



## **Response to Comments**

### **Revisions to the Standard for Environmental Innovation (GS-20)**

April 4, 2019

In October 2018, Green Seal proposed changes to our Environmental Innovation Standard and solicited feedback. This document presents the comments that were formally submitted by stakeholders during that time and provides Green Seal's responses.

By issuing a new version of this standard, Edition 2.0, Green Seal has clarified eligibility requirements, removed unintentional barriers to certification, and more fully detailed how minimum environmental and human health requirements apply across a wide variety of product types and forms. Through this new edition, we have also improved the readability of the standard.

The standard is now a more effective tool for market leaders in the manufacturing community to work collaboratively with Green Seal to explore environmental and health impacts, engage in transformative product innovation, and be rewarded for their achievement of significant lifecycle impact reductions through third-party certification.

The following organizations participated in the Public Comment Period and played a vital role in this revision.

#### **Participating Organizations and Companies:**

**3M**  
**Americo**  
**Branch Creek**  
**Concept Manufacturing**

## **Response to Comments, Document Guide**

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### **Eligibility Requirements**

- Requests to clarify commercial availability.
- Requests to add a clause allowing for trade-offs resulting from innovations.
- [View comments.](#)

### **Product Lifecycle Impact Review Requirements**

- Impact review should contain benefits and negative impacts.
- [View comments.](#)

### **Environmental Innovation Requirements**

- Data required in order to demonstrate impact reduction.
- Need for clarification on Option 3: Alternative Method.
- Clarify the difference between the Improved Design and Improved Function options.
- Request for more information about product differentiation.
- [View comments.](#)

### **Functional Performance Requirements**

- Baseline functional performance requirements.
- Use of third-party independent testing.
- [View comments.](#)

### **Environmental and Human Health Requirements**

- Determining under what circumstances various requirements apply.
- Request for more clarity on case-by-case allowances and exemptions.
- [View comments.](#)

### **Recovered Content Requirements**

- Request to strike the requirements.
- [View comments.](#)

### **Skin and Eye Damage Requirements**

- Request for clarification on when the requirement applies.
- [View comments.](#)

### **Certification and Labeling Requirements**

- Length of Certification Term.
- Request for certification exclusivity for a product innovation.
- Applying Certification to retail brands.
- [View comments.](#)

### **Fragrance and Allergen Labeling Requirements**

- Request for clarification on when the requirement applies and what must be included on label.
- [View comments.](#)

## GS-20, Section 1.0: Eligibility Requirements

**Comment:** There is a significant difference between "commercially available" and "pending commercial introduction". Should not this appear in the text body instead of the footnotes only?

**Comment:** Add a clause allowing tradeoffs to the product Green Seal standards if significant human health and environmental impacts are reduced with the new product—for example, “deviations may be accepted upon demonstration of reduced significant human health and environmental impacts.” As drafted, Section 1.0 risks limiting innovation in various product categories, including those for which Green Seal standards already exist. The draft section states that “products for which a Green Seal standard exists shall meet the functional performance, health and environmental, and packaging requirements for that standard.” This requirement is unduly rigid, as technology innovation in a product category may not fit the established framework of product evaluation. For example, an innovative product that reduces significant human health and environmental impacts is environmentally net positive even if it contains a minimal amount of a prohibited component.

**Response:** Green Seal appreciates this feedback.

Products must meet a set of eligibility requirements in order to pursue certification under the Environmental Innovation Standard. As it pertains to the commentary, the product must be commercially available at the time of certification. The product must be in production during the certification process, and a Green Seal auditor will conduct a site visit to review the manufacturing process.

The benefits of this requirement include the following: products that have already been publicly released have finalized and published marketing claims, and in most cases, have undergone an initial period of purchaser and user scrutiny. This provides Green Seal with more data points, more stakeholders for public comment periods, and overall a more solid foundation from which to conduct a product innovation analysis.

Next, if the product is covered under another Green Seal standard, it must meet the requirements of that standard before pursuing certification under Environmental Innovation (GS-20). This alignment between the Innovation requirements and Green Seal’s current Environmental Leadership requirements establishes that Innovation is above and beyond environmental leadership; it is not a different pathway to demonstrating environmental leadership.

In the cases where Green Seal has already certified products to a standard, those manufacturers and products have demonstrated that Green Seal certification is achievable for the upper echelon of products; the requisite (healthier, greener) chemical substitutions, packaging, and manufacturing processes exist on today’s market. As is current Green Seal procedure, if a significant barrier to certification exists as a result of a market-wide dearth in the availability of a raw material, for example, then Green Seal would consider a revision to the Environmental Leadership standard. This approach allows for a high level of technical rigor and the ability to consider exemptions as appropriate.

In summary, in cases where a Green Seal standard already exists for a certain product type, the Environmental Innovation Standard does not provide a pathway for a product-specific or innovation-based exemption or change in the requirements.

**Decision: No modifications were made based on the comment received. However, Section 1.0 has been modified to clarify a full set of eligibility requirements.**

**1.0 Eligibility**

All eligibility requirements shall be met in order for a manufacturer to register an applicant product under this standard.

**Commercially Available.** The product shall be commercially available.

**Comparable Alternatives.** There must be products that provide the same function as the applicant product in order to make comparisons.

**Legal Compliance.** Manufacturer shall not be in violation of any applicable environmental regulations or laws nor any applicable regulations under the authority of the U.S. Federal Trade Commission, U.S. Food and Drug Administration, or the U.S. Environmental Protection Agency (or equivalent if based outside the United States).

**Established Lifecycle Impacts.** Studies<sup>1</sup> on the environmental and/or health impacts of the raw material extraction, manufacturing, transportation, use, and disposal of the applicant product, must be readily available. Green Seal reserves the right to require studies were conducted by independent authorities.

**Compliance with Existing Green Seal Standards.** Products for which a Green Seal standard exists shall be certified under the requirements for that standard before attempting certification under GS-20.

**Exclusions.** This standard does not cover services, processes, proofs of concept, or products for which there is insufficient technical, market, or lifecycle information.

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(no footnote #) environmental impact assessments, occupational or user exposure analyses, lifecycle assessments

## GS-20, Section 2.0: Product Lifecycle Impact Review Requirements

**Comment:** We recommend modifying the language to state. "The applicant shall note which of those lifecycle changes provide the most significant positive AND negative impacts, and shall provide a detailed technical summary that supports those findings".

**Response:** Green Seal appreciates your comment.

The Environmental Innovation Standard defines an eligible innovation as one that reduces significant environmental and human health impacts compared to products of the same function (Section 3.2, Reduces Impacts).

In order to determine that impacts are reduced, the applicant shall conduct a product lifecycle impact review, citing authoritative sources, to estimate the most detrimental (i.e., greatest in negative effect) human health and environmental impacts for each phase of the product category's lifecycle. This review is not specific to the applicant product; rather, it is general to the product category for which the applicant product belongs.

Once typical impacts have been established, the applicant must demonstrate how the innovation reduces significant impacts within the product category (Section 3.2).

Benefits may be considered as part of the requirement in Section 3.1, Product Differentiation.

**Decision:** No modifications were made based on this feedback.

## GS-20, Section 3.0: Environmental Innovation Review Requirements

**Comment:** What is acceptable data to prove the innovation statement (2.3.1) [Ed. Note: this is now Section 3.0]? Can the option 1 (improved design) demonstration part be based on only in-house testing or does it need to rely on 3rd party testing? Do the products comparison needed for the demonstration involve having all competing products undergo the same testing protocols? If so, what is the comparison testing time frame (before/after GS-20 application, after selection of relevant competing products...)? Overall, a dedicated article on the 'evaluation' of the innovation, mirroring part 3.0 (Evaluation of functional performance...), could help clarify this.

**Comment:** Clarifying option 3: unclear. Could it be further detailed, for instance in the footnote?

**Comment:** Clarify the difference between Option 1: Improved Design and Option 2: Improved Function [Ed. Note: this is now Section 3.0]. Provide multiple examples of design vs. function. The difference between Option 1: Improved Design and Option 2: Improved Function is not clear, potentially allowing manufacturers to make a case for either option. This difference is important because, based on draft section 3.3, products pursuing Option 2 must undergo independent third-party testing, but products pursuing Option 1 do not (see additional comment below).

**Comment: in Option 2: Improved Function.** It states...*“Demonstrate an improved functional output of the product that results in a reduction of the significant human health and environmental impacts...”* We suggest that in addition to demonstrating improved functional performance an applicant must also provide details on the innovation as it relates to product design and/or manufacturing process as compared to other products within the same class. In other words, what is it about the product that is unique and allows it to perform significantly better than alternative products?

**Response:** Green Seal appreciates these comments.

In order to comply with the Improved Design option, the applicant shall demonstrate a minimum of 30% reduction of one or 20% in each of two or more significant environmental or human health impacts. In-house data is accepted for this option.

When pursuing the Improved Design option, an applicant must demonstrate that the product functions as marketed (in short, that the product performs effectively and meets user expectations). Showing that the product performs at least as well as one nationally-recognized or market-leading product of the same function establishes this and is detailed in Section 4.0. This requirement is in alignment with the Alternative Performance Requirements that exist in many other Green Seal Environmental Leadership Standards.

Functional performance indicators are established during an applicant's Innovation Criteria development process and are made available for public comment. When available, test methods shall comply with relevant industry standards, American National Standards, ASTM standards, ISO standards, or other equivalent methodology.

Green Seal acknowledges the request for clarity between the Improved Design and Improved Function options. The differentiation depends on how the innovation is measured – either by direct impact reduction or functional performance improvement which results in an impact reduction. Further clarification has been provided within the standard.

Green Seal acknowledges the comment requesting additional information on the product design and manufacturing process compared to other products in its class. This issue is largely addressed in Section 3.1 and 3.3, which detail additional requirements for demonstrated an environmental innovation. Green Seal notes that there are commonly instances in which protecting confidential business information would prohibit this information from being publicly disclosed.

**Decision: The following modifications were made based on this commentary:**

- **Removed Option 3, Alternative Method.**
- **Clarified when the Improved Design and Improved Function options apply.**

- Clarified requirements for product differentiation in Section 3.1 and first-to-market in Section 3.3.
- Implemented related revisions to Section 4.0, Functional Performance ([see discussion](#)).

## GS-20, Section 4.0, Functional Performance and Fitness for Purpose Requirements

**Comment:** Add introductory language requiring the product to meet a similar level of functional performance as similar products in the market. This requirement was made clear in the previous version of the GS- 20 standard. It was an important component of that standard and should be retained here. Given that only one product of a class will receive the distinction, it is important that only high-performing products do so.

**Comment:** Require independent testing to support both Option 1: Improved Design and Option 2: Improved Function. Make the language more prescriptive and precise. Require the use of (a) standardized test methods, where available; and (b) demonstrably unbiased third-party testing facilities (for instance, through an approval or accreditation mechanism).

**Comment:** We recommend adding the following: *“Applicants pursuing Option 2 in Section 2.3.1 are required to use a third party independent laboratory chosen or approved by Green Seal to conduct performance tests.”*

**Response:** Green Seal appreciates these comments.

Green Seal has conducted outreach with independent laboratories and discussed the potential option of third-party independent testing with companies of various sizes interested in using the Improved Function pathway. Green Seal has determined that requiring independent testing is not an effective approach in the majority of cases for this standard. While we are maintaining independent testing as a potential necessity in select cases, Green Seal has determined that, for our analyses, in-house product testing is an acceptable method of data collection.

In many product industries, performance testing has historically been conducted in-house, which has resulted in few existing industry-wide standards for performance testing and minimal/limited/scarcely standardized product testing equipment or procedures. Because these industries have succeeded in in-house testing, there has been no market for independent laboratories to provide these services, or to make major investments in product-testing equipment.

Green Seal considers this option in the Environmental Innovation Standard as an opportunity to build greater transparency and wider understanding of performance testing and performance benchmarks for many industries. As determined by our research, Green Seal anticipates that we can effectively ensure validity by requiring a detailed level of disclosure of the nuances of a test's design, methods, and resulting data.

Therefore, Green Seal has revised the testing criteria to include a high level of transparency within the Improved Function option, i.e., greater detail on the test process, assumptions, reference products and attributes, equipment, personnel, and other necessary detail to allow Green Seal the ability to validate performance claims for all certifications. When necessary to protect Confidential Business Information, Green Seal will collect complete information under a Non-Disclosure Agreement and appropriately limit the information shared publicly.

In addition, Green Seal maintains the discretion to require independent testing in instances where public records from the last five years exist that demonstrate legal misconduct regulated by institutions such as the U.S. Federal Trade Commission, U.S. Food and Drug Administration, or environmental regulations reported by the U.S. Environmental Protection Agency, is not in good standing according to groups such as Better Business Bureau, Consumer Reports, and Truth in Advertising, or in select other cases when appropriate.

Green Seal requires data and test results to validate any performance claim within any of its standards and has a stringent internal protocol for ensuring validity of the test data received. This data is collected, reviewed, and validated during the Certification Process, which will begin once an applicant's Final Criteria Document is

published. In all Green Seal standards, an applicant must submit for evaluation the product performance data and test reports to demonstrate conformance to the standard's performance criteria. All performance test report(s) must include: test method number and description; name of the product(s) tested; date of the test; any sample preparation/dilution; types of test substrates and/or soils if not specified by the method; the results of the test; laboratory name, address, and contact person.

**Decision: A revision was implemented to clarify that the applicant's product must perform at least as well as a nationally recognized or market-leading benchmark product of its type, which must be approved by Green Seal.**

**In addition, the third-party independent testing requirement for applicants pursuing the Improved Function option was removed. Subsequent revisions were made to clarify when independent testing shall be required, and additional testing methodology transparency criteria required for applicants pursuing the innovation option for Improved Function.**

### **EVALUATION OF FUNCTIONAL PERFORMANCE AND FITNESS FOR PURPOSE**

Applicant shall demonstrate that the product functions as well as or better than at least one nationally-recognized or market-leading benchmark product of its type. The benchmark product shall be approved by Green Seal.

**Test Methods.** If available for the product category, test methods shall comply with relevant industry standards, American National Standards, ASTM standards, ISO standards, or other equivalent methodology.

Alternatively, if unavailable, another objective, scientifically-validated method conducted under controlled and reproducible laboratory conditions may be used, subject to Green Seal approval. Test methodology and results must be documented in sufficient detail for this determination to be made.

Applicants pursuing Section 3.0, Option 2 (Improved Function) shall meet the testing methods disclosure requirements in Annex B.

**Independent Testing.** Green Seal reserves the right to require third-party testing by an independent laboratory as needed, and in the following cases:

Public records from the last five years exist that demonstrate legal misconduct regulated by institutions such as the U.S. Federal Trade Commission, U.S. Food and Drug Administration, or environmental regulations reported by the U.S. Environmental Protection Agency, or is not in good standing according to groups such as Better Business Bureau, Consumer Reports, and Truth in Advertising.

## GS-20, Section 5.0: Environmental and Human Health Requirements

**Comment:** Preserve the language stating that products will be evaluated on a case- by-case basis. Strengthen the language to clarify that products will not be disqualified for not meeting one of the requirements. Flexibility, at the discretion of Green Seal, allows for products that have significant reduction in human health and environmental impacts to be considered despite not meeting all standards. The current language in the document (“Green Seal maintains the discretion to determine which requirements must be addressed and reserves the right to add to or disregard any of the requirements below to appropriately evaluate products on a case-by-case basis”) does not specifically state that a product will not be disqualified for not meeting a requirement.

**Comment:** Delineate between requirements applying to liquids and solids. As drafted, it is not clear if all requirements in sections 3.4 through 3.24 apply to components of both liquids and solids. Liquids and solids merit separate consideration, as the features important to each differ. For solids, an assessment may focus on biodegradability and durability; for liquids, the focus may be corrosiveness and exposure. The GS-20 Proposed Minimum Requirements — July 2018 document published by Green Seal effectively separated requirements for solids and liquids.

**Response:** Green Seal appreciates these comments.

Green Seal recognizes the need for additional clarity in this standard, given the wide variety of product types that are eligible to use this program. Green Seal has clarified that three conditions dictate the level of disclosure against which compliance with the environmental and human health requirements will be evaluated. The conditions are:

- Product Form (e.g., Gas, Aerosol, Water-Based Solution, Nonaqueous Liquid or Solution, Paste, Gel, Powder, Solid, Assembly of Parts, Some Combination of the Above, etc.).
- Direct Human *Exposure Pathway* (e.g., Skin Absorption, Inhalation, Ingestion)
- Environmental Releases (e.g., into Air, Water, Wastewater, Land, Landfill)

For example, for a product that is a water-based solution that, through regular handling and use of the product, has the potential for user and/or bystander inhalation, ingestion, or skin absorption and potential releases to soil and water that occur when the product is used as intended, the following assessment model would be applied:

*Due to the product form and high exposure potential to both humans and the environment, the strictest application of these requirements applies, as noted below, and a complete formula disclosure of all ingredients is required.*

In another example, for a product that is an assembly of solid parts, including polypropylene plastic, 300 series stainless steel, brass fittings, nylon braided hose, and EPDM Seals that, through regular handling and use of the product, has very low potential for inhalation, ingestion, skin absorption or environmental releases from product components, the following assessment model would be applied:

*Given the considerations of product form, potential for direct human exposure, and potential for environmental releases, the applicant shall disclose all product parts through a bill of materials including the part name, type (e.g., raw material, assembly, sub-assembly, component), part function, and material type (e.g., steel, aluminum, resin, nylon, etc.)*

If a component fails to meet a requirement within this section, Green Seal would explore the potential for an ingredient exemption based on a market review, the availability of functional substitutes, and the impacts resulting from the presence of the ingredient.

**Decision:** The introduction to Section 5.0 has been modified to outline the framework for determining the level of disclosure necessary in a case-by-case basis, and how requirements apply depending on the product form and potential for direct human exposures or environmental releases.

## GS-20, Section 5.0: Recovered Content Requirements

**Comment:** Strike this requirement. Benchmarking the amount of recycled content to the most environmentally preferable constrains innovation. Products that have significant reduction in human health and environmental impacts outside of recycled content would be disqualified with this requirement.

**Response:** Green Seal appreciates your comment.

Green Seal supports the creation of incentives for greater use of recovered content in products whenever possible. At the same time, Green Seal recognizes that the benefits derived from impact reduction from a potential product innovation may outweigh the relative benefit of using recovered content in that instance. To address this balance, Green Seal has responded by removing the specific requirement for a specific percentage of recovered content in a product and creating a requirement allowing for product-specific requirements to be determined on a case-by-case basis as part of the collaborative Criteria Development process between Green Seal and an applicant.

**Decision:** Green Seal has removed the generic minimum requirement for recovered content consistent with practices within the product category. Green Seal has added requirement 5.21 to allow for product-specific requirements on a case-by-case basis to effectively address significant environmental or human health lifecycle impacts within a product category.

**5.21 Product Specific Requirements.** Green Seal reserves the right to include requirements for applicants in addition to Section 5.1 – 5.20 to effectively address significant environmental or human health lifecycle impacts within a product category.

## GS-20, Section 5.7: Skin and Eye Damage Requirements

**Comment:** We recommend adding the following to the beginning of first sentence: “*when the product is used for its intended purpose*”.

**Response:** Green Seal appreciates your comment.

Each of the requirements within Section 5.0, Environmental and Human Health Requirements is intended to apply when products are used for their intended purpose, through regular handling and use. This comment is consistent with Green Seal’s approach to requirements for direct human exposures and environmental releases.

**Decision:** The introductory text to Section 5.0, Environmental and Human Health Requirements contains the following statement to clarify this comment for all relevant requirements:

**Section 5.0 Environmental and Human Health Requirements**

The following Environmental and Human Health requirements apply when possible exposure pathways exist for the whole product or any product component(s). The requirements are designed to prevent human exposure to and environmental releases of hazardous chemicals during product use and disposal lifecycle stages, through regular handling and use.

## GS-20, Section 7.0: Certification and Labeling Requirements

**Comment:** (1) Green Seal should clarify that it intends to reward true environmental innovation by providing exclusivity during the initial three-year certification period; and (2) Green Seal should clarify that products certified to the GS-20 standard can continue to be certified on a non-exclusive basis after the initial three-year certification period even if a competing product emerges. I believe that both of these issues can be addressed with the following changes to the “Certification Term” proposed for GS-20: Certification Term. The initial Certification Term shall be exclusive for the first 3 years. After the Certification Term, the applicant has the option to undergo Recertification. If recertification is pursued, the product shall be re-evaluated to ensure that the Environmental Innovation (1) continues to result in the same level of reductions of the significant human health and environmental impacts compared to products in the same functional class. If the review determines that the Environmental Innovation no longer result in the reduction of the significant human health and environmental impacts, or that the Environmental Innovation are now implemented elsewhere in the product category, the applicant will have 12 months to pursue Certification under new requirements, or the Green Seal Certification will be withdrawn.

**Comment:** *We recommend increasing the initial certification term to 4 years from 3 years. The cost in time and money to complete the certification process is significant.* Companies may not receive enough value when they weigh the cost associated with gaining a certification against the limited time of 3 years with which to promote the certification.

**Comment:** Are these new GS-20 requirements compatible with manufacturers designing products for the benefit of their customers (for instance leading US retail brands). Could a GS-20 certified product be rebranded for the benefit of such a customer? If so, what would be the limitations applied (packaging, use of certification mark, etc.)

**Response:** Green Seal appreciates the comments related to certification and labeling requirements.

Green Seal acknowledges the resources—in terms of both time and money—required to comply with the Environmental Innovation Standard and the need for the incentive of certification to be worth the investment. In addition, Green Seal acknowledges that the initial proposal created the unintentional consequence of disincentivizing the first mover in a product category if their innovation were replicated, and because the initial certification term was relatively short.

Green Seal’s intention is that this program serves as a catalyst for market transformation through product innovation, and that the certification terms must incentivize activities that promote product innovation that drives environmental good.

Green Seal also intends to continue to use mechanisms such as its private labeling program to accommodate the variety of go-to-market strategies used by manufacturers.

**Decision:** The Certification Term has been increased from 3 years to 4 years.

**Green Seal has clarified in Terms and Conditions that the initial certification term is exclusive, even if a competitor is able to duplicate an innovation. In this case, the applicant would not be eligible for recertification unless they developed a new innovation that met all requirements of the standard.**

**Green Seal continues to allow the use of private labeling within the Environmental Innovation Standard (GS-20).**

## GS-20, Sections 7.5 and 7.6: Fragrance and Allergen Labeling

**Comment:** Fragrance and Allergen Labeling. Alter the requirement such that: (1) solid products with no fragrance added should not have to state on the label that no fragrance has been added; (2) liquid products with no fragrance added should state that no fragrance has been added; and (3) solid or liquid products with fragrance added should state that fragrance has been added.

**Response:** Green Seal appreciates your comment.

Green Seal agrees that the labeling requirements for both fragrances and allergens benefit from additional clarification.

**Decision:** The fragrance and allergen labeling requirements were updated to reflect this commentary. The requirements now read as follows:

**Fragrance Labeling.** The product label and SDS shall declare if a fragrance has been added or if no fragrance has been added. If applicable, liquid products with no fragrance added shall state that no fragrance has been added.

**Note:** Solid products with no fragrance added are exempt from this requirement.

**Allergen Labeling.** The product label and SDS shall indicate any allergen components present in the product at 0.01% or more (e.g., “Contains allergen [allergen’s INCI name]”). Where an INCI name does not exist, alternative nomenclature may be used.