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## SENATE COMMITTEE ON EDUCATION

Senator Carol Liu, Chair  
2015 - 2016 Regular

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**Bill No:** SB 47  
**Author:** Hill  
**Version:** January 4, 2016  
**Urgency:** No  
**Consultant:** Lynn Lorber  
**Hearing Date:** January 13, 2016  
**Fiscal:** No

**Subject:** Environmental health: artificial turf

**NOTE:** This bill was previously heard by the Senate Environmental Quality Committee and has since been amended. This is the first time the bill is being heard by this Committee. (See comment #2)

### SUMMARY

This bill requires a public or private school, or local government, to take specified steps prior to installing artificial turf that contains crumb rubber.

### BACKGROUND

Existing law, the California Tire Recycling Act of 1989, requires the Department of Resources, Recycling and Recovery (CalRecycle) to administer a tire recycling program that promotes and develops alternatives to the disposal of used tires in landfills. A fee is assessed on the sale of new tires, and the revenue is deposited quarterly into the California Tire Recycling Management Fund. The tire recycling program includes, among other things:

- 1) The awarding of grants, subsidies, rebates, and loans to businesses or other enterprises, and public entities, involved in activities and applications that result in reduced landfill disposal of used whole tires and reduced illegal disposal or stockpiling of used whole tires.
- 2) The awarding of grants to cities, counties, and other local governmental agencies for the funding of public works projects that utilize rubberized pavement. (Public Resources Code § 42870, et seq.)

### ANALYSIS

This bill requires a public or private school, or local government, to take specified steps prior to installing artificial turf that contains crumb rubber. Specifically, this bill:

- 1) Requires a public or private school, or local government, to do all of the following prior to installing, contracting for the installation of, or soliciting bids for a new artificial turf field containing crumb rubber infill within the boundaries of the school or public recreational park:

- a) Gather information from companies that offer artificial turf products that do not use crumb rubber infill. This bill specifies that information must include, but not be limited to, information obtained from discussions with at least one company that offers artificial turf products that do not contain crumb rubber infill.
  - b) Consider the use of material that does not contain crumb rubber infill in its artificial turf field project based on the information gathered.
  - c) Hold a public meeting that includes as a properly noticed agenda item a discussion of the installation of crumb rubber infill, with an opportunity for public comment. This bill requires members of the public be allowed to comment consistent with the established comment procedure for the meeting.
- 2) Defines “crumb rubber” as any composition material that contains recycled crumb rubber from waste tires and is used to cover or surface an artificial turf field.
  - 3) Provides that this bill does not apply to any installation of an artificial turf field containing crumb rubber infill that began, or any contract for such an installation entered into, prior to January 1, 2017.
  - 4) Provides that this bill does not apply to any maintenance that is needed on an artificial turf field containing crumb rubber infill in existence as of January 1, 2017, or that is installed prior to January 1, 2017.
  - 5) Sunsets on January 1, 2020.
  - 6) States legislative findings and declarations relative to existing research and remaining questions regarding the health effects of artificial turf with crumb rubber.

## STAFF COMMENTS

- 1) ***Need for the bill.*** According to the author, “Thousands of schools, parks and local governments have installed artificial turf fields throughout the state. It has allowed them to use fields year round, save water, and save money, among other benefits. But not all artificial turf fields are made from the same materials. While most artificial turf fields use less expensive crumb rubber infill from ground-up used car and truck tires, many companies now offer artificial turf infill alternatives made from coconut fibers, rice husks, cork, sand, or virgin crumb rubber. The average artificial turf field uses approximately 20,000 ground-up used tires (that contain many chemicals) to make crumb rubber infill.”
- 2) ***History of the bill.*** This bill was heard by the Senate Environmental Quality Committee on March 18, 2015. At that time, the bill prohibited schools and local governments from installing artificial turf and required a study analyzing synthetic turf for potential adverse health impacts. The bill was subsequently held in the Senate Appropriations Committee and has since been amended to require

schools and local governments to take specified steps prior to installing artificial turf and to delete reference to the study (thereby removing the fiscal impact). The bill was recently referred to this Committee.

- 3) **Safety of crumb rubber.** Most synthetic turf is a layered system that includes a drainage layer, a backing system, and “grass blades” that are infilled 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.

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 asked broad questions about health impacts yet examined a small sample size of fields, examined only one chemical, looked at a limited number of exposure pathways, or did not look at the specific risks to children.

<http://www.epa.gov/chemical-research/tire-crumb-and-synthetic-turf-field-literature-and-report-list-nov-2015>

SB 1277 (Maldonado, Chapter 398, Statutes of 2008) required the California Integrated Waste Management Board (now CalRecycle), in consultation with the Office of Environmental Health Hazard Assessment (OEHHA) (a division within the California Environmental Protection Agency) and the Department of Public Health, to complete 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.”

<http://www.calrecycle.ca.gov/publications/Documents/Tires%5C2010009.pdf>

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.

[http://cfpub.epa.gov/si/si\\_public\\_record\\_report.cfm?dirEntryId=215113&simpleSearch=1&searchAll=EPA%2F600%2FR-09%2F135](http://cfpub.epa.gov/si/si_public_record_report.cfm?dirEntryId=215113&simpleSearch=1&searchAll=EPA%2F600%2FR-09%2F135)

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 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. <http://www.cdc.gov/nceh/lead/tips/artificialturf.htm>

On October 23, 2015, the United States House of Representatives Committee on Energy and Commerce sent several questions related to the safety of crumb rubber to the United States Environmental Protection Agency (US EPA). Among other things, the inquiry asked if the US EPA had conducted additional testing to fully assess the hazards and exposures associated with crumb rubber, as their 2009 study indicated was necessary; if the US EPA had interactions with other federal agencies, such as the Centers for Disease Control and Prevention and the Consumer Product Safety Commission; and, if the US EPA is aware and has access to other scientific studies on the hazards and/or exposures associated with crumb rubber.

<http://energycommerce.house.gov/sites/republicans.energycommerce.house.gov/files/letters/20151023EPA.pdf>

The US EPA responded, “We have information from a number of limited studies and they do not show an elevated health risk from playing on fields with synthetic turf containing tire crumb. However, these studies have various limitations and do not comprehensively address the concerns about children’s health risks from exposure to tire crumb.”

<http://energycommerce.house.gov/sites/republicans.energycommerce.house.gov/files/114/Letters/20151221EPA.pdf>

- 4) **Pending study.** In June 2015, CalRecycle and California Environmental Protection Agency’s Office of Environmental Health Hazard Assessment agreed to conduct a series of studies to understand how chemicals may be released from recycled tire rubber under various environmental conditions, human exposures, and the associated chemical hazards and risks to humans. The prior version of this bill required this study to be completed, but that provision has since been amended out of the bill.

As amended this bill requires public and private schools, and local governments, to consider options to crumb rubber but no longer prohibits the installation of such materials.

In 2008, the Los Angeles Unified School District (LAUSD) tested synthetic turf fibers and rubber pellets (crumb rubber) at nine schools. The LAUSD found the turf fibers to be absent of lead, but found small traces of lead in the rubber pellets. The LAUSD stated that “there is no evidence of harm to any children at our schools”; however, “in an abundance of caution” and “as a precautionary measure,” the LAUSD removed the rubber pellets from 54 early education centers.

Should the Legislature statutorily require schools and local governments to take specific action prior to completion of the study? Are the questions of safety sufficient to err on the side of caution, while still allowing the installation of artificial turf with crumb rubber?

- 5) **Clarifying amendment.** This bill requires schools and local governments to hold a public meeting to discuss the installation of crumb rubber infill. **Staff recommends** amendments to clarify that the meeting is to be a regularly scheduled meeting of the governing board. **Staff further recommends** an amendment to clarify that the discussion is to relate to the installation of artificial turf, rather than crumb rubber, to ensure there is a public discussion if a school chooses to install artificial turf with, or without, crumb rubber.
- 6) **Related and prior legislation.** SB 1277 (Maldonado, Ch. 398, 2008), required the California Integrated Waste Management Board (now CalRecycle), in consultation with the Office of Environmental Health Hazard Assessment (a division within the California Environmental Protection Agency) and the Department of Public Health, to prepare and make available a study comparing the effects of synthetic turf and natural turf on the environment and public health.

#### **SUPPORT**

California Safe Schools  
Center for Environmental Health  
Environmental Working Group  
Environment California  
Sierra Club California

#### **OPPOSITION**

California Catholic Conference  
International Union of Painters and Allied Trades, District Council 16  
State Building and Construction Trades Council of California

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