

Horticulture & Community

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This report focuses on the importance of horticultural elements and other components of community design. It investigates personal to public realms and natural to built settings.

The intent of the study is to understand the role that horticultural elements and horticultural systems contribute to personal well being in the greater Sacramento region. The study begins with an investigation of treasured and important places as perceived by Sacramento region residents. The findings are then compared with more detailed and place specific studies that further illustrate the relations and importance of horticultural elements and quality of community life.

Approach

This paper represents an expansion of the scope of the funded Slosson proposal and a shift in research approach. Expanding scope has been made possible by involving students in survey design and data collection and evaluation and by incorporating information from recent related original research studies funded through Community Design & Planning Services (CDPS) and the Sustainable Communities Consortium (SCC). Adjusting the approach was necessary for two reasons. The non-profit housing developer that managed the housing project that was the setting of the original proposal elected to not renew leases with the majority of existing tenants. This action eliminated the possibility of measuring impact of horticultural changes in the complex. In addition, construction funds were prioritized to infrastructure improvements such as irrigation systems, fence replacement, walk repair, and lighting. These changes reduced the budget for horticultural elements. By conducting new investigations in the Treasured Places study, and by focusing on horticultural findings of recent research, the original goals have been addressed.

Methods

Information was collected by focus groups, interviews, and questionnaires involving approximately 730 people. African as well as Asian and European American adults in their twenties to people into their seventies

contributed to the data. Each of the four studies used one or more data collection methods:

1. Treasured Places: Involved 70 personal interviews using three open ended questions and 18 responses by an open format questionnaire using the same interview questions.
2. Del Paso Heights: Focus group with 12 participants.
3. UC Davis Medical Center: 18 personal interviews, 40 participants in three focus groups, and 103 respondents to a closed format questionnaire.
4. Pedestrian Amenities in Downtown Davis: Primarily a closed format questionnaire involving 416 participants.

Summary

The Treasured Places study suggests that places rich in horticultural elements, such as parks and natural areas, are highly important. Sacramento Region residents prefer natural and park places 2 to 1 over urban places. Distant nature, places requiring a drive up to several hours, are the top treasured places in the region (45% of responses). In urban settings, nearby natural areas (12% of responses) are more treasured than parks (8% of responses). It is interesting that these responses were similar among African, Asian, Latino, and European Americans.

The other studies support these findings and illustrate the importance of horticultural elements and systems in community design and quality of life. In discussing resident preferred physical improvements to Del Paso Heights, the focus group (67% African American) wanted street trees planted along all major streets. When asked why this was important, the aesthetic benefits and community pride were the considerations. Contributions that street trees could make for environmental quality, economic development, and social interaction were not at all seen as important.

The UC Davis Medical Center study rated the importance of outdoor landscaped settings in balancing the experiences in clinic and hospital settings. Patients, visitors, and staff all used the outdoor environment to “escape the clinic environment”. While this use is expected, the extent of use very interesting. People used the grounds for escape as much as they used it for functional reasons, such as walking to another building or walking to a parking lot. People sought a variety of uses

from the outdoor environment, from a place to meditate and focus thoughts, to rest, and to exercise for both stress reduction and for rehabilitation.

The Downtown Davis Pedestrian Amenity study was the most specific in rating the importance of horticultural elements and comparing these elements with other aspects of the built environment. Respondents were asked residents to rate the importance of 19 amenity elements that included landscape, infrastructure, architectural, social, and retail amenity criteria. The presence of street trees were the top item of all 19 factors, followed by lighting, sidewalk cafes, other people using the downtown, benches, and colorful plantings on the sidewalk.

All findings support the importance of horticultural systems and elements to community well being on regional to local scales. It is particularly interesting the degree to which findings in the Treasured Places and the Downtown Pedestrian Amenities studies demonstrated how these systems (Treasured Places) and elements (Downtown Amenities) dominated over other environmental components.

The Treasured Places Study

This study sought a qualitative assessment of the degree to which aspects of the built and natural environment were seen by residents as important to their quality of life in the greater Sacramento metropolitan region.

Three questions sought open responses to:

1. The places people felt were treasured or sacred, meaning places that were critical to their enjoyment and well being in the region.
2. The places that people felt enriched their quality of daily life, yet were not as critical as the treasured places.
3. The places that people would like to see improved in order to increase their enjoyment of the region.

Information representing an east to west transept of the Valley was solicited, beginning with Sutter Creek and Grass Valley in the foothills, City of Sacramento in the center, and Davis and Woodland at the western edge. A script was developed for the interviews and questionnaires that explained the meaning of treasured/sacred/important places in order to maintain a consistency in responses.

The intent was to give great range in what was an acceptable response in order to make the process as

open as possible. Each interview or question included the following information:

“We are working on a UC Davis research project that will help us better understand how people feel about this region. We would like to know which places you regard as treasured or sacred, meaning places that are of the highest importance to you personally. These places can be big like Yosemite, or small like your backyard. They can be natural, like a river or wildlife reserve; or man made, like park, orchard, or building. They are places that have the highest importance to you, and they can be critical personal places like your home or very important experiences and sensations, such as a view to the Sierra mountains or the salty smells of Monterey Bay. Basically they should be places that you love go to or experience, and if these places were no longer available to you, you would be quite devastated.”

A total of 88 residents participated in the survey. While this sample provides a strong indication of patterns, because of the size of the sample it may or may not be conclusive and sufficiently representative of the region. The findings included several surprises that merit further study to confirm results.

Question 1:

What are your most treasured/sacred/critical places in the region? The average number of responses per person was 4.5 treasured places. (See chart, next page.)

The data from Question 1 was organized into seven general categories, including:

- Distant Nature (places one drives a distance to) 145
- Nearby Nature (a natural setting in or near an urban area) 39
- Urban Park 26
- Built Environment (architecture, downtowns, streets, library, cafe, malls etc.) 97
- Agricultural (causeway, orchards, farms, etc.) 9
- Personal Place (home, backyard, grandmothers house, country home, ranch, etc) 7
- Social Issue (crime, homeless, schools, etc.) 0

Gender

Male: 45 Female: 43
(88 Reporting)

Ethnicity

Caucasian: 56 African-American: 3
Asian-American: 18 Native American: 1
Pacific Islander: 4 Other: 4
(82 Reporting)

Age Group

(0-10): 0 (11-20): 11
(21-30): 27 (31-40): 20
(41-50): 13 (51-60): 13
(61-70): 2 (71+): 1
(87 Reporting)

County of Residence

Yolo: 20 Sacramento: 46
Amador: 5 Nevada: 12
(83 Reporting)

Breakdown of residents sampled for the Treasured Places study.

Question 2:

What are the places that, while not as critical as the treasured places, make your life very enjoyable in the Sacramento Region? This question generated an average of 2.5 responses per person. (See chart, next page.)

Question 3:

Which areas or places could be improved in order to increase your enjoyment in living here? We received an average of 2.3 responses per person for this question. (See chart, next page.)

Summary of “Treasured Places”

From a horticultural perspective, this study demonstrates the importance of natural and green places as significant components in the quality of life in the Sacramento region, exceeding all other aspects of the environment.

The study also raises several issues. Distant nature, places that one needs to travel to, comprise the

largest percentage of treasured/sacred places. Travel times and distances are quite extensive, and generally represent most of Northern California. Some sites were as far north as Redwood National Park, and as far South to Sequoia National Park. Could this extensive travel be reduced if a more diverse and powerful system of natural places existing nearby?

Developed parks often comprise the major open space in urban areas. However this study suggests that nearby natural sites are more treasured than typical urban parks, and that more natural sites should be improved/developed than developed parks.

Perhaps most surprising is the response to personal places that are treasured. In our definition of treasured places prior to responding to the questions, we stated that these could be one’s backyard or elsewhere. Of 333 treasured/sacred places categorized, only 17 included personal places. It is also interesting that the foothill communities ranked so high in treasured places (71% of the responses), over the central and western portions of the valley.

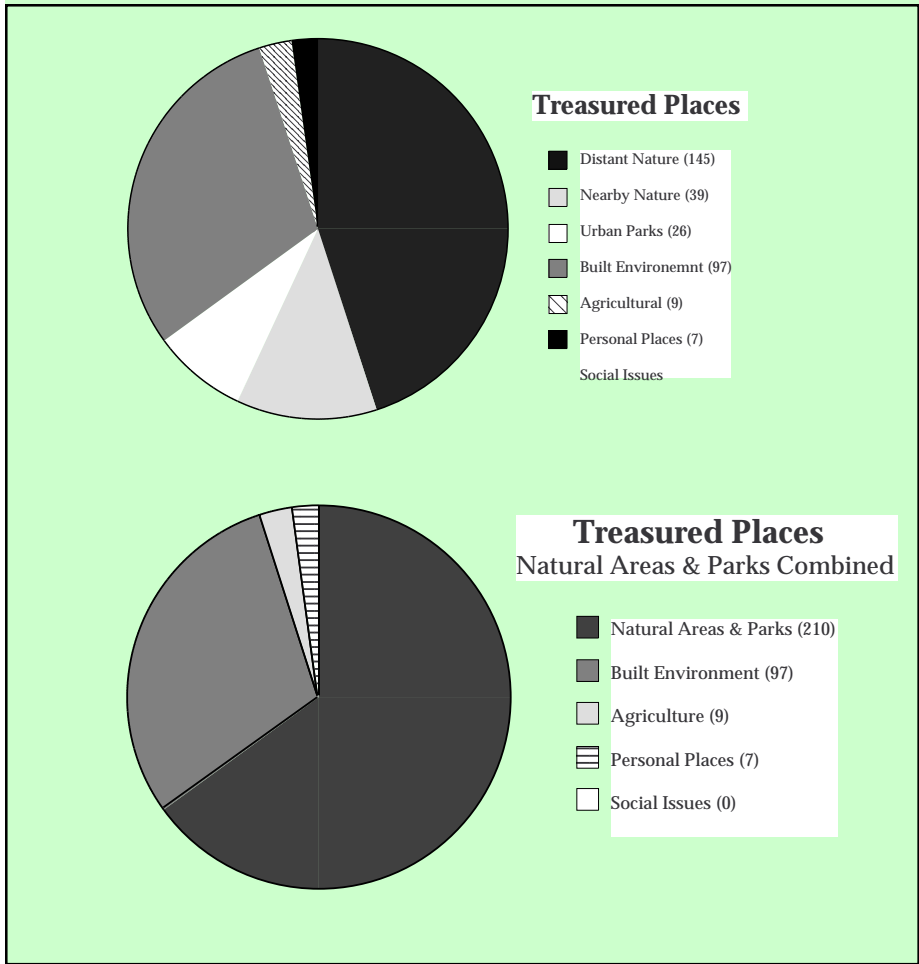
It would intuitively suggest that one’s connection to community and region would be enhanced by treasured or sacred connections to one’s personal environment. Should these findings repeat in a larger sample of the region, it may suggest both a need and opportunity to involve horticultural elements in the design of personal gardens that are extremely meaningful to residents.

The Del Paso Heights Focus Group

The purpose of the focus group was to explore community improvements the Del Paso Heights district in Sacramento. The district’s population includes predominately African American and Asian residents. Income is low and unemployment is high. The twelve focus group participants included 9 African Americans and 3 Caucasians.

Two classes of improvements were raised by the residents, improving safe paths through the community that could be used by school children to avoid threatening areas (drug houses) as they traveled to school and other destinations. The other set of improvements involved street tree planting along major streets (thoroughfares that are the entrances to and connectors within the community) and shrub and ground cover improvements to the area surrounding the high school football field. (football is of high importance in community activities).

Reasons for the horticultural improvements were



Responses to Question 1.
Data clearly establish that distant nature is the most treasured place category in the region. If you combine all natural and park places, these exceed built environment features by 2:1.

based on aesthetics and reinforcing pride in the community. The facilitator raised other issues related to the improvements, such as enhancing economic development, improving environmental quality, and increasing social opportunities; yet these were not of interest to the participants.

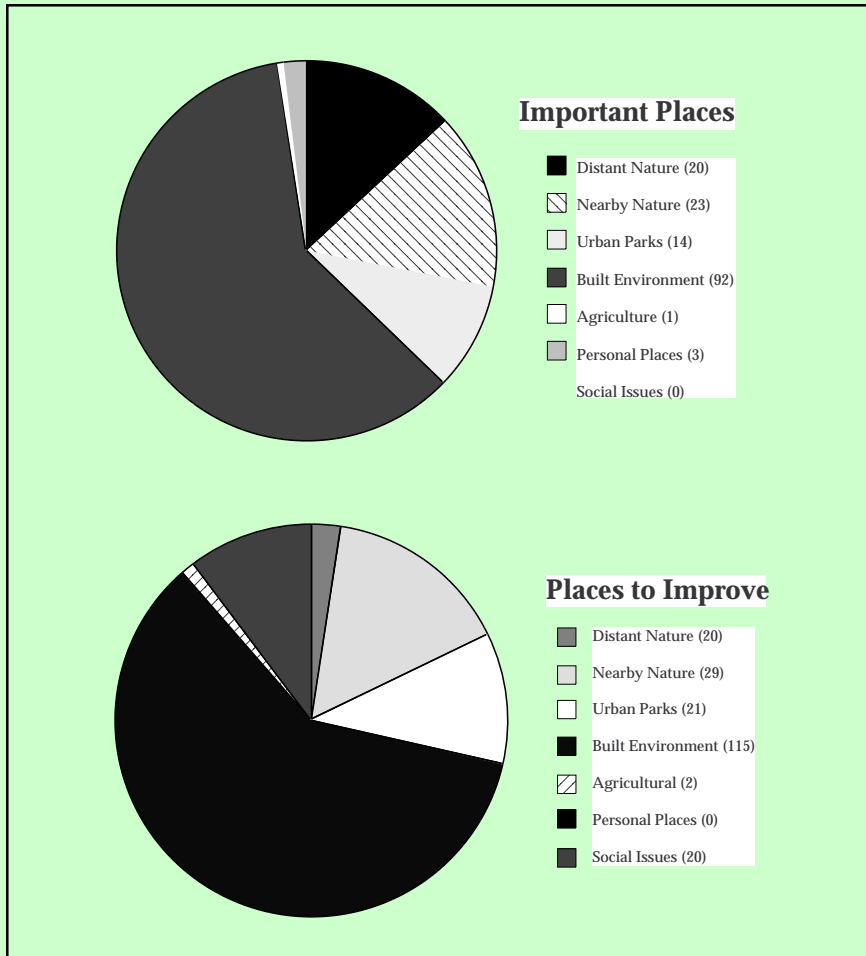
Perhaps this study is most interesting is the extent that people perceive horticultural elements as making urban places more attractive.

The Downtown Davis Study

For many years Davis has been improving the downtown environment. A tree planting program has resulted in established shade trees throughout the downtown. Policies permit retail use of the public

sidewalk, for outdoor cafes, sidewalk signs, sidewalk sales, to food and flower vendors. Parades, festivals, and events are also encouraged in the downtown.

Since the adoption of the Core Area Specific Plan in 1991, Davis has been adding a variety of amenities to their downtown. The area has successfully evolved into an active social, entertainment, and specialty retail town center. A banner spanning the main automobile entrance welcomes people to the City. Street trees shade sidewalks throughout the downtown. New turn of the century styled street lights improve night lighting and colorful banners hang from the light fixtures. Coordinated pre-cast concrete planters and trash receptacles are located along every sidewalk. Bulbouts at intersections provide annual planting beds and improve the



Responses to Question 2. The elements of the urban environment, historic buildings and districts, farmers markets, shopping, etc., were most mentioned in this question. Nearby nature is slightly more important than distant nature, and reasonably more important than urban parks. We had anticipated seeing more personal places, such as homes and yards, mentioned in this section, and were surprised to see that these places only represented about 1% of all responses.

Responses to Question 3. With respect to green places versus urban places, the attitudes toward “improvement” of these places focused primarily on the improvement of the built environment. People perceived the improvement of urban environments as correcting societal issues, while improvement to parks and nearby nature was perceived as increasing the quality and improved access as the highest ranked desire. It is interesting how social issues, crime, homelessness, etc. were mentioned in this question.

growing environment for established trees. Public art, including sculptures, murals, and etched glass windows on public buildings add to the decorative mix. Benches are placed along the sidewalks in a variety of orientations. Different sidewalk paving patterns and materials are used throughout the downtown, often 2 or more designs per block.

Prior to implementing phase 2 of their amenity program, The City asked Community Design & Planning

Services to find out what people enjoy about the downtown streetscape, what new amenities would make the area more enjoyable, and then use the information to update the implementation plan. Our research process included a survey to gather downtown user preference information, studies of evening use, sidewalk uses, and pedestrian circulation patterns. Near the end of the process, a public workshop reviewed alternatives and selected the preferred plan.



View of Marysville Boulevard in Del Paso Heights. Note how the lack of horticultural elements such as shade trees and ornamentals reduces the overall desirability of engaging the commercial strip.

The questionnaire that asked what the overall character of the downtown should be, what amenities people liked, what would improve the downtown; and we asked respondents to rate design character of several proposed improvements. The questionnaire included 51 closed and open format questions. Closed questions, those with specific choices that people respond to, are well suited to analysis. Open questions, ones in which people respond to in writing and in their own terms, are more difficult to evaluate scientifically. However, often valuable information and unique, creative ideas are suggested in the comments. By providing space for written comments at the end of the questions, we were able to get the benefits of each method. Most closed questions were written to be rated using the Likert, 5 response scale. This scale is particularly useful because it prioritizes preferences beginning with very important, somewhat important, no opinion, not very important, not at all important. The scale helps prioritize opinions. Results high on the extremities indicate very clear preferences.

Questionnaires were distributed and filled out in the downtown. Students set up tables in 4 different locations on four different days and at 4 different time periods. As it took about 4 to 8 minutes to complete the questionnaire, we provided chairs for people to sit. We found that people appreciated some form of payment, like candy. When we ran out of the candy, people started taking the balloons that were tied to the chairs to make the event feel more festive. To attract people, students invited people to spend a few minutes and share their ideas on the downtown with us. The more people filling out the forms, the easier it was to interest people. After the 4 sessions we found that the responses were well distributed among university students, residents, visitors, yet low in merchants. We then went door to

door and asked downtown merchants to fill out the questionnaire. Overall, 416 responses were received.

We then asked people to rate the degree to which a variety of in-place amenities contributed to their use and enjoyment of downtown Davis (See chart, above). Nineteen factors were listed, varying from public improvements such as street lighting, banners, and paving; to landscape aspects such as trees, flower beds, and planters; to retailing aspects such as signs, awning, window displays, store architecture, and outdoor sidewalk sales; as well as the social character of the street, including benches, other people using the downtown, parades and events, and sidewalk cafes.

It is interesting that two very important responses exceeded 70%, and combined very important and somewhat important responses were also high, with 10 of the 19 amenities receiving more than 70% important responses. In comparing the very important responses with the combined very important and somewhat important, the very important had more separation between the percentage of responses and in my opinion, are more useful to understand how people prioritized the items.

The results are quite interesting. Notice how the top 5 items provide service to people. The trees give shade in the hot valley climate. Night lighting and lots of people using the downtown provide security. The benches and sidewalk cafes are welcoming, provide places to rest, and encourage people to linger and enjoy the area. Aesthetic features dominate the next 7 items, with public art and landscaping elements being rated as more important than architecture, paving, and attractive streetlights. The bottom of the very important ratings involve use of the sidewalks for retailing purposes, followed closely by banners hung from the streetlights.



Two views of downtown Davis. the view on the left is of F Street looking north, and the view on the right is of E Street looking north. The use of planters and shrubs along the sidewalk help to define personal space in the E Street view.

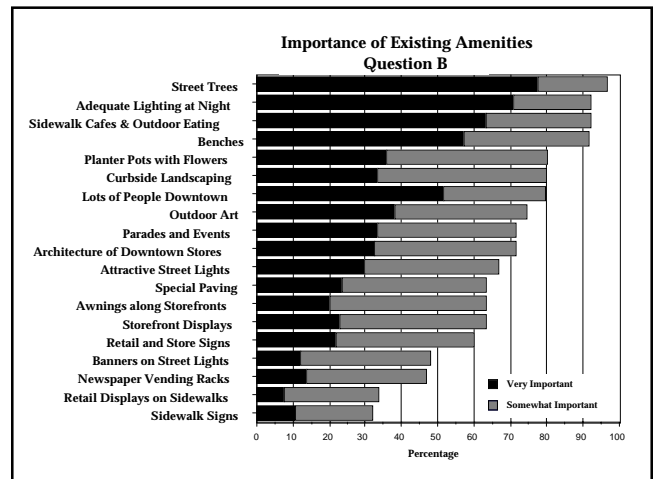
UC Davis Medical Center Study

Purpose

The intent of this study was to develop planning criteria for pedestrian circulation and related landscape open spaces for the Medical Center campus. The study investigated the potential of the grounds to be a healing landscape that would reinforce the well being of all Medical Center users and staff.

Methods

Several outreach participation methods were implemented to determine how the UCDMC campus was used by families, visitors, patients, and UCDMC staff. The UCDMC pedestrian Circulation Questionnaire targeted responses from all site users, while the UCDMC Administrative Personnel Survey focused exclusively on a list of UCDMC administrative personnel provided by the Facilities Design and Construction Office. Both surveys were reviewed and tested prior to distribution. The UCDMC Pedestrian Circulation Questionnaire was left to be filled out at the hospital by choice. The UCDMC Administrative Personnel Survey contacted all eighteen participants listed. Focus group discussions with three recovery and rehabilitation groups targeted family members and outpatients. Overall, CDPS contacted 24 family members and visitors, 74 patients and 63 UCDMC staff members. In addition, three on-site observations recorded site use.



Importance of existing amenities in downtown Davis.

Comments by Focus Groups

Healing Environments. Healing environments were discussed in detail by two focus group discussions, and the results of the UCDMC Pedestrian Circulation Questionnaire revealed a need to have relaxing places where one can get some air and leave the hospital environment.

The UCDMC grounds should provide:

- private areas that help reduce stress and allow for reflection, meditation or prayer,
- opportunities to exercise near buildings for patients and staff
- gardens or atriums as part of waiting rooms

- specific ideas generated by the analyzes:
- nonsectarian chapel
- nurturing landscaped walkways
- water features: fountains, ponds with fish or birds
- walking programs for patients
- space to practice wheelchair maneuvers
- a “transitional living center” for family and patients to learn how to negotiate the home environment before being discharged

Aesthetics. In many cases, healing environments and aesthetic improvements go hand in hand, and access to a beautiful garden from a window view or walking within the grounds can have a beneficial effect on a patient’s well-being and speed of recovery. However, one member of the focus group and three survey respondents to the UCDMC Pedestrian Circulation Questionnaire felt that funds devoted to landscaping could be better spent elsewhere. From the results of the site observations, focus groups, and the UCDMC Pedestrian Circulation Survey, a majority of the people felt that the landscaping should be improved.

The UCDMC grounds should provide:

- attractive planting of trees, shrubs, and plants with colorful flowers and fragrance
- landscaping that transitions scale between large buildings and pedestrian scale
- water features in the landscape
- art in the landscape

Summary of Planning and Design Guidelines

General Planning Principles:

Principle One: Within 150 feet of patient/visitor serving building entrances, develop small, personal scaled spaces that serve the variety of user needs listed in the research. Assume that patients with mobility limitations will be using areas within 75 feet of the entrances

Principle Two: In areas with high concentrations of visitors and patients, such as the main hospital, provide an outdoor food pavilion within 600 feet of the building entrance.

Principle Three: Design paths to provide a variety of pedestrian amenities, such as directional signage, shade, lighting, benches, and areas of attractive and restful landscape.

Principle Four: Create a variety of walks with design character that varies from geometric to organic. As per principles one and two, provide a variety of spaces and gardens where they are needed most.

UCDMC Conclusion

Gardens and outdoor spaces are important to balance the hospital environment. This is more important to family, visitors, and staff. Of the 10 amenity factors, trees and shrubs for shade are highly important to all users (90-100%) and attractive plants are slightly less important (72-82%).

Conclusion

These studies provide an interesting regional to place specific framework for understanding the role of horticultural elements in contributing to community design and quality of life. Clear intersections of results have been seen, often transcending geographic, social, and economic boundaries.

The Treasured Places study clearly shows that natural and park areas are highly valued by Sacramento region residents and that they have more importance than the built aspects of the regional environment. Treasured places also tended to be highly personalized, and little overlap occurred in other than a handful of places. For example, 24 people identified Lake Tahoe, 16 said Point Reyes, and 14 identified Yosemite and San Francisco as treasured places. The remaining 287 places were generally mentioned by only one person. This perhaps reinforces the need for diversity in the environment such that a variety of connections are possible for residents.

The Treasured Places information also suggests where urban horticultural emphasis could be directed. It is interesting that people in urban areas find natural settings more important than traditional park development (not a single person identified special purpose park types, such as golf courses or playfields). This could imply more focus on horticultural resources to develop/improve nearby nature sites. The fact that only 5% of the Treasured Places responses talked about personal places (homes, yards) is quite surprising. This could imply a new realm for horticulture and landscape design, working with people to achieve significant and treasured personal places.

The UC Davis Medical Center healing landscape study demonstrated that most users need and benefit from access to landscaped open spaces and that these spaces can have a variety of functions, from stress reduction, meditation, relaxation, and exercise. Within these areas, trees are highly important, essentially of similar importance to night lighting and directional

signage. Attractive planting, flowers, seasonal color, strong textural materials, are much more important than paving design, winding or straight paths, and grade changes.

Findings from all the studies suggest that trees alone are the single most important element of the urban horticultural landscape. It is interesting that the preference for trees was similar to people of different races and varying economic levels. From downtown Davis to Del Paso Heights, people saw street trees as the primary amenity, exceeding all other factors. In low income Del

Paso Heights, street trees were seen as the primary means to improve appearance and instill pride in the community. In downtown Davis, trees were the most important amenity, and trees, planters, and curbside landscaping were 3 of the top 10 factors that contributed to overall enjoyment of the downtown.

As an overall conclusion from the perspective of community design, the role of horticultural elements such as trees, and horticultural systems such as nearby and distant nature, are of very high importance in quality of life for Sacramento region residents.

Randall Fleming is Academic Coordinator with the Landscape Architecture Program, UC Davis. This study was funded, in part, by the Slosson Endowment Fund.