

117TH CONGRESS
1ST SESSION

S. _____

To direct the Occupational Safety and Health Administration to issue an occupational safety and health standard to protect workers from heat-related injuries and illnesses.

IN THE SENATE OF THE UNITED STATES

Mr. BROWN introduced the following bill; which was read twice and referred to the Committee on _____

A BILL

To direct the Occupational Safety and Health Administration to issue an occupational safety and health standard to protect workers from heat-related injuries and illnesses.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE AND FINDINGS.**

4 (a) SHORT TITLE.—This Act may be cited as the
5 “Asuncion Valdivia Heat Illness and Fatality Prevention
6 Act of 2021”.

7 (b) FINDINGS.—Congress finds the following:

8 (1) Excessive heat exposure poses a direct
9 threat to workers and the economy. Climate change

1 increases this danger, as 19 of the 20 hottest years
2 on record have occurred since 2001. Rising tempera-
3 tures are projected to cause an increase in heat-re-
4 lated workplace injuries and illnesses, a dramatic
5 loss in labor capacity, and decreased productivity.

6 (2) On average, 3 times as many people die
7 from extreme heat in the United States each year
8 than from hurricanes, floods, and tornadoes com-
9 bined.

10 (3) Heat-related illnesses can arise when high
11 temperatures rise above the capacity of the body to
12 dispel heat. Impacts range from comparatively minor
13 problems such as heat cramps to severe afflictions
14 such as organ damage, heat exhaustion, stroke, and
15 death.

16 (4) Heat stress and COVID–19 are individually
17 dangerous to workers and can interact, making some
18 work environments especially hazardous. Respiratory
19 infections, such as COVID–19, and the use of pro-
20 tective equipment, like face and skin coverings, can
21 increase susceptibility to heat exhaustion and heat
22 stroke. Moreover, the symptoms of heat stress and
23 respiratory illnesses may overlap in ways that exae-
24 rbate the diagnosis and pathophysiology related to
25 these potentially fatal conditions.

1 (5) The current scientific evidence, rate of vac-
2 cine production and distribution, racial and socio-
3 economic inequities in vaccine access, mistrust of
4 science messengers, and levels of international and
5 national preparedness, indicate it will take months
6 to years to achieve herd immunity from COVID-19.
7 Moreover, only long-term study will reveal if vaccines
8 sufficiently protect communities from all strains of
9 this coronavirus. Accordingly, workplaces must con-
10 tinue to guard against COVID-19 and other com-
11 municable illnesses well into the future, especially in
12 high-density workplaces that expose employees to
13 stressors that include unhealthy levels of heat.

14 (6) Jobs at highest risk of heat stress illness
15 and death are disproportionately held by Black and
16 Brown workers, a disparity that reflects the racial
17 injustice inherent in our economic system.

18 (7) Farmworkers and construction workers suf-
19 fer the highest incidence of heat illness, but all out-
20 door and indoor workers employed in excessively hot
21 and humid environments are at significant risk of
22 material impairment of health or functional capacity.

23 (8) Asuncion Valdivia was a California farm-
24 worker who died of heat stroke in 2004 after picking
25 grapes for 10 straight hours in 105 degree tempera-

1 tures. Instead of calling an ambulance, his employer
2 told his son to drive Mr. Valdivia home. On his way
3 home, he started foaming at the mouth and died.

4 (9) While heat stress is often associated with
5 outdoor jobs, some indoor workers are also at risk
6 from dangerously high temperatures. Indoor heat
7 stress is prevalent in enclosed workplaces without
8 climate control or adequate ventilation, such as
9 warehouses and factories, and workplaces with heat-
10 generating machinery such as steel mills, electrical
11 utilities, bakeries, commercial kitchens, and laun-
12 dries.

13 (10) People working in excessive heat suffer di-
14 minished mental acuity and physical ability, which
15 increases the risk of accidents. Heat-related injuries
16 and illnesses increase workers' compensation costs
17 and medical expenses.

18 (11) The costs of lower labor productivity under
19 rising temperatures is estimated to reach up to
20 \$160,000,000,000 in lost wages per year in the
21 United States by 2090 according to the 2018 Na-
22 tional Climate Assessment. The drop in productivity
23 decreases income for employers and workers. Global
24 gross domestic product losses from heat are pro-

1 jected to be greater than 20 percent by the end of
2 this century.

3 (12) Every year, thousands of workers become
4 sick and some die from exposure to heat. Between
5 1992 and 2017, 815 United States workers died
6 from heat and almost 70,000 were seriously injured.
7 These numbers are generally understood to be gross
8 undercounts because many heat-related illnesses and
9 deaths are blamed on natural causes.

10 (13) Workers have a legal right to a safe work-
11 place. The vast majority of heat-related workplace
12 deaths and illnesses can be prevented by access to
13 water, rest, and shade. Many employers don't pro-
14 vide these simple measures for workers according to
15 the Occupational Safety and Health Administration.

16 (14) Employers often retaliate against employ-
17 ees if they report or seek assistance due to problems
18 with heat. Many employees are therefore afraid to
19 report problems and face increased risk of heat-re-
20 lated illnesses or death.

21 (15) In the absence of a Federal standard, mul-
22 tiple branches of the United States Armed Forces—
23 including the Army, Navy, Marine Corps, and Air
24 Force—have issued heat prevention guidelines, and
25 several States—California, Washington, and Min-

1 promulgate a final standard on prevention of occupational
2 exposure to excessive heat that shall—

3 (1) provide no less protection than the most
4 protective heat prevention standard adopted by a
5 State plan that has been approved by the Secretary
6 under section 18 of the Occupational Safety and
7 Health Act of 1970 (29 U.S.C. 667) and, at a min-
8 imum, include the requirements described in section
9 3; and

10 (2) be effective and enforceable in the same
11 manner and to the same extent as any standard pro-
12 mulgated under section 6(b) of the Occupational
13 Safety and Health Act of 1970 (29 U.S.C. 655(b)).

14 (c) INTERIM FINAL STANDARD.—

15 (1) IN GENERAL.—If the proposed standard de-
16 scribed in subsection (a) is not promulgated within
17 2 years after the date of enactment of this Act, the
18 Secretary shall promulgate an interim final standard
19 on prevention of occupational exposure to excessive
20 heat not later than 2 years and 60 days after such
21 date of enactment—

22 (A) to require covered employers to develop
23 and implement a comprehensive workplace ex-
24 cessive heat prevention plan to protect covered

1 employees from excessive heat that may lead to
2 heat-related injuries and illnesses; and

3 (B) that shall, at a minimum—

4 (i) provide no less protection than the
5 most protective heat prevention standard
6 adopted by a State plan that has been ap-
7 proved by the Secretary under section 18
8 of the Occupational Safety and Health Act
9 of 1970 (29 U.S.C. 667);

10 (ii) establish requirements for covered
11 employers with respect to—

12 (I) exposure limits that trigger
13 action to protect covered employees
14 from heat-related illness;

15 (II) hydration;

16 (III) scheduled and paid rest
17 breaks in shaded or climate-controlled
18 spaces;

19 (IV) an acclimatization plan;

20 (V) exposure monitoring, and
21 other measures to prevent exposure to
22 heat above safe limits;

23 (VI) covered employee and super-
24 visor training;

25 (VII) hazard notification;

1 (VIII) an emergency medical re-
2 sponse plan;

3 (IX) heat-related surveillance rec-
4 ordkeeping; and

5 (X) procedures for compensating
6 covered employees paid on a piece rate
7 basis for required heat-related rest
8 breaks;

9 (iii) take into consideration the Cri-
10 teria for a Recommended Standard: Occu-
11 pational Exposure to Heat and Hot Envi-
12 ronments published by the National Insti-
13 tute for Occupational Safety and Health in
14 2016; and

15 (iv) include a requirement to protect
16 covered employees of covered employers
17 from discrimination or retaliation for exer-
18 cising the rights of covered employees
19 under the interim final standard.

20 (2) APPLICABILITY OF OTHER STATUTORY RE-
21 QUIREMENTS.—The following shall not apply to the
22 promulgation of the interim final standard under
23 this subsection:

24 (A) The requirements applicable to occupa-
25 tional safety and health standards under section

1 6(b) of the Occupational Safety and Health Act
2 of 1970 (29 U.S.C. 655(b)).

3 (B) The requirements of section 553(e) of
4 chapter 5 and chapter 6 of title 5, United
5 States Code.

6 (C) The requirements of the National En-
7 vironmental Policy Act of 1969 (42 U.S.C.
8 4321 et seq.).

9 (3) EFFECTIVE DATE OF INTERIM STAND-
10 ARD.—The interim final standard shall—

11 (A) take effect on a date that is not later
12 than 30 days after the promulgation of such
13 standard, except that such interim final stand-
14 ard may include a reasonable phase-in period
15 for the implementation of required engineering
16 controls that take effect after such date;

17 (B) be enforced in the same manner and
18 to the same extent as any standard promul-
19 gated under section 6(b) of the Occupational
20 Safety and Health Act of 1970 (29 U.S.C.
21 655(b)); and

22 (C) be in effect until the final standard de-
23 scribed in subsection (b) becomes effective and
24 enforceable.

1 **SEC. 3. REQUIREMENTS FOR FINAL STANDARD ON PRE-**
2 **VENTION OF OCCUPATIONAL EXPOSURE TO**
3 **EXCESSIVE HEAT.**

4 (a) IN GENERAL.—The final standard promulgated
5 under section 2(b) shall, at a minimum—

6 (1) take into consideration the Criteria for a
7 Recommended Standard: Occupational Exposure to
8 Heat and Hot Environments published by the Na-
9 tional Institute for Occupational Safety and Health
10 in 2016;

11 (2) establish requirements for covered employ-
12 ers with respect to—

13 (A) exposure limits that trigger action to
14 protect covered employees from heat-related ill-
15 ness;

16 (B) hydration;

17 (C) scheduled and paid rest breaks in
18 shaded or climate-controlled spaces;

19 (D) an acclimatization plan;

20 (E) exposure monitoring, and other meas-
21 ures to prevent exposure to heat above safe lim-
22 its;

23 (F) covered employee and supervisor train-
24 ing;

25 (G) hazard notification;

26 (H) medical monitoring;

1 (I) an emergency medical response plan;

2 (J) heat-related surveillance recordkeeping;

3 (K) procedures for compensating covered
4 employees paid on a piece rate basis for re-
5 quired heat-related rest breaks; and

6 (L) a heat prevention plan; and

7 (3) include the requirements described in sub-
8 section (b) with respect to covered employers.

9 (b) REQUIREMENTS.—The final standard promul-
10 gated under section 2(b) shall, with respect to covered em-
11 ployers, include the following:

12 (1) HEAT ILLNESS PREVENTION PLANS.—

13 (A) IN GENERAL.—A covered employer
14 shall develop, implement, and maintain an ef-
15 fective, written excessive heat illness prevention
16 plan for covered employees of the covered em-
17 ployer, which shall—

18 (i) for all aspects of the plan, be de-
19 veloped and implemented with the mean-
20 ingful participation of such covered em-
21 ployees and, where applicable, representa-
22 tives (including collective bargaining rep-
23 resentatives) of such covered employees;

24 (ii) be tailored and specific to hazards
25 in the covered workplace;

1 (iii) be in writing, in English and in
2 the language understood by a majority of
3 such covered employees, if such language is
4 not English; and

5 (iv) be made available, upon request,
6 to such covered employees, representatives
7 (including collective bargaining representa-
8 tives) for such covered employees, and the
9 Secretary.

10 (B) PLAN CONTENT.—Each plan required
11 under subparagraph (A) shall include proce-
12 dures and methods for the following:

13 (i) Initial and regular monitoring of
14 covered employee exposure to determine
15 whether covered employees are exposed to
16 excessive heat.

17 (ii) Provision of water, paid rest
18 breaks, and access to shade or cool-down
19 areas.

20 (iii) Emergency response.

21 (iv) Acclimatization.

22 (v) Hazard prevention applying prin-
23 ciples of the industrial hygiene hierarchy of
24 controls of the National Institute for Occu-

1 pational Safety and Health, including, as
2 appropriate—

3 (I) engineering controls that may
4 include isolation of hot processes, iso-
5 lation of covered employees from
6 sources of heat, local exhaust ventila-
7 tion, shielding from a radiant heat
8 source, insulation of hot surfaces, and
9 the provision of air conditioning, cool-
10 ing fans (including cooling mist fans),
11 evaporative coolers, and natural ven-
12 tilation;

13 (II) administrative controls that
14 limit exposure to a hazard by adjust-
15 ment of work procedures or work
16 schedules, which may include accli-
17 matizing covered employees, rotating
18 covered employees, scheduling work
19 earlier or later in the day, using work-
20 rest schedules, reducing work inten-
21 sity or speed, changing required work
22 clothing, and using relief workers; and

23 (III) personal protective equip-
24 ment which may include water-cooled

1 garments, air-cooled garments, reflec-
2 tive clothing, and cooling vests.

3 (vi) Coordination of risk assessment
4 efforts, plan development, and implementa-
5 tion of the plan with other employers who
6 have covered employees who work at the
7 covered workplace.

8 (vii) Compensating covered employees
9 paid on a piece rate basis for required
10 heat-related rest breaks.

11 (2) TRAINING AND EDUCATION.—

12 (A) EMPLOYEE TRAINING.—A covered em-
13 ployer shall provide annual training and edu-
14 cation to covered employees who may be ex-
15 posed to high heat levels, which shall cover the
16 following topics:

17 (i) Identified heat illness risk factors.

18 (ii) Personal factors that may increase
19 susceptibility to heat-related illness.

20 (iii) Signs and symptoms of heat-re-
21 lated illness.

22 (iv) Different types of heat illness.

23 (v) The importance of acclimatization
24 and consumption of liquids.

25 (vi) Engineering control measures.

1 (vii) Administrative control measures.

2 (viii) The importance of reporting
3 heat-related symptoms being experienced
4 by the covered employee or another covered
5 employee.

6 (ix) Recordkeeping requirements and
7 reporting procedures.

8 (x) Emergency response procedures.

9 (xi) Covered employee rights.

10 (B) SUPERVISOR TRAINING.—In addition
11 to the training and education required in sub-
12 paragraph (A), training and education shall be
13 provided annually to covered employees of the
14 covered employer who are supervisors that shall
15 cover the following topics:

16 (i) The procedures a supervisor is re-
17 quired to follow under this Act.

18 (ii) How to recognize high-risk situa-
19 tions, including how to monitor weather re-
20 ports and weather advisories, and not as-
21 signing a covered employee to situations
22 that predictably compromise the safety of
23 the covered employee.

24 (iii) The procedures to follow when a
25 covered employee exhibits signs or reports

1 symptoms consistent with possible heat ill-
2 ness, including emergency response proce-
3 dures.

4 (C) GENERAL TRAINING REQUIRE-
5 MENTS.—The education and training provided
6 under this paragraph to covered employees of
7 the covered employer shall meet the following:

8 (i) In the case of such a covered em-
9 ployee whose job circumstances have
10 changed, within a reasonable timeframe
11 after such change of job circumstances,
12 education and training shall be provided
13 that shall be—

14 (I) in addition to the education
15 and training provided under clause
16 (ii), subparagraph (A), and, if applica-
17 ble to such covered employee, sub-
18 paragraph (B); and

19 (II) applicable to such change of
20 job circumstances.

21 (ii) Applicable education and training
22 shall be provided for each new covered em-
23 ployee prior to the job assignment of such
24 covered employee.

1 (iii) The education and training shall
2 provide such covered employees opportuni-
3 ties to ask questions, give feedback, and
4 request additional instruction, clarification,
5 or other follow-up.

6 (iv) The education and training shall
7 be provided in-person and by an individual
8 with knowledge of heat illness prevention
9 and of the plan of the covered employer
10 under this section.

11 (v) The education and training shall
12 be appropriate in content and vocabulary
13 to the language, educational level, and lit-
14 eracy of such covered employees.

15 (3) RECORDKEEPING.—Each covered employer
16 shall—

17 (A) maintain at all times—

18 (i) records related to each plan of the
19 covered employer under paragraph (1), in-
20 cluding heat illness risk and hazard assess-
21 ments, and identification, evaluation, cor-
22 rection, and training procedures;

23 (ii) data on all heat-related illnesses
24 and deaths; and

1 (iii) data on environmental and phys-
2 iological measurements related to heat; and

3 (B) make such records and data available,
4 upon request, to covered employees and their
5 representatives (including collective bargaining
6 representatives) for examination and copying in
7 accordance with section 1910.1020 of title 29,
8 Code of Federal Regulations (as such section is
9 in effect on the date of enactment of this Act).

10 (4) WHISTLEBLOWER PROTECTIONS.—

11 (A) POLICY.—Each covered employer shall
12 adopt a policy prohibiting any person (including
13 an agent of the covered employer) from dis-
14 criminating or retaliating against any covered
15 employee for—

16 (i) exercising the rights of the covered
17 employee under this Act; or

18 (ii) reporting violations of the stand-
19 ard to a Federal, State, or local govern-
20 ment.

21 (B) PROHIBITION.—No covered employer
22 shall discriminate or retaliate against any cov-
23 ered employee for—

24 (i) reporting a heat-illness-related con-
25 cern to, or seeking assistance or interven-

1 tion with respect to heat-related health
2 symptoms from, the covered employer,
3 local emergency services, or a Federal,
4 State, or local government; or

5 (ii) exercising any other rights of the
6 covered employee under this Act.

7 (C) ENFORCEMENT.—This paragraph shall
8 be enforced in the same manner and to the
9 same extent as any standard promulgated
10 under section 6(b) of the Occupational Safety
11 and Health Act of 1970 (29 U.S.C. 655(b)).

12 **SEC. 4. DEFINITIONS.**

13 In this Act:

14 (1) COVERED EMPLOYEE.—The term “covered
15 employee” includes an individual employed by a cov-
16 ered employer.

17 (2) COVERED EMPLOYER.—The term “covered
18 employer”—

19 (A) means an employer that employs an
20 individual to work at a covered workplace; and

21 (B) includes a contractor, subcontractor, a
22 temporary service firm, or an employee leasing
23 entity.

1 (3) COVERED WORKPLACE.—The term “covered
2 workplace” includes a workplace with occupational
3 exposure to excessive heat.

4 (4) EMPLOYER.—The term “employer” has the
5 meaning given the term in section 3 of the Occupa-
6 tional Safety and Health Act of 1970 (29 U.S.C.
7 652).

8 (5) EXCESSIVE HEAT.—The term “excessive
9 heat” includes outdoor or indoor exposure to heat at
10 levels that exceed the capacities of the body to main-
11 tain normal body functions and may cause heat-re-
12 lated injury, illness, or fatality (including heat
13 stroke, heat exhaustion, heat syncope, heat cramps,
14 or heat rashes).

15 (6) SECRETARY.—The term “Secretary” means
16 the Secretary of Labor.