



PROJECT:

Boy Scouts of America – Northern Tier High Adventure Base



Leading the way with sustainable solutions

LOCATION

Ely, Minnesota

PROJECT TYPE

Wastewater Treatment

COMPLETION DATE

2001

PROJECT SIZE

9,000 gpd



NEED

The Boy Scouts of America (BSA) operate an adventure program that gives Scouts the opportunity to camp on a primitive island: no running water, no electricity, and no permanent structures. The BSA needed a treatment system that would treat a small amount of graywater and meet the strict nutrient reduction standards for the Florida Keys. With no permanent structures and no boat dock, all supplies need to be easily transported and waded ashore. Any treatment system, or treatment equipment would be brought to the island in the same manner and comply with the temporary structure requirement.

SOLUTION

A very small sand filter that fits into a polyethylene drum was designed for each camp site. A total of 15 graywater receiving units are needed to service the 17 campsites. The system uses material that can easily be brought to the island from a boat. A 55 gallon barrel houses the sand filter which sits in a lined wetland bed. The Scouts pour the graywater into the top of the barrel that has been modified to include a coffee filter supported by a plastic screen. The coffee filter catches any food particles and is disposed of with the trash. Water flows through the sand filter and out the bottom of the barrel into the wetland bed that is filled with phosphorus absorbing material. In the case of heavy rainfall or unexpected high use, the treated effluent flows through the bed into a subsurface discharge system. The wetland bed is planted with native vegetation that aids in the evaporation of water and is aesthetically pleasing.

BENEFIT

The BSA has an effective treatment system for the small volume of wastewater, which does not detract from the primitive environment. They also have created a great educational opportunity to discuss water treatment, water recycling, and protecting the environment.



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