Bio-engineered Stream Bank Stabilization Using Wetland Sod
### Soil Stability and Wetland Plants

<table>
<thead>
<tr>
<th>Plant Community Type</th>
<th>Total Root Mass to 40 cm (g/m²)</th>
<th>Root Length Density 0-40cm (cm/cm³)</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Carex nebrascensis</em></td>
<td>3,382</td>
<td>95.6</td>
</tr>
<tr>
<td><em>Juncus balticus</em></td>
<td>2,545</td>
<td>33.6</td>
</tr>
<tr>
<td><em>Carex douglasii</em></td>
<td>1,526</td>
<td>25.7</td>
</tr>
<tr>
<td><em>Poa nevadensis</em></td>
<td>555</td>
<td>8.8</td>
</tr>
</tbody>
</table>

Manning et al. 1989
What is WETLAND SOD?

Pre-planted, biodegradable coconut fiber mat hydroponically grown to produce maximum root growth.
Bank Stabilization Details

- 4:1 Slope
- 5 Gallon Willows
- Cutt Willows
- 2.5 ft
- 8 in
- Soil wrapped in C125 (2 layers)
- Wetland Sod
- High Water Line
- Low Water Line