

2014 IHS Green Champion Award Winners

Sustainable Design & Facilities Award

Kayenta Staff Quarters – CDR Michael Young, CDR Stephen Christopher

The Kayenta Staff Quarters is a housing project of 129 Single Family, Multi-Family, and Transient units to support the recruitment and retention of health care staff serving the new Kayenta Health Care Center on the Navajo Reservation in Kayenta, Arizona. CDR Stephen Christopher serves as the Project Manager and CDR Michael Young as the Sustainability Coordinator on the project. The two carefully crafted a design and construction scope of work that ensures the project not only meets federal sustainability standards, but exceeds them where possible.

The Kayenta Staff Quarters project fully incorporates the *Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings* via the Architect/Engineering (A/E) Design Guide; as well as goals established under Executive Order 13514. In addition, it will be the first IHS project to be certified under the LEED for Homes v3 template and is expected to achieve a gold certification.

Several innovations incorporated into the project may be useful for consideration and implementation in future projects, including:

- Solar hot water heating for domestic hot water load and supplemental heating;
- Exterior building envelope to prevent air from infiltrating into the building and maximize thermal performance;
- Laundry graywater system to divert laundry wastewater for landscaping irrigation; and reduce the load on the public sewer system.

Water Use Efficiency and Management Award

Alaska Native Tribal Health Consortium’s Rural Energy Initiative – Chong Park, Ph.D, PE, David Reed, PE, LT Praveen KC, PE, Christopher Mercer, Kolt Garvey, Carl Remley

Remote communities in rural Alaska face some of the highest energy costs in the country, and provision of public sanitation services can comprise up to 30 percent of a community’s total operational cost. The US Census Bureau reports that 2010 poverty rates were 28.4 percent for American Indians and Alaska Natives compared to 8 percent for the country. High energy costs, coupled with low household income, hinders the ability of many rural Alaskans to afford clean water and benefit from basic sanitation. Lack of in-home piped water and sewer services is directly linked to higher gastric, respiratory and skin infection rates.

Through partnerships with Alaska Native communities, funding agencies, and utility companies, ANTHC’s REI has developed and implemented “wind to heat” systems. This technology captures unused energy from community wind turbines to heat public water systems – significantly reducing sanitation system energy costs.