

BEAUTIFUL • AFFORDABLE • ECOLOGICAL
SHORELINE PROTECTION & BEAUTIFICATION



d/b/a EROSION RESTORATION, LLC

YOUR LASTING EROSION SOLUTION
GOLF COURSES • HOA'S • GOVERNMENTS • RESIDENCES



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YOUR ECO-FRIENDLY SOLUTION TO EROSION

Lakes • Ponds • Creeks • Streambanks • Canals

Shoreline Restoration Specialists

Landshore® Enterprises, LLC, (Landshore®) with offices in Fort Lauderdale, Florida, and headquartered in Venice, FL, is a turnkey national design-build environmental company specializing in erosion control, shoreline repair and restoration challenges. Landshore® uses non-structural, bioengineering and bio-technical methods to fulfill the demands of our clients.

Established over sixteen years ago, we have provided our services of excellence to golf courses, homeowner associations, private residences, and government entities in more than 10 states.

Over the years, Landshore® has provided a level of service that goes beyond the norm. By delivering on time and within budget we always strive to exceed the expectations of our clients. We became a design-build company that ensures the right products are used to protect your shoreline.

Before



After



Landshore® Specialties

Shoreline Restoration & Stabilization
Erosion Control
Environmental Engineering
Land Reclamation
Dewatering
Retaining Walls
Culvert Installation & Maintenance

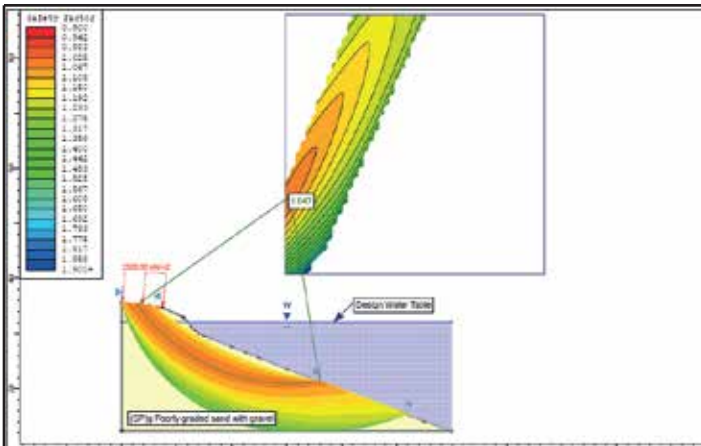
Who We Are

Decades of Experience
Ecologically Friendly to the Environment
Professional Engineer
Set Standards in Industry
Complete Satisfaction on all Projects
Design-Build
BBB+

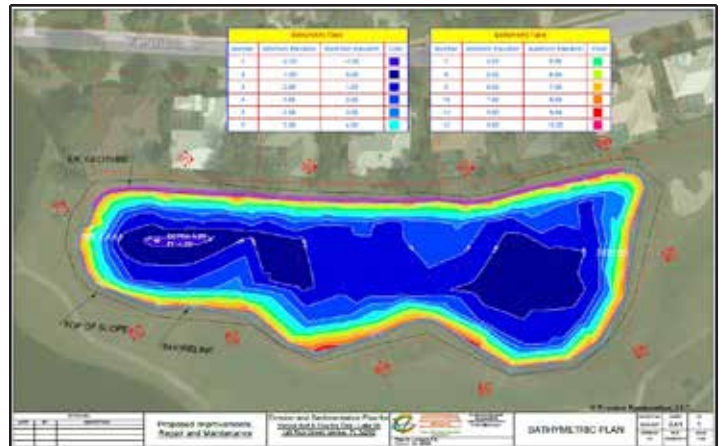
Landshore® is committed to helping each of its clients achieve their objectives. We understand that each project conjures up different circumstances and an array of complex challenges that demand our utmost attention. We have the expertise, resources, technology and collaborative insight to create designs and solutions that far exceed our clients' expectations. Because we are committed to providing quality work in a timely manner, our company guarantees satisfaction on all projects. Landshore® comprehensive experience, outstanding responsiveness, and fiscal conscientiousness have made us innovative leaders in our industry.

ENVIRONMENTAL ENGINEERING

Stability Calculation



Bathymetric Survey

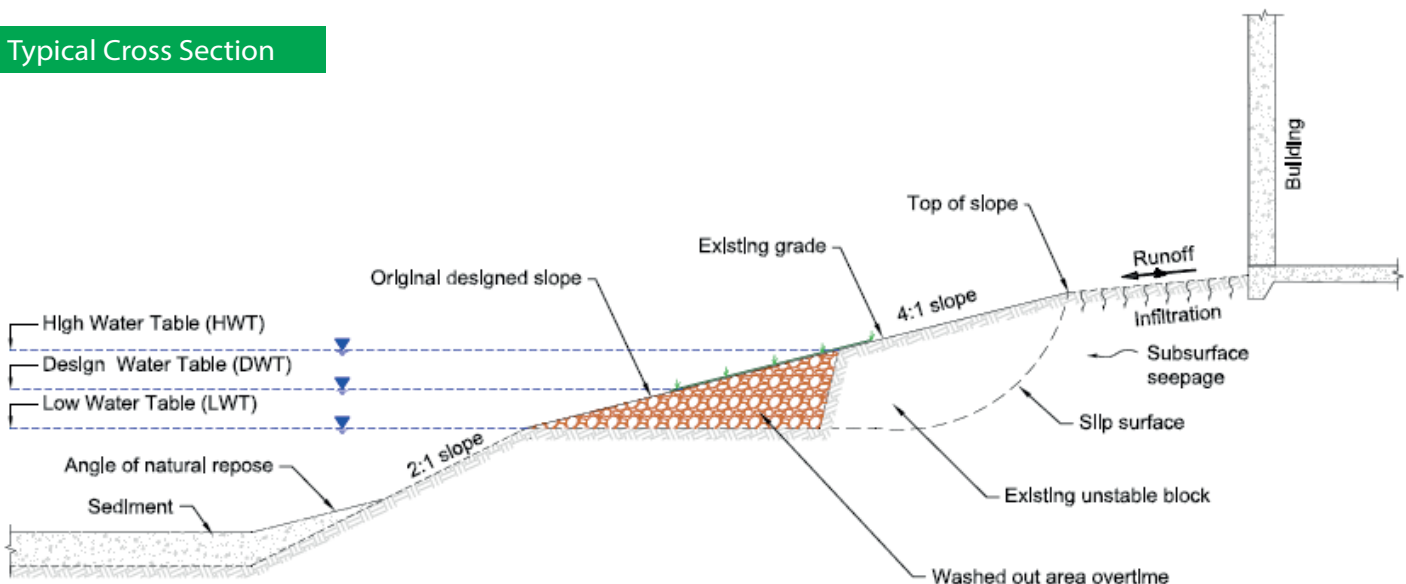


Landshore® Enterprises, LLC, is committed to the process and successful results of all completed projects. Because our long-term objective is to provide clients with whom we contract the best solutions available, we rely a great deal on engineering. Our engineering team is responsible for the integrity of the design-build repair project to control and protect the shoreline from future erosion through:

- | | |
|----------------|-----------------------------|
| Research | GPS Surveys |
| Investigation | Plans & Cross Sections |
| Testing | Bathymetric Surveys |
| Interpretation | Stability Analysis |
| Design | Geotechnical Investigations |
| | Construction Management |

Our philosophy is finding a problem and eliminating its origin through proper balance, symmetry, harmony and equilibrium of force instead of fighting against nature or patch work which costs more in the long run.

Typical Cross Section



ECO FILTER-TUBE (EFT®)

Many of our projects involve the installation of our Eco-Filter Tube (EFT®). It is an extremely economical erosion control solution. The material for the tubes is made of permeable polypropylene, filled with sand and organic matter, pumped hydraulically from the site's lake bottom, or if the sand is inadequate in quantity or quality, then sand is brought to the job site. Once filled and properly placed based on engineering specifications and depending on the number of tubes required, the EFT®s will endure for many years.

The implementation of our EFT® system makes the tubes ideal for many shoreline restoration situations. The flexibility of our EFT® allows the shape to conform to the flow of the original shoreline. The weight-filled tubes become a permanent structure providing strength for controlling future erosion and weight for soil stability. This process results in the ultimate goal of land reclamation for our clients.

The use of EFT® bypasses the need to bring heavy equipment to the job site, preventing the possibility of damage from the large weight of the equipment. By minimizing the use of heavy equipment, costs are lowered as well. The EFT® also allows for easily maneuvering through small areas and heavily wooded shorelines. Another advantage to using our EFT® to restore a shoreline: any type of plant, shrub, or ground cover is feasible. Once a project is completed and sod put down, hidden tubes allow for an aesthetically pleasing appearance.

Dewatering

EFT® systems for dewatering have proven themselves to be extremely efficient for containment and dewatering of pump slurry by-products, industrial waste, municipal sludge, pulp and paper sludge, and other marine sediments. They are custom manufactured in circumferences and lengths for each particular application with prefabricated filling ports and tie down straps along the length of the tubes. They will work well with any hydraulically transported material. The dewatering tubes are especially designed for the mechanical stresses associated with the filling and placement processes, including abrasion, tearing, puncturing, and flattening.



EROSION CONTROL PANEL (ECP)

The modern, lightweight and durable Erosion Control Solution

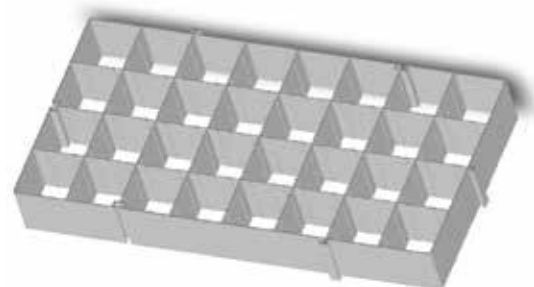


The Erosion Control Panel (ECP) is a patented restoration product and licensed to Landshore® exclusively for installation. The ECP stabilizes soils on shoreline embankments, creating a low-maintenance and structurally stable environment for long-term sustainability. The ECP is especially beneficial for non-cohesive granular infill materials. The ECP system minimizes erosion problems caused by water contact, surface flow and wave action.

At its core, the ECP has a cellular structure that improves resistance to erosion forces on steep, unstable ground or slopes exposed to severe hydraulic and mechanical stresses. The cellular confinement improves the performance of vegetated slopes by reinforcing root systems and directing hydraulic flows over the top of the cells. The cells therefore acts as a series of small 'check dams', preventing formation rills and gullies. It dissipates energy throughout and underneath the cells and confines the fill materials within the cells.

Typical installation consists of two panel sections centered at the main water table elevation. This reinforces the upper soil layer and resists erosive conditions as well as sliding forces beyond the limits of other systems. The ECP provides a long-term solution with sustainable vegetation and permeable aggregate. During water fluctuations, it offers better resistance to soil loss caused by saturation. Studies show that the effectiveness of the ECP with established vegetation handles flow velocities up to 30 feet per second.

The ECP allows for affordable lake maintenance as it stabilizes infill and controls shearing, lateral and vertical movements. The cell size allows for smaller, less expensive fill materials with poor physical properties to be used on steeper slopes. The open mesh design promotes dense grass growth, increases system stability, reduces visibility and blends naturally with the environment.



EROSION CONTROL SOLUTIONS

Landshore® relies on engineering calculations to determine the best design-build given the site conditions. Erosion control products we install and repair or related services we perform include:

Eco-Filter Tube (EFT®)



Erosion Control Panel (ECP)



Articulated Concrete Mat



Gabions



Rip Rap



Retailing Wall



Turf Reinforcement Mat (TRM)



Geo Web



EROSION CONTROL WITH SUPERIOR DURABILITY

Discover the most cost effective solution to erosion renovations

This is Your Challenge



Shoreline erosion is a continual and enduring problem. Many times land degradation is exacerbated by factors such as wave action, tidal flow, winds, and storm run-off. The resulting washout and undercutting that compromise the shoreline's integrity, weakens its natural structure. Over time, the lake bank becomes an unstable surface that invariably becomes a real nuisance and an unsightly mess. Members and residents want the ground repaired as quickly as possible while staying within budget. The question is, how best to do it?

The Clear Solution



Shoreline restoration is a complex process that requires planning, implementation, monitoring, and management. Not only does Landshore® restore lost or degraded land, but we also create a barrier against further erosion using various methods.

Landshore® relies on engineering to determine the best design-build given the site conditions. This includes bathymetric surveys of the body of water's varying depths, topographic surveys, creating cross-sections, and conducting soil tests to measure the amount of tension or stress the soil can withstand. The findings from the different tests provides us with the knowledge to effectively design-build each erosion control solution.

Features of Erosion Control Plans

1. Public safety (establish safe slopes)
2. Slope stability (structural calculations & design)
3. Land reclamation (increase property size)
4. Aesthetics (natural blend into existing landscaping)
5. Oversight (plans are signed & sealed by professional engineer, permits received from government agencies, inspected by engineer, released by Water Management District)

LANDSHORE® ENTERPRISES

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Soil Erosion Control Solutions

Shoreline Stabilization
Shoreline Erosion Restoration
Land Reclamation
Non-Structural Reinforcement
Dewatering & Sediment Control
Dredging
Structural Erosion Control Repair
Culvert Maintenance / Installation

Environmental Engineering

GPS & Surveys
Soil Testing & Shear Stress
Slope Stability Analysis
Plans & Cross Sections
Permit Application
Construction Management



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