

ASABE Standards Development Guidelines

1 Purpose of Standardization

- 1.1 Standards are developed and adopted because of a need for action on a common problem. Their effectiveness is dependent upon voluntary compliance with the standards adopted. It is therefore essential that affected groups be invited to participate in the development of such standards.

2 Principles of Standardization

- 2.1 Standards are engineering requirements (specifications) prepared to define materials, products, processes, tests, testing procedures and performance criteria in an effort to achieve certain specified purposes. Standards must accurately and specifically define the properties required without unnecessary, restrictive specifications that thwart originality or progress.
- 2.2 Basic principles shall be considered in determining the acceptability of draft standards.
- 2.2.1 The standard shall have a clearly defined purpose and scope.
- 2.2.2 Only those specifications essential to achieving the stated purpose within the stated scope shall be included. Descriptive material may be included in an informative annex when necessary.
- 2.2.3 Standards shall not assign responsibility for conformance to or application of its provisions and specifications.
- 2.2.4 The verb “shall” will be used in provisions and specifications to convey a strict requirement for conformance to that specific standard; i.e., requirements necessary to achieve the stated “purpose”. Use of the verbs “must” and “needs to be” shall be avoided.
- (1) “Products shall include all applicable safety symbols, applied on a surface visible to the operator.” (Denotes that the safety symbols are required in order to meet the standard.)
- 2.2.5 The verb “should” shall be used to convey a recommendation that is optional in achieving conformance to that specific standard; i.e., recommendations that may be followed exactly as written, ignored while remaining in conformance with the standard, or achieved through another method.
- (1) “Products should be easily used by people of all sizes.” (Denotes that ease of use by all people is recommended, but not a requirement.)
- 2.2.6 The verb “may” shall be used to grant permission without being a requirement or recommendation.
- (1) “Products may be painted a bright color, for visibility.” (Grants permission to paint the products a bright color, but does not necessarily require or recommend doing so.)
- 2.2.7 Standards concerned with safety and/or health of personnel shall not state or imply that products or materials that conform to the standard are completely safe or completely

healthy. They shall not state or imply that products or materials that do not comply with the standard are unsafe or unhealthy.

2.2.8 Standards development committees frequently identify hazards that will remain even if the design, construction, and performance requirements of a standard are met. In such situations, standards should include important safe practices that will minimize the potential for injury, if followed by users of products, processes, operations, or systems.

- (1) Safe practices are the actions or behavior of users of products, processes, operations, or systems that when followed in the presence of a recognized hazard provide for the users' safety and health.
- (2) A safe practice message is an instruction intended for communication to users to call attention to the need to act safely in the presence of a recognized hazard. Requirements with respect to the design, process, operation, or system itself, including instructions that are to accompany the product, process, operation, or system are not safe practice messages.
- (3) Users are operators, service and maintenance personnel, inspectors, supervisory personnel, and others exposed to hazards related to products, processes, operations, or systems.
- (4) A safe practice message shall be included with a standard if the safe practice is a vital safety requirement, the safe practice has broad generic application and is unaffected by individual variations in products, processes, operations, or systems. The safe practice message can be written to clearly describe a practice or practices with regard to use of the subject equipment that will minimize risk to users or bystanders.
- (5) In the interest of clarity and to assure distinctiveness, safe practice messages shall not be intermixed with the design, construction, and performance requirements of a standard. Safe practice messages in standards should be presented in an informative annex (see annex A).

2.3 Many standards are of international significance and importance. ASABE standards should be harmonized with other national standards, international standards, and international organizations such as Organization for Economic Cooperation and Development (OECD) where appropriate.

3 Project Development Guidelines

3.1 Project Proposal Form, Requirements and Directions

3.1.1 Project Lead / Project Email

3.1.2 Project Type - Identified as development of a new standard, revision of existing standard, withdrawal of an existing standard, or adoption of an existing international standard.

- (1) ASABE or ANSI endorsed
- (2) A separate PPF is used for the national adoption of an international standard either identically or with deviation. Both forms are found at <https://www.asabe.org/Publications-Standards/Standards-Development/National-Standards>.

3.1.3 Proposed Designation

- (1) The letter(s) **S, EP, or D** shall precede the numeric designation of a standard, depending on the standard type. The numeric designation shall be retained even though classification as standard, engineering practice or data could change.
 - (2) **ASABE Standard (S)**. A definite terminology, specification, performance criteria, or procedure providing interchangeability; enhancing quality, safety, economy or compatibility; viewed as a proper and adequate example model.
 - (a) Definitions, terminology, graphic symbols, and abbreviations.
 - (b) Performance criteria for materials, products, or systems.
 - (c) Testing procedures.
 - (d) Specifications or ratings regarding size, mass, volume, etc.
 - (3) **ASABE Engineering Practice (EP)**. A practice, procedure or guide accepted as appropriate, proper and desirable for general use in design, installation or utilization of systems or system components, and based upon current knowledge and the state-of-the-art.
 - (4) **ASABE Data (D)**. Numerical values, including statistics, and relationships, either mathematical or graphical, organized, codified, and uniquely applicable to engineering in agriculture, food, and other biological systems. Data need not be free of variation.
- 3.1.4** An ASABE Technical Reports shall be identified with the letters “TR” followed by the date of approval or ANSI registration, whichever is later.
- (1) Example: ASABE **TR100** MONYEAR or ANSI/ASABE **TR100** MONYEAR
- 3.1.5** Proposed Title - A proposed project title shall be given for reference purposes. Notification of staff is required for title changes.
- 3.1.6** Previous version superseded (if revision)
- 3.1.7** Is it a Safety standard?
- 3.1.8** Units of Measure Options
- 3.1.9** Rationale for project - A rationale statement on the necessity of the project including alternatives and implications of the availability or lack of such a standard in the industry (business, society, trade, safety, etc). Include any points on the benefits of the standard.
- 3.1.10** Scope of Project
- (1) The content of this section should closely reflect the anticipated text of the project when completed. This is a key requirement relating to how the project will be reviewed by the Standards Oversight Committee and in guiding that committee in recommendations for approval to proceed with the project. Should the scope of the project change after the Standards Oversight Committee has approved it, staff is to be notified to amend the PPF and inform the Standards Oversight Committee.
 - (2) If the project is a revision, the scope statement in the PPF should specify the specific extent of the revision, especially if it is not intended to be a major revision of the entire standard. This will set the boundaries of the accepted comments from the reviewers to prevent making additional changes that are not intended in the revision plan. Comments outside of the plan would require a new project to address them.

- (3) The scope statement should be concise and describe the range of information specific to the document.

3.1.11 Scope of Standard (if revision)

- (1) If the project is a revision, the scope statement in the PPF should specify the specific extent of the revision, especially if it is not intended to be a major revision of the entire standard. This will set the boundaries of the accepted comments from the reviewers to prevent making additional changes that are not intended in the revision plan. Comments outside of the plan would require a new project to address them.

3.1.12 Keywords (alphabetical) - A listing of key words to describe the title of the standard and the purpose of the standard shall be provided for data search and posting purposes. They may be amended during development. Terminology and definitions shall be limited to those actually used within the text of a standard. Be sure to review final definitions against final text.

3.1.13 Stakeholders - The Project Lead should complete a review and documentation of impacted parties for the standard.

3.1.14 Interest Categories

3.1.15 Consensus Body Roster - A tentative listing of the proposed membership of the development committee who will actively participate in the development of the project, and the designated Consensus Body, who will actively participate in the balloting of the proposed standard. The Consensus Body will be considered the voting members of the development committee. It is understood that the initial Consensus Body will most likely be developed and amended during the process.

3.1.16 The ASABE Standards staff shall assign the project number upon submission of the PPF.

3.1.17 A review of affected parties may assist in responding to this requirement. This statement of facts assists in prioritizing work projects and in the Standards Oversight Committee work of determining if the project is related to any other known projects either within ASABE or other associated Standards Development Organization (SDO) groups. The objective is to clarify purpose and scope, avoid duplication of effort, effectively utilize resources, review for clarification of objectives, and need.

3.1.18 The need to interface with other institutions and the related communication/planning shall be evaluated. Factors to be considered include:

- (1) The implications on authorship of a standard and royalties that may be received or paid to other SDO's. A formal agreement with another SDO in relation to joint development is required for all parties regarding development and publication of the product.
- (2) If the project proposal is to be based on published standards or work items, such linkages shall be identified if they relate to the needs of ASABE obtaining the necessary rights for use and any requirements for payment of fees or royalties. For example, relationships with ISO standards and OECD test schemes shall be identified.
- (3) If the ASABE standard will be harmonized with similar international standards or OECD test codes that are either published or in development.

3.1.19 The project proposal shall include:

- (1) Development Committees drafting a standard shall strive to obtain broad representation and shall provide an opportunity for qualified individuals within the Consensus Body. Groups may include, but are not limited to: user of a product, producer of a product, academia, research, government, safety expert, and general interest. Any consultant is to be listed in relation to who they represent, producer, user, etc.
- (2) There shall be no opportunity for domination by any single interest group or company. No single interest group shall constitute more than one-half of the voting members of any Consensus Body (one-third for safety-related projects). Membership of the Consensus Body should be limited to no more than three (3) members or 20% of the total Consensus Body (whichever is less) from a single organization, unless members are clearly identified as being from different fields of expertise, which allow for independent decision making. Any deviation must be documented for audit purposes.
- (3) It is recommended that a Consensus Body have a minimum of twelve (12) members for participation in the final review and balloting of a proposed project.

3.1.20 The information provided on the project proposal form shall be updated for delivery with the completed balloted standard prior to presentation to the Standards Oversight Committee. It shall serve as a guide for development of the final report.

4 Standards Designation

4.1 For an adoption without deviation, unless the international standard has its origination in the US and is included in government regulation, code or safety requirements, the designation shall be identical to the designation of the international standard with the inclusion of ASABE in the prefix. For listing on ANSI forms the designation shall include "ANSI" at the beginning.

4.2 The adoption of an international standard or technical specification with deviation or identified changes based on US regional needs or regulations, is identified with the prefix "AD" to indicate adopted with deviation. As an ANSI approved document, the identifier is included in the designation.

4.3 National Identical Adoption of ISO/IEC: ANSI/ASABE/ISO 3463:2006

4.3.1 In the 0 Forward: - confirm if table covers

- (1) ASABE publication date shall be included (SEP2017)
- (2) ASABE reaffirmation dates shall be included (R2020)

4.3.2 If referenced in other ASABE documents: ANSI/ASABE/ISO 3436:2006

4.4 Adoption with deviation: ANSI/ASABE AD3918:2007

4.4.1 In the 0 Forward: confirm if table covers

- (1) ASABE publication date and ISO publication date shall be included.
 - (a) ISO Publication Date: 2007
 - (b) ASABE Publication Date: JAN 2011
 - (c) ASABE Reaffirmation Date: Reaffirmed in 2020

4.4.2 If referenced in other ASABE documents: ANSI/ASABE AD3918

4.5 National Standards

4.5.1 ASABE S591 Title or ANSI/ASABE S632-1 Title

4.5.2 In History Table, include:

- (1) Original publication date
- (2) Revision dates
- (3) Reaffirmation dates

4.5.3 If referenced in other ASABE documents: ASABE S328 Title or ANSI/ASABE S632-1 Title

4.6 When an ANSI standard has been stabilized, an 'S' will replace the 'R' in the designation.

4.6.1 ANSI/ASAE S261.7 FEB1989 (R2025) changes to ANSI/ASAE S261.7 FEB1989 (S2025)

5 Format and Content of Draft Standards

5.1 The Standards Development Organization and any outside resources involved in the standards development are responsible for the technical accuracy of the document and for clarity in communicating requirements.

5.1.1 Proposed unapproved voluntary standards shall include the statement "Unapproved Draft for Review Only" and contain a watermark indicating "Draft".

5.1.2 Each proposed draft standard for publication shall include a statement of purpose and a scope statement indicating areas, classes of equipment, etc. for which the draft standard is and is not applicable.

5.1.3 Functional interchangeability between metric and imperial units shall be included. SI units are the required measurement to be shown first when both SI and English/U.S. customary units are used. Refer to ASAE EP285 Use of SI (Metric) Units.

5.1.4 Decimals shall be used except where common fractions are used in inch-pound units as nominal designations and are necessary to convey proper meaning (i.e., 3/4-in. pipe).

5.1.5 When ASABE adopts International Standards, the format of the International Standard shall be maintained.

5.1.6 Implied measurement tolerances shall be avoided. When specifying measurements, SI and inch-pound units that require tolerances shall be included.

5.2 Style guide information for ASABE standards is included in a template provided by ASABE Standards staff. – explanation on how to access the template styles that are preset in Word

6 Formatting a National Adoption of an International Standard

6.1 All examples are available in the Standards Template.

6.2 See the ASABE Standardization Procedures for the Identical Adoption of an International Standard designation.

6.2.1 History of the withdrawn ASABE standard shall be retained to the adopted International Standard. This portion of the history shall follow the designated ASABE number. Future revision of the adopted International Standard shall follow the designated ASABE Format.

6.3 The International Standard shall be attached following the ASABE 0 Foreword. Alternate wording: The 0 Forward detailing deviations shall be included prior to the text of the document being adopted.

6.4 ASABE Forward - Section 0

- 6.4.1** Describes the relationship between the withdrawn ASABE Standard and the International Standard. This section should also note if the International Standard was originally based on the technical content of the withdrawn ASABE Standard.
- 6.4.2** Describes the subject content and the relationship between the scope of the nationally adopted International Standard and the withdrawn ASABE Standard. The scope of the adopted International Standard shall be clearly defined and include if the scope is either broader or narrower. A brief justification should be included for historical purposes.
- 6.4.3** Provides additional documentation concerning normative references specified by the ISO standard. The adopting committee shall review the status of all international normative references. If the normative references have not been adopted by ASABE, additional domestic references or explanations may be included here. For example, the normative reference may have been adopted by another domestic SDO. If normative references contain deviations, this shall require the document to be processed as an adoption with deviation per section 10.8 in the ASABE Standardization Procedures. If the deviation(s) of normative references point to standards adopted without deviations, the standard may be adopted without deviations.
- 6.4.4** Denotes that the document has been adopted as an American National Standard.
- 6.4.5** Additional section 0.X paragraphs and subparagraphs may be added as needed.

6.5 ASABE Adoption of International Standards with Deviations

- 6.5.1** This procedure is applicable to situations where technical harmonization cannot be achieved between the ASABE Standard and the International Standard. This may also apply to situations where some technical information is missing from the international document and which has been determined to be pertinent to ASABE interests. In this case (referred to as "Adoption with Deviations"), the ASABE foreword will contain information relative to the technical deviations to the International Standard.
- 6.5.2** International terminology shall be maintained (e.g. litre vs. liter). ISO uses European English.
- 6.5.3** The International Standard is still attached with the ASABE 0 Foreword.
- 6.5.4** Deviations should be noted within the text of the international standard, as well as in the 0 Foreword section. Details of the foreword content are specified below.
- 6.5.5** The scope of the ASABE Standard shall be included on the first page.
- 6.5.6** ASABE and International Document Revision History shall also be included as a chart on the first page.

6.6 ASABE National Adoption with Deviation Forward – Section 0

- 6.6.1** Describes the relationship between the ASABE standard and the nationally adopted International Standard and includes information regarding the need for technical deviation(s). Deviations from the subsequently printed international standard should be noted with underscore (additions) or strikethrough (deletions) text. Deviations from the international standard figures and equations should be clearly marked. This section should also note if the International Standard was based on the technical content and provisions of the original ASABE Standard. Only those aspects relative to the deviation rational should be included.

- 6.6.2 Describes the subject content and relationship of the scope between the International Standard and the ASABE Standard. The scope may be deviated to be either broader or narrower.
- 6.6.3 Provides additional documentation of normative references or deviations to normative references specified by the ISO standard. The adopting committee shall review the status of all international normative references. If the normative references have not been adopted by ASABE, additional domestic references or explanations may be included here.
- 6.6.4 Denotes that the document has been adopted as an American National Standard.
- 6.6.5 Additional section 0.X paragraphs and subparagraphs may be added as needed. Include documentation of ASABE technical deviations from the referenced International Standard.
- 6.6.6 Committee Review of ASABE and International Documents will be required.
- 6.6.7 All deviations are to be noted in the 0 Foreword paragraph as well as in the body of the document. Deviations noted in the body of the document shall use strikethrough for deletions and underline for additions. When tables or graphs are deleted, a selected symbol shall be used to indicate “do not use”. All deletions and additions shall be indicated using red font for ease of recognition.

7 Dating of Standards Upon Approval or Reaffirmation

- 7.1 For all endorsed American National Standards, the month and year the standard was approved by ANSI shall be added to the history table on the first page. The ANSI Logo shall be prominently displayed on the cover sheet following approval.

8 ASABE Staff Reference

- 8.1 ASABE standards shall be identified as follows using appropriate alphanumeric designations assigned by ASABE Standards staff:
 - 8.1.1 The letters ASABE shall precede the assigned alphanumeric designation for all projects adopted after July 2005 (date of Society name change from ASAE to ASABE). All standards adopted prior to July 2005 shall retain their ASAE designation, even when revised.
 - (1) If the project is endorsed by the American National Standards Institute (ANSI) the designation shall include “ANSI” at the beginning unless an identical adoption of an international standard (section 4.5).
 - (a) **ANSI/ASABE EP555**