SEAWALL REPAIR NETWORK

Case Study

Seawall Repair in Carrollton, GA

A homeowner on a private lake in Carrollton, Georgia contacted Seawall Repair Network® looking for a way to save their failing seawall. A representative from member contractor Ground Consolidation Solutions promptly arrived to perform a free assessment. There was significant soil loss on the land side. In addition, the seawall itself was starting to shift due to a buildup of hydrostatic pressure.



Repair Materials

SW-RP1 repair material and hydrostatic pressure control panels were used to stabilize the seawall and prevent any further shifting.

SW-RP1 Uncured (Appearance brown liquid)		
Viscosity at 77°F (25°C)	(ASTM D4878-98)	± 215 cP (± 215 mPa.s)
Density	(ASTM D3505-96 [2000])	± 70.92 lbs/ft³ (± 1.12 kg/dm³)

SW-RP1 Accelerator, Accelerator for SW-RP1 (Appearance: yellow - orange liquid)		
Viscosity at 77°F (25°C)	(ASTM D4878-98)	± 75 cP (± 75 mPa.s)
Flash point	(ASTM D1310-86)	313°F (156°C)
Density	(ASTM D3505-96 [2000])	± 65.5 lbs/ft³ (± 1.05 kg/dm³)

Procedures

Given that there were two separate issues occurring, a two-pronged repair approach was in order. First, the crew backfilled the soil voids with coarse river sand, then they injected SW-RP1 repair material from the bottom of the seawall up to the top. This ensured that all of the leaks were sealed off. In addition, the SW-RP1 resin permeated the soil, creating a solid mass to add structural support. Next, the crew addressed the hydrostatic pressure issue. Hydrostatic pressure occurs when groundwater on the soil side builds up and has nowhere to escape, putting undue pressure on the seawall. To alleviate this pressure, the crew installed panel filters every 6 feet, along the face of the seawall just above the average water line. The filters allow water to pass through from the landside without any soil loss.

Results

This process took only two days to complete and was completed for a fraction of the cost of seawall replacement.

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