



Idaho Department of Environmental Quality Pollution Prevention Champion

Foothills Learning Center

Boise, Idaho

2006

Environmental Commitment

The City of Boise's Foothills Learning Center provides a place for interpretive and learning opportunities for the community to help raise the awareness and appreciation of the desert environment, the urban-wildland interface, and the challenges land management agencies face in caring for these unique lands. The center was built to model sustainable components for modern living in an arid and fire-susceptible environment.

Pollution Prevention Success

Energy Conservation

In designing the Foothills Learning Center, architects modeled how the sun would affect the building during different times of the day throughout the different seasons. As a result, the building orientation and design and window placement maximize natural light while providing for passive solar heat in the winter.

Other energy-conservation features include:

- Energy-efficient windows, fluorescent lighting, and light sensors.
- A ground-source heat pump to heat and cool the building. Underground about 6 feet, the earth's temperature remains about 55 degrees Fahrenheit throughout the year. The ground source heat pump takes advantage of the constant temperature for heating and cooling. In the winter, the air passed through the system needs to be warmed from only 55 degrees to room temperature (rather than warming outside air which can be near freezing). In the summer, air passed through the system is cooled naturally, eliminating the need for air conditioning.
- A hydrogen fuel cell demonstration site. A 5 kilowatt fuel cell converts hydrogen and oxygen into electricity, producing heat and water as byproducts. In the winter, waste heat is piped into the ground source heat pump, increasing the efficiency of the system.

Sustainable Building Materials

The Foothills Learning Center is built from composite wood and wood that has been certified by the Forest Stewardship Council (FSC). FSC is a non-profit organization devoted to encouraging the responsible management of the world's forests. FSC sets standards that ensure forestry is practiced in an environmentally responsible, socially beneficial, and economically viable way.

The building's insulation (cellulose cavity insulation) is made from recycled wood fibers.

Landscaping

The Foothills Learning Center uses landscaping techniques that balance water conservation with the need for fire protection. Vegetation includes drought-tolerant, native plants that require little water. Spray and drip irrigation systems use less water than traditional sprinkler systems by reducing evaporation loss. FireWise techniques include well-spaced plants, placement of plants away from structures, and buffer zones using walkways and parking areas.

Public Outreach

The center provides activities for the local community including interpretive programs, community lectures, and school programs.

For More Information

Contact Jennie Rylee at (208) 514-4845 for more information.

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