

Description	Channel liners are geosynthetic materials or jute matting used to line the bottom or banks of ditches or channels to prevent or reduce erosion, and, to some degree, to capture sediment.		
Applications	Channel liners can be left in place until a more permanent BMP is put in place, (i.e., riprap) or can assist in holding the soil until permanent seeding is established. Complete contact of the channel liner with the surface of the soil is necessary to keeping water flowing over, not under, the liner.		
Limitations	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;">                     Drainage area – Dependent on product used                      Minimum bedrock depth - N/A                      NRCS soil type – N/A                      Drainage/flood control – no                 </td> <td style="width: 50%; vertical-align: top;">                     Maximum slope – Dependent on product used                      Minimum water table - N/A                      Freeze/thaw – good                 </td> </tr> </table> <ul style="list-style-type: none"> <li>▪ Channel liners should never be used in live streams unless approved by the appropriate state and federal authorities.</li> <li>▪ Channel liners are not suitable when used in ditches or channels with steep sides or where the soils are gravelly or not compacted; because the soil may not hold the liner in place.</li> </ul>	Drainage area – Dependent on product used Minimum bedrock depth - N/A NRCS soil type – N/A Drainage/flood control – no	Maximum slope – Dependent on product used Minimum water table - N/A Freeze/thaw – good
Drainage area – Dependent on product used Minimum bedrock depth - N/A NRCS soil type – N/A Drainage/flood control – no	Maximum slope – Dependent on product used Minimum water table - N/A Freeze/thaw – good		
Targeted Pollutants	Sediment		
Design Parameters	<ul style="list-style-type: none"> <li>▪ Stable inlets and outlets should be designed and constructed prior to construction of channel liners.</li> <li>▪ Channel liners should be installed on side slopes of 3H/1V or flatter and in channels with a low-flow velocity. The material (geosynthetic or jute matting) should be porous, long lasting (longer than 1 year) and flexible.</li> </ul>		
Construction Guidelines	<p>Follow manufacturer’s installation recommendations and the following general guidelines:</p> <ul style="list-style-type: none"> <li>▪ Site preparation: Shape, grade, and compact the bottom and banks as required for a smooth fit. Remove rocks, clods, sticks, and other materials that prevent positive contact with the soil surface. Complete contact of channel liner with the soil surface is critical for satisfactory performance.</li> <li>▪ Side ditches or channels: Treat in the same manner as the main ditch or channel.</li> <li>▪ Channel liner applications: Start at the upstream end of the channel and continue down grade.</li> <li>▪ Channel liner overlap: At least 3 ft with the end of the upstream liner overlapping the top of the next lower liner. The top end of the lower liner should be buried at least 6 in.. Both the top and bottom liner should be securely anchored in the area of the overlap. The outer edges of the channel liner should be buried in a trench at least 1 ft and properly anchored.</li> </ul>		

## Maintenance

- Make field adjustments as necessary to ensure proper performance.
- Make corrections based on weekly erosion control inspections.
- After channel lining is installed, make sure all liner is in contact with the soil in all places, and that critical areas are securely anchored. Inspect channel liners periodically and following each storm event or snowmelt. Repair as necessary.