



# THE GREEN BUILDING PROGRAM POLICY STATEMENT

## *City of Mission Viejo*

In fulfilling its mission of “The California Promise” to protect and preserve natural resources for an environmentally sustainable future, the City of Mission Viejo commits to the following principles of leadership:

### **Performance**

The City will institutionalize best practices and continually monitor, report on and improve its environmental performance.

### **Responsible management and growth**

The City will endeavor to design, construct and maintain its buildings, infrastructure and grounds in a manner that ensures environmental sustainability and protects public health and safety.

### **Outreach**

The City will promote environmental stewardship throughout Orange County and embrace environmental initiatives in partnership with its surrounding communities.

### **Academics**

The City will advance understanding of the environment through sponsoring community classes and instructional seminars to assist residents and businesses.

### **Conservation**

The City will conserve natural resources, increase its use of environmentally sustainable products, materials and services, including renewable resources, and prevent pollution and minimize wastes through reduction, reuse and recycling.

### **Teamwork**

The City will encourage teamwork and provide groups and individuals with support, guidance and recognition for achieving shared environmental goals.

We, the community of Mission Viejo both individually and collectively, affirm our commitment to act in accordance with these principles.

## **Goal and Guiding Principles of the Green Building Program**

The goal of this Program is to improve the quality of life for Mission Viejo residents through recommendations for energy efficiency, water conservation, better indoor air quality, the use of sustainable materials and the reduction of environmental impacts.

### **Energy efficiency**

Energy consumption has far-reaching environmental impacts: from the mining of fossil fuel energy sources to the environmental emissions from burning non-renewable energy sources. And each home consumes energy year after year, meaning that the environmental impacts associated with that use accrue over time. Therefore, energy efficiency is weighted heavily in a green building program.

Energy consumption not only occurs during the operation of a home, but also during the construction of a home and, indirectly, in the production of the materials which go into the home. Although the energy used to heat and cool a home over its life far outweighs that to manufacture the materials and construct it, the large number of homes built (currently about 1.85 million per year) renders the energy used during the construction phase significant.

On average, a home built between 1990 and 2001 consumed about 12,800 kWh per year for space and water heating, cooling, and lights and appliances. Where natural gas is used, consumption averages 69,000 cubic feet per household annually. Total energy expenditures during a year cost these homeowners about \$1,600. Energy efficiency improvements that make a home 20% more efficient--a conservative estimate for many green homes--could significantly reduce a homeowner's annual utility bill expenses.

No matter what the climate, energy efficiency is considered a priority in most existing green building guidelines/programs. Moreover, as the cost to heat and cool a home becomes more unpredictable, it is advantageous to every homeowner to be "insulated" from inevitable utility bill increases. As with all aspects of these guidelines, the greatest improvements result from a "whole systems" approach. Energy performance does not end with increased R-values, the use of renewable energy, and/or more efficient HVAC equipment. Rather, there needs to be a balance between these features and careful window selection, building envelope air sealing, duct sealing, and proper placement of air and vapor barriers from foundation to attic to create a truly high performance, energy-efficient home that is less expensive to operate and more comfortable to live in than a conventionally-constructed home.

### **Guiding Principle - Water Efficiency**

The mean per capita indoor daily water use in today's homes is slightly over 64 gallons. Implementing water conservation measures can reduce usage to fewer than 45 gallons. For this reason, green homes are especially welcomed in areas affected by long- and short-term drought conditions.

The importance of water resources is becoming increasingly recognized, especially in the western third of the country. Choices between sending water to growing urban areas versus

making water available for irrigation highlight the issues surrounding the scarcity of this valuable resource.

Green homes often conserve water both indoors and out. More efficient water delivery systems indoors and native and drought-resistant landscaping choices outdoors can help prevent unnecessary waste of valuable water resources. Communities can obtain additional benefits when builders effectively use native species in landscaping. Current research and practice has shown that natural processes can be a successful means of filtering and removing contaminants from storm water and wastewater.

### **Guiding Principle -Indoor Environmental Quality**

Healthy indoor environments attract many people to green building. After energy efficiency, the quality of a home's indoor air is often cited as the most important feature of green homes. An increase in reported allergies and respiratory ailments and the use of chemicals that can offgas from building materials have contributed to a heightened awareness of the air we breathe inside our homes. Even though there is no authoritative definition of healthy indoor air, there are measures that can mitigate the effects of potential contaminants including: controlling the source, diluting the source, and capturing the source through filtration.

### **Guiding Principle - Operation, Maintenance and Homeowner Education**

Improper or inadequate maintenance can defeat the designer's and builders best efforts to create a resource-efficient home. For example, homeowners often fail to change air filters regularly or neglect to operate bath and kitchen exhaust fans to remove moist air. Many homeowners are unaware of the indoor environmental quality impact of using common substances in and around the house such as pesticides, fertilizers, and common cleaning agents. By providing homeowners with a manual that explains proper operation and maintenance procedures, offers alternatives to toxic cleaning substances and lawn and garden chemicals, and points out watersaving practices, a builder can help assure that the green home that was so carefully built will also be operated in an environmentally responsible manner.

### **Guiding Principle - Global Impact**

There are some issues related to home building and land development that do not fit nicely into the context of the aforementioned guiding principles. For these items that are a by product of home construction, we have added a separate principle - global impact. One example of an issue having global impact is the selection of paints that contain relatively low or no volatile organic compounds (VOCs). Although the VOC content of paint is often considered for indoor environmental reasons, the vast majority of VOCs are released by the time the paint is dry.

However, the release of VOCs from wet paint help form ground-level ozone pollution. Therefore, the use of low- or no-VOC paints falls under the global impact principle because the environmental impact of using paints with relatively high VOC levels is greater on the global scale than it is on the indoor environment.