

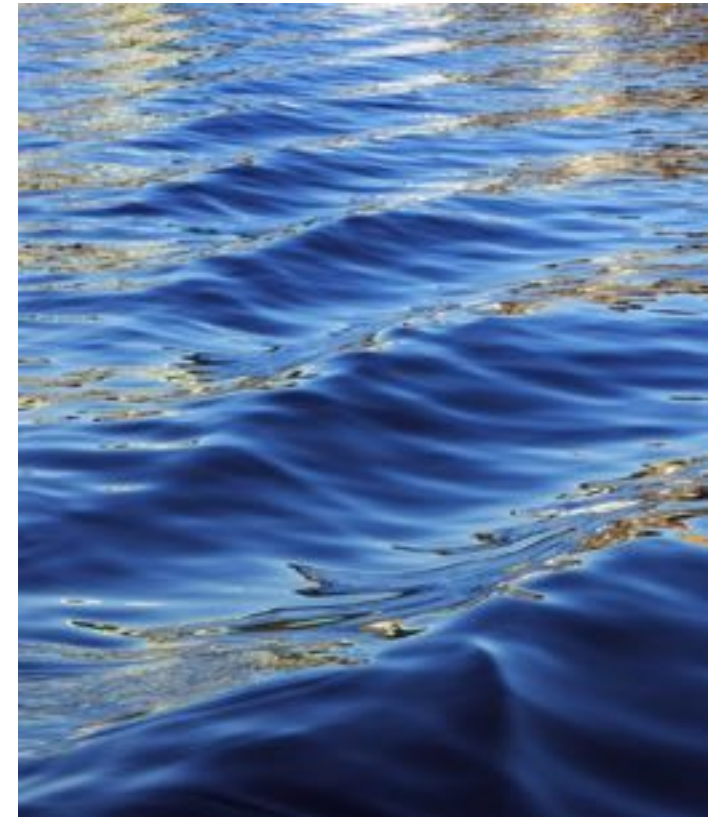
# Vermont Organics Recycling Summit 2019

## Compost Product Market Development

Frank Franciosi-Executive Director



**US** Composting  
Council



# VORS

- US Composting Council
- The Compost Council Foundation
- Compost Product Market Development

Nature's Way to Grow!



US Composting  
Council®





**US** Composting  
Council



Composting  
Council®

Research &  
Education Foundation

# Established 1990

- **Who & What Are We?**

The US Composting Council advances compost manufacturing, compost utilization, and organics recycling to benefit our members, society, and the environment.

## Compost: Nature's Way To Grow!

Nature's Way to Grow!



**US** Composting  
Council®



## Vision Statement

We believe compost manufacturing and compost utilization are central to creating healthy soils, clean air and water, a stable climate, and a sustainable society.



# Role of the USCC

## Areas of Engagement

- **Education**

- Annual Conference Program
- Workshops & Webinars
- Operator & Professional Certification

- **Market Development**

- Seal of Testing Assurance Program®
- Certified Compost® Marketing
- Compost End Use Applications

- **Advocacy**

- National Outreach
- State Policy Support
- Partnering Organizations

- **Membership**

- Communication
- Organizational Management
- State Chapters

Nature's Way to Grow!



US Composting Council®



# Membership

- 750 business entities that make up 1700 individual members
- 8 levels of membership
- Young Professionals Program
- Eight State Charter Chapters- NC, MN, CA, CO, VA, NJ, MI & NE
- Three State Committees – MD-DC & IL

Nature's Way to Grow!



US Composting  
Council®



# Member Benefits

- Products & Training Discounts
  - CAT, Compost Operator Training, Certification & Annual Conference
- Conference Exhibit Booth Discounts
- STA Participant Discounts
- BioCycle Subscription
- Member Directory access
- Eligible for Online Products/Services Directory
- Member Mail List (Upper Level members only)



**SAVE UP TO \$2,750 ON A CAT® MACHINE.\***

**EXCLUSIVE USCC MEMBERSHIP OFFER**

Save up to **\$2,750** when you buy or lease qualifying Cat® Backhoe Loaders, Wheel Loaders, Mini Excavators, Multi Terrain Loaders, Skid Steer Loaders, Compact Track Loaders, Telehandlers or Small Dozers – exclusive to you and fellow USCC members. Save an additional \$250 on select Cat attachments.\*\* To redeem your offers, take this card and proof of your USCC membership to your local Cat dealer. **You're making a living. We're making it easier.**

**Nature's Way to Grow!**



**US Composting Council®**



# USCC Certification



Two certifying programs

- Operations Manager
- Composting Professional
- Based on following criteria
  - Work Experience
  - Formal Education
  - Training in subject matter
  - Passing the exam



Nature's Way to Grow!



US Composting Council®







**Composting  
Council®**

---

**Research &  
Education Foundation**



# The Foundation



**Composting  
Council®**

---

**Research &  
Education Foundation**

## Vision

Our vision is to advance composting technologies, practices, and beneficial uses that support resource conservation and economic and environmental sustainability.

## Mission

The Composting Council Research and Education Foundation supports initiatives that enhance the stature and practices of the composting industry by supporting scientific research, increasing awareness, and educating practitioners and the public to advance environmentally and economically sustainable organics recycling.

**Nature's Way to Grow!**



**US Composting  
Council®**



# ICAW

- 1,800 posters distributed
- All 50 states plus 30 countries
- 15 sponsoring companies

- Social media outlets

ICAW FB page

USCC FB page

CCREF FB page

LinkedIn

CCREF YouTube

For two to three weeks, leading up to ICAW, during, and after there were Google Alerts every day mentioning ICAW



Nature's Way to Grow!



US Composting Council®



# Compost Operator Training Course

Over 675 students trained to date

## 2019 Schedule

- Pomona, CA      March 11-15
- Ithaca, NY      August 5-9
- Raleigh, NC     September 9-13
- Monterey, CA   September 23-27
- Denton, TX      November 11-15



Composting  
Council®  
Research &  
Education Foundation



US Composting  
Council®

# Compost Sampling Video

How to properly sample compost as per modified TMECC method

- Finish compost product
- In-process sampling
- Trouble shooting
- Companion guide
- Launched in January 2019
- Funded by:



US Composting Council®

Nature's Way to Grow!

# Applied Research

## Salt Project:

A literature review of all past research on soluble salts in finished compost

- Research completed by University of Wisconsin Oshkosh
- Developing a fact sheet
- Published in January 2019



**Composting  
Council®**  

---

**Research &  
Education Foundation**



**US Composting  
Council®**



# International Field Testing Program for Compostable Products

- The online database for the International Field Testing Program (IFTP) facilitates real-world testing of compostable products and packaging in aerobic facilities across North America through an easy to use interface
- The 'user' of the database is a testing partner, whether a facility operator, academic or other researcher
- Admin support guide users in the use of the database and testing materials to conduct in situ testing of compostable products.



Composting  
Council®

Research &  
Education Foundation

bsibio

Nature's Way to Grow!

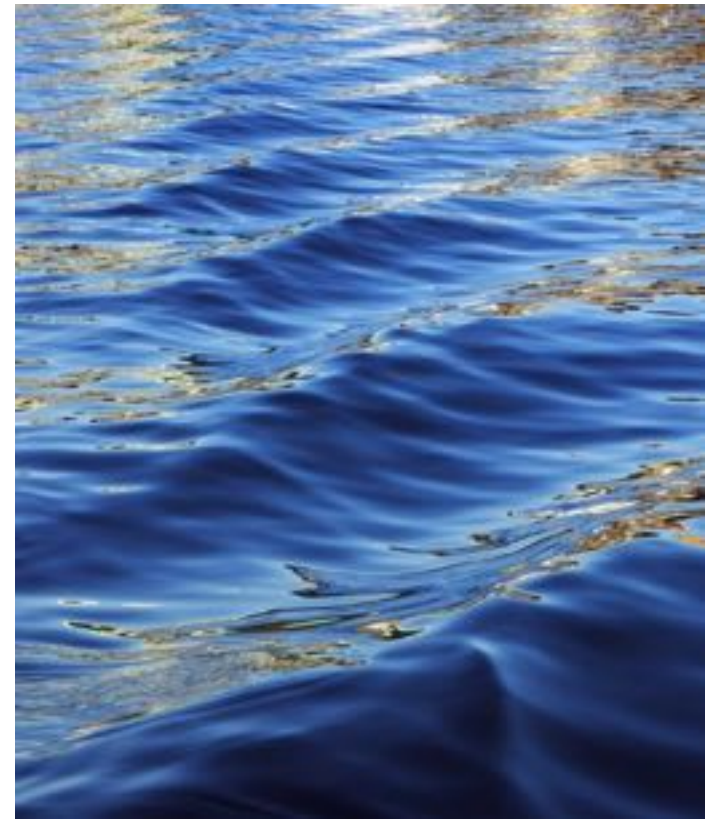


US Composting  
Council®





# Compost Product Market Development





# Compost Manufacturing

- Product quality (repeat sales)
- Specifications (government & yours)
- Quality assurance plan (increase sales)
- Testing programs (feedstock & end products)
- Certification programs (USCC STA, NOP & OMRI)
- Product diversification (markets)

Nature's Way to Grow!



US Composting Council®



# Importance of Product Quality

- Characteristics of specific compost products = application
- Quality is important from the start = repeat sales
- Quality and market reputation = long term success
- Selling your product's quality = confidence
- Product testing = verifying quality
- Provide consumers information on compost quality = education
- US Composting Council STA program = standards met

Nature's Way to Grow!



US Composting Council®



# Certified Compost® STA Program

- 230 Participants now in the STA Program
- 350 Products represented
- Using Certified Compost webinars through Forrester University
- Specifying Certified Compost- AMERICAN ASSOCIATION OF STATE AND HIGHWAY TRANSPORTATION OFFICIALS
- Represented USCC at AAPFCO meetings
- Provided annual support for –Compost Analysis Proficiency Program
- Growing A Greener World –National PBS Program
- Continued upgrades and revisions to marketing materials
- Annual renewal and recertification
- Tracking activity and results



Nature's Way to Grow!



US Composting Council®



# 2019 STA Certified Labs



**13 Labs**

3 New Labs

3 Requested Info

Nature's Way to Grow!



US Composting Council®



# How to become STA Certified



- Meet definition of compost
- Follow government regulations
- Yearly re-sign contract
- Update info yearly
- Pay yearly fees

Nature's Way to Grow!



US Composting Council®

# How to become STA Certified



- Use STA-tested and approved labs
- Test at required frequency
- Pass EPA limits- heavy metals and pathogens
- Provide customers with test results, feedstocks, and directions for use

**Nature's Way to Grow!**

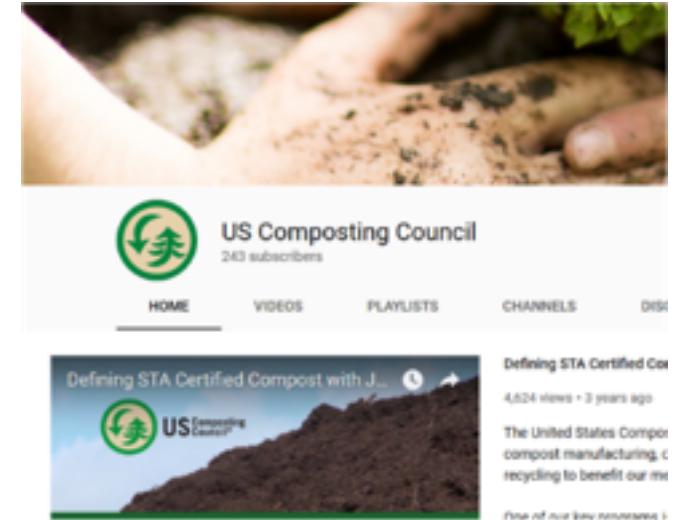


**US Composting Council®**



# STA Marketing Tools

- Published important info on STA webpage
- New simple guide to STA requirements
- New simple guide to STA Benefits
- Organized YouTube Channel
- Customized brochures and videos for your business



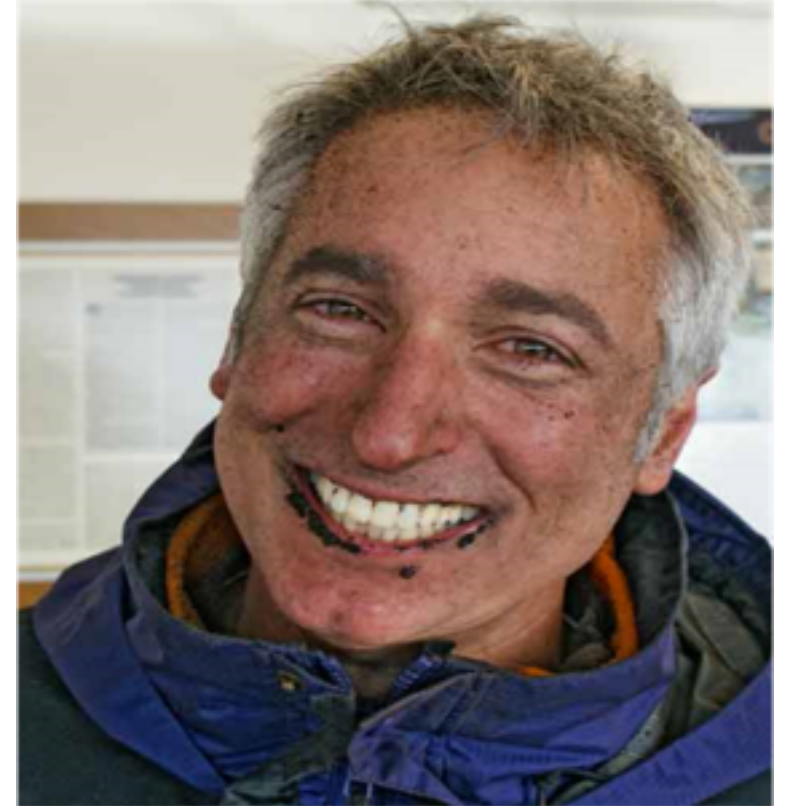
Nature's Way to Grow!



US Composting Council®

# Joe Lamp'L –Growing a Greener World

- National spokesperson
- Focused on organic gardening, sustainability, and green living
- Award-winning public television series
- Airing 52 weeks a year
- 175 markets across the United States
- Ninth season with 13 new episodes
- Compost subject matter videos



US Composting Council®





# Marketing Research

- Determine criteria that **best fits** your specific projected market and incorporate in marketing plan
- Marketing research should be continuous: before, during, and after production & sale of compost, **adjusted** as needed
- Focus on what your compost can and cannot do, to determine which markets are **most viable** for your product
- Include projected total demand for compost in your projected market, relate to **production capacity** of your facility

Nature's Way to Grow!



US Composting Council®



# Compost Markets

## Traditional Markets

- Homeowners/gardeners
- Landscapers/garden centers
- Containerized horticulture
- Turf Topdressing
- Topsoil Manufacturing



## Emerging Markets

### Green Infrastructure

- Erosion Control
- Streambank Restoration
- Stormwater Management
- Soil Restoration



**Nature's Way to Grow!**



**US Composting Council®**



# Compost Markets

## Value vs. Volume Markets

- **Value Markets**

- Higher value (sports fields, golf courses, nurseries)
- Quality and consistency more important than price

- **Volume Markets**

- Agriculture, E&S, stormwater, remediation, wetlands
- Price is key defining criteria

Nature's Way to Grow!



US Composting Council®



# How Does Compost Benefit Customers?

- Reduces soil compaction
- Saves water by increasing retention
- Holds on to nutrients
- Reduces chemicals needed
- Reduces erosion
- Increases infiltration
- Reduces some plant diseases
- Increases porosity



Talk the customer's language – “what's in it for me?”

Nature's Way to Grow!

*Different benefits are important to diverse end*

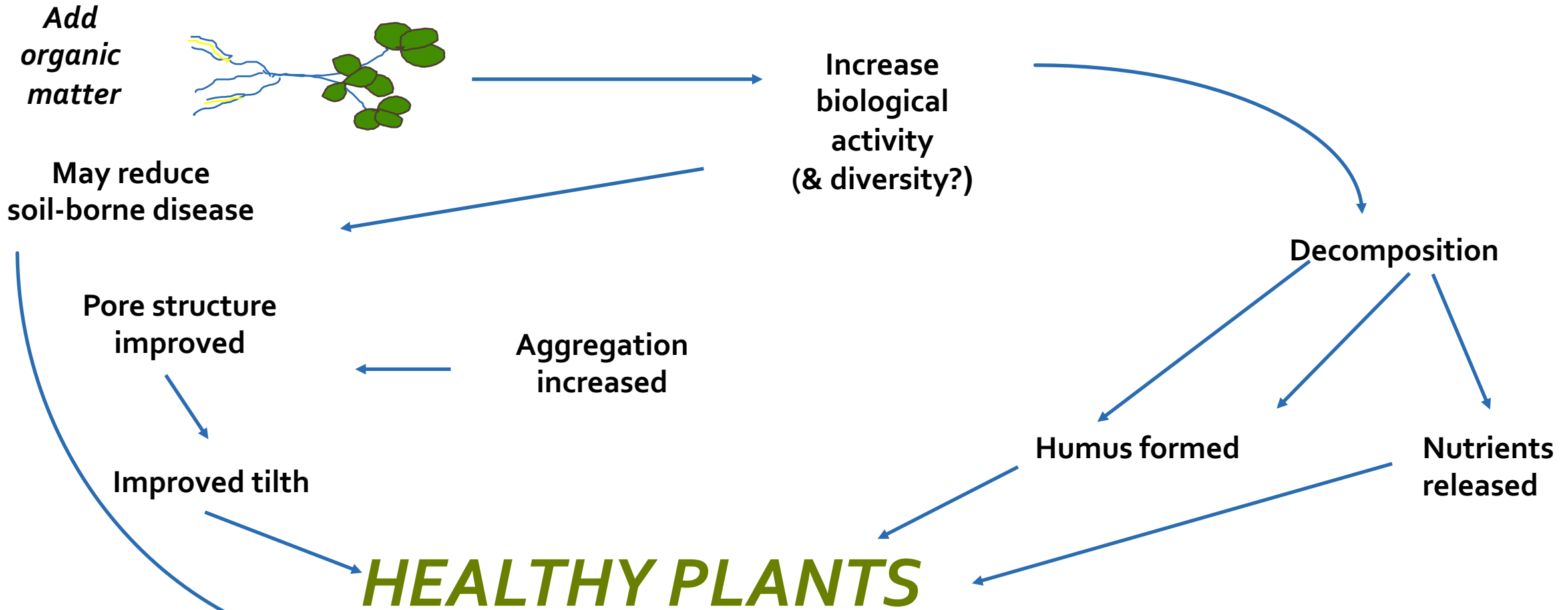
*users*



US Composting Council®



# Effects of adding Organic Matter



Nature's Way to Grow!



US Composting Council®



# Benefits of Soil Organic Matter



**One percent** of organic matter in the top six inches of soil would hold approximately ***20-25,000 gallons of water per acre/foot!***

–USDA Natural Resources Conservation Service

***In the US, irrigation consumes approximately 67% of fresh groundwater withdrawals.***

# Soil Ecosystem Challenges



*Healthy soil is one of  
**nature's** key tools in  
recycling, cleaning, and  
preserving our  
environment.*

**By improving soil ecosystems & creating **clean** storm water runoff will help states meet total maximum daily (TMDL) limits**

# Erosion & Sediment Control



*Soil erosion research in the USA started in the 1920's. Despite 90+ years of research, soil erosion continues to be a serious problem, worldwide.*

*The yearly damage of soil erosion estimated to be 400 billion US dollars worldwide*



# Storm Water Challenges

*850 billion gallons of untreated water are discharged into the nation's water bodies every year*



*Each year, enough precipitation falls to cover the Continental United States in 30" of water!*



**A one-inch rainfall event drops more than 27,000 gallons of water per acre!**

# Emerging Markets

## Using Compost in Green Infrastructure

- Erosion Control
- Streambank Restoration
- Stormwater Management
- Soil Restoration

Nature's Way to Grow!



US Composting Council®



# Green Infrastructure

*"Green infrastructure is the physical environment within and between our cities, towns and villages. It is a network of multi-functional open spaces, including formal parks, gardens, woodlands, green corridors, waterways, wetlands, forest, and open countryside. It comprises all environmental resources."*

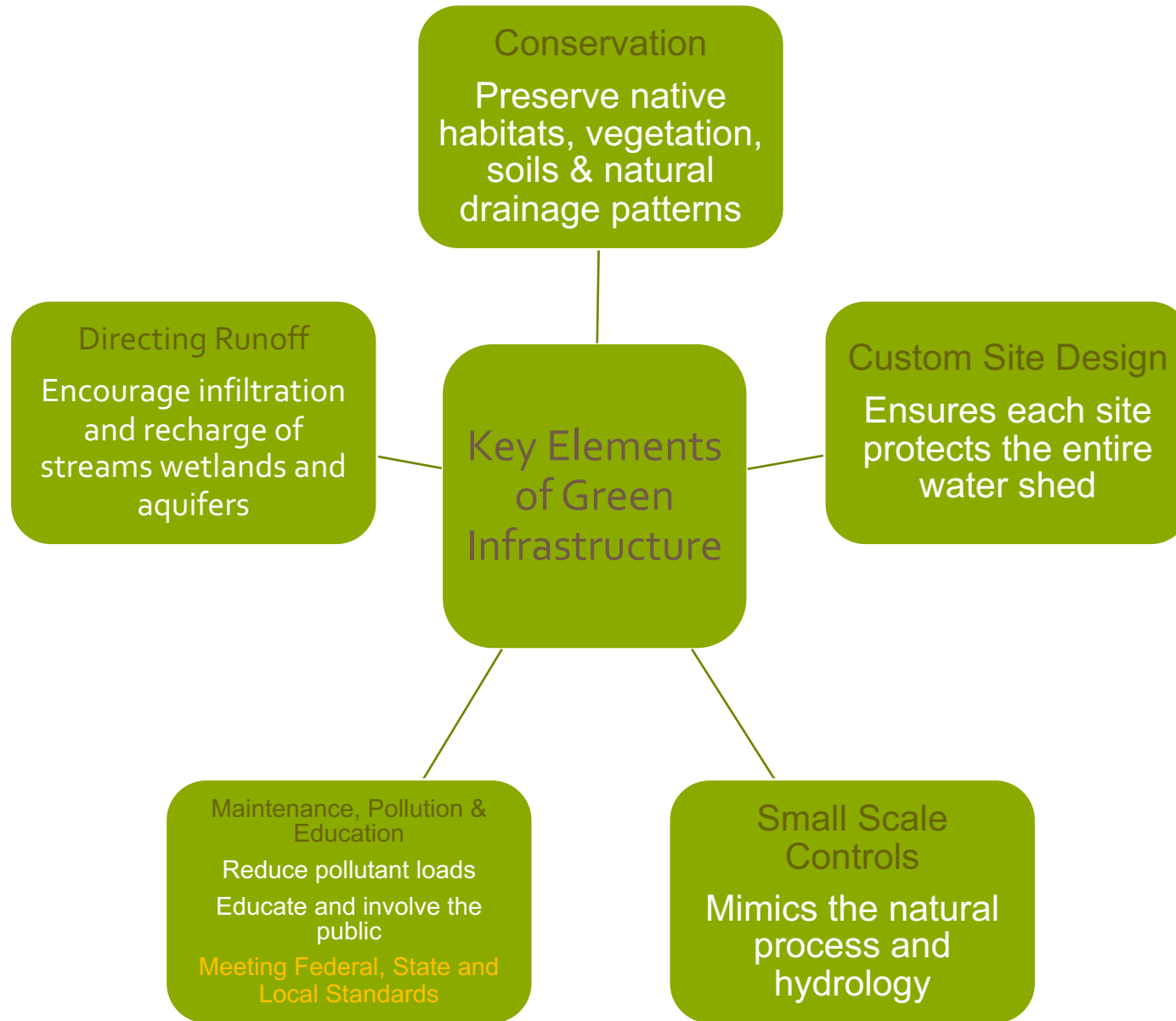
**Nature's Way to Grow!**

Source: Green infrastructure Planning Guide, C Davies, R MacFarlane, C McGloin, M Roe.



US Composting  
Council®







**Nature's Way to Grow!**



**US Composting Council®**



# Compost Erosion Control Blankets



Before



Applied



After

# Compost Blankets

## Benefits:

- Intimate contact allows nearly 100% ground contact, eliminating puckering of other blankets
- Intimate contact reduces sediment loss
- Water infiltration increases, increasing germination from seed
- Water discharge from slopes decreases, reduces potential sediment loss
- Addition of organic matter improves slope ability to revegetate and establish a permanent erosion system

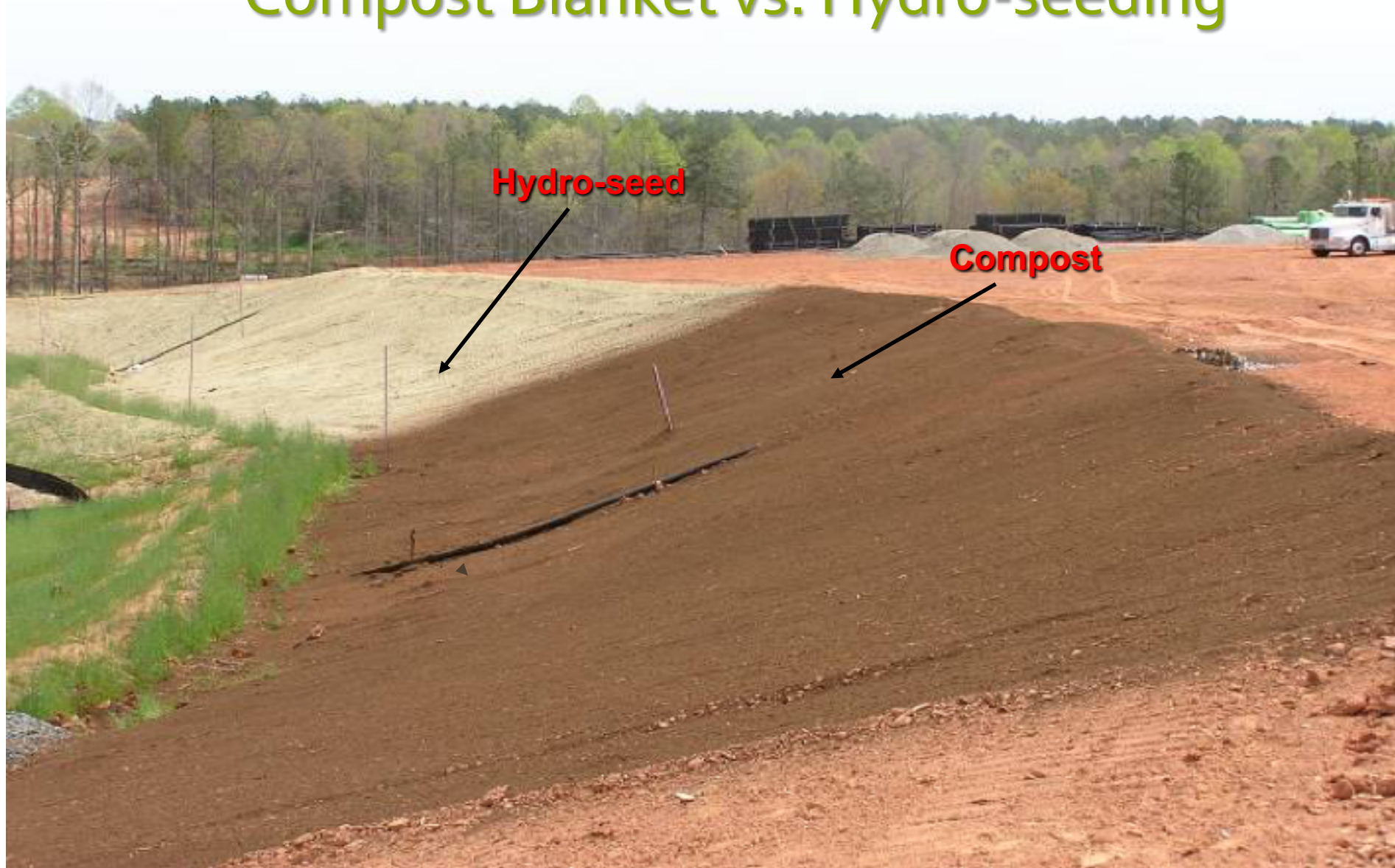
# Soil Contact



Compost Has 100% Soil  
Contact



# Compost Blanket vs. Hydro-seeding



# Compost Blanket vs. Hydro-seeding



One week later-One 3 inch rain event

# What are Compost Filter Socks?

- A mesh tubular product which is filled on site with a compost or composted media
- The product has the capability to be a continuous length, or cut to fit the application
- Only 2 Manufacturers
  - Filtrex International
  - Envirotech Biosolutions

Nature's Way to Grow!



US Composting Council®



# Compost Filter Socks

## Benefits:

- Contained material reduces wash out
- Weight of compost filter sock resist movement
- Guaranteed volume/size from compost filter sock
- Continuous Lengths means unbroken perimeter control
- Three dimensional Filtration

Nature's Way to Grow!



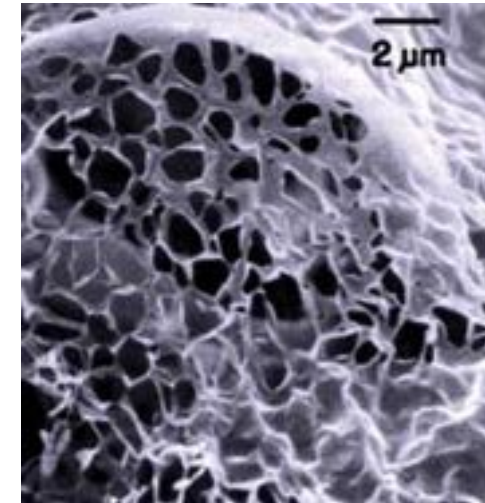
US Composting  
Council®



# Compost Filter Socks



# Compost Filter Media



# Perimeter Protection



# Inlet Protection Sediment Trap





# Stream & Lake Bank Stabilization

## Benefits:

- Only technology which combines immediate bank protection with vegetation establishment for the long term
- Can seed in the sock – no other technology can do this
- Live stakes or plugs planted directly into the sock provide customization to the site
- Can reach remote areas without disturbance
- Continuous sock offer unbroken protection
  - ✦ This is a huge benefit in streambank stabilization where forces of water catch edges of other competing products = erosion

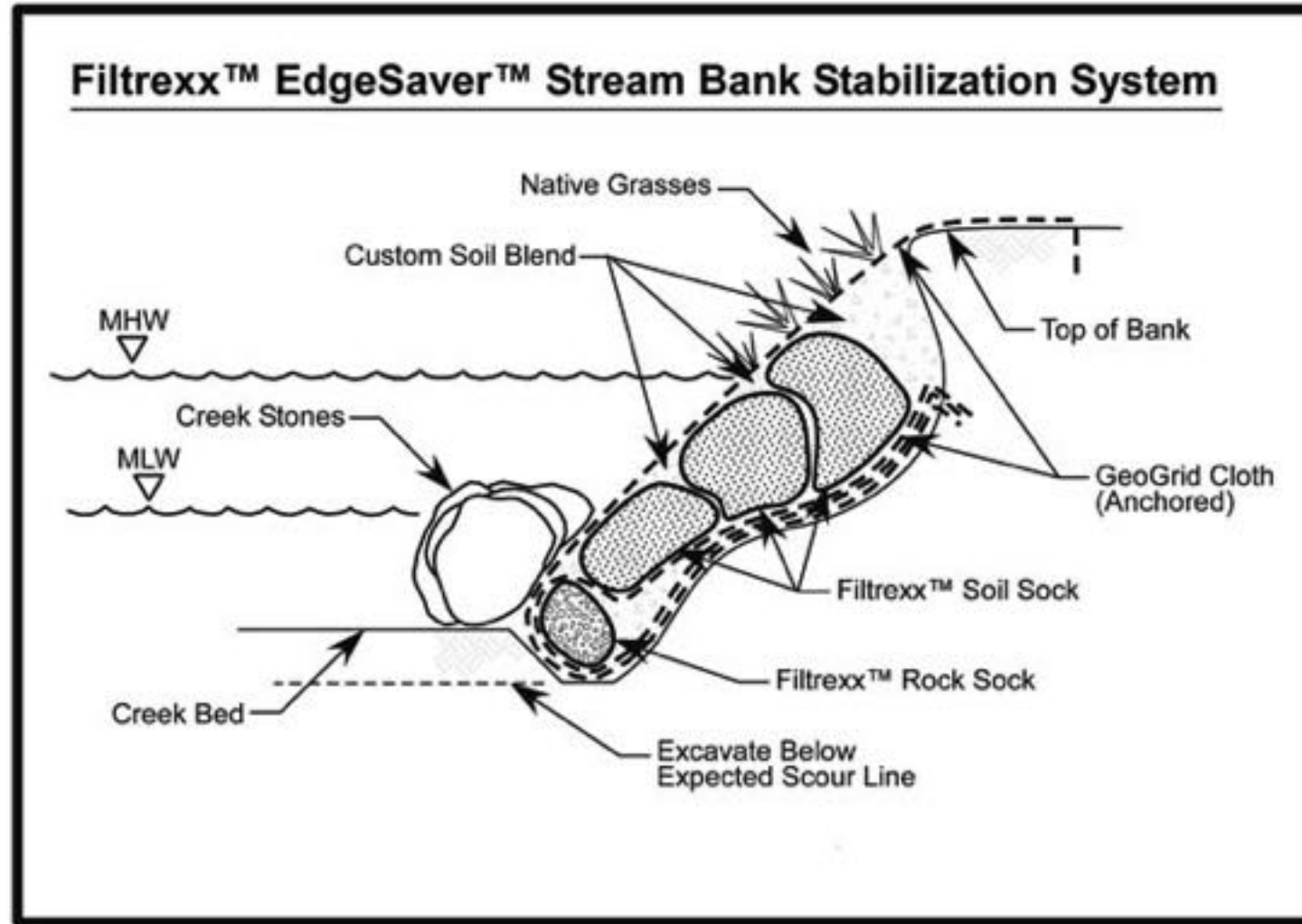
Nature's Way to Grow!



US Composting Council®



# Cross Diagram



## Root Anchors to Bank



## Installed & Staked



5 Days Later



# 20 Days Later



# 18 Months Later



# Stormwater Management

## Bioretention Basins-Rain Gardens-Bioswales

### Benefits:

- Reduces stormwater runoff
- Prevents combined sewer overflow
- Neutralizes acid rain effect
- Removes nitrogen pollution from rainfall
- Provides green space
- Provides habitat for wildlife

Nature's Way to Grow!

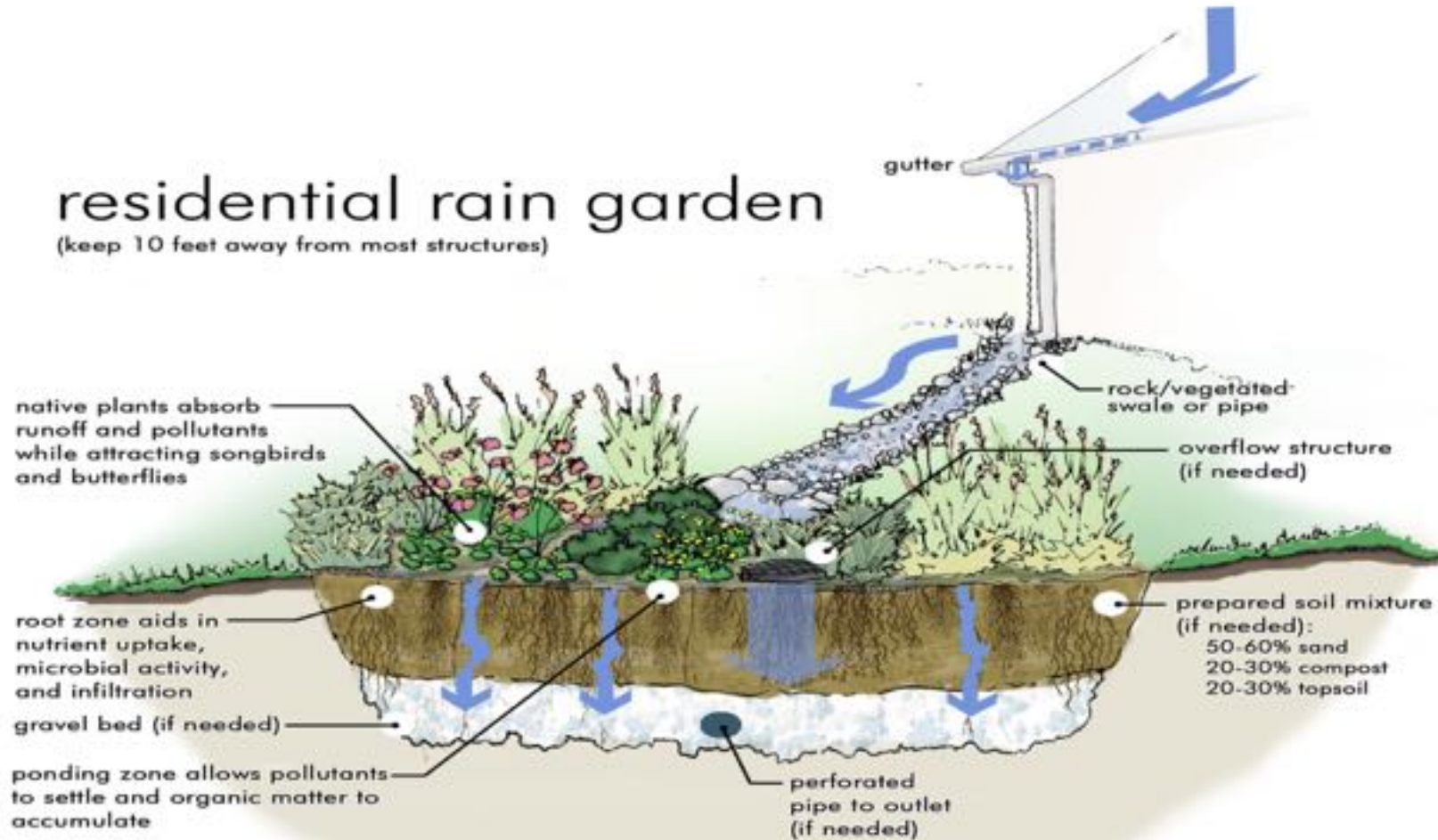


US Composting  
Council®

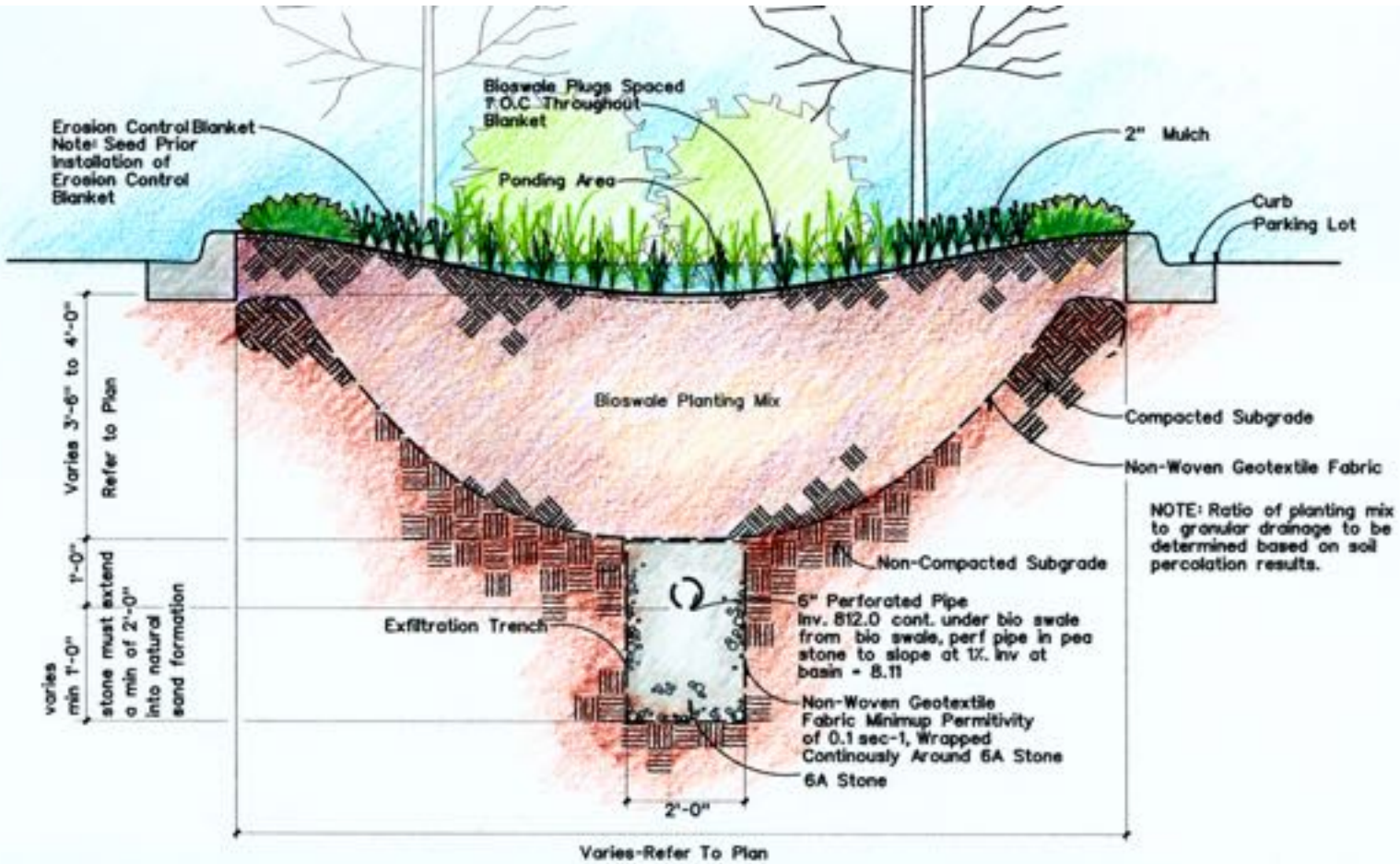


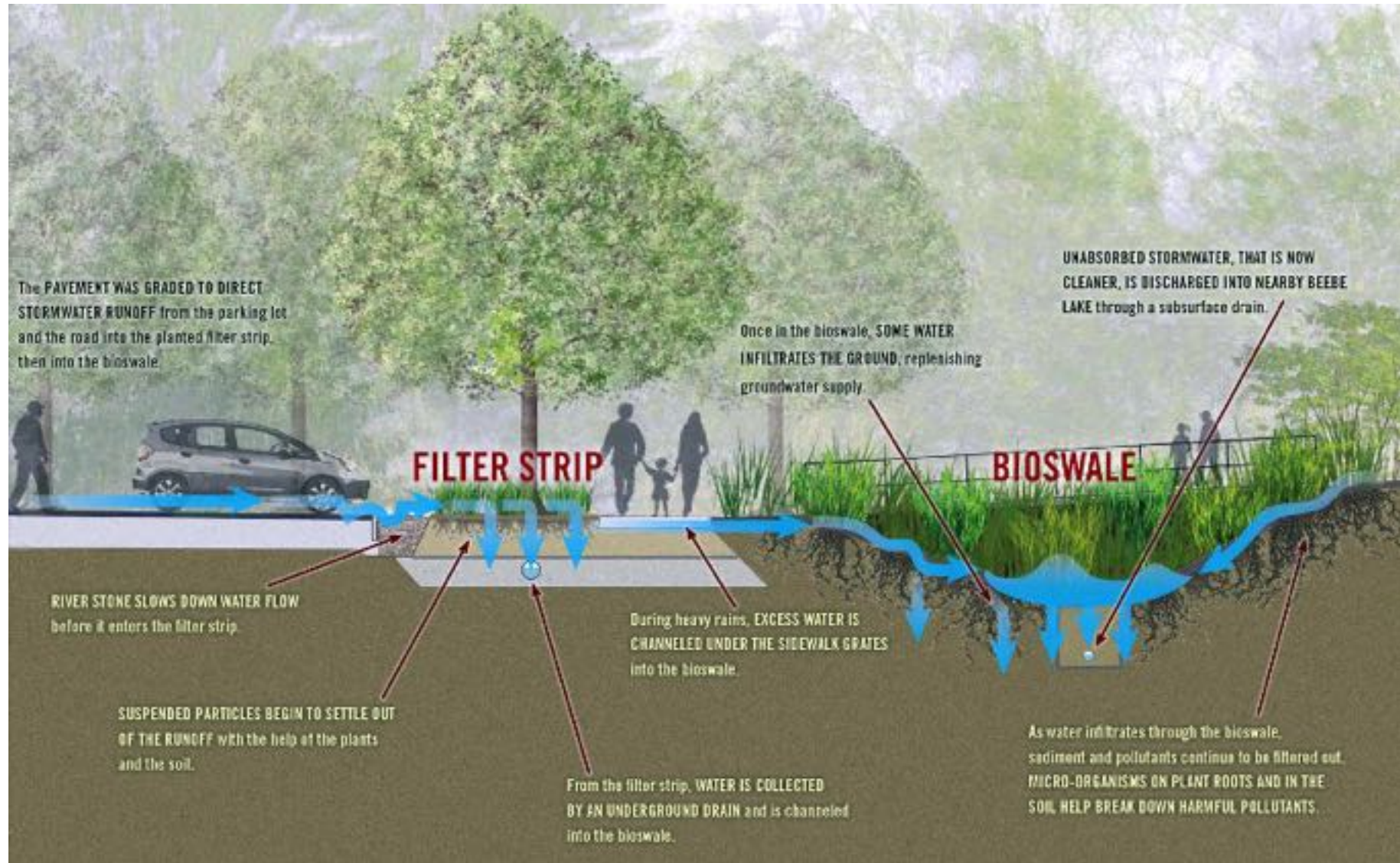


# Anatomy of a Rain Garden

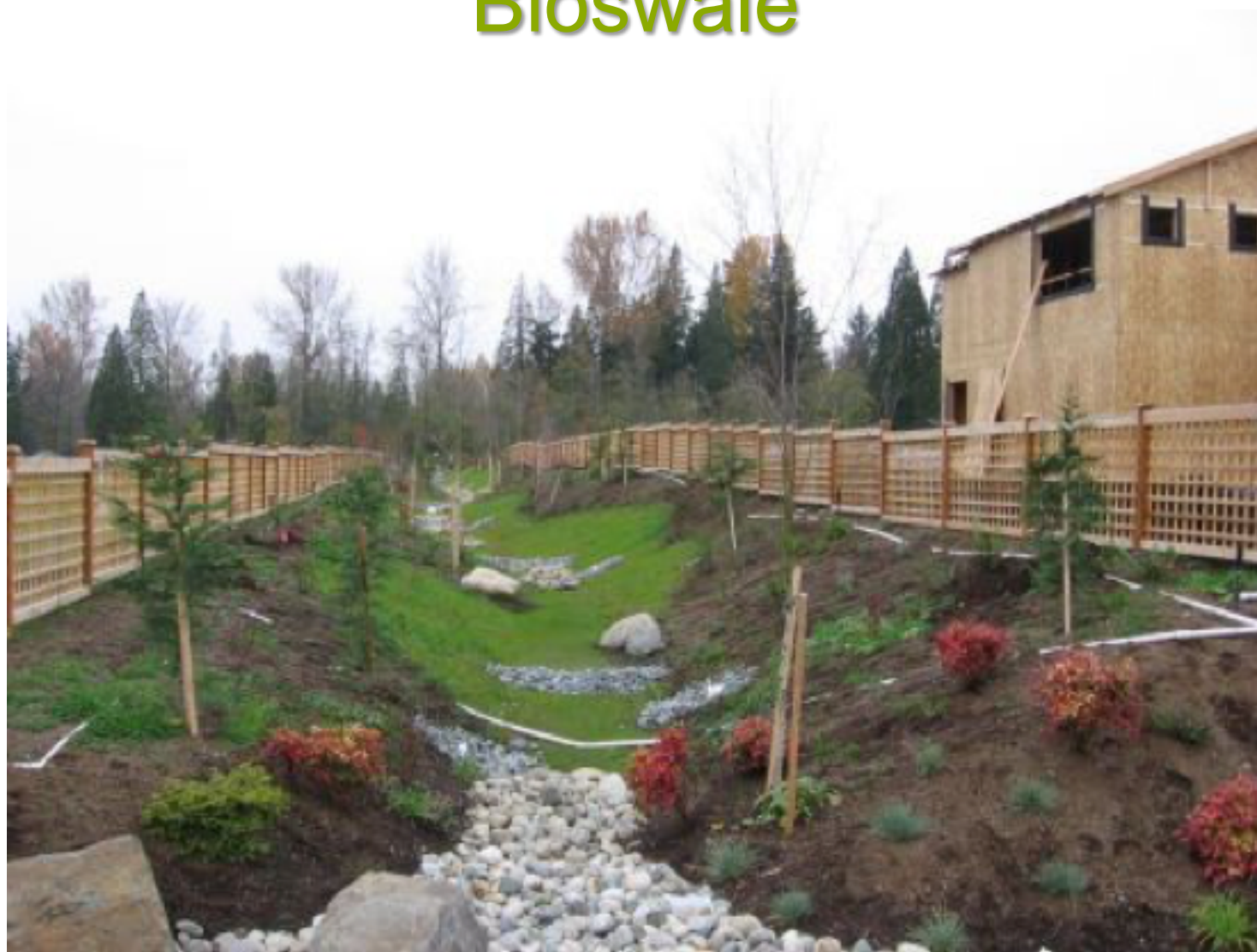


# Anatomy of a Bioswale





# Bioswale



## Green Planter Boxes- Green Streets & Parking Lots



# Soil Restoration

- Soil quality is directly related to stormwater detention capacity, and so to the health of streams and aquatic resources. Soil quality also determines landscape success: plant survival, growth, disease resistance, and maintenance needs.
1. **Soil retention** – preserving existing site vegetation and soil, un-compacted by equipment, or
  2. **Soil restoration** – correcting compaction to a 12-inch depth, and amending soils with compost or bringing in/reusing an amended topsoil to an 8-inch depth, plus
  3. **Soil protection** – protecting restored soils from re-compaction, and mulching after planting to prevent erosion and support healthy plant growth.

# Soil Restoration

## Benefits:

- Decreases surface water runoff
- Increases water infiltration
- Traps sediments, heavy metals and excess nutrients; and biodegrades chemical contaminants
- Rebuilds the beneficial soil life
- Improves plant health, with reduced need for additional water, fertilizer and pesticides
- Aids deep plant root growth
- Recharges ground water aquifers

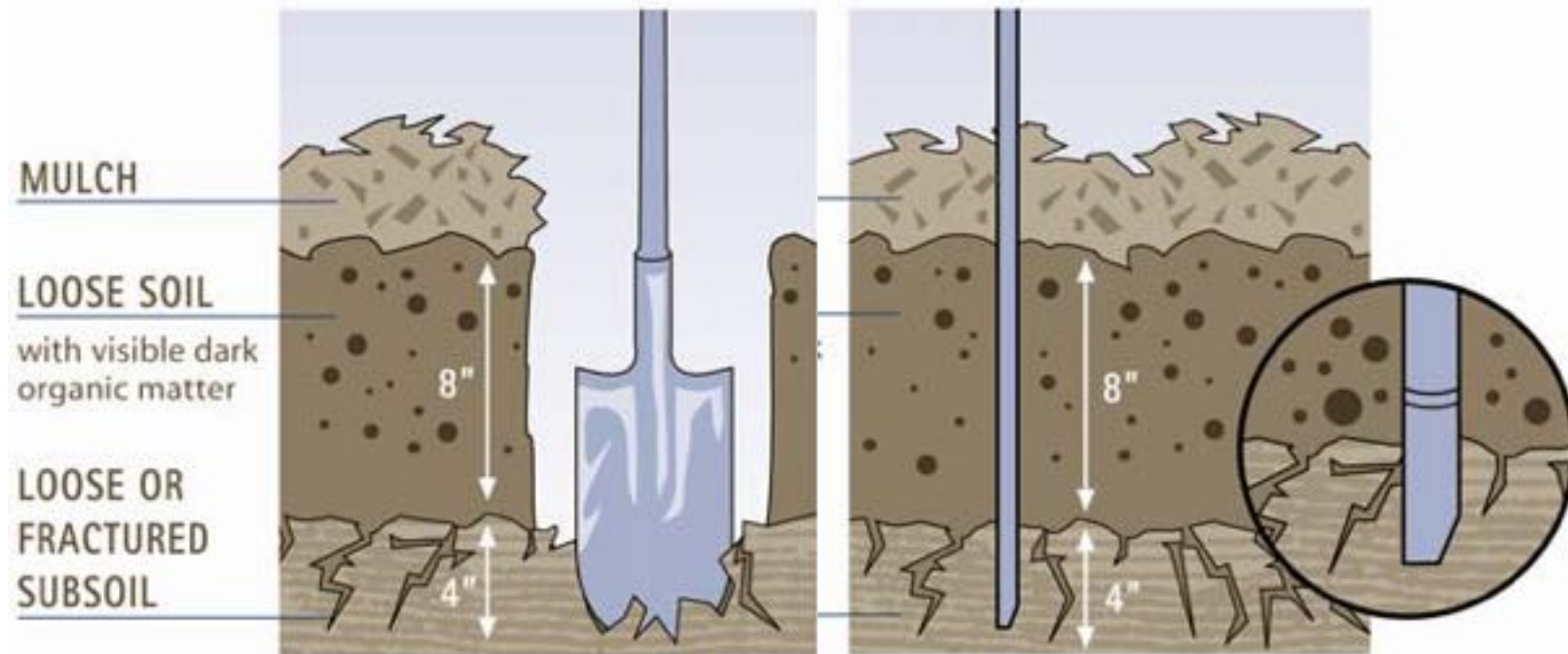
Nature's Way to Grow!



US Composting Council®



# Soil Restoration

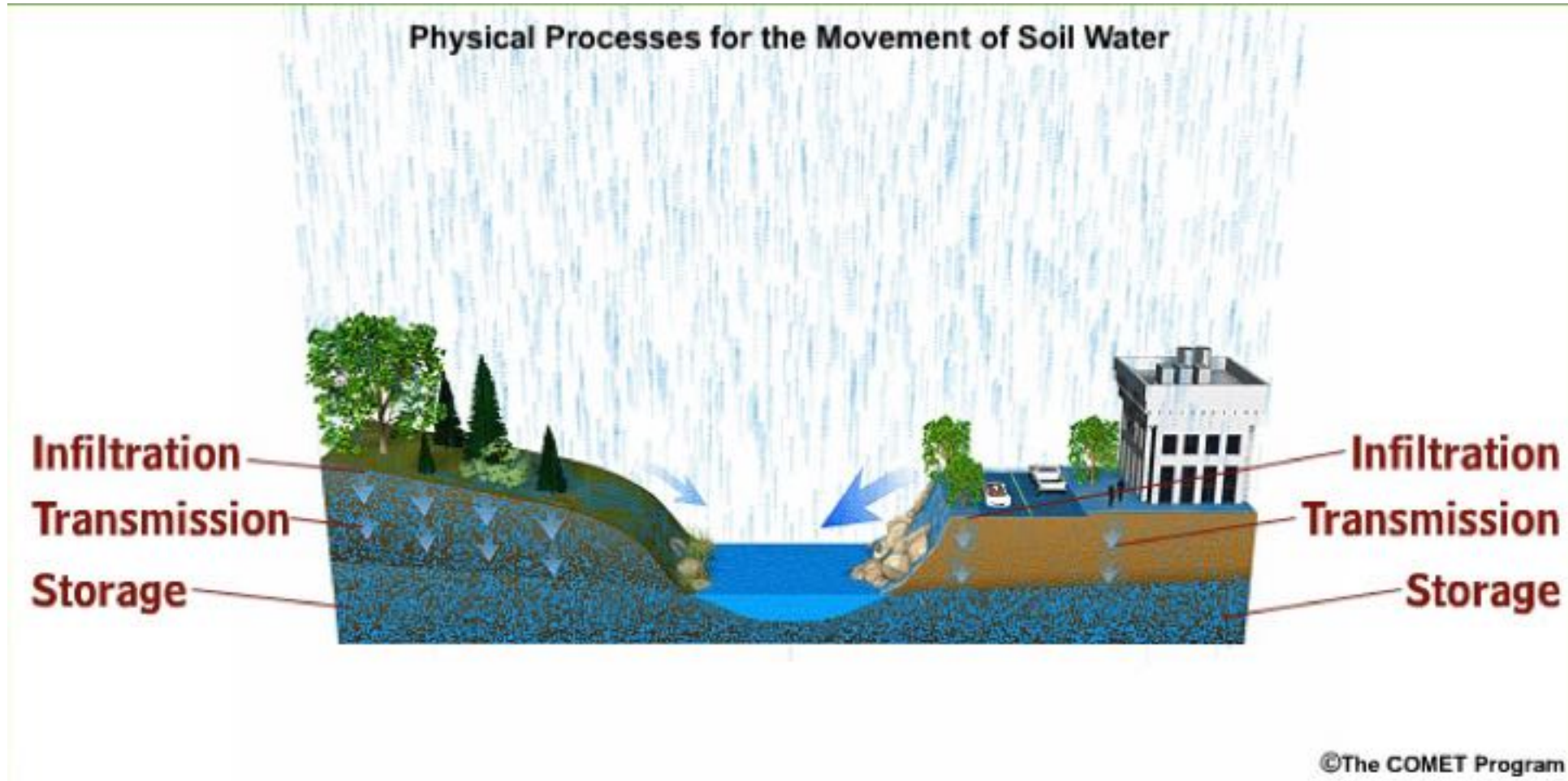




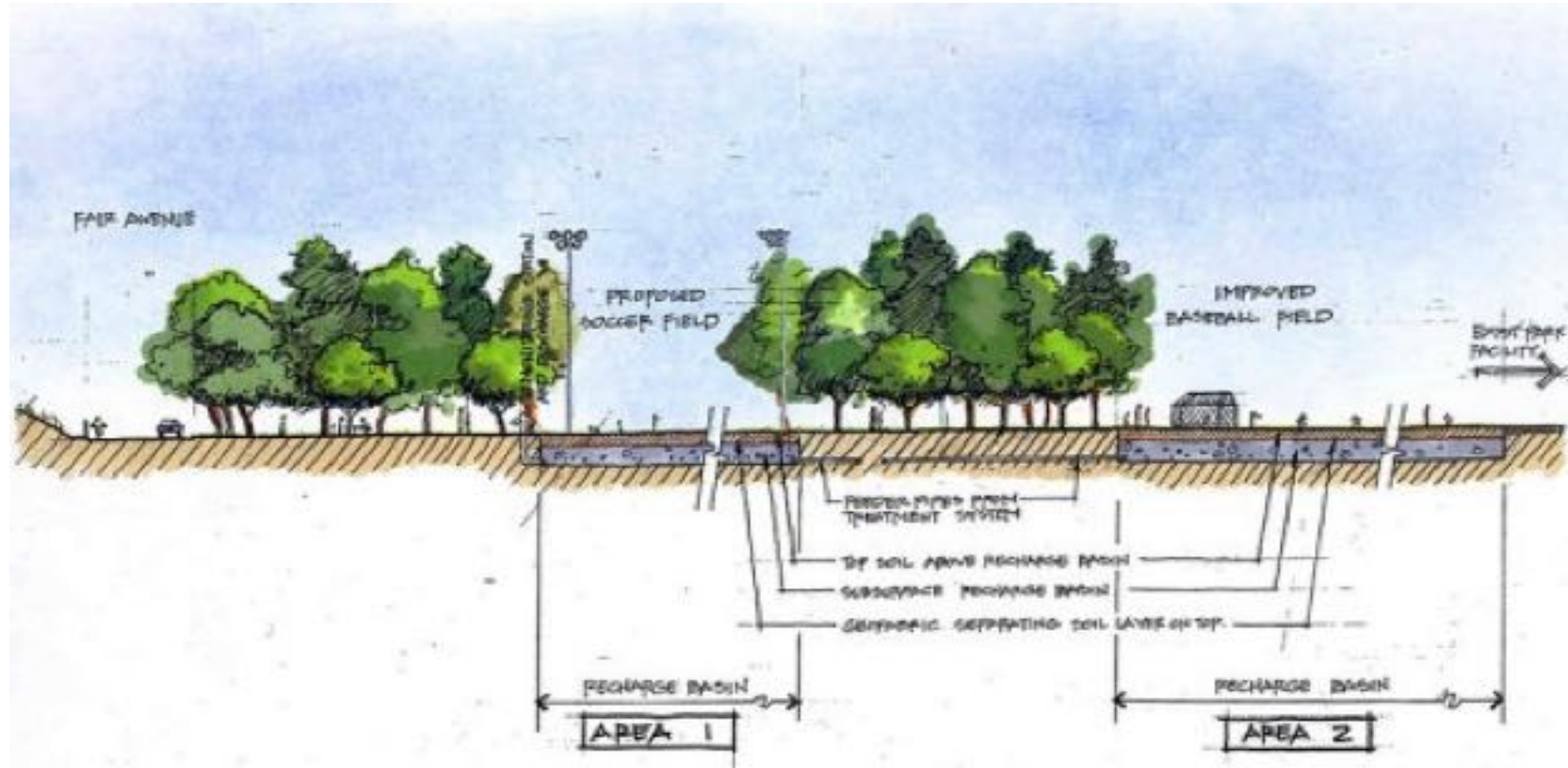
# Soil Restoration



# Soil Restoration & Infiltration



# Soil Restoration & Infiltration



**SUN VALLEY PARK RECHARGE BASINS**

NOT TO SCALE

# Future Design



# Creating Demand for Green Infrastructure

- Model Ordinances for Soil Restoration
- Specifying Compost Media Stormwater BMP's
- USGBC-LEED Certification
- Specifying State DOT ( use of STA Certified Compost )
- University Research



Nature's Way to Grow!



US Composting Council®



BRIDGING THE GAP FOR



# ORGANICS RECOVERY

JANUARY 28-31, 2020 | CHARLESTON, SC

# Questions



**US** Composting  
Council