



# Big Sky Health and Fitness Building Big Sky, Montana

**45.8%** energy cost savings

**85.2%** diverted waste

**33.2%** reduction in potable water use



## LEED® Facts

Big Sky Health and Fitness Building  
Big Sky, Montana

LEED for NC v2.2  
Certification awarded 9/09

**Gold** **40\***

Sustainable Sites 10/14

Water Efficiency 4/5

Energy & Atmosphere 12/17

Materials & Resources 2/13

Indoor Environmental Quality 8/15

Innovation & Design 4/5

*\*Out of a possible 69 points*

The information provided is based on that stated in the LEED project certification submittals. USGBC and Chapters do not warrant or represent the accuracy of this information. Each building's actual performance is based on unique design, construction, operation, and maintenance/ Energy efficiency and sustainable results will vary.

## Big Sky Heath and Fitness Center

### PROJECT BACKGROUND

The Big Sky Health and Fitness Building is located in the Meadow Village Center of Big Sky, MT. It is a two story 11,500 sqft mixed use building. The uses consist of an exercise gym, a physical therapy office, a massage therapy studio, and commercial offices.

### STRATEGIES AND RESULTS

Throughout the project the “green” components needed to be justified financially. As a result, the project strategies included mechanical system upgrades, intelligent building geometry, building envelope upgrades, efficient lighting, and a whole building control system. The design team identified these areas as building upgrades that would provide a low recurring operating cost with a justifiable initial investment. As a result, many of the green components are not obvious to the casual observer in the way that a sod roof or solar panels would be. However, the team is pleased with the results of the low recurring cost strategy. For example, since the building went into service, the average heating and cooling costs have been approximately \$350.00 per month for the entire 11,500sqft building!



Innovative stainless steel plate heat exchangers were used for ground source heating and cooling of the building. These heat exchangers were lowered into the adjacent sewage treatment pond owned by the Big Sky Sewer and Water District. The District was concerned about damage to the pond liner at first. However, after the design team proved that there would be no damage, the district was enthusiastic about the project. These heat exchangers (in conjunction with heat pumps), pull heat from the ponds for heating the building in the winter and serve as a heat sink to remove heat from the building during the summer months. Using these heat exchangers cost approximately \$40,000 less than drilling wells for the ground source heat pumps would have cost.”

“This was our first LEED project and we didn’t know what to expect in terms of additional cost and administration. However, working with an enthusiastic design team the overhead was minimal and the paybacks in terms of finished building operating expenses are huge. This project has changed my mind set about how to execute the building process.”

Josh Greene  
Owner, Greene Construction, Inc.

Architect: Reid Smith Architects, Inc  
Civil Engineer: Redleaf Consulting, PLLC  
Commissioning Agent: Fico, Inc.  
Contractor: Greene Construction, Inc.  
Developer: Madko Realty, Inc.  
Landscape Architect: Valley of the Flowers, Inc.  
LEED Consultant: Greene Construction, Inc.  
Lighting Designer: Mountain Home Electric, Inc.  
Mechanical Engineer: Redleaf Consulting, PLLC  
Energy Modeling: Redleaf Consulting, PLLC  
Owner: Madko Realty, Inc.  
Structural Engineer: C & H, Inc.

Project Size: 11,500 sqft

Total Project Cost (cost per square foot in parentheses):  
\$1.4 million (\$121.74 per sqft)

Photography Courtesy of: Reid Smith Architects, Inc.  
and Greene Construction, Inc.

