

National Park Service
2011 Environmental Achievement Awards

Winner

Grand Canyon Railway, Concessioner
Grand Canyon National Park
Greening a Railroad Operation

In 2007, Xanterra Parks & Resorts, concessioner at Grand Canyon National Park, acquired the Grand Canyon Railway (GCR). Although rail travel is one of the most energy-efficient methods of travel, operating and maintaining a historic tourist train and resort can still generate large amounts of pollution.

Therefore, Xanterra immediately went to work making the entire operation as environmentally sustainable as possible. The GCR steam locomotive now runs on 100% clean-burning waste vegetable oil (WVO), a Xanterra waste product generated just a few miles away in the kitchens they operate in the park.

Highlights of this innovative project include:

- Saved 1,200 gallons of diesel fuel per 130-mile trip to Grand Canyon by using 100% WVO;
- Since WVO is cleaner-burning than conventional diesel fuel, significantly reduced carbon emissions per trip;
- The water used in the locomotive comes from rainwater collected during the monsoon season and snow melt collected during the winter season saving more than 11,000 gallons of water per trip; water that would otherwise be drawn from the local aquifer.
- Reduced train ticket generation from 2.8 million to 700,000 per year by consolidating tickets and reducing the number of tickets mailed by using a “will call” pickup window;
- Reused hundreds of used railroad ties per year, some for fencing and landscape applications;
- Used biodegradable, non-toxic pin, bearing, and journal oil to lubricate steam locomotive bearings, slides, and mechanical drives;
- Became the first short-line tourist railroad in the United States to receive the prestigious ISO14001 third-party certification for its Environmental Management System;
- Saved fuel by eliminating the “old school” railroad practice of idling locomotives 24 hours per day all year to keep engine and fuel temperatures up. Locomotives are now parked indoors, saving 18,000 gallons of fuel per year;
- Used a “pharmacy” approach to eliminate hazardous chemicals resulting in the elimination of all EPA F-listed hazardous solvents used for cleaning locomotive parts by replacing them with 100% citrus-based cleaners.

GCR’s commitment to environmental protection has led to significant environmental benefits to the park, their visitors, and the surrounding communities.