



Standard Guide for Fish and Wildlife Incident Monitoring and Reporting¹

This standard is issued under the fixed designation E1849; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 State and Federal agencies as well as industry have requested guidance for collecting, reporting, and interpreting fish and wildlife incident data. This guide covers planning and completing a thorough investigation to determine an incident's cause. Recommendations for documenting and reporting incidents are provided. A summary of the information necessary for completing a risk assessment and information on how fish and wildlife incident data are considered for regulatory decisions are also provided.

1.2 Several agencies collect information and maintain databases regarding fish and wildlife incidents. A list of these databases and the types of information they contain are included. Agencies with regulatory authority relating to fish and wildlife incidents are listed and laws pertaining to fish and wildlife incidents are summarized.

1.3 For the purposes of this guide, a fish or wildlife incident is defined as an allegation of an adverse effect on nontarget fish and wildlife species. By today's detecting standards, adverse effects data are usually limited to mortalities. However, as biological monitoring improves, sublethal effects data may be more readily quantifiable and reported.

1.4 This guide is arranged as follows:

	Section
Referenced Documents	2
Terminology	3
Significance and Use	4
Laws and Regulations	4.1
Benefits of Maintaining Records	4.2
Ecological Risk Databases	4.3
Ecological Risk Assessments	4.4
Precautionary Steps and Safety	5
Determining the Cause of the Incident	6
Common Causes of Fish Mortality	6.1
Common Causes of Wildlife Mortality	6.2
Investigation of Incidents	7
Quality Control and Standard Operating Procedures	7.1
Planning Field Investigation	7.2
Interagency Coordination	7.3
Chain of Custody	7.4

Comprehensive and Systematic Collection of Samples and Information	7.5
Analyses of Samples	7.6
Analyses of Data	7.7
Determining Significance of Investigation	7.8
Reporting of Incidents	8
Format of Report	8.1
Documentation of Information	8.2
Appendixes	
References	

1.5 The values stated in both inch-pound and SI units are to be regarded separately as the standard. The values given in parentheses are for information only.

1.6 *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.* Specific precautionary statements are given in Section 5.

2. Referenced Documents

2.1 ASTM Standards:²

- [D4687 Guide for General Planning of Waste Sampling](#)
- [E729 Guide for Conducting Acute Toxicity Tests on Test Materials with Fishes, Macroinvertebrates, and Amphibians](#)
- [E943 Terminology Relating to Biological Effects and Environmental Fate](#)
- [E1023 Guide for Assessing the Hazard of a Material to Aquatic Organisms and Their Uses](#)
- [E1192 Guide for Conducting Acute Toxicity Tests on Aqueous Ambient Samples and Effluents with Fishes, Macroinvertebrates, and Amphibians](#)
- [E1241 Guide for Conducting Early Life-Stage Toxicity Tests with Fishes](#)
- [E1295 Guide for Conducting Three-Brood, Renewal Toxicity Tests with *Ceriodaphnia dubia*](#)
- [E1367 Test Method for Measuring the Toxicity of Sediment-Associated Contaminants with Estuarine and Marine Invertebrates](#)

¹ This guide is under the jurisdiction of ASTM Committee E50 on Environmental Assessment, Risk Management and Corrective Action and is the direct responsibility of Subcommittee E50.47 on Biological Effects and Environmental Fate.

Current edition approved March 1, 2013. Published May 2013. Originally approved in 1996. Last previous edition approved in 2007 as E1849–96(2007). DOI: 10.1520/E1849-96R13.

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.