

## **Water and Energy Conservation Best Practices: Elfin Forest Interpretive Center Honoring Susan J. Varty** [Elfin Forest Recreational Reserve](#)

Since 1991, Olivenhain Municipal Water District has operated the 784-acre Elfin Forest Recreational Reserve. In order to create stronger bonds between San Diego County's residents and their natural environment, OMWD partnered in 2009 with a local environmental non-profit organization, the Escondido Creek Conservancy, to develop an interpretive center at the reserve's entrance. Goals expressed via the partnership were to establish a welcoming focal point to the reserve while also enhancing the ability of the two organizations to better attract and communicate with members of the community through meetings, exhibits, and seminars. OMWD also had an interest in developing a stronger enforcement presence for its ranger staff in order to provide park patrons with outstanding service with safety as a focus.

To cover design and construction costs, OMWD was able to take advantage of a \$68,500 grant from the Land and Water Conservation Fund via the California Department of Parks and Recreation. The Escondido Creek Conservancy initiated an extraordinary fundraising campaign by which to close the funding gap. The 1,000-square-foot Elfin Forest Interpretive Center Honoring Susan J. Varty was completed in 2009.

The structure was designed by Hubbell & Hubbell, a local architecture firm specializing in environmentally sensitive and distinctive design. The center's walls were constructed of reinforced Perform Wall, a highly insulated polystyrene and concrete material made of 85% post-consumer recycled content that is exceptionally efficient at insulating the building from heat, cold, fire, and flood.

The center's living roof was installed with drought-tolerant, native grasses; not only does this help insulate the roof from the heat of the day and visually blend the structure with its surroundings, but rain in excess of what the living roof can capture also helps to irrigate the native garden that encircles the building, ensuring the efficient use of water. The native garden also helps to blend the center with its surroundings while educating visitors on water-wise landscapes.

The roof is vaulted to the south, assisting in natural daylighting and passive heating and cooling. To further help with seasonal heating and cooling, the center utilizes a trellis covered with a grapevine that provides shade in the summer months and loses its leaves during the winter to let sunlight in. The energy needs of the center are further reduced by slot windows in the rear wall and an operable skylight, which help to provide natural ventilation to the interior of the center.

The center is located in an area where power is not available, so it utilizes a photovoltaic system to meet its minimal power demands. A 2,400-Watt solar panel array and a 48-volt battery bank to keep the power flowing in the building day or night, having produced over 7,000 kWh of clean, green energy since activation of the system.

The mission statement created for the center indicates that it *gives a voice to the Escondido Creek watershed, inspiring visitors to feel connected to nature, value open space and the creek, and join in conserving this precious North County resource through personal and community stewardship.* Today, the mission is readily carried out via the nearly 50 docent volunteers that staff the Elfin Forest Interpretive Center Honoring Susan J. Varty seven days per week. This unique facility now provides the reserve's 100,000 annual visitors with educational opportunities through monthly lectures, interpretive displays, school field trips, and its one-of-a-kind science lab, ensuring that visitors leave the reserve with a greater focus on sustainability.

