New oil spill cleanup technology developed

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U.S. scientists say they have developed a new technology for cleaning oil spills on oceans, lakes and other waterways.

Victoria Broje and Arturo Keller of the University of California-Santa Barbara say they have constructed and successfully field tested an improved version of the mechanical skimmer -- the mainstay device for recovering oil spilled on water.

Relatively unchanged for decades, the typical skimmer consists of a revolving steamroller-like drum that picks up a film of oil on the drum's surface. A scraper then removes the oil, which drops into a collector.

The new mechanical skimmer uses a grooved surface. With a larger surface area, the grooves scoop up more oil than the smooth-surfaced traditional skimmer. The scraper is machined to precisely match the groove geometry, removing nearly 100 percent of the adhered oil with each rotation.

The grooves also are coated with an improved oil-adhering polymer and field tests show the new skimmer is up to three times more efficient than traditional skimmers, the scientists report.

The technology is detailed in a report scheduled for the Dec. 15 issue of the journal Environmental Science & Technology.