

The *New Carissa* Removal Process

Required Permits and Approvals

Department of State Lands: **Removal-Fill Permit** (required when altering more than 50 cubic yards of material within the territorial sea, a “water of the state”).
Approved March 7, 2008.

Temporary Easement (for use of state land, the territorial sea, which DSL oversees).
Approved Feb. 28, 2008

U.S. Army Corps of Engineers: **Permit under Section 10 of the Rivers and Harbors Act** (for work in or affecting navigable U.S. waters) **and Section 404 of the Clean Water Act** (for discharge of dredged or fill material into U.S. waters)
Approved April 28, 2008

Bureau of Land Management: **Temporary Right-of-Way Permit** (to use BLM land, particularly Foredune Road, for staging the removal and securing public access to the beach during removal operations)
Approved April 4, 2008

Coos County: **Conditional Use Permit**
Approved March 6, 2008

The Department of State Lands (DSL) and the U.S. Army Corps of Engineers (Corps) regulate fill and removal of material within the Pacific Ocean. No permanent impacts to waters of the state or U.S. (including wetlands) are proposed by Titan, the removal contractor.

Work Elements of the Removal

The proposed work will be completed using temporary structures in the tidal zone near the wreckage and on shore approximately 1,000 feet east of the wreckage.

Two jack-up barges, each 170 feet x 80 feet x 13 feet, will be floated near the wreck and serve as work platforms during the dismantling process. A shoreline staging area will include an aerial construction transporter, two office containers, several storage containers, a crane, a parking area, and an access road.

One jack-up barge will be winched into place by a bulldozer on the beach and the other will be positioned from the stationary barge. A helicopter will be used to transfer mooring lines from the barge to the bulldozer.

Once winched into place, each barge will be jacked up on six legs so that the deck is at the same elevation as the wreckage, with a 20- to 30-foot gap between the water surface and the barge deck. The legs are 71 inches in diameter and will likely be sunk approximately 30 feet into the sand. The legs are designed to use high-pressure water spray from the end of the legs to agitate the sand and sink the legs under their own weight.

The jacking process does not use any lubricants that contain oils, grease, and/or other hydrocarbons.

Public traffic on Foredune Road will be diverted onto a temporary bypass road constructed around the east side of the shoreside staging area. Titan and the Bureau of Land Management (landowner) are working out the details of the bypass, which Titan will construct. BLM personnel will be on site when the road is built to ensure there are no environmental conflicts.

The shoreline staging area will occupy about 26,250 square feet (350 x 75 feet not including the temporary bypass), located above the average high tide line near the dune line. The staging area will provide support to the barges.

A construction transporter (an aerial tramway) will provide safe and efficient transport of crew and materials between the shoreline staging area and the seaward work platforms. It is composed of a single tower within the staging area, a cable car, and a heavy wire cable run between the tower and one of the barges.

The crane and excavator used to construct the construction transporter will remain within the staging area until the removal of the wreckage is complete, and will be used to dismantle the structures.

The *New Carissa* stern section will be dismantled on site using standard steel cutting techniques. Fragments of the wreckage will be hoisted by a barge-mounted crane and placed on a barge. The submerged portion of the stern section will be removed using up to eight 300-ton hydraulic pullers that will allow the salvage crew to “roll and cut” the wreck.

Wreckage scrap material will be recycled at an appropriate disposal facility to be determined by Titan during the removal process. No scrap material will be transferred to the foredune staging area on shore.

Any contaminants remaining on or leaving the *New Carissa* are the responsibility of the Department of State Lands. Similarly, any contaminants on the jack-up

barges are the responsibility of Titan. In response to the possibility of oil or other contaminants entering the water, DSL and Titan have developed a joint Oil Spill Response Plan to address the management of any contaminants as well as the removal process and contaminant cleanup. The plan is available from DSL.

Detailed questions about the salvage process should be directed to Titan.

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