
SENATE COMMITTEE ON ENVIRONMENTAL QUALITY

Senator Wieckowski, Chair

2015 - 2016 Regular

Bill No: SB 47
Author: Hill
Version: 12/17/2014
Urgency: No
Consultant: Rachel Machi Wagoner
Hearing Date: 3/18/2015
Fiscal: Yes

SUBJECT: Environmental health: synthetic turf.

ANALYSIS:

Existing law: under the California Tire Recycling Act of 1989, requires the Department of Resources, Recycling and Recovery (CalRecycle) to initiate a tire recycling program that promotes and develops alternatives to the landfill disposal of used tires. A fee is assessed on the sale of new tires, and collected revenue is deposited quarterly into the California Tire Recycling Management Fund. CalRecycle allocates funds annually based on availability and changing program needs.

This bill:

1. Requires the Office of Environmental Health Hazard Assessment (OEHHA), by July 1, 2017, in consultation with CalRecycle, the State Department of Public Health (DPH), and the Department of Toxic Substances Control (DTSC), to prepare and provide to the Legislature and post on the office's Internet Web site a study analyzing synthetic turf, as defined, for potential adverse health impacts. The bill would require the study to include certain information, including a hazard analysis of individual, synergistic, and cumulative exposures to the chemicals that may be found in synthetic turf, as provided.
2. Prohibits a public or private school or local government, until January 1, 2018, from installing, or contracting for the installation of, a new field or playground surface made from synthetic turf within the boundaries of a public or private school or public recreational park, as provided.

Background

1. What is Synthetic Turf?

Synthetic turf is the next generation of artificial turf. It more closely resembles natural turf and is much different than the 'AstroTurf' of old. Most synthetic turf

installed today is a layered system that includes a drainage layer, a backing system, and ‘grass blades’ that are in filled to resemble natural turf. The filler is a soil-like substance created with sand and/or granulated recycled tire rubber (crumb rubber) or other materials that provide the necessary stability, uniformity, and resiliency. The popularity of synthetic turf results from the benefits of providing a consistent year-round, all-weather playing surface built to withstand extended use without downtime for poor weather. It is low maintenance; it does not have to be mowed; nor does it need water for irrigation, pesticides or fertilizers.

2. California Tire Recycling Act of 1989.

The California Tire Recycling Act was originally enacted to provide a solution to the ever growing problem of mountains of stockpiled waste tires. The primary objective of the act is to provide alternatives to landfill disposal of waste tires.

According to CalRecycle, California today is faced with the challenge of diverting or safely managing more than 42 million reusable and waste tires generated annually in the state. CalRecycle staff estimates that of the approximately 42 million reusable and waste tires generated in 2013, approximately 36.7 million of the tires (87.3 percent) were diverted through various alternatives, including reuse, retreading, and combustion.

CalRecycle has lead responsibility to stimulate the diversion of reusable and waste tires and to promote alternatives to landfill disposal of this resource. CalRecycle has developed and funded a variety of waste tire management activities to achieve these objectives, including:

- Business development assistance to California enterprises.
- Research to expand the uses and recyclability of tires.
- Assistance to local governments to manage waste tires.
- Regulation of waste tire facilities and waste tire haulers, to help ensure the protection of public health, safety and the environment.
- Public education.

Currently, the recycling markets in California do not consume all of the waste tires generated. Waste tires need to be stored safely until sufficient markets are in place to increase the consumption of waste tires. CalRecycle provides the proper waste tire management framework by enforcing waste tire facility and waste tire hauler regulations. As the use of tires as feedstock material in commercial

applications increases, illegal stockpiling and the need for permitted storage will decrease or cease to exist.

The Waste Tire Enforcement Program's primary goal is to manage and mitigate the impacts of tires on public health and safety, and the environment, by ensuring that tire businesses comply with tire permitting, storage, and movement laws, regulations, and state minimum standards. Compliance is monitored through integrated and consistent permitting, inspection, and enforcement efforts. CalRecycle works closely with state and local governments to: Inspect tire businesses for compliance with permitting, storage, and movement laws, regulations, and state minimum standards; educate tire businesses and property owners about tire laws and regulations; look for illegal dumping, storage, and movement of tires; and, take enforcement actions as needed to correct violations.

Comments

1. Purpose of Bill.

The author asks, "Why are so many schools and local governments using turf fields made from waste tires when health concerns are increasing and alternative turf field materials are 30-40 degrees cooler than waste tire fields? Why is California subsidizing waste tire fields and playgrounds given the health concerns?"

The author believes that we have a responsibility to ensure that our children are not being harmed by materials used to make their fields and playground surfaces. SB 47 requires OEHHA, in consultation with CalRecycle, DPH, and DTSC, to submit a report to the Legislature by July 1, 2017, analyzing turf containing waste tires for potential adverse health impacts.

2. Concerns raised over the use of crumb rubber.

With significant water savings and low maintenance requirements, artificial turf is increasingly promoted as a replacement for natural grass.

However, questions remain as to whether it is an environmentally friendly alternative to natural grass. The major concerns stem from the infill material that is typically derived from scrap tires. Tire rubber crumb contains a range of organic contaminants and heavy metals that can volatilize into the air and/or leach into the percolating rainwater, thereby posing a risk to and in the environment. Questions also arise as to the direct exposure risks associated with contact with the crumb rubber and whether ingestion, inhalation, eye or skin/abrasion contact with the rubber present health risks.

In 2010, then-Attorney General Jerry Brown settled a case with the nation's largest makers and installers of turf fields requiring them to reduce levels of lead in their products. The settlement required companies to reformulate their products to reduce lead levels to negligible amounts and established the nation's first enforceable standards applicable to lead in artificial turf. Brown brought the case in 2008 against these companies for excessive lead levels after testing by the Center for Environmental Health found high concentrations of lead in their products. Brown's office confirmed these findings in independent tests.

In recent years there has been an increased concern about the health impacts on frequent users of turf fields made from waste tires.

In 2014, NBC's story, "How Safe Is the Artificial Turf Your Child Plays On?" reported on a soccer coach who had noticed an influx of young soccer players (goalies) who had been playing more extensively on synthetic turf fields and had been diagnosed with cancer. The report goes on to state that no research has linked cancer to artificial turf but questions whether the product had been sufficiently tested to determine if there was a link.

Over the last decade there have been upward of 50 studies conducted nationally and internationally by academic institutions and federal and state governments examining the potential adverse health impacts associated with synthetic turf, synthetic turf using crumb rubber, and recycled rubber playground materials. These studies range in scope from inhalation risks to bacterial infections associated with exposure to staphylococcus aureus on synthetic fields. Some of the studies ask broad questions about health impacts, however examine a small sample size of fields, examine only one chemical, look at a limited number of exposure pathways, or do not look at the specific risks to children.

SB 1277 (Maldonado), Chapter 398, Statutes of 2008, required the California Integrated Waste Management Board (now CalRecycle), in consultation with the OEHHA and DPH, to prepare and make available a study comparing the effects of synthetic turf and natural turf on the environment and public health with respect to four subjects: skin abrasions, bacteria harbored by the turf, inhalable particulate matter, and volatile organic compounds. Based on OEHHA's analysis of the data collected for this study, OEHHA "concluded these fields do not pose a serious public health concern, with the possible exception of an increased skin abrasion rate on artificial turf relative to natural turf."

In 2009, the United States Environmental Protection Agency (US EPA) released results of a limited fields-monitoring study of artificial turf playing fields and playgrounds constructed with recycled tire material or crumb rubber. The study was intended to gain experience conducting field monitoring of recreational surfaces that contain crumb rubber. US EPA states, “The limited data [US] EPA collected during this study, which do not point to a concern, represent an important addition to the information gathered by various government agencies.” However, given the limited nature of the study (limited number of constituents monitored, sample sites, and samples taken at each site) and wide diversity of tire crumb material, it is not possible without additional data, to extend the results beyond the four study sites to reach more comprehensive conclusions.

The Centers for Disease Control and Prevention (CDC) states that information provided by the New Jersey Department of Health and Senior Services (NJDHSS) to CDC and the Agency for Toxic Substances and Disease Registry (ATSDR) indicates that some of the fields tested by NJDHSS were found to have elevated lead in either dust and/or turf fiber samples that were weathered and visibly dusty. Fields that are old, that are used frequently, and that are exposed to the weather break down into dust as the turf fibers are worn or demonstrate progressive signs of weathering, including fibers that are abraded, faded or broken.

Both CDC and the Consumer Product Safety Commission (CPSC) advise that children always wash their hands after playing on this material.

While, to date, there have been an extensive number of studies done, both the US EPA and CPSC have advised that the studies are not extensive enough to provide adequate data to be conclusive on the potential adverse health impacts and conclude that further study is necessary.

3. Should California Subsidize the Development of Recycled Markets Without Requiring Safety Testing?

One of the primary directives of the California Used Tire Act is to assist in developing new markets for recycled used tires.

To date, CalRecycle has successfully built a program that is diverting nearly 90% of California’s waste tires. This provides an important service to the state. Without this program millions of waste tires would be stockpiled or filling California landfills.

However, not every product made from recycled waste may be appropriate.

The harmful constituents that are found in tires are a known and accepted environmental risk associated with the tire for that tire's original purpose -- on a vehicle. The potential health risks associated with potential uses of that tire once it is recycled (such as for playgrounds and fields) were not considered or examined in the design and approved original use of the tire.

When CalRecycle is developing new markets and subsidizing the use of recycled products, should the department require health and safety analysis be done prior to using state funds to subsidize those markets?

Tire recycling and use of crumb rubber in synthetic fields has been encouraged by the State of California for many years. A moratorium on use in California would negatively impact the sale and manufacturer of synthetic turf in California and may place an unfair burden on the businesses that were specifically built for this purpose and encouraged by the state to do so.

For SB 47, since this product is already a developed market in California, removing the moratorium from the bill would prevent California businesses from having to cease operations until the study is complete.

However, because the state does not have the comprehensive data to assert that this product is safe for use by children, the state should not be encouraging the use of the product through subsidies until that study is complete. The bill should be amended to discontinue state subsidies of the product until that comprehensive study is completed and shows that the product is safe for use by children.

4. Clarifying Amendments.

The bill needs several clarifying amendments to the study to make it clear to OEHHA what type of analysis will be done and under what conditions.

Related/Prior Legislation

SB 1277 (Maldonado), Chapter 398, Statutes of 2008, required the California Integrated Waste Management Board (now CalRecycle), in consultation with OEHHA and DPH, to prepare and make available a study comparing the effects of synthetic turf and natural turf on the environment and public health.

SOURCE: Senator Hill

SUPPORT:

Action for Nature
Brock International, LLC
California Native Plant Society
California Safe Schools
Center for Environmental Health
Clean Water Action
Coalition for San Francisco Neighborhoods
Coalition to Save Ocean Beach / Friends of Sutro Heights Park
D5 Action
Environment and Human Health, Inc.
Environment California
GeoTurf/Limonta Sport USA
Golden Gate Audubon Society
Golden Gate Park Preservation Alliance
Haight Ashbury Neighborhood Council
Healthy Soccer SF
Hellas Sports Construction
Public Employees for Environmental Responsibility
San Francisco Tomorrow
Senator Quentin L. Kopp
Sierra Club California
SF Ocean Edge
SFPARKS
SPEAK Sunset Parkside Education and Action Committee
SynTurf.org
The Turf Authority
Turf Grass Forum
77 individuals

OPPOSITION:

American Sports Builders Association (ASBA)
California Association of School Business Officials
Californians Against Waste
CRM Company, Inc.
Liberty Tire Recycling
Los Angeles County Solid Waste Management Committee/Integrated Waste
Management Task Force
Synthetic Turf Council
West Coast Rubber Recycling, Inc.

ARGUMENTS IN SUPPORT: Public Employees for Environmental Responsibility (PEER) state that “every year millions of pounds of tires are recycled

into ground rubber, sometimes called “tire crumb”) and placed onto playgrounds and sports fields. PEER represents public health professionals who are concerned that there has been no adequate risk assessment on the potential toxicity to children from direct contact with tire ingredients, such as arsenic, cadmium, chromium, mercury and a number of dangerous hydrocarbons.

Neither the US EPA nor the CPSC has ever fully investigated its public health and environmental risks. In fact, US EPA scientific reviews or available literature have concluded that the agency lacks the information required to adequately assess the extent of childhood exposure from ingestion or inhalation of an array of toxic chemicals found within tires.”

ARGUMENTS IN OPPOSITION: Californians Against Waste (CAW) strongly opposes SB 47, stating that while CAW “often urges the application of the Precautionary Principle in response to conflicting data,” “in this instance, [CAW] is not aware of any conflicting data that indicates a health risk from the use of recycled crumb rubber. In fact, the use of this product has been studied more extensively than almost any other recycled product that is sold. There have been more than 50 technical studies and several extensive literature reviews analyzing the health concerns of crumb rubber use (including cancer risk). To the best of our [CAW’s] knowledge, none have found an elevated cancer risk.”

Rubber recycling and synthetic turf manufacturers in opposition state that they fear that the moratorium in SB 47 puts at risk dozens of California businesses and jobs that have invested in building a tire recycling infrastructure.

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