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Subcommittee: ENV	Status: Working Draft	Wiki Links: See below
Current Version: 2.0	Document Type: Word	
Previous Version: 1.1	Parent Doc/Section: None	Key Discussion Threads: None
Start Date: Fall 2009	Lead Editor(s) & E-mail(s):	
Current Date: 06.15.10	This Version Approved by Standards Committee	Reference Docs:

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7 **National Sustainable Agriculture Standard (SCS-001)**
8 **Subcommittee Work Product Form**

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10 **Upon completion, this form should be submitted to the Coordinating Subcommittee**
11 **and the**
12 **Structure and Process Subcommittee**

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[Environmental Criteria Subcommittee]

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18 **PURPOSE/PREAMBLE:** This document provides a form to be completed by the Subcommittees as
19 they organize their work during development of recommendations for the National Sustainable Agriculture
20 Standard. This document helps achieve the guidelines set forth in the *Guide to Developing Standard*
21 *Development Subcommittee Working Documents* by LEO on July 22, 2009. Use of this form will provide
22 a working list of outstanding topics to ensure that these topics are addressed. It will also provide a place
23 to record the discussion/descriptions of the situations and questions that need to be resolved and the
24 Subcommittee's recommendations on them.

25 **Types of Work Products:**

26

27 **I. Terms and Definitions**

28 This is a Subcommittee's recommendation relative to the current use of terms or definitions. Terms or definitions recommendations
29 may be specific to a document or may be submitted for universal inclusion in the Standard. Definitions that clarify a specific
30 document term or definition need to reference that document following the proposed definition.

31

32 **II. Standard Criteria/Requirements**

33 This is a Subcommittee's recommendation relative to the content of the Standard. Such recommendations include, but are not
34 limited to, organizational principles, metrics and measurement criteria, roles and responsibilities, etc.

35

36 **III. New Document**

37 This is a Subcommittee's proposal for a new document of which the content is submitted below. Such documents would likely not
38 be inserted into the Standard but might lend supporting information for recommendations or decisions made during the process.
39 New documents include, but are not limited to, reference or supporting document for the Standard, analysis of supporting
40 documents, new guidance/procedures, etc.

41

42 **IV. Discussions in Progress**

43 This is a Subcommittee's place to house topics that are in the discussion phase but have not yet reached a recommendation for
44 status as Terms and Definitions, Standard Criteria/Requirement, New Document, or Unresolved Issues. The Discussion in Progress
45 designation serves as a place holder for the subcommittee to log its discussion relative to a given topic.

46

47 **V. Unresolved Issues/Guidance Needed**

48 This is a Subcommittee's request for 1) clarification on a specific issue in order to advance its work on an item or 2) further guidance
49 in order to bring resolution to a given issue.

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53 **Recommended Work Product Type:** *(Check Only One)*

54 I. Term/Def. II. Standard Criteria/Req. III. New Doc. IV. In Progress V. Unresolved
55 Issue

56

57 **Working Title or Summary of Document or Issue:**

58

59 [Principle #1: Minimize, and/or avoid soil, water, and air pollution and degradation](#)

60

61 **SUBCOMMITTEE RECOMMENDATION:** (Recommendation to Standards Committee on a given
62 discussion issue. Please footnote or insert references to all documents where information has been obtained.)

63 Sustainable agricultural producers manage their farming operations and resources to preserve
64 and improve the environment on land they manage and, to the extent practical, in down-stream
65 and down-wind environments.

67

68 Desired outcomes include, but are not limited to: conservation of natural resources; and
69 avoidance or reduction of adverse effects to the environment, such as topsoil erosion and
70 degradation, water source degradation and depletion, unintended effects of agricultural inputs,
71 and emissions of air pollutants and greenhouse gases.

72

73 Examples of strategies or types of practices that might be used, where practical, to achieve the
74 desired outcomes include – but are not limited to – the following:

- 75 1. Adopting soil conservation methods that limit wind and water erosion of soil;
- 76
- 77 2. Implementing approaches to nutrient management and tillage that retain and utilize soil
- 78 nutrients, select and use nutrients or soil amendments that minimize accumulation of
- 79 toxic substances in soils, reduce the potential for movement of nutrients to surface and
- 80 groundwater, and match nutrient input to crop needs;
- 81
- 82 3. Maximizing irrigation efficiency and avoiding over-withdrawal of groundwater aquifers
- 83 and surface water resources;
- 84
- 85 4. Adopting approaches to pest management, such as Integrated Pest Management (IPM),
- 86 that balance the cultural, biological and chemical controls in a way that avoids or
- 87 minimizes environmental risks, minimizes pesticide off-target movement, and defers to
- 88 the use of the least harmful pest control strategies, materials, and application methods
- 89 whenever possible;
- 90
- 91 5. Managing sources of on-farm air pollutants and implementation of best practices to
- 92 avoid or reduce unnecessary emissions of all air pollutants and greenhouse gases; and
- 93
- 94 6. Managing sources of on-farm water pollutants and implementation of best practices to
- 95 avoid or reduce unnecessary movement of pollutants through stormwater discharge.
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99 **Recommended Work Product Type:** *(Check Only One)*

- 100 I. Term/Def. II. Standard Criteria/Req. III. New Doc. IV. In Progress V. Unresolved
- 101 Issue
- 102

103 **Working Title or Summary of Document or Issue:**

104

105 [Principle #2: Maintain and replenish long-term soil health, fertility and productivity.](#)

106

107 **SUBCOMMITTEE RECOMMENDATION:** *(Recommendation to Standards Committee on a given discussion issue. Please footnote or insert references to all documents where information has been obtained.)*

109 Sustainable agricultural producers manage their farming operations and resources to preserve
110 and improve long-term soil health, fertility and productivity. Healthy, productive soil has
111 beneficial chemical, physical, and biological characteristics that support optimum yields of high
112 quality crops; regulate water infiltration and runoff; store carbon and nutrients; and help filter,
113 buffer, and degrade pollutants.

115

116 Desired outcomes include, but are not limited to: sustained or improved productivity, year after
117 year; improved soil health and fertility; and operational planning that balances the goals of
118 agricultural production and environmental protection.

119

120 Examples of strategies or types of practices that might be used, where practical, to achieve the
121 desired outcomes include – but are not limited to – the following:

- 122 1. Using an appropriate combination of soil tests and plant analyses for planning nutrient
123 management strategies and optimizing pH and availability of essential nutrients;
- 124 2. Tracking nutrient inputs and removals, and effectively using green and animal manures,
125 fertilizers, soil amendments and other inputs at times and at rates that meet crop nutrient
126 needs at critical growth periods and minimize nutrient losses to the environment;
- 127 3. Maintaining or improving soil organic matter content to sustain productivity and soil tilth
128 and to support the biological activity and diversity that contribute to nutrient cycling;
- 129 4. Maintaining or improving soil structure, porosity and moisture holding capacity, and
130 minimizing compaction and other structural degradation of soil;
- 131 5. Managing nutrient use and irrigation to minimize salinization, where applicable;
- 132 6. Making land use and tillage decisions that address variation in soil characteristics and
133 topography within a given field and across the farm, including topsoil depth, soil texture,
134 slope, drainage, and vulnerability to erosion or compaction;
- 135 7. Managing soil-borne pests while encouraging high populations of beneficial soil
136 organisms; and
- 137 8. Managing farming operations, vegetative cover, and drainage structures and
138 conveyances to divert stormwater, protect soils from erosion, and minimize sediment
139 loss.

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142 **Recommended Work Product Type:** *(Check Only One)*

- 143 I. Term/Def. II. Standard Criteria/Req. III. New Doc. IV. In Progress V. Unresolved
144 Issue
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146 **Working Title or Summary of Document or Issue:**

147

148 [Principle #3: Use Renewable and Nonrenewable Inputs Efficiently and Minimize Waste](#)

149

150 **SUBCOMMITTEE RECOMMENDATION:** *(Recommendation to Standards Committee on a given
151 discussion issue. Please footnote or insert references to all documents where information has been obtained.)*

152
153 Sustainable agricultural producers manage their farming operations to use renewable and non-
154 renewable inputs efficiently and to minimize waste. Inputs include – but are not limited to –
155 energy, fuel, water, nutrients, soil amendments, pest control materials, equipment, supplies and
156 packaging materials. Waste includes materials generated from farm operations that have no
157 further value to the operation and that require responsible disposal, reuse, or recycling. Waste
158 materials include – but are not limited to – paper, plastics, metals, construction debris,
159 machinery, machinery fluids, petrochemicals, organic wastes and household and office refuse.
160 Waste minimization, in addition to conserving resources, can prevent the release to the
161 environment of materials that can pollute soil, air, and water.

162

163Desired outcomes include, but are not limited to: optimized use of energy, water, nutrients, and
164pest control materials relative to yield and quality; increased use of renewable energy,
165renewable materials, and renewable agricultural inputs; reduced use of materials; material
166reuse; use of recycled materials; and reduced volumes of materials landfilled, incinerated, or
167released to the environment.

168

169Examples of strategies or types of practices that might be used, where practical, to achieve the
170desired outcomes include – but are not limited to – the following:

171

172 1. Increasing energy and fuel efficiency;

173

174 2. Purchasing supplies and scheduling deliveries to maximize transport efficiency;

175

176 3. Optimizing the delivery and usage of irrigation water;

177

178 4. Optimizing the use of farm-generated renewable energy;

179

180 5. Optimizing the use of on-farm sources for nutrients and pest-control methods;

181

182 6. Maintaining and calibrating farm equipment and facilities to maximize the efficiency of
183 input and energy use and to minimize losses of materials to the environment;

184

185 7. Decommissioning and salvage of agricultural equipment, facilities, and their
186 maintenance byproducts to avoid damage to the environment;

187

188 8. Managing hazardous waste to avoid risks to the environment;

189

190 9. Selecting products made with recycled or recyclable materials and/or products in
191 reusable or recyclable containers; and

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193 10. Reusing containers, paper products, and other materials whenever possible and
194 recycling unneeded materials.

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198**Recommended Work Product Type:** *(Check Only One)*

- 199 I. Term/Def. II. Standard Criteria/Req. III. New Doc. IV. In Progress V. Unresolved
- 200 Issue

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202**Working Title or Summary of Document or Issue:**

203

204[Principle #4: Maintain or enhance biodiversity and supporting habitats within the farming](#)
205[system and its surroundings.](#)

206

207**SUBCOMMITTEE RECOMMENDATION:** *(Recommendation to Standards Committee on a given*
208*discussion issue. Please footnote or insert references to all documents where information has been obtained.)*

209

210 Sustainable agricultural producers manage their farming operations to support on-farm
211 biodiversity through the maintenance or enhancement of terrestrial, wetland, and aquatic
212 ecosystems and the promotion of ecologically functional habitats and species.

213 Desired outcomes include, but are not limited to: maintained or enhanced native (including rare
214 or threatened and endangered) species and communities, improved habitat for wildlife, and
215 maintained or enhanced populations and diversity of beneficial organisms in cropped and non-
216 cropped areas.

217 Examples of strategies or types of practices that might be used, where practical, to achieve the
218 desired outcomes include – but are not limited to – the following:

- 219 1. Addressing biodiversity within the farm plan to assess current ecosystems and
220 identify appropriate habitat management practices, and encouraging participation in
221 existing conservation programs and watershed ecosystem protection efforts to
222 support diverse species and habitats;
- 223 2. Managing cultivated areas to support species diversity by utilizing crop rotation,
224 cover cropping, intercropping, crop residues, perennial poly-cultures, filter strips,
225 buffers, and/or other effective practices;
- 226 3. Participating in trials or using a mix of crops and varieties that conserve genetic
227 diversity in agriculture;
- 228 4. Managing farm inputs to reduce or minimize adverse impacts on biodiversity and
229 beneficial organisms;
- 230 5. Timing harvest and other mechanical activities, within the window of opportunity, to
231 minimize impacts on wildlife, habitat, and/or ecosystem functions, especially during
232 critical reproduction and migratory periods;
- 233 6. Taking appropriate measures to remove and prevent the introduction and spread of
234 noxious and invasive species;
- 235 7. Managing uncultivated areas to support species diversity and provide wildlife habitat
236 and ecological corridors by utilizing windbreaks, hedgerows, buffers, and protecting
237 areas of uncultivated native vegetation from conversion;
- 238 8. Providing or enhancing pollinator-beneficial habitat and forage and using best
239 management practices to maintain healthy pollination services from managed honey
240 bees and native pollinators in cultivated and uncultivated farmland and wildlife
241 habitats;
- 242 9. Providing or enhancing habitat and refuge for beneficial species and natural enemies
243 of crop pests; and
- 244 10. Maintaining or enhancing aquatic, wetland, and riparian ecosystems to support
245 diverse species and habitats.

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248 **Recommended Work Product Type:** *(Check Only One)*

249 I. Term/Def. II. Standard Criteria/Req. III. New Doc. IV. In Progress V. Unresolved
250 Issue
251

252 **Working Title or Summary of Document or Issue:**

253

254 [Principle #6: Reduce, avoid, offset and/or sequester greenhouse gas emissions](#)

255

256 **SUBCOMMITTEE RECOMMENDATION:** *(Recommendation to Standards Committee on a given
257 discussion issue. Please footnote or insert references to all documents where information has been obtained.)*

258
259 Sustainable agricultural producers manage their farming operations to reduce, avoid, and/or
260 sequester greenhouse gas (GHG) emissions, per unit of production or other measurement
261 parameter, to the extent practical.

262 Desired outcomes include, but are not limited to, the optimized use of: (a) cropped and non-
263 cropped management systems that reduce greenhouse gas emissions and sequester carbon;
264 and/or (b) renewable inputs, relative to fossil fuel-based inputs.

265 Examples of strategies or types of practices that might be used, where practical, to achieve the
266 desired outcomes include, but are not limited to, the following:

- 267 1. Developing an inventory of current GHG emissions in order to identify appropriate
268 strategies and practices to reduce GHG emissions;
- 269 2. Using no-till or limited-tillage practices for those crops and cropping areas adaptable
270 to these conservation methods;
- 271 3. Optimizing crop rotations, including cover crops, perennials , and deep-rooted plants;
- 272 4. Taking additional measures to build soil carbon;
- 273 5. Maintaining or optimizing the use of non-cultivated set-aside cropped and non-
274 cropped land;
- 275 6. Installing and/or protecting forests, riparian and wetland areas, hedgerows,
276 windbreaks and other permanently vegetated areas;
- 277 7. Maintaining farm equipment and vehicles, and facilities, to optimize fuel efficiency
278 and reduce greenhouse emissions;
- 279 8. Increasing the use and/or generation of on-farm and off-farm renewable energy (e.g.,
280 electricity, biogas, biomass, fuel);
- 281 9. Reducing nitrous oxide emissions through strategies that optimize nitrogen use
282 efficiency;
- 283 10. Optimizing use of crop residue;

284 11. Optimizing irrigation usage; and

285 12. Consider reducing overall carbon footprint further through purchased carbon offsets.

286 _____ (Items below this line are completed by reviewers) _____

287 **RECOMMENDATION #** _____

288 **Review Comments:**

289 **Addressed:**

290 **Outstanding:**

291 **Open Issues:**

292 **Status/Needs:**

293

294 **PLEASE COPY AND PASTE THE ABOVE FORMAT INTO THIS DOC AS NEW**
295 **TOPICS ARISE**

296 **VERSION DESCRIPTION:**

297V 1.0 – Combined version of all ENV principle statements.

298V 1.1 – Version with Principle #5 (Crop and Livestock Integration) moved to the end.

299V2.0 – Version approved by the Standards Committee.