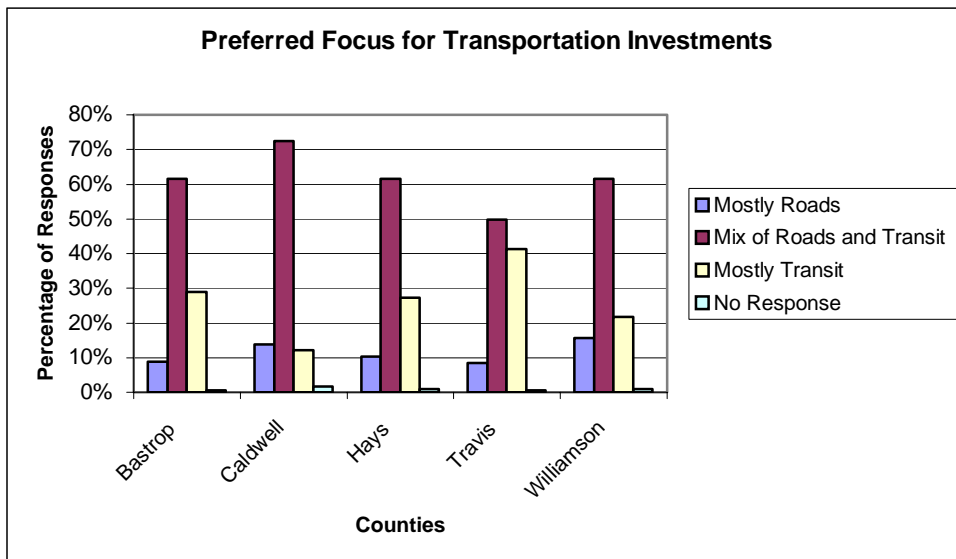
On the topic of transportation, Scenario D was preferred over Scenario C by a wide margin. When asked “Which scenario do you think would best serve our future transportation needs?” only 18% of respondents chose Scenario C, far less than the 67% of respondents who chose Scenario D. The approval for scenario D in the five counties ranged from 57% - 70%. In terms of transportation, Scenario D was described in the survey as 85% auto trips with 15% of trips by other modes. The transportation element of Scenario D included the highest percentage of non-auto trips and the lowest number of average weekday hours of travel per year (248 compared to 244 in 1997) than all of the other scenarios.

Exactly 63% of respondents indicated that transportation was an issue of high importance and 25% indicated transportation was an issue of medium importance. Respondents further indicated that the number one concern for the future was “transportation/congestion.” In terms of transportation, scenario’s C and D fared better

because they contained greater amounts of high capacity transit than either Scenarios A or B. A logical conclusion related to transportation is that respondents indeed see the need for more travel options.



However, when asked to decide how transportation investments should be focused there was wide variation by county. In Caldwell County, 72% of respondents chose “a mix of roads and transit.” However, only 12% respondents chose investing in “mostly transit.” In Travis County, “mostly transit” was chosen by 41% of respondents. Given land use patterns these responses indicate that a variety of approaches will be necessary to meet differing needs across the region.



Examining Weighted Results

In order to craft a preferred scenario, a weighted review of the discrete survey results can provide a foundation from which the preferred scenario can be built. A weighted review takes into consideration the entire range of responses to find an overall average. For example, in response to the question of which scenario provides the best use of land, we found that 5% of respondents chose the scenario that developed 468,000 acres and 57% of respondents chose the scenario that used only 85,000 additional acres. The weighted average response resulted in around 131,000 additional acres, or 205 square miles of new development. A similar review of the “development over the Edwards Aquifer” question resulted in a weighted average of respondents preferring no more than 640 acres or 1 square mile of the aquifer recharge zone to be developed. The weighted average response in terms of housing mix resulted in 56% single-family housing, 7% town homes and 37% apartments or condos.

Building the Preferred Scenario: 2003

By creating weighted average responses we conclude that the Preferred Scenario that best meets the desires and values of Central Texas residents would:

- Minimize development over the Edwards Aquifer recharge area;
- Concentrate new development in existing towns and centers and use redevelopment in order to minimize development of “new land”;
- Rely on many ‘Centers’ around the region; and
- Provide for a greater mix of housing types in the future, with more multi-family housing options than are available today.

In order to meet those criteria, FCA has created a development program for a new Preferred Scenario: 2003. This program can be thought of as the menu for future development. The program includes a range and quantity of development types that could be expected.

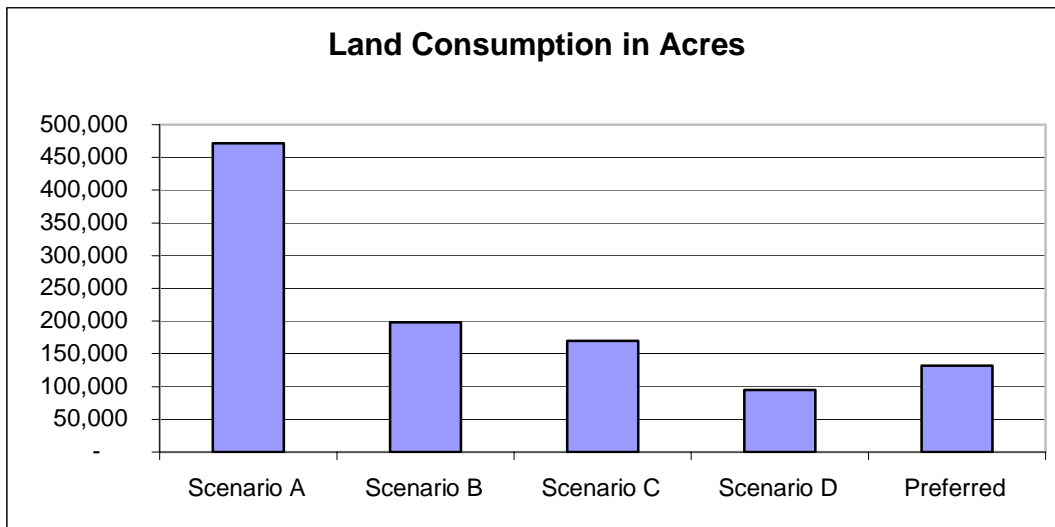
This table details the “ingredients” of the Preferred Scenario: 2003. The development types use the same building styles, densities, and other factors included in the building and testing of the original four scenarios. The numbers below represent new units (jobs and housing) that would be added to the region’s current supply under the Preferred Scenario: 2003.

Development type	Employment	Households	Acres
Downtown	109,844	13,250	355
Downtown Commercial	130,333	4,751	235
Downtown Residential	10,585	8,491	193
City	29,879	42,164	2,470
City Neighborhood	6,408	22,788	1,000

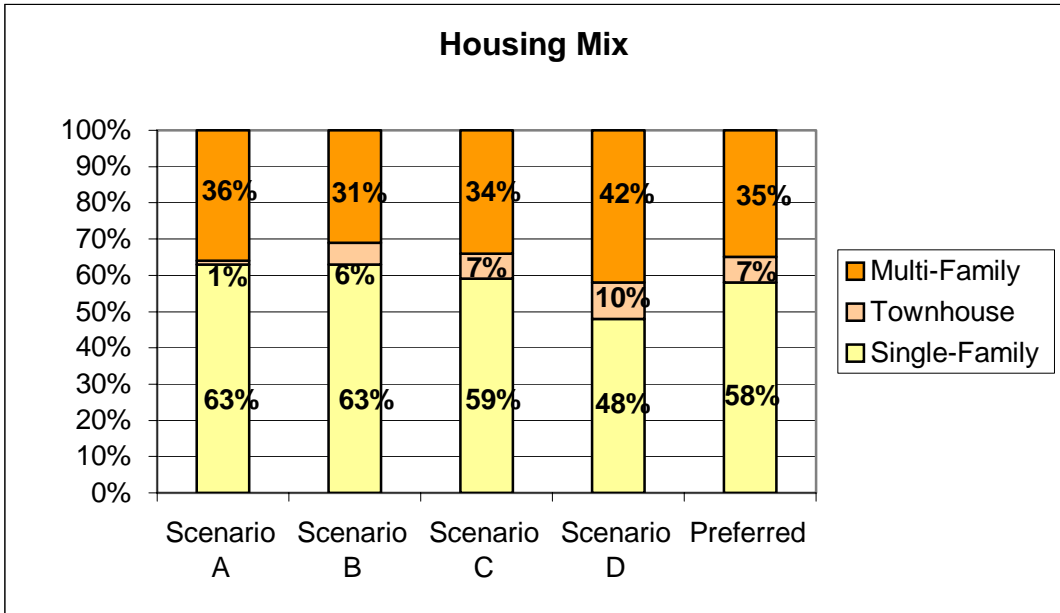
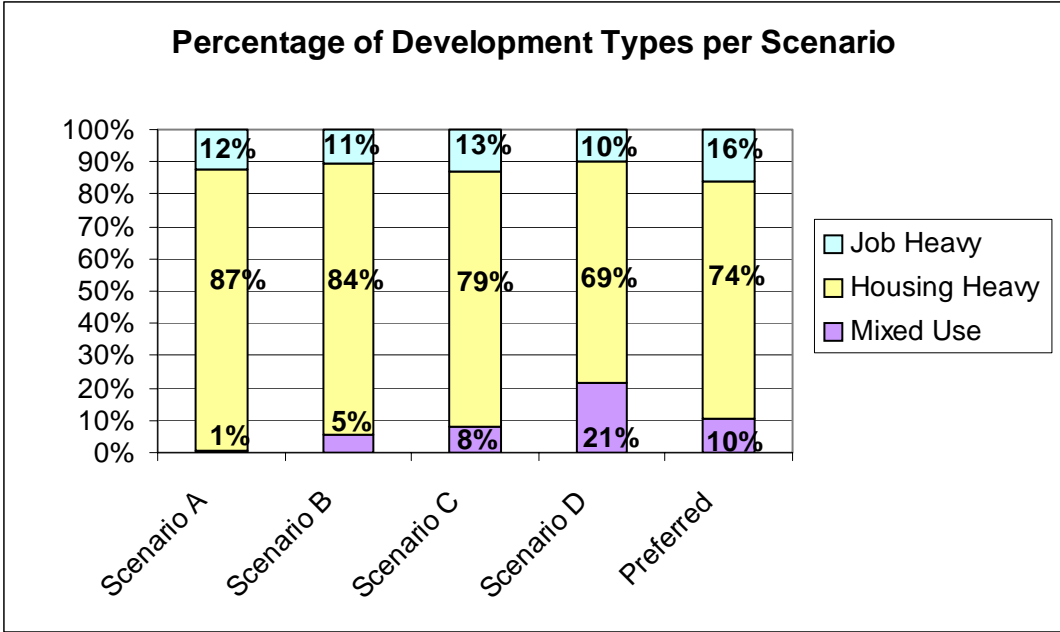
Town	51,431	61,902	5,610
Residential Subdivision	0	175,375	48,850
Large lot	0	67,362	38,900
Rural Housing	0	0	0
Conservation Rural	0	5,959	8,950
City Commercial	110,234	9,914	750
New Town	20,669	36,506	3,140
Activity Center	48,260	27,572	3,240
Highway Commercial	63,845	24,854	5,490
Office Park	176,496	0	4,970
Industrial	71,019	0	7,290
Totals	829,003	500,887	131,443

The following graphs provide a comparison between the test scenarios and the Preferred Scenario: 2003 for “new land” consumed, mix of housing types and mix of land uses. Unlike the earlier graphs they do not show residents’ preferences for the scenarios, but rather illustrate how the Preferred Scenario: 2003 compares with the elements of the original scenarios.

The Preferred Scenario: 2003 addresses resident’s concerns about developing too much land in the future, and provides a conservative use of new land, at around 131,000 acres, which is in between Scenarios C and D.



The Preferred Scenario: 2003 includes significantly more mixed use development than is currently allowed in the “base case” Scenario A, but far less than was described in Scenario D.



There is a slight difference in housing mix between the weighted average discussed earlier (56% single family, 7% townhouse and 37% multi-family) and that presented in the above chart. That slight variation is due to blending the housing survey question response with the preferences for the amount of land urbanized when the weighted average response analysis was conducted.

The illustration below describes the spatial distribution of growth as indicated by preferences of respondents. This graphic will be used to help guide FCA in the development of a GIS based Preferred Scenario: 2003.

Preferred Scenario

The numbers of households, employment, developed acres, regional density, costs of new local infrastructure and other indicators for the Preferred Scenario: 2003 were derived as weighted averages based on the direct survey feedback each scenario received. Calculating the total weighted averages allows the resulting numbers to directly reflect the wishes of participating residents. Because the majority of residents voted for either Scenario C or D in most categories, the Preferred Scenario: 2003 numbers consistently fall within this range. However, with some residents voting for Scenarios A and B, the Preferred Scenario: 2003 is more than just an average of Scenarios C and D, but instead a buffered and specific allocation prescribed by the voting results of all the scenarios in each of the categories including employment, developed acres, housing mix, etc.

Preferred Scenario Weighted Average Numbers	
Incremental Households	292,274 (58%) Single Family Residential 170,885 (35%) Multi-family Residential 38,590 (8%) Townhomes
Incremental Employment	186,178 Retail 375,286 Office 32,750 Industrial 235,460 Other
Developed Acres	131,000 acres
New Development	205 square miles

Building off Scenarios C and D

Once the numbers for the Preferred Scenario: 2003 are determined, it is possible to configure the spatial allocation, or geographic distribution of growth to show what the Preferred Scenario: 2003 might look like in physical form across the region. By a significant margin, residents stated their preference for the land use distribution patterns described in Scenario D, which received 57% of the vote. Secondly, 24% of respondents voted in favor of the land distribution of Scenario C. With a combined total of 81% of respondents voting for either Scenario C or D, it can be conferred that participants prefer, in general, focusing growth within urbanized areas, preserving rural areas and open space where possible, and protecting land within the Edwards Aquifer recharge zone. Therefore, in constructing the spatial distribution for the Preferred Scenario: 2003, the land use and development typologies assigned to Scenario C and Scenario D provided a great starting point.

Of all the scenarios, Scenario D represents the most aggressive compact development pattern by focusing growth within already urbanized areas around the region and by building on existing vacant land, adding density through infill and redevelopment, and converging mostly within the Austin downtown area by means of compact neighborhoods and employment centers. New development on undeveloped land fanned out from already concentrated household and employment areas such as Lockhart, San Marcos, Bastrop, and Taylor. Under this scenario, the region’s urban footprint expands

very little. Scenario C, by contrast, included the development of 144,878 acres throughout the region in a more scatter shot approach. This results in new towns and developments in areas currently undeveloped which are also isolated from existing transportation corridors. New development in Scenario C would likely replace open space and would require significant infrastructure including transportation linkages. This scenario costs more money and expands the urban footprint significantly more.

Preferred Scenario Spatial Allocation

The Preferred Scenario pursues compact growth patterns and incorporates higher density of household and employment. The Preferred Scenario 2003 also calls for the development of 205 acres on existing undeveloped land. In order to bridge the gap of 71 additional developed acres based on the desired weighted average, attributes of Scenario C were borrowed. To achieve development of 205 *new* acres, the Preferred Scenario 2003 relies on the use of vacant land within currently urbanized areas, particularly in and around Austin's downtown, and on vacant land near areas of concentrated households and employment clusters.

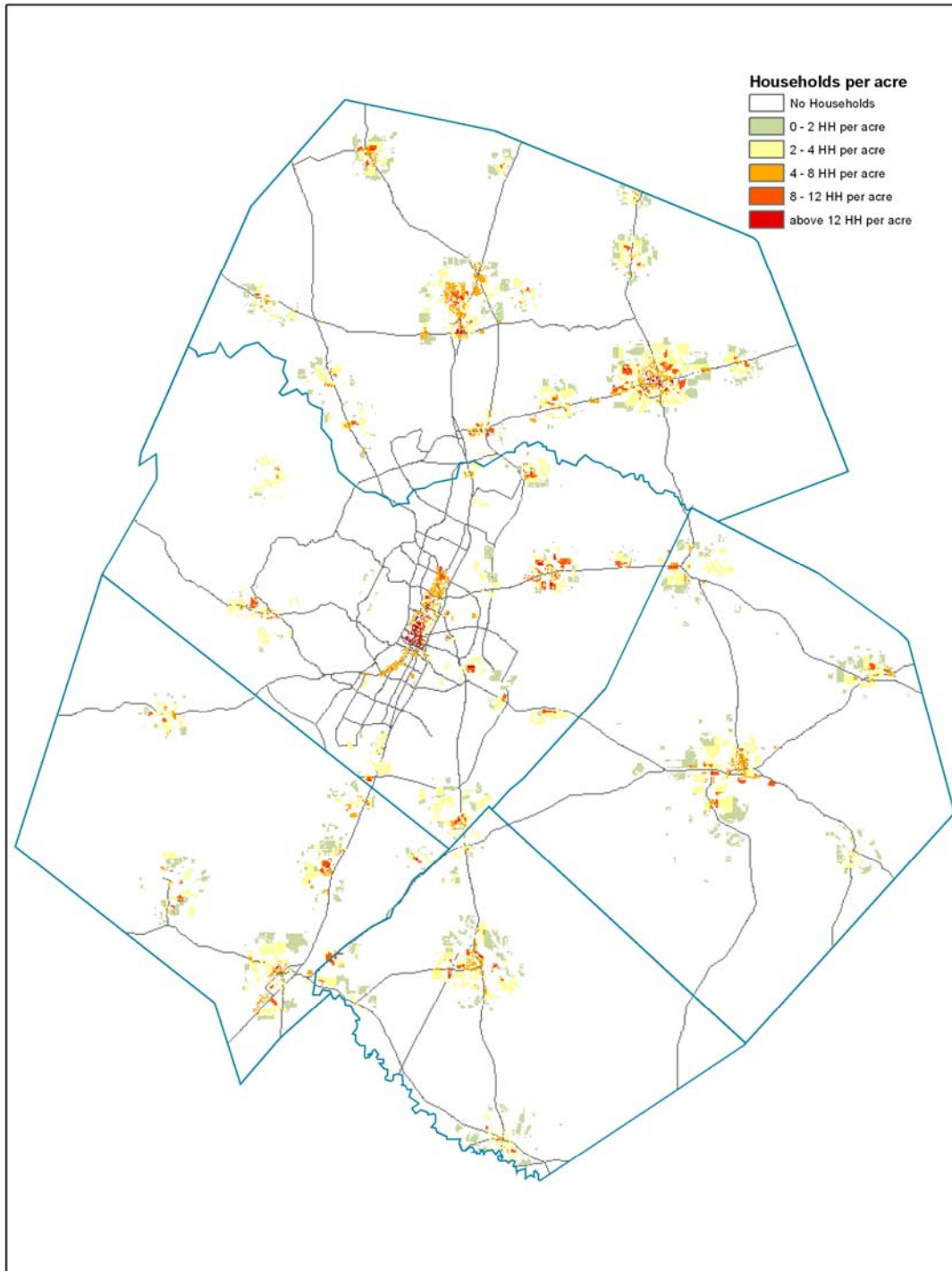
Households Distribution

To configure the spatial allocation of households for the Preferred Scenario, adjustments were made to maintain the desired overall urbanized footprint of 113,000 acres. For example, the Preferred Scenario 2003 calls for a housing mix of 56% single family, 37% multi-family, and 7% townhome residences. This housing mix, under current households per acreage allotments, in effect would require more than 113,000 acres of total urbanized land. To adjust this, the average single family residence lot acreage size was decreased, thus increasing the overall household density from 2.8 people per acre, to 3.6. In addition, households comprised of new rural housing developments, which require a larger expanse of land per person, were removed from the Preferred Scenario housing mix and instead dedicated toward conservation and rangeland uses. Any additional households needed to meet the total weighted average of households were allotted to more compact neighborhood areas within already urbanized clusters. Housing mix and new households appropriation adjustments allowed preservation of the overall desired amount of urbanized acres, including allowing only 1 square mile of aquifer recharge zone development, while meeting the overall households and employment numbers.

As a result, the Preferred Scenario housing mix would more closely resemble 58% single-family residences, 35% multi-family, and 7% townhomes. This housing mix remains close to the original weighted averages of the Preferred Scenario but at a slightly higher density of households per acre. By making the adjustments noted previously, it was possible to retain, and in fact slightly increase, the proportion of total single family residences in the area, which satisfies the wishes of survey respondents, particularly who live outside of the Austin downtown area.

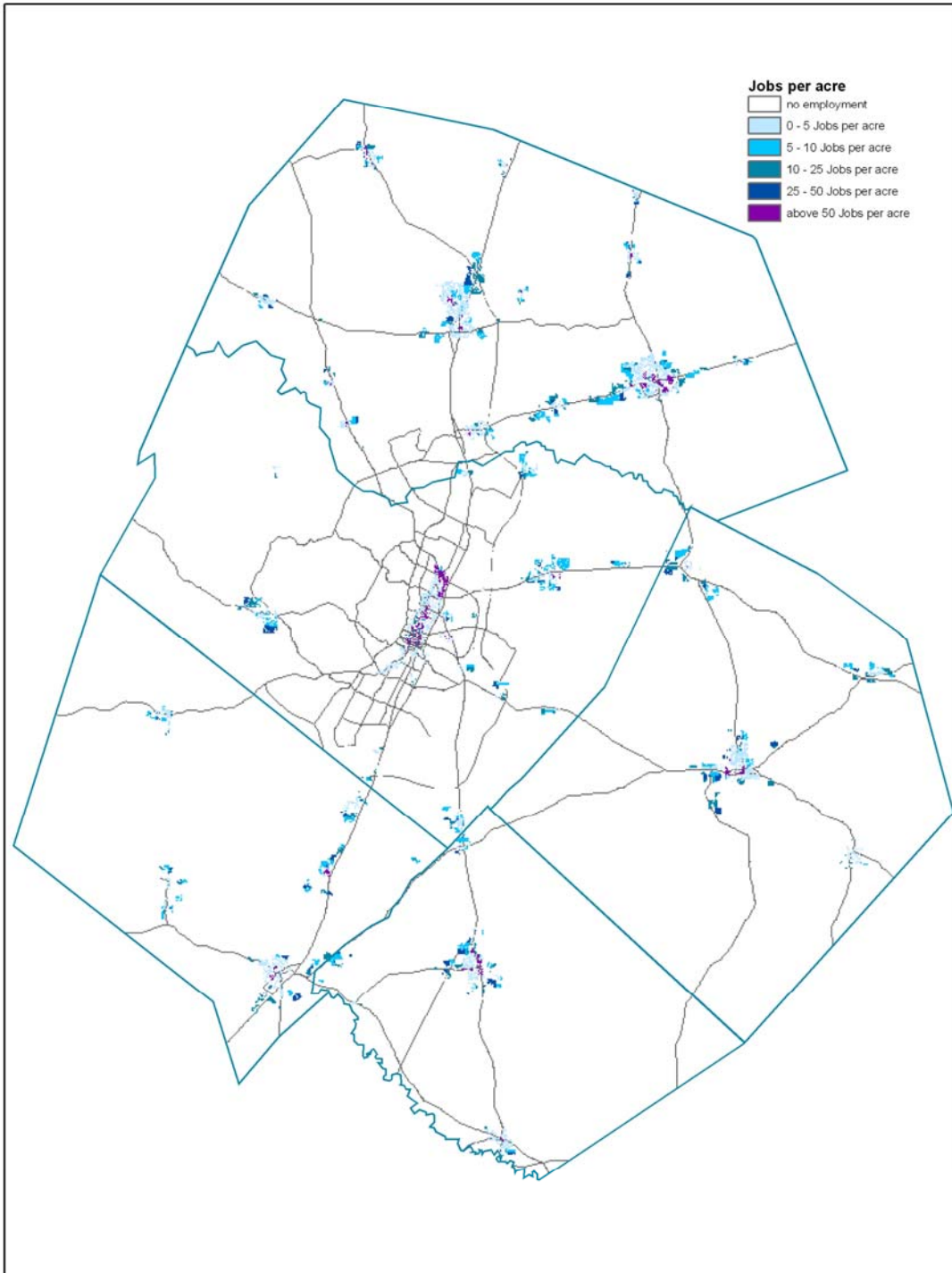
The following map shows the resulting distribution of households across the region. Some patterns that emerge show the concentration of high density housing development occurring along major transportation corridors, and at the epicenters of intersections,

regional towns, and regional centers. Medium density housing blankets many of these higher density areas and new pockets sprout areas such as Lago Vista and Florence.



Employment Distribution

The following map shows the distribution of employment throughout the region.



The Preferred Scenario focuses new employment development into already urbanized areas, which requires less public investment for new infrastructure needed to provide employers with access to public services. The Preferred Scenario also shows an employment distribution that closely matches the distribution of households throughout the region with a 1.0 jobs to housing ratio. Centers outside the Austin urban downtown, such as Taylor, Georgetown, and Lockhart provide new employment opportunities for local residents. Employment centers are located along transportation corridors allowing easy access for employees and for employer product distribution. By locating employment in already urbanized areas, employers can take advantage of existing transportation infrastructure while also helping spur new economic development. New transportation options become more viable, such as transit, more frequent bus service, etc. By closing the distance between households and employment centers, workers have more options for work, including working closer to home which can decrease overall travel distance—an important indicator for quality of life.

Conclusion

The Preferred Scenario: 2003 is the result of a unique blend of public opinion, analysis and design. This combination of driving forces is at the core of developing a path for Central Texas that:

- Provides for an efficient, effective and reliable system for moving people and goods on a daily basis through a network of roads, transit and trails;
- Conserves natural resources by minimizing the footprint of growth and avoiding environmentally sensitive areas such as streams, floodplains and the Edwards Aquifer;
- Enhances neighborhoods by directing growth and investment to where they are most desired;
- Improves access to jobs for all by building on accessible employment centers and increasing the number of jobs in parts of the region where more localized options are desired.

Accompanying this memorandum is a series of one-page descriptions of how the Preferred Scenario: 2003 compares with scenarios A, B, C, and D. Each page focuses on one indicator or measure that relate to the guiding principles established by the Envision Central Texas Board.