

JULIA A. OLSON (CA Bar 192642)
julia@ourchildrenstrust.org
ANDREA K. RODGERS (*pro hac vice*)
andrea@ourchildrenstrust.org
CATHERINE SMITH, Of Counsel (*pro hac vice*)
catherine.smith@ourchildrenstrust.org
OUR CHILDREN'S TRUST
1216 Lincoln St.
Eugene, OR 97401
Tel: (415) 786-4825

Attorneys for Plaintiffs
(Additional Counsel Listed on Next Page)

UNITED STATES DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA

GENESIS B., a minor, by and through
her Guardian, G.P.; et al.

Plaintiffs,

vs.

The UNITED STATES
ENVIRONMENTAL PROTECTION
AGENCY; et al.

Defendants.

**Case No.: 2:23-CV-10345-MWF-
AGR**

**DECLARATION OF ELIZABETH
PINSKY, MD, IN SUPPORT OF
PLAINTIFFS' MEMORANDUM
OF POINTS AND AUTHORITIES
IN OPPOSITION TO
DEFENDANTS' MOTION TO
DISMISS (ECF No. 62)**

Date: September 30, 2024
Time: 10:00 a.m.
Judge: Hon. Michael W. Fitzgerald
Courtroom: 5A

**DECLARATION OF ELIZABETH PINSKY, MD, IN SUPPORT OF
PLAINTIFFS' OPPOSITION TO DEFENDANTS' MOTION TO DISMISS**

1 PHILIP L. GREGORY (CA Bar 95217)

2 pgregory@gregorylawgroup.com

3 **GREGORY LAW GROUP**

4 1250 Godetia Drive

5 Redwood City, CA 94062

6 Tel: (650) 278-2957

7 PAUL L. HOFFMAN (CA Bar 71244)

8 hoffpaul@aol.com

9 **UNIVERSITY OF CALIFORNIA AT IRVINE**

10 **SCHOOL OF LAW**

11 **Civil Rights Litigation Clinic**

12 401 E. Peltason Drive, Suite 1000

13 Irvine, CA 92697

14 Tel: (310) 717-7373

15 JOHN WASHINGTON (CA Bar 315991)

16 jwashington@sshhzlaw.com

17 **SCHONBRUN SEPLOW HARRIS**

18 **HOFFMAN & ZELDES LLP**

19 200 Pier Avenue #226

20 Hermosa Beach, CA 90254

21 Tel: (424) 424-0166

I, Elizabeth Pinsky, hereby declare and if called upon would testify as follows:

1. I am a child and adolescent psychiatrist and pediatrician at Massachusetts General Hospital and Associate Director at the Massachusetts General Center for Environment and Health. I have personal knowledge of the facts stated herein and, if called to testify, I would and could testify competently thereto. Because of the importance of the issues presented in this case, I am providing this expert opinion on a pro bono basis and am not charging these young plaintiffs for my time in preparing this declaration.
2. I received my medical degree from Harvard Medical School and completed consecutive residencies in pediatrics and psychiatry followed by a child psychiatry fellowship at Massachusetts General Hospital. My clinical interests focus on the intersection of child mental and physical health, including childhood trauma associated with climate change. I am board certified in both pediatric medicine and psychiatry and an Assistant Professor in Psychiatry at Harvard Medical School. I lecture nationally on climate change and mental health, am the author of numerous related journal articles and textbook chapters, and serve as Chair of the Climate Change Committee at the American Academy of Child and Adolescent Psychiatry.
3. Climate change is a mental health emergency for children. Current levels of increased temperatures from greenhouse gas pollution, and the climate consequences of that, are already posing significant threats and harming children's physical and mental well-being. Further pollution and heating will exacerbate that already present harm to children. Conversely, fully accounting for children's lives and accurately incorporating these costs into policy making could begin to alleviate these escalating harms.

- 1 4. Compared to adults, children have disproportionate exposure to many of
2 the pathways through which climate impacts human health. Children spend
3 more time outdoors, and are physically closer to the ground where
4 particulate matter and other pollutants are measurably more concentrated.
5 Children breathe at a faster rate and require more calories and more water
6 per pound of body weight than adults, exposing them to proportionately
7 higher levels of pollutants. Young children are also uniquely vulnerable to
8 severe harm from infectious diseases spreading in range and seasonality as
9 the climate warms, including Zika, malaria, and Dengue.
- 10 5. Children experience direct impacts to their mental health through acute
11 climate events like heat, which has been linked to deterioration in sleep,
12 cognition, mood, and academic achievement. Heat is particularly
13 dangerous for youth with chronic mental illness, who may have impaired
14 temperature regulation due to neuroanatomic abnormalities or to side
15 effects of common psychoactive medication. Likewise, chronic air
16 pollution has been associated with increased rates of anxiety and
17 depression in children, and episodic poor air quality has been associated
18 with increased pediatric crisis presentations.
- 19 6. According to the fifth edition of the Diagnostic and Statistical Manual of
20 Mental Disorders (DSM-5), the initial criterion for the diagnosis of Post
21 Traumatic Stress Disorder (PTSD) is exposure to a traumatic event,
22 described as actual or threatened death, serious injury, or sexual violence.
23 As extreme weather events increase in frequency and intensity, so does
24 exposure to a range of potentially traumatic exposures, including injuries,
25 bereavement, and threats to availability of food, shelter, and medical care.
26 Research has further shown that the aftermath of extreme weather events

1 is associated with increased risk of other traumatic exposures, including
2 interpersonal violence, child abuse, and community and gender-based
3 violence.

4 7. Short-term or acute climate events like hurricanes, floods, wildfires and
5 evacuations, and extreme heat have been linked not just to PTSD, but also
6 to a range of additional negative mental health outcomes including anxiety
7 and depression, substance use disorders, and suicide. Recurrent or ongoing
8 exposures, like drought conditions, consistently high temperatures,
9 repeated exposures to wildfire smoke and poor air quality also lead to
10 chronic traumatic stress. Studies have demonstrated that children who
11 experience severe weather events may suffer psychiatric symptoms that
12 are more severe and of longer duration compared to adults.

13 8. Even children who have not directly experienced climate-related trauma
14 increasingly experience impairing distress in the setting of exposure to
15 climate change through news media, social media, and awareness about
16 how climate change will affect the viability of their futures. This distress
17 can manifest itself as fear, dread, despair, disaffection, rage, or grief and is
18 sometimes referred to as “eco-anxiety.” It is important to note that “eco-
19 anxiety” is not a mental illness, but a normative reaction to an imminent
20 threat. Recent studies have shown a high prevalence of climate distress in
21 young people, with related impact on their beliefs and feelings about their
22 futures.

23 9. Though both adults and children can be affected by climate change,
24 children are distinctly more vulnerable to life-long consequences for their
25 physical and mental health in terms of both severity and duration. Early
26 childhood is critical for brain development. Stress from even minor
27

disturbances during childhood, including environmental stressors, can irreversibly impact neurodevelopment. Specifically, exposure to products of fossil fuel combustion in childhood has been linked to lower IQ, attention-deficit hyperactivity disorder, and autistic traits.

10. The consequences of adversity experienced in childhood are also both quantitatively and qualitatively different from the consequences for adults. This fact has been firmly established by the robust Adverse Childhood Experiences literature. Adverse Childhood Experiences (ACEs) include both narrowly defined traumatic events (like those meeting PTSD criterion) and, more broadly, circumstances that threaten the safety, stability, and security of the childhood environment. Many of these adverse circumstances – such as housing insecurity, abrupt separation from a caregiver, and parental mental illness – are also more common in aftermath of extreme weather.

11. ACEs are associated with profound consequences in adulthood, including lower mental health, physical health, economic potential and even life expectancy. There is a powerful dose-response relationship between the total number of ACEs experienced and increased likelihood of negative adult outcomes. These outcomes are significant, incur enormous costs, and include lower educational attainment and employment, increased rates of mental illness and suicide, increased rates of cancer, diabetes, and heart disease, and early death.

12. As fossil fuel pollution continues, more heating will result and, thus, more incidences of childhood exposure to traumatic or harmful climate events. Already, a child born in 2020 is expected to be exposed up to a seven-fold

1 increase in extreme heat waves compared to someone born in 1960.¹ Thus
2 the greater emissions, the greater a child's lifetime exposure to extreme
3 climate events and the resulting ACEs and mental health consequences.
4 The economic burden of health conditions associated with ACEs among
5 current adults in the United States was recently estimated at \$14.1 trillion
6 annually.²

7 13. Compared to adults, children are at still further additional risk from climate
8 change because their psychological and emotional development is in
9 progress. The collective adult abdication of responsibility for their well-
10 being inflicts a unique injury during this period of immaturity. The primary
11 developmental task of early childhood is to establish a sense of security
12 and trust through "attachment," a process that requires predictable adult
13 caretakers who ensure the child's safety. It is from a base of so-called
14 "secure attachment," established in childhood, that adolescents can
15 develop the individuation and independence, motivation, and risk-taking
16 that allow them to form meaningful relationships and become productive,
17 contributing adults.

18 14. Children raised with caretakers who do not care for their basic needs and
19 safety, or who do so unpredictably, are at risk for derangements in
20 attachment and a range of negative adult outcomes, including anxiety,
21 depression, and interpersonal difficulties. A similar child/caregiver
22

23 ¹ Wim Thiery et al., *Intergenerational Inequities in Exposure to Climate Extremes*,
24 374 Science 158 (2021).

25 ² Peterson C, Aslam MV, Niolon PH, et al., *Economic Burden of Health Conditions*
26 *Associated With Adverse Childhood Experiences Among US Adults*. JAMA Netw
Open. 2023;6(12):e2346323. doi:10.1001/jamanetworkopen.2023.46323

relationship can be applied on a population level for children and the adults in positions of power whose decision-making could, but does not, safeguard their wellbeing. Knowing that their government is continuing to permit fossil fuel pollution, treating children's lives unequally, with repercussions that will disproportionately impact them, unequally aggravates psychological harm for children. The failure by governments to respond to the climate crisis and to affirmatively contribute to it -- importantly *as perceived* by young people -- has been linked to climate distress in a study of 10,000 youth,³ suggesting that it is not just fear of climate change, but this fear in combination with the belief that adults collectively will not protect them, that contributes to distress. This collective harm has been referred to as "institutional betrayal."

15. Children are also politically powerless, with no immediate control over the decisions that will impact their futures, contributing to a sense of helplessness in the face of institutional betrayal. These harms are amplified for children of color who are already vulnerable due to systems, or institutions, that have consistently perpetuated inequities in housing, education, health, and political power. Children, including Plaintiffs in this case, experience institutional betrayal by Defendants' knowingly and intentionally abdicating their fundamental role to keep them safe, and instead intentionally value their lives as less than those of adults.

16. Because institutional betrayal is a distinct harm, children reap immediate benefits when government eliminates one source of trauma, like the

³ Caroline Hickman et al., *Climate Anxiety in Children and Young People and Their Beliefs About Government Responses to Climate Change: A Global Survey*, 5 The Lancet Planetary Health E863 (2021).

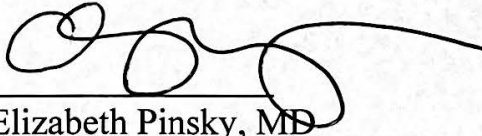
1 discriminatory unequal or the mistreatment of children. Thus, based on my
2 research, other published research, and my experience working with
3 children of all ages, it is my expert opinion that Plaintiffs' mental health,
4 and therefore physical and developmental wellbeing, would immediately
5 benefit from Defendants ceasing discriminatory policies and practices that
6 devalue children's lives.

7 17. Every child living in the United States today is experiencing some level
8 of harm from fossil fuel pollution and associated warming. These harms
9 will mount as long as pollution and warming continue unabated.
10 Conversely, every avoided fraction of a degree of warming confers benefit.

11 18. Similar to the products of fossil fuel combustion, there is no known safe
12 level of exposure to lead: each additional microgram of exposure
13 represents lost cognitive ability and lower academic achievement. Also
14 similar to current exposure to warming, virtually all Americans born before
15 1980 were exposed to lead levels that would demand urgent action if
16 detected in a child today. With abatement measures, average blood lead
17 level of children in the US has steadily declined over the past 40 years from
18 15 µg/dL to 0.6 µg/dL, a change that represents millions – and possibly
19 billions – of preserved IQ points and associated savings over time. These
20 then-children also experienced *individual* benefits from abatement
21 measures; failing to fully account for the specifically developmental nature
22 of their vulnerability would have presented a significant hurdle to their
23 protection. Changes in policy that lead to even incremental benefits to
24 children in the short term have profound long-term benefits to those
25 children's lives and to society at large, especially when the real human
26 benefits are not economically discounted.

1 19. It is my expert opinion as a child and adolescent psychiatrist and
2 pediatrician, and one of the nation's leading experts in the field of climate
3 anxiety and trauma in our youngest populations, that removing
4 discriminatory barriers to children accessing equal rights under the law,
5 and attempting to secure equal privileges to live safely, to breathe clean air,
6 to be free from extreme heat and other unnatural weather events, and at
7 minimum to seek to prevent their worsening physical and mental health
8 circumstances as climate pollution continues, is unquestionably
9 meaningful for these children. Conversely, having courts deny their right
10 to be heard and their rights and claims of harm to be considered is yet
11 another institutional betrayal for the most politically powerless group of
12 citizens in the country.

13
14 I declare under penalty of perjury under the laws of the United States of
15 America that the foregoing is true and correct. Executed on August 8, 2024.

16
17 
18 Elizabeth Pinsky, MD