CS-09

EDUCATION · SPORTS TURF · RAINWATER HARVESTING



EPIC CASE STUDY

CAMBRIA ELEMENTARY SCHOOL

CALIFORNIA COAST, USA · A WATER-INDEPENDENT PARK AND FIELD

A school on a steep coastal slope with no municipal water for irrigation, and a 2,200,000 gallon reservoir built below the soccer field.

130,000
SQ FT OF EPIC TURF
Across 12 acres

2,200,000
GALLONS RESERVOIR CAPACITY
40 pipes × 380 ft, below the field

Zero
FRESH-WATER IRRIGATION
Source required

EVIDENCE LEVEL

DOCUMENTED · Design scope, storage capacity and one-year photographic arc

The completed school grounds and fields, Cambria Elementary School, Cambria, California.

PROJECT RECORD

LOCATION	Cambria, California Coast, USA
CAMPUS	12 acres
EPIC TURF	130,000 sq ft across six strategic areas
FIELDS	An 85,000 sq ft community soccer field, as well as school athletic fields
RESERVOIR	40 pipes of 380 ft below the soccer field, with a total capacity of 2,200,000 gallons
COLLECTION	The entire campus, including the fields, designed to collect all available stormwater and hardscape runoff
SUMMER REPLENISHMENT	Effluent from the municipal sewage treatment facility
INSTALLATION METHOD	High-speed fill using a Brundage conveyor system

THE PROBLEM

Cambria Elementary School sits on the steep slopes of the California Coast, where access to municipal water for irrigation is not available.

The City of Cambria was unable to provide either the volume of water or the water pressure necessary to irrigate athletic fields using a traditional sprinkler system.

The school needed a way to take advantage of a short rainy season, storing water from the winter wet months for reuse in the dry summer, without negatively affecting an environmentally sensitive coastal area. Stormwater treatment and irrigation efficiency were both paramount.

WHAT EPIC BUILT

EPIC turf covers 130,000 sq ft in six strategic areas of the 12 acre campus. These include an 85,000 sq ft community soccer field, as well as school athletic fields, along with other park areas.

The entire campus, fields included, was designed to collect all available stormwater and hardscape runoff. Below the EPIC soccer field, a reservoir of 40 pipes of 380 ft has a total capacity of 2,200,000 gallons. The piped reservoir prevents both algae and evaporation.

The storage capacity gives the school a source of free irrigation water through the dry summer months, during which the system is also replenished with effluent from the municipal sewage treatment facility. This eliminates the need for a fresh water irrigation source entirely.

Because the design also mitigates runoff, the school gained multi-functional green space in a sensitive coastal setting where it would otherwise have been impossible.



Chamber installation across the field, with the Brundage conveyor system filling the EPIC pans.



Pipes for the below-field reservoir, with a person for scale.

130,000
SQ FT OF EPIC TURF ACROSS 12 ACRES

2,200,000
GALLONS RESERVOIR CAPACITY BELOW THE FIELD

Zero
FRESH-WATER IRRIGATION SOURCE REQUIRED

THE RECORD

This project is documented by its scope, its reservoir capacity and a photographic arc through to one year after completion.

	AS BUILT
Campus area	12 acres
EPIC turf installed	130,000 sq ft in six areas
Community soccer field	85,000 sq ft
Below-field reservoir	40 pipes × 380 ft
Total reservoir capacity	2,200,000 gallons
Fresh water irrigation source required	None



The 12 acre campus under construction.



Completed installation two weeks after sod was installed on the athletic field portion of the site.

ALSO ON THE RECORD

- **Why the reservoir is piped, not open.** “This system prevents any algae and evaporation.”
  Project record, Cambria Elementary School
- **The stated outcome.** “The EPIC System's storage capacity provides the school with a source of free irrigation water during the dry summer months, completely eliminating the need for a fresh water irrigation source.”
  EPIC project summary, Cambria Elementary School
- **The environmental case.** “EPIC designed and installed multi-functional green spaces that mitigate runoff issues and conserve water within the environmentally sensitive coastal area.”
  EPIC project summary, Cambria Elementary School
- **The photographic arc.** The 14-page project record runs from initial earthwork and design plans through chamber installation, conveyor fill, reservoir construction and sod laying to a page captioned “After one year”.
  Project record, Cambria Elementary School



Fill being placed in the chambers alongside a school building.



A piece of sod lifted by hand at the field edge, showing its roots.



A finished turf strip between the planted bank and the play courts.



After one year.

RECORDS EPIC one-page project summary for Cambria Elementary School; 14-page project record with its photographic record from earthwork through to one year after completion; EPIC case study presentation for Cambria Elementary School.