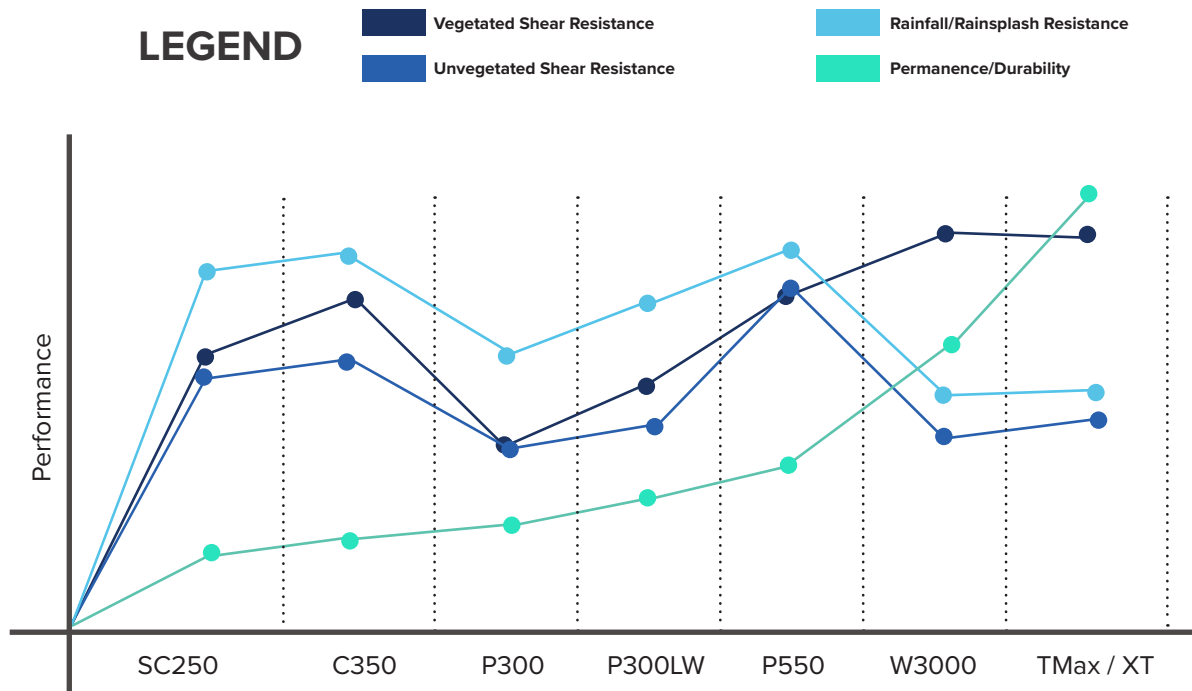


# TRM Comparison Matrix

**Turf Reinforcement Mats (TRMs)** are unique tools. Not just unique from other types of permanent erosion control solutions, but unique when compared to one another. This chart provides relative comparison of ROLLMax™ TRMs to aid in project selection.



This is a qualitative guide for basic evaluation of North American Green Turf Reinforcement Mats. Site-specific analysis should always be performed and the specific design conditions and material performance evaluated. Figure 1 presents a comparison of these materials over time. Further guidance is provided on the proceeding pages.

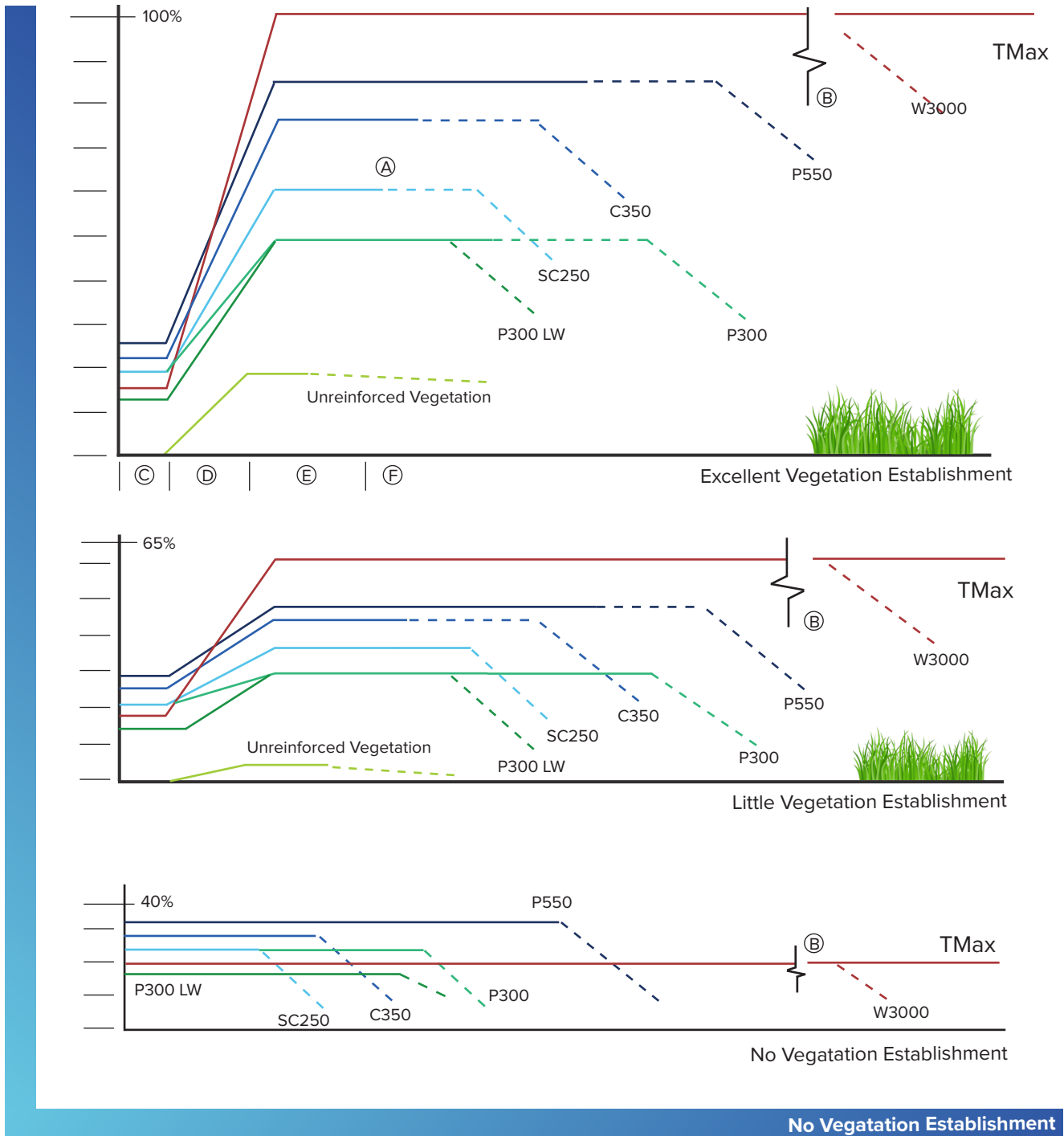
**Vegetated Shear Resistance**  
 Typically, the final, fully vegetated state is of primary concern in TRM selection. NAG TRMs offer industry leading performance and options to fit project requirements and economics. In conditions where nonhydraulic stresses, geotechnical loading or extended design life is required, the woven materials are the sound choice.

**Unvegetated Shear Resistance**  
 Similar to rainfall erosion resistance, unvegetated shear resistance is not typically a primary concern for TRMs with the expectation that vegetation will establish. For the period of time prior to vegetation establishment, the VMax series is the clear standout. The materials with a fully synthetic footprint provide greater assurance of protection.

**Rainfall/Rainsplash Resistance**  
 All NAG TRMs provide significant protection against erosion caused by rainfall and rainsplash. The VMax line of SC250, C350 and P550 lead the way with particularly outstanding performance. As TRMs are designed to be permanent installations, rainfall erosion is rarely the primary mode of performance to consider. Vegetation is expected to establish and significantly increase the performance over time.

**Permanence/Durability**  
 TMax offers the longest design life and highest durability in the North American Green lineup. The woven structure provides the highest tensile strength and highest level of UV protection. In addition, the woven structure is the most wildlife friendly and resistant to nonhydraulic stresses like foot traffic, mowing, geotechnical loading and light vehicle traffic.

## Relative TRM Lifecycle Performance in Various Conditions



**Figure 1.** Comparison of Relative Performance Over Time

- A** - Breakdown of material begins to reduce system performance.
- B** - Timeline / durability of woven products significantly greater than stitch bonded products.
- C** - Time from installation until significant germination
- D** - Vegetation establishment period.
- E** - System performing as designed.
- F** - Long term system condition.

## Vegetation Establishment

Review of Figure 1 clearly shows the improved performance of a TRM system as vegetation establishes. A key component to any TRM is the ability to encourage vegetation establishment and promote healthy germination. The matrix fiber type, coverage and thickness all play a role in the germination performance. Having a spectrum of options affords designers and project owners flexibility and performance assurance. Figure 2 presents a summary of the vegetation establishment performance offered by each NAG TRM.

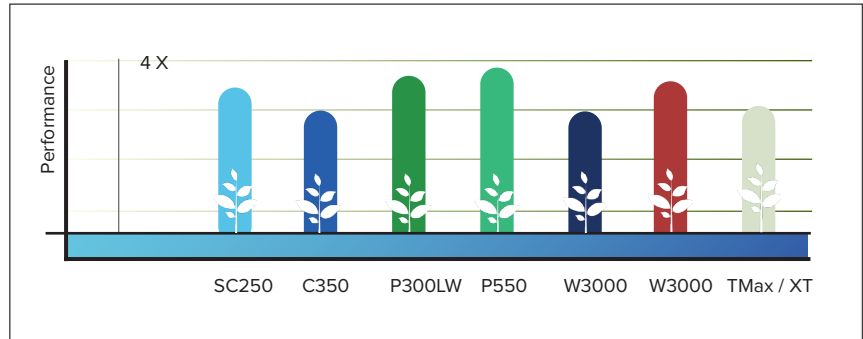


Figure 2. Comparison of Relative Vegetation Establishment Performance

North American Green TRMs all promote the establishment of vegetation. Each improves germination by three to four times that of an uncovered, control plot. Carefully selecting the TRM that is most appropriate for the project should include consideration of the vegetation establishment potential.

## Interaction with Wildlife

Although controlling erosion and sedimentation is the primary goal of TRM installation, additional factors are always considered. The overall environmental impact includes the interaction with local wildlife. Stitch bonded materials consist of various nettings and fills that are bound by stitching. By their very nature, these materials are designed to catch soil. In that same process, wildlife is not immune to interaction with TRM installations.

Experience with these types of installations over the years has yielded standard guidance for the selection of TRMs in areas where wildlife interaction is of primary importance. Materials with mesh openings equal to or less than five (5) millimeters are generally regarded as the most favorable to avoid entanglement with wildlife. Once vegetation establishes, wildlife entanglement is typically less of a concern. Higher rates of fasteners is also advisable for installations with wildlife entanglement concerns.



Contact [Polyfabrics](#) for advice and support in choosing the right TRM for your project. The right products, combined with the right people make the best choices. Let Polyfabrics support your installation and have confidence in project success.