

DATE ISSUED: January 18, 2002

REPORT NO. 02-022

ATTENTION: Committee on Rules, Finance and Intergovernmental Relations
Agenda of January 23, 2002

SUBJECT: San Diego's Urban Forest

REFERENCES: Managers Report Nos. 01-070, 178, 211, and 212, and 02-003

THIS IS AN INFORMATION ITEM ONLY. NO ACTION IS REQUIRED ON THE PART OF THE COMMITTEE OR THE CITY COUNCIL.

BACKGROUND

On October 5, 2001, the Committee on Rules, Finance and Intergovernmental Relations heard Report No. 01-212 regarding Energy Conservation Regulations for New and Existing Buildings resulting from the California Energy Commission's new higher energy efficiency standards and an incentive-based approach to encourage further energy conservation measures. After the staff report, Holly Duncan, a concerned citizen of the Clairemont Mesa Community Planning Area, discussed the benefits of trees in the built environment. Mike Singleton, Council District Two representative to the Tree Advisory Board, submitted a Ten-Step Action Plan (Plan) developed by the City's Tree Advisory Board (TAB) for consideration by the Committee. The Committee then requested staff to return with additional information about the tree issue.

The City has been active for many years in providing trees in public areas such as parks and street right-of-ways, and encouraging or requiring developers to incorporate trees into projects. About twenty years ago, the Urban Design Element of Project First Class focused on bringing urban street trees to south eastern communities of San Diego. The City hired a street tree coordinator for this project, developed a program that serves as a prototype for the current street tree master plan/program; and, in 1989, began coordinating with the nonprofit group People for Trees. Community members, including People for Trees, recommended the City develop a TAB using grant money. This report provides a brief background of TAB and the City's tree programs. It describes how City programs address the recommendations presented at the October 5 hearing. Finally, the report identifies five areas for further investigation to improve and enhance the urban forest.

DISCUSSION

Trees contribute to the attainment of several of the goals outlined in the Mayor's January 7, 2002 State of the City address, including: reducing traffic congestion, creating neighborhoods we can be proud of, cleaning up beaches and bays, increasing safety, and pursuing energy independence. Trees provide traffic calming and improved safety for pedestrians near auto routes. Although landscaping was identified as a source of pollution in the Mayor's address, vegetation can also be used to minimize runoff and stormwater problems.

Tree Advisory Board

The City's TAB has fourteen members appointed by the Mayor and confirmed by the City Council. The members serve three-year terms, with each member serving until a successor is appointed and confirmed. In making the initial appointments, the Mayor appointed the chairperson and selected eight members from nominations submitted by council members and five members to represent the following specialties/groups: landscape architecture, certified arborists/urban foresters, horticulture/nursery industry, People for Trees, and the art community. The Transportation Department's Urban Forester represents the City Manager at TAB meetings.

TAB reviews City programs and policies related to street trees. TAB has provided input on budget appropriations, the City's Strategic Framework and on the development of a draft tree protection ordinance. TAB is focused on protecting existing tree resources, expanding the current level of tree cover, and is charged with the following:

Provide advice and recommendations to the Mayor, City Council and City Manager on policies and programs related to urban forestry and review and comment on implementation and compliance with urban forestry policies and programs.

Advocate and formulate proactive urban forestry policies, ordinances, and guidelines.

Prepare a recommended comprehensive urban forestry master plan and conduct a tree inventory.

Network with other boards, agencies, and community residents. Promote and foster a strong sense of community through urban forestry.

Act as a general information resource and promote volunteerism.

Promote and seek funding for the establishment and sustaining of an urban forestry program.

According to City Manager Report No. 01-070, TAB's focus has been on street trees because of their prominence within our communities. TAB has consistently worked with City staff and the council to increase the level of funding for street tree maintenance.

Transportation Department

In October 1995 street tree maintenance responsibility was transferred from the Park and Recreation Department to the Transportation Department's Street Division as part of a City restructuring process. The City of San Diego's street network consists of 2,863 miles of streets and 4,226 miles of concrete sidewalk. Staff performs and oversees contractual sidewalk repair, and works to prevent root damage to sidewalks by encouraging appropriate tree selection. Contractors perform routine repairs, retaining trees if possible. The Street Division has funded or matched funding through grants to provide more than 9,000 free non-required street trees. This results in a 3:1 replacement for street trees removed by Street Division.

The Plan submitted by TAB calls for an "Urban Forest Overview" project to determine the State

of the Urban Forest in the city and the region using City Green Software. Environmental Services Department staff has gathered quite a bit of information on what this software is, how it works, and has contacted the owners of the system. Potential funding sources that would make this project affordable to the City are being investigated. The Transportation Department's tree maintenance contracts already include inventory collection requirements and GIS mapping. Staff is investigating the potential to combine information from the Transportation Department's tree inventory with other existing information, such as Park and Recreation Department's Balboa Park tree inventory (completed in 1998), and new research to provide the Urban Forest Overview requested by TAB.

The Ten Step Action Plan calls for Adoption of a tree protection ordinance. Urban Forestry staff is already working with TAB and other stakeholders to develop a tree protection ordinance. The purpose is to protect significant tree resources located in the public rights-of-way, parks or other publicly-owned lands, such as:

- 1) landmark trees of an exceptional aesthetic quality due to size, form, or flowers,
- 2) heritage trees that are generally 50 years or older, at least 30 feet in height and with a trunk diameter of at least a 30 inches,
- 3) parkway resource trees that have been planted in a consistent design theme along public streets or trails, and
- 4) preservation groves of at least six or more native trees in public rights-of-way or in other open space or recreation areas.

The ordinance would allow TAB, community group members, citizens, Councilmembers, the Mayor, City Manager, or City staff to ask for a tree protection designation under one of the four categories.

Current Council Policy 200-05 guides the planting of trees on City streets. It encourages the planting of additional and replacement trees in street rights-of-way. Street trees may be removed at private expense only if the owner of the affected property makes the request, and only if the tree is not part of a uniform street tree planting or a significant neighborhood asset. TAB has submitted a draft revision to Council Policy 200-5 intended to enhance the urban forest as a component of the City's critical infrastructure. The proposed ordinance would be consistent with this revised policy.

The Urban Forestry Section has taken other steps to protect trees. For example, Specialty Forces sidewalk repair crews realign damaged sidewalks surrounding significant older urban trees; however, sites are limited because of funding and personnel constraints. The Urban Forestry Section and the City Attorney have set up a fund for tree recovery when trees are damaged or killed as a result of vandalism or traffic accidents. Similarly, the Urban Forestry Section works with SDG&E to ensure replacement trees are provided to residents affected by palm tree removals necessary to accommodate utility wires.

Planning and Development Services

TAB's Plan calls for a program that analyzes City policies to integrate tree canopies as an important part of energy conservation. This coordination is currently being provided. For example, the first section of the City's General Plan provides Guidelines for Future Development, which will soon be updated with the Strategic Framework Element currently under development. TAB and the City's Urban Forester are providing input.

The existing General Plan is consistent with TAB's recommendations, pointing out that landscape design should consider solar access and energy conservation, not only in the form and orientation of buildings and the location of shading vegetation and trellises, but also in the selection of building sites that do not force long commutes and cause attendant fuel consumption and emissions (pages 173, 253, 344, 382, 388, 390, 399).

The City's General Plan balances tree planting with other issues, pointing out that community character is established by natural valleys and canyons, which should be "left to their native vegetation" (pages 16, 300, 303, 304, 328, 337, 328, 377). The natural San Diego environment is dominated by shrubs that are more adapted to the local dry conditions, with trees providing an uncommon but important resource. Landscaping should emphasize drought tolerant native landscaping in public and private development including parks, commercial developments and residences, rather than reflecting the forests of the "humid east" (pages 185, 201, 269, 280, 298, 316, 381, 401). Landscaping should be sensitive to police concerns of providing "visible space" in architecture and landscaping (page 295) and the need to prune vegetation to provide safety from fire (page 296).

Consistent with this General Plan, the Development Services Department, developed and implemented award-winning landscape regulations (Municipal Code section 142.0401 through 142.0413). These regulations are designed to minimize erosion, conserve energy, conserve water, reduce the risk of fire, and improve the appearance of the built environment by increasing the quality and quantity of landscaping visible from the public right-of-way. These regulations require tree planting in front yards of commercial and residential development, and also along street rights-of-way and in parking lots. The regulations are intended to provide shade to paved areas and require the installation of street trees (equivalent of one for every thirty feet of street frontage) and trees in parking lots (within 30 feet from each parking space). For erosion control on slopes, container plantings of not less than one for every hundred square feet are required, and trees are an important component of slope plantings. TAB's Plan calls for equal street tree requirements for capital improvement projects. Development Services staff is currently investigating changes to the landscape regulations that would accomplish this.

The Development Services and Planning Departments have several programs that encourage proper landscaping with trees. For example, as of January 2000, the Zoning Code now requires root barriers adjacent to sidewalks in all new development. Additionally, planners have been coordinating with other City staff and community groups on community street tree master plans. Approximately one quarter of the communities have completed plans, and work is in progress in the remaining communities. Planners and project managers also submit data to the City's tree inventory. Finally, the City is currently developing a Street Design Manual, which will

recommend larger parkways in the public right-of-way to accommodate the growth of large crowning shade trees.

TAB's Plan calls for development of a tree planting fund to facilitate mitigation measures for projects with cumulatively significant air quality, stormwater runoff, public safety, and urban heat island impacts. Development Services staff requires landscaping to soften visual impacts. Impacts to natural forests, such as riparian areas, are often mitigated at a 3:1 ratio. Cumulative effects of development on air quality, storm water run off, and urban heat islands are investigated and mitigation is required on a case-by-case basis, although not via a fund as recommended by TAB.

Park and Recreation Department

Currently the City has 337 parks providing trees for communities citywide. New parks provide at least 22 new trees per acre. Balboa Park has more than 16,000 trees of more than 380 different species. Over the past seven years more than 1,400 trees have been planted in Balboa Park and 562 have been removed. In 2001, the Park and Recreation Department planted more than 200 trees and removed less than 90, despite the red gum lerp psyllid infestation that has recently caused problems. To combat the psyllid problem a psyllid parasite has been released and has now become established in many parts of the City. Park and Recreation staff works to diversify the Urban Forest as another means of preventing tree loss from insects and diseases. Trees are only removed in parks when they pose a significant threat to the public or property, are dead, diseased, or are a "weed" species. Exotic trees are also removed from native areas, such as Mission Trails Park, to protect habitat from invasive plants. Additionally, there are native tree planting programs and mitigation projects in Mission Trails Park, Los Penasquitos Preserve and other open space areas.

The Park and Recreation Department maintains Landscape and Maintenance Assessment Districts. These districts have resulted in thousands of new trees throughout the city as new areas are developed. TAB's Plan calls for more support for these districts. Staff fully supports expansion of these areas; however, the final decision is up to community residents.

Environmental Services Department

The Environmental Services Department (ESD) has a section devoted to energy issues. The Energy Section promotes the City's demonstration green building, which illustrates how to prevent heat islands and conserve energy. City Manager Report No 02-003 recently reported on the City's sustainable community program. This program is designed to "shepard more sustainable practices citywide" and includes sustainability indicators such as number of trees per mile of street. With the adoption of the LEED standard for new or remodeled City facilities, the benefits of tree shading will be evaluated as part of the design process for new facilities.

TAB's Plan calls upon the Environmental Services Department to assign City staff in the Energy section to work with the Urban Forester and with TAB regarding energy conservation. This is the first week for the new Energy Administrator, and this issue has already been discussed with him.

Recommendations Submitted to the Committee on October 5, 2001

The recommendations submitted to the Committee on October 5, 2001 are attached. They included a report submitted by Holly Duncan, a resident of Clairemont Mesa, on urban heat islands, and an Action Plan developed by TAB. In general, the recommendations of both TAB and Holly Duncan call for measures to:

- reduce heat islands, conserve energy,
- inventory and protect trees, and
- encourage or require tree planting and maintenance.

An interdepartmental committee was convened to focus on these recommendations and to prepare a response to this committee. The committee found that many of the issues raised at the October 5, 2001 hearing are already being addressed by the City.

Heat Islands and Energy Conservation. With regard to heat island reduction, not only is ESD providing a demonstration on this issue, the City's landscape regulations have required the planting of trees in parking lots, parks, and yards, resulting in at least 40 percent canopy cover in new development, effectively preventing heat island formation. ESD's energy conservation demonstrations and public information efforts complement requirements imposed by the California Energy Commission and implemented via regulations and incentives administered by the Development Services Department.

Inventory and Protect Trees. Both Transportation and Park and Recreation Departments have conducted extensive tree inventory efforts that provide excellent information for assessment of the City programs. Park and Recreation completed its Balboa Park inventory in 1998, and reports a net increase of 120 trees per year over the past seven years at Balboa Park. The Transportation Department's tree inventory is expected to be completed in 2002. Staff is investigating the feasibility of TAB's recommendation to conduct an Urban Forest Overview that would incorporate this information and also gather additional information.

Tree protection is addressed by Council Policy 200-05 and the proposed Tree Protection Ordinance. Tree protection also is provided by coordination between the City Attorney and Street Division to ensure that penalties are assessed for damage to trees, and that the penalties are spent on restoring or replacing damaged trees. The Division's sidewalk preventive maintenance program will avoid the need for tree removals and for millions of dollars in sidewalk maintenance.

Encourage or Require Tree Planting and Maintenance. The City's General Plan sets the tone with an emphasis on natural landscapes and appropriate plant palettes. The Planning Department is developing a Street Design Manual, and also works with community groups to develop street tree master plans. The Development Services Department implements the City's landscaping requirements, which assure appropriate plantings are provided in all new development.

TAB's Plan also includes three items that are not currently being addressed by the City. First, the Plan calls for a program in which residential improvements would trigger a requirement to

plant a tree. Currently single family residences are exempt from the landscape regulations. Second, the Plan calls for the development of a City fund to provide for watering and care of street trees. Currently, many property owners will not sign a tree maintenance agreement (street tree permit) to provide water for trees in the public right-of-way. Third, the Plan calls on the City to properly fund an urban forestry program. Although this report identifies several excellent components of the City's program, funding shortages do exist. For example, funding and staffing shortages were identified by staff as constraints on the Special Forces program providing protection for significant trees in the public right-of-way.

CONCLUSION

The committee will look into forming a Citywide perspective and will bring forward recommendations to address these issues in a followup report. In general, the committee found the City's urban forestry efforts have provided significant enhancement, especially in recent years. The City's programs and staff have been officially recognized with significant awards. An evaluation of the City's efforts revealed that the City would qualify for a "Tree City USA" designation, which recognizes local governments' contributions to the urban forest.

Trees provide important contributions in San Diego's landscape. The Urban Forest is a vital component of the City's infrastructure. Shrubs are more dominant than trees in most of San Diego's native habitats, but trees dominate the urban landscape. Various City programs are targeted at enhancing the built environment by providing appropriate trees in areas with public views. The ten areas identified by TAB will help guide staff in ongoing and new efforts. TAB should be consulted for additional comments on all programs. Staff will continue to implement various programs affecting the urban forest based on the analysis and recommendations in this report.

Respectfully Submitted,

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Approved, George I. Loveland
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EPLER/LFW

Attachments: 1. Tree Advisory Board's 10-Step Action Plan
2. Letter from Holly Duncan