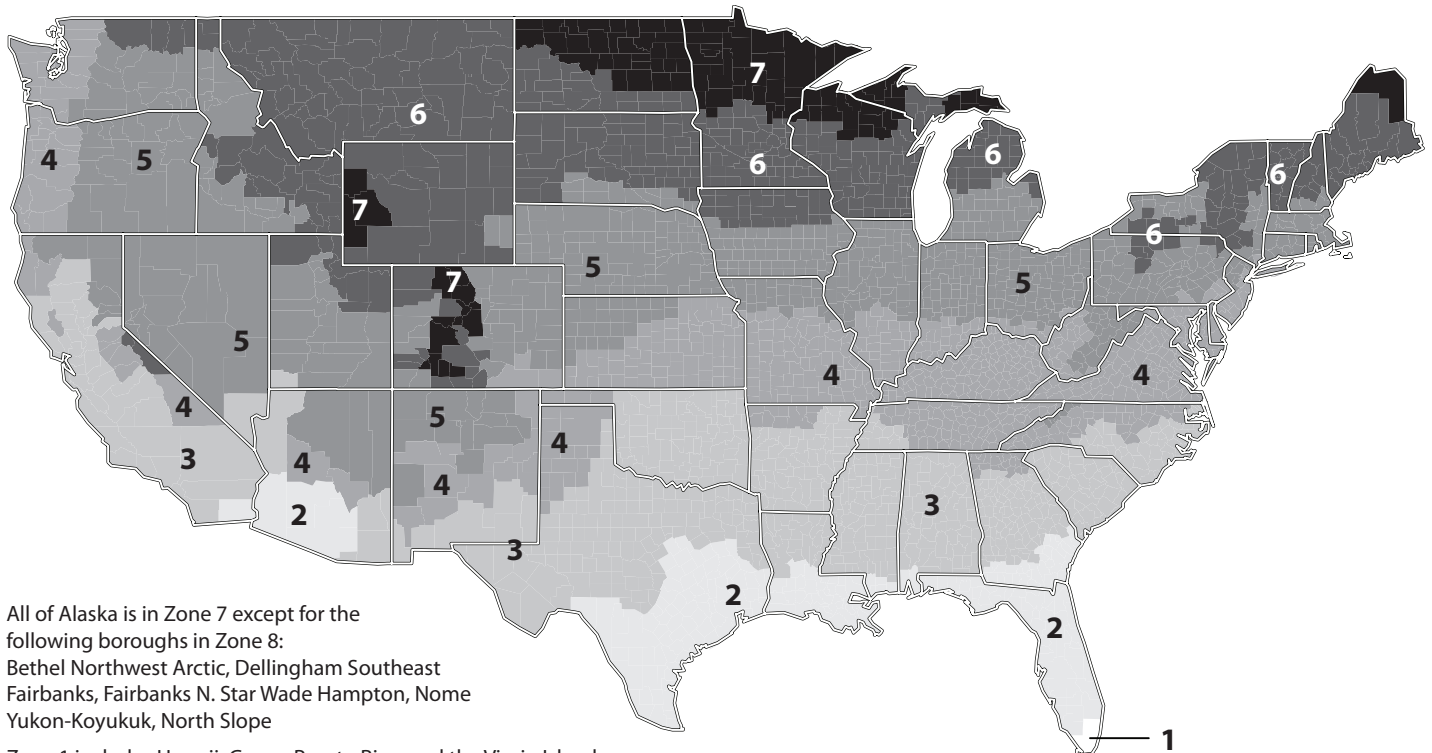# Recommended R-Values for New Wood-framed Homes

All of Alaska is in Zone 7 except for the following boroughs in Zone 8:
Bethel Northwest Arctic, Dellingham Southeast Fairbanks, Fairbanks N. Star Wade Hampton, Nome Yukon-Koyukuk, North Slope

Zone 1 includes Hawaii, Guam, Puerto Rico, and the Virgin Islands.

| ZONE | ATTIC | CATHEDRAL CEILING | WALL INSULATION | | FLOOR |
			CAVITY	INSULATION SHEATHING	
1	R30 to R49	R22 to R38	R13 to R15	None	R13
2	R30 to R60	R22 to R38	R13 to R15	None	R13, R19 to R25
3	R30 to R60	R22 to R38	R13 to R15	R2.5 to R5	R25
4	R38 to R60	R30 to R38	R13 to R15	R2.5 to R6	R25 to R30
5	R38 to R60	R30 to R60	R13 to R21	R2.5 to R6	R25 to R30
6	R49 to R60	R30 to R60	R13 to R21	R5 to R6	R25 to R30
7	R49 to R60	R30 to R60	R13 to R21	R5 to R6	R25 to R30
8	R49 to R60	R30 to R60	R13 to R21	R5 to R6	R25 to R30

Data: U.S. Department of Energy

Most homes have more windows than doors. The best windows shut tightly and are constructed of two or more pieces of glass. Caulk any cracks around the windows and make sure they seal tightly. With older windows, install storm windows or sheets of clear plastic to create added air barriers. Insulated blinds also help prevent air flow—during heating seasons, open them on sunny days and close them at night. During cooling seasons, close them during the day to keep out the sun.

Moisture
Moisture is a term used to describe water in both liquid and vapor form. Like heat and air, it is important to have the right amount of moisture in a building. Most moisture indoors exists as water vapor. The amount of water vapor in the air plays an important role in determining our health and comfort.

Humidity is a measurement of the total amount of water vapor in the air. It is measured with a tool called a **hygrometer**. Relative humidity measures the amount of water vapor in the air compared to the amount of water vapor the air is able to hold, which depends on the temperature of the air.

Air acts like a sponge and absorbs water through the process of evaporation. Warmer air, with greater energy, can support more water vapor than colder air, which has less energy. When cold air from outdoors is heated, it feels very dry and makes the occupants of the building uncomfortable. Furthermore, moisture in the air in a room will help it resist changes in temperature, which can reduce the number of times a heating or air conditioning system has to run. The correct humidity level can also help promote a healthy indoor environment. Humidity levels should be kept between 40% and 60%. Using a dehumidifier in the summer and a humidifier in the winter can help condition the air to maintain appropriate humidity levels.

Landscaping
Although you cannot control the weather, you can plant trees to block the wind and provide shade. Properly placed trees and bushes can reduce the energy needed to keep your home comfortable. Deciduous trees, for example, are good to plant on the south side of a building in the Northern Hemisphere, since their leaves provide shade in summer and their bare branches allow sunlight through in the winter.

Saving Energy at Home and School