

Date of Hearing: June 26, 2024

ASSEMBLY COMMITTEE ON EDUCATION
Al Muratsuchi, Chair
SB 1248 (Hurtado) – As Amended April 4, 2024

SENATE VOTE: 37-0

SUBJECT: Pupil health: extreme weather conditions: physical activity

SUMMARY: Requires, contingent upon an appropriation, the California Department of Education (CDE) on or before January 1, 2026, to establish guidelines specifying temperature thresholds or index ratings that trigger modifications to physical activities during extreme weather conditions. Further requires local education agencies (LEAs) to develop policies that adhere to the guidelines developed by the CDE. Specifically, **this bill:**

- 1) Requires, on or before January 1, 2026, the CDE, in consultation with relevant stakeholders and experts, to establish, and post on the CDE’s website, standardized guidelines specifying temperature thresholds or index ratings that trigger modifications to pupil physical activities during extreme weather conditions. Requires the standardized guidelines to consider relevant factors, including, but not limited to, pupil ages, harmful duration of exposure to extreme weather conditions, overall pupil safety, and available mitigation measures.
- 2) Authorizes the CDE, in consultation with relevant stakeholders and experts, to use existing resources or frameworks, or both, about temperature thresholds or index ratings that trigger modifications to pupil physical activities during extreme weather conditions to meet the requirements.
- 3) Requires, on or before July 1, 2026, each LEA to develop, adopt, and implement a weather policy that includes protocols for extreme weather conditions.
- 4) Requires the weather policy to incorporate the standardized guidelines developed by the CDE and to detail the specific measures to be taken during extreme weather conditions, including, but not limited to, all of the following:
 - a) Clear criteria for determining when weather conditions are considered extreme weather conditions and warrant modification or cessation of outdoor physical activities;
 - b) Procedures for monitoring weather forecasts and alerts to anticipate extreme weather conditions;
 - c) Protocols for communicating with staff, pupils, and parents or guardians regarding changes to outdoor activities due to extreme weather conditions;
 - d) Designation of indoor alternative activities that can be safely conducted during extreme weather conditions;
 - e) Training for staff members on recognizing signs of weather-related distress in pupils and appropriate response measures; and

- f) Coordination with local emergency management agencies and authorities to ensure timely access to weather-related information and resources.
- 5) Requires the weather policy to be annually reviewed, evaluated, and updated to incorporate best practices and address any emerging concerns or challenges, and to reflect changes in weather patterns, advances in safety practices, and feedback from stakeholders.
- 6) Requires, commencing January 1, 2026, the CDE to do all of the following:
- a) Identify any LEA that is not in compliance with this section and provide targeted technical assistance (TA) and resources to those identified LEAs for the development and implementation of their respective weather policy;
 - b) Work collaboratively with noncompliant LEAs to identify specific challenges or barriers to compliance and develop customized action plans to address those issues; and
 - c) Regularly assess the effectiveness of the TA and supports provided to LEAs and make adjustments, as necessary, to ensure their continued relevance and impact.
- 7) Defines the following terms:
- a) “Extreme weather conditions” to mean occurrences of unusually severe weather or climate conditions, including, but not limited to, periods of extreme heat, wildfires, excessive precipitation, and floods, that may pose significant harm to pupils;
 - b) “LEA” to mean a school district, county office of education (COE), or charter school; and
 - c) “Physical activity” to include, but not be limited to, physical education classes, outdoor sports, athletic practices, and recreational activities conducted by an LEA.
- 8) States that the implementation of these requirements is subject to an appropriation in the annual Budget Act or another statute.

EXISTING LAW:

- 1) Requires the California Interscholastic Federation (CIF), in consultation with the CDE, to develop guidelines, procedures, and safety standards for the prevention and management of exertional heat illness in order to better protect student athletes participating in athletics. (Education Code (EC) 35179.8)
- 2) States that if a school district or charter school elects to offer any interscholastic athletic program, the governing board of the school district or the governing body of the charter school must ensure that there is a written emergency action plan in place that describes the location and procedures to be followed in the event of sudden cardiac arrest and other medical emergencies related to the athletic program’s activities or events. The written emergency action plan shall be posted in compliance with the most recent pertinent guidelines of the National Federation of State High School Associations. (EC 35179.4)

- 3) Requires a high school coach, among other qualifications, to receive a certification in cardiopulmonary resuscitation (CPR) and first aid, including, but not limited to, a basic understanding of the signs and symptoms of concussions and heat illness and the appropriate response to concussions and heat illness. Authorizes concussion or heat illness training requirements to be fulfilled through entities offering free, online, or other training courses. Defines “heat illness” to include cramps, syncope, exhaustion, and exertional heat stroke. (EC 35179.1)
- 4) Requires each high school sports coach to complete a coaching education program developed by their school district or the CIF that meets the guidelines outlined in the California High School Coaching Education and Training Program (CHSCTP). (EC 49032)

FISCAL EFFECT: According to the Senate Appropriations Committee:

- While the bill’s provisions would be contingent upon an appropriation, it would result in additional General Fund cost pressure to fund its activities. The CDE estimates General Fund costs of approximately \$162,000 and one Education Program Consultant position to comply with the bill’s requirements.
- The CDE also indicates that LEAs would incur expenses in the development and monitoring of the extreme weather condition protocol, but the extent of the costs is unclear. This would include training and meeting with partners throughout implementation development and oversight. However, LEAs would likely be responsible for the cost of hiring substitutes to allow their teachers to attend professional development opportunities.

COMMENTS:

Need for the bill. According to the author, “I first want to express my utmost admiration for the family of Yahushua Robinson, the twelve year student who lost his life due to heat related illness during on-campus physical education, for lending their emotional strength and compassion for others in this process to help ensure that no other family has to experience this pain.

Unfortunately, we presently find ourselves in a time where the realities of climate change are becoming increasingly evident. Extreme weather patterns, from scorching heat to freezing temperatures, relentless droughts to torrential rains and floods, are reshaping our lives in profound ways. Studies have unequivocally shown that our environment is undergoing drastic shifts in weather patterns, posing significant threats to our overall health and safety. No student should ever face the risk of losing their life due to extreme weather conditions while on campus. It is our collective responsibility as a state and as a community to ensure the safety and well-being of our pupils by taking comprehensive action. This includes implementing statewide plans that prioritize preparedness and minimize exposure to the most harmful effects of climate change.

SB 1248, Yahushua’s Law, requires the Department of Education to establish uniform standards that guide schools and school districts in developing tailored extreme weather plans for, meeting their specific needs while maintaining a consistent statewide standard for student protection. By taking proactive measures and implementing comprehensive guidelines, we can better protect our students and mitigate the impacts of climate change on their safety and well-being.”

Climate change impacts in California. California’s climate is generally expected to become hotter, drier, and more variable over the coming decades, increasing the risk of catastrophic wildfires, droughts, floods, extreme weather, biodiversity loss, and sea level rise. California’s Fourth Climate Assessment estimates the economic cost to California for these losses by 2050 will be over \$100 billion annually. Average global temperatures have increased since 1895, with the fastest relative increase beginning in the 1980s. Nine of the ten hottest years recorded have occurred in the last decade. In California, the statewide average temperature is predicted to increase 1.9°F by 2025 and 4.6°F by 2050. Populations in cooler parts of the state, particularly along the coast, are generally at a greater risk for health-related illness because they are less acclimatized to the heat, people may be less aware of behaviors to reduce exposure, and the built environment is not designed for warmer temperatures.

Urban areas have higher temperatures than surrounding areas due to pavement and building materials that absorb sunlight and heat. This phenomenon is referred to as the urban heat island effect. Average daytime temperatures in urban areas are 1-6°F warmer than surrounding areas, but at night that increases to as much as 22°F as the heat is gradually released from buildings and paved surfaces. The urban heat island effect increases the health risks associated with extreme heat for populations living in those areas. A number of strategies can be used to mitigate the urban heat island effect, such as shading, green spaces, and the use of cool building and paving materials.

The impact of heat on student health, academic performance, and physical activity. As climate change intensifies, students are increasingly burdened by worsening heat waves, wildfires, drought, and other extreme weather-related events that hinder their well-being and academic development, according to a 2023 report from the Sean N. Parker Center for Allergy and Asthma Research at Stanford University and other partners, *Climate Resilient California Schools: Safeguarding Children’s Health and Opportunity to Learn in TK-12*. Children are particularly vulnerable to extreme weather conditions because their bodies are more sensitive and less capable of self-regulating temperature. According to a 2023 UCLA Luskin Center for Innovation policy brief, “Children also face a heightened risk of some health conditions, including asthma, when they experience extremely high temperatures. Overheating at schools can lead to hospital emergency department room visits and missed school days. Socially, children have less agency to take care of their needs by retreating to a cool area. And when considering the effects of hot protective sports equipment, heat-absorbing blacktops, and other intensifying factors, children often face particularly heightened heat exposures, and thus risk, at school.”

According to a 2022 Legislative Analyst’s Office report, *Climate Change Impacts Across California K-12 Education*, climate change has led to students experiencing greater learning loss, poorer academic outcomes, food insecurity, and traumatic mental health problems. Moreover, minority children who live in high-poverty neighborhoods are often exposed to more heat, which contributes to racial disparities in health outcomes. School facilities located in low-income neighborhoods have historically had fewer financial resources to invest in efficient HVAC systems and may have play areas covered in asphalt without shade, thereby compounding student health risks from worsening climate change.

According to a 2020 Journal of Human Resources article, *Hot Temperature and High Stakes Performance*, hot temperature reduces performance by up to 13% of a standard deviation and leads to persistent impacts on high school graduation status, despite compensatory responses by teachers who selectively upward manipulate grades after hotter exams. According to a 2020

American Economic Journal: Economic Policy article, *Heat and Learning*, students of color and students in lower-income areas are the most affected by heat-driven learning losses, exacerbating racial and income-based achievement gaps. It is estimated that 5% of the nationwide gap in academic achievement between white and Black students is due to heat and air conditioning disparities.

California’s Extreme Heat Action Plan. Existing law requires the Natural Resources Agency to update the state’s climate adaptation strategy every three years. In updating the strategy, the need for an interagency approach to extreme heat was identified, and therefore the state updated its extreme heat guidance and recommendations to create California’s Extreme Heat Action Plan.

California’s Extreme Heat Action Plan was released by the Natural Resources Agency (NRA) in April 2022. The plan provides a strategic and comprehensive set of state actions to adapt and build resilience to extreme heat, including exploring the implementation of indoor and outdoor heat exposure rules for schools, supporting climate-smart planning in heat-vulnerable schools, promoting climate-appropriate shade tree cover and schools, and promoting increased use of green barriers between agricultural fields and schools.

California Department of Public Health (CDPH) Guidance for Schools on Sports and Strenuous Activities During Extreme Heat. In 2023 the CDPH released guidance for schools on sports and strenuous activities during extreme heat. The online resource outlines the risks of exercising during extreme heat, how to protect students from extreme heat, describes the National Weather Service (NWS) “HeatRisk” levels and forecast, describes the signs of exertional heat-related illness, lists factors that increase the risk of heat-related illness, and suggests (but does not require) actions that can be taken to reduce risk.

Value	Risk of Heat-Related Impacts
0 (Green)	Little to no risk from expected heat.
1 (Yellow)	Minor - This level of heat affects primarily those individuals extremely sensitive to heat, especially when outdoors without effective cooling and/or adequate hydration.
2 (Orange)	Moderate - This level of heat affects most individuals sensitive to heat, especially those without effective cooling and/or adequate hydration.
3 (Red)	Major - This level of heat affects anyone without effective cooling and/or adequate hydration.
4 (Magenta)	Extreme - This level of rare and/or long-duration extreme heat with little to no overnight relief affects anyone without effective cooling and/or adequate hydration.

Source: National Weather Service Heat Risk

The NWS Heat Risk tool allows for assessing conditions at a specific location as it allows the user to enter the address of the site in question. It also provides a seven-day forecast.

The CDPH guidance suggests, but does not require the following actions based on the heat risk level as identified above:

- **Extreme:** Cancel all outdoor and unconditioned indoor activities and reschedule these for another day or move to alternative activities in an air-conditioned environment; and
- **Major:** Cancel all outdoor and unconditioned indoor activities during the heat of the day (usually 10 a.m. to 5 p.m.) and reschedule activities to a cool time of the day, if there is one (e.g. very early morning), or reschedule activities to another day, or move to alternative activities in an air-conditioned indoor environment.

The CDPH guidance offers additional direction as follows:

- Be aware that multiple days of extreme high temperatures will make students and athletes more vulnerable to heat illness;
- Always monitor for exertional heat illness. Air temperature, humidity, direct sunlight, and other factors can increase the risk of heat illness;
- Be aware that exertional heat stroke is life-threatening. Exertional heat stroke (EHS) can occur within the first 60 minutes of exertion and may be triggered without exposure to high ambient temperatures;
- Other heat-related illnesses include heat exhaustion, heat cramps, sunburn, and heat rash; and
- Proceed with extra caution in scenarios where extreme heat occurs suddenly, lasts an extended period of time and/or reaches new high temperatures. Generally, in these scenarios, very few outdoor activity participants (or those participating in indoor spaces without cooling) are “acclimatized.” Heat acclimatization is the body’s process of adapting to or “getting used to” the heat that occurs gradually (usually requiring 1 to 2 weeks) when a person is exposed to a hotter setting. Students and athletes face higher risk of heat illness when they are not acclimatized to hotter and/or more humid conditions. Certain geographic areas (such as coastal areas) not accustomed to higher temperatures will have more persons that are not acclimatized.

Practice/play policy using wet bulb globe thermometer (WBGT) readings. AB 1653 (Sanchez), Chapter 589, Statutes of 2023, requires the CIF, in consultation with the CDE, to develop guidelines, procedures, and safety standards for monitoring the safety of practice and play when wet bulb globe thermometer (WBGT) readings reach specified levels, no later than July 1, 2024; and requires the governing board of the school district or the governing body of the charter school to ensure that there is a written emergency action plan in place that describes the location and procedures to be followed in the event of heat illness related to the athletic program's activities or events.

According to the NWS, a WBGT is a measure of the heat stress in direct sunlight, which takes into account: temperature, humidity, wind speed, sun angle, and cloud cover (solar radiation). This differs from the heat index, which takes into consideration temperature and humidity and is calculated for shady areas. Using a WBGT monitor on-site provides more accurate data than that

from the NWS and can help athletic programs to dictate modifications in activity (work/rest ratios, hydration breaks, equipment work, length of practice) that make sports safer for all participants.

CIF guidance has been established. As required by current law, CIF has established mandatory guidance for heat-related actions as Bylaw 503 K.1. Research indicates that when establishing WBGT guidelines for physical activity, the guidelines must be geographically specific. Researchers have established heat safety regions to address the differences in heat acclimation among residents in these areas. Thus, the first step for schools is to determine which geographic category applies to their location.



To the left is a map of the California heat safety zones matched to the CIF zones that can be used to read the activity guideline chart. The next step is to match the WBGT reading with the activity guidelines in the chart below:

CIF guidance also provides direction on acclimatization for high school athletes to help them adapt to hot weather conditions and reduce the risk of heat-related illnesses. These include gradual increases in activity, adequate hydration, modifying practice schedules for cooler times of day, and monitoring athlete health to identify signs of heat-related illness.

Cat 3	Cat 2	Cat 1	Outdoor Activity Guidelines
<82.0°F <27.8°C	<79.7°F <26.5°C	<76.1°F <24.5°C	Normal Activities – Provide at least three separate rest breaks each hour with a minimum duration of 3 min each during the workout.
82.2 - 86.9°F 27.9 - 30.5°C	79.9 - 84.6°F 26.6 - 29.2°C	76.3 - 81.0°F 24.6 - 27.2°C	Use discretion for intense or prolonged exercise; Provide at least three separate rest breaks each hour with a minimum duration of 4 min each.
87.1 - 90.0°F 30.6 - 32.2°C	84.7 - 87.6°F 29.3 - 30.9°C	81.1 - 84.0°F 27.3 - 28.9°C	Maximum outdoor practice time is 2 h. Provide at least four separate rest breaks each hour with a minimum duration of 4 min each. <u>For Football/Field Hockey</u> ; players are restricted to helmet, shoulder pads, and shorts during practice. If the WBGT rises to this level during practice, players may continue to work out wearing full pads without changing to shorts.
90.1 - 91.9°F 32.2 - 33.3°C	87.8 - 89.6°F 31.0 - 32.0°C	84.2 - 86.0°F 29.0 - 30.0°C	Contests are permitted with additional hydration breaks. Maximum outdoor practice time is 1 h. No protective equipment may be worn during practice, and there may be no conditioning activities. There must be 20 min of rest breaks distributed throughout the hour of practice.
≥92.1°F ≥33.4°C	≥89.8°F ≥32.1°C	≥86.2°F ≥30.1°C	No outdoor workouts/contests. Delay practice/competitions until a cooler WBGT is reached.

Emergency action plans. Existing law requires, if a school district or charter school elects to offer any interscholastic athletic program, the governing board of the school district or the governing body of the charter school to ensure that there is a written emergency action plan in place that describes the location and procedures to be followed in the event of sudden cardiac

arrest and other medical emergencies related to the athletic program's activities or events. Current law requires the written emergency action plan to be posted in compliance with the most recent pertinent guidelines of the National Federation of State High School Associations.

Coaches training. Currently, the CIF offers training programs to high school coaches who receive a certificate upon course completion. The completed certificate is transferable between school districts. CIF's mandated coaches training program under the CHSCTP currently includes instruction on CPR, First Aid and concussions, sudden cardiac arrest, and heat acclimation.

CIF offers a free online concussion training course for coaches where they receive an immediate printed certification upon completion. The free CIF online training course in heat illness prevention includes sections which explore the principles of Heat Illness Awareness, Adequate Hydration, Gradual Acclimatization, Hydration Status Record Keeping, and offers Additional Prevention Measures. Currently, coaches must complete a CPR/First Aid/Concussion course and renew that training every two years. This applies to all CIF member schools, public and private.

Physical activities in schools. Under the existing law, LEAs are required to provide physical education and recess to students. However, these opportunities can also expose students to extreme heat, which may lead to heat illness and other related health issues. The Physical Education Model Content Standards for California Public Schools: Kindergarten through Grade Twelve define the knowledge and skills that students should acquire through a quality physical education program. The standards require students to participate safely in moderate to vigorous physical activity in atypical conditions, and also provide alternative physical activities that can be performed if one's physical fitness program is disrupted due to inclement weather, travel from home or school, or minor injury. The CDE provides resources and guidance for schools regarding sports and other strenuous activities, many of which were developed in partnership with other state agencies.

Potential conflict with existing law. This bill requires the development of guidelines for pupil physical activities. As noted above, the CIF has adopted clear direction for high school sports, therefore ***the Committee may wish to consider*** excluding high school sports from the provisions of this bill.

Recommended Committee Amendments. ***Staff recommends that the bill be amended*** as follows:

- 1) Clarify that the CDE is responsible to compile guidelines using existing resources and frameworks related to heat-related thresholds and indices.
- 2) Identify existing guidance and tools that CDE may use.
- 3) Clarify that an LEA must develop weather protocols based upon the guidelines identified by the CDE.
- 4) Require LEAs to consult with local relevant agencies and experts.
- 5) Remove the requirement for the CDE to monitor compliance with the requirement to develop weather protocols and require the CDE to provide technical assistance to LEAs.

- 6) Remove reference to climate conditions and wildfires in the definition of extreme weather conditions.
- 7) Specify that physical activity refers to physical education classes and school sports activities not under the jurisdiction of the CIF.
- 8) Specify that physical activity does not include interscholastic athletic programs administered by the CIF as they must comply with current law, pursuant to Section 35179.8.

Arguments in support. The American Academy of Pediatrics California writes, “Extreme weather conditions pose significant risks to the physical health and safety of pupils, particularly when engaging in physical activities outdoors. With climate change leading to more frequent and intense heatwaves, it is imperative that we have standardized guidelines in place to protect our students from potential harm. By providing clear and consistent guidance, this bill will empower educators and school administrators to make informed decisions regarding pupil physical activities during extreme weather events. Moreover, it will help ensure that the well-being of students remains a top priority in our educational institutions.”

Related legislation. AB 245 (McKinnor), Chapter 422, Statutes of 2023, adds to the CHSCTP, by July 1, 2024, training in recognizing and responding to the signs and symptoms of concussions, heart illness, and cardiac arrest.

AB 384 (Calderon) of the 2023-24 Session would have required the CDE to conduct a research study on recommended indoor air temperature ranges and temperature control standards for public schools, to compile a statewide inventory of heating and cooling systems and interventions in all public schools, and to develop policy recommendations for safe indoor air temperature standards for public school facilities. This bill was vetoed by the Governor with the following message in part:

While I appreciate the author's goal of supporting access to indoor temperatures most conducive to student learning, this bill creates significant long-term cost pressures that are not accounted for in the budget.

AB 1653 (Sanchez), Chapter 589, Statutes of 2023, requires the CIF, in consultation with the CDE, to develop guidelines, procedures, and safety standards for monitoring the safety of practice and play when WBGT readings reach specified levels, no later than July 1, 2024; and requires the governing board of the school district or the governing body of the charter school to ensure that there is a written emergency action plan in place that describes the location and procedures to be followed in the event of heat illness related to the athletic program's activities or events.

SB 394 (Gonzalez) of the 2023-24 Session would have required, upon an appropriation by the Legislature for this purpose, the California Energy Commission (CEC), in consultation with specified state agencies to facilitate an interagency process and stakeholder engagement to develop a Master Plan for Healthy, Sustainable, and Climate-Resilient Schools. This bill was vetoed by the Governor with the following message in part:

While I support the author's goal of making our schools more climate friendly and climate prepared, the development of this Master Plan will cost up to \$10 million that was not

considered through the annual budget process. Additionally, the Master Plan would create significant long-term cost pressures that are not accounted for in the state budget plan.

SB 499 (Menjivar) of the 2023-24 Session would have required every school in the state, contingent on appropriation, to develop and implement an extreme heat action plan. The bill would have also required every school to replace outdoor surfaces with more heat resistant materials the next time the school replaces an outdoor surface. This bill was held in the Assembly Appropriations Committee.

AB 2800 (Chu), Chapter 21, Statutes of 2021, adds basic understanding of the signs and symptoms of, and appropriate responses to, heat illness, to the training component of the 1998 CHSCTP.

AB 2741 (Miller) Chapter 744, Statutes of 1998, establishes the 1998 California High School Coaching and Education Program to be administered by school districts and to emphasize, among other things, sport psychology, sport pedagogy, sport physiology, CPR, and first aid.

REGISTERED SUPPORT / OPPOSITION:

Support

American Academy of Pediatrics, California
Bold Enterprises
California Black Women's Collective Empowerment Institute
Familias Empoderadas Del Valle Central
NAACP Branch 1034
National Action Network
The Black Student Advocate
Ventura County Alumnae Chapter of Delta Sigma Theta Sorority

Opposition

None on file

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