The 532nd Engineer Amphibian Regiment, 2nd Engineer Amphibian Brigade, sailed from San Francisco, USA on board the SS Noordam on 24 January 1943 accompanied by Headquarters, Headquarters Company, and the 562nd Engineer Boat Maintenance Company of the 2nd Engineer Amphibian Brigade. They arrived in Townsville in north Queensland on 23 February 1943. Company "B" of the 532nd travelled by truck to Cairns through floods that had hit north Queensland. "A" Section of the 2nd Engineer Amphibian Brigade and other Companies of the 3rd Engineer Amphibian Brigade (later 3 ESB) moved to Rockhampton and Brisbane.

Company "B" camped 15 miles north of Cairns on the left hand side of the "highway" in their partly constructed camp. Their first task was to build a road complete with a number of bridges from the "highway" to Palm Beach (Palm Cove). The medn of Company "B" built a baseball diamond on the right-hand side of the road opposite their camp.

The men of the 532nd were there to give the Australian 9th Division AIF some training in amphibious boats and beach landings at Trinity Beach and Palm Beach.

The 532nd Engineer Amphibian Regiment headed for New Guinea on two Liberty Ships, on 20 July 1943 along with the 9th Division AIF, complete with jeeps, artillery and tanks. Company "A" of the 532nd moved to New Guinea on 28 October 1943. Their camp was then occupied by Company "A" of the 592nd Engineer Boat Regiment.

The Provisional Battalion of the 532nd Engineer Amphibian Regiment left Townsville for Milne Bay in New Guinea on 28 May 1943 under the command of Major Rising. They relocated to Oro Bay in New Guinea on 13 June 1943.