Envirolok®

Designed for Nature...Engineered for Life

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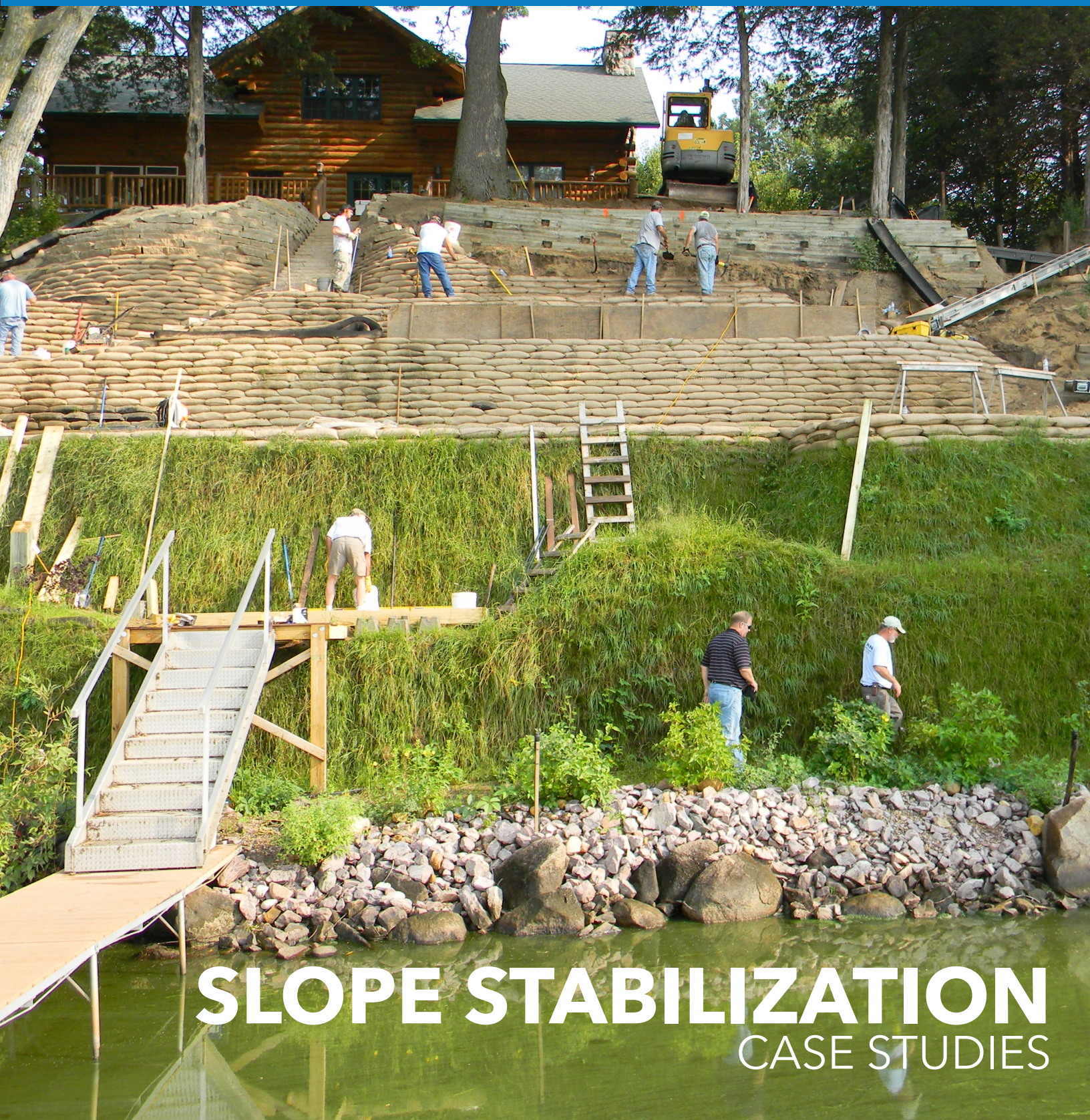

SLOPE STABILIZATION
CASE STUDIES

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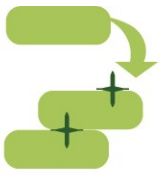
+ENGINEERED SLOPE STABILIZATION

Slope failures are often a result of weather events, poor soil structures, poor drainage, and/or land use. Each of these influences can lower the soil's ability to resist shearing, leading to slope instability. Traditional erosion control products only address surface failure and are limited in their ability to stabilize steep slopes. The Envirolok system stabilizes the soil, allowing vegetation to establish and flourish.

Envirolok is ideal for slopes from 1V:2H to near-vertical slopes. With a variety of gravity, tie-back, and advanced reinforcement techniques, Envirolok can achieve permanent vegetative stabilization no matter how gradual or steep the slope. Site drainage and adequate strength are the keys to a successful solution. Envirolok takes the guesswork out of identifying the right solution by providing collaborative tools to assess drainage and shear strength.

DESIGN

FILL



INSTALL

VEGETATE

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GLENORCHY TRAIL - Slope Stabilization

Year Constructed: 2014

Project Size
8100 Units/450m^2

Client: Town of Oakville

Reinforcement
Threaded Anchors

Vegetation
Hydroseed and Live Stakes

Engineer
Amec Foster Wheeler

Contractor: CSL Group

Bag Filler
Marco Clay Products

+ Project *Snapshot*

Due to Sixteen Mile Creek's scouring action, the subsurface clay shale of this steep slope was quickly eroding and no longer stable, preventing the slope from reaching a stable inclination. Town officials were concerned about this section of their well-used trail system failing. Envirolok was able to conform to the slope's natural contours easily, and due to limited accessibility, a crane was utilized to access the slope from across the creek. A mixture of geogrid and earth anchors was used to increase stability and shear strength along such a steep slope. A mix of native grasses and wildflowers was hydroseeded onto the slope, and then nearly 2000 live stakes of dogwood and willow were added along the slope face. The slope was fully vegetated within three months of construction, and the root systems added further strength and support. The Envirolok system successfully stabilized the slope and established a habitat along a sensitive area for the Glenorchy Conservation Area.

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LAKE WISCONSIN - Slope Stabilization

Year Constructed
2014-2016

Project Size
120' x 50'

Client
Private Homeowner

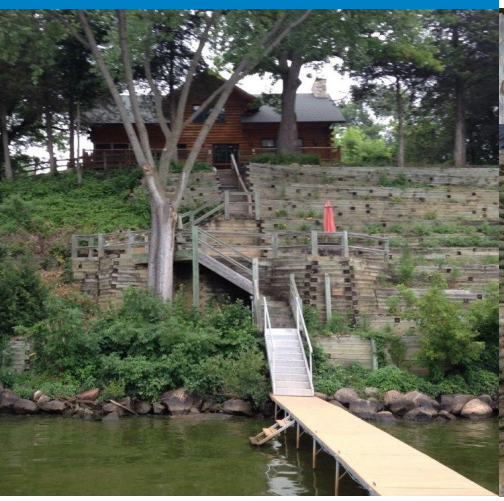
Reinforcement
Geogrid & Earth Anchors

Vegetation
Plant Plugs & Hydroseed

Engineer
Robert Race, P.E.
Envirolok Consulting Engineer

+ Project *Snapshot*

A homeowner on Lake Wisconsin had a failing timber retaining wall that needed to be replaced. Upon reviewing the project and coordinating with regulatory agencies, options were limited. Replacing the current wood timbers with concrete was not allowed. Envirolok was chosen to stabilize this slope as it meets the required needs of the regulatory agencies. During construction, the timber retaining walls were removed in sections and replaced with the Envirolok Unit. Due to the steepness of the slope, geogrid and earth anchors were used to strengthen and stabilize the slope. Due to the large scale of this project, it was completed over multiple years in various stages. Native plant plugs and hydroseeding were used to vegetate the walls. The Envirolok system met all the requirements for this project and exceeded expectations. Due to the flexibility and easy installation, this large-scale project with multiple terraces and steep slopes will be stabilized for many years to come.



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LAKE MENDOTA - Slope Stabilization

Client
Private Homeowner

Reinforcement
Geogrid
Earth Anchors

Vegetation
Plant Plugs
Hydroseed

Contractor
Dixon Shoreline
Landscaping

+ Project *Snapshot*

This lakefront resident had a steep un-vegetated slope that was eroding into the lake with every rain event. Record high lake levels combined with wave action eroded the base of the hillside causing severe hillside instability. During excessive rains, the hillside slipped down the slope, hitting the steel guard railing and bending the structure. The hillside slip exposed the outlook platform's supporting post and its concrete footing, making the outlook platform very unstable. There is an ancient Eagle Indian Effigy Mound at the top of the slope that was being threatened by this erosion. The residence owner was concerned with preserving the slope, the overlook platform, stairway, and the Indian Effigy Mound. Envirolok created the opportunity to stabilize the slope, promote vegetation, and protect the existing structures from further damage. Due to the steepness of the slope, a combination of geogrid and earth anchors was used to create maximum stability and support. After construction, the retaining wall was vegetated with native species via plant plugs and hydroseeding.

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