Safe Places to Play

Play It Safe
Minneapolis

Playground Tire Mulch

Crumb Rubber Infill

Made from waste tires

Tires are not designed to be recycled and the "solution" to stockpiling has created a new problem.

Is it Safe or Not?

✧Waste tires contain dozens of chemicals. (This is undisputed.)

✧Kids are exposed in numerous way. (This is undisputed.)

✧We're learning there are no safe levels of exposure for children.

✧New studies are showing harm.

✧Tire much and crumb are getting into our waterways.

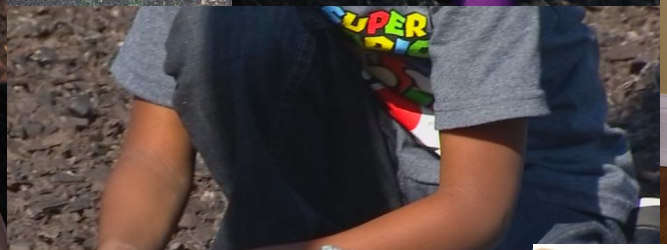
What's in waste tires?

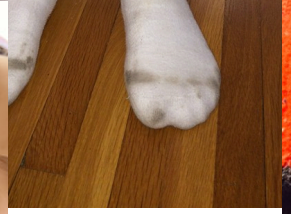
In 2015, Yale researchers found 96 chemicals in the samples of mulch and tire crumb. Just under a half have never been studied for their health effects.

Compound	Health Effects
Benzothiazole:	Skin and eye irritant, harmful if swallowed. No data on cancer, mutagenic toxicity, teratogenic toxicity, or developmental toxicity.
Butylated hydroxyanisole:	Carcinogen, suspected endocrine toxicant, gastrointestinal toxicant, immunotoxicant (adverse effects on the immune system), neurotoxicant (adverse effects on the nervous system), skin and sense-organ toxicant. No available data on cancer, mutagenic toxicity, teratogenic toxicity, or developmental toxicity.
n-hexadecane:	Severe irritant, based on human and animal studies. No available data on cancer, mutagenic toxicity, teratogenic toxicity, or developmental toxicity.
4-(t-octyl) phenol:	Corrosive and destructive to mucous membranes. No available data on cancer, mutagenic toxicity, teratogenic toxicity, or developmental toxicity.
Zinc	
Benzene:	Carcinogen, Developmental Toxicant, Reproductive Toxicant
Phthalates:	Suspected Developmental Toxicant, Endocrine Toxicant, Reproductive Toxicant
PAHs:	Suspected Cardiovascular or Blood Toxicant, Gastrointestinal or Liver Toxicant, Reproductive Toxicant ,Respiratory Toxicant
Maganese:	Gastrointestinal or liver toxicants
Carbon Black:	Carcinogen
Latex:	Allergen

Kids are exposed in several ways

Sunny, 77 degree day in Duluth
127 degree tires
127.5
°F
Laser ON/OFF
°F/°C





Who still claims safety?

Synthetic Turf Council, trade association and lobbying group for crumb rubber and mulch industry.

U.S. Consumer Product Safety Commission (CPSC)

•In 2008, the agency posted an article called: "CPSC Staff Finds Synthetic Turf Fields OK to Install, OK to Play On."

•April 28, 2015—Internal records released by Public Employees for Environmental Responsibility showed the principal information the CPSC uses to assess the health effects of synthetic turf is supplied by industry lobbyists.
•April 29, 2015, "Chairman Elliot Kaye has deep concerns with the (2008) press release and it is not the agency's current position. What was done in 2008 was not good enough to make a claim either way as to the safety of those fields." *WSB-TV* 2 (*ABC* affiliate)

U.S. Environment Protection Agency (EPA)

•In 2008, The EPA conducted a limited-scale study and reported that the average levels lower determined to be below levels of concern.

•In 2013, they updated their webpage, claiming "it is not possible to extend the results beyond the four study sites or to reach a more comprehensive conclusion without the consideration of additional data." They now recommend children wash their hands after any contact with mulch.

2015 Yale School of Engineering

(Found 96 chemicals in the samples of mulch and tire crumb.)

"Not surprisingly, the shredded tires contain a veritable witches brew of toxic substances. It seems irresponsible to market a hazardous waste as a consumer product."

Gaboury Benoit, Ph.D., Yale Professor of Environmental Chemistry and Engineering

2013 Llompart study, Spain

(Peer-reviewed study on tire mulch. Found large presence of PAHs, phthalates, antioxidants, benzothiazole, among other chemicals.)

"The study evidences the high content of toxic chemicals in these recycled materials... Uses of recycled rubber tires, especially those targeting play areas and other facilities for children, should be a matter of regulatory concern."

2014 Environmental & Analytical Toxicology, Italy

(Studied PAHs and heavy metals from synthetic fields. Aim was to estimate the "hazard" for athletes inhaling PAHs released from synthetic turf.)

"The main conclusion we can draw from this preliminary study, which will be validated by further field and laboratory research, is that although synthetic turf offers various advantages over natural grass, the quantity of toxic substances it releases when heated does not make it safe for public health."

Mount Sinai School of Medicine

"The use of recycled waste tires for playground mulch and crumb rubber athletic field infill potentially puts the health of children and athletes at risk... Any level of exposure to known carcinogens or neurotoxic chemicals is too much. There are no safe levels of exposure to these chemicals, especially for children."

Dr. Philip J. Landrigan,
Mount Sinai School of Medicine, NY

Duluth study

- 12 out of 13 chemicals identified are on the Minnesota Department of Health's list of "Chemicals of High Concern"
- Levels of four PAHs in bagged mulch studied exceeded European standards

Duluth removes mulch

"I feel your group (Duluth Parents for Healthy Playgrounds) is correct in its assessment of the potential dangers of tire mulch and in proposing wood chip mulch as an alternative.

There are a number of nasty chemicals in this mix. Furthermore, there has been no testing for combined neurological, endocrine and immune effects of these chemicals, which makes them particularly problematic for young children's exposure. We are now beginning to understand that exposures even in the parts per trillion may be biologically significant.

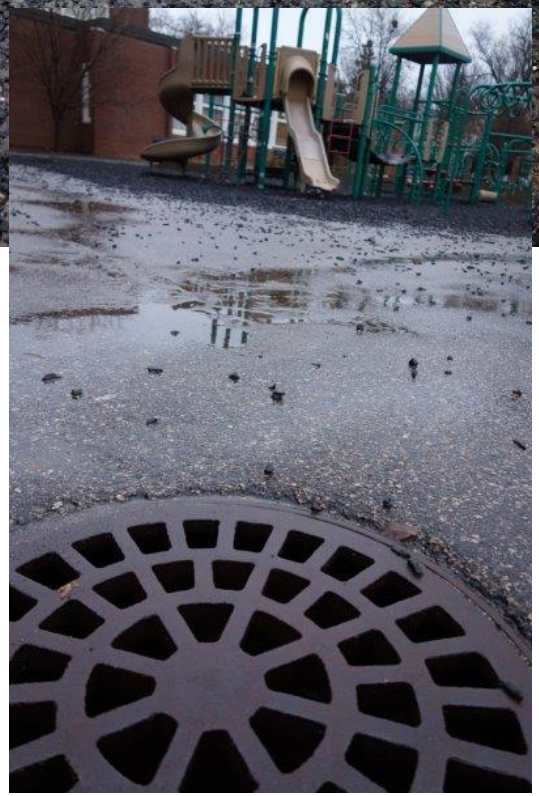
The Europeans have characteristically been ahead of us in terms of protecting their health and this is yet another example.

I strongly endorse your group's position on replacement of the tire mulch with wood chips especially for young children who are particularly vulnerable to developmental alterations due to inhalation or other means of exposure."

Warren Porter, Professor of Zoology and former chair Professor of Environmental Toxicology, University of Wisconsin Madison.

Protecting water

The City of Santa Monica prohibits plastic or rubber pellets via its Stormwater Code and fines the Santa Monica Malibu Unified School District $10,000 per pellet that makes its way to the ocean.



Non-toxic, high-performing alternatives are available

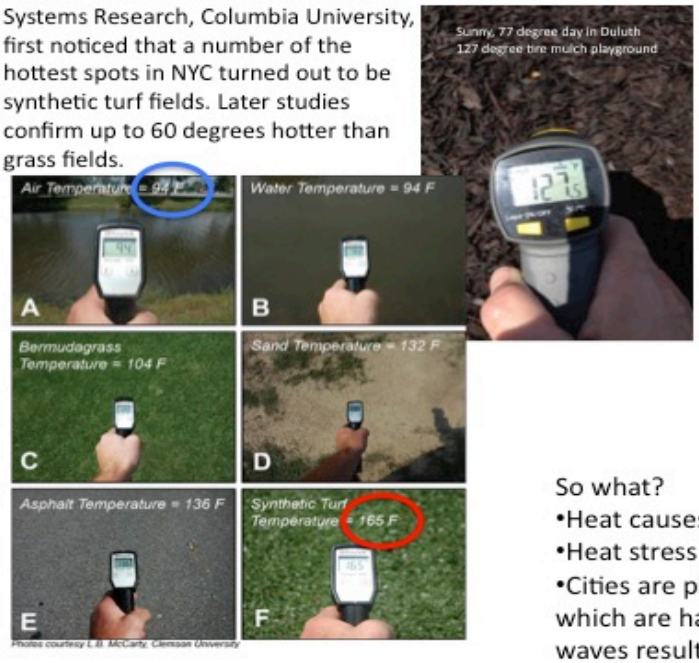
Engineered Wood Fiber: wood w/o additives

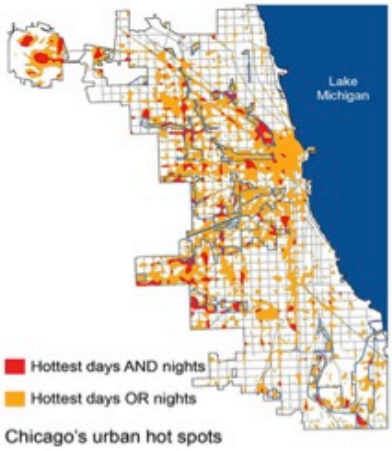
Grass, managed without pesticides

Cork infill on synthetic filed

Urban Heat Islands

Stuart Gaffin at the Center for Climate Systems Research, Columbia University, first noticed that a number of the hottest spots in NYC turned out to be synthetic turf fields. Later studies confirm up to 60 degrees hotter than grass fields.





Chicago's urban hot spots

So what?

- Heat causes chemicals to outgas more quickly.
- Heat stress and skin injuries are medial concerns.
- Cities are planning to "green" urban hot spots, which are hazardous places to be during intense heat waves resulting from climate change.

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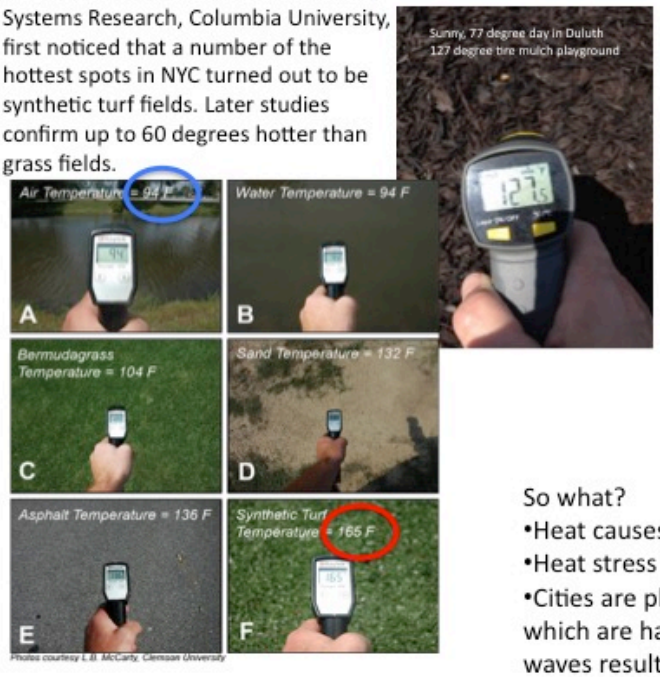

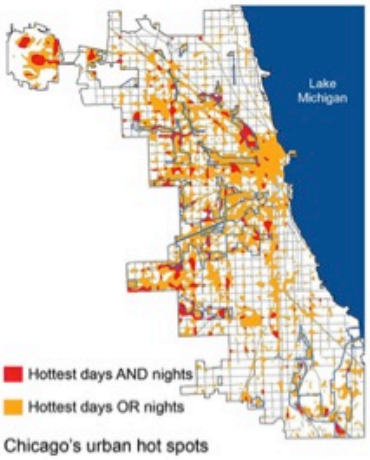

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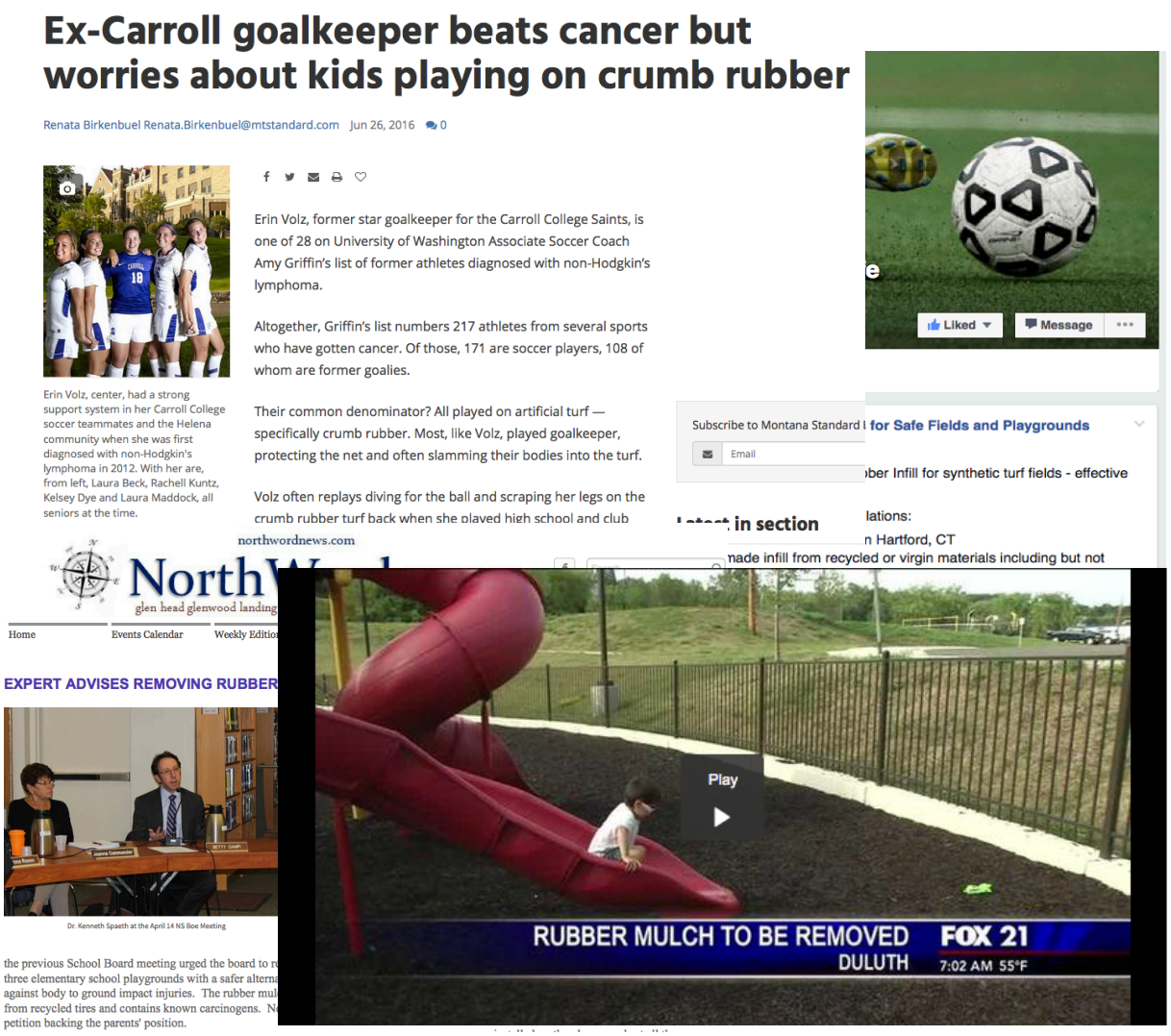
Communities switching to safe alternatives

January 2016: The City of Hartford Connecticut bans crumb rubber infill—and all man-made infill—in synthetic fields.

April 2016: North Shore Board of Education on Long Island, New York votes to remove tire mulch from playgrounds.

May 2016: Seattle Parks & Rec replaces crumb rubber with natural cork after University of Washington coach Amy Griffin speaks out about her list of 217 former athletes with lymphoma: 171 are soccer players, 108 goalies.

June 2016: Duluth School Board voted unanimously to remove toxic tire mulch from playgrounds.



Ex-Carroll goalkeeper beats cancer but worries about kids playing on crumb rubber

Renata Birkenbuel Renata.Birkenbuel@mtstandard.com Jun 26, 2016 0

Erin Volz, center, had a strong support system in her Carroll College soccer teammates and the Helena community when she was first diagnosed with non-Hodgkin's lymphoma in 2012. With her are, from left, Laura Beck, Rachell Kuntz, Kelsey Dye and Laura Maddock, all seniors at the time.

Erin Volz, former star goalkeeper for the Carroll College Saints, is one of 28 on University of Washington Associate Soccer Coach Amy Griffin's list of former athletes diagnosed with non-Hodgkin's lymphoma.

Altogether, Griffin's list numbers 217 athletes from several sports who have gotten cancer. Of those, 171 are soccer players, 108 of whom are former goalies.

Their common denominator? All played on artificial turf — specifically crumb rubber. Most, like Volz, played goalkeeper, protecting the net and often slamming their bodies into the turf.

Volz often replays diving for the ball and scraping her legs on the crumb rubber turf back when she played high school and club

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ber Infill for synthetic turf fields - effective

lations:

n Hartford, CT

made infill from recycled or virgin materials including but not

northwordnews.com

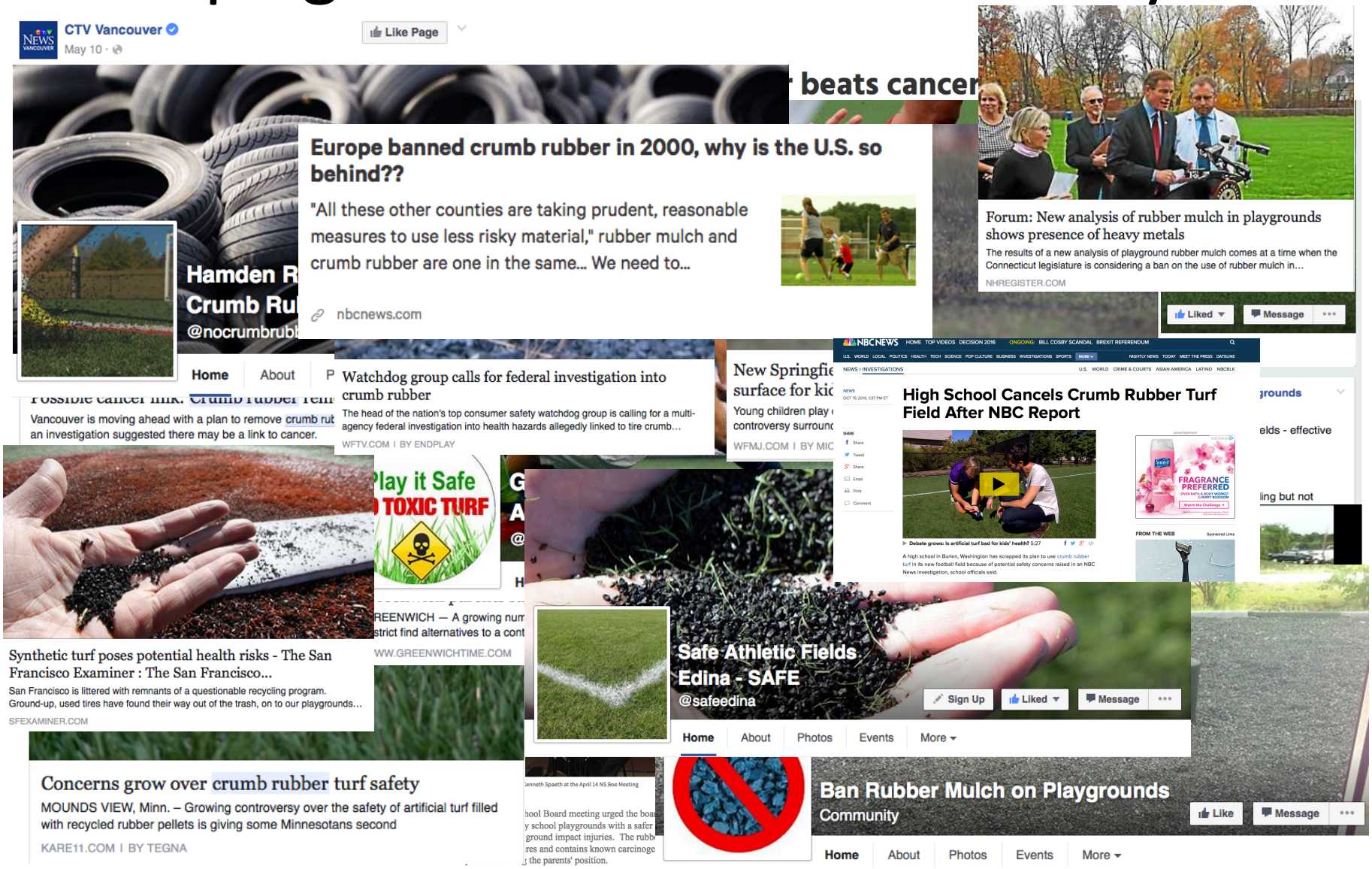
Home Events Calendar Weekly Edition

EXPERT ADVISES REMOVING RUBBER

Dr. Kenneth Spaeth at the April 14 NS Boe Meeting

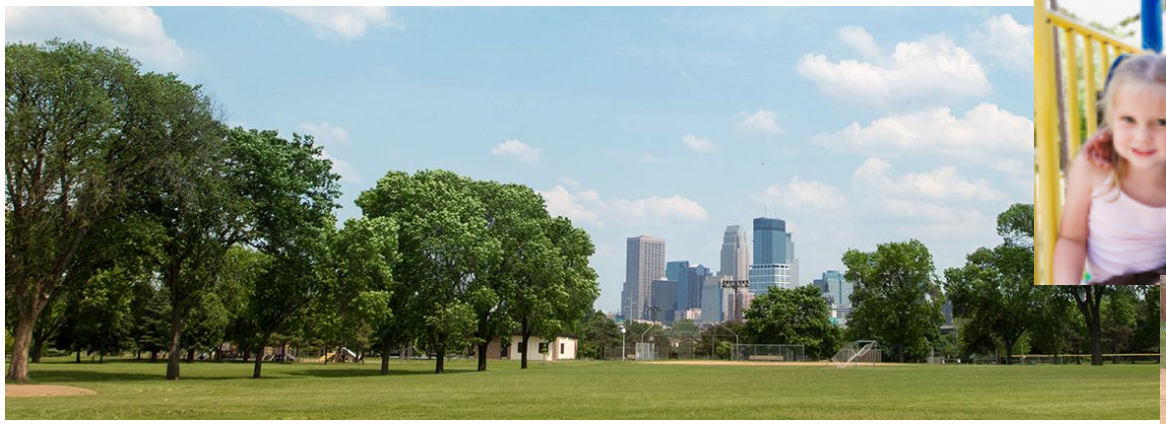
the previous School Board meeting urged the board to r
three elementary school playgrounds with a safer alterna
against body to ground impact injuries. The rubber mul
from recycled tires and contains known carcinogens. N
petition backing the parents' position.

Campaigns across the U.S. and beyond



All Minneapolis kids deserve protection from toxins.

A ban of waste tires in Minneapolis playgrounds and fields will protect children at school, in parks, in preschools, in church playgrounds, and in their own backyards.



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