

Enviro-Ridge

Ditch Barrier Innovation



Enviro-Ridge is an improved, patented, low-profile, lightweight, flexible and permeable plastic check dam for sediment control in ditch channels.

Enviro-Ridge's patented transverse flexibility and unique permeable structure is designed to emulate natural vegetative filters. In the absence of grass or vegetation after road and ditch construction, Enviro-Ridge can provide a temporary "soft" structure with some of the beneficial characteristics of grass filters.

Enviro-Ridge's primary innovation is its flexibility, which allows it to conform to uneven ground, offering effective performance across a variety of ditch shapes and forming a better "seal" when installed on top of Erosion Control Blankets.



Enviro-Ridge reduces water velocity by distributing water over a wider area of the ditch bottom, facilitating sedimentation and revegetation. By dissipating energy and reducing flow velocity, Enviro-Ridge causes sediment to settle near the upslope side of each berm. In addition, its triangular configuration provides a protective shelter for newly emerging vegetation.

ENVIRO-RIDGE SPECIFICATIONS

Property	Unit	Enviro-Ridge
Polymer	N/A	100% recycled UV resistant high density polyethylene
Colour	N/A	black
Porosity	%	35-40%
Height	cm (in)	22.5 cm (8.86 in)
Length	m (ft)	1 m (3.25 ft)
Weight	kg (lbs)	0.907 kg (2lbs)

SPACING

When positioning Enviro-Ridge panels in a channel, the gradient plays a key role in the distance between panels as follows:

GRADIENT	SPACING
1%	23.0 m
2%	11.5 m
3%	7.7 m
4%	5.8 m
5%	4.6 m
6%	3.8 m
7%	3.3 m
8%	2.9 m
9%	2.6 m
10%	2.3 m

Spacing is based on calculating the height of Enviro-Ridge divided by the gradient.

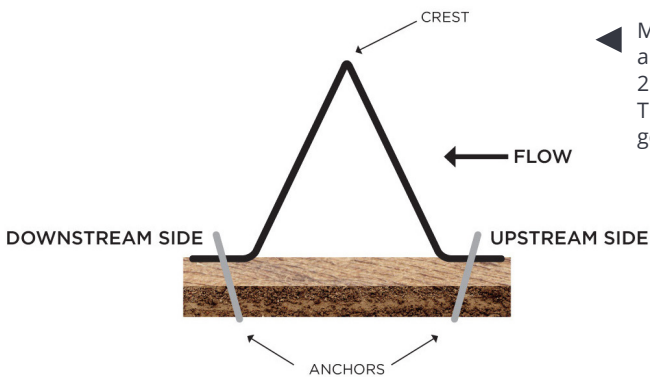
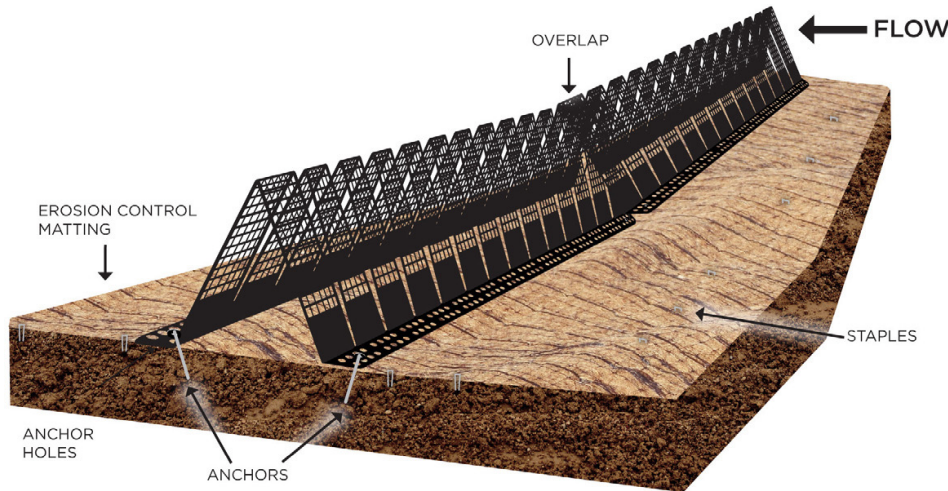
For example: On a 2% gradient, 0.23 m (height of Enviro-Ridge) / 0.02 gradient = 11.5 m spacing.



INSTALLATION GUIDELINES

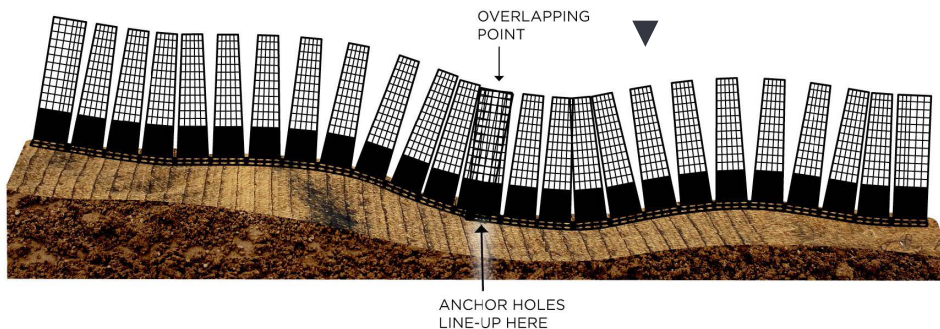
When installed as a series of berms perpendicular to flow in ditches and channels, each berm helps reduce delivery of sediment to aquatic habitats, acting as a filtration system that gradually removes sediment and improves water quality.

Select an erosion control blanket (ECB) grade based on the channel geometry and flow conditions. Always follow the manufacturer's recommended installation procedures.



Minimum recommendation is 3 anchors on the upstream side and 2 anchors on the downstream side. The anchors will prevent water from going under the Enviro-Ridge.

If multiple Enviro-Ridge units are required to span a channel, ensure that the anchor holes line-up when you overlap each panel.



INSTALLATION INSTRUCTIONS

STEP 1

A section of ECB shall be placed across the flow line direction of the channel prior to the installation of the Enviro-Ridge. The ECB section must span the entire width of the channel, while the width of the blanket must be at least one roll width or no less than 1.22 m (4 ft).

STEP 2

The upstream edge of the ECB must be secured in a 100 mm 4" trench. Secure the blanket in the trench using 150 mm or 6" minimum staples placed at 500 mm (1.67 ft) intervals along the edge. Backfill and re-compact the soil in the upstream edge trench.

STEP 3

Secure the downstream edge of the blanket with 150 mm or 6" minimum staples placed at 300 mm (1 ft) intervals along the edge.

STEP 4

Place the Enviro-Ridge berm in the middle of the ECB and anchor with 10" spiral spikes. Anchor spacing depends on soil condition and density.

EXAMPLE:

On a 2% gradient, 0.230 m (height of Enviro-Ridge) / 0.02 gradient = 11.5 m spacing.