# 06 CHANNELS OF THE PILAR WATERFRONT

## CULVERT OUTFALL PROTECTION — UNIFORM SECTION

PROJECT CASE · PARAGUAY



The channel lined with US300 discharging into the Paraguay river — Pilar Waterfront

**3,000**
M² OF COVERAGE

**US300**
HYDROTEX UNIFORM SECTION

**Direct**
INTO THE PARAGUAY RIVER, WITH NO SCOUR

**The challenge:** the culvert outfalls on the Pilar waterfront run down the slope of the defence and discharge straight into the Paraguay River. Every rain concentrated the flow on bare soil: scour advanced towards the embankment and threatened the defence works themselves.

**The solution:** lining with a mattress of **US300 Uniform Section**: a continuous slab with a smooth surface and a low Manning coefficient that carries the water at an optimal velocity without eroding, cast in situ over the profile of each outfall down to its discharge point. They were **3,000 m²** of protection that follow the topography of the coastal slope.

**The whole family on a single project:** the Pilar Coastal Defence combines AB600 Articulated Block on the river frontage and US300 Uniform Section in its outfall channels — each function with its own HYDROTEX® mattress.



The finished mattress, already blending into the setting



How the Uniform Section works in a channel · photo: Synthetex®

### PROJECT FILE

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| **Project** | Outfall channel protection |
| **Location** | Pilar Waterfront, Ñeembucú |
| **Product** | HYDROTEX® US300 Uniform Section |
| **Area** | 3,000 m² |
| **Status** | Completed |