



## CITY OF BEVERLY HILLS STAFF REPORT

**Meeting Date:** May 4, 2010  
**To:** Honorable Mayor & City Council  
**From:** Shana Epstein, Environmental Utilities Manager  
 Jonathan Lait, AICP, City Planner *[Signature]*  
**Subject:** Use of Synthetic Turf in Residential Front Yards to Achieve Water Conservation Goals  
**Attachments:** None

### INTRODUCTION

In an effort to reduce water consumption, there is a growing interest in the use of synthetic turf in place of grass or other living ground cover in front yards. This is due, in part, to the City's Stage B water conservation emergency and also, in part, to the City's Water Efficient Landscape Ordinance, itself a response to State legislation to conserve water resources. However, in order to maintain the City's garden quality, the Zoning Code limits the use of nonliving material in front yards. Thus, synthetic turf is currently prohibited in the front yard setback. Staff is seeking the City Council's guidance on how to balance these two objectives.

While the recent interest in synthetic turf was fueled by the two City actions above, the California Legislature adopted SB 7 last November, which requires a longer-term 20% reduction in urban per-capita water use by 2020.

### DISCUSSION

Landscaping represents 65% of the water demand in Beverly Hills. Changes in landscaping can therefore result in some of the most substantial differences in water usage by a household. Synthetic turf presents one of the



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more obvious means of reducing landscape water demands while maintaining a green aesthetic to neighborhoods. A 2004 study conducted by the City of Anaheim concluded that an average of 457 gallons of water per square foot could be saved over a typical 15-year lifespan of an artificial lawn. With its development for use on athletic fields, high-quality, properly-installed synthetic turf is durable, requires less maintenance than grass, and produces no stream of green waste. There continue to be improvements to make artificial grass more aesthetically natural.

Synthetic turf does have a number of disadvantages to natural grass, but improvements are continually being made.

| <b>Synthetic Turf Issues</b>   |   |
|--|---|
| <b>Issue</b>   | <b>Comments</b>   |
| <u>Toxicity</u> : Some synthetic turf includes silicon and rubber recycled from used tires. These may contain heavy metals that can leach into ground water, where the City obtains much of its water supply. Lead content has been an issue in with some manufacturers. | The City can prohibit lead, material from recycled tires, and/or other potential contaminants.  |
| <u>Drainage/runoff</u> : Generally less permeable than natural lawns, synthetic turf provides less opportunity for rainwater to recharge the local aquifer and places a corollary increase in load on the City's and County's storm drain systems.                       | The City can require a minimum level of permeability.   |
| <u>Heat</u> : In sunlight, synthetic turf tends to be much hotter than grass and can create undesirable microclimates.   | Synthetic turf is often installed where poor access to sunlight makes it difficult to grow and maintain natural grass. Heat can still be an issue where artificial lawns are more exposed to sunlight, but the heat issue is generally associated with large athletic fields with little shade. The effect can be reduced with a complement of trees and drought-tolerant plant material. |
| <u>Maintenance</u> : Although properly-installed synthetic turf requires relatively low maintenance, it eventually deteriorates from exposure to the elements and wear.  | The City can include standards for replacement.   |
| <u>Safety</u> : Synthetic turf is more prone to cause abrasive injuries than grass.  | Given the extensive use of synthetic turf on athletic fields, improvements have been significant in this area.  |

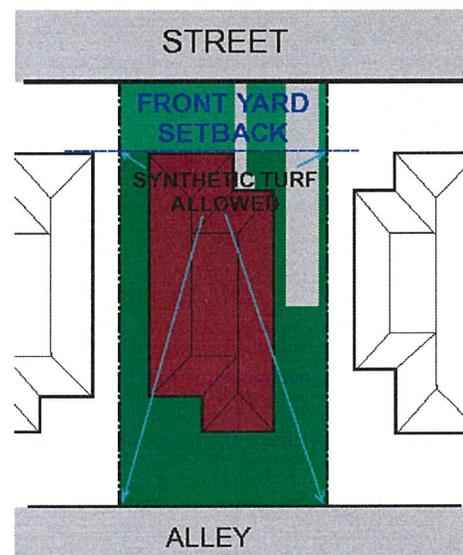
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| Synthetic Turf Issues  |  |
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| Issue  | Comments   |
| <p><u>Pathogens</u>: Synthetic turf generally impedes the natural breakdown of pathogens (also impedes the natural organic processes that recycles nutrients back into soil), so periodic disinfection may be required, with corollary environmental issues.</p> | <p>Grass lawns are not without their respective environmental considerations. Chemical fertilizers, insecticides, and weed killers used in the maintenance of regular lawns.</p> |
| <p><u>Global Climate Change</u>: The manufacture and composition of synthetic turf, together with the reduction in living plant material, could increase the community's carbon footprint.</p>   | <p>This is offset to some degree by the elimination of the need to regularly mow the lawn. Artificial lawns can be complemented with drought-tolerant plant material.</p>        |

The City's Zoning Code only prohibits synthetic turf in residential front yard setbacks. The Code limits the amount of paving allowed in front yards, requiring the remaining portion to be plant material (non-living accent materials are allowed). But these same provisions also restrict paving to a narrow palette of materials, largely those intended to bear the weight of a vehicle (excluding asphalt). Thus, as synthetic turf is neither paving nor plant material, it is generally not allowed in the front yard setback. Synthetic turf is allowed on residential property outside of the front yard setback.

The purpose of the front yard paving restrictions is to maintain the garden quality of the community, one of the goals in the General Plan. They also minimize hardscape, which allows rainwater to percolate into the ground and recharge the water table. Artificial lawns of high quality may be able to aesthetically satisfy this goal, but without some of the other environmental and ecological benefits of living plant material (fragrance, microclimate, fauna, absorption of carbon dioxide). However, use of synthetic turf can help to advance one of the other General Plan goals— water conservation through reduced consumption. It should be recognized that synthetic turf is one among several options to reduce water consumption for landscaping. Drought-tolerant grasses, landscape alternatives to lawns, and highly-efficient irrigation systems can also reduce water consumption.

On May 13, 2009, City Council declared a Stage B water conservation emergency, requiring a 10 percent reduction in the use of potable water in the community. The declaration instituted a number of water-saving measures, such as restrictions on when



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watering is allowed and requirements for expeditious repairs of irrigation and plumbing. In addition, water usage beyond a 90% baseline can result in penalty surcharges at double the regular water rates. While the Stage B declaration is intended as a temporary measure during droughts, the City faces long-term mandates instituted by the State: 10 percent reduction by 2015, and 20 percent reduction by 2020. Water agencies that do not comply with the requirement can lose eligibility for State water grants and loans.

On November 17, 2009, City Council adopted the Water Efficient Landscaping Ordinance. The ordinance essentially focuses on efficient irrigation to minimize wasteful watering. As it requires no irrigation, synthetic turf can reduce the landscape area subject to ordinance requirements.

Currently, the City does not offer a rebate for installing synthetic turf, but many other communities within the Metropolitan Water District's (MWD) jurisdiction do. If City Council wants to consider matching MWD's artificial turf rebate then that is an additional expense to the Water Enterprise Fund that is not included in the rate analysis currently being submitted to the City Council. With the match a customer would receive \$1.20 per square foot for up to half an acre (60¢ from the City, matched with 60¢ from the MWD). However, the Metropolitan Water District is currently considering the discontinuation of the rebate program, because there is little evidence that the rebate has been a motivating factor in owners' decisions to install artificial lawns.

Should the City Council wish staff to proceed with the development of zoning text amendment, it is suggested that it be considered and discussed in the context of other priorities assigned to the Community Development Department, including:

- Update of the Housing Element
- Commercial Common Interest Development
- Trousdale/Hillside View Preservation Ordinance
- Extension of Single-Family Residential Design Review into Hillside and Trousdale Areas
- Medical Office Land Use Ordinance
- Amendments/Updates to the Zoning Code

### **FISCAL IMPACT**

Development of zone standards would require staff time for research and work with the Planning Commission. It is estimated that fully-burdened staff costs (i.e. including overhead) would be approximately \$15,400 for development of the ordinance and the public hearing process. Additionally, City Council would need to appropriate approximately \$2,500 to the Planning Division to cover the costs of public notice requirements associated with the public hearings before the Planning Commission and the City Council.

If the City proceeds with an artificial turf rebate program that matches Metropolitan Water District matching funds, its impact on the Water Enterprise Fund will depend how much demand there is to install artificial turf, and whether the City caps the annual funding at a certain level. For a typical single-family residential property between Santa Monica and Sunset Boulevards, the landscaped portion of the front yard setback would be about 1,900 square feet. If the landscaped portion is entirely covered with artificial

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lawn, the rebate would be \$2,280, of which \$1,140 would be the City's portion of the cost. As noted above, the MWD will probably discontinue its rebate program, so any rebate program implemented by Beverly Hills is likely to be funded entirely by City funds. Most lots south of Santa Monica Boulevard have smaller front yards; lots north of Sunset Boulevard are larger, but vary widely on the depth of their front yard setbacks. At this time an artificial rebate program is not included in the revenue requirements in the water utility rate increase.

### **RECOMMENDATION**

If the City Council is favorable toward allowing synthetic turf in the front yard setback, staff can explore how well the disadvantages of synthetic turf can be addressed through stringent requirements while ensuring that the General Plan goals of a garden quality community are advanced. Synthetic turf would be addressed through a text amendment to the Zoning Code. Staff would develop the standards with the Planning Commission and return with a zoning text amendment for consideration by the City Council.

Susan Healy Keene, AICP,  
Director of Community Development

Approved By



David D. Gustavson,  
Director of Public Works

Approved By

