



SEAFOOD WASTEPILE MONITORING SURVEY-DUTCH HARBOR, AK

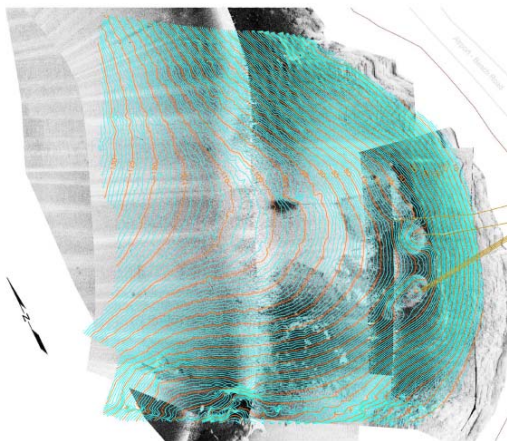
Studies have been conducted in Alaskan waters over the last decade to quantify wastepiles produced from seafood processing plants. Alaska seafood processors have historically contracted divers to perform wastepile monitoring required for NPDES permits, including measurements to calculate wastepile volume, aerial extent, and thickness. Much of the data collection through the use of divers was manual, subjective, and often not geo-referenced.

SCOPE AND APPROACH

EHI proposed a scientific, methodical approach using established remote sensing technologies in combination with ground-truth sampling techniques to assess the wastepile. Key elements of the program were positioning, precision, records, and repeatability. A RTK-DGPS was used for controlled positioning. Acoustic equipment was used to gather a dense data grid and provide 3D imagery of the seafloor and wastepile. Underwater video was taken of the seafloor to document the outfalls, wastepile, and marine life. Sediment cores were collected to correlate the acoustic data and past diver surveys. The cores provided direct measurements of seafood waste over the native sediments.

RESULTS

The acoustic method for assessing the wastepile proved a viable alternative to the dive surveys. The primary reason was the extended area capable of being surveyed using acoustic methods over diver methods. In addition, the number of data points used to calculate volume, area, and thickness is ten-fold over diver survey data and comprehensively delineated the seafood byproduct wastepile. Determination of the native seabed below the wastepile created a baseline by which the present and future surveys can determine change in wastepile volume. The methods established minimize subjective interpretation of wastepile aerial extent, which was very problematic in previous diver surveys



Side-scan imagery mosaic with bathymetry overlay.

Client Reference

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Project Timeframe

April – December 2007

