



**Figure 6**  
Some slopes are stabilized by building walls made from concrete or stone.

**Making Steep Slopes Safe** Plants can be beautiful or weedlike—but they all have root structures that hold soil in place. One of the best ways to reduce erosion is to plant vegetation. Deep tree roots and fibrous grass roots bind soil together, reducing the risk of mass movement. Plants also absorb large amounts of water. Drainage pipes or tiles inserted into slopes can prevent water from building up, too. These materials help increase the stability of a slope by allowing excess water to flow out of a hillside more easily.

Walls made of concrete or boulders also can reduce erosion by holding soil in place, as shown in **Figure 6**. However, preventing mass movements on a slope is difficult because rain or earthquakes can weaken all types of Earth materials, eventually causing them to move downhill.

**✓ Reading Check** *What can be done to slow erosion on steep slopes?*

People who live in areas with erosion problems spend a lot of time and money trying to preserve their land. Sometimes they're successful in slowing down erosion, but they never can eliminate erosion and the danger of mass movement. Eventually, gravity wins. Sediment moves from place to place, constantly reducing elevation and changing the shape of the land.

## Section 1 Assessment

1. Define the term *erosion* and name the forces that cause it.
2. Explain how deposition changes the surface of Earth.
3. What characteristics do all types of mass movements have in common?
4. Describe ways to help slow erosion on steep slopes.
5. **Think Critically** When people build houses and roads, they often pile up dirt or cut into the sides of hills. Predict how this might affect sediment on a slope. Explain how to control the effects of such activities.

### Skill Builder Activities

6. **Comparing and Contrasting** Compare and contrast rockfalls and rock slides. **For more help, refer to the *Science Skill Handbook*.**
7. **Using an Electronic Spreadsheet** Pretend that you live along a shore where the water is 500 m from your front door. Each year, slumping causes about 1.5 m of land to cave into the water. Design a spreadsheet that will predict how much property will be left each year for ten years. Type a formula that will compute the amount of land left the second year. **For more help, refer to the *Technology Skill Handbook*.**