

# Review of Sustainable Packaging Designed to Replace PFAS/PFC in Food Applications



Sustainable  
Fiber Solutions

*The Largest Eco Toll Coater in North America*

Presented To:



DEPARTMENT OF  
**ECOLOGY**  
State of Washington

# Agenda

---

- I. SFS Sustainability Message – Why it's Important to the Consumer
- II. SFS Product Overview
- III. Addressing the Bill
- IV. Next Steps

# I. Sustainability - Why it's Important to the Consumer



Sustainable  
Fiber Solutions

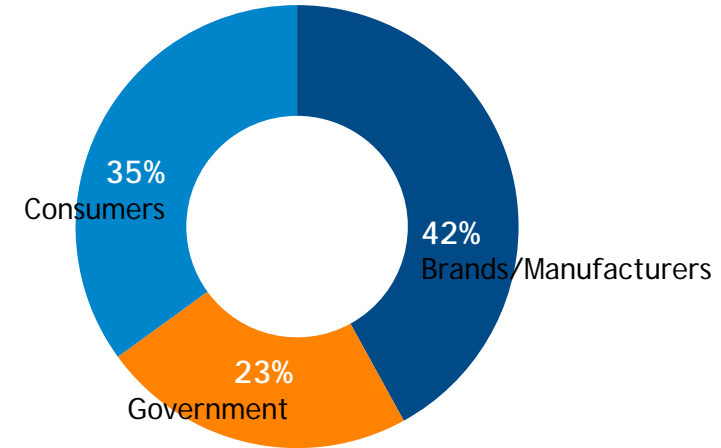
*The Largest Eco Toll Coater in North America*

# Headlines – The Path of Packaging

- “PFASs are man-made and found everywhere.” – Madrid Conference
- **“The Emerging Crisis of PFAS Exposure”** – New York Law Journal
- “Fluorinated Compounds in U.S. Fast Food Packaging” – Environmental Science and Technology Letters
- **A World Without Waste? Absolutely** – Coca Cola WWW Campaign
- **“11 leading companies pledge to recycle 100% packaging”** – ClimateAction
- A new model for corporate governance – Larry Fink’s annual letter to CEOs  
“To prosper over time, every company must not only deliver financial performance, but also show how it makes a positive contribution to society.”

# Who is Responsible for Protecting the Environment?

- **Consumers consider brands to be most responsible for sustainability.**



- 91% of consumers say they expect food and beverage brands to actively help increase the recycling of their packages.

*- Carton Council of North America by  
Research+Data Insights (2500 US Adults - March 2, 2016)*



# Sustainable Packaging is an Important Issue for Consumers

- 43% of Millennials and 37% of Baby Boomers consider sustainability attributes, including certification as deforestation-free or made from recycled materials, when purchasing paper products\*.





# Look who's already focused on clear labeling:



## II. SFS Product Overview



Sustainable  
Fiber Solutions

*The Largest Eco Toll Coater in North America*



# Sustainability

- ▶ PFAS free materials with suitable oil & grease resistance for a multitude of applications
- ▶ Eco SBS is repulpable – certified so at the Western Michigan University (WMU) facilities.
- ▶ Eco SBS is recyclable – also certified as so at WMU
- ▶ Life Cycle Assessment (LCA) – a tool to compare packaging and demonstrate the relative impact across eight environmental categories.

# SFS Line of Sustainable Paper Based Products

- Eco Wrap
- Eco Linerboard
- Eco SBS
  
- Toll Coating Capabilities

# Eco SBS – A Portfolio of Products to Cover Multiple Applications

- Three Current Products
  - Oil & Grease Resistance (OGR) + Moisture Resistance
  - Low Moisture Vapor Transmission Rate (MVTR)
  - Heat Sealable
- Typical Properties – substrate dependent
  - 30 minute Cobb values: <math><10 \text{ gms/m}^2</math>
  - kit values: 10-12 typical
  - MVTR – tropical conditions (90%RH, 100F): <math><120 \text{ gms/m}^2/24\text{hours}</math>
  - Heat sealable, hot melt, and/or cold set glueable

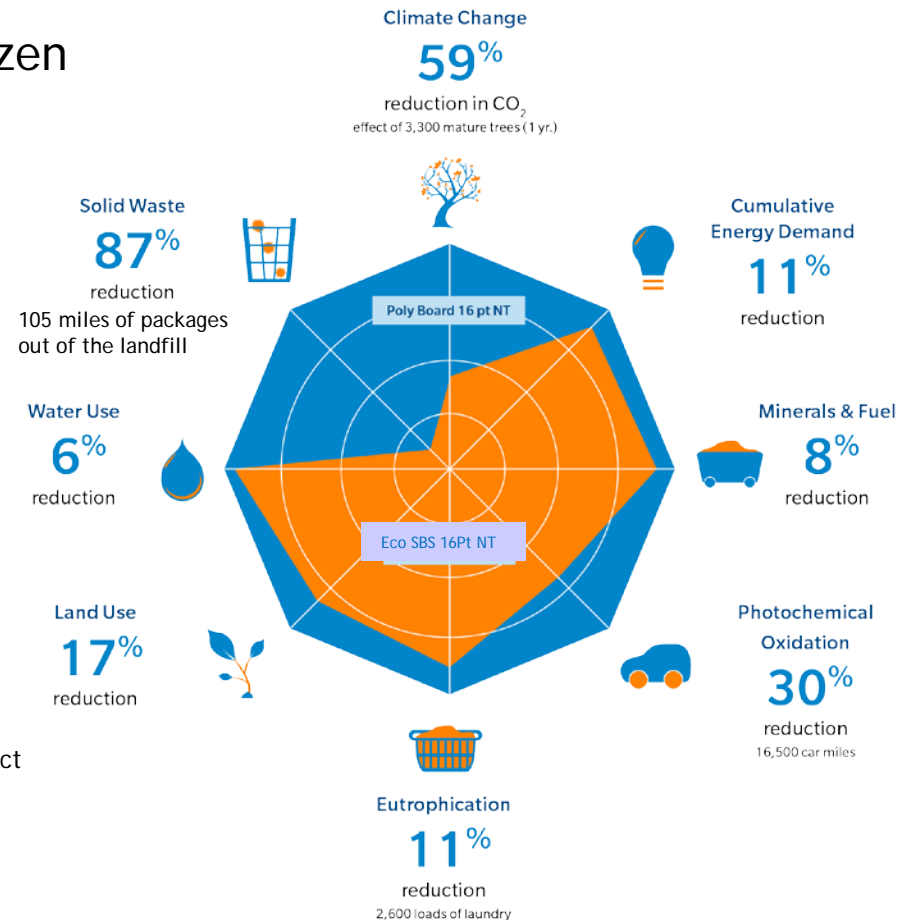
# Target Applications – Eco SBS

- ▶ Clamshells
- ▶ French Fry Scoops
- ▶ Fried Desserts & Wrap Pillow Packs
- ▶ Folding Cartons
- ▶ Bakery Pads
- ▶ Take-out containers (non-liquid)
- ▶ Doughnut Boxes
- ▶ Food Trays
- ▶ Ice Cream Containers
- ▶ Butter Boxes
- ▶ Muffin Sleeves
- ▶ Paper plates

# Life Cycle Assessment Example\*

## Eco SBS® vs. poly-coated SBS

Life cycle impact<sup>1</sup> of frozen food packages<sup>2</sup>



1 PIQET v3.4-16

2 One million units of takeout packaging containers (7" x 2 3/4" x 4 1/4")

\* "Typical" - need to run the model for exact impact

### III. Addressing ENGROSSED SUBSTITUTE HOUSE BILL 2658



Sustainable  
Fiber Solutions

*The Largest Eco Toll Coater in North America*



# Eliminate PFAS Materials with Sustainable Solutions

- Sustainable paper based products that replace poly or PFAS containing materials for many applications.
- Current solutions for a multitude of applications.
- In development for other applications – hot/cold cups – containers that must hold liquids. Starbucks NextGen Cup Challenge
- Leverage technology to meet all of the sustainability requirements of food packaging:
  - No PFAS materials
  - Reusable, recyclable, compostable.

## Section 2.2.c – “...evaluation of chemical hazards, exposure, performance, cost, and availability.”

- FDA approved paperboard and papers.
- Exposure equivalent to non-PFAS, FDA approved paper products.
- Performance equal to or better than PFAS materials
- Equal to slightly higher costs (see tables)
- Available immediately – SBS
- Available with minimal development work - wrap, linerboard, other substrates
- Explore total cost – savings from recycling/composting vs landfills

# Alternative Solution Assessment - Cost

Sandwich Wrap	Increased Cost per Sheet (\$)		
16" x 16"	Increased Cost per Ton of Paper		
	\$100	\$200	\$300
25#	0.00074	0.00147	0.00221
30#	0.00088	0.00177	0.00265
40#	0.00118	0.00236	0.00354
Clamshell	Increased Cost per Package (\$)		
18" x 6"	Increased Cost per Ton of Paper		
	\$100	\$200	\$300
12Pt	0.0018	0.0036	0.0054
14Pt	0.0020	0.0041	0.0061
16Pt	0.0023	0.0046	0.0068
18Pt	0.0025	0.0050	0.0075
20Pt	0.0027	0.0053	0.0080

## V. Next Steps



Sustainable  
Fiber Solutions

The Largest Eco Toll Coater in North America

# Next Steps

- Scope of Work – what additional information is required?
- Implementation Approach
- How can SFS be of assistance?
- Others



Sustainable  
Fiber Solutions

The Largest Eco Toll Coater in North America



# Appendix - Supply Chain and Qualification Processes



Sustainable  
Fiber Solutions

*The Largest Eco Toll Coater in North America*

# Supply Chain Process

- ▶ Paper or paperboard is shipped to the SFS facility in Covington, TN
- ▶ Paper is coated to produce the customer specified product.
- ▶ Order to delivery lead times that are  $1/3$  to  $1/2$  that of poly products designed for the same application.
- ▶ SFS coordinates all production related activities.

# Qualification Process

- ▶ Poly is a “known quantity” having been used in packaging applications for decades.
- ▶ Poly is over engineered for many applications.
- ▶ Understanding the true requirements of an application is the challenge.
- ▶ Work with the customer to fully understand each step of the supply chain.
- ▶ Perform the appropriate testing to confirm full fit-for-use performance.