

# Introducing WattleFence™

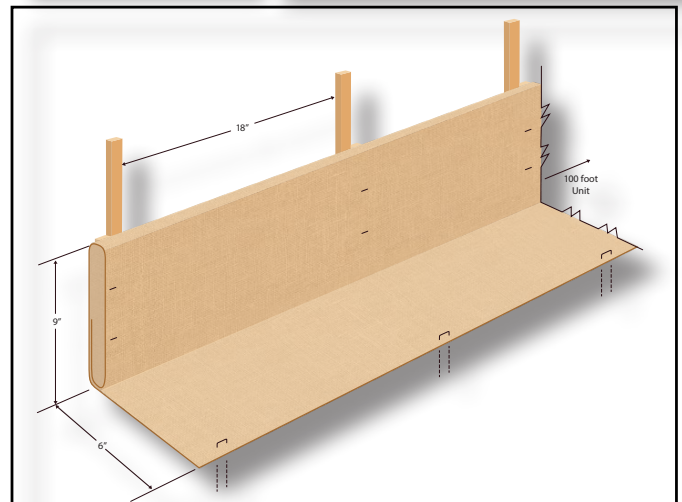
## What is WattleFence™?

WattleFence is the newest innovation in sediment control, combining the best features of wattles (aka logs, SFRs) and silt fence. A longtime leader in erosion control, Western Green has developed this unique solution to evolve treatment of sediment-laden flows, quickly and cost-effectively replacing more traditional technologies for perimeter control, slope interruption, ditch checks, and more.

The patented WattleFence technology combines proven performance with shipping, installation, and removal advantages. Made in the USA using a fleece of coconut fiber reinforced with a woven fabric folded longitudinally to form a thick, multilayer product. The result, at 9 inches tall, is significantly shallower than traditional silt fence while providing equivalent performance. A 6 inch splash apron extends on the upstream side, further securing the WattleFence and preventing scour while removing the need for trenching. Once on site, WattleFence forms an L-shape with vertical stakes at the fence and staples securing the apron. At project closeout, this 99% biodegradable solution may be left on site, reducing costs through eliminating mobilization, labor, and disposal.

## Shipping and Handling

WattleFence is coiled for packaging, reducing shipping costs and storage space. With a storage density of over 10 times that of traditional wattles, just a few pallets can provide over a mile of protection. The vertical support of the Wattlefence also provides dimensional stability, helping to combat the shrinkage that can take place in traditional wattles during shipping and storage. With Wattlefence, you can be confident that every foot will meet installed height requirements.



*Shown Above: Finished WattleFence Unit, WattleFence Installed, Schematic of WattleFence*



*Shown Left to Right: Finished Coil of WattleFence Unit, 2ft Diameter, 100 ft installed Length, 9" Height, Boxed pallet of 16 WattleFence units, 4' x 4' x 40", 1,600 linear feet installed, Installed WattleFence*

## Installation

The unique stake and splash apron attachment system eliminates trenching and provides easy handling for reduced installation effort. Using wooden stakes and bio-degradable fasteners, the system is more than 99% biodegradable, as only a few metal staples are included into the design. This allows the contractor to fasten and forget, with no need for removal at the end of the project.



## WattleFence cont.

### Performance

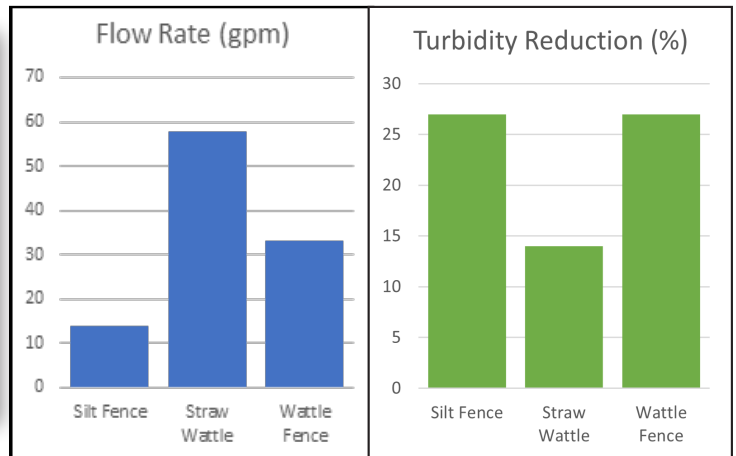
WattleFence features two-stage performance, which allows similar sediment capture and turbidity reductions to silt fence at a significantly higher flow rate. The result is a system that is more easily crossed on-site, both by workers and wildlife.

This two-stage performance is achieved through the tail and multiple layers of fabric at the base of the system providing a higher level of restriction to flow, allowing for greater sediment capture through higher filtration during sediment laden first flush events. As water levels rise behind the WattleFence during larger rainfall events, the upper section of the system is less restrictive. This allows for passage of higher flow rates without sacrificing overall sediment removal performance.



Shown Left to Right: WattleFence Before Testing, WattleFence During Testing, Flow and Turbidity Comparison\*.

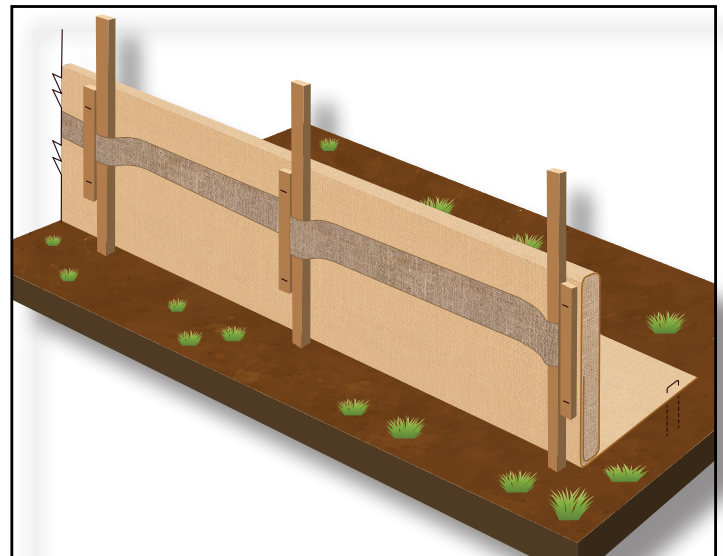
\*WattleFence has been tested in multiple laboratories, results shown from test not pictured.



### Why WattleFence?

The overall efficiency and performance of the product provides a unique tool to simplify the process of sediment control.

- Unique value in shipping and storage – add a few thousand feet to a near-full truckload of blankets. Keep miles of product in the same space 500 feet worth of wattles requires.
- Unique value in installation – no trenching, leave-behind biodegradability. Stake configuration with flexible arrangement.
- Easy step-over height for field work.
- Two-stage filtration, performance at first flush and high flow.
- Stable height dimension avoids inspection violation.
- Easy repair with zip ties and traditional wood stakes.



Copyright 2021.

Western Green  
4609 E. Boonville-New Harmony Rd., Evansville, IN 47725  
[www.nagreen.com](http://www.nagreen.com) | [www.westernexcelsior.com](http://www.westernexcelsior.com)

# WattleFence™ Biodegradable Sediment Control Alternative



## What is WattleFence™?

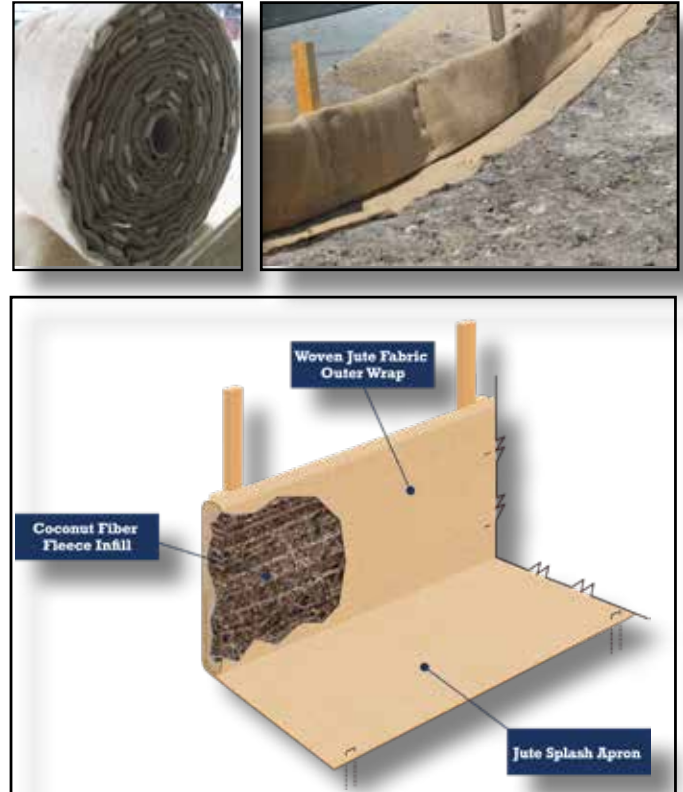
WattleFence is the next innovation in sediment control, combining the best features of wattles (a.k.a. logs, SRFRs) and silt fence. Western Green has developed a tool that creates a **unique and powerful value proposition for those working to contain sediment-laden flow on site**. The finished product is unique in the complete-biodegradability components. WattleFence is constructed using a fleece of coconut fiber that is placed on a biodegradable, planar, woven fabric. This arrangement is folded, forming a thick, multilayer product that measures approximately 9 inches high. Additionally, a six-inch splash apron is left for securing to the ground. Once deployed on site, the product forms an L-shape with the splash apron secured to the ground and the fleece fence held vertical by stakes. This unique system does not require trenching and provides an upstream apron.

## Environmentally-Friendly and Renewable

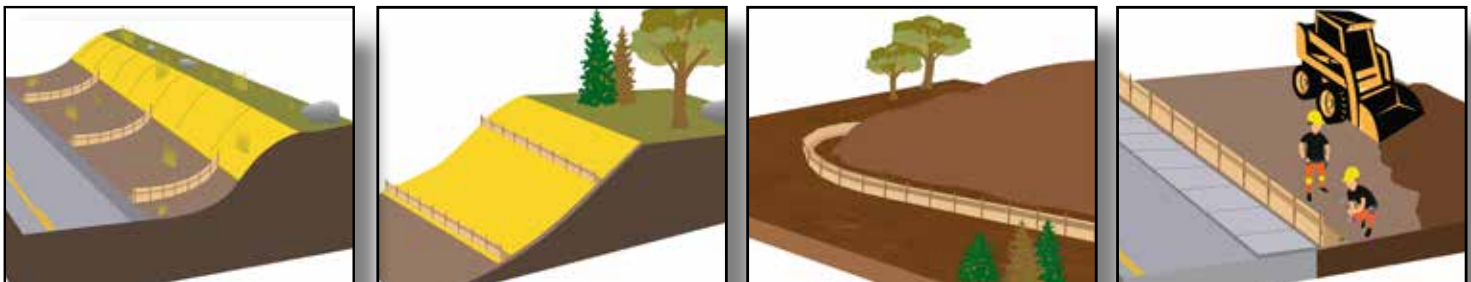
WattleFence is **constructed from natural, renewable components**, and is installed with wood stake supports. The final unit is unique in that it removes all plastics, poly nettings, and metal staking. The result is a sediment control device that is an environmentally-friendly product compared to silt fence, plastic netted logs, or poly-fabric compost socks. The WattleFence is made in the USA, and can offer a solution for project sourcing requirements.

## One-Touch Installation

WattleFence works best with the easiest possible installation practice with a unique staking system, easy handling, no trenching or secondary apron requirement. Because of the condensed packaging, a single 100 linear ft unit of WattleFence can be handed easily by a single person, and installed with no equipment needed. Using wooden stakes and other degradable components, the system can be left in place without removal. Comparatively, silt fence often must be removed and wattles can leave plastic netting long after the filling has degraded. **WattleFence allows the contractor to fasten and forget.** WattleFence is a good choice for a wide range of applications including slope interruption protection, channel flow dissipation, stockpile and perimeter control, and more.



Shown Above: Finished WattleFence Unit, WattleFence Installed, All-natural components of WattleFence





# WattleFence™ Testing and Performance



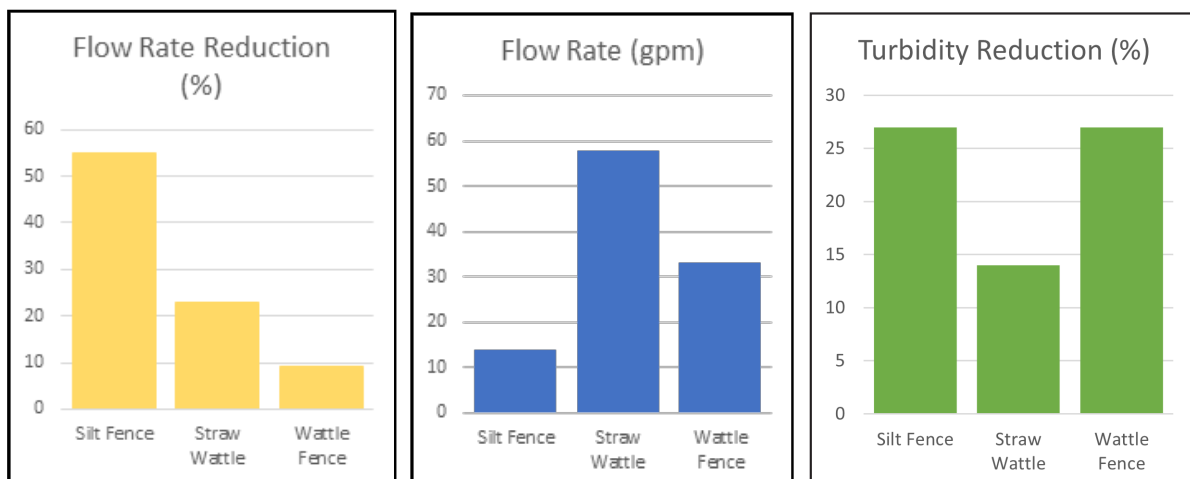
## Overview of WattleFence Sediment Control Device Testing

Sediment control devices represent the last line of defense for keeping soil and pollutants on site. Key requirements for these devices are the flow-through capacity, sediment capture, and longevity. WattleFence offers a unique offering that changes the value equation from the specifier, to the contractor. With ultra-high shipping and storage efficiency, excellent performance and being fully biodegradable, WattleFence is changing how sediment is corralled and controlled.

WattleFence has been tested to determine the flow-through capacity, flow rate reduction, sediment capture and turbidity reduction. In a series of tests conducted at multiple, independent facilities, WattleFence has been shown to provide an advantageous performance envelope. In short, WattleFence captures more sediment, reduces turbidity at higher flow rates compared to a familiar technology, silt fence. Additionally, WattleFence presents less resistance to flow than a straw log and provides significantly better turbidity reduction.



In testing performed at the Texas Transportation Institute (TTI), sediment-laden flows were conveyed through three devices as a comparison. WattleFence provided equivalent turbidity reduction without creating problematic backwater. The sediment load introduced was granular (average grain size 3 micron), thus, did not lead to blinding of any of the products. Thus, this could be considered the worst-case in considering the turbidity reduction. This method is a standard protocol utilized by Texas Department of Transportation.



*Testing performed at TTI, shows the flow rate reduction, flow rate, and turbidity reduction comparison between three different sediment control devices.*



# WattleFence cont.

When configured to intercept channelized flow, as in testing at a leading research university, the flow-through discharge was determined in conjunction with the reduction in sediment size achieved with WattleFence. Normalized sampling from upstream and downstream of the WattleFence during testing showed a 100% reduction in sediment at 4 mm diameter. This was determined as samples upstream showed some particles of 4 mm or greater, downstream samples did not, thus 100% reduction. Similarly, for particle sizes 2 – 4 mm in size, the downstream samples showed 96% less particles of this size fraction. The conveyance during testing was greater than 20 gpm per foot for the 9" tall unit.



Grain Size (≥ mm)	Sampled Reduction %
4	100
2	96
1	89
0.5	81
0.25	67
0.125	46
0.075	24

*Shown Left to Right: WattleFence Before Testing, WattleFence During Testing.*

## WattleFence In Action

In real-world evaluation, WattleFence has been shown to provide outstanding longevity, remaining fully functional and at design height for approximately 9 months in southern Georgia. In this case, the unit was removed at the end of construction, and was fully functional at the time. Comparatively, logs, wattles, compost socks, etc, utilize a fill or stuffing to provide the device height. This fill is degrading from the first day on-site. The device loses height and structure every day on the job. WattleFence stands tall, month after month. Additionally, the WattleFence is comprised of natural, biodegradable elements, so once its functional use is no longer needed, the product can be laid down to allow degradation without removal.

WattleFence can be used in lieu of Coir Logs, Coir Wattles, Silt Fence, Straw/Excelsior Logs or any other type of sediment control device. The sediment capture performance is exemplary, while passing significant flow, minimizing ponding. Added to the ease of installation and the ability to leave the unit behind, WattleFence provides on-site simplicity.

For more information about WattleFence's design or installation, or to learn more about our other Erosion and Sediment Control product brands, visit our website at [www.westerngreen.com](http://www.westerngreen.com).



*Shown Left to Right: Straw wattle deformation as degradation occurs, WattleFence in action under sediment-laden flows, WattleFence continued performance after multiple flow event.*



Copyright 2021.

Western Green  
4609 E. Boonville-New Harmony Rd., Evansville, IN 47725  
[www.nagreen.com](http://www.nagreen.com) | [www.westernexcelsior.com](http://www.westernexcelsior.com)



# The WattleFence™ Advantage



## Why WattleFence™?

WattleFence is the next innovation in sediment control, combining the best features of wattles (a.k.a. logs, SRFRs) and silt fence. Western Green has developed a new product that creates a unique and powerful value proposition on projects working to contain sediment-laden flow on site. The finished product is unique in the high-volume shipping and storage, biodegradability, and installation. Wattle Fence provides all these advantages while providing similar sediment reduction and turbidity reduction as wattles and silt fence. This innovation has been awarded multiple patents.

## Shipping and Handling

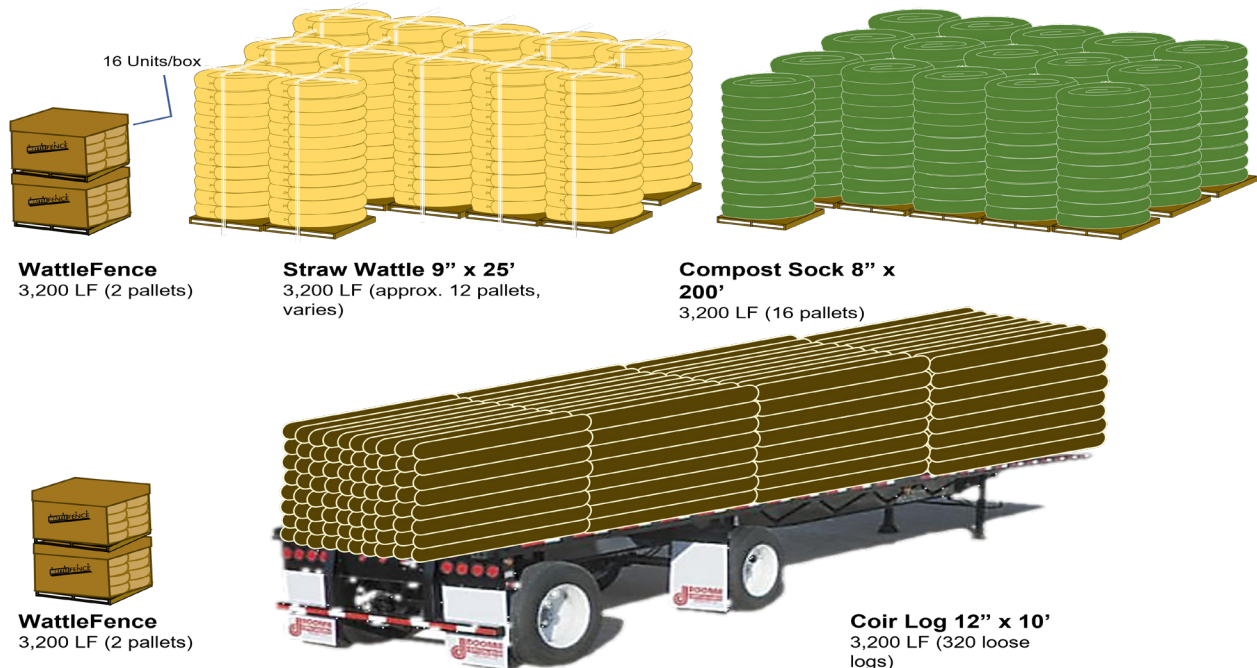
This unique configuration provides packaging opportunities that increases shipping and storage density in excess of 10 times. ***With just a few pallets on hand, WattleFence is ready to deploy over a mile of wattle fence*** around stockpiles, along roadside ditches, at the toe of slope, and anywhere wattles or logs might be considered. The Wattle Fence incorporates small wooden slats along with is completely biodegradable configuration, to allow the installation of a 9 inch high by 100 linear ft. unit. Each unit is coiled into a 2 ft diameter roll and can be stacked 16 units per pallet, resulting in the best shipping and warehousing configuration of any all-natural, sediment filtration system of comparable height.



*A WattleFence Unit, a boxed pallet of 16 units of Wattle-*

## Sediment Systems Comparison

For distributors, contractors, and project site managers, the ***WattleFence results in the best shipping density and storage and warehousing opportunity.*** The graphic below illustrates the unique benefits of the WattleFence in this regard. A single unit of pallet floor space of the WattleFence either on a truck or in the warehouse can replace up to 20 times the space of other sediment control units such as fiber logs (e.g. straw wattles), coir logs, or compost socks, and twice the floor space of unstackable silt fence. And when you factor in the dual-stage filtration performance of the WattleFence against other sediment devices, the answer becomes clear. WattleFence is your go-to option for an all-natural, highly-effective, and innovative sediment control system.





## Installation Benefits of WattleFence

WattleFence can offer additional benefits regarding installation compared to other forms of sediment control. One of the biggest benefits to WattleFence, is the ease in mobility around a project site. Since the WattleFence is coiled into a compact unit, 100 linear feet of WattleFence can be carried by a single person in a single trip by hand. Comparatively, wattles or logs of equal performance, may require multiple handlers, multiple trips, and possibly the use of equipment to move the product around a construction site.

Another installation benefit of the WattleFence, is that it does not require any trenching during installation. The WattleFence can be installed directly on the soil without the need for trenching equipment or shoveling my hand. Simply unroll the WattleFence stake into place, and secure the splash apron with staples or additional stakes.

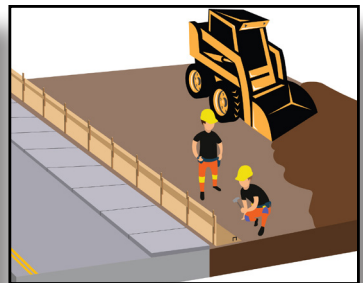
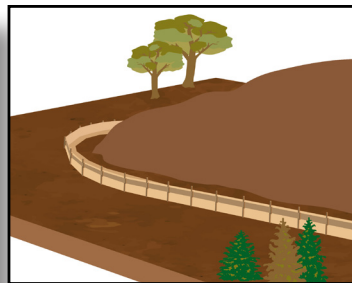
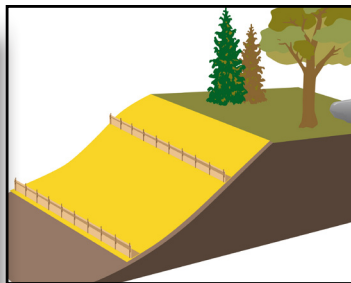
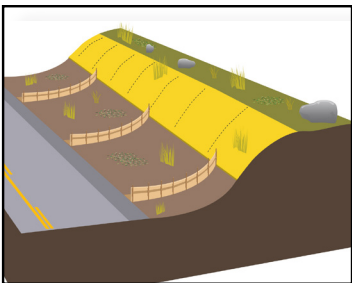
## One-Touch Installation

WattleFence works best with the easiest possible installation practice with a unique staking system, easy handling, no trenching or secondary apron requirement. Because of the condensed packaging, a single 100 linear ft unit of WattleFence can be handed easily by a single person, and installed with no equipment needed. Using wooden stakes and other degradable components, the system can be left in place without removal. Comparatively, silt fence often must be removed and wattles can leave plastic netting long after the filling has degraded. **WattleFence allows the contractor to fasten and forget.**

WattleFence is a good choice for a wide range of applications including channel flow dissipation, slope interruption protection, stockpile and perimeter control, drain protection, and more. To learn more about WattleFence visit our website [www.westerngreen.com](http://www.westerngreen.com).



WattleFence installed (top), 200 linear ft of WattleFence can easily be carried on a project site (bottom).



Copyright 2021.

Western Green

4609 E. Boonville-New Harmony Rd., Evansville, IN 47725

[www.nagreen.com](http://www.nagreen.com) | [www.westernexcelsior.com](http://www.westernexcelsior.com)



# PROJECT PROFILE



## Project Basics

**Project Name:** Commerical Site Channel Dissipation  
**Installation Date:** Fall 2020  
**Product Type:** Western Green WattleFence  
**Project Location:** Georgia

## Project Overview

Ongoing construction on this Georgia project location, resulted in temporary, but erosive soil exposure. In many areas, the water concentrates and becomes a drainage area for the larger construction site during storm events. As fall set in, and construction continued, sediment control solutions were needed to help mitigate sediment migration from the project site onto neighboring lands. The solution needed to handle the heavy silt clay soils, allow for easy access around the site both for equipment and foot traffic, and be able to hold up under the winter rainy season until construction and final stabilization could finish in spring 2021.

## Installation

The WattleFence was selected for the stabilization job. Needing little to no soil prep, and no trenching, the WattleFence was installed directly into the existing channelized area. The WattleFence utilizes a multi-layered fabric and coconut fleece unit with a splash apron to capture, filter, and dissipate water energies. The splash apron is installed with staples facing upstream, and helps to capture sediment and debris. A series of wood stakes are used on 3-4 ft spacing to support the final WattleFence Unit. A single unit of WattleFence is coiled into a 100 linear foot unit and is easy to handle and install.

## Performance

The dual filtration design of the WattleFence, allows the tail and multiple layers of fabric on the lower portion to provide more restriction to flow, allowing more sediment to settle and increasing the filtration effect at low flows. As the flow rates rise, the upper section is less restrictive, increasing the unit flow rate to allow the greater flow to pass. The higher flows are handled without compromise of the system or significant reduction in overall performance. After 3 months in place, the WattleFence has provided the sediment capture and control needed on this active construction site.



*Newly installed WattleFence requires no trenching (top), under heavy rain events the WattleFence did not overtop allowing filtration and sediment capture throughout the full unit height (middle), 3 months after installation, the unit continues to capture and filter sediment (middle).*

Copyright 2021.

Western Green  
4609 E. Boonville-New Harmony Rd., Evansville, IN 47725  
(866) 540-9810 | [www.westernexcelsior.com](http://www.westernexcelsior.com)

