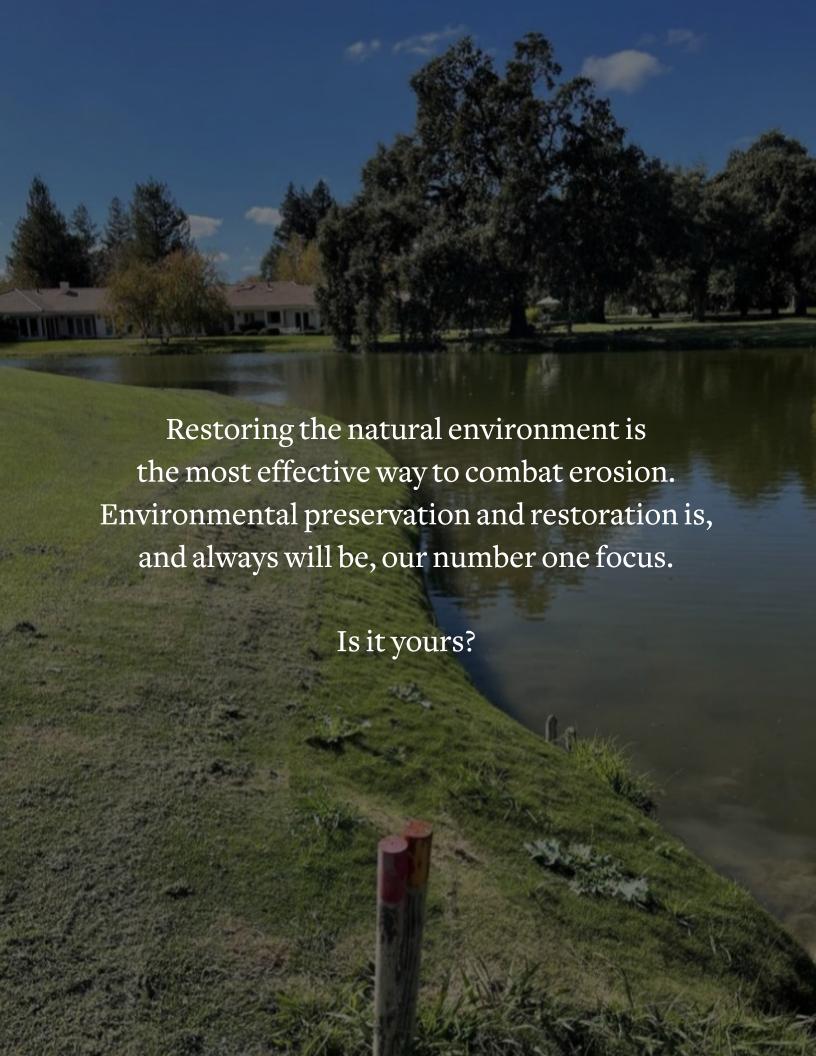


# Ecological Improvements

**EROSION CONTROL SPECIALISTS** 





## WHAT IS EROSION AND WHY IS IT A PROBLEM?

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Erosion is the geological process in which earthen materials are worn away and transported by natural forces such as wind or water.

## Associated problems?

- Land loss
- Decreased property value
- Causes safety issues that can lead to injury, death, and costly lawsuits
- Decreases property aesthetics
- Causes Structural Damage
- · Allows water to encroach onto properties causing damage and flooding
- Can increase nutrient runoff into adjacent water bodies, leading to water quality issues
- Increases sedimentation into adjacent water bodies causing habitat damage
- Can decrease carrying capacity of storm water retention facilities
- Can lead to costly compliance issues
- Worsens exponentially overtime





## **OUR PROCESS**

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**1.** Anchoring is set. We use a range of anchoring products for different substrates like sand, dirt, clay, rock, and concrete.



**2.** Mesh is laid out and bottom row is tied in.



**3.** Mesh is folded over and top row is then tied in. System is filled with desired medium: dredged fill, backfill, blow-in mulch, spoils, etc.



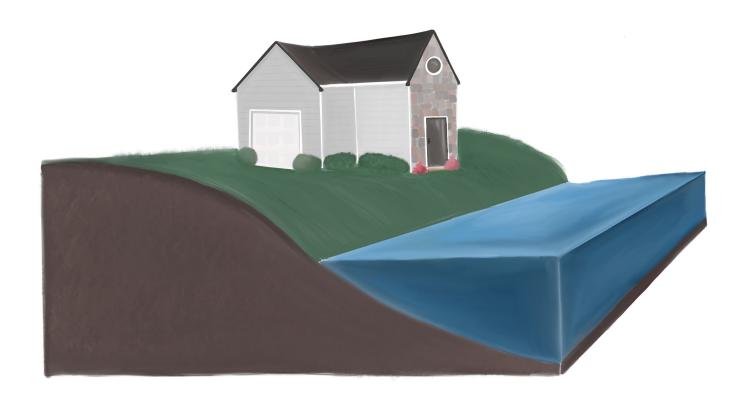
**4.** System is sealed and anchoring is driven sub-grade.



# **OUR PROCESS**

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# **5.** Desired vegetation is planted and system is covered and finished.



## WHY IT WORKS

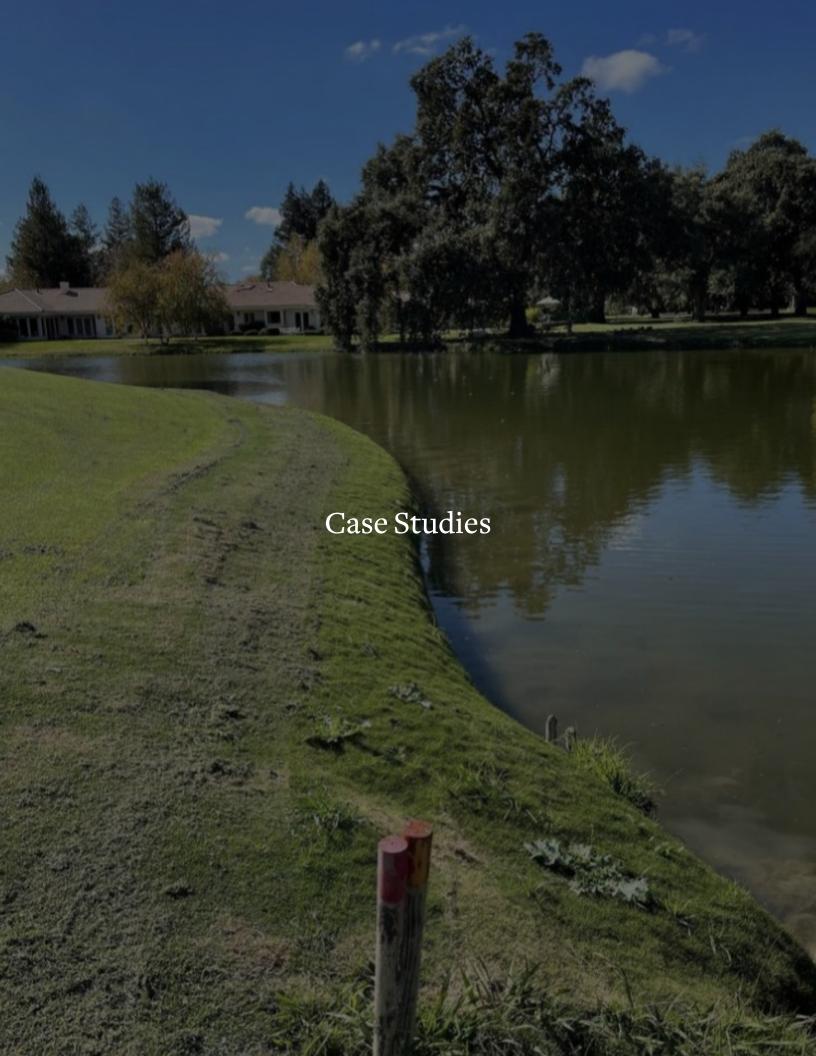
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Our process halts erosion by encapsulating the shoreline with a knitted double layer polyethylene mesh.



Because the mesh is knitted, it allows vegetation to grow through it. Although the mesh encapsulates the shoreline and reclaimed sediment, it is the root structure of the vegetation that makes the system last the test of time

This rip-stop technology of the mesh makes it completely modular. It can be used in almost any application of erosion. It can even be cut and manipulated to go around obstructions like trees, pipes, walls, and rocks.



## TRUMP INTERNATIONAL GOLF CLUB

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WEST PALM BEACH, FL



## The problem:

Donald Trump was redesigning one of the holes on his premier golf course in West Palm Beach Florida. He needed a solution that could halt erosion while maintaining the aesthetic standard upheld by this prestigious property. He also needed a team that was flexible enough to work with his on the go changes to design.





#### The solution:

Ecological Improvements was able to secure Mr. Trumps lake bank erosion gave him his desired design. El was also able to accommodate his gametime decisions and last minute changes. The former president was extremely pleased with El's level of professionalism, understanding of golf etiquette(not disturbing members while they were playing their rounds), and most of all the highly transformative end result seen by members daily for decades to come.

## The Breakers

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#### **FLORIDA**



## The problem:

This predominant hotel in south east florida is a popular destination for many well-known celebrities, athletes, politicians, and professionals. Their Superintendent was displeased with the appearance of several lakes around the property. He wanted a solution that could tie in nicely to the wood bulkheads that surrounded portions of the lank banks and until being introduced to EI had not found a compatible solution.





#### The solution:

El was able to secure the erosion in desired areas while not compromising aesthetics. El tied their system into the bulkheads in a way that looked natural and was not visible to members. The superintendent was absolutely blown away by the speed and efficiency of the team. In a short amount of time we were able to provide a costeffective, highly effective solution to their growing problem.

## **Boca Rio Golf Club**

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BOCA RATON, FL



#### The problem:

Many members at Boca Rio Golf Club were complaining about the eyesore of a shoreline on the first hole directly in front of their clubhouse. This problem was only getting worse as heavy rainfall ate away at the shoreline.

Besides the ugly look of the shoreline, it also was causing structural problems as it encroached on the adjacent cartpath. The steep, eroded lank bank also caused a major safety issue for workers when trying to mow and maintain this area. It was apparent that an immediate solution was needed.

#### The solution:

Ecological improvements system halted the erosion, provided a medium to filter nutrients from entering the lake, therefore improving water quality, and gained about



6 feet of extra shoreline. This reclaimed land was graded in a way that was more friendly for workers to maintain. The members were ecstatic with the result and are already requesting proposals from El for other areas of concern around the course.

# **Aspect Landscape**

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BOCA RATON, FL

## The problem:

Aspect landscape was presented as an opportunity to solve an erosion problem on one of their construction sites in Northern California. The erosion was severe and the contract was valuable. Although they did not want to pass up the opportunity they did not believe they had the tools, resources, or expertise to complete the job.







#### The solution:

Ecological Improvements gave Aspect landscape a wholesale price to send our team to complete the job for them. At the same time we trained their staff on the process so that they could complete jobs in the future.

Their customer was thrilled by the finished result and Aspect landscape was pleased with El's ability to work alongside another contractor. Since then Aspect landscape provides erosion control as one of their primary services and continues to use El for all of their installs. The result is a mutualistic partnership that benefits both companies and most importantly the customer.

## The Sprankle Residence

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BOCA RATON, FL





## The problem:

Overtime the Sprankles had lost the majority of the land beyond their fence to erosion from the adjacent river. To slow down its effect they planted large aquatic plants which blocked their view and access to the river. The sprankles grandchildren were beginning to get older so they wanted them to have access to the river like their children once did. They had looked into a number of solutions that would have cost them thousands of dollars with very little effect.

#### The solution:

Ecological Improvements removed the aquatic plants and deployed their erosion control system. In less than a week the team was able to reclaim almost 15 feet of shoreline. Their property is now protected against further erosion and their grandkids will be able to enjoy their new riverfront beach. Many of the sprankles neighbors have seen the drastic improvement and are taking the necessary steps to get our product on their own properties.

Ecological Improvements halts erosion of shorelines, lake banks, creeks, canals, tee boxes, and green slopes on golf courses while revitalizing ecosystems, improving water quality, and making courses safer for golfers and staff.

#### Problem:

- Erosion of shorelines, lake banks, tee and green slopes, canals, and creeks
- Unsafe conditions for golfers and workers on the course
- Loss of vegetation and habitat fragmentation
- Reduced and diminished aesthetics
- Low-grade water quality and high algae density
- Loss of original design and structure of the course
- Golf course budget restraints and allocations

#### Solution:

- Quick installation leading to minimal disruption to golf play
- Lake bank stabilization creates golf course safety for players and workers
- Enhanced golfer experience and increased golf course aesthetics
- Mitigated application run-off
- Creation of a littoral shelf for aquatic vegetation
- Improved water quality and reduced algae
- Integrity of the original course design
- Utilizing operating and capital budget







Hotels and Home Owner Associations have many responsibilities including oversight of property aesthetics and the care and maintenance of water bodies on the properties.

Aesthetics, safety, and liability are critical components of property and community management.

Whether it's putting proactive measures into place or tackling current maintenance issues, shoreline restoration with Ecological Improvements is the proven, cost-efficient way to mitigate safety risks near the water's edge and boost the aesthetics that all board members, residents, and guests see.

## **Expected Results:**

- Lost land will be reclaimed
- Erosion will finally be halted, with vegetative growth boosted
- Improved water quality through filtrating phosphates and nitrates that can cause algae to bloom
- Protect and upgrade your property value
- Maintain your property's soil integrity



Hillsides and shorelines can provide scenic outlooks and much needed beauty for municipalities when properly maintained. Eroded hillsides and shorelines on the other hand can be a safety hazard and massive budget draw.

Our bio engineered SOX Erosion Solutions™ system is a costefficient and long-lasting solution for municipal canals, creeks, lakes, ponds, and seawalls that will improve residential areas, prevent road closures, keep bodies of water clearer, reduce flood damage, and promote vegetation and wildlife.

Ecological Improvements uses Best Management Practices (BMP's) of erosion control solutions:

- The erosion control device must provide strength and integrity to support newly established vegetation.
- The device must wick and retain water and nutrients to effectively support the health of newly established vegetation.
- The device must provide safe ingress and egress zones for wildlife and aquatic life.
- The device must contain appropriate organic material to provide safe and effective biodegradability, without causing additional contamination to nearby waterways.
- The device must provide filtration of unwanted nutrients and pollutants in order to protect the water quality.



Whether it's on a commercial or private lot, golf course, or alongside a water body, erosion is detrimental to the aesthetics and safety of any property.

Expand your current offerings of landscape installation and maintenance to clients by providing erosion control services for their shoreline, hillside, lake, pond, creek, and soil needs while growing your business opportunities.

## How we can help:

- Add erosion control as another "tool in your toolbox." All you need to do is get trained by our team.
- Want to subcontract the work out to someone else? We'll connect you to our network of trained franchisees to do the project you have or have just won.
- Want to jump into the world of erosion and sediment control, perimeter, and silt fencing? Ecological Improvements will train your crews on how to install our systems so you can do the work yourself!





## **PRODUCTS**

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## DredgeSOX:

An Erosion Control material designed with a double layer of patented knitted polyethylene mesh that is filled by dredging shallow sediment into the containment unit. Upon installation, the system halts erosion and creates an immediate, fully integrated secure living shoreline.

DredgeSOX is our preferred method when a water body is part of the project. Unlike other erosion restoration options on the market, DredgeSOX® is quick to install and has little to no impact on surrounding property.



Before

#### **ShoreSox:**

ShoreSOX Erosion Control system is designed with a single layer of patented knitted polyethylene mesh that is filled with a locally sourced organic media such as blow-in mulch. Upon installation, the system halts soil erosion and re-stabilizes shorelines and hillsides using an open-ended containment system

The short term and long term impacts include an immediately stable shoreline which adds aesthetic value to all properties, an improved and enhanced ecosystem, and mitigating safety risks for residents, workers, and staff.

With two decades and thousands of linear feet installed, each new SOX installation is expected to last several decades, with a 5-year product warranty.



After

## PRODUCTS CONTINUED

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#### Soxfence:

SOXfence Silt & Sediment Control is the next generation of protective project fencing that reduces water encroachment, retains sediments, and serves as a containment barrier. It creates a safe and healthy environment for wildlife and aquatic habitats.

- Material is reinforced heavy-duty polyethylene that will NOT leachate into waterways
- Designed for in-water work & perimeter control
- Heavy-duty fabrication allows for multiple uses Patented anchoring system creates positive contact to soil without digging
- Fewer stakes required and NO TRENCHING NEEDED.
- Knitted construction will not unravel if torn, unlike traditional silt fence products
- Superior alternative to MTO/OPSD Wire Back Silt Fence
- Saves on installation costs vs. traditional methods
- Safe for wildlife, fish, and other aquatic habitats
- 5-year manufacturing warranty





We also offer training on the installation of all three products as well as know how on how to implement our services into your own business.

# Join the Ecological Improvements Family



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## Want to add erosion control to your list of services?

Contact us at info.ei.com and we can:

- Introduce you to our business model and suggest ways to incorporate it into your own business
- Give you all the necessary materials to make the transition seamless and easy
- Provide all the training you will need to become an expert in our process

#### Have an Erosion Problem?

Contact us today at email to schedule a free consultation with one of our erosion specialists.

- We will evaluate your problem areas
- · Identify and other areas of concern
- Provide you a solution that accommodates your needs and budget