



Standard Guide for Surveys to Document and Assess Oiling Conditions on Shorelines¹

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1. Scope

1.1 This guide covers field procedures by which data may be collected in a systematic manner to document and assess the oiling conditions on shorelines.

1.2 This guide does not address the terminology that is used to define and describe shoreline oiling conditions, the ecological character of oiled shorelines, or the cultural or other resources that may be present.

1.3 The guide is applicable to marine coasts (including estuaries) and may also be used in freshwater environments (rivers and lakes).

1.4 The values stated in SI units are to be regarded as the standard. The values given in parentheses are for information only.

1.5 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*

F 1687 Guide for Terminology and Indices for Describing the Oiling Conditions of Shorelines²

F 1779 Practice for Reporting Visual Observations of Oil on Water²

3. Significance and Use

3.1 Systematic surveys provide data on shoreline conditions from which informed planning and operational decisions may be developed with respect to shoreline cleanup.

3.2 Surveys may include one or more of three components, listed below. The scale of the affected area and the availability of pre-spill information will influence the selection of survey components and the level of detail **(1)**.³

3.3 The aerial reconnaissance survey provides a perspective on the overall extent and general nature of the shoreline oiling conditions. This information is used in conjunction with environmental, resource, and cultural sensitivity data to evaluate which areas require a response and the priorities of the response operations.

3.4 The aerial videotape survey(s) provide systematic audio and video documentation of the extent and type of shoreline oiling conditions, physical shoreline character, and potential access restrictions **(2)**.

3.5 The ground assessment survey(s) provide the necessary information and data to develop appropriate shoreline response recommendations. A field team(s) collects detailed information on shoreline oil conditions, the physical and ecological character of oiled shorelines, and resources or cultural features that may affect or be affected by the timing or implementation of response activities **(2)**.

3.6 In order to ensure data consistency it is important to use standardized terminology and definitions in describing oiling conditions, as provided in Guide F 1687.

4. General Considerations

4.1 The specific survey procedures and the magnitude of the data sets collected will vary with the scale of the spill (the length and distribution of oiled shoreline and quantity of oil), the nature or complexity of the shoreline, and the needs of the response organization **(3)**.⁴

4.2 Following a spill in which only a few kilometers of coast have been oiled, one ground survey team may be able to accomplish all of the goals in an appropriate time frame.

4.3 As the scale of the affected area increases, it may be necessary to conduct an aerial videotape survey that is followed by a ground assessment using one or more teams.

4.4 Following spills that affect long sections of coast (for example, more than 100 km), the sequence of an initial aerial reconnaissance, an aerial videotape survey and ground assessment surveys may be necessary to satisfy planning and operational requirements in a timely manner **(2)**.

¹ This guide is under the jurisdiction of ASTM Committee F20 on Hazardous Substances and Oil Spill Response and is the direct responsibility of Subcommittee F20.17 on Shoreline Countermeasures.

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² *Annual Book of ASTM Standards*, Vol 11.04.

³ The boldface numbers in parentheses refer to the list of references at the end of this standard.

⁴ Owens, E. H., and Sergy, G. A., *Field Guide to the Documentation and Description of Oiled Shorelines*, ISBN 0-662-22048-X, Environment Canada, Edmonton, Alta., 1994.