

# 3 RESEARCH MEMOS

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# POLYSTYRENE RESEARCH

CORPORATION COUNSEL NOTED CONCERNS ABOUT THE POTENTIAL ISSUES WITH THE COMMERCE CLAUSE RELATIVE TO REQUIRING OUTSIDE PRE-PACKAGED FOOD VENDORS TO COMPLY WITH BILL 127.

ACCORDINGLY, CORPORATION COUNSEL STATED THEIR OFFICE NEEDED:

“LEGITIMATE AND RELIABLE STATEMENTS SUPPORTING THE DETERMINATION THAT THE ORDINANCE FURTHERS A “LEGITIMATE LOCAL PUBLIC INTEREST.”

Memo 1 dated May 1, 2017

THIS PARTICULAR MEMO SET OUT TO FIND “LEGITIMATE  
RELIABLE” STATEMENTS AS REQUESTED BY THE  
CORPORATION COUNSEL.

INCLUDED IN THIS PRESENTATION IS HIGHLIGHTS OF THE  
RESEARCH IN THE MEMO

# EPA

WHEN ASKED TO PROVIDE A POSITION ON THE USE OF POLYSTYRENE FOOD CONTAINERS?

TIMONIE HOOD, BUILDING WASTE AND GREEN BUILDING COORDINATOR FOR SOUTHWEST REGION STATED:

“EPA DOES NOT HAVE A SPECIFIC POLICY STATEMENT ON POLYSTYRENE FOOD CONTAINERS; HOWEVER, THE EPA HAS SUPPORTED PROJECTS TO REDUCE DISPOSABLE PLASTIC FOOD PACKAGING,”

# EPA

- STUDIES REFERENCED INCLUDE:
- EPA study entitled “Assessing and Monitoring Floatable Debris,” August 2002”
- “It has now become evident, however, that such materials can also have serious impacts on human health, wildlife, the aquatic environment, and the economy, and therefore the problem of floatable debris should be addressed.”
- CITY AND COUNTY OF SAN FRANCISCO REFERENCED IN THEIR FINDINGS FOR THE POLYSTYRENE ORDINANCE

# EPA

ANOTHER STUDY THAT WAS REFERENCED WAS:

“State of the Science White Paper: A Summary of the Effects of Plastic Pollution on Aquatic Life and Aquatic-Dependent Wildlife”

THIS STUDY CONCLUDED:

- “Plastics in aquatic systems contain chemicals originating from the plastic material, chemicals added during the manufacturing process.”
- “the potential toxicological impacts of these chemicals associated with plastic once ingested by aquatic organisms and aquatic-dependent wildlife is an area of concern.”

# EPA

ALSO PROVIDED A STUDY CALLED:

“U.S. EPA BOARD ANALYSIS OF THE FY82 NATIONAL HUMAN ADIPOSE TISSUE SURVEY(1986)”

THE STUDY OBSERVED:

“several compounds, including styrene, the xylene isomers, 1.4-dichlorobenzene, and ethylphenol, were detected in all composite samples.”

Hence a commonly quoted statement:

“100% of Americans have styrene in the bodies.”

However, the study did not address the cause of exposure.

# FDA

- REFERENCES:
- Code of Federal Regulations, Title 21, Food and Drugs, Chapter 1 Food and Drug Administration, Department of Health and Human Services
- Section 177.1640 Polystyrene and rubber-modified polystyrene.
- “Polystyrene and rubber-modified polystyrene identified in this section may be safely used as components of articles intended for use in contact with food, subject to the provisions of this section.”



# FDA

- Catherine McDermott, FDA/Office of Foods & Veterinary Medicine, provided the following:
- “In evaluating the safety of an intended food contact use of a substance, FDA reviews the toxicology information submitted by the proponent of the use. This includes toxicological studies on any chemicals that might migrate into food as a result of the intended use of a food contact substance.”

# FDA

- Ms. McDermott also stated:
- “In addition to the toxicological information provided by industry when submitting their intended use for approval, FDA also reviews applicable publicly available information on substances that migrate to food as that information becomes available.”

# Other studies include...

Centers for Disease Control and  
Prevention and the Agency for Toxic Substances and Diseases  
Registry

“Toxicology Profile for Styrene,” November 2010; and

World Health Organization, International Agency for Research on  
Cancer

“Styrene 1, Exposure Data”

Centers for Disease Control and  
Prevention and the Agency for Toxic Substances and Diseases  
Registry

- Observed the following:
- “most styrene associated with food is the result of packaging of the food material in polystyrene containers.”
- “smokers and those eating a high proportion of foods packaged in polystyrene, may have above average exposure to styrene.”

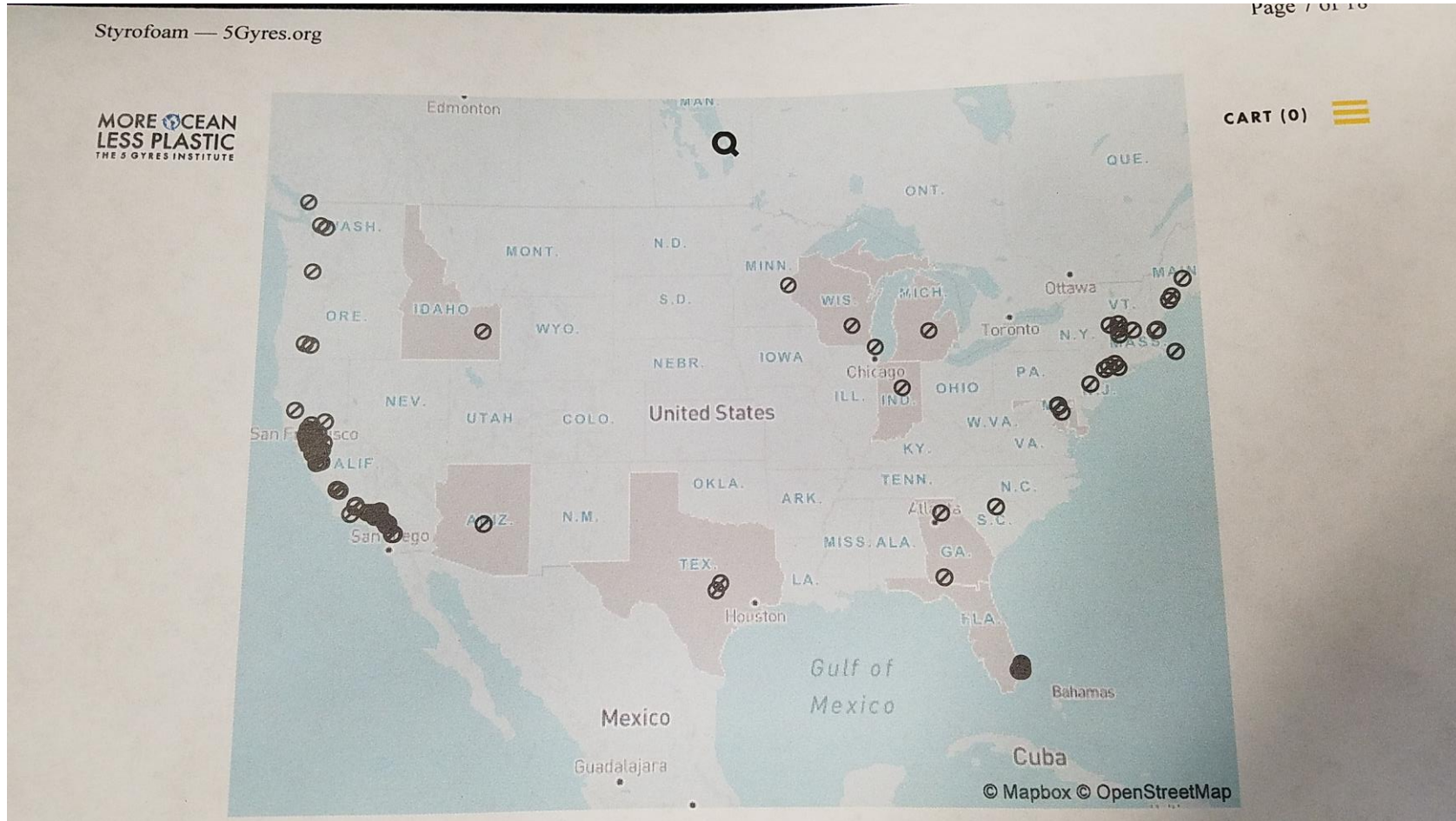
# World Health Organization, International Agency for Research on Cancer

- Polystyrene and its copolymers have been used widely as food packaging materials, and residual styrene monomer can migrate into food from such packaging (WHO, 1983).”
- “Exposure to the general population occurs at levels of micro-grams per day due mainly to inhalation of ambient air and cigarette smoke and intake of food that has been in contact with styrene-containing polymers.”
- Draw your conclusions....

## SECOND MEMO, DATED MAY 4, 2017, (PAF 17-100B)

This memo is an attempt to see what other jurisdictions have adopted relative to polystyrene bans.

# Cities and Counties with Polystyrene Food Ban



# Surfrider.org and 5Gyres Institute

- Notes 100's of polystyrene bans across the United States
- Culver City is the 100<sup>th</sup> city or county banning polystyrene food containers in California
- San Francisco is considered the most extensive.
- Including not only polystyrene foam food containers but also packaging materials, coolers, ice chests, pool toys and dock floats, moorings and buoys



# City and County of San Francisco

- Singled out because:
  - Even though it's the most extensive, its focus is only polystyrene foam.
  - The ordinance does not apply to food pre-packaged outside the city; and
  - The only reference to food pre-packaged outside the city is to encourage outside businesses to use food service ware that is compostable or recyclable and is not made, in whole or in part, from polystyrene.

# Foam and outside containers

- Most jurisdictions focus their ban on polystyrene foam.
- They do not restrict polystyrene oriented that is made of a plastic polymer (clear or colored polystyrene).
- Jurisdictions typically focus the intent of the ordinance on their own community.

# MEMO 3, MAY 4, 2017, PAF 17-100C

- This memo focuses on the definition of polystyrene.
- TASK FORCE ON POLYSTYRENE DISPOSABLE FOOD SERVICE CONTAINERS, stated:
- “Every type of foam and non-foam polystyrene is subject to the ordinance.”
- “Consider whether to limit the restriction to only cups and clamshell type disposable food service containers.”
- “Consider whether to limit the restriction on polystyrene to only polystyrene foam.”

# Memo 3, Definitions

- Correlation between Bill 127 definition and that of existing laws, in San Jose, Montgomery County, Alameda County and San Francisco.
- In the memo the “red” highlighted language mirrors or is exact language used in our definition of “Polystyrene.”
- You will note a significant amount of the language in each definition is similar to Maui’s.
- However.....

# Memo 3, Definitions

- All of the 4 definitions used in this example are from jurisdictions that limit only polystyrene foam containers.
- Many of these jurisdictions were concerned with polystyrene foam breaking apart and becoming a health and safety hazard.
- There are a number of these communities that can recycle the polystyrene oriented, clear or colored containers.
- Could not locate an existing ordinance banning more than foam.

# Memo 3, Definitions

- Where Maui's polystyrene definition differs:
- Maui-
- “Polystyrene” means a thermoplastic petrochemical material utilizing a styrene monomer, **including all polystyrene**, meaning any styrene or **vinyl chloride polymer** which is blown into a foam-like material. Polystyrene may be processed by any number of techniques, including fusion of polymer spheres (expandable bead polystyrene), injection molding, foam molding, and extrusion-blow molding (extruded foam polystyrene).”