NOTE

COMPASSIONATE RELEASE AS A RESPONSE TO CLIMATE IMPACTS: LESSONS FROM IMPLEMENTATION OF THE FIRST STEP ACT DURING THE COVID-19 PANDEMIC

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Climate change poses numerous threats to the health and safety of incarcerated individuals, particularly those who are elderly and have medical conditions that make them more susceptible to environmental extremes. The physical condition of prison buildings, many of which lack air conditioning, exacerbate threats such as extreme heat. There are significant barriers to improving overall carceral conditions such as budget constraints, lack of political will, the lengthy timeline of civil rights-based litigation, the requirement of the Prison Litigation Reform Act (PLRA) that injunctive relief be "narrowly drawn," and potential failure of officials to comply with court orders and settlement agreements. Compassionate release may provide a means for particularly vulnerable incarcerated individuals facing dangerous climate extremes to seek an individual remedy. This Note evaluates the possibility of using compassionate release to address climate risks, drawing upon the use of compassionate release under the First Step Act during the COVID-19 pandemic.

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INTRODUCTION

The summer of 2023 was a brutally hot one in Texas. Temperatures topped 100 ºF for more than 75 days in parts of the state, breaking records.[1] In Austin, the heat index—a measure of how hot it feels based on a combination of temperature and humidity—reached 118 ºF.[2] The stretch of scorching temperatures, driven by

[1] *See* Roberto Villalpando, *As Texas Heat Breaks Records, Data Show 100-Degree Days Are Happening More Often Over Time*, HOUS. CHRON. (Sept. 18, 2023), https://www.houstonchronicle.com/news/houston-weather/article/triple-digit-temperatures-100-degree-days-18359771.php.

[2] *See* Marie Elizabeth Oliver et al., *'It's Dangerous': Heat Wave Spreads From Texas to Bake the Southeast*, N.Y. TIMES (June 27, 2023), https://www.nytimes.com/2023/06/27/us/heat-wave-forecast-texas-southeast.html.

climate change,[3] was part of the planet's hottest year on record.[4] Heat sent hundreds of Texans to the emergency room, caused spikes in 911 calls, and strained the state's power grid.[5] At least 334 people died due to the heat, the highest number since the state began keeping records.[6]

Conditions were especially dire inside prisons in the state. At FCI Seagoville, a federal prison southeast of Dallas, the temperature inside prison buildings regularly exceeded 100 ºF,[7] well above the Bureau of Prison's target high temperature of 76 ºF.[8] The extreme heat, combined with chronic electrical outages and understaffing, put correctional staff and incarcerated people in danger. According to Robert Freeman, president of the officers' union at the prison, air conditioning in some parts of the prison was unavailable due to power outages.[9] Multiple housing units had no air conditioning,

[3] *See* Seth Borenstein, *Climate Change Leaves Fingerprints on July Heat Waves Around the Globe, Study Says*, ASSOCIATED PRESS (July 25, 2023), https://apnews.com/article/heat-wave-deadly-climate-change-europe-america-4c361736afa70766049acdb189ccfd64; Villalpando, *supra* note 1.

[4] *See* Eric Niiler, *2023 Was the Hottest Year on Record*, WALL ST. J. (Jan. 9, 2024), https://www.wsj.com/us-news/climate-environment/climate-change-global-extreme-weather-record-heat-2023-0cbd5870. All ten of the hottest years on record have occurred within the last decade. Rebecca Lindsey & Luann Dahlman, *Climate Change: Global Temperature*, CLIMATE.GOV (Jan. 18, 2024), https://www.climate.gov/news-features/understanding-climate/climate-change-global-temperature.

[5] *See* Martha Pskowski & Gina Jiménez, *Emergency Room Visits and 911 Calls for Heat Illness Spike During Texas Heat Wave*, INSIDE CLIMATE NEWS (June 28, 2024), https://insideclimatenews.org/news/28062023/texas-heat-illness-emergency-visits/; Matt Egan, *Texas Heat Wave: US Energy Department Declares Power Emergency*, CNN (Sept. 8, 2023), https://www.cnn.com/2023/09/08/energy/texas-power-emergency-heat-wave/index.html.

[6] *See* Erin Douglas & Alejandra Martinez, *"I Don't Wish This on Anyone": Two Families Mourn Their Losses After a Record Year for Texas Heat Deaths*, TEX. TRIB. (Jan. 12, 2024), https://www.texastribune.org/2024/01/12/texas-heat-deaths-2023-record-climate-change/.

[7] *See* Kaley Johnson, *Power Outages, Understaffing and No AC Create 'Volatile' Situation at Prison Near Dallas*, FORT WORTH STAR-TELEGRAM (Sept. 17, 2023), https://www.star-telegram.com/news/local/crime/article278798754.html.

[8] *See* FEDERAL BUREAU OF PRISONS, FACILITIES OPERATIONS MANUAL 16–5 (2017).

[9] *See* Johnson, *supra* note 7.

while others lacked fans and had windows that would not open.[10] Jacob Kolonis, who was incarcerated in one of these buildings, reported seeing people have seizures because of the heat, and others saw people pass out.[11]

In state prisons in 2023, the Texas Department of Criminal Justice (TDCJ) reported that heat-related illnesses had affected 35 employees and 14 incarcerated people as of late August.[12] Family and friends of incarcerated people disputed these numbers, and reported frequent instances of people fainting and experiencing other symptoms of heat exhaustion.[13] The Texas Tribune identified 41 deaths due to cardiac arrest or unknown causes during the heatwave, and family members and prison rights advocates argued that the heat and lack of air conditioning caused at least some of these deaths.[14]

Excessive heat in prisons continued to take a deadly toll in 2024, and it is expected to worsen as climate change continues to drive global temperatures higher.[15] The deadly effects of heat in prisons has been established both through scientific studies and litigation. TDCJ reported that 23 men died of heat between 1998 and 2017.[16] An independent review of deaths in Texas prisons between 2000 and 2019 put the number of heat-related deaths closer to 271.[17] The study found extreme heat increased the rate of mortality in prisons without air conditioning during summer months, and found no similar increase in prisons with air conditioning; it attributed 13% of deaths during summer months in Texas prisons without air

[10] *See id*.

[11] *See id*.

[12] *See* Jodie McCullough, *As the Death Toll in Stifling Texas Prisons Climbs, Congressional Democrats Ask for Investigation*, TEX. TRIB. (Aug. 21, 2023), https://www.texastribune.org/2023/08/21/texas-prison-heat-deaths/.

[13] *See id*.

[14] *See id*.

[15] *See* Emily Wax-Thibodeaux, *For Inmates, Little Escape from Brutal Heat in Prisons Without Air Conditioning*, WASH. POST (July 30, 2024), https://www.washingtonpost.com/nation/2024/07/30/prisons-heat-waves-deaths-air-conditioning/.

[16] *See* Cole v. Collier, No. 4:14-CV-1698, 2017 WL 2178526, at *3 (S.D. Tex. July 19, 2017).

[17] *See* Julianne Skarha et al., *Provision of Air Conditioning and Heat-Related Mortality in Texas Prisons*, 5 JAMA NETWORK OPEN 1, 1 (2022).

conditioning to extreme heat.[18] Climate change will only make conditions more dangerous by increasing average temperatures, intensifying heat waves, and causing more extreme weather events.[19]

Prison officials have a constitutional duty to ensure safe conditions of incarceration and a legal responsibility to provide safe working conditions for prison staff as the climate changes.[20] Exposure to consistently hot temperatures may violate prisoners' constitutional rights.[21] The Supreme Court established that cold temperatures, combined with a failure to provide blankets, could violate the Eighth Amendment by depriving incarcerated people of warmth—an "identifiable human need."[22] The Fifth Circuit expanded this into a more general statement of a "prisoner's right to be free from extreme temperatures,"[23] and held that the constitutional duty to provide humane conditions of incarceration includes keeping temperatures within a safe range.[24] This is particularly important for incarcerated people who "are taking medications or have health conditions that prevent their bodies from adjusting to high heat."[25] Prison officials can also be held liable in wrongful death cases where officials knew that high temperatures posed a serious health

[18] *See id.* at 1.

[19] *See* Paloma Wu & D. Korbin Felder, *Hell and High Water: How Climate Change Can Harm Prison Residents and Jail Residents, and Why COVID-19 Conditions Litigation Suggests Most Federal Courts Will Wait-And-See When Asked to Intervene*, 49 FORDHAM URB. L. J. 259, 274 (2022); DANIEL W. HOLT, SABIN CENTER FOR CLIMATE CHANGE LAW, HEAT IN US PRISONS AND JAILS: CORRECTIONS AND THE CHALLENGE OF CLIMATE CHANGE (2015).

[20] *See* HOLT, *supra* note 19, at 33, 53–54.

[21] *See* Webb v. Livingston, 618 F. App'x 201, 207–08 (5th Cir. 2015) (citing Gates v. Cook, 376 F.3d 323, 340 (5th Cir. 2004)).

[22] Wilson v. Seiter, 501 U.S. 294, 304 (1991).

[23] Webb, 618 F. App'x at 209.

[24] *See* Ball v. LeBlanc (Ball I), 792 F.3d 584, 596 (5th Cir. 2015); Gates v. Cook, 376 F.3d 323, 340 (5th Cir. 2004); Graves v. Arpaio, 623 F.3d 1043, 1049 (9th Cir. 2010) (per curiam); *see also* Farmer v. Brennan, 511 U.S. 825, 832 (1994) ("The Constitution does not mandate comfortable prisons, but neither does it permit inhumane ones." (internal quotation marks and citation omitted)).

[25] Jones'El v. Berge, No. 00–C–421–C, 2003 WL 23109724, at *1 (D. Wis. Nov. 26, 2003).

risk to an individual and "made no effort to rectify the excessive heat and lack of ventilation" despite being warned.[26]

In a few cases, courts have ordered prisons to limit exposure to high temperatures or provide other relief. The Ninth Circuit upheld an injunction requiring Arizona to "provide pretrial detainees taking psychotropic medications with housing in which the temperature does not exceed 85° F."[27] The Seventh Circuit upheld an order requiring Wisconsin to install air conditioning in a super-maximum security prison.[28] And the Fifth Circuit upheld an injunction ordering Mississippi to provide class members with "fans, ice water, and daily showers when the heat index is 90 degrees or above."[29]

However, litigation aimed at improving prison conditions faces significant barriers. The Prison Litigation Reform Act (PLRA) constrains litigation involving incarcerated individuals through barriers to settlement, a requirement of physical injury, and limits on attorney's fees that make it more difficult for incarcerated individuals to obtain representation.[30] PLRA also requires injunctive relief to be "narrowly drawn" and the "least intrusive means necessary to correct the violation of [a] Federal right."[31] The Fifth Circuit has interpreted this requirement as preventing courts from requiring states to install air conditioning in prisons to address extreme heat. In *Ball v. LeBlanc*, the court affirmed that housing death row prisoners "in very hot cells without sufficient access to heat-relief measures, while knowing that each suffers from conditions that render him extremely vulnerable to serious heat-related injury, violates the Eighth Amendment" and affirmed that injunctive relief was appropriate.[32]

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[26] Brock v. Warren Ctny., 713 F. Supp. 238, 243 (E.D. Tenn. 1989); *see also* Webb v. Livingston, 618 F. App'x 201, 205 (5th Cir. 2015) (consolidating cases and affirming that pleaded allegations of heat-induced deaths, if true, were sufficient to overcome prison officials' qualified immunity, specifically noting that "decedent had a heat-sensitive disability that made them particularly vulnerable to heatstroke at high temperatures").

[27] Graves, 623 F.3d at 1045.

[28] *See* Jones–El v. Berge, 374 F.3d 541, 542 (7th Cir. 2004).

[29] Gates, 376 F.3d at 336.

[30] *See* Emily C. Gribble & David N. Pellow, *Climate Change and Incarcerated Populations: Confronting Environmental and Climate Injustices Behind Bars*, 49 FORDHAM URB. L.J. 341, 368–69 (2022).

[31] 18 U.S.C. § 3626(a)(1)(A).

[32] Ball v. LeBlanc (Ball I), 792 F.3d 584, 596 (5th Cir. 2015).

Yet, the court concluded that the scope of an injunction issued by the district court violated PLRA, first in that it "effectively" required Louisiana to install air conditioning when more limited remedies—such as installing additional ice machines—were available, and second in that it ordered facility-wide changes rather than ordering relief specific to the plaintiffs.[33] Three years later, the court struck down a second order crafted by the district court on remand that set a maximum allowable heat index.[34]

Even when prison officials have agreed to install air conditioning through a settlement agreement, noncompliance with the terms of the settlement has prevented incarcerated people from obtaining relief.[35] In *Cole v. Collier*, a class action on behalf of individuals incarcerated in Texas's Pack Unit, TDCJ agreed in a settlement to install air conditioning, house all class members in areas where the heat index does not exceed 88 ºF in summer months, notify class counsel if equipment malfunctions, and transport heat-sensitive subclass members in air conditioned vehicles.[36] The Southern District of Texas has since noted a "repeated pattern of violations" of the settlement agreement, which included air conditioning unit malfunctions that were not reported to counsel and misrepresentations to the court.[37] Some class members also claimed retaliatory action by TDCJ, which the court found plausible enough to order limited discovery.[38]

Climate change will amplify the dangers posed by extreme heat and exacerbate other environmental threats to the health and safety of incarcerated people, especially those who are medically vulnerable.[39] Prisons are largely ill-prepared to cope with the environmental stresses created by extreme weather, and adaptation will be a major

[33] Ball I, 792 F.3d at 598.

[34] *See* Ball v. LeBlanc (Ball II), 881 F.3d 346, 351–52 (5th Cir. 2018).

[35] *See* Cole v. Collier, No. 4:14-CV-1698, 2023 WL 1967951, at *1–2 (S.D. Tex. Feb. 10, 2023)

[36] *See* Cole v. Collier, No. 4:14-CV-1698, 2018 WL 2766028 (S.D. Tex. June 8, 2018).

[37] *See* Cole v. Collier, No. 4:14-CV-1698, 2019 WL 6733002, at *1–3 (S.D. Tex. Dec. 11, 2019).

[38] *See* Cole v. Collier, 2023 WL 1967951, at *3.

[39] *See infra* Part I.

challenge and strain on prison budgets.[40] Federal facilities alone already have "unfunded modernization and repair needs with a total estimated cost approaching $2 billion," including over $200 million needed for HVAC.[41] Even when funding is available, lawmakers may be unwilling to spend it on air conditioning improvements.[42] Efforts to compel improvements in conditions through litigation must contend with the barriers imposed by PLRA, the difficulty of ensuring ongoing compliance, and the cost and time required to bring a successful case.[43]

Medically vulnerable individuals facing urgent health threats due to climate change-driven heat and storms do not have time to wait for lengthy civil rights litigation or budget negotiations to improve conditions. For these individuals, this Note proposes an alternative remedy: seeking compassionate release.

A search of cases on Westlaw and Lexis indicates that climate change has never been invoked to justify compassionate release. However, prison conditions that posed health risks to vulnerable individuals were used to justify compassionate release during the COVID-19 pandemic. Between October 2019 and September 2021, federal courts granted more than 3,800 people compassionate release following passage of the First Step Act.[44] During this period, courts cited the pandemic as part of their justification for release in more than 60% of cases.[45] While courts generally agreed that the

[40] *See* HOLT, *supra* note 19, at 69–72.

[41] U.S. DEP'T OF JUST., AUDIT OF THE FEDERAL BUREAU OF PRISONS' EFFORTS TO MAINTAIN AND CONSTRUCT INSTITUTIONS, NO. 23-063, at ii, 11 (2023) [hereinafter 2023 BOP AUDIT].

[42] *See, e.g.*, Jodie McCullough, *Despite Budget Surplus, Texas Legislature Makes Little Money Available for Prison Air Conditioning*, TEX. TRIB. (May 26, 2023), https://www.texastribune.org/2023/05/26/texas-prisons-air-conditioning/.

[43] *See* Cole v. Collier, No. 4:14-CV-1698, 2017 WL 3049540, at *2–3 (S.D.Tex., 2017) (noting that previous litigation included a four-day evidentiary hearing on class certification, a four-day evidentiary hearing for a preliminary injunction ordering provision of arsenic-free water, and then a nine-day evidentiary hearing on conditions of extreme heat, which included testimony from four expert witnesses).

[44] *See* U.S. SENT'G COMM'N, COMPASSIONATE RELEASE DATA REPORT, FISCAL YEARS 2020 TO 2022 4 (2022) [hereinafter U.S.S.C. 2020–2022 DATA REPORT].

[45] *See id.* at 17, 19.

pandemic alone did not justify release, courts in thousands of cases found that an individual's age and medical conditions, along with the risk of infection in their prison facility, made them particularly vulnerable to the virus, creating "extraordinary and compelling" reasons for release.[46] The incorporation of environmental risk factors into court evaluations is bolstered by the recent update to the U.S. Sentencing Commission's guidelines on compassionate release, which added a justification based on a "public health emergency" and clarified that circumstances may be considered in combination.[47]

This Note begins by summarizing the ways in which climate change threatens the health and safety of incarcerated individuals. It then discusses how federal courts applied compassionate release during the COVID-19 pandemic and analogizes to how similar reasoning could be applied in the context of climate change. Finally, the Note walks through a hypothetical case study, applying the tests for compassionate release developed during the COVID-19 pandemic and under the Sentencing Commission's updated guidelines to the conditions of extreme heat at FCI Seagoville during the summer of 2023.

I. VULNERABILITY OF INCARCERATED PEOPLE TO CLIMATE CHANGE IMPACTS

Human activity, particularly the burning of fossil fuels, is pumping greenhouse gases into the atmosphere.[48] These gases trap heat, raising global temperatures and disrupting weather patterns. 2024 was the hottest year on record, continuing a warming trend that scientists predict will accelerate.[49] All regions of the United

[46] *See, e.g.*, United States v. Salvagno, 456 F. Supp. 3d 420, 427–28 (N.D.N.Y. 2020).

[47] *See* U.S. SENT'G COMM'N, AMENDMENTS TO THE SENTENCING GUIDELINES, POLICY STATEMENTS, OFFICIAL COMMENTARY, AND STATUTORY INDEX 2–3 (2023) [hereinafter U.S.S.G. AMENDMENTS COMMENTARY]; *see infra* Part II.B.

[48] *See* ALEXA K. JAY ET AL., OVERVIEW: UNDERSTANDING RISKS, IMPACTS AND RESPONSES, IN FIFTH NATIONAL CLIMATE ASSESSMENT 1-13 (2023), https://nca2023.globalchange.gov/downloads/NCA5_Ch1_Overview.pdf.

[49] *See 2024 Was the World's Warmest Year on Record*, NAT'L OCEANIC AND ATMOSPHERIC ADMIN. (Jan. 10, 2025), https://www.noaa.gov/news/2024-was-worlds-warmest-year-on-record*; see also* Damian Carrington, *2023 Smashes Record for World's Hottest Year by Huge Margin*, GUARDIAN (Jan. 9, 2024),

States are experiencing warming temperatures, and heatwaves have become longer, more frequent, and more intense.[50] According to the U.S. Environmental Protection Agency (EPA), multiple forms of extreme weather have become more frequent and severe due to climate change, including heavy rain, flooding, drought, wildfire, and hurricanes.[51] Extreme weather events now cost the U.S. nearly $150 billion each year, with a billion-dollar disaster occurring every three weeks on average, as compared to every four months in the 1980s, adjusted for inflation.[52]

Greenhouse gas emissions are continuing to increase. Even under the most ambitious emissions reduction pathways, global temperatures would continue to rise through mid-century.[53] While there is uncertainty in the precise degree of warming that will occur, there is broad scientific consensus that climate change will cause society- and economy-wide disruption.[54] Heat waves will continue to expand in duration, frequency, and spatial extent, affecting larger numbers of people and placing high levels of stress on the power grid.[55] Rising temperatures and more frequent extreme weather events threaten water supplies, food systems, property, infrastructure, and human health.[56] Health-related impacts from climate change include: increased heat stress; wider distribution of infectious diseases; and worsened air quality from wildfire smoke, dust, and pollen.[57] These stressors will "exacerbate long-standing disparities that

https://www.theguardian.com/environment/2024/jan/09/2023-record-world-hottest-climate-fossil-fuel.

[50] *See* JAY ET AL., *supra* note 48, at 16; *Climate Change Indicators: Heat Waves*, EPA, https://www.epa.gov/climate-indicators/climate-change-indicators-heat-waves (June 2024).

[51] *See* JAY ET AL., *supra* note 48, at 16.

[52] *See id.* at 16–17 (noting that damage estimates do not take into account loss of life, healthcare-related costs, or damages to ecosystem services).

[53] *See id.* at 13.

[54] *See id.* at 23–36.

[55] *See* Bradfield Lyon et al., *Projected Increase in the Spatial Extent of Contiguous US Summer Heat Waves and Associated Attributes*, 14 ENV'T. RSCH. LETTERS 1, 8 (2019).

[56] *See* JAY ET AL., *supra* note 48, at 23–28.

[57] *See id.* at 28.

result in inequitable health outcomes for historically marginalized people."[58]

While climate change affects everyone, the impacts are not evenly distributed, and incarcerated people as a group are particularly vulnerable due to their physical confinement and demographic characteristics.[59] An individual's vulnerability to climate change impacts can be described as the product of three factors: (1) their *exposure* to hazards such as extreme heat or weather, (2) their *sensitivity* due to factors such as their age or health conditions, and (3) their *adaptive capacity*, or ability to change their surroundings in response to hazards.[60] Each of these factors, examined below, contribute to the vulnerability of incarcerated individuals.

I begin with an overview of incarcerated individuals' exposure to climate change-related hazards based on the physical locations and conditions of jails and prisons, with a particular focus on heat waves and extreme weather. In this section, I also summarize the potential second-order impacts stemming from the disruptive effect of climate change on social and economic systems. I then summarize demographic factors, including age and medical conditions, that contribute to the overall sensitivity of the incarcerated population to climate change-related hazards. Finally, I look at barriers to adaptation facing incarcerated individuals, including their inability to relocate and limited access to tools to adapt in place.

A. *Exposure*

Approximately 1.8 million people were incarcerated across the Unites States as of late 2022, roughly 35% in local jails, 56% in state prisons, and 8% in federal prisons.[61] Nine of the 10 states with the

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[58] *Id.* at 29.

[59] *See* Wu & Felder, *supra* note 19, at 262; Njideka C. Motanya & Pamela Valera, *Climate Change and Its Impact on the Incarcerated Population: A Descriptive Review*, 31 SOC. WORK PUB. HEALTH 348, 349 (2016).

[60] *See Climate Change and Human Health,* EPA, https://www.epa.gov/climateimpacts/climate-change-and-human-health (last visited Feb. 6, 2024).

[61] *See* JACOB KANG-BROWN ET AL., PEOPLE IN JAIL AND PRISON IN 2022 2 (2023), https://vera-institute.files.svdcdn.com/production/downloads/publications/People-in-Jail-and-Prison-in-2022.pdf (reporting a total of 1.8 million people were incarcerated in fall of 2022, 677,000 of whom were in local jails); E. ANN CARSON & RICH KLUCKOW, PRISONERS IN 2022—STATISTICAL TABLES 5 (2023), https://bjs.ojp.gov/document/p22st.pdf (reporting 1.2 million people were in US

highest rates of incarceration are located in the South.[62] No comprehensive research has been done into the specific climate change risks facing each correctional facility in the United States. However, the entire country is facing changes driven by climate change. As discussed below, projections of the widespread risks, combined with research on how changing climate conditions will affect prisons, indicate that incarcerated individuals will have high exposure to the risks posed by higher temperatures, extreme weather, and the secondary effects of climate change.

1. Heat

Extreme heat is one of the deadliest climate change-related hazards and will affect a growing number of people as global temperatures rise.[63] By the middle of this century, the numbers of days with a heat index—a measure of perceived heat based on temperature and humidity—over 100 °F is expected to double in the United States, and the number of days with a heat index exceeding 105 °F is projected to triple, compared to a 1971–2000 baseline.[64] The South and Southeast are projected to see the largest increases in the number of days of extreme heat each year, and portions of Texas, Louisiana, and Florida are expected to experience 50 to 100 days per year with a heat index over 105 ºF, a five-fold increase over historical conditions.[65] Research shows that prisons in various states including Arizona, California, Nevada, and Georgia have experienced more extreme heat than these states as a whole, perhaps due to decisions to build prisons in deserts and swampy locations.[66] The analysis found

prisons as of the end of 2022, 159,309 in federal custody and 1,070,834 in state custody).

62 *See* KANG-BROWN ET AL., *supra* note 61, at 15.

63 *See* HOLT, *supra* note 19, at 5.

64 *See* Kristina Dahl et al., *Increased Frequency of and Population Exposure to Extreme Heat Index Days in the United States During the 21st Century*, 1 ENV'T RSCH. COMMC'NS 075002, 075002 (2019). Heat index is a combination of temperature and relative humidity, a measure of the risk of heat stress used by the National Weather Service because elevated humidity reduces the human body's ability to cope with high temperatures. *Heat Forecast Tools*, NAT'L WEATHER SERV., https://www.weather.gov/safety/heat-index (last visited Feb. 27, 2024).

65 *See* Dahl et al., *supra* note 64, at 6.

66 *See* Cascade Tuholske et al., *Hazardous Heat Exposure Among Incarcerated People in the United States*, 7 NATURE SUSTAINABILITY 394, 395 (2024).

that people incarcerated in state prisons in Texas, Florida, Arizona, and Louisiana experienced the greatest number of dangerously hot and humid days.[67] These states are among those projected to see the greatest increases in the number of days of extreme heat, indicating that significant numbers of incarcerated people will be exposed to extended periods of extreme heat.

High summer temperatures and heat waves have already caused heat-related deaths and illnesses within prisons, though the specific number of heat-related deaths is uncertain as these deaths are often attributed to other causes, such as cardiac arrest.[68] In order to understand the effect of heat on death rates within prisons, researchers compared data on deaths in U.S. state and private prisons with daily maximum temperature data for June, July, and August from 2001 to 2019. They found that an increase of 10 ºF "was associated with a 5.2% . . . increase in total mortality and a 6.7% . . . increase in heart disease mortality."[69] Three-day heat waves were deadlier than two-day heat waves, consistent with the fact that longer periods of extreme heat take a greater physical toll.[70] The greatest increases in mortality rates were observed among people ages 65 and older, those incarcerated less than one year or more than 10 years, and those incarcerated in the Northeast.[71] The authors of the study suggest that lack of acclimatization to high heat and prison conditions may explain the higher rates of death among people incarcerated in the Northeast and those incarcerated less than one year, while the higher rates of death among people incarcerated over 10 years may be explained by negative effects of incarceration on an individual's health.[72] Heat waves were also associated with a

67 *See id.* at 394.

68 *See* HOLT, *supra* note 19, at ii, 5.

69 Julianne Skarha et al., *Heat-related mortality in U.S. State and Private Prisons: A Case-crossover Analysis*, 18 PLOS ONE 1, 1 (2023).

70 *See id.* at 5.

71 *See id.* at 9–10.

72 *See id.* at 10.

22.8% increase in suicides.[73] The authors note that the study does not capture heat related illnesses that did not result in death.[74]

The problem of heat-related deaths and illness has been particularly pronounced in Texas, where summer temperatures routinely exceed 100 ºF and more than two thirds of the state's prisons lack air conditioning.[75] The state has faced litigation over heat-related deaths and illnesses[76] and litigation from plaintiffs claiming that excessive heat violates incarcerated individuals' constitutional and civil rights.[77] Between 1998 and 2012, the Texas Department of Criminal Justice (TDCJ) reported 23 prisoner deaths due to heat related causes.[78] In 2023, TDCJ said that no incarcerated person had died of heat in state prisons since 2012.[79] Public health researchers, advocates, and family members of incarcerated persons dispute

[73] *See id.* at 1. A study by the Vera Institute found that the average number of self-harm incidents in Louisiana solitary confinement units were correlated with average monthly heat index. *See* DAVID CLOUD ET AL., THE SAFE ALTERNATIVES TO SEGREGATION INITIATIVE: FINDINGS AND RECOMMENDATIONS FOR THE LOUISIANA DEPARTMENT OF PUBLIC SAFETY AND CORRECTIONS, AND PROGRESS TOWARD IMPLEMENTATION 40–41 (2019), https://www.vera.org/downloads/publications/safe-alternatives-segregation-initiative-findings-recommendations-ldps.pdf.

[74] *See* Skarha et al. (2023), *supra* note 69, at 11.

[75] *See* Matthew Clarke & Christopher Zoukis, *Litigation Heats Up Over Extreme Temperatures in Prisons, Jails*, PRISON LEGAL NEWS (June 29, 2018), https://www.prisonlegalnews.org/news/2018/jun/29/litigation-heats-over-extreme-temperatures-prisons-jails/.

[76] *See, e.g.*, Hinojosa v. Livingston, 807 F.3d 657, 666 (5th Cir. 2015); Webb v. Livingston, 618 F. App'x 201 (5th Cir. 2015); Martone v. Livingston, No. 4:13-CV-3369, 2014 WL 3534696 (S.D. Tex. July 16, 2014); *see also* Brief for Families of Deceased Texas Prisoners as Amici Curiae Supporting Plaintiffs, Ball v. LeBlanc (Ball I), 792 F.3d 584 (5th Cir. 2015) (No. 14-30067), 2014 WL 5106159.

[77] *See, e.g.*, Cole v. Collier, No. 4:14-CV-1698, 2017 WL 3049540, at *3 (S.D.Tex., 2017) (granting injunction requiring TDCJ to "redress conditions that are alleged to create an unconstitutional risk of heat-related illnesses" in class action); Blackmon v. Garza, 484 F. App'x 866, 867 (5th Cir. 2012) (reversing district court's dismissal as a matter of law of petitioner's Eighth Amendment deliberate indifference claim over exposure to excessive heat).

[78] *See* Clarke & Zoukis, *supra* note 75; Pooja Salhotra & William Melhado, *Texas Inmates are Being 'Cooked to Death' in Extreme Heat, Complaint Alleges*, TEX. TRIB. (Apr. 22, 2024), https://www.texastribune.org/2024/04/22/texas-prisons-heat-deaths/ ("Although the state has not reported a heat-related death since 2012, researchers and inmates' families dispute those statistics").

[79] *See* McCullough, *supra* note 12.

TDCJ's figures. An independent statistical analysis of deaths in Texas prisons between 2001 and 2019 found an average of 14 deaths per year were associated with heat in Texas prisons without air conditioning, compared to no deaths associated with heat in prisons with air conditioning.[80] In 2023, at least 41 individuals incarcerated in Texas died of heart-related or unknown causes during record-breaking summer heat waves, including a dozen individuals in their 20s and 30s. Family members of those who died "insist[ed] at least some of those deaths were caused by the heat."[81] During the summer of 2024, John Castillo died in a Texas prison without air conditioning; his body temperature was 107.5 ºF, yet officials did not attribute his death to extreme heat.[82]

Taken together, the projected increase in extreme heat across the United States and the effect of heat on death rates in prisons indicate that incarcerated people will face significant increases in heat related illness and death as a result of climate change.[83] While people incarcerated in the South are projected to experience the greatest increase and highest number of days of extreme heat, people incarcerated in the Northeast may be susceptible to heat-related illness because they are not accustomed to high temperatures and humidity.

2. Flooding and Storms

As climate-change related disasters become more frequent,[84] prisons will increasingly be exposed to disasters including floods, hurricanes, and wildfires. During past storms, including Hurricanes Katrina and Harvey, incarcerated individuals have been trapped in flooded buildings without access to power, food, water, ventilation,

80 *See* Skarha et al., *supra* note 17, at 1.

81 *See* McCullough, *supra* note 13.

82 *See* Lauren McGaughy, *An Inmate's Body Temp Was 107.5 When He Died. The State of Texas Says Heat Did Not Kill Him.*, KUT NEWS (July 29, 2024), https://www.kut.org/crime-justice/2024-07-29/investigation-texas-prison-heat-inmate-deaths-ac-autopsy-lawsuit.

83 *See* HOLT, *supra* note 19, at 5.

84 *See* David Gelles & Austyn Gaffney, *'We're in a New Era': How Climate Change Is Supercharging Disasters*, N.Y. TIMES (Jan. 10, 2025, updated Jan. 16, 2025), https://www.nytimes.com/2025/01/10/climate/california-fires-climate-change-disasters.html.

or medication.[85] One measure of the risk facing each county is the Expected Annual Loss (EAL), a projection of financial loss due to 18 different natural hazards calculated by the U.S. Federal Emergency Management Agency (FEMA) for each county of the United States.[86] Using 2010 census data on incarceration, researchers found that there is overlap between states with the highest EAL rates and highest incarceration rates.[87] In particular, Texas, Florida, North Carolina, and California collectively contain over 30% of the counties with both the highest EAL scores and highest incarceration rates, indicating that large numbers of incarcerated individuals in these states may be exposed to disasters exacerbated by climate change.[88] Additionally, thirteen federal prisons housing more than 17,000 individuals are located within seventy-five miles of the Gulf Coast, an area that is particularly prone to hurricanes.[89]

3. Additional Risks

Heat, extreme weather, and the cumulative disruptive effect of climate change on society will also have a series of secondary effects within prisons. Climate change will increase exposure to

[85] *See* NAT'L PRISON PROJECT OF THE AM. C.L. UNION, ABANDONED & ABUSED: ORLEANS PARISH PRISONERS IN THE WAKE OF HURRICANE KATRINA 9 (2006), https://www.aclu.org/wp-content/uploads/publications/oppreport20060809.pdf; Daniel A. Gross, *Weathering a Hurricane in Prison*, NEW YORKER (Sept. 8, 2017), https://www.newyorker.com/sections/news/weathering-a-hurricane-in-prison.

[86] *See Expected Annual Loss*, FED. EMERGENCY MGMT. AGENCY, https://hazards.fema.gov/nri/expected-annual-loss (last visited Feb. 27, 2024) (noting the hazards included in the EAL calculation are avalanche, coastal flooding, cold wave, drought, earthquake, hail, heat wave, hurricane, ice storm, landslide, lightning, riverine flooding, strong wind, tornado, tsunami, volcanic activity, wildfire, and winter weather).

[87] *See* Kristen N. Cowan et al., *Overlapping Crises: Climate Disaster Susceptibility and Incarceration*, 19 INT. J. ENV'T RES. PUB. HEALTH 7431, 7434 (2022).

[88] *See id*.

[89] *See* Maggie Sullivan, *Prisons, Immigration Detention Centers, and Natural Disasters: An Eighth Amendment Right to Risk Reduction*, 28 TEX. J. C.L. & C.R. 85, 91 (2022).

wildfire smoke[90] and infectious diseases[91] generally, which will also affect incarcerated people.[92] Prisons may be affected by disruptions to the food supply, as well as water shortages.[93] Intense heat may also be correlated with increased violence within prisons; a study of Mississippi correctional facilities found the number of violent acts was 20% higher on days with an average temperature above 80 ºF.[94]

Additionally, climate change will strain prison infrastructure and the power grid. Power outages may become more frequent, driven both by high demand placed on the grid during heat waves

[90] *See Climate Change Indicators: Wildfires*, EPA, https://www.epa.gov/climate-indicators/climate-change-indicators-wildfires (last visited Feb. 27, 2024); *see also* Whitney Woodworth, *1,303 Inmates Evacuated from Coffee Creek Prison Due to Wildfires*, SALEM STATESMAN J, https://www.statesmanjournal.com/story/news/2020/09/10/oregon-wildfires-inmates-evacuated-coffee-creek-prison-santiam-riverside/3463532001 (Sept. 10, 2020). Smoke exposure and fire risk generally are especially grave concerns for incarcerated people working as wildfire fighters, although the labor implications are outside the scope of this article. *See* Note, *Climate Carceralism: The Future of Climate-Linked Prison Labor*, 137 HARV. L. REV. 706, 717 (2023); Maisie Ide, *Behind Bars and Flames: Protecting the Occupational Health and Safety of California's Incarcerated Firefighters*, 42 Berkeley J. Emp. & Lab. L. 237, 242 (2021).

[91] *See, e.g.*, Kris A. Murray et al., *Tracking Infectious Diseases in a Warming World*, 371 CLIMATE CHANGE & COMMUNICABLE DISEASES 1, 2 (2020) (finding climate change is increasing the environmental suitability of transmission of dengue, malaria, and *Vibrio* bacteria); *see also* Melissa Matlock et al., *A Case Study of Valley Fever in Central California*, 16 INT'L J. ENV'T RES. PUB. HEALTH 3254 (2019) (noting that people in prison are vulnerable to Valley Fever, a fungal respiratory disease that is "climate-sensitive", because of their living conditions).

[92] *See, e.g.*, Elizabeth Weill-Greenberg, Ethan Corey & Meg O'Connor, *LA's Wildfires Threaten Almost 40 Prisons and Jails. Here's How They're Responding.*, THE APPEAL (Jan 9, 2025), https://theappeal.org/los-angeles-wildfires-fires-threaten-prisons-jails/.

[93] *See* HOLT, *supra* note 19, at 6; *see also* AISHAH ABDALA ET AL., HIDDEN HAZARDS: THE IMPACTS OF CLIMATE CHANGE ON INCARCERATED PEOPLE IN CALIFORNIA STATE PRISONS 32 (2023), https://ellabakercenter.org/wp-content/uploads/2023/06/Hidden-Hazards-Report-FINAL.pdf (63% of incarcerated survey respondents in California reported that "their shower use had been limited, justified by claims of conserving water").

[94] *See* Anita Mukherjee & Nicholas J. Sanders, *The Causal Effect of Heat on Violence: Social Implications of Unmitigated Heat Among the Incarcerated* 2 (Nat'l Bureau of Econ. Rsch., Working Paper No. 28987, 2021).

and by more intense storms.[95] Buildings and mechanical systems are vulnerable to damage from high heat and flooding.[96] Prison buildings are already in disrepair; the Bureau of Prisons "identified a large and growing list of unfunded modernization and repair needs with a total estimated cost approaching $2 billion" as of May 2022.[97] The top three areas of unfunded needed repairs were roofs ($219 million), HVAC ($212 million), and electrical systems ($199 million).[98] A 2022 Department of Justice Office audit noted facilities had issues "including cracking and separating concrete, housing units with no air conditioning, failed equipment, small water leaks in ceilings, outdated albeit operational temperature controls, and a roof with soft spots and blisters."[99] In recent years, while the Bureau of Prison's overall budget has grown, relatively little of its budget has gone to addressing the conditions of its prison buildings.[100] As climate change strains state and federal budgets, even less money may be available to maintain prison facilities.[101] Poor and deteriorating building conditions—including lack of air conditioning, poor ventilation, unreliable electrical systems, and leaky roofs—further exacerbate the exposure of those living and working inside to climate change-related hazards.

Finally, climate change will also affect correctional officers in ways that may further compromise the health of incarcerated people. Prison staff also suffer from heat stress when working in

95 *See* Charles Fant et al., *Climate Change Impacts and Costs to U.S. Electricity Transmission and Distribution Infrastructure*, 195 ENERGY (2020) 116899; HOLT, *supra* note 19, at 6.

96 *See* HOLT, *supra* note 19, at 6.

97 2023 BOP AUDIT, *supra* note 41, at ii.

98 *See id.* at 11.

99 *Id.* at ii.

100 *See* NATHAN JAMES, CONG. RSCH. SERV., R42486, APPROPRIATIONS FOR THE BUREAU OF PRISONS (BOP): IN BRIEF 3, 6 (Jan. 29, 2018) (noting that the bulk of BOP's budget goes to Salaries and Expenses, not Buildings and Facilities, and that increases in Buildings and Facilities funding generally correspond to construction of new prisons); *see also* NATHAN JAMES, CONG. RSCH. SERV., R47157, OVERVIEW OF FY2023 APPROPRIATIONS FOR COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES (CJS) 6 (2023) (noting in FY 2023, BOP requested 23.7% less for Buildings and Facilities than the FY 2022 appropriation).

101 *See* Wu & Felder, *supra* note 19, at 271–72.

facilities that lack air conditioning,[102] and extreme weather may prevent them from getting to and from work, leaving facilities understaffed.[103] Existing staffing shortages have led to lengthy lockdowns and increased violence, and have disrupted incarcerated individuals' access to medical care, family visits, education, and law libraries.[104] Climate change-driven occupational hazards, along with economic pressure on state budgets which could limit hiring and wage increases, may worsen chronic understaffing, with serious implications for the wellbeing of both incarcerated people and prison staff.[105]

B. *Sensitivity*

Demographic characteristics of incarcerated individuals in the U.S. make incarcerated people, as a group, more sensitive to health risks from climate change shocks. The U.S. prison population is increasingly elderly, a change driven in large part by lengthy sentences.[106] At the end of 2022, there were "186,000 persons age 55 or older in state and federal prisons . . . a 4% increase" from the previous year.[107] By 2030, an estimated 400,000 persons age 55 and older are projected to be incarcerated, accounting for "nearly one third of the entire American prison population."[108] Elderly incarcerated individuals are also more likely than their peers on the outside

[102] *See* HOLT, *supra* note 19, at 32.

[103] *See, e.g.*, Gabrielle Banks, *Texas Prisons Take Hit from Harvey, Complaints of Water, Sewage Problems Surface*, CHRON (Sept. 4, 2017), https://www.chron.com/news/houston-texas/article/Texas-prisons-take-hit-from-Harvey- complaints-of-12172438.php.

[104] *See* Mario Koran & Justin Mayo, *10 Guards, 900 Inmates and the Dire Results of Warnings Ignored*, N.Y. TIMES (Feb. 2, 2024), https://www.nytimes.com/2024/02/02/us/wi-prison-staffing-shortage.html; *see also* Shannon Heffernan & Weihua Li, *New Data Shows How Dire the Prison Staffing Shortage Really Is*, MARSHALL PROJECT (Jan. 10, 2024), https://www.themarshallproject.org/2024/01/10/prison-correctional-officer-shortage-overtime-data.

[105] *See* Wu & Felder, *supra* note 19, at 262, 265–66.

[106] *See* E. ANN CARSON & WILLIAM J. SABOL, AGING OF THE STATE PRISON POPULATION, 1993–2013 1 (2016)*; see also* Julia Vitale, *A Look at the United States' Aging Prison Population Problem*, INTERROGATING JUST. (Apr. 7, 2021), https://perma.cc/SLU8-S3MA.

[107] CARSON & KLUCKOW, *supra* note 61, at 21.

[108] George Pro & Miesha Marzell, *Medical Parole and Aging Prisoners: A Qualitative Study*, 23(2) J. CORRECTIONAL HEALTH CARE 162, 162 (2017).

to suffer one or more chronic health conditions, and they are more likely to have untreated mental illnesses.[109]

As of 2012, 40% of state and federal prisoners reported having a current chronic medical condition, a rate higher than the general public. A "majority of prisoners (74%) and jail inmates (62%) were overweight, obese, or morbidly obese," and 9.8% of state and federal prisoners reported having heart-related problems, compared to 2.9% of the general population.[110] Among those with a current chronic condition, "66% of prisoners and 40% of jail inmates" reported taking prescription medication.[111] The high rate of chronic medical conditions among incarcerated individuals intersects with underlying racial and socioeconomic health disparities, as Black, Latino, and Indigenous persons are disproportionately incarcerated and are also affected by higher rates of chronic medical conditions.[112]

Old age and certain chronic medical conditions, including obesity and heart disease, can increase an individual's sensitivity to climate change impacts, including heat.[113] Additionally, various medications used to treat physical and mental health conditions interfere with the body's ability to cope with high temperatures, increasing the risk of heat-related illness.[114] High rates of chronic medical conditions and medication use, as well as the increasing age of the

[109] *See* Brie A. Williams et al., *Addressing the Aging Crisis in U.S. Criminal Justice Health Care*, 60 J. AM. GERIATRICS SOC. 1150, 1151 (2012).

[110] LAURA M. MARUSCHAK ET AL., BUREAU OF JUST. STAT., MEDICAL PROBLEMS OF STATE AND FEDERAL PRISONERS AND JAIL INMATES, 2011–12 1, 3 (2015).

[111] *Id.* at 1.

[112] *See generally* Denise N. Obinna, *Confronting Disparities: Race, Ethnicity, and Immigrant Status as Intersectional Determinants in the COVID-19 Era*, 48(4) HEALTH EDUC. & BEHAV. 397, 397 (2021); Gribble & Pellow, *supra* note 30, at 341.

[113] *See Climate Change and the Health of Older Adults*, EPA, https://www.epa.gov/climateimpacts/climate-change-and-health-older-adults (last visited Dec. 22, 2024); *Climate Change and the Health of People with Chronic Medical Conditions*, EPA, https://www.epa.gov/climateimpacts/climate-change-and-health-people-chronic-medical-conditions (last visited Dec. 22, 2024); *see also* HOLT, *supra* note 19, at 22–23.

[114] *See* HOLT, *supra* note 19, at 26–27.

incarcerated population, contribute to the heightened sensitivity of this population to climate change impacts.

C. *Adaptive Capacity*

The reality of being incarcerated alone limits an individual's adaptive capacity,[115] as the COVID-19 pandemic demonstrated. The virus spread quickly through prisons, driven by poor ventilation, lack of protective equipment such as masks, limited access to soap and cleaning products, and overcrowding that made social distancing impossible.[116] Prisons used widespread lockdowns and disciplinary solitary housing units to isolate infected persons, creating harsh and punitive conditions that discouraged reporting of symptoms.[117] Courts recognized the limited ability of incarcerated people to protect themselves from the virus.[118] By the summer of 2020, the infection rate in U.S. prisons was 5.5 times higher than in the outside population.[119] While officials took some steps to reduce prison populations, over 2 million people who were convicted, awaiting trial, or approved for parole were trapped as the virus spread.[120] At least

115 *See* Wu & Felder, *supra* note 19, at 262.

116 *See* Sabba Salebaigi, *Locked Up and Left Behind: Addressing Cruel and Unusual Punishments Among Senior Inmates During COVID-19 Across US Prisons*, 25 HEALTH & H.R. J. 91, 92–93 (2023); Eddie Burkhalter et al., *Incarcerated and Infected: How the Virus Tore Through the US Prison System*, N.Y. TIMES (Apr. 10, 2021), https://www.nytimes.com/interactive/2021/04/10/us/covid-prison-outbreak.html.

117 *See* Minna Song et al., *"It Was Like You Were Being Literally Punished for Getting Sick": Formerly Incarcerated People's Perspectives on Liberty Restrictions During COVID-19*, 14 AJOB EMPIRICAL BIOETHICS 155, 155 (2023).

118 *See, e.g.*, United States v. Tucker, No. CR ELH-15-0359, 2023 WL 8357340, at *9–10 (D. Md. Dec. 1, 2023) (summarizing news articles and other cases).

119 *See* Sharon Dolovich, *Mass Incarceration, Meet COVID-19*, U. CHI. L. REV. ONLINE (2020), https://lawreview.uchicago.edu/online-archive/mass-incarceration-meet-covid-19.

120 *See id.*; Rebecca Griesbach & Libby Seline, *Granted Parole or Awaiting Trial, Inmates Died of Covid-19 Behind Bars*, N.Y. TIMES (May 6, 2021), https://www.nytimes.com/2021/05/06/us/coronavirus-inmates-parole.html; *see also* Eric Reinhart & Daniel L. Chen, *Incarceration and Its Disseminations: COVID-19 Pandemic Lessons From Chicago's Cook County Jail*, 39 HEALTH AFFS. 1412, 1412 (2020); Beth Schwartzapfel, *COVID-19 Has Trapped Thousands of Parolees in Prison*, SLATE (May 7, 2020), https://slate.com/news-and-politics/2020/05/covid-19-probation-parole-limbo.html.

2,907 incarcerated people and 279 correctional staff had died of COVID-19 as of October 2022.[121]

When it comes to climate change impacts, people in prison are similarly unable to move out of harm's way to escape extreme weather.[122] During Hurricanes Katrina and Harvey, prisons were not evacuated, leaving incarcerated people exposed to dangerous flooding, chemical exposure, and infection.[123] During Hurricane Helene, people incarcerated in North Carolina prisons reported being stuck in cells without running water or electricity for nearly a week before eventually being relocated,[124] and a federal prison in South Carolina "sustained significant damage, including a roof failure and consequential flooding."[125]

According to the Department of Justice, the Bureau of Prisons "maintain[s] facility-specific contingency plans" for natural disasters.[126] Yet there is "no federally-mandated minimum level of

[121] *See* Miltonette Olivia Craig, Mijin Kim & Dawn Beichner-Thomas, *Incarcerated in a Pandemic: How COVID-19 Exacerbated the "Pains of Imprisonment"*, 49(2) CRIM. JUST. REV. 244, 245 (2023).

[122] *See* Gribble & Pellow, *supra* note 30, at 346; Sullivan, *supra* note 89, at 85.

[123] *See* NAT'L PRISON PROJECT OF THE AM. C.L. UNION, *supra* note 85, at 9 ("During [Hurricane Katrina], and for several days thereafter, thousands of men, women, and children were abandoned at [Orleans Parish Prison ("OPP")]. As floodwaters rose in the OPP buildings, power was lost, and entire buildings were plunged into darkness. Deputies left their posts wholesale, leaving behind prisoners in locked cells, some standing in sewage-tainted water up to their chests. Over the next few days, without food, water, or ventilation, prisoners broke windows in order to get air, and carved holes in the jail's walls in an effort to get to safety. Some prisoners leapt into the water, while others made signs or set fire to bed sheets and pieces of clothing to signal to rescuers."); Gross, *supra* note 85 ("During Hurricane Harvey, many Texas prisoners were locked in their cells with limited access to water and electricity. After officials decided not to evacuate a federal prison in Beaumont, Texas, hundreds of guards struggled to show up for work. Inmates said that they lost access to medication, and one prisoner told his wife that cells flooded up to calf-height.").

[124] Schuyler Mitchell, *Hurricane-Struck North Carolina Prisoners Were Locked in Cells With Their Own Feces for Nearly a Week*, INTERCEPT (Oct. 4, 2024), https://theintercept.com/2024/10/04/hurricane-helene-north-carolina-mountain-view-prison/.

[125] *Hurricane Helene*, FED. BUREAU OF PRISONS, https://www.bop.gov/resources/news/20240926-hurricane-helene.jsp (Sept. 26, 2024).

[126] U.S. DEP'T OF JUST., CLIMATE ADAPTATION PLAN: 2022 PROGRESS REPORT 5 (2022).

protection in the face of natural disasters," and efforts to pass federal legislation ensuring protections for incarcerated people during natural disasters have failed.[127] Emergency and evacuation plans for prisons across the country "suffer from disjointedness," and state emergency plans for prisons tend to focus on medical emergencies, prisoner escapes, electrical fires, and prison violence.[128] A review of state and correctional department disaster plans found that 24 states plan to use incarcerated labor to respond to disasters, yet "only six states outline protocols to keep incarcerated individuals safe in the event of a disaster."[129] Interviews conducted with 24 correctional facility administrators suggest that few correctional facilities conduct practice exercises to respond to natural disasters and that prison administrators may be reluctant to evacuate facilities due to barriers including cost, safety concerns, difficulty tracking evacuated inmates, legal and logistical hurdles.[130]

Incarcerated individuals also have limited ability to adapt in place due to their reliance on prison officials to provide for basic needs such as food, water, medical care, and adequate housing conditions, and the difficulty of filing grievances complaints to obtain access to supplies such as fans, cool water, and ice.[131] They may lack access to air conditioning to cope with extreme heat, especially in the 13 Southern states where prisons lack universal air

[127] Sullivan, *supra* note 89, at 88, 94–95 (noting that the Correctional Facility Disaster Preparedness Act was introduced in the Senate in 2020 and 2021).

[128] Motanya & Valera, *supra* note 59, 352–53; *see also* Carlee Purdum et al., *No Justice, No Resilience: Prison Abolition as Disaster Mitigation in an Era of Climate Change*, 14 ENV'T JUST. 418, 420 (2021) (citing the examples of Hurricanes Harvey and Katrina as evidence of "consistent refusal of state governments to evacuate incarcerated people even as surrounding community members are told to evacuate due to the presence of a hazard").

[129] Morgan Maner et al., *Where Do You Go When Your Prison Cell Floods? Inadequacy of Current Climate Disaster Plans of US Departments of Correction*, 112 AM. J. PUB. HEALTH 1382, 1382–83 (2022).

[130] *See* Carl Dement, *Coordinating the Chaos: An Evaluation of Carceral Evacuations*, 103 Prison J. 541, 542, 545 (2023).

[131] *See* Motanya & Valera, *supra* note 59, at 349; *Documents Reveal Thousands of Texas Prison Heat Complaints in 2023—and Perilously Slow Grievance Process*, AM. OVERSIGHT (May 22, 2024), https://www.americanoversight.org/documents-reveal-thousands-of-texas-prison-heat-complaints-in-2023-and-perilously-slow-grievance-process.

conditioning.[132] Adaptive tools such as cool towels or fans may be provided only at a high cost through prison commissaries.[133] Indeed, during the heat waves of the summer of 2023, the cost of bottled water in Texas prison commissaries increased by 50%.[134]

In combination, elevated exposure, heightened sensitivity, and limited adaptive capacity make incarcerated people particularly vulnerable to the impacts of climate change.

II. COMPASSIONATE RELEASE AS AN ADAPTIVE TOOL: LESSONS FROM THE COVID-19 PANDEMIC

Incarcerated people, legal scholars, advocates, and journalists have begun to grapple with the threats that climate change poses to the health and wellbeing of incarcerated people.[135] Prison officials are also becoming more aware of the risks. The U.S. Department of Justice's 2021 Climate Adaptation Plan acknowledges potential risks climate change poses to prison facilities and the supply chain of food and medical supplies for prisons, and it discusses steps BOP

[132] *See* Alexi Jones, *Cruel and Unusual Punishment: When States Don't Provide Air Conditioning in Prison*, PRISON POL'Y INITIATIVE (June 18, 2019), https://www.prisonpolicy.org/blog/2019/06/18/air-conditioning/; 2023 BOP AUDIT, *supra* note 41, at 34–35 (citing examples of federal prison facilities without air conditioning).

[133] *See* Leah Wang, *Heat, Floods, Pests, Disease, and Death: What Climate Change Means for People in Prison*, PRISON POL'Y INITIATIVE (July 19, 2023), https://www.prisonpolicy.org/blog/2023/07/19/climate_change/ ("In one federal prison, where most people make less than $0.50 per hour, a fan costs $30.70. And in Oregon, where a heat wave brought 100-plus degree days in 2021, one prison offered special "cooling" towels for $18—a nearly 100% markup.").

[134] *See* Paul Flahive, *Texas Charges Prisoners 50% More for Water as Heat Wave Continues*, TEX. PUB. RADIO (July 20, 2023), https://www.tpr.org/criminal-justice/2023-07-20/texas-charges-prisoners-50-more-for-water-for-as-heat-wave-continues.

[135] *See, e.g.*, *id.*; Wu & Felder, *supra* note 19; Editorial, *Changing Climate is Turning Prisons into Torture Chambers and Death Traps*, L.A. TIMES (Sept. 3, 2023), https://www.latimes.com/opinion/story/2023-09-03/editorial-prisons-heat-air-conditioning; Kim Kelly, *The Climate Disaster Inside America's Prisons*, NEW REPUBLIC (Sept. 18, 2019), https://newrepublic.com/article/155092/climate-disaster-inside-americas-prisons; *Prisons and the Climate Crisis: More Than 40 Member States Gather on Nelson Mandela Day 2023*, U.N. OFF. DRUGS & CRIME (July 18, 2023), https://www.unodc.org/unodc/en/justice-and-prison-reform/cpcj-prison-reform/news/prisons-and-the-climate-crisis_-more-than-40-member-states-gather-on-nelson-mandela-day-2023.html.

is taking to increase resiliency in the face of extreme weather events, such as building on-site renewable energy generation capacity to prevent power outages during extreme weather.[136] TDJC has worked to expand access to air conditioning in Texas state prisons, adding 9,559 "cool beds" since 2018, with more than 16,000 under construction or in design.[137]

However, case law on the rights and remedies available to incarcerated people in light of the threats posed by climate change remains sparse. Legal scholars have argued that extreme weather exacerbated by climate change is creating conditions that violate incarcerated persons' Eighth Amendment rights.[138] This theory has not been widely tested, although courts have referenced climate change in at least two Eighth Amendment cases. A federal district court in *Cole v. Collier*, while issuing a preliminary injunction ordering Texas to mitigate exposure to extreme heat in the Pack Unit, heard expert testimony from a climate scientist and took judicial notice that scientists predict "with a high degree of confidence" that climate change will cause average temperatures to rise and heat waves to become frequent and severe.[139] In *Shafer v. Sanchez*, the plaintiff cited testimony in *Cole* on the effects of climate change on extreme heat, but a federal district court concluded that this evidence was not sufficient to disprove the magistrate judge's conclusion that "temperature conditions at his particular unit do not provide a current threat to his health."[140] These two decisions indicate

[136] *See* U.S. DEP'T JUST., CLIMATE ADAPTATION PLAN, at 23 (2021), https://www.justice.gov/jmd/page/file/1438016/dl?inline.

[137] *See TDCJ Air Conditioning Construction Projects*, TEXAS DEP'T CRIM. JUST., https://www.tdcj.texas.gov/ac/index.html (Apr. 1, 2025).

[138] *See* Sullivan, *supra* note 89, at 100; Vaughn Ford-Plotkin, *Climate Change and the Carceral System: How Extreme Weather Threatens Inmates' Eighth Amendment Rights*, 28 BERKELEY J. CRIM. L. 1, 18 (2023); Sonia Badyal, *A Song of Ice and Fire: The Climate Crisis Inside America's Prisons*, 54 SETON HALL L. REV. 201, 216 (2023).

[139] Cole v. Collier, No. 4:14-CV-1698, 2017 WL 3049540, at *31 n.27 (S.D.Tex., 2017); Amended Expert Report of Dr. Linda O. Mearns, Cole v. Livingston, No. 4:14-cv-1698, 2015 WL 13542400 (S.D. Tex. Oct. 22, 2015).

[140] Shafer v. Sanchez, No. 2:22-CV-00049, 2023 WL 198629 (S.D. Tex. Jan. 17, 2023) (distinguishing the decision in *Cole* as relying on "hundreds of exhibits and thirteen days of testimony" about conditions specific to the plaintiff's prison facility). The court ultimately granted a preliminary injunction request. Shafer v. Sanchez, No. 2:22-CV-00049, 2023 WL 5577351, at *2 (S.D. Tex. Aug. 29, 2023)

that some courts may be open to considering the Eighth Amendment implications of climate change, particularly when presented with expert testimony. However, acknowledgment of the risks climate change poses to incarcerated people has so far been extremely limited, and proponents of using the Eighth Amendment to combat climate risks also acknowledge that PLRA presents a significant barrier to obtaining relief.[141]

Looking beyond the Eighth Amendment, some scholars have suggested that responses to the COVID-19 pandemic offer potential corollaries to the effects of extreme weather and climate change on the prison system.[142] The threats that climate change poses to incarcerated individuals in certain ways mirror those posed by the COVID-19 pandemic. Both climate change and COVID-19 are society-wide challenges, outside the control of prison administrators. Both pose dangers to all members of society, but the risks are more acute for the elderly and individuals with underlying illnesses. For both COVID-19 and climate change-driven threats like extreme heat or storms, individuals can take steps to protect themselves (getting vaccinated, wearing masks, and isolating in the case of COVID-19; evacuating, installing back-up power sources, or using air conditioning to cool off in the case of climate threats), but the ability of incarcerated people to take these steps is limited by the fact of their incarceration.

When the COVID-19 pandemic struck in 2020, the elevated risk of infection in the crowded prisons quickly became clear, and jails and prisons initially reduced the number of people locked up.[143] The number of people incarcerated in U.S. prisons and jails fell from 2.1 million in 2019 to 1.8 million midway through 2020.[144] By the end of 2020, total prison populations were down 15% from 2019,

(granting "the construed motion to reconsider the denial of Plaintiff's request for a preliminary injunction" and ordering the "Defendants to provide Plaintiff with a cold shower and at least one hour of time in respite air-conditioning per day upon request.").

141 *See* Sullivan, *supra* note 89, at 116; Badyal, *supra* note 138, at 223.

142 *See* Laurie L. Levenson, *Climate Change and the Criminal Justice System*, 51 ENV'T L. 333, 366 (2021); Jennifer E. James et al., *COVID-19 and the Reimaging of Compassionate Release*, 19 INT'L J. PRISONER HEALTH 20, 30–31 (2022).

143 *See* KANG-BROWN ET AL., *supra* note 61, at 3.

144 *See id* at 1.

with nine states reporting decreases of over 20%.[145] The drop was temporary and largely due to reductions in arrests and admissions, along with court slowdowns that delayed trials.[146]

Releases also played a role in reducing overall prison populations.[147] The federal government and 34 states created COVID-specific release programs—based on legal mechanisms including parole, compassionate release, home confinement, commutation, and good time or earned time credits—that were used to release over 80,000 incarcerated people, equivalent to roughly 5.5% of the prison population in 2019.[148]

For the federal prison system, the pandemic came on the heels of the passage of the First Step Act of 2019, which aimed to "reduce the federal prison population while maintaining public safety" by reducing sentence lengths and allowing for early release.[149] Among other statutory changes, the First Step Act amended Section 3582(c)(1)(A) of Title 18 of the U.S. Code to allow incarcerated individuals to directly file a motion for compassionate release in federal district court, removing a restriction that motions could only be filed by the Bureau of Prisons (BOP).[150] In the first months of the COVID-19 pandemic, petitions for compassionate release increased dramatically, and district courts went from handling a few dozen motions per month to deciding more than 1,000 per month during

145 *See* E. ANN CARSON, PRISONERS IN 2020—STATISTICAL TABLES 1 (2023).

146 *See* Wendy Sawyer, *Untangling Why Prison & Jail Populations Dropped Early in the Pandemic*, PRISON POL'Y INITIATIVE (Mar. 24, 2022), https://www.prisonpolicy.org/blog/2022/03/24/covid_admissions/; Damini Sharma et al., *Prison Populations Drop by 100,000 During Pandemic, But Not Because of COVID-19 Releases*, THE MARSHALL PROJECT (July 16, 2020), https://www.themarshallproject.org/2020/07/16/prison-populations-drop-by-100-000-during-pandemic.

147 *See* CARSON, *supra* note 145, at 1, 3 (noting that releases from federal and state prisons in 2020 decreased by almost 10% from 2019, but this decrease was lower than the decrease in admissions).

148 *See* KELLY LYN MITCHELL ET AL., EXAMINING PRISON RELEASES IN RESPONSE TO COVID: LESSONS LEARNED FOR REDUCING THE EFFECTS OF MASS INCARCERATION iii (2022).

149 BEN HARRINGTON & NATHAN JAMES, CONG. RSCH. SERV., IF10573, FEDERAL CORRECTIONAL REFORM AND THE FIRST STEP ACT OF 2019 1 (2018).

150 *See* U.S. SENT'G COMM'N, COMPASSIONATE RELEASE: THE IMPACT OF THE FIRST STEP ACT AND COVID-19 PANDEMIC 1 (Mar. 2022) [hereinafter U.S.S.C. 2022 COMPASSIONATE RELEASE REPORT].

the height of the pandemic.[151] In 2020, 2,601 individuals were granted compassionate release, compared to 145 in 2019, and 24 in 2018 before the implementation of the First Step Act.[152]

The rapid expansion in the use of compassionate release during the COVID-19 pandemic suggests that compassionate release is one tool that incarcerated individuals, advocates, and courts can use to respond to novel and urgent threats to the health of incarcerated persons. Jennifer James and her coauthors suggested that the expansion of compassionate release during the COVID-19 pandemic could be extended to apply to climate change risks, as a means of addressing the "structural and environmental conditions that put vulnerable, older adults at risk."[153] This Section expands on the idea suggested by James, assessing the potential use of compassionate release to respond to hazardous conditions created by climate change and drawing upon parallels with the COVID-19 pandemic.

I begin by elaborating on compassionate release, including its history and the legal standard under the First Step Act. I then look at how courts have applied this legal standard to motions brought in the context of the COVID-19 pandemic and discuss how a similar analysis could be applied to risks created by climate change.

A. *A Brief History of Compassionate Release*

Compassionate release refers to an early release mechanism, typically allowing courts to release incarcerated individuals with a terminal illness, as well as serious medical and non-medical conditions.[154] The history of federal compassionate release dates to the 1984 Sentencing Reform Act (SRA).[155] Under the law, BOP could request that a federal judge reduce an incarcerated person's sentence based on either "extraordinary and compelling reasons" or the fact that "the defendant is at least 70 years of age, has served at least 30

151 *See* U.S.S.C. 2020–2022 DATA REPORT, *supra* note 44, at 4 (the number of compassionate release motions decided rose to at least 467 in April 2020, 900 in May 2020, and remained over 1,000 per month between June 2020 and May 2021).

152 *See* James et al., *supra* note 142, at 25.

153 *Id.* at 30–31.

154 *See id.* at 22.

155 *See* U.S. DEPT. JUST. OFF. INSP. GEN., THE FEDERAL BUREAU OF PRISONS' COMPASSIONATE RELEASE PROGRAM i (2013), https://oig.justice.gov/reports/2013/e1306.pdf.

years in prison . . . , and a determination has been made by the Director of the Bureau of Prisons that the defendant is not a danger to the safety of any other person or the community . . . ."[156]

Congress initially delegated to the newly created U.S. Sentencing Commission to define "extraordinary and compelling reasons," but the Sentencing Commission did not do so until 2007.[157] This left interpretation up to BOP, which was criticized by scholars and government officials for placing narrow restrictions on compassionate release.[158] Even after 2007, BOP continued to file release motions only in cases where the individual had a terminal illness with a life expectancy under eighteen months, despite the Sentencing Commission's directive to consider a wider range of circumstances.[159] In 2013, the Office of the Inspector General for the Department of Justice criticized BOP's compassionate release program as "poorly managed and implemented inconsistently."[160] The problems identified by the review persisted.[161] Between 2014 and 2018, BOP approved only 306 requests for compassionate release, a rate of about six requests per month.[162] During this time, 81 people died while their requests were being considered by BOP's Central Office.[163]

156 18 U.S.C. § 3582(c)(1)(A)(i–ii).

157 Marielle Paloma Greenblatt, *In Search of Judicial Compassion: The Cantu-Lynn Divide Over Compassionate Release for Federal Prisoners*, 52 COLUM. HUM. RTS. L. REV 141, 148–149 (2020).

158 *See id*. at 148.

159 *See id.* at 149.

160 U.S. DEPT. JUST. OFF. INSP. GEN., *supra* note 155, at i.

161 *See Public Hearing on Compassionate Release and the Conditions of Supervision: Hearing before the United States Sentencing Commission* 66 (Feb. 17, 2016) (Statement of Michael E. Horowitz, Inspector Gen., U.S. Dep't of Just.).

162 *See* Letter from Stephen E. Boyd, Assistant Att'y Gen., U.S. Dep't of Just., Off. of Legis. Aff., to Brian Schatz, U.S. Sen. 1 (Jan. 16, 2018), https://www.themarshallproject.org/documents/4369114-1-2018-BOP-response (BOP received 3,182 requests for compassionate release during this period).

163 *See id.* at 2 (the average time for processing approvals was 141 days, or more than 4.5 months).

The First Step Act aimed to expand the use of compassionate release.[164] Congress considered the statistics cited above,[165] along with reports from the Congressional Report Service showing that increased use of compassionate release could reduce the financial and social costs of incarceration.[166] The Sentencing Commission later concluded that Congress, in passing the First Step Act, had the "express purpose, set forth on the face of the enactment, of 'increasing the use' of sentence reduction" through compassionate release.[167]

In the first year after the First Step Act was passed, the number of compassionate release cases increased five-fold, with federal district courts handling a few dozen motions per month.[168] The onset of the COVID-19 pandemic the following year prompted a massive increase in the volume of compassionate release petitions, peaking with 2,017 motions decided in October 2020.[169] The number of petitions has since fallen but has remained above pre-pandemic levels. In the first six months of 2023, federal district courts decided an average of 277 compassionate release motions per month, granting release in around 13% of cases.[170]

While this analysis will focus on federal compassionate release under the First Step Act, it is worth noting that some version of

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[164] 164 Cong. Rec. S7774 (daily ed. Dec. 18, 2018) (statement of Sen. Benjamin L. Cardin: "The bill expands compassionate release under the Second Chance Act and expedites compassionate release applications.").

[165] *See, e.g.*, Letter from Stephen E. Boyd, *supra* note 162.

[166] *See* NATHAN JAMES, CONG. RSCH. SERV., R42937, THE FEDERAL PRISON POPULATION BUILDUP: OPTIONS FOR CONGRESS 14–16 (2016).

[167] U.S.S.G. AMENDMENTS COMMENTARY, *supra* note 47, at 6. The relevant section of the act is titled, "Increasing the Use and Transparency of Compassionate Release." *See* First Step Act of 2018, Pub. L. No. 115–391, § 603(b), 132 Stat. 5194, 5239 (2018); *see also* Greenblatt, *supra* note 157, at 153–54.

[168] *See* U.S. SENT' COMM'N, THE FIRST STEP ACT OF 2018: ONE YEAR OF IMPLEMENTATION 6 (2020) (in the first year after the passage of the First Step Act, 145 people were granted compassionate release); U.S.S.C. 2022 COMPASSIONATE RELEASE REPORT, *supra* note 150, at 3 (between October 2019 and March 2020, district courts granted 91 motions for compassionate release, approximately 50% of 180 total motions decided).

[169] *See* U.S.S.C. 2020–2022 DATA REPORT, *supra* note 44, at 4.

[170] *See* U.S. SENT'G COMM'N, COMPASSIONATE RELEASE DATA REPORT, FISCAL YEAR 2023, 3RD QUARTER 4 (2023) [hereinafter U.S.S.C. 2023 DATA REPORT].

compassionate release exists in 49 states and the District of Columbia, often under the name "medical parole."[171] Criteria for release varies, but most states consider some combination of "age, chronic illness, terminal illness, mental health/dementia, and cost of care."[172] However, these programs are rarely used, and have been criticized as "piecemeal, cumbersome and unavailable."[173] The limited data available indicate that states release an average of four to seven individuals each year,[174] with some states releasing fewer than one person per year, and others releasing as many as 170 per year.[175] A survey of state Departments of Corrections indicated that states did not significantly increase compassionate release during the COVID-19 pandemic.[176]

B. *Compassionate Release Under the First Step Act*

Compassionate release is a form of resentencing, an arena where courts have significant discretion.[177] As in all sentencing proceedings, courts evaluating motions for compassionate release engage in an "individualized inquiry" of the facts and circumstances[178] and consider the individual "on that day, not on the date of his offense or the date of his conviction."[179] The U.S. Supreme Court in *Concepcion v. United States* held that courts considering motions for resentencing under the First Step Act have discretion to consider

171 *See* Renagh O'Leary, *Compassionate Release and Decarceration in the States*, 107 IOWA L. REV. 621, 624, 669–76 (2022).

172 Lindsey E. Wylie et al., *Extraordinary and Compelling: The Use of Compassionate Release Laws in the United States*, 24 PSYCH., PUB. POL'Y., AND L. 216, 219 (2018).

173 James et al., *supra* note 142, at 22.

174 *See* O'Leary, *supra* note 171, at 624.

175 *See* Wylie et al., *supra* note 172, at 218 ("[S]ome states (e.g., Maryland) have provisions for release but no records of ever having released an inmate. Other states release very few inmates per year. For example, Arizona released just nine inmates between 1992 and 2005. Yet other states utilize their statutes more frequently. For example, Texas releases approximately 170 inmates per year, and from mid-2008 to 2010, Michigan released 100. Still, given the number of state inmates eligible for consideration, these numbers are remarkably low.")

176 *See* James et al., *supra* note 142, at 27, 29.

177 *See* Concepcion v. United States, 597 U.S. 481, 486 (2022).

178 United States v. Marcussen, 15 F.4th 855, 858 (8th Cir. 2021).

179 Concepcion, 597 U.S. at 486.

"intervening changes" of law or fact.[180] The Court explained that federal district courts are obliged to consider any nonfrivolous arguments raised by the parties and that nothing in the First Step Act constrains the district court's discretion to consider information.[181] Courts have consistently recognized that Congress sought to expand the use of compassionate release through the First Step Act, although they have disagreed over the degree of discretion that the First Step Act transferred from BOP to courts.[182]

The First Step Act amended 18 U.S.C. § 3582(c)(1)(A) to allow defendants to directly petition the district courts for release if they get no response from petitioning BOP.[183] Individual defendants must allow BOP 30 days to respond in order to satisfy this exhaustion requirement,[184] although some courts have concluded that the exhaustion requirement may be waived under urgent circumstances.[185] The statute's language allowing courts to grant release when "extraordinary and compelling reasons warrant" sentence reduction remained unchanged.[186] The First Step Act also preserved two constraints on release: courts may reduce a sentence only "after considering the factors set forth in 18 U.S.C. § 3553(a) ('Section 3553(a)') to the extent that they are applicable" and only if "such a reduction is consistent with applicable policy statements issued by the Sentencing Commission."[187] Section 3553(a) lists factors that courts must consider when imposing a sentence, including "nature and circumstances of the offense and the history and characteristics of the defendant," and the need for the sentence to deter criminal

180 *Id.* at 486–87.

181 *See id.* at 487.

182 *See* Greenblatt, *supra* note 157, at 166–168.

183 *See* First Step Act of 2018, Pub. L. 115-135, § 603 (b)(1), 132 Stat. 5194, 5239 (2018).

184 *See* 18 U.S.C. § 3582(c)(1)(A); *see, e.g.*, United States v. Lopez, No. 16 CR. 317-22, 2024 WL 964593, at *5 (S.D.N.Y. Mar. 5, 2024) (denying motion solely for failure to satisfy administrative exhaustion requirement, and explicitly stating that motion otherwise would have been granted).

185 *See, e.g.*, United States v. Salvagno, 456 F. Supp. 3d 420, 425–36 (N.D.N.Y. 2020) (collecting cases); United States v. Agomuoh, 461 F. Supp. 3d 626, 634 (E.D. Mich. 2020).

186 18 U.S.C. § 3582(c)(1)(A)(i–ii).

187 18 U.S.C. § 3582(c)(1)(A)(i).

conduct, protect the public, and provide restitution for victims.[188] The key policy statement issued by the Sentencing Commission is the U.S. Sentencing Guidelines (U.S.S.G.) § 1B1.13, which defines "extraordinary and compelling reasons."[189]

Some federal circuit courts describe the evaluation of a compassionate release petition as a two-step process: first evaluating whether the petitioner has presented an extraordinary and compelling reason for release; and second, evaluating whether the Section 3553(a) factors support release.[190] In these circuits, consistency with U.S.S.G. § 1B1.13 is considered as part of the first step and treated as tool for evaluating whether the petitioner presented extraordinary and compelling reasons for release.[191] Other circuits describe consistency with U.S.S.G. § 1B1.13 as a distinct step, separate from the evaluation of whether extraordinary and compelling circumstances warrant a sentence reduction.[192] This divergence in framing of the test is not ultimately consequential, as courts across all circuits evaluate the same criteria and diverge only in whether they consider consistency with U.S.S.G. § 1B1.13 to be a tool for evaluating extraordinary and compelling reasons, or a criteria in its own right.

A circuit split emerged regarding the applicability of the Sentencing Commission policy guidelines following the passage of the

188 18 U.S.C. § 3553(a).

189 U.S. SENT'G COMM'N, GUIDELINES MANUAL § 1B1.13 (Nov. 2023) [hereinafter GUIDELINES MANUAL].

190 *See* United States v. Kurzynowski, 17 F.4th 756, 759 (7th Cir. 2021); United States v. Ruvalcaba, 26 F.4th 14, 18–19 (1st Cir. 2022); United States v. Gonzalez, No. 22-1425, 2023 WL 7401432, at *1 (2d Cir. Nov. 9, 2023); United States v. Pawlowski, 967 F.3d 327, 329 (3d Cir. 2020); United States v. Centeno-Morales, 90 F.4th 274, 279 (4th Cir. 2024); United States v. Marcussen, 15 F.4th 855, 858–59 (8th Cir. 2021).

191 *See, e.g. Kurzynowski* 17 F.4th at 760; United States v. Handerhan, 789 F. App'x 924, 925 (3d Cir. 2019) ("'Extraordinary and compelling reasons' are in turn defined by the commentary to policy statement U.S.S.G. § 1B1.13.").

192 *See* United States v. Shkambi, 993 F.3d 388, 392 (5th Cir. 2021); United States v. Jones, 980 F.3d 1098, 1106 (6th Cir. 2020); United States v. Chen, 48 F.4th 1092, 1094–95 (9th Cir. 2022); United States v. McGee, 992 F.3d 1035, 1043 (10th Cir. 2021); United States v. Shapiro, No. 23-12660, 2024 WL 1092345, at *1 (11th Cir. Mar. 13, 2024); United States v. Jackson, 26 F.4th 994, 1001 (D.C. Cir. 2022).

First Step Act.[193] The Sentencing Commission lacked a quorum until 2022 and was unable to update its guidance such that, for the first four years after the First Step Act's passage, U.S.S.G. § 1B1.13 discussed only petitions brought "[u]pon motion of the Director of the Bureau of Prisons."[194] The Second Circuit, joined by a majority of circuit courts, concluded that it was "manifest that [U.S.S.G. § 1B1.13's] language is clearly outdated and cannot be fully applicable" to petitions brought by individual defendants, and thus the Sentencing Commission guidance could not "constrain district courts' discretion to consider whether any reasons are extraordinary and compelling."[195] The Third and Eighth Circuit concluded that U.S.S.G. § 1B1.13 was not binding because of this textual limit but could be used by district courts as persuasive guidance in determining whether the circumstances were extraordinary and compelling.[196] The Eleventh Circuit explicitly rejected the interpretation of other circuit courts and concluded that U.S.S.G § 1B1.13 was fully applicable to all motions for compassionate release.[197]

This circuit split was seemingly resolved by an update to U.S.S.G. § 1B1.13, Amendment 821, that took effect November 1, 2023. The amendment explicitly includes motions filed by the defendant.[198] Since then, district courts in circuits that had previously found U.S.S.G. § 1B1.13 inapplicable have applied the amended

193 *See* United States v. Bryant, 996 F.3d 1243, 1247 (11th Cir. 2021). A circuit split also developed over whether nonretroactive sentencing changes qualify as an extraordinary and compelling reason. *See* Claire Griffin, *An Extraordinary and Compelling Case for Judicial Discretion: Nonretroactive Sentencing Changes and Compassionate Release*, 54 U. TOL. L. REV. 237 (2023). I will not focus on this split as the reasoning is separate from extraordinary and compelling circumstances based on the COVID-19 pandemic, whereas the general applicability of U.S.S.G § 1B1.13 is directly relevant.

194 U.S.S.G. AMENDMENTS COMMENTARY, *supra* note 47, at 6.

195 United States v. Brooker, 976 F.3d 228, 235–36 (2d Cir. 2020); *see also* Bryant, 996 F.3d at 1252 (summarizing that the Second, Fourth, Fifth, Sixth, Seventh, Ninth, and Tenth circuits had "concluded that 1B1.13 is not an 'applicable policy statement[ ]'").

196 *See* United States v. Andrews, 12 F.4th 255, 260 (3d Cir. 2021) (affirming that the district court "correctly recognized that although the policy statement is no longer binding, it still sheds light on the meaning of extraordinary and compelling reasons"); United States v. Marcussen, 15 F.4th 855, 859 (8th Cir. 2021).

197 *See* Bryant, 996 F.3d at 1262.

198 *See* U.S.S.G. AMENDMENTS COMMENTARY, *supra* note 47, at 1, 7.

guidance.[199] However, the split may speak to an underlying divergence in approaches courts take to the Sentencing Commission's guidance more generally. Marielle Paloma Greenblatt identified a doctrinal split between courts "which envision a broad expansion of judicial discretion to issue compassionate release" and those that "emphasize a more limited degree of judicial discretion under the Act."[200]

In revising U.S.S.G § 1B1.13, the Sentencing Commission also made several substantive expansions of the circumstances it suggests qualify as extraordinary and compelling.[201] The Sentencing Commission added new medical circumstances that qualify: first, a medical condition that requires "long-term or specialized medical care that is not being provided,"[202] and second, "an ongoing outbreak of infectious disease, or an ongoing public health emergency declared by the appropriate federal, state, or local authority" if the emergency puts the defendant at increased risk of complications and such risk cannot be "adequately mitigated in a timely manner."[203] Each of these new categories recognize that an individual's medical risk may be exacerbated by environmental factors, including BOP's inability to provide needed care or mitigate risks from a public health emergency. The Commission also added two entirely new categories to the list of extraordinary and compelling reasons—

199 *See, e.g.*, United States v. Lopez, No. 317-22, 2024 WL 964593, at *2 (S.D.N.Y. Mar. 5, 2024) ("The amended guidance from the Commission as to what constitutes extraordinary and compelling reasons now controls the analysis of a compassionate release petition, however initiated."); United States v. Tucker, No. 15-0359, 2023 WL 8357340, at *5 (D. Md. Dec. 1, 2023) ("the Sentencing Commission has made the Policy Statement expressly applicable to defendant-filed motions under § 3582(c)(1)(A)"); United States v. Johnson, 713 F. Supp. 3d 399, 405 (W.D. Mich. 2024) ("after November 1, 2023, the Court must also determine whether a reduction would be consistent with the Section 1B1.13 policy statements").

200 Greenblatt, *supra* note 157, at 163.

201 *See* U.S.S.G. AMENDMENTS COMMENTARY, *supra* note 47, at 6 (noting that the changes respond to Congress's "express purpose… of 'increasing the use' of sentence reduction motions").

202 GUIDELINES MANUAL, *supra* note 189, § 1B1.13 (b)(1)(C).

203 GUIDELINES MANUAL, *supra* note 189, § 1B1.13 (b)(1)(D).

"Victim of Abuse" and "Unusually Long Sentence"[204]—and expanded on the list of qualifying "Family Circumstances."[205]

Significantly, the Commission preserved "Other Reasons" as a category and expanded on its definition, explaining that extraordinary and compelling reasons exist when the petitioner presents "any other circumstance or combination of circumstances that . . . are similar in gravity to those described" in the guidance.[206] The change also removed a clause that made Other Reasons dependent on a determination by the BOP.[207] In the commentary explaining this change, the Commission noted that it considered and rejected a definition that required other reasons to be "similar in nature and consequence," and instead required the reasons to be "similar only in gravity."[208] The Commission explained that it was unable to "predict and specify in advance all of the grounds on which relief may be appropriate" and that specific determinations based on the circumstances were best left up to judges.[209] Courts have concluded that this catch-all clause affords them "significant leeway in defining precisely what qualifies as an extraordinary and compelling justification for a sentence reduction."[210] Courts have so far relied on the Other Reasons catch-all to grant compassionate release motions

204 GUIDELINES MANUAL, *supra* note 189, § 1B1.13 (b)(4), (6).

205 GUIDELINES MANUAL, *supra* note 189, § 1B1.13 (b)(3)(C), (D) (adding caregiving responsibilities for parents, immediate family members, and any person with a relationship "similar in kind" to that of an immediate family member to a list that previously included only the defendant's minor child, spouse, or registered partner).

206 GUIDELINES MANUAL, *supra* note 189, § 1B1.13 (b)(5).

207 *See* U.S.S.G. AMENDMENTS COMMENTARY, *supra* note 47, at 5.

208 *Id.* at 10.

209 *Id*.

210 United States v. Gudgel, No. 1:17-CR-00108, 2024 WL 729959, at *2 (D. Idaho Feb. 22, 2024); *see also* United States v. Donato, No. 03-CR-929, 2024 WL 665939, at *3 (E.D.N.Y. Feb. 16, 2024) (U.S.S.G. § 1B1.13(b)(5) "affords the court significant discretion to determine when a reduction in sentence is warranted"); United States v. Smith, No. 14-CR-20014, 2024 WL 1529158, at *6 (S.D. Fla. Apr. 8, 2024) (though cabined by the requirement that reasons be similar in gravity, U.S.S.G § 1B1.13(b)(5) "unambiguously gives courts discretion to consider a broader range of extraordinary and compelling circumstances than before").

in cases based on disproportionately lengthy sentences[211] and harsh conditions of confinement during the COVID-19 pandemic,[212] though other courts have rejected similar arguments.[213]

Taken together, the Sentencing Commission's expansion of U.S.S.G § 1B1.13 and its explanation of these changes emphasize the wide latitude that federal district courts have under the First Step Act to determine that a petitioner's individual circumstances qualify as extraordinary and compelling.

C. *Application of Compassionate Release During COVID-19*

As the COVID-19 pandemic progressed, it dominated the reasoning of federal district courts evaluating petitions for compassionate release. The Sentencing Commission analyzed the reasoning provided by district courts in more than 30,000 compassionate release decisions between October 2019 and June 2023, and the results of that analysis are presented in Table 1 (reasons courts

[211] *See, e.g.*, United States v. Kindle, No. 09 CR 687-2, 2024 WL 1152519, at *3 (N.D. Ill. Feb. 23, 2024) (addressing a sentence that was disproportionately lengthy compared to co-defendants and was based on a now-discontinued practice of stash house stings); United States v. Brown, 715 F. Supp. 3d 1034, 1044 (S.D. Ohio 2024) (noting "draconian and oppressive length" of sentence compared with those of co-defendants and current sentencing practices); United States v. Courtway, No. 18-CR-4687, 2023 WL 8772931, at *11 (S.D. Cal. Dec. 19, 2023) (finding the "stark sentencing disparity supports a finding of extraordinary and compelling reasons and is 'similar in gravity'" to reasons enumerated by the guidance).

[212] *See, e.g.*, United States v. Donato, No. 03-CR-929, 2024 WL 665939, at *6 (E.D.N.Y. Feb. 16, 2024) (citing U.S.S.G. § 1B1.13(b)(5) in support of finding COVID-19 lockdowns and restrictions to be a relevant factor); United States v. Lopez, No. 16 CR 317-22, 2024 WL 964593, at *5 (S.D.N.Y. Mar. 5, 2024) (finding that "lockdowns and associated rigors" experienced by the defendant may be considered under the "catch-all provision," and would support release, but that the defendant had failed to satisfy the exhaustion requirement).

[213] *See, e.g.*, United States v. Crandall, No. 89-CR-21, 2024 WL 945328, at *10 (N.D. Iowa Mar. 5, 2024) (rejecting argument based on disproportionate sentence length, finding that "Congress was referring to national disparities, not differences between co-conspirators," and that the disparity was not of similar gravity); United States v. Feliz, No. 16 CR. 809, 2023 WL 8275897, at *6 (S.D.N.Y. Nov. 30, 2023) (defendant "has not established that alleged staffing shortages or other harsh conditions … are 'similar in gravity'"); United States v. Smith, 729 F. Supp. 3d 1308, 1318 (S.D. Fla. 2024) (similar).

provided for granting sentence reduction) and Table 2 (reasons courts provided for denying sentence reduction).[214]

In the 2020 fiscal year (October 1, 2019 – September 30, 2020), 71.5% of decisions granting compassionate release cited the COVID-19 pandemic in finding extraordinary and compelling reasons that justified a sentence reduction. COVID-19 alone was cited as a reason by 59.6% of courts, while 11.9% of courts cited COVID-19 and other reasons.[215] The number of decisions citing COVID-19 as a reason at all steadily declined to just 13.1% in the first half of fiscal year 2023.[216] Throughout the time period studied, a significant percentage of courts denying motions for compassionate release referenced the absence of risk from COVID-19 as a reason for denial. This was one of the primary reasons for denial, alongside general absence of an extraordinary and compelling reason, consideration of the Section 3553(a) sentencing factors, and public safety.[217]

The Sentencing Commission's analysis also—in aggregate—compares the rates of compassionate release based on: the circuit in which the case was brought; the age, race, gender, and citizenship of the defendant; the length of the original sentence; the type of crime; and sentencing factors such as the defendant's criminal history category. Defendants were more likely to be granted compassionate release if they were older.[218] The majority of defendants granted compassionate release were initially sentenced to 10 years or longer, and over 40% of individuals granted compassionate

[214] *See* U.S.S.C. 2020–2022 DATA REPORT, *supra* note 44; U.S.S.C. 2023 DATA REPORT, *supra* note 170. Some cases were excluded due to indeterminate motion status. All cases included in the analysis predate the Sentencing Commission's update to U.S.S.G. § 1B1.13.

[215] *See* U.S.S.C. 2022 COMPASSIONATE RELEASE REPORT, *supra* note 150, at 31, 49.

[216] *See infra* Table 1: **Reasons cited by U.S. district courts granting motions for compassionate release. Courts may cite multiple reasons for granting motions.**

[217] *See infra* Table 2**: Reasons cited by U.S. district courts denying motions for compassionate release. Courts may cite multiple reasons.**

[218] *See* U.S.S.C. 2022 COMPASSIONATE RELEASE REPORT, *supra* note 150, at 4 (in fiscal year 2020, "the grant rate was highest (61.5%) for offenders 75 years or older and lowest (below 20%) for offenders under 45 years old.").

release in 2023 were sentenced to 20 years or longer.[219] The defendant's race, criminal history, and offense of conviction did not appear to significantly affect the likelihood of their motion being granted,[220] and there was significant variability in the rate at which motions were granted both between and within the circuits.[221]

[219] *See* U.S.S.C. 2020–2022 DATA REPORT, *supra* note 44, at 16 (29.2% had sentences 20 years or longer; 28.1% had sentences 10–20 years); U.S.S.C. 2023 DATA REPORT, *supra* note 170, at 16 (43.2% had sentences 20 years or longer; 27.7% had sentences 10–20 years).

[220] *See* U.S.S.C. 2022 COMPASSIONATE RELEASE REPORT, *supra* note 150, at 5, 25 (noting that grant rates were similar for the most common offense types, but that the denial rates were highest for individuals convicted of assault, kidnapping, sexual abuse, and stalking/harassing offenses had the lowest grant rates).

[221] *See id.* at 4 (noting that "compassionate release substantially varied by circuit, from a grant-rate high of 47.5 percent in the First Circuit to a low of 13.7 percent in the Fifth Circuit"); U.S.S.C. 2020–2022 DATA REPORT, *supra* note 44, at 7–9, 11; U.S.S.C. 2023 DATA REPORT, *supra* note 170, at 7–9, 11.

Table 1: Reasons cited by U.S. district courts granting motions for compassionate release. Courts may cite multiple reasons for granting motions.[222]

Reason given by sentencing courts for granting compassionate release	Percentage of opinions that cited reason			
	FY 2020 (n = 1819)	**FY 2021** (n = 2052)	**FY 2022** (n = 631)	**FY 2023 (Q1 - z2)** (n = 351)
COVID-19				
COVID-19/pandemic	71.7	62.6	29.5	13.1
Medical Conditions + Age				
Terminal illness	3.7	2.4	6.3	9.7
Serious physical or medical condition	10.2	7.7	13.3	19.4
Serious functional or cognitive impairment	0.5	0.3	0.5	0.6
Deteriorating physical or mental health due to aging process	1.4	0.8	1.9	2.8
Age 65 and deteriorating health and served 10 years/75% [of sentence served]	2.4	0.9	3.8	3.1
Age 70 and served 30 years of sentence	0.1	0.2	0.3	n/a
Nearly meets requirements of USSG § 1B1.13	1.0	1.5	5.1	5.7
BOP failure to provide treatment	0.2	0.5	1.9	4.3
Family Circumstances				
Care for minor child	1.3	2.3	4.9	4.0
Care for spouse or registered partner	0.4	0.5	1.0	0.9
Conviction + Sentencing[223]				

[222] *See* U.S.S.C. 2020–2022 DATA REPORT, *supra* note 44, at 17; U.S.S.C. 2023 DATA REPORT, *supra* note 170, at 17 (noting that "[i]n all cases where the court gave rehabilitation as a reason for the granted motion, the court also gave one or more other reasons.").

[223] The reasons cited in the category of "Conviction + Sentencing" encompass changes in law that would reduce the offender's sentence were they sentenced today, including provisions of the FSA that that eliminated "stacked" firearm penalties under 18 U.S.C.§ 924(c) and changed enhanced drug penalties imposed under 21 U.S.C. § 851, along with court rulings that "attempt and conspiracy offenses do not qualify as predicate offenses under the career offender guideline." *See* U.S.

Multiple 18 U.S.C. § 924(c) penalties	2.2	7.4	15.4	8.5
Career Offender issues	0.5	1.4	7.9	9.1
21 U.S.C. § 851 enhanced drug penalties	0.4	2.3	5.9	8.0
Mandatory nature of guideline at sentencing	0.2	0.7	1.7	1.7
Guideline amendment	n/a	0.3	n/a	1.4
Safety Valve disqualification	0.1	0.1	0.8	1.1
ACCA issues	n/a	0.3	1.1	0.3
Conviction/sentencing errors	n/a	0.3	2.7	2.8
Other mandatory minimum penalties/long sentence	0.3	1.9	5.9	10.0
Rehabilitation				
Rehabilitation	2.8	5.6	13.0	21.7
Unspecified				
BOP Program Statement	0.1	0.0	0.2	n/a
Other	1.1	3.9	5.7	11.1
Missing/no reason provided	13.7	13.7	12.2	13.1

SENT'G COMM'N, COMPASSIONATE RELEASE: THE IMPACT OF THE FIRST STEP ACT AND COVID-19 PANDEMIC, at 33–34 (Mar. 2022).

Table 2: Reasons cited by U.S. district courts denying motions for compassionate release. Courts may cite multiple reasons.[224]

Reason given by sentencing courts for denial of compassionate release	Percentage of opinions that cited reason			
	FY 2020 (n = 5471)	FY 2021 (n = 13255)	FY 2022 (n = 4561)	FY 2023 (Q1 - 2) (n = 2182)
Absence of reason for release				
No extraordinary and compelling reason provided	20.4	30.3	35.2	35.5
COVID-19				
Not at risk from COVID/pandemic	38.5	29.0	36.4	24.1
Medical Conditions + Age				
Insufficient proof of serious physical and medical condition	7.9	8.1	11.6	13.2
Defendant able to provide self-care in prison	3.6	4.6	8.8	9.5
Does not meet age or length of time served requirement under 18 U.S.C. § 3559	3.3	3.4	2.1	1.7
Insufficient proof of deteriorating physical or mental health	0.3	0.2	0.2	0.6
Insufficient proof of serious functional or cognitive impairment	0.2	0.0	0.1	0.2
Family Circumstances				
Other care available for minor child	1.0	1.5	3.9	6.1
Other care available for spouse or partner	0.3	0.2	0.6	0.6
Countervailing reason to deny release				
Public Safety + Rehabilitation				
18 U.S.C § 3553(a) factors	39.5	55.6	56.7	53.1
Protection of the public	18.6	16.4	10.2	8.2
Rehabilitation insufficient	1.6	1.3	8.1	14.1
Post-sentencing/post-conviction conduct	1.1	0.9	0.8	1.3

[224] *See* U.S.S.C. 2020–2022 DATA REPORT, *supra* note 44, at 17; U.S.S.C. 2023 DATA REPORT, *supra* note 170, at 17 (noting that "[i]n all cases where the court gave rehabilitation as a reason for the granted motion, the court also gave one or more other reasons.").

Procedural Barriers				
Failure to exhaust administrative remedies	31.4	14.9	11.6	13.7
Mandatory minimum penalty	0.1	0.1	0.3	1.3
Binding plea agreement	0.1	0.2	0.2	0.4
Unspecified				
Other	5.1	9.6	13.3	22.6
Missing/no reason provided	3.0	2.6	1.8	0.9

While this analysis offers a high-level overview of the factors considered by courts, the inquiry in each case is individualized and fact specific. Courts' reasoning in specific cases throughout the COVID-19 pandemic offers additional insight into how courts evaluate the existence of extraordinary and compelling reasons. In particular, courts' reasoning typically emphasizes that the mere existence of a hazard that affects the prison population at large is not sufficient to merit compassionate release.[225] As the Eighth Circuit held in *United States v. Marcussen*, finding extraordinary and compelling reasons "requires an individualized inquiry, not a widespread release of inmates based on the existence of a persistent worldwide pandemic."[226]

Courts look for specific circumstances that make an individual particularly vulnerable to COVID-19. *United States v. Salvagno* provides a typical example from the first months of the pandemic, in which the court found that the petitioner's "unique circumstances" provided extraordinary and compelling reasons for release.[227] This conclusion was based on a combination of: (1) the high risk of exposure in the specific prison environment due to "the significant outbreak" at the petitioner's prison; (2) the petitioner's heightened sensitivity to infection based on his medical conditions and medications, including hypertension and the medication Lisinopril; and (3) the petitioner's inability to mitigate the risk given

[225] *See, e.g.*, United States v. Stehley, No. 3:16-CR-14, 2023 WL 8014078 (W.D. Pa. Nov. 9, 2023) ("the reality of COVID-19 within a prison facility, standing alone, is an insufficient basis upon which to grant a motion for compassionate release").

[226] United States v. Marcussen, 15 F.4th 855, 858–59 (8th Cir. 2021).

[227] United States v. Salvagno, 456 F. Supp. 3d 420, 427–28 (N.D.N.Y. 2020).

that the defendant was in "a prison environment in which social distancing is difficult even compared to other federal prisons."[228]

As with the climate change vulnerability analysis discussed *supra* in Part I, the extraordinary and compassionate reasons analysis performed by district courts in the context of COVID-19 can be conceptualized in terms of the individual's (1) exposure to an acute risk, (2) sensitivity to that risk, and (3) ability to adapt or mitigate the risk. Each of these factors are discussed in greater depth below.

1. Exposure: Facility-Level Infection Levels

One factor that courts have consistently considered relevant to compassionate release petitions based on the risk of contracting COVID-19 is the extent of an outbreak within a petitioner's specific facility. Courts have generally required a showing that there is an outbreak of COVID-19 within the petitioner's prison facility, reasoning that the mere fact of the pandemic and the "possibility that [the virus] may spread to a particular prison" are insufficient.[229] To establish this fact, courts typically relied on testing data as a means of assessing the risk of infection; however, early in the pandemic, BOP had limited testing capacity, was only testing symptomatic individuals, and was not consistently quarantining those waiting for results.[230]

For example, the court in *United States v. Simmons* rejected a compassionate release petition, reasoning in part that it could not find extraordinary and compelling circumstances given "the absence of any evidence that COVID-19 has been found among the inmate population" at the prison where the petitioner was incarcerated.[231] Similarly, the court in *United States v. Dorsey*, in declining a motion for release, noted that the petitioner's prison had "no confirmed cases of COVID-19 among its 1,094 inmates and only one confirmed case among its staff," whereas the petitioner would be released to a county had one of the highest rates of infection in the

228 *Id.* at 428.

229 United States v. Raia, 954 F.3d 594, 597 (3d Cir. 2020).

230 *See* DEP'T OF JUST. OFF. INSP. GEN, CAPSTONE REVIEW OF THE FEDERAL BUREAU OF PRISONS' RESPONSE TO THE CORONAVIRUS DISEASE 2019 PANDEMIC 75–76, 81 (2023).

231 United States v. Simmons, No. 15 CR. 445, 2020 WL 1847863, at *1 (S.D.N.Y. Apr. 13, 2020).

country.[232] More recently, the court in *United States v. Mahan* referenced the revised Sentencing Commission guidance to similar effect, noting that the petitioner had "not shown there was an outbreak in his facility or that his facility is subject to a public health emergency."[233]

Conversely, evidence of an ongoing outbreak has been used by courts to support granting release. The court in *United States v. Bandrow* granted compassionate release, noting that the petitioner's prison had been "hit particularly hard" by the pandemic, with an ongoing outbreak and one of the highest morality rates in the country.[234] The petitioner in that case had already been infected, but the court found the risk of reinfection—and the impact of the outbreak on the medical care available to treat the petitioner's other illnesses—warranted release.[235]

Under Amendment 821 to U.S.S.G. § 1B1.13, courts now have even clearer grounds to find that an infectious disease outbreak or declared public health emergency that "cannot be adequately mitigated in a timely manner" creates an extraordinary and compelling reason for release.[236] In the context of climate change impacts, emergencies declared by government officials could include extreme weather, hurricanes, or heat waves.[237]

2. Sensitivity: Individual Health Conditions

Courts have also consistently held that the individual must show heightened sensitivity to the virus based on their age and

[232] United States v. Dorsey, No. 15-20336, 2020 WL 3819123, at *4 (E.D. Mich. July 8, 2020).

[233] United States v. Mahan, No. 1:19-CR-00233, 2024 WL 710634, at *4 (D. Idaho Feb. 20, 2024) (citing U.S.S.G. § 1B1.13(b)(1)(D))

[234] United States v. Bandrow, 473 F. Supp. 3d 778, 786 (E.D. Mich. 2020).

[235] *See id.* at 786–87.

[236] *See* GUIDELINES MANUAL, *supra* note 189, § 1B1.13 (b)(1)(D).

[237] *See, e.g.*, STATE OF CALIFORNIA, PROCLAMATION OF A STATE OF EMERGENCY (2022), https://www.gov.ca.gov/wp-content/uploads/2022/08/8.31.22-Heat-Proclamation.pdf?emrc=78e3fc; *Governor Katie Hobbs Declares Heat State of Emergency*, OFF. ARIZ. GOV. (Aug. 11, 2023), https://azgovernor.gov/office-arizona-governor/news/2023/08/governor-katie-hobbs-declares-heat-state-emergency; STATE OF LOUISIANA, PROCLAMATION NO. 141 JBE 2023, STATE OF EMERGENCY-HEAT RELATED EMERGENCIES (2023), https://gov.louisiana.gov/assets/141JBE2023StateofEmergency.pdf.

existing medical conditions. Environmental factors alone are not sufficient. For example, while acknowledging the "extraordinary scope and severity of the COVID-19 health crisis," the court in *United States v. Zehner* found that the petitioner's high blood pressure and depression did not create extraordinary and compelling reasons for release because these health conditions do not increase the risk of severe illness from COVID-19.[238] In contrast, the court in *United States v. Zukerman* found that the petitioner's "age, combined with his diabetes, hypertension, and obesity" put him at serious risk from the COVID-19 pandemic, such that compassionate release was warranted.[239] This aspect of the judicial analysis frequently includes a fact-intensive review of the petitioner's medical records, as well as reference to expert medical sources, in order to assess whether the petitioner's medical conditions elevate their sensitivity to COVID-19.[240]

Pre-existing medical conditions, including obesity, hypertension, and asthma, certain medications, and advanced age may similarly increase an individual's sensitivity to extreme heat.[241] Additionally, people with reduced mobility or who rely on medical equipment that requires a consistent power supply, such as an oxygen concentrator, may be particularly at risk from power outages and extreme weather. As with COVID-19, evidence that an individual's specific medical condition and treatment requirements elevate their sensitivity to the general environmental risk would be key to

[238] United States v. Zehner, No. 19 Cr. 485, 2020 WL 1892188, at *2 (S.D.N.Y., 2020).

[239] United States v. Zukerman, 451 F. Supp. 3d 329, 335–36 (S.D.N.Y. 2020) (collecting cases in which compassionate release was granted to individuals who were immunocompromised or had other conditions that put them at risk of severe illness if they contracted COVID-19). This analysis is intertwined with adaptive capacity, as it hinges in part on the defendant's "ability to provide self-care within the environment of a correctional facility," which the court in *Zuckerman* discussed in the context of the defendant's inability to socially distance to avoid contracting the virus due to the prison's "close quarters." *Id* at 335.

[240] *See, e.g.*, United States v. Figueroa, No. 15-CR-495, 2021 WL 664004, at *3 (E.D.N.Y. Feb. 19, 2021) (referencing guidance from the Centers for Disease Control and Prevention (CDC) to conclude that the petitioner, as a 38-year-old whose only medical condition was kidney stones, was not at elevated risk from COVID-19).

[241] *See* HOLT, *supra* note 19, at ii.

establishing extraordinary and compelling reasons in the context of climate change.

3. Adaptive Capacity: Availability of Protective Measures

Finally, the availability of protective measures has been a key aspect of courts' analysis of compassionate release petitions based on COVID-19, particularly after vaccines became available. Early in the pandemic, the court in *United States v. Haney* weighed factors related to the ability of incarcerated people to protect themselves from infection, including "sharing small cells, eating together, using same bathrooms and sinks, delays in medical evaluation and treatment, and rationed access to soap," along with protective steps BOP had taken, such as "increased screening of inmates, restrictions on visitors, restrictions on gatherings, and mandated social distancing."[242] Once vaccines were available, courts have "consistently denied" compassionate release to fully vaccinated individuals, even if they had underlying health conditions.[243] Courts have also denied compassionate release to individuals who had declined to get vaccinated, reasoning that remaining unvaccinated made their risk of infection "self-incurred."[244] The Seventh Circuit concluded in *United States v. Broadfield* that the availability of vaccination eliminated COVID-19 as an extraordinary and compelling reason for release for the majority of individuals.[245] However, the Seventh Circuit walked this conclusion back somewhat in *United States v. Rucker*, emphasizing the importance of an individualized risk assessment in light of the emergence of the Omicron variant and the increased possibility of "breakthrough" infections among people who had been vaccinated.[246] The acknowledgement of the emergence of a new, more infectious variant of COVID-19 highlights, again, the role that exposure to environmental risk factors plays in assessing an individual's vulnerability.

This analysis is in line with the Sentencing Commission's updated guidance, which emphasizes the availability of medical care

[242] United States v. Haney, 454 F. Supp. 3d 316, 324 (S.D.N.Y. 2020).

[243] United States v. Farmer, No. 19-CR-427, 2022 WL 47517, at *3 (S.D.N.Y. Jan. 5, 2022).

[244] United States v. Broadfield, 5 F.4th 801, 803 (7th Cir. 2021).

[245] *See id.* at 803.

[246] United States v. Rucker, 27 F.4th 560, 562 (7th Cir. 2022).

and the ability to mitigate the risk posed by an outbreak of infectious disease or public health emergency.[247] This guidance and courts' focus on the availability of vaccines in assessing COVID-19 risk indicate that the availability of tools to mitigate environmental hazards is key to assessing whether they create an extraordinary and compelling reason for release. In the context of climate change, analogous protections could include the availability of air conditioning during heat waves or evacuation plans during extreme weather events, particularly for medically vulnerable individuals.

III. EVALUATING POTENTIAL ARGUMENTS FOR COMPASSIONATE RELEASE DUE TO EXTREME HEAT

Next, I examine one defendant's[248] request for compassionate release based on the risk of contracting COVID-19, and I assess how similar arguments could be made about the risks posed by extreme heat. I analogize between the two scenarios to evaluate the potential strengths and weaknesses of extending compassionate release to climate change risks. A sample fact pattern is presented, based on a real defendant's case and the heat-related conditions that existed in the prison where he was incarcerated during the summer of 2023. This is followed by a summary of potential arguments and counter-arguments about whether extreme heat—exacerbated by climate change—creates extraordinary and compelling circumstances that warrant compassionate release.

A. *Sample Fact Pattern*

The fact pattern is composed of two core elements: (1) environmental and prison conditions and (2) the individual defendant's background and health risks. Both sets of facts are drawn from a single prison facility. This choice was made in an effort to hew closely to reality and avoid discrepancies in the type of medical care available to the defendant or the characteristics of the individuals incarcerated at the specific prison. The environmental conditions are based on news reports about summer heat at FCI Seagoville in

247 *See* GUIDELINES MANUAL, *supra* note 189, § 1B1.13 (b)(1)(C), (D)(iii).

248 Courts typically refer to a petitioner for compassionate release as the "defendant." This article also uses "defendant," for the sake of consistency.

Texas during 2023,[249] along with data on past weather patterns and future climate risks at this location. The defendant's circumstances are based on those of Frederick Amerson, an individual incarcerated at FCI Seagoville whose compassionate release petition was granted in 2023.[250] All personal and medical details discussed below were included in the opinion granting Mr. Amerson compassionate release based on the COVID-19 pandemic. This opinion provides the basis for analogizing to climate change. The effects of heat on a person matching Mr. Amerson's description are hypothetical.

1. Environmental and Prison Conditions

FCI Seagoville is a low security federal prison with an adjacent detention center and minimum-security satellite camp. The facility houses approximately 1,500 men.[251] The prison is located 15 miles southeast of Dallas. Historically, the area has experienced about 20 days per year with temperatures of 100 ºF or higher, and summers tend to be humid.[252] Average temperatures in the region have been increasing over the last century, with the greatest temperature increase occurring during summer months.[253] The number of hot days is expected to continue to increase, such that by 2050 the region will experience an average of 50 to 100 days per year with temperature over 100 ºF.[254] A regional report projected that climate change will cause more severe droughts, raise the risk of wildfires, and increase severe thunderstorms, heavy rainfall, flooding, and tropical cyclones, all of which will strain the region's infrastructure.[255]

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249 *See* Johnson, *supra* note 7.

250 *See* United States v. Amerson, No. 05-CR-0301, 2023 WL 4497767 (E.D.N.Y. July 12, 2023).

251 *See FCI Seagoville*, FED. BUREAU OF PRISONS, https://www.bop.gov/locations/institutions/sea/ (last visited Feb. 6, 2025).

252 *See DFW—Normals, Means, and Extremes*, NAT'L WEATHER SERV., https://www.weather.gov/fwd/dfw_records_normals (last visited May 7, 2024); *Dallas-Fort Worth Climate Narrative*, NAT'L WEATHER SERV., https://www.weather.gov/fwd/dfw_narrative (last visited May 7, 2024).

253 *See* ARNE WINGUTH ET AL., CLIMATE CHANGE/EXTREME WEATHER VULNERABILITY AND RISK ASSESSMENT FOR TRANSPORTATION INFRASTRUCTURE IN DALLAS AND TARRANT COUNTIES 3–4 (2015).

254 *See* Dahl et al., *supra* note 64, at 6.

255 *See* WINGUTH ET AL., *supra* note 253, at 9–14.

In 2023, the Dallas-Fort Worth area experienced 55 days where the maximum temperature was 100 ºF or higher.[256] Maximum temperatures stayed above 100 ºF for 21 continuous days in July and August, closely followed by an 11-day stretch of 100 ºF days, with temperatures reaching as high as 110 ºF.[257] These conditions are considered high risk by the Federal Emergency Management Agency, which defines "extreme heat" as a period of two to three days of temperatures over 90 ºF with high humidity.[258] With a "sustained heat wave that is resulting in abnormally high electric demand" and temperatures projected to reach 107 ºF in the Dallas-Fort Worth area, the Department of Energy declared a state of emergency in Texas on September 7, 2023.[259]

Incarcerated people at FCI Seagoville reported that several housing units lack air conditioning and that temperatures inside the prison routinely exceed 100 ºF during summer months. The facility has "[f]aulty electrical equipment" that caused a fire in one building, according to the president of the correctional officer's union.[260] In 2023, the facility relied on rented generators that caused power outages, making air conditioning unavailable.[261] Some housing units lack fans, and the windows do not open. Personal fans can be

256 *See NOAA Online Weather Data*, NAT'L WEATHER SERV., https://www.weather.gov/wrh/Climate?wfo=fwd (last visited May 7, 2024) (maximum daily temperatures for the Dallas-Fort Worth Area).

257 *See id.*

258 *See* ERICA LEE, CONG. RSCH. SERV., R46873, EMERGENCY RESPONSE TO EXTREME HEAT: FEDERAL FINANCIAL ASSISTANCE AND CONSIDERATIONS FOR CONGRESS 3 (2024) ("During these events, affected communities frequently report excess deaths, overwhelmed health care systems and increased rates of hospitalization, and power supply strains that may affect access to air-conditioning or other services. Socially vulnerable populations, including individuals with medical conditions and disabilities, children, older adults, unhoused persons, agricultural and other outdoor workers, lower-income persons, people of color, incarcerated persons, and persons without air-conditioning, may be at particular risk of heat-related illness or death.")

259 *See* DEP'T OF ENERGY, ORDER NO. 202-23-1 1 (Sept. 7, 2023), https://www.ercot.com/files/docs/2023/09/07/202(c)%20Order%20-%2009072023%20(ERCOT)%20-%20Signed%20by%20Secretary%20Granholm%20-%209-07-23.pdf.

260 *See* Johnson, *supra* note 7.

261 *See id.*

purchased from commissary for $30.70.[262] According to the Bureau of Prisons, hot conditions in 2023 caused "no inmate health concerns."[263] Yet, people incarcerated at FCI Seagoville informed the Fort Worth Star-Telegram that some individuals had seizures and passed out due to the heat.[264]

2. Defendant's Circumstances

The defendant in this fact pattern was a 66-year-old man incarcerated at FCI Seagoville.[265] He pled guilty in 2007 to two counts of brandishing a firearm during a crime of violence and was sentenced to 32 years' imprisonment, including credit for time served since 2005. He had previously served 10 years in New York and New Jersey for a series of robberies. During 18 years of incarceration, he had no disciplinary infractions, and he had taken "every class that [was] available to him."[266]

The defendant was diagnosed with type II diabetes, obesity, hypertension, asthma, hyperlipidemia, polyneuropathy in diabetes,

262 *See* FCI/SCP Seagoville*, Texas Commissary Shopping List*, FED. BUREAU OF PRISONS, https://www.bop.gov/locations/institutions/sea/sea_commlist.pdf (last visited May. 7, 2024). Incarcerated workers at FCI earn between $0.23 and $1.15 per hour. FED. BUREAU OF PRISONS, FCI SEAGOVILLE ADMISSIONS & ORIENTATION INFORMATION HANDBOOK 12 (2022), https://www.bop.gov/locations/institutions/sea/sea_ao-handbook.pdf?v=1.0.0.

263 *See* Johnson, *supra* note 7.

264 *See id*.

265 The personal details of the defendant described in this sample fact pattern are based on the description of defendant Frederick Amerson. *See* United States v. Amerson, No. 05-CR-0301, 2023 WL 4497767 (E.D.N.Y July 12, 2023). To be clear, Mr. Amerson's compassionate release petition did not discuss the effects of heat. All arguments discussed in the following section regarding the effects of heat on a defendant matching this description are purely hypothetical. A real case was selected merely for purposes of drawing an analogy based on a plausible combination of facts. Furthermore, this analysis will focus on the arguments for finding extraordinary and compelling circumstances in the context of climate change. It will not focus on the evaluation of whether the § 3553(a) sentencing factors weigh in favor of release, such as the evaluation of whether the sentence provided just punishment and adequate deterrence. However, this information is included as the court in Mr. Amerson's case considered evidence of rehabilitation as supporting its finding of extraordinary and compelling circumstances.

266 *Id.* at *8.

difficulty in walking, nocturia, and fasciitis.[267] He had been prescribed daily medication for diabetes. He had experienced four hypoglycemic events, including one episode which required him to be transported to an emergency room outside the prison.[268] Some of his hypoglycemic episodes occurred overnight, when there was allegedly no medical staff on site, and a guard had to give him glucose tabs to stabilize him.[269] He attributed his hypoglycemic episodes to his limited ability to check his glucose levels while in prison; the prison's policy allowed him to test his blood sugar levels twice a day, and he maintained that he would self-test six times daily if not incarcerated. A medical update filed with the court stated that his "health has significantly declined."[270] The Government asserted that his asthma was mild, his diabetes and other chronic health conditions were controlled, and his hypoglycemic episodes were due to skipping meals.[271]

B. *Arguments for Finding Extraordinary and Compelling Circumstances*

If the defendant described in the sample fact pattern above were to file a petition for compassionate release based on extreme heat, he could argue that it is likely—based on warming trends driven by climate change—that he will be exposed to temperatures above 100 ºF for an extended period of time during the summer months and that he is at high risk of suffering permeant illness or death from the heat.

The defendant is particularly vulnerable to heat stroke due to a combination of his exposure, sensitivity, and adaptive capacity. The exposure to dangerously hot temperatures at FCI Seagoville is high and increasing, as climate change is causing more intense and prolonged heatwaves in the Dallas-Fort Worth area.[272] The defendant is particularly sensitive to heat stroke based on his age and medical

267 *See id.* at *3–4 (the Defendant has a body mass index of 29.6, just under the threshold of 30 for obesity, but is described by both parties and the court as having obesity).

268 *See id.* at *3.

269 *See id.* at *5.

270 *Id.* at *3–4.

271 *See id.* at *5.

272 *See* Dahl et al., *supra* note 64, at 6.

conditions. Deterioration of the central nervous system during aging makes it more difficult for the body to cope with temperature changes, and those above age 65 are considered to be at higher risk of heat-related illness.[273] Diabetes, obesity, and hypertension (high blood pressure) increase the defendant's sensitivity to heat.[274] The defendant also has limited adaptive capacity based on the unreliable availability of air conditioning within FCI Seagoville.[275] The availability of air conditioning within the Defendant's living area is outside his control, and, unlike people outside prison who lack air conditioning, the defendant is not free to visit a library or other public place with air conditioning. Additionally, while the defendant may be able to purchase a fan from commissary, the use of fans can increase the risk of heat-related illness when the ambient temperature is higher than the body temperature and is not recommended by medical experts.[276]

There are several reasons that a court could find that the defendant's circumstances create extraordinary and compelling reasons for release. First, there are direct parallels to the risks Mr. Amerson faced due the COVID-19 pandemic, which the court found justified release. Second, extreme heat can create a public health emergency, which may justify extraordinary and compelling reasons based on the revised Sentencing Guidelines. Third, the novelty of an argument for compassionate release based on extreme heat is not a barrier as case law and the Sentencing Guidelines make clear

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[273] *See Heatstroke*, MAYO CLINIC, https://www.mayoclinic.org/diseases-conditions/heat-stroke/symptoms-causes/syc-20353581 (last visited May 8, 2024).

[274] SEE EKTA CHOUDHARY & AMBARISH VAIDYANATHAN, HEAT STRESS ILLNESS HOSPITALIZATIONS: ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM, 20 STATES, 2001–2010, 63 MORBIDITY & MORTALITY WKLY. REP. SURVEILLANCE SUMMARIES 1 (Dec. 12, 2014), cdc.gov/mmwr/pdf/ss/ss6313.pdf; *Effects of Hot Weather, Humidity on Blood Pressure, Heart*, MAYO CLINIC (June 27, 2023), https://www.mayoclinichealthsystem.org/hometown-health/speaking-of-health/effects-of-high-temperatures-on-blood-pressure-heart.

[275] *See* MAYO CLINIC, *supra* note 273 ("air conditioning is the most effective way to cool down and lower humidity").

[276] *See* Cole v. Collier, No. 4:14-CV-1698, 2017 WL 2178526, at *48–9 (S.D. Tex. July 19, 2017). ("use of fans is unhelpful, and potentially harmful, when the heat index exceeds 95 degrees"); *Heat Stress: Risk Factors*, CTR. FOR DISEASE CONTROL AND PREVENTION, https://stacks.cdc.gov/view/cdc/45852 (last visited May. 8, 2024) ("when ambient conditions are higher than body temperature, warm airflow can actually increase heat gain.").

that courts have discretion to consider a wide range of factors that create risks of similar "gravity" to those explicitly outlined by the Sentencing Guidelines.

1. Parallels to Amerson Decision Based on COVID-19

In *United States v. Amerson*, the case on which this comparison is based, the court found extraordinary and compelling circumstances justified release based on a combination of factors, including the risk of contracting COVID-19, the harshness of incarceration caused by the pandemic, the length of the defendant's sentence, and his rehabilitation.[277]

Mr. Amerson initially moved for compassionate release on March 13, 2021, "during the height of the COVID-19 pandemic."[278] In assessing the risk when the case was decided in 2023, the court noted that Mr. Amerson had already "weathered the worst of COVID-19" because he has been vaccinated, he was previously infected and survived, and the rates of infection at FCI Seagoville were low at the time of the decision. For this reason, the court found the risk of infection alone insufficient to justify compassionate release. But, noting that Mr. Amerson's health had significantly declined as of his most recent medical update, the court concluded that the ongoing risk of reinfection, emergence of new variants, and the possibility of breakthrough infections after vaccination "tips in favor of granting a sentence reduction."[279]

This is similar to the risk posed by heat, given that the Defendant survived past heat waves during the summer of 2023. Although real-time environmental risk factors are important,[280] the analysis in *Amerson* indicates that the court could consider the potential of future increases in risk—new virus variants or future heat waves—to be relevant. Additionally, if a motion for compassionate release were filed during the height of a heatwave or extreme weather event

[277] United States v. Amerson, No. 05-CR-0301, 2023 WL 4497767 (E.D.N.Y July 12, 2023).

[278] *Id.* at *1.

[279] *Id.* at *5–6.

[280] *See, e.g.*, United States v. Arceo, No. 5:09-CR-00616, 2020 WL 4001339, at *1 (N.D. Cal. July 15, 2020) (granting compassionate release to another defendant at FCI Seagoville based on a "new (and alarming) COVID-19 outbreak," after denying a previous motion).

and conditions have improved by the time of decision, the end of that particular event would not prevent the court from considering similar future risks.

Within the COVID-19 analysis, the court also discussed Mr. Amerson's claims that his diabetes had deteriorated because he was only allowed to check his blood sugar levels twice per day, whereas he would check six times per day if not incarcerated.[281] The lack of access to equivalent medical care, which the court weighed in favor of release, could be seen as analogous to the unavailability of reliable air conditioning inside the prison. While it is not certain that Mr. Amerson would check his blood sugar levels more frequently if free—or that he would have better access to air conditioning outside prison—the potential access to preventative tools may be relevant.

The court also discussed the effect of the pandemic on the conditions of incarceration generally, beyond the specific risk to Mr. Amerson's health. The court noted that incarceration during the pandemic imposed lengthy lockdowns and heightened fear.[282] Specifically, FCI Seagoville was "particularly hard-hit by the Pandemic" and operated with severe restrictions that limited access to programming. The court concluded that "the harshness of COVID-related restrictions weigh in favor of a sentence reduction even if they do not independently constitute an extraordinary and compelling reason."[283] Heat may similarly limit access to recreation and programming if outdoor areas are too hot, if recreational spaces within the prison are not air conditioned, or if heat exacerbates understaffing. Additionally, being incarcerated in an already stiflingly hot prison as the climate continues to warm could create a "well-founded fear" of harm, similar to the fear of contracting COVID-19 in prison, which courts have found make the conditions of confinement "harsher and more punitive than would otherwise have been the case."[284]

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281 *See* Amerson, 2023 WL 4497767, at *5.

282 For more discussion of this reasoning generally, see Skylar Albertson, *Do Prison Conditions Change How Much Punishment A Sentence Carries Out? Lessons From Federal Sentence Reduction Rulings During the COVID-19 Pandemic*, 18 NW. J.L. & SOC. POL'Y 1 (2022).

283 Amerson, 2023 WL 4497767, at *6.

284 *Id.* (quoting United States v. Johnson, 671 F.Supp.3d 265, 280–1 (E.D.N.Y. Apr. 26, 2023) and United States v. Rodriquez, 492 F. Supp. 3d 306, 311 (S.D.N.Y. 2020)).

Finally, the court in *Amerson* found that compassionate release was justified based on the conditions created by the COVID-19 pandemic combined with other factors. These factors included the length of Mr. Amerson's sentence (32 years, compared to an average of 4 to 5 years for similar crimes) and his rehabilitation efforts, namely a lack of disciplinary infractions, participation in educational programs, and remorse for his crimes.[285] The court also found, for similar reasons, that the Section 3553(a) sentencing factors weighed in favor of release. This inquiry would be equivalent in a case brought based on exposure to extreme heat and would similarly weigh in favor of release. This aspect of the analysis shows that the court could consider a claim that climate change creates extraordinary and compelling reasons for release in combination with other factors specific to the individual defendant.

2. Public Health Emergency

The U.S. Sentencing Commission clarified in its November 2023 amendments to the Sentencing Guidelines that public health emergencies may create extraordinary and compelling reasons for release. Specifically, the guidelines specify that extraordinary and compelling reasons exist if

> the defendant is housed at a correctional facility affected or at imminent risk of being affected by . . . an ongoing public health emergency declared by the appropriate federal, state, or local authority; due to personal health risk factors and custodial status, the defendant is at increased risk of suffering severe medical complications or death as a result of exposure to the . . . the ongoing public health emergency . . . ; and such risk cannot be adequately mitigated in a timely manner.[286]

The three key factors here are notably similar to the vulnerability analysis discussed *supra* in Part I: a public health emergency affecting the facility (exposure), the defendant's personal health (sensitivity), and the possibility of timely mitigation of the risk (adaptive capacity).

The Guidelines definition requires that the public health emergency be declared by government authorities. Extreme heat can create public health emergencies and has previously been the basis of

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285 *See id.* at *7–8.

286 GUIDELINES MANUAL, *supra* note 189, § 1B1.13(b)(1)(D) (cleaned up).

a declared emergency.[287] In the summer of 2023, Texas did not declare a state of emergency based on extreme heat, but the U.S. Department of Energy did declare a state of emergency in September of 2023, based in part on the risk that stress on the power grid caused by extreme heat presented to public health and safety.[288] In general, power outages have been shown to affect public health by preventing electrically powered medical devices from working, among other impacts.[289]

The Federal Emergency Management Agency (FEMA), "for purposes of emergency preparedness," defines extreme heat as a period of at least two to three days of temperatures above 90 ºF with high humidity. Similar conditions typically affect FCI Seagoville for most of the summer.[290] While FEMA's definition is not an emergency declaration, it could be used to show that the defendant is "at imminent risk" of being affected by a public health emergency.

3. Discretion to Consider Other Reasons

Courts have broad discretion in resentencing, and the First Step Act "freed district courts to consider the full slate of extraordinary and compelling reasons that an imprisoned person might bring before them in motions for compassionate release."[291] Additionally,

[287] *See, e.g.*, STATE OF CALIFORNIA, PROCLAMATION OF A STATE OF EMERGENCY (2022), https://www.gov.ca.gov/wp-content/uploads/2022/08/8.31.22-Heat-Proclamation.pdf?emrc=78e3fc; *Governor Katie Hobbs Declares Heat State of Emergency*, OFF. ARIZ. GOV. (Aug. 11, 2023), https://azgovernor.gov/office-arizona-governor/news/2023/08/governor-katie-hobbs-declares-heat-state-emergency; STATE OF LOUISIANA, PROCLAMATION NO. 141 JBE 2023, STATE OF EMERGENCY—HEAT RELATED EMERGENCIES (2023), https://gov.louisiana.gov/assets/141JBE2023StateofEmergency.pdf. Relatedly, labor unions are pushing the Federal Emergency Management Agency to declare extreme heat a "major disaster" in order to unlock emergency funds. Manuela Andreoni, *Dozens of Groups Push FEMA to Recognize Extreme Heat as a 'Major Disaster'*, N.Y. TIMES (June 17, 2024), https://www.nytimes.com/2024/06/17/climate/labor-unions-fema-disaster-relief.html.

[288] *See* Dep't of Energy, *supra* note 259.

[289] *See generally* Christine Dominianni et al., *Health Impacts of Citywide and Localized Power Outages in New York City*, 126 ENV'T HEALTH PERSPS. 067003-1 (2018).

[290] *See Dallas-Fort Worth Climate Narrative*, NAT'L WEATHER SERV., *supra* note 252.

[291] United States v. Brooker, 976 F.3d 228, 237 (2d Cir. 2020); *see also* Concepcion v. United States, 597 U.S. 481, 481 (2022).

the post-First Step Act amendment to the Sentencing Guidelines clarified that extraordinary and compelling reasons may exist when the defendant presents circumstances that—individually or in combination—"are similar in gravity" to specific justifications listed in the Guidelines, including declared public health emergencies.[292]

Heat is the deadliest type of extreme weather, killing an average of 1,300 Americans per year.[293] Exposure to extreme heat can exacerbate chronic medical conditions and damage the central nervous system, brain, heart, kidneys, and muscles.[294] Heat-related illness can set in quickly and cause permanent damage.[295] It is widely recognized to pose the most severe risk of harm to the elderly and people with underlying medical conditions, much like COVID-19. Furthermore, it is within the court's discretion to consider rising temperatures driven by climate change as a relevant fact in evaluating the risk posed by extreme heat, regardless of whether this risk was known or foreseeable at the time of sentencing.[296]

Climate change impacts, particularly extreme heat, pose a grave threat to the health of incarcerated people. This threat is particularly acute for individuals like the defendant who have high exposure to extreme heat, are medically sensitive to heat-related illness, and who have limited or unreliable access to air conditioning. Together, these factors create a risk of permanent injury or death that is similar in gravity to the risks posed by the COVID-19 pandemic.

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[292] GUIDELINES MANUAL, *supra* note 189, § 1B1.13(b)(5).

[293] *See* Terri Adams-Fuller, *Extreme Heat Is Deadlier Than Hurricanes, Floods and Tornadoes Combined*, SCIENTIFIC AM. (July 1, 2023), https://www.scientificamerican.com/article/extreme-heat-is-deadlier-than-hurricanes-floods-and-tornadoes-combined/ (noting that heat-related deaths are often under-counted, meaning that the true number is likely higher).

[294] *See id.*; *Heatstroke Risk Factors*, MAYO CLINIC, https://www.mayoclinic.org/diseases-conditions/heat-stroke/symptoms-causes/syc-20353581 (last visited May 8, 2024).

[295] *See* Adams-Fuller, *supra* note 293; *see also* Cole v. Collier, No. 4:14-CV-1698, 2017 WL 2178526, at *39 (S.D. Tex. July 19, 2017) (citing expert testimony that "those with heat sensitivities may suffer heat-related illnesses within a few hours" when the heat index is above 88 ºF).

[296] *See* GUIDELINES MANUAL, *supra* note 189, § 1B1.13(e).

C. *Counterarguments*

There are several counterarguments that could undermine the claim that extreme heat creates extraordinary and compelling reasons for compassionate release.

First, the defendant had already survived high heat while incarcerated at FCI Seagoville, seemingly without suffering heat-related illness, based on the information available. This would weaken his claim of the gravity of the risk. The government made similar arguments regarding Mr. Amerson's prior COVID-19 infection, although these arguments were rejected by the court in part based on evidence that his health had continued to decline.[297]

Second, to the extent that the Defendant's argument would rely on the unavailability of air conditioning at FCI Seagoville, the court may have options short of release. The court could potentially order the defendant to be housed in a unit with air conditioning or require the prison to provide other relief from the heat. Similar remedies have been ordered in civil rights litigation over extreme heat, as a means of addressing Eighth Amendment violations.[298] Additionally, in the context of COVID-19, courts have held that the availability of a vaccine mitigated the risk of infection and therefore undermined claims that the pandemic created extraordinary and compelling circumstances.[299] Air conditioned housing—if reliably and universally available, which is not currently the case in prisons—could be seen as a similar tool that effectively eliminates the environmental risk.

Third, courts may also be wary of granting release on these grounds, due to the very fact that extreme heat and climate change affect such a large number of incarcerated people. In the context of COVID-19, courts warned that the pandemic did not justify "widespread release of inmates based on the existence of a persistent worldwide pandemic."[300] Instead, courts generally insisted that the individual defendant prove a specific, individualized risk. This defendant's circumstances were not unique, particularly due to the fact that the prison population is aging, and rates of obesity and chronic

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297 *See* United States v. Amerson, No. 05-CR-0301, 2023 WL 4497767, at *6 (E.D.N.Y July 12, 2023).

298 *See, e.g.*, Jones'El v. Berge, No. 00-C-421-C, 2003 WL 23109724, at *1 (D. Wis. Nov. 26, 2003).; Graves v. Arpaio, 623 F.3d 1043, 1049–50 (9th Cir. 2010).

299 *See, e.g.*, United States v. Broadfield, 5 F.4th 801, 803 (7th Cir. 2021).

300 United States v. Marcussen, 15 F.4th 855, 858–59 (8th Cir. 2021).

medical conditions among incarcerated people are high.[301] Indeed, other incarcerated people who are older, or who take psychotropic medications that limit the body's ability to respond to high heat, may be at higher risk of heat-related health problems. The court would likely be cautious of sending a signal that a heatwave, combined with an underlying medical condition, creates extraordinary and compelling conditions, as this set of circumstances affects large numbers of incarcerated people each year. However, as in the case of the COVID-19 pandemic, the widespread nature of the risk should not disqualify defendants, especially those who are particularly vulnerable, from the remedy offered by compassionate release.

Finally, there may be general skepticism of treating heat and other climate change-related hazards as threats on par with the COVID-19 pandemic. The danger of extreme heat is often underestimated.[302] Hot summer temperatures are seen as normal, and lack of access to air conditioning within prison may be seen as part of the punitive conditions contemplated at sentencing.[303] Additionally, while most Americans now believe that climate change is occurring and poses real threats, about 16% of Americans do not believe global warming is happening, and 29% do not believe climate change will harm people in the US.[304] Lack of understanding of the scientific consensus on climate change and its effect on average temperatures, heat waves, and extreme weather may undermine the case for compassionate release on these grounds. Despite this potential challenge, courts have recognized the effect of climate change in exacerbating dangerously high temperatures.[305]

CONCLUSION

As the COVID-19 pandemic vividly demonstrated, public health crises that affect society at large can be especially dangerous

301 *See* MARUSCHAK ET AL., *supra* note 110, at 1.

302 *See* Adams-Fuller, *supra* note 293.

303 *See* Jones, *supra* note 132 ("Refusing to install air conditioning is a matter not just of short-term cost savings, but of appearing tough on crime.").

304 *See* Jennifer Marlon et al., *Climate Opinion Maps 2023*, YALE PROGRAM CLIMATE CHANGE COMMC'N (Dec. 13, 2023), https://climatecommunication.yale.edu/visualizations-data/ycom-us/.

305 *See* Cole v. Collier, No. 4:14-CV-1698, 2017 WL 3049540, at *31 n.27 (S.D.Tex., 2017).

for incarcerated people who are unable to get out of harm's way. Climate change poses similar threats to the health and safety of incarcerated people, particularly the elderly and those with chronic medical conditions. This Note proposes that, for these individuals, compassionate release may offer one adaptive tool: a pathway to release. As discussed above, the vulnerability analysis conducted by courts evaluating motions for compassionate release during the COVID-19 pandemic can be extended to environmental threats exacerbated by climate change. This argument is untested, but the First Step Act granted courts wide discretion to consider new facts and arguments for compassionate release. Depending on the individuals' circumstances, some courts might be open to this analogy, although others would surely be skeptical.

It is also important to note that, even if this argument were successful, it is at best a band-aid solution. Nothing proposed in this Note would change the underlying conditions of mass incarceration or alter the trajectory of climate change. Others may argue that legal action to reduce climate threats to incarcerated people should aim to address the root causes of the problem, for example: promoting policy to reduce greenhouse gas emissions; advocating for universal air conditioning and better extreme weather planning within prisons; phasing out the use of especially vulnerable prison facilities; and reducing the overall number of people incarcerated.[306] Compassionate release is an inherently individualistic approach that would not improve prison conditions more broadly.[307] Even for the individual defendant, an order granting release would also not guarantee access to safe shelter, air conditioning, or medical care.[308]

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306 *See* HOLT, *supra* note 19, at iv-v.

307 For further discussion of some limitations of compassionate release, see Emily Widra & Wanda Bertram, *Compassionate Release Was Never Designed to Release Large Numbers of People*, PRISON POL'Y INITIATIVE (May 29, 2020), https://www.prisonpolicy.org/blog/2020/05/29/compassionate-release/.

308 *See* George Pro & Miesha Marzell, *Medical Parole and Aging Prisoners: A Qualitative Study*, 23 J. CORRECTIONAL HEALTH CARE 162, 168–69 (2017) (prison medical care providers interviewed said that incarcerated people receive better care for chronic medical conditions than they might be able to access outside of prison); *see also* Sarah Kliff, *Sick Prisoners in New York Were Granted Parole but Remain Behind Bars*, N.Y. TIMES (Jan. 17, 2025), https://www.nytimes.com/2025/01/17/health/prisoners-medical-parole-ny.html (describing the difficulty of finding nursing care placements for sick and elderly persons granted parole).

Despite these real limitations, it is worth considering compassionate release as one tool for addressing the pressing threats that climate change poses to incarcerated persons. Political action to cut greenhouse gas emissions will not meaningfully improve conditions of incarceration, as temperatures would continue to rise even if all emissions ceased immediately.[309] Civil rights litigation to address dangerous prison conditions is time- and resource-intensive and is limited by the requirements of PRLA. Efforts to improve prison conditions are also limited by a lack of political will and budget constraints. In light of the limitations of these other advocacy approaches, compassionate release may offer a speedier and more effective way to address climate change-induced threats to the health and safety of medically vulnerable individuals.

[309] *See* Thomas Lukas Frölicher, *Continued Global Warming After CO2 Emissions Stoppage*, 4 NATURE CLIMATE CHANGE 40 (2014).