

Background:

The Wilderness golf course at Fortune Bay Resort Casino, in northern Minnesota, opened in May of 2004. This highly-praised championship golf course is owned by the Boise Forte Band of Chippewa and operated by Kemper Sports Management. The course's location, on the shores of Lake Vermillion, and the surrounding natural landscapes make the Wilderness one of Minnesota's most scenic golf courses. However, over the course of the design process, the natural landscape posed challenges for course planners. In order to further enhance the course's appeal and maximize convenience for the golfers, planners wanted to install mid-course restrooms at the 5th and 14th holes. At the 14th hole, site characteristics allowed for flush toilets and sinks to be connected to local utility lines, but that was not the case at the second location.

Problem:

Between the 5th hole and the nearest utility lines, there is close to a mile of bedrock. It would have been extremely expensive and hugely environmentally disruptive to run water and/or sewer lines to a restroom there. Andy Datko, Director of Planning for Fortune Bay (now CEO) was in charge of finding an alternative. He needed a restroom solution that would need no running water and little electricity but still be good-looking and pleasant to use. One idea was to use portable toilets and hide them within a larger structure. But Datko realized that no amount of concealment could disguise the odor associated with portable toilets.



Solution:

Datko knew that composting toilets were a possible solution but didn't know very much about them. A Google search led him to the Clivus Multrum web site, and ultimately, after a review of the product literature and detailed discussion of his situation with Clivus, he became convinced that this was the answer. Datko purchased the Clivus Multrum Trailhead composting toilet system in early 2002. The Trailhead unit shipped to Datko as kit. The only heavy equipment needed for installation is a small backhoe to dig a hole four feet deep for the composter. The handicapped-accessible structure is erected directly on top of the composting unit. No foundation is called for, and the entire unit can be installed in less than two days. A customized solar system powers the fan that keeps the Trailhead odorless.

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Solution (continued):

According to Datko, the Clivus was much cheaper than a flush system at that location. Datko worked with a Chippewa environmental official, Darren Steen, to describe the process and benefits of composting toilet systems for the course. The Clivus was installed at the 5th hole later that year and was first used by construction workers in early 2003. Superintendent Vince Dodge says the Wilderness course gets around 24,000 golfers per year, and he guesses that, over the course of a year, the Trailhead unit is used a couple thousand times. Dodge says golfers don't seem to pay much attention to the novelty of the composting toilet, which would likely not be the case had they used portable toilets. And Dodge describes the Clivus as a "low maintenance unit." In fact, Dodge generally takes care of the monthly maintenance himself.

Environmental Benefits:

In addition to conserving water, the Clivus system at The Wilderness produces safe, useful compost end-products. Liquid waste filters through the system and is transformed into a stable liquid end-product, with the makeup of a high-potency nitrogen fertilizer. This liquid is then separated into a storage tank and added to the course compost pile, which consists mainly of grass clippings. Although solid end-product, which closely resembles topsoil, has not yet been removed from the system, it will eventually end up in the compost pile as well. Finished compost from the pile will be added to flower beds on the course. This manner of disposal puts the nutrients in human waste back where they belong, into the soil, not into lakes, rivers, oceans and groundwater supplies, where they cause damage.

Other well-known golf courses that use composting toilets include Giants Ridge, also in northern Minnesota, and Maidstone in East Hampton, New York.

