



PRINTRELEASE STANDARD

PRX-STD-V01.8-INTL



TITLE: PrintReleaf Standard

DOCUMENT #: PRX-STD-V01.8-INTL

SCOPE: International

APPROVAL: V01.8-INTL Approved by PrintReleaf, Inc. Board of Directors on February 24, 2017
[The Original PrintReleaf Standard V01.0 INTL was published on November 12, 2012]

CONTACT: Jordan K. Darragh CEO / PrintReleaf, Inc.
www.printreleaf.com

Ronald E. Wald CoC Manager / SGS North America, Inc.
www.sgsgroup.us.com

EMAIL: info@printreleaf.com

© 2012-2017 PrintReleaf, Inc., All rights reserved.

No part of this work covered by the publisher's copyright may be reproduced or copied in any form or by any means (graphic, electronics or mechanical, including photocopying, recording, recording taping, or information retrieval systems) without the written permission of the publisher.

PrintReleaf, Inc. has developed a software platform - PrintReleaf Exchange - which calculates and equates paper consumption to forest impact measured in trees. Customers of paper-based products 'releaf', or replant, their calculated paper consumption by planting the equivalent number of trees across reforestation projects managed by PrintReleaf's network of certified Global Reforestation Partners. Meanwhile, contributions to reforestation projects are subject to increase creating an accelerated rate of reforestation and improving social and ecological systems for the planet.



Overview

This version of the PrintReleaf Standard was developed in 2017 by cooperation of PrintReleaf, Inc. (PrintReleaf), non-profit, non-government reforestation organizations which are partners of PrintReleaf, and SGS North America, Inc.

Use of the PrintReleaf Standard

This standard outlines the minimum organizational requirements by PrintReleaf's network of certified Global Reforestation Partners.

The purpose of this standard is to uphold the integrity of the PrintReleaf Exchange [PRX] and ensure the quantitative volume of trees planted which are determined as PrintReleaf Certified by the PrintReleaf Exchange is truthful and correct while accounting for any reconciliation required due to survival rates which are less than 100%.

The certification requirements for Global Reforestation Partners of PrintReleaf are divided into the following sections:

Section 1 describes the PrintReleaf Exchange scope and calculation methodology

Section 2 describes the general requirements for Global Reforestation Partners to achieve and maintain PrintReleaf Certification

Section 3 describes the definition of the PrintReleaf Certificate Process and eligible use of PrintReleaf marks

Please send any comments about the PrintReleaf Standard to:

PrintReleaf, Inc.
6820 N. Broadway
Unit T
Denver, CO 80221
Email: info@printreleaf.com

Table of Contents

<u>Section 1: Overall Scope and Calculation Methodology</u>	5
1. Scope.....	5
2. Calculation Methodology.....	5
3. Effective Date.....	7
4. References.....	7
5. Terms and Definitions.....	7
<u>Section 2: Global Reforestation Partners – Requirements</u>	9
6. Organizational Requirements.....	9
7. Project Specifications.....	10
<u>Section 3: User Certification and Marks</u>	12
1. Definition of the User Certificate Process.....	12
2. Eligible Allowance of Use.....	12

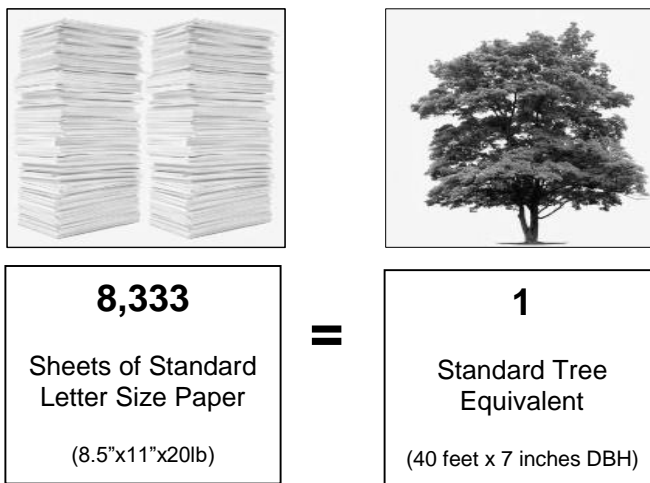
Section 1: Overall Scope and Calculation Methodology

1 Scope

The PrintReleaf Exchange (PRX) is the world's first known technology platform connecting consumers of paper-based products with global reforestation projects to certifiably 'releaf' (reforest) their paper consumption and achieve a 'net-neutral', if not 'net-positive', balance. Customers releaf their consumption by planting new trees – equivalent to their consumption – across projects managed by PrintReleaf's network of certified Global Reforestation Partners. As a result, customers effectively achieve a net-neutral net-positive balance and contributions are accelerated to the reforestation projects that are aggressively replanting what has been lost from the world's original forest canopy over the last century: approximately 80% of the world's old growth forests¹. Customers are certified by the projects within PRX that their consumption will be releafed.

2 PRX Calculation Methodology

PRX employs a calculation methodology to determine the estimated amount of paper content per tree by normalizing both sides of the equation as follows:



PRX collects paper consumption data from OEM print monitoring software or online marketplace systems to determine and normalize the number of sheets of paper. The paper consumption data may contain details specific to paper size or paper stock (weight). When this is the case, PRX will automatically calculate the equivalent number of standard 'letter' size sheets of paper (8.5 x 11 inch size, 20lb stock). Additionally PRX may collect paper consumption data in the form of business cards, hard copy books, or

¹ World Resources Institute



other paper-based products. Regardless of form, PRX will always mathematically normalize consumption to standard 'letter' size paper before equating consumption to trees. When processing paper consumption data, if the paper size and/or stock data is absent, PRX will default the paper size and/or stock calculation to standard 'letter' paper size and/or stock.

Below is an example transaction calculation based on the following paper consumption data:

1,450,000 sheets of tabloid size 11" x 17", 20lb. stock paper

PRX will normalize the consumption data as such:

$$(1,450,000 * 11 * 17) / (8,333 * 8.5 * 11) = 348 \text{ Standard Tree Equivalents}$$

Upon normalizing and representing paper consumption data in sheets of paper, or pages, PRX will equate the data to a number of standard tree equivalents based on an average standard tree size of 40 foot height, 7 inch diameter – softwood or hardwood.

Example Calculation 1:

Faidherbia Albida tree with an average height of 65 feet and average width of 24 inches at maturity

PRX will normalize such species to standard tree equivalents as follows:

$$(\pi * (24/2)^2 * 780) / (\pi * (7/2)^2 * 480) = 19 \text{ Standard Tree Equivalents}$$

To complete the conversion in the above example and equate **1,450,000 sheets of Tabloid size 11" x 17", 20lb. stock paper to an equal number mature Faidherbia Albida trees**, the formula and resulting amount is:

$$((1,450,000 * 11 * 17) / (8,333 * 8.5 * 11)) / ((\pi * (24/2)^2 * 780) / (\pi * (7/2)^2 * 480)) = 18 \text{ Faidherbia Albida trees}$$

Example Calculation 2:

Lagerstroemia indica tree with an average height of 14 feet and average width of 4 inches at maturity

PRX will normalize such species to standard tree equivalents as follows:

$$(\pi * (4/2)^2 * 168) / (\pi * (7/2)^2 * 480) = 0.11 \text{ Standard Tree Equivalents}$$

To complete the conversion in the above example and equate **1,450,000 sheets of Tabloid size 11" x 17", 20lb. stock paper to an equal number mature Lagerstroemia indica trees**, the formula and resulting amount is:

$$((1,450,000 * 11 * 17) / (8,333 * 8.5 * 11)) / ((\pi * (4/2)^2 * 168) / (\pi * (7/2)^2 * 480)) = 3,045 \text{ Lagerstroemia indica trees}$$

3 Effective Date

February 24, 2017

4 References

The following information sources were referenced in formulating the PrintReleaf Standard:

- FSC Standard for Chain of Custody Certification: FSC-STD-40-004 V2-1 EN
- Recycled Papers: The Essential Guide (Cambridge, MA: MIT Press, 1992)
- USDA Forest Service Manual: FSM 2400, Chapter 2470 – Silvicultural Practices

5 Terms and Definitions

For this standard the following terms and definitions apply to this document:

A4: is term used in the paper industry to describe standard letter size paper (see definition below)

Coppice: coppice or coppicing refers to the forest management practice of cutting or trimming back tree species which have regenerating or re-growth properties

GIS: stands for Global Information System which is a system of hardware and software used for storage, retrieval, mapping, and analysis of geographic data

GPS: stands for Global Positioning System which is a satellite-based system for identifying a location on the earth based on latitudinal and longitudinal coordinates

GRP: GRP stands for Global Reforestation Partner – an organization that manages one or more reforestation project locations around the world

Indigenous: originating in and characteristic of a particular region or country; native

Letter (Paper Size): ‘letter’ paper size is an industry standard size with specific length, width, and thickness (weight dimensions measuring as 8.5” inches long (x) 11” inches wide (x) 20lbs. (pounds) thick

Naturalized: to introduce (organisms) into a region and cause them to flourish as if native

Normalize: to convert variable data to a standard set of dimensions, e.g., converting paper size and stock to a consistent standard (A4 standard letter size paper – 8.5” x 11”, 20lb. stock) or to convert tree size to a consistent standard tree equivalent - average height of 40 feet and average diameter of 7 inches

Nursery: refers to a place where trees are grown to a usable or transportable size, e.g., growing a seed into a seedling

OEM: stands for Original Equipment Manufacturer, i.e., the company that originally manufactures a product



Paper Stock: is the term used to describe the thickness of a sheet of paper in pounds (lbs.), e.g., letter size paper is 20lb stock

Net-Neutral: refers to a position of balance when an equal number of standard tree equivalents have been planted equal to a normalized amount of paper consumption

PRX: PRX stands for PrintReleaf Exchange – the software platform developed by PrintReleaf, Inc. connecting electronic OEM print monitoring software or online marketplace systems with eligible global reforestation projects for purposes of ‘releafing’

Releaf: to plant trees equivalent to paper consumption

Silviculture: refers to the care and cultivation of forest trees

Tabloid (Paper Size): ‘tabloid’ paper size is an industry standard size with specific length, width, and thickness (weight dimensions measuring as 17” inches long (x) 11” inches wide (x) 20lbs. (pounds) thick

Verbal Forms of Expression used within the PRX Standard

Should: must or ought, past tense of shall – indicates the most suitable possibility of out of multiple possibilities with regard to requirements within the standard

May: expression of possibility – indicates permission within the limits of the standard

Can: to be able to or know how to – used in statements within the standard to define possibility and capability

Shall: must or obliged to – indicates strict requirements to adhere to within the standard

SECTION 2: Global Reforestation Partners – Requirements

6 Organizational Requirements

6.1 Tenure and Reputation

- 6.1.1 The organization shall have an established history as a legal entity that is equal to or greater than three years or have experience in the region they are reforesting for at least 12 months.
- 6.1.2 The organization shall not have any illegal convictions brought against them in their past history.

6.2 Reforestation Expertise

- 6.2.1 The organization shall have a history of three or more years of dedicated reforestation efforts and expertise.
- 6.2.2 The organization shall have a public facing presence visible via marketing communications (web, print, etc.) which documents their ability to deliver satisfactory reforestation.

6.3 Financial

- 6.3.1 The organization shall have one or more of the following:
 - a. total net assets of \$100,000 or more
 - b. maintain cash balances of \$100,000 or more as of their last audited fiscal year
 - c. total cash revenues of \$200,000 or more per year for the last two fiscal years

6.4 Management

- 6.4.1 The organization shall have a dedicated Field Operations Manager (or similar title) for each of their reforestation projects participating in connection with PrintReleaf. The Field Operations Manager shall maintain a regular presence at the physical site of the project. A regular presence is defined as 60% or more of their working hours.
- 6.4.2 The organization shall have a dedicated Compliance Manager (or similar title) responsible for organizational adherence to the PrintReleaf Standard. This person is responsible for ensuring the Global Reforestation Partner is complying with all of the Organizational Requirements of the PrintReleaf Standard, not just Field Operations.
- 6.4.3 The organization is responsible for building staff awareness subject to the PrintReleaf Standard.

6.5 Training

- 6.5.1 The organization is responsible for training their direct staff across all titles and responsibilities for those individuals responsible for meeting the requirements of the PrintReleaf Standard.
- 6.5.2 The organization is responsible for training their indirect staff as an extension of their field operations for all projects participating in connection with PrintReleaf.

6.6 Records Keeping

- 6.6.1 The organization is responsible for keeping timely records and providing quarterly progress reports upon request for each project participating with PrintReleaf. Requested quarterly progress reports will include updates to inform on 1) sources and uses of funds 2) seedling acquisition and nursery development progress 3) quantitative tree planting by species and 3) a general narrative outlining development status both backward and forward looking.
- 6.6.2 The organization is responsible for keeping timely records and shall keep PrintReleaf informed of any expected changes relative to their ongoing ability to meet the minimum requirements of the PrintReleaf standard.

7 Project Specifications

7.1 Location

- 7.1.1 The organization is responsible for maintaining accurate GPS coordinates within PRX for the location of their reforestation projects.
- 7.1.2 The organization may establish GPS digital boundary perimeters for the future potential of evolving the PrintReleaf audit process to include GPS and/or GIS data to inform reforestation status.
- 7.1.3 The organization shall provide legal evidence of their right to land entry with legal 'in country' authority to plant trees.
- 7.1.4 The organization shall provide legal evidence of their right to access land to plant trees.

7.2 Tree Species

- 7.2.1 The organization is responsible for providing and maintaining the tree species content visible in PRX associated with each eligible reforestation project participating in PRX.
- 7.2.2 The organization is responsible for providing the expected mature height and diameter of the tree species for each eligible reforestation project participating in PRX to allow for Standard Tree Equivalent normalization calculations.
- 7.2.3 If the tree species is not already established in the PRX, then the organization is responsible for notifying PrintReleaf via email to add the tree species to PRX to allow the organization to represent the tree species as part of their project.
- 7.2.4 The organization is responsible for planting the tree species corresponding to each transaction associated with contributions to their projects, i.e., the project cannot substitute tree species because it would risk disqualifying the accuracy of the standard tree equivalent required to meet the paper consumption data for the transaction.
- 7.2.5 The organization maintains that each tree planted will live a mature life of eight years or more before ceasing to survive.
- 7.2.6 The organization is responsible for planting trees specific to the quantities and species prescribed by each transaction derived from PRX.
- 7.2.7 The organization is responsible for tending to commonly accepted silvicultural restoration practices to include planting indigenous species relative to the location of each project.

7.3 Survival Rates & Reconciliation Process

- 7.3.1 Reforestation projects will be audited, at minimum, four years after the first full year of contributions to a specific project. A project may be audited before the four year minimum but no more than four years after the first full year of contributions. Reforestation projects will be audited a final time (minimum second time) at or before eight years after the first full year of contributions to a specific project. As with the first four year window, projects may be audited one or more times between years four and eight.
- 7.3.2 The organization is responsible for upholding the PrintReleaf warranty which guarantees 100% survival.
- 7.3.3 At the four year audit, or prior, should a project auditor determine that survival is less than 100%, then the organization is responsible for planting the required number of trees at their cost as determined by the auditor to meet the minimum standards of the PRX warranty guarantee within one year of being notified by the auditor. If after the eight year audit, should a project auditor determine that survival is still less than 100%, then the organization is responsible for planting the required number of trees at their cost as determined by the auditor to meet the minimum standards of the PrintReleaf warranty guarantee within one year of being notified by the auditor and the project is also responsible for paying for a future audit four years from the date of warranty tree planting beyond the initial eight year track to demonstrate they have met the originally intended 100% survival rate. Failure to meet this requirement may result in decertification from the PrintReleaf.
- 7.3.4 The only factor which would release a project from meeting 100% survival is an 'Act of God', i.e., an event that directly and exclusively results from the occurrence of natural causes that could not have been prevented by the exercise of foresight or caution; an inevitable accident.

7.4 PRX Content

- 7.4.1 The organization is responsible for providing current content, i.e., video, photography, written content, and statistics on a minimum interval of every 365 days or annual calendar year.
- 7.4.2 Specific to statistics, while organizations are subject to the PRX audit process, the organization shall update available forest capacity for each participating project on a minimum interval of every 365 days or annual calendar year.

7.5 Time Requirement

- 7.5.1 Upon receipt of contributed funds from PrintReleaf, the organization shall ensure the corresponding volume of trees and specified tree species be planted in the ground (no longer residing in a nursery) within 365 standard calendar days (one year)
- 7.5.2 Should the organization determine they cannot meet the timing requirement for a specific transaction or set of transactions they shall have the right to re-queue transactions and plant trees at another project location so long as the project is managed by the same parent organization and the correct number of standard tree equivalents are re-queued and planted.

SECTION 3: PrintReleaf User Certificate and Marks

8 Description of PrintReleaf Certificate Process

Users that access PRX to releaf their paper consumption will receive certificates for each transaction that warrant standard tree equivalents will be planted to reforest their consumption. Certificates illustrate the timeline of each transaction from date the transaction occurs, when the tree was planted, and each subsequent audit – at or before the 4 year mark and again at or before the 8 year mark.

9 Eligible Allowance of Use

Authorization to use the PrintReleaf logo requires written consent from PrintReleaf or must be issued to by PrintReleaf or an authorized PrintReleaf partner.