



Tyton BioScience's ANCIENT FOREST FRIENDLY SOURCING POLICY **Effective: March 23, 2018**

Tyton BioSciences is committed to protecting the planet and promoting sustainability with our pulping & textile recycling technology. We are leaders in clean extraction of cellulose from various sources, including post-consumer clothing waste, industrial textile waste, and agricultural residues (residual plant material after harvest). Our proprietary process can provide environmentally-friendly feedstocks used to manufacture man-made fabrics, cellulosic products, paper and packaging. All too often today, wood for these cellulosic products is sourced from ancient and endangered forests. Tyton BioSciences will be a leader in the sustainability movement and support supply chain solutions that promote responsible environmental and ethical practices in manufacturing, and the protection of global ecosystems including ancient and endangered forests.

Demonstrate Corporate Leadership

Tyton BioSciences recognizes that business leadership and long-term success must consider the environment. Consequently, Tyton BioSciences is dedicated to building environmental awareness among customers, employees, suppliers and peers.

Conserve Ancient and Endangered Forests and Ecosystems

Tyton BioSciences provides a clear solution to avoid sourcing textile fibers and pulp/paper inputs from the world's ancient and endangered forests, by producing these valuable raw materials from post-consumer textiles and agricultural fibers. We are providing innovative fiber solutions that can meet marketplace demand while also protecting the world's remaining ancient and endangeredⁱ forests including the Canadian and Russian Boreal Forests; Coastal Temperate Rainforestsⁱⁱ; tropical forests and peat lands of Indonesiaⁱⁱⁱ, the Amazon and West Africa, and the protection of biodiversity and ecosystems contained within these forests.

As the issue of ancient and endangered forest fiber in packaging, paper and cellulosic fabrics gains increasing awareness among global retailers, brands, designers and producers, Tyton BioSciences will work with suppliers, Canopy and businesses that have Canopy policies in place to support the protection of ancient and endangered forests and forward solutions to reduce demand on our forests.

Innovation and Development

Tyton BioSciences produces new fiber and pulp from recycled textile content and agricultural fibers. This provides Tyton BioSciences's customers with a guarantee that the company is not sourcing from controversial sources associated with wood including wood from: illegal logging^{iv}, wood logged in contravention of First Nations/indigenous peoples' rights or in contravention of Free, Prior or Informed Consent (FPIC) or endangered species habitat.

Tyton BioSciences remains open to exploring partnerships to supply pulp and dissolving pulp to companies that do not source from ancient and endangered forests and also wish to utilize feedstocks made from agricultural^v and recycled content.

Advance Joint Conservation Solutions

Tyton BioSciences supports the implementation of visionary agreements in key forest areas, such as the Canadian Boreal Forests^{vi}, Coastal Temperate Rainforests and Indonesia. We look to Canopy to identify opportunities to encourage existing and new initiatives that seek to protect the world's remaining ancient and endangered forests.

Reduce our Carbon Footprint

Tyton BioSciences aims to reduce the company's greenhouse gas emissions and where possible will play a role in mitigating climate change by participating in initiatives that reduce the loss of carbon-rich forests (e.g.



ancient old growth temperate rainforests and forests growing on peat lands) and by encouraging the development of products made with agricultural residue fibers and post-consumer recycled content.

Pollution Prevention

Pulp production is a resource-intensive process that can lead to air and water emissions that impact overall environmental quality. Tyton BioSciences will strive to use best practices with its fiber production, monitor and reduce overall emissions, not use harmful chemicals that cannot be recycled in a closed process, minimize air and water pollution and encourage our supply chain partners to do the same.

Paper and Packaging

Recognizing that avoiding impacts to the world's forests is also tied to Tyton BioSciences's own use of paper and packaging, Tyton BioSciences is committed to improved efficiency in paper use in its own operations, and reduce waste. In line with Tyton BioSciences's own business production, Tyton BioSciences will aim to source agricultural residue and/or 100% post recycled content paper and packaging products.^{vi}

Promote Industry Leadership

Tyton BioSciences recognizes the benefit of creating environmental awareness amongst its team, customers, and partners. The company will work to highlight our environmental efforts on our website, in public communications and social media, and in partnership with stakeholders.

Strong Forest Management Standards

Tyton BioSciences fully supports responsible forest management practices that protect biodiversity and ecosystem integrity, provide long-term social and economic benefits to communities, and facilitate a stable, sustainable supply chain and climate of operational certainty. We encourage our supply chain partners to preference fiber certified to the Forest Stewardship Council (FSC) standard outside of ancient and endangered forests where virgin fiber is needed.



Peter Majeranowski
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Tyton BioSciences LLC

Date: March 23, 2018

ⁱ Ancient and endangered forests are defined as intact forest landscape mosaics, naturally rare forest types, forest types that have been made rare due to human activity, and/or other forests that are ecologically critical for the protection of biological diversity. Ecological components of endangered forests are: Intact forest landscapes; Remnant forests and restoration cores; Landscape connectivity; Rare forest types; Forests of high species richness; Forests containing high concentrations of rare and endangered species; Forests of high endemism; Core habitat for focal species; Forests exhibiting rare ecological and evolutionary phenomena. As a starting point to geographically locate ancient and endangered forests, maps of High Conservation Value Forests (HCVF), as defined by the Forest Stewardship Council (FSC), and of intact forest landscapes (IFL), can be used and paired with maps of other key ecological values like the habitat range of key endangered species and forests containing high concentrations of terrestrial carbon and High Carbon Stocks (HCS). (The Wye River Coalition's Endangered Forests: High Conservation Value Forests Protection – Guidance for Corporate Commitments. This has been reviewed by conservation groups, corporations, and scientists such as Dr. Jim Stritholt, President and Executive Director of the Conservation Biology Institute, and has been adopted by corporations for their forest sourcing policies). Key endangered forests globally are the Canadian and Russian Boreal Forests; Coastal Temperate Rainforests of British Columbia, Alaska and Chile; Tropical forests and peat lands of Indonesia, the Amazon and West Africa. For more information on the definitions of ancient and endangered forests, please go to: <http://canopyplanet.org/solutions/ancient-forest-friendly/the-science-behind-the-ancient-forest-friendly-brand/>

ⁱⁱ Conservation solutions are now finalized in the Great Bear Rainforest, located in coastal temperate rainforests that originally covered 0.2% of the planet, and where now less than 25% of the original forests remain. On February 1st, 2016 the Government of British Columbia, First Nations, environmental organizations and the forest industry announced 38% protection in the Great Bear Rainforest and an ecosystem-based management approach that will see 85% of this region off limits to logging. Provided these agreements hold – sustainable sourcing has been accomplished in this ancient and endangered forest. We encourage ongoing verification of this through renewal of Forest Stewardship Council certification. British Columbia's last stands of coastal temperate rainforests on Vancouver Island are not currently afforded the same future. We look forward to supporting and encouraging protection for landscapes of hope on BC's Vancouver Island.

ⁱⁱⁱ Indonesia experiences the second highest rate of deforestation among tropical countries, with the island of Sumatra standing out due to the intensive forest clearing that has resulted in the conversion of 70% of the island's forested area (FAO Forest Assessment 2010; Margono, B.A. et al. 2012). Asia Pulp & Paper (APP) and Asia Pacific Resources International Ltd. (APRIL) have been criticized by local and international groups for being implicated in deforesting important carbon rich peat lands, destroying the habitat for critically endangered species and traditional lands of indigenous communities,

corruption, and human rights abuses (Eyes on the Forest. 2011. <http://www.eyesontheforest.org/jd/>). Both APP and APRIL have put in place promising forest policies; tracking implementation will be key to understanding these policies offer lasting solutions for Indonesia's rainforests.

¹³ Legal forest management is management that complies with all applicable international, national, and local laws, including environmental, forestry, and civil rights laws and treaties.

¹⁴ Agricultural Residues are residues left over from food production or other processes and using them maximizes the lifecycle of the fiber. Fibers used for pulp and paper products include cereal straws like wheat straw, rice straw, seed flax straw, corn stalks, sorghum stalks, sugar cane bagasse, and rye seed grass straw. Textiles also utilize hemp and flax straw. Where the LCA shows environmental benefits and conversion of forest land to on purpose crops is not an issue, kenaf can also be included here. (Agricultural residues are not from on purpose crops that replace forest stands or food crops.)

¹⁵ Protection of Boreal Forests where the largest remaining tracts of forests are located worldwide is critical and dissolving pulp is becoming an increasing threat. Canada's Boreal Forest contain the largest source of unfrozen freshwater world wide and are part of the world's largest terrestrial carbon sink – equivalent to 26 years worth of global fossil fuel use. Canopy is committed to working collaboratively on the establishment of new protected areas, the protection of endangered species and the implementation of sustainable harvesting in Canada's Boreal Forest.

¹⁶ See Canopy's Paper Steps: <http://canopyplanet.org/resources/the-paper-steps/>