ProGanics®
BIOTIC SOIL MEDIA™

The World's Most Advanced Engineered Soil Media™

Loaded with a Patented Biological Soil Nutrient System

Profile®
Solutions for your Environment

When Failure Isn't an Option, ProGanics® is Your Solution

In nature, sustainable vegetation is achieved through the biological process of organic matter breaking down in soil and delivering nutrients plants need to grow—it's called nutrient cycling. Unfortunately, all too many erosion control and revegetation attempts fail due to soils deficient in organic matter and biological activity. ProGanics® Biotic Soil Media™ (BSM™) is engineered with key biological elements and patented bark and wood fibers to kick-start vigorous root development and vegetation establishment while also initiating the nutrient cycling necessary to regenerate depleted soils. Unless you are certain the soils on your sites contain the essentials to sustain plant growth, you can't afford not to use ProGanics. It is absolutely revolutionizing the way soil is amended today.

Ensure Success
ProGanics help soils reach their full potential anywhere it's needed—on top of bare ground or under erosion control blankets, straw, hydraulic mulch or sod.

Get the Best
The proprietary ProGanics formulation outperforms other biotic amendments and is a proven alternative to topsoil and compost.

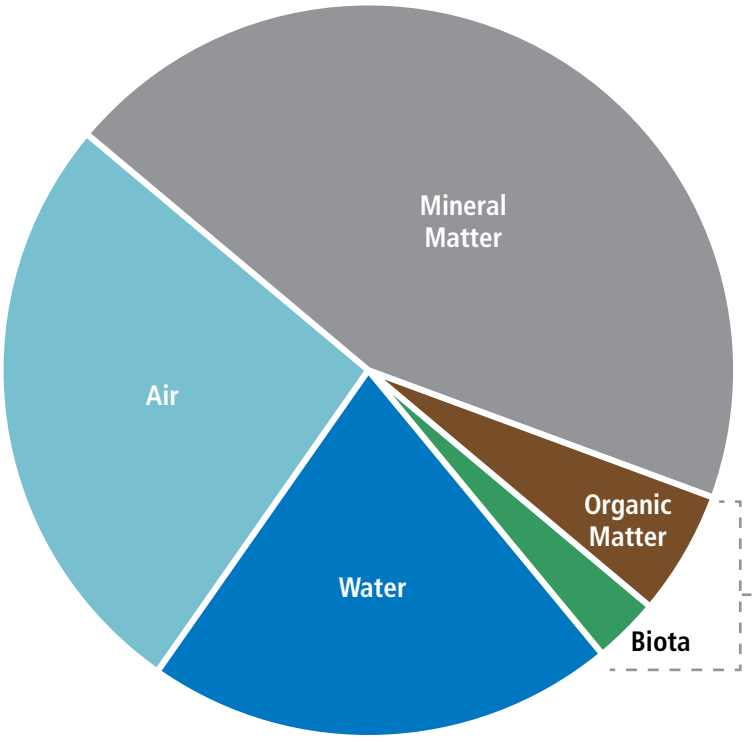
Save Time and Money
Hydraulically applied for quick and cost-efficient installation versus truckloads of topsoil or compost.

Make it Your First Step
Too many projects fail before ProGanics is brought in: Do it right the first time!

See ProGanics in action at
profileproducts.com/proganics

What's Critical to Making Soil Healthy?

Healthy soil is essential for achieving rapid vegetation establishment and long-term sustainability, factors that help you eliminate callbacks and result in faster fulfillment of your project expectations. What are typical construction site soils lacking that make them unfit to support plant growth, and how does ProGanics facilitate the development of healthy soil?



The Contents of Healthy Soil

- Microbes such as bacteria in the soil decompose organic material, making it readily available for plants to take up as nutrients.
- Fungi feed on the carbon and carbohydrates that plants release and in return they help deliver water and nutrients to the plants.
- With adequate nutrients and moisture available for uptake, plants flourish.
- Healthy vegetation produces new organic material to sustain this nutrient cycle process.

ProGanics' biological elements provide the spark and its organic materials are the fuel to ignite the nutrient cycle process to restore depleted soils back to health.

ORGANIC MATTER	BIOLOGICAL ACTIVITY	WATER	AIR	MINERAL MATTER
Required for microbial conversion to humus	Bacteria, fungi, protozoa, nematodes, worms, etc.	Carrier of nutrients, all living things require water	Critical for plant and microbiological activity	Clay, sand and silt particles hold essential minerals

Patented Wood and Bark Fibers Lay the Foundation

Profile® Products is the world's foremost authority on bark and wood fibers with its renowned Thermally Refined® process. Proven in the horticultural community as an excellent replacement for peat and perlite, Profile's bark and wood fibers are an industry standard used by many of the world's top growers in their growing media. Made from 100% recycled wood and bark chips that have been phytosanitized to remove weed seeds and pathogens, these fibers are the foundation of what makes ProGanics® unsurpassed in bringing dead soil back to life.

Added ingredients include:

Porous Ceramics: Help create a prime habitat for beneficial bacteria and fungi through amazing amounts of surface area and bonding sites for water and nutrient retention

Biochar: This porous and highly stable form of organic matter is produced by heating plant based materials in a high temperature, low oxygen environment and helps fuel biological activity

Patented Biological Soil Nutrient System: Beneficial soil bacteria convert Thermally Refined bark and wood fibers and other organic materials into plant-available nutrition

Proprietary Formulation of Fast-Acting and Sustained Release Soil-Building Components Containing Seaweed Extract, Humic Acid and Endomycorrhizae: Critical to the development of strong root systems that ensure plants have an extensive supply route to necessary nutrients

Cross-Linked Polysaccharide Biopolymers: Increase matrix water-holding capacity, ease of application, bond strength and ability to stay in place on soil

Game-Changing Advantages

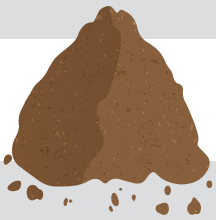
ProGanics is a consistent product manufactured under highly controlled conditions. Trucked in topsoil or compost are often used to augment depleted soils, but both add cost, uncertain quality and time to projects with elevated carbon footprints. Using ProGanics Biotic Soil Media instead saves money and time while delivering outstanding results.

CONSIDERATIONS	ProGanics	Topsoil	Compost
Consistent Product	✔	?	?
Decreased Hauling Costs	✔	x	x
Readily Available / Easy Delivery	✔	?	?
Easy On-Site Storage	✔	?	?
Fast, Uniform Application	✔	x	x
No Substrate Mixing Required	✔	✔	?
Safe for Steep Slope Applications	✔	x	x
Introduces Organic and Biological Elements	✔	?	✔
From Renewable Sources	✔	x	✔
Wet or Frozen Conditions	✔	x	x
Weed Seed and Pathogen Free	✔	?	?
Potentially Hazardous to Human Health	x	✔	✔

Do The Math

Class A Compost Limits

Compost
268,900 lb/ac
(301,200 kg/ha)



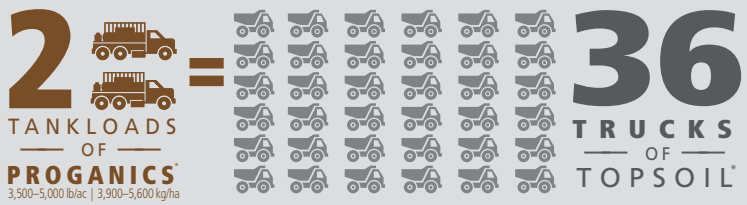
vs.

ProGanics
5,000 lb/ac
(5,600 kg/ha)

Specifications commonly call for a two-inch (50 mm) layer of compost on denuded sites. That translates to approximately 268,900 pounds of compost per acre (301,200 kg/ha). That same area would get what it needs from an application of just 5,000 pounds per acre (5,600 kg/ha) of ProGanics. And look what also can be applied to your site in a 2-inch (50 mm) layer of compost:

BASED ON CLASS A COMPOST LIMITS		
Contaminants	**Class A Compost**	**ProGanics BSM Tested Value**
Arsenic	**5.51 lb/ac (6.17 kg/ha)**	**0.003 lb/ac (0.003 kg/ha)**
Lead	**40.33 lb/ac (45.17 kg/ha)**	**0.003 lb/ac (0.003 kg/ha)**
Mercury	**2.29 lb/ac (2.56 kg/ha)**	**0.003 lb/ac (0.003 kg/ha)**
Pathogen: Fecal coliform (most probable number per gram dry weight basis)	**1,000 MPN**	**< 1 MPN**
Physical Contaminants: (< 0.5 % dry weight) Plastic, Glass and Metal	**1,344.45 lb/ac (1,505.78 kg/ha)**	**0 lb/ac (0 kg/ha)**

The Class A Compost numbers are maximum allowable limits established by the US Composting Council (USCC) based on US EPA biosolid limits. The allowable levels of contaminants that may be applied to your site when applying STA Certified compost are off the charts compared to ProGanics, which has been tested in its entirety and meets or exceeds all USCC requirements for Standard of Testing Assurance (STA) certified Class A compost.



*3,000-gallon capacity hydroseeder equipped with gear or positive displacement pump.

*Amount needed to cover 1 acre (0.4 ha) with 4 inches (102 mm) of topsoil; based on a 15 cubic yard capacity dump truck.

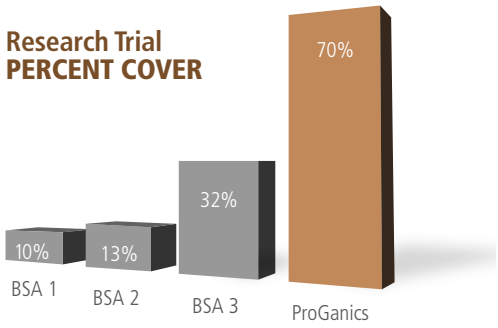
5,000 pounds of ProGanics provides the same amount of organic and soil-building components per acre as 36 loads of rich topsoil. Separation layer will be required on highly deficient soils.

Placing topsoil over depleted soils is another common option. However, even topsoil with sufficient organic matter levels can be devoid of biological activity. ProGanics delivers the necessary soil-building components you need faster, more consistently and at decreased costs.

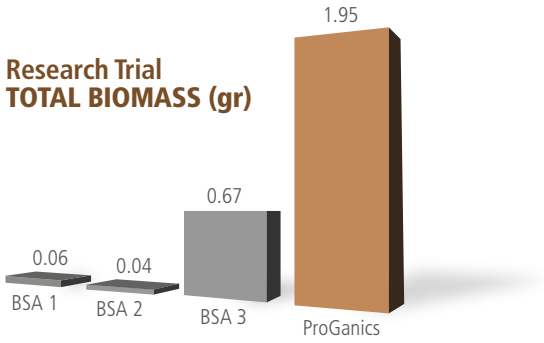
Nothing is Better at Converting Site Dirt into Ideal Soil

ProGanics dramatically outperformed three Biotic Soil Amendments (BSAs) in replicated random block design greenhouse trials for Total Percent Cover and Total Biomass. No BSA performs like ProGanics when it comes to establishing sustainable vegetation.

Sustainability is an issue with BSA formulations that contain peat. Peat releases CO_2 into the environment when harvested from fragile wetlands, leading some countries to initiate bans on its use. **ProGanics does not contain peat.**



The ProGanics plots achieved twice the cover of the next best BSA.



Biomass was three times greater in the ProGanics plots.

ProGanics Cost & Savings Calculator

profileproducts.com/proganics

This easy-to-use calculator will show you how much money ProGanics can save you when compared to topsoil or compost on your next project.

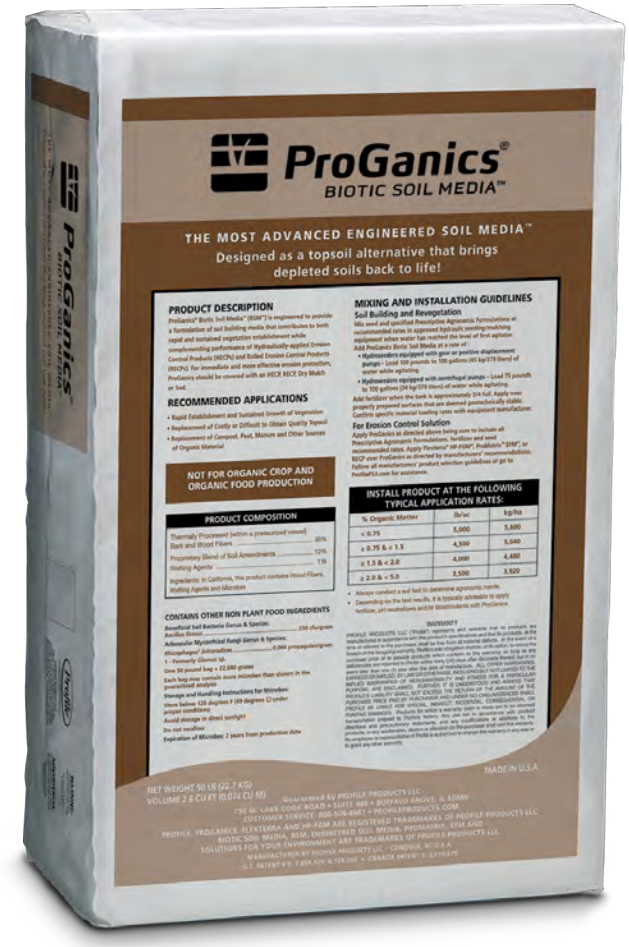
Faster and Easier Application

In hydroseeders equipped with mechanical agitation, ProGanics® mixes quickly into a viscous, dark-brown slurry that is easy to apply and meter. ProGanics is designed to retain water for slurries that go down evenly, adhere to the soil and resist dewatering.

Quick and Easy Loading

Consistent Slurry

Smooth Shooting



Recommended Application Rates:

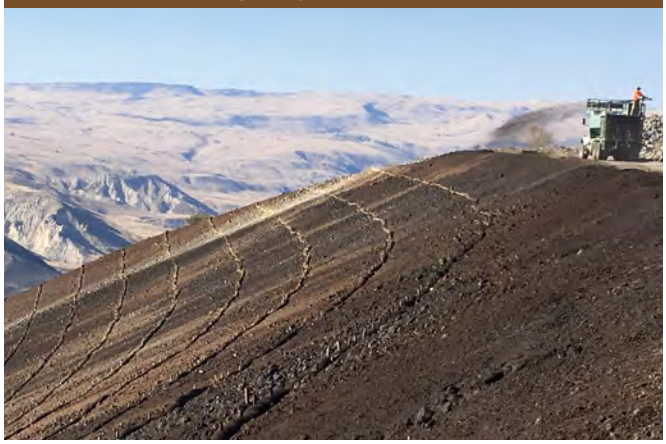
% ORGANIC MATTER	lb/ac	kg/ha
< 0.75	5,000	5,600
≥ 0.75 & < 1.5	4,500	5,040
≥ 1.5 & < 2.0	4,000	4,480
≥ 2.0 & < 5.0	3,500	3,920

Quantifying percent organic matter and critical soil parameters is achieved via a soil test. In the absence of a soil test to determine organic matter, apply ProGanics at a minimum rate of 4,000 pounds per acre (4,480 kg/ha). Soils with organic matter greater than 5% typically do not require ProGanics.

Whether You're Working on Energy, Waste Containment, Transportation or Residential Projects, ProGanics® Has You Covered

From difficult-to-access sites to residential developments and everything in between, ProGanics is your best "life insurance" for ailing soil. ProGanics can even be applied to revitalize stockpiled topsoil.

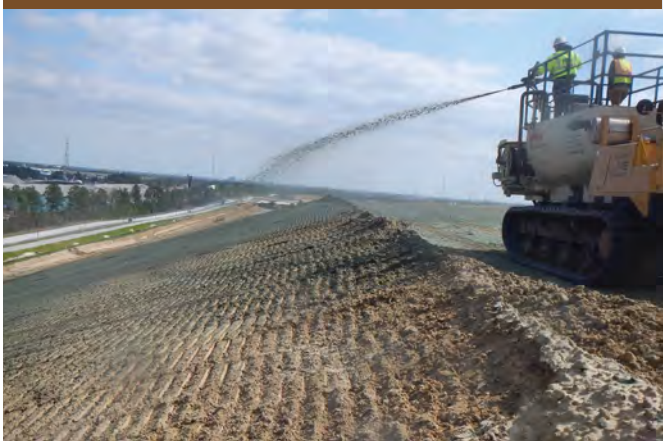
Highways / Roadsides



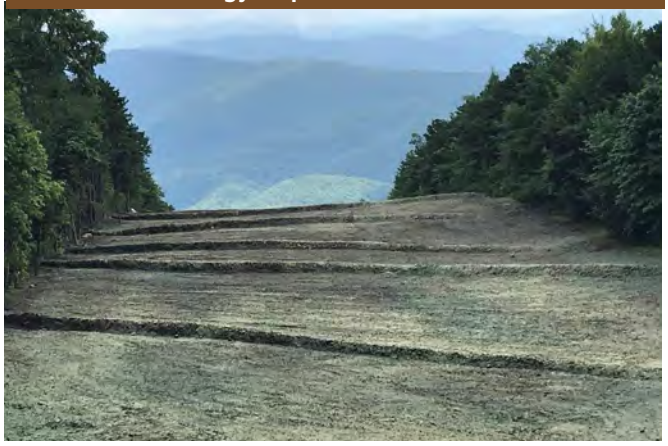
Golf Courses

Residential Development

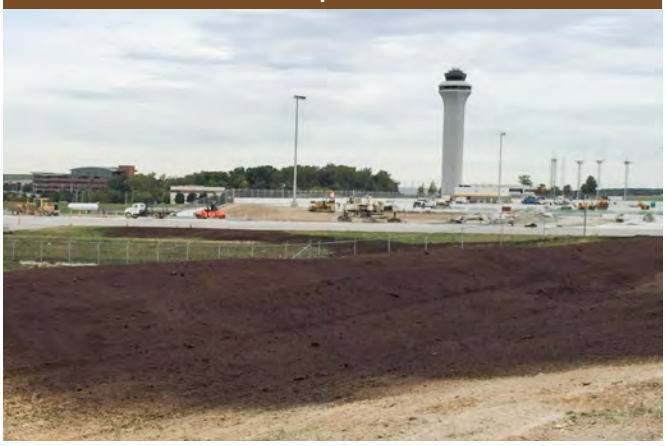
Waste Containment



Energy / Pipeline Restoration



Airports



Enhance Performance with Effective Cover

ProGanics® is typically applied as a topical growing media and covered with an erosion control product to protect the soil, ProGanics and seed until vegetation is fully established.

General recommendations include:

MILD TO MODERATE TERRAIN

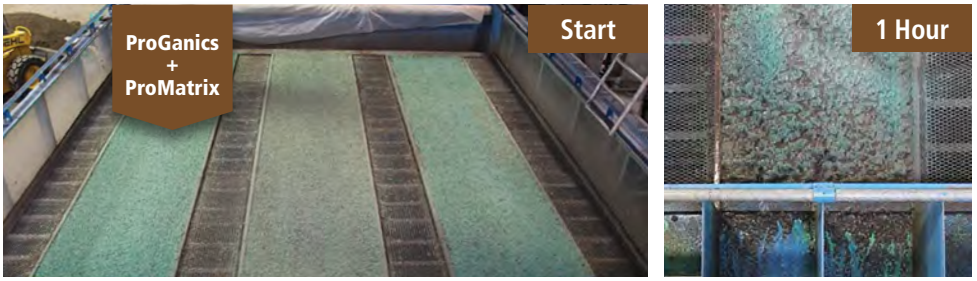
Straw with tackifier, Profile® wood or wood with tackifier should be adequate on flat to gentle terrain where erosion potential is lower. As slope gradients and/or lengths increase, erosion control blankets or ProMatrix® EFM™ would be advisable.

STEEP TERRAIN

Profile Flexterra® High Performance-Flexible Growth Medium® (HP-FGM®) is necessary on steeper/longer slopes or challenging sites where erosion potential is greater and design safety is critical.

LAB TESTING

Testing at the prestigious and world-renowned Utah Water Research Laboratory (UWRL) has shown that ProMatrix EFM applied over ProGanics resulted in **99% erosion control effectiveness** whereas ProMatrix over a competitive Biotic Soil Amendment at the same rates resulted in only 90% effectiveness.



Proof is in the Performance: ProGanics Contributes to Both Quick and Long-Lasting Results

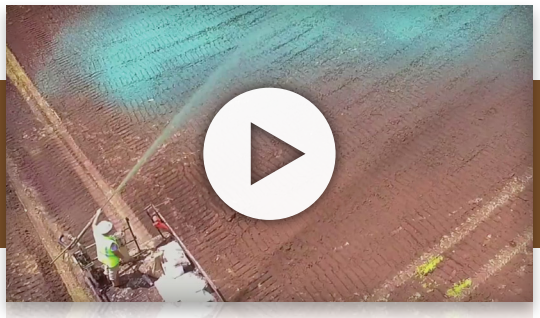
CLAY MINE RESTORATION

For 13 years, a clay mine in the Southeastern U.S. sat partially barren as a large mining company made multiple attempts using traditional seeding methods to revegetate 5 acres (2 hectares) of the sprawling site. Nothing worked. After conducting a site visit and soil testing, Profile determined **"nearly lifeless" soil** was one of the primary reasons.

An amendment plan designed to drastically improve soil health was prescribed, beginning with ProGanics Biotic Soil Media and several ProPlus® Prescriptive Solutions. Once the amelioration plan was finalized, regional seed and plant experts developed a blend of plant species that would thrive on this particular site. Finally, Profile recommended utilizing Flexterra High Performance-Flexible Growth Medium to enhance vegetation establishment and prevent erosion.

During follow-up inspections a year later, Profile technical experts confirmed that soil health had dramatically improved thanks to the benefits offered by ProGanics:

- A five-fold **increase** in organic matter from 0.4% to 2.0% versus a background level of 1.5%
- 271% **increase** in soil respiration
- 345% **increase** in bacterial counts
- 142% **increase** in fungal counts
- **pH increase** from 4.8 to 5.3



Watch this video at
profileproducts.com/proganics

Before

Large gullies formed due to erosion

Application

ProGanics, Flexterra and ProPlus Prescriptive Solutions applied to soil in April

4 Months

In less than four months after application, the mine received a full bond release from the presiding regulatory agency and then obtained permits for three additional mine sites

1 Year

Sustainable vegetation one year later

Highway Fire Reclamation

Twenty acres of vegetation along the Highway 210/Interstate 15 interchange in Rancho Cucamonga, California, were torched during what was dubbed the Freeway Fire. The California Department of Transportation (Caltrans) needed a quick, reliable solution to restore the vegetation and prevent hillside washouts safely and without disrupting the heavy traffic flow.

Soil tests showed the site had less than 1.5% organic matter, leading to the recommendation of ProGanics® BSM™ and ProPlus® Prescriptive Solutions to accelerate germination and improve long-term plant vitality. The site was then rapidly covered with ProMatrix™ EFM™ to protect both seed and soil.

All products were applied with just two hydroseeders, making it easy to work without shutting down multiple lanes of traffic. Spreading compost would have required a significant number of trucks entering and leaving the site, creating the potential for traffic disruptions and safety issues.

Over the three months following application, the site only received 1.7 inches (43 mm) of rain. Despite the lack of rainfall, the site had a blanket of vegetation with purple and yellow wildflowers as specified by Caltrans. The distributor on the project commented, ***"The fact that it was up and looking so good within that time frame is pretty unique, but how much of it you had was pretty staggering, too."***

Before restoration of the scorched slope

Taking a soil test

Three months after application

Even more significant growth on the site during follow-up inspections

Test Your Soil—Ensure Sustainable Success

Healthy soil is the necessary infrastructure to support and nurture vegetation. Once vegetation is established, it then grows and flourishes through nutrient cycling.

Once you understand your soils, you can work toward building the proper soil composition and profile to promote nutrient cycling.

Go to ProfilePS3.com to get started PS³ PROFILE SOIL SOLUTIONS SOFTWARE

Profile Soil Solutions Software (PS³) walks you through the process of proper soil sampling techniques. After you send in the sample, you'll receive a comprehensive analysis that details the site's soil characteristics. You'll also receive detailed recommendations on what practices and amendments may be necessary to correct or improve the soil. Those recommendations may include fertilizer and specific amounts of ProGanics and/or ProPlus® Prescriptive Solutions which include Soil Neutralizers, Growth Stimulants and Soil Enhancers.

When used in conjunction with one another, ProGanics and ProPlus Prescriptive Solutions can lay the foundation you need to sustain success on nearly any soil or substrate.

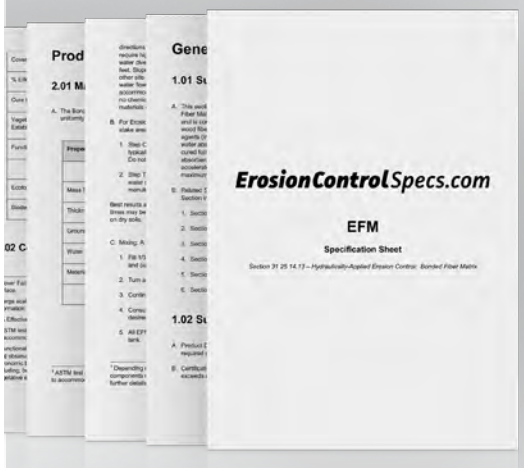
Project Site Design and Comprehensive Specifications Made Easy

In addition to providing free soil testing, **ProfilePS3.com** is the only online project design and management software of its kind with expansive design capabilities that integrate and compare the calculated performance of a variety of manufacturers' products to each other based on project design criteria. From there, it provides installation guidelines, CAD details and other pertinent technical information.

You can also get comprehensive, current and customizable CSI-formatted specifications for your projects at **erosioncontrolspecs.com**. It's the only online resource that allows you to compile project specifications for either branded or generic products in just minutes!

Spec Builder™

ErosionControlSpecs.com



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U.S. Patents: 7,854,926; 8,728,460; 10,266,457 | Canada Patent: 2,616,578

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