

Chapter 12. Resource Conservation

Solar Access Protection

During the 1970s, an energy shortage took place in the United States. As a result, state legislation was enacted that required all municipalities to include a solar access protection element in their comprehensive plan. Solar energy systems, either active or passive, can supply a significant portion of the heating and cooling and water heating requirements to an individual home or business. By using solar energy, natural resources, such as natural gas and fossil fuels, are preserved for future use.

This section of the *Comprehensive Plan* identifies existing City policies that promote the use of solar energy and explores new ways in which the City can encourage new developments to include solar energy.

Existing Controls

The City's Development Ordinance regulates solar access protection for those developments that choose to use passive or active solar energy systems. All new subdivisions and planned unit developments are encouraged to be designed to accommodate the present or future use of passive and active solar energy systems with special attention given to street, lot, and building orientation. Energy efficient buildings are also encouraged. New buildings should be designed and fitted to permit the addition or conversion of the hot water heating system to solar energy. Builders and developers must demonstrate their ability for incorporating active and passive solar energy systems in new buildings, installing energy-efficient appliances and lighting systems, and using exterior landscaping to reduce the energy demands of new construction.

The Development Ordinance also provides an incentive for developers who incorporate solar energy systems in their development projects. A density bonus of up to five percent may be given to developments that use passive energy systems on at least 80 percent of the dwelling units. And a density bonus of up to ten percent may be given to all developments that use active energy systems for space heating, air conditioning, and/or domestic hot water heating on at least 30 percent of the dwellings.

The City also enforces the State building code requirements regarding the energy efficiency of residential or commercial structures.

Goals, Policies, and Recommended Actions

Goals

1. To protect solar access as a means to provide an alternate source of energy for residents and businesses within the community.

Policies

- A. Review development proposals in accordance with the City's Development Ordinance requirements for solar access and energy efficiency.
- B. Encourage residents, builders and developers to consider alternate forms of energy, such as solar access during the development process.
- C. Educate residents and businesses of benefits provided by solar energy systems and other forms of energy.

Recommended Actions

- 1. Continue to enforce the regulations of the Development Ordinance regarding solar access and energy efficiency.
- 2. Continue to enforce building code regulations regarding energy efficient building design.
- 3. Provide information materials to the general public regarding energy efficiency, solar access and other forms of energy.

Sustainability and Green Building

Green building is a whole-systems approach applying the five (5) key concepts of Green building – energy efficiency, resource efficiency (including durability), indoor environmental quality, water conservation, site and community – to the eight (8) components of the traditional building process – outdoor and site, building envelope and systems, mechanicals, electrical and lighting, plumbing systems and fixtures, finish materials and coatings, waste management – in order to improve the impact of building on individuals, their families, the community, and the environment. Effective green building can lead to 1) reduced operating costs by increasing productivity and using less energy and water, 2) improved public and occupant health due to improved indoor air quality, and 3) reduced environmental impacts by, for example, lessening storm water runoff and the heat island effect

The related concepts of sustainable development and sustainability are integral to green building. Sustainability links the environment, economy and social equity together, recognizing that the inter-relationship between these affect quality of life. An action or decision based on one of these factors will have an impact on the other two. Sustainable communities are those that contemplate the connection between these factors in their decision-making process and achieve the desired outcome without compromising the resources needed for future generations.

The concepts of green building and sustainability are reflective of Shoreview's values and are a common theme found in the *Plan's* policies. This effort is enhanced through the adoption of the following goals, policies and recommended actions.

Goals, Policies, and Recommended Actions

Goals

1. Incorporate sustainable practices and green building within the City of Shoreview's local governmental organization.
2. Advance sustainability and green building within the development community, among residents and local businesses.
3. Promote the use of renewable sources of energy.

Policies

- A. Encourage and support the efforts of local organizations, businesses, developers and residents to use sustainable design and green building in their development projects.
- B. To consider and incorporate sustainable design and green building practices, when feasible, for public projects such as road reconstructions, facility improvement and new public buildings.
- C. Encourage and support alternate modes of transportation, including public transit initiatives and travel demand management.

Recommended Actions

1. Participate in the EnergyStar campaign to reduce local government's energy consumption.
2. When considering improvements to public facilities or new construction, incorporate green building and sustainable design into the review process.
3. Encourage builders and developers to seek LEED, EnergyStar, MNGreenStar or other comparable certifications.
4. Review the City's Development Code and identify obstacles to green building and sustainable design and amend the Code as needed to remove these barriers. Regulations should promote the use of green building and sustainable design, address how such techniques are integrated into the building and site design, and address the impact on adjoining residential properties.
5. Continue to enforce building code regulations regarding energy efficient building design.

6. Develop and maintain links and/or pages on the City's website that provides information and strategies to help residents incorporate sustainable and green practices into their daily lives. Communicate these strategies through other methods such as the cable TV and the City's newsletter.
7. Consider developing incentives for property owners, buildings and developers who incorporate green building and sustainable design into their development and construction projects.
8. Continue to work with the Environmental Quality Committee and other groups such as the Sierra Club to promote the benefits of sustainable design and green building within the community.
9. Continue to implement the *Shoreview Green Community Awards* program that recognizes residents who have incorporated sustainable and green practices into their property improvements.
10. Evaluate existing transit services being provided to the community, identify the community's transit needs and work with the City's transit providers to improve ridership and services. Transit alternatives should also be identified.
11. Consider establishing "green zones" or areas where green and sustainable improvements can be concentrated and may provide benefit to residents.