1	Shiloh S. Hernandez	
1	Western Environmental Law Center	
2	103 Reeder's Alley	
	Helena, MT 59601	
3	(406) 204-4861	
	hernandez@westernlaw.org	
4	\bigcirc 5	
	Roger Sullivan	
5	Dustin Leftridge	
	McGarvey Law	
6	345 1st Avenue East	
	Kalispell, MT 59901	
7	(406) 752-5566	
	rsullivan@mcgarveylaw.com	
8	dleftridge@mcgarveylaw.com	
0	Nothen Dollinger (nuc has vies noudine)	
9	Nathan Bellinger (<i>pro hac vice pending</i>) Our Children's Trust	
10	1216 Lincoln Street	
10	Eugene, OR 97401	
11	(413) 687-1668	
11	nate@ourchildrenstrust.org	
12	nate@ourennarenstrust.org	
14	Attorney for Plaintiffs	
13		
	FIRST JUDICIAL DISTRICT COURT	Γ, LEWIS AND CLARK COUNTY
14		
	RIKKI HELD; LANDER B., by and through	
15	his guardian Sara Busse; BADGE B., by and	Case No
	through his guardian Sara Busse; SARIEL S.,	
16	by and through her guardian Cristen Twoteeth;	
	KIAN T., by and through his guardian Todd	
17	Tanner; GEORGIANNA F., by and through	
	her guardian Douglas Fisher; KATHRYN	
18	GRACE S., by and through her guardian Erik	
	Gibson-Snyder; EVA L., by and through her	
19	guardian Mark Lighthiser; MIKA K., by and	COMPLAINT FOR DECLARATORY
	through his guardian Rachel Kantor; OLIVIA	AND INJUNCTIVE RELIEF
20	V., by and through her guardian Lynn Purl;	
	JEFFREY K., by and through his guardian	
21	Laura King; NATHANIEL K., by and through	
22	his guardian Laura King; CLAIRE V., by and	
22		
	through her guardian Michael Vlases; RUBY	
	D., by and through her guardian Shane Doyle;	
23		
	D., by and through her guardian Shane Doyle;	

1 2 3 4 5 6 7 8 9 10 11 12	Shane Doyle; TALEAH H., by and through her guardian Cesar Hernández, Plaintiffs, v. STATE OF MONTANA, GOVERNOR STEVE BULLOCK, MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY, MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION, MONTANA DEPARTMENT OF TRANSPORTATION, and MONTANA PUBLIC SERVICE COMMISSION, Defendants.	
13 14 15		
16		
17		
18		
19		
20		
21		
22		
23		

TABLE OF CONTENTS	
COMPLAINT FOR DECLARATORY AND INJUNCTIVE RELIEF	1
NATURE OF THE ACTION	1
URISDICTION AND VENUE	5
PARTIES	5
PLAINTIFFS	5
DEFENDANTS	26
TATEMENT OF THE FACTS	
DEFENDANTS' STATE ENERGY POLICY AND THE CLIMATE CHAN EXCEPTION TO MEPA PERPETUATE FOSSIL FUELS AND CONTRIE TO THE CLIMATE CRISIS	BUTE
A. Defendants' State Energy Policy Perpetuates a Fossil-Fuel Based Energy System that Causes and Contributes to the Climate Crisis and Youth Plaintiffs' Injuries	
B. Defendants' Aggregate Acts Pursuant to and in Furtherance of the Sta Energy Policy Demonstrate an Unconstitutional Systemic Course of Conduct and Cause Dangerous Levels of GHG Pollution and Climate Destabilization	
DEFENDANTS' STATE ENERGY POLICY HAS RESULTED IN DANGEROUS AMOUNTS OF GREENHOUSE GAS EMISSIONS IN MONTANA	
ANTHROPOGENIC CLIMATE DESTABILIZATION IS ALREADY CAUSING DANGEROUS IMPACTS IN MONTANA	53
A. Anthropogenic Climate Disruption and the Dangers of Increased Glo Warming	
B. The Impacts of Climate Disruption in Montana are Pervasive	
C. Children are the Most Vulnerable to the Climate Crisis and Its Dange Impacts	
DEFENDANTS' LONGSTANDING KNOWLEDGE OF THE DANGERS AIR POLLUTION AND CLIMATE DISRUPTION AND AUTHORITY TO REDUCE GHG EMISSIONS	0

1	THE SCIENCE DICTATES WHAT IS NEEDED TO PROTECT YOUTH PLAINTIFFS	87
2	CLAIMS	
3	COUNT I—RIGHT TO CLEAN AND HEALTHFUL ENVIRONMENT,	
4	INCLUDING THE RIGHT TO A STABLE CLIMATE SYSTEM (Mont. Const. Art. II, § 3, § 15, § 17, Art. IX, § 1)	90
5 6	COUNT II—RIGHT TO SEEK SAFETY, HEALTH, AND HAPPINESS (Mont. Const. Art. II, § 3, § 15, § 17, Art. IX, § 1)	93
7	COUNT III—INDIVIDUAL DIGNITY AND EQUAL PROTECTION (Mont. Const. Art. II, § 4, § 15)	95
8 9	COUNT IV—PROTECTION OF MONTANA'S CLEAN AND HEALTHFUL ENVIRONMENT AND PUBLIC TRUST RESOURCES FOR PRESENT AND FUTURE GENERATIONS (Mont. Const. Art. IX, § 1, § 3)	98
10	PRAYER FOR RELIEF	
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		

COMPLAINT FOR DECLARATORY AND INJUNCTIVE RELIEF

1. Youth Plaintiffs, Rikki Held; Lander B., by and through his guardian Sara Busse; Badge B., by and through his guardian Sara Busse; Sariel S., by and through her guardian Cristen Twoteeth; Kian T., by and through his guardian Todd Tanner; Georgianna F., by and through her guardian Douglas Fisher; Kathryn Grace S., by and through her guardian Erik Gibson-Snyder; Eva L., by and through her guardian Mark Lighthiser; Mika K., by and through his guardian Rachel Kantor; Olivia V., by and through her guardian Lynn Purl; Jeffrey K., by and through his guardian Laura King; Nathaniel K., by and through his guardian Laura King; Claire V., by and through her guardian Michael Vlases; Ruby D., by and through her guardian Shane Doyle; Lilian D., by and through her guardian Shane Doyle; and Taleah H., by and through her guardian Cesar Hernández, (collectively, "Youth Plaintiffs"), bring this action against Defendants, State of Montana, Governor Steve Bullock, Montana Department of Environmental Quality, Montana Department of Natural Resources and Conservation, Montana Department of Transportation, and Montana Public Service Commission (collectively "Defendants") in their official capacities, and respectfully allege as follows:

NATURE OF THE ACTION

2. The Youth Plaintiffs to this proceeding are children and youth in Montana, between the ages of two (2) and eighteen (18), who have been and will continue to be harmed by the dangerous impacts of fossil fuels and the climate crisis. Children are uniquely vulnerable to the consequences of the climate crisis, which harms Youth Plaintiffs' physical and psychological health and safety, interferes with family and cultural foundations and integrity, and causes economic deprivations. The climate crisis is degrading and depleting

Montana's unique and precious environment and natural resources, which the Youth Plaintiffs depend on for their safety and survival. Because of their unique vulnerabilities and age, Youth Plaintiffs are disproportionately harmed by the climate crisis and face lifelong hardships. Instead of using governmental authority to exacerbate the existing dangers and risks of harm to these children, Defendants must use their existing authorities to take science-based actions to reduce their risk of harm.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

- Defendants are governmental entities that have created and implemented a long-standing fossil-fuel based state energy system that contributes to dangerous climate disruption in violation of Youth Plaintiffs' constitutional rights as guaranteed under Article II, Section 3; Article II, Section 4; Article II, Section 15; Article II, Section 17; Article IX, Section 1; Article IX, Section 3 of the Montana Constitution; and the Public Trust Doctrine.
- 4. Youth Plaintiffs bring this case to challenge the constitutionality of Montana's fossil-fuel based State Energy Policy, which is codified in law, Mont. Code Ann. § 90-4-1001(c)-(g) ("State Energy Policy"), as well as the Climate Change Exception in the Montana Environmental Policy Act ("MEPA"), Mont. Code Ann. § 75-1-201(2)(a) ("Climate Change Exception"). A controversy lies in the ongoing implementation of the State Energy Policy and the Climate Change Exception to MEPA, which are harming these Youth Plaintiffs and infringing on their constitutional rights.
- 5. The purpose of the Montana Constitution, as set out in its Preamble, is not just to benefit Montana's present generations of children and youth, but future generations as well:
 - We the people of Montana grateful to God for the quiet beauty of our state, the grandeur of our mountains, the vastness of our rolling plains, and desiring to improve the quality of life, equality of opportunity and to secure the blessings of liberty for this *and future generations* do ordain and establish this constitution.

Montana Constitution, Preamble (emphasis added).

6. Moreover, the Constitution, through Article II, Section 15, explicitly extends all constitutional rights to children and youth.

7. The threats posed by fossil fuels and the climate crisis are existential. Science is unequivocal that dangerous climate change is upon us and is occurring due to human activities, primarily from the extraction and burning of fossil fuels. Additionally, while forests have the potential to sequester significant amounts of carbon dioxide ("CO₂"), current forestry practices and activities are not maximizing the sequestration potential of forests and are resulting in significant greenhouse gas ("GHG") emissions. The release of anthropogenic GHGs into the atmosphere is already triggering a host of adverse consequences in Montana, including dangerously increasing temperatures, changing precipitation patterns, increasing droughts and extreme weather events, increasing the frequency and severity of wildfires, increasing glacial melt, and causing numerous adverse health risks, especially to children.

8. Although Defendants know that Youth Plaintiffs are living under dangerous climatic conditions that create an unreasonable risk of harm, they continue to act affirmatively to exacerbate the climate crisis. Youth Plaintiffs, most of whom cannot vote, therefore seek this Court's judgment and redress. Youth Plaintiffs first seek a declaration of their constitutional rights, the constitutionality of the State Energy Policy and the Climate Change Exception to MEPA, and the liability and duties of the government Defendants. If awarded declaratory relief, these children seek an equitable order directing Defendants to cease and reform their unconstitutional conduct and prepare a remedial plan of the government's own devising, consistent with its authorities and the Court's declaration of law, to bring the state energy system into constitutional compliance. Where the political

majority places these children in harm's way and at substantial risk to their lives and security, Youth Plaintiffs are dependent on the judiciary to vindicate and protect their fundamental and inalienable constitutional rights.

9. Some of this State's and the nation's landmark constitutional rulings have approved declaratory and injunctive relief, including remedial plans, to remedy systemic constitutional violations like those at issue here. For example, in *Columbia Falls Elementary School Dist. No. 6 v. State*, 2005 MT 69, 326 Mont. 304, 109 P.3d 257, schools on behalf of children called upon the courts to reform pervasive deficiencies in Montana's system of funding public elementary and secondary schools. *See also Helena Elementary School Dist. No. 1 v. State*, (1989), 236 Mont. 44, 769 P.2d 684. Similarly, federal courts have declared unconstitutional systemic racial injustice in school systems, *Brown v. Bd. of Educ.*, 349 U.S. 294 (1955), government-sanctioned segregated public housing systems, *Hills v. Gautreaux*, 425 U.S. 284 (1976), and cruel and unusual conditions across California's state prison system, *Brown v. Plata*, 563 U.S. 493 (2011).

10. Here too, because Defendants have used their governmental authority to create a state energy system that causes unparalleled harms to Montana's children and youth, it is incumbent on the courts to bring that system into constitutional compliance. As Delegate Aronow stated during Montana's 1972 constitutional convention: "The Constitution is, true enough, the framework of government, but on the other hand, it is a last bulwark and protection that the people have."¹

¹ Montana Constitutional Convention 1971-1972 Verbatim Transcript Vol. IV, at 1069 (Mar. 1, 1972), https://courts.mt.gov/portals/189/library/mt_cons_convention/vol4.pdf.

JURISDICTION AND VENUE

- 11. This Court has original jurisdiction over this action pursuant to Article II, Section 16, and Article VII, Section 4 of the Montana Constitution and pursuant to Mont. Code Ann. § 3-5-302.
- 12. This Court has jurisdiction to grant declaratory and injunctive relief pursuant to the Uniform Declaratory Judgments Act, Mont. Code Ann. §§ 27-8-101, *et seq*. ("UDJA") and §§ 27-19-101, *et seq*., as well as the general equitable powers of this Court. Pursuant to the UDJA, this Court "shall have power to declare rights, status, and other legal relations" and this is "whether or not further relief is or could be claimed" in this action. Mont. Code Ann. § 27-8-201.
- 13. Venue in this action is proper in this Court pursuant to Mont. Code Ann. § 25-2-126(1) and § 25-2-117. This is an action against the State of Montana, against officers and agencies of the state in their official capacities, and one or more of the Youth Plaintiffs reside in Lewis and Clark County.

PARTIES

PLAINTIFFS

- 14. Plaintiff Rikki Held is 18 years old and is from Broadus, Montana where she lives with her family on their 7,000 acre-ranch. Her family's livelihood largely depends upon the cattle they raise on the ranch and sell, as well as growing and harvesting a variety of crops. Rikki's access to and enjoyment of the outdoors, including camping and backpacking, are central to her health and foundational to her family. Climate disruption is already threatening Rikki's home, family, community, and way of life.
 - 15. The Powder River runs through Rikki's family ranch and Rikki's family has water rights to the river. Due to changes in the climate there is increased variability in the water levels

in the river. In 2007 the river dried up. In the spring of 2017, abnormally high temperatures linked to the climate crisis caused the frozen river to melt at a rapid rate and flood. The water flooded Rikki's family property and nearly flooded her house. Approximately 20 feet of river bank was lost in the overflow and more has eroded since then. In 2011, a few young bulls on the ranch were stranded at a bend in the river on a piece of ice when a channel flooded. The young bulls were unable to cross to safe land, and one bull died. Rikki's father operated a log skidder to wade through 4-feet of water and help provide alfalfa to save the cattle, placing his own life at risk.

16. Rikki and her family depend upon an abundant snowfall in the winter, which melts and fills up the reservoirs on the ranch to water the cattle all summer. However, due to climate disruption, the snow does not last throughout the winter. The lack of snow means there is no spring runoff that Rikki's family can rely on to water their livestock. The variant temperatures and rapidly melting snow quickly freeze and Rikki's fields are then covered in ice. The ice is incredibly dangerous; cattle slip and fall on the ice, breaking their hips or aborting their calves. These injuries to cattle greatly affect Rikki and her family's livelihood because they lose profits when any calf, cow, or bull is injured or dies. Rikki's family has already experienced a loss in profits and Rikki is afraid of the worsening economic hardship her family will face if the climate crisis is not addressed.

17. Climate change has intensified extreme weather events in the Powder River County area. For example, a severe hail storm in or around July 2019 destroyed parts of Rikki's ranch, including her home, and the second cutting of the alfalfa crop was devastated.

18. Rikki's family hunts deer and elk on the ranch, which they freeze and eat throughout the year. Due to rising temperatures and drought conditions, elk range and herd behaviors have

changed and it has become more difficult for Rikki's family to hunt deer and elk on the ranch. Elk herd ranges now extend past the outskirts of the ranch, causing significant damage to the interior ranch, including fences and hay crops. The elk migrate down to the meadows earlier in the year because the grass dries in the hills, and the elk then compete with the cattle and destroy crops on Rikki's ranch. The rising temperatures in Montana have caused an increase in Bluetongue Virus, a viral disease of ruminants transmitted by small biting midges, or *Culicoides*. The first severe frost of the year destroys the biting midges and abruptly ends the spread of disease for the year; however, such disease-carrying insects are surviving due to warmer winters. Rikki and her family frequently find diseased white-tailed deer and carcasses on her ranch due to Bluetongue, which could be transmitted if eaten. Likewise, white pine weevils are surviving in the warmer temperatures and are killing the pine trees on Rikki's ranch.

19. There have been a number of wildfires on the ranch. In or around the summer of 2012, a large wildfire swept the ranch and burned approximately 70 miles of area powerlines causing Rikki and her family lost electricity and power for approximately one month. Rikki and her family's cattle suffered because of the fire; many lost a significant amount of weight and several starved to death, causing Rikki's family financial losses that year. The smoke was particularly bad, and Rikki was forced to remain inside. Broadus has recorded some of the worst air quality in Montana, as well as the nation, in significant part due to the fossil fuels development and combustion that happens in the areas surrounding Broadus.

20. Rikki feels a heavy burden as a result of the climate crisis. She experiences stress and despair when thinking about how the State of Montana has known about climate disruption

for decades and yet has chosen to continue to act in a way that threatens her home and property, her family's livelihood, and infringes upon her constitutional rights and future.

- 21. Plaintiffs Lander B. and Badge B. are 15 and 12 years old, respectively, and live in Kalispell, Montana. Hunting and fishing are an integral part of Lander and Badge's cultural heritage and community, as well as an important food source Lander, Badge, and their family depend on the food they hunt and fish for as their source of meat and protein. Their access to an important food source, and a cultural and familial tradition, is inhibited due to the climate crisis.
- 22. Lander and Badge are also avid fishermen and catch cutthroat trout, rainbow trout, bull trout, and other fish in Montana. Their ability to fish is adversely impacted as the climate crisis causes abnormally low instream water levels and high water temperatures, which harm fish and decrease their population. Climate disruption has also caused the closure of certain fisheries; Lander and Badge recall closures on the Flathead River and Blackfoot River, among others, which have prohibited them from fishing. Their ability to raft on rivers, including the Flathead, Blackfoot, and Smith Rivers, has also been restricted, and in some cases made impossible, due to low instream water levels.
- 23. Hunting is an important part of Lander and Badge's family life, identity, and culture. Lander hunts for antelope, deer, birds, and other small and large wild game animals. However, the increasing heat, as well as the dry and smoke-filled air in the summer and fall, as a result of climate disruption, have diminished his opportunities to hunt in Montana. The extreme temperatures and smoke make hunting unbearable for Lander. The heat and drought conditions pose challenges for wildlife and alters their normal range, behavior, and populations, which makes hunting even more challenging. Badge hunts for upland birds,

which are a food source for him and his family. However, as climate disruption increases the frequency of extreme weather events and drought conditions, the birds are experiencing increased mortality rates, which limits Badge's ability to hunt and cuts off a natural food source.

- 24. During the summer of 2018, a wildfire near Lander and Badge's home forced their family to prepare to evacuate. While the wildfire ultimately spared their property, Lander and Badge fear that, as climate destabilization makes wildfires more frequent and destructive, their home could be damaged or destroyed, further threatening their safety and security. Due to climate change, the wildfire smoke in Kalispell, and in other parts of Montana where Badge recreates, makes it difficult for Badge to breath, triggers a cough, and irritates his eyes, which negatively impacts his health and well-being. Lander has seasonal pollen allergies, which will worsen with the increased pollen count and a changing climate.
- 25. Badge is named after Badger-Two Medicine, an area where he frequently recreates and fishes, and feels strongly connected to. Severe wildfires in Badger-Two Medicine destroyed ancient White Pines and degraded areas significant to Badge and where he likes to visit and recreate. The devastation of Badger-Two Medicine, Badge's namesake, was particularly distressing and had a profound emotional impact on Badge. Badge's ability to enjoy and recreate in and around Montana's forests, which is important for his health and foundational to his family, has been diminished as pine beetles infest and kill trees, decimating forests. Badge has even seen pine beetles on the trees while hiking in Montana's forests.
- 26. Lander cares deeply about protecting Montana's environment, which is an integral part of his family traditions, culture, and identity. Witnessing the current impacts of the climate

crisis in Montana and in other parts of the world is traumatic for Lander. Badge is anxious when he thinks about the future that he, and his potential children, will inherit. Both Lander and Badge were plaintiffs in a 2011 constitutional climate case against the State of Montana, which was filed directly with the Montana Supreme Court. Following the Supreme Court's directive, they are filing this case in the district court.²

- 27. Plaintiff **Sariel S**. is 17 years old and lives on the Flathead Indian Reservation. Sariel is a member of the Confederated Salish and Kootenai Tribes. Sariel's family and community have a deep connection to the natural world, and have a body of knowledge about the environment closely tied to the seasons, locations, and environment. This body of knowledge, as well as cultural practices and traditions, are passed on by Elders and family to Sariel so that her generation and future generations can continue her community's spiritual, cultural, and familial traditions and ways of life.
- 28. Climate change is threatening Sariel's culture, which is already in jeopardy and at risk of being lost. The environment is one of the remaining connections Sariel and her community have to their culture; Sariel is worried that her and her community's activities, practices, and beliefs of cultural significance will be entirely lost if climate change continues. The threat of losing her community's important connection to the environment and losing her culture because of climate change is extremely stressful on Sariel and her community.

29. The lack of winter snowpack in recent years, due to climate disruption, has harmed Sariel and her community on the Flathead Reservation. The Flathead Lake depends on the runoff from the snow but the lack of snow creates low water levels, which impacts Sariel's aesthetic and recreational opportunities, and impacts her community's ability to fish for

² Barhaugh et al., v. State of Montana, No. OP 11-0258 (June 15, 2011).

bull trout and rainbow trout. Snow is also a necessary component of certain traditional ceremonies, like Coyote Stories and Creation Stories. Sariel's Elders are only able to share these stories when there is snow on the ground, but this winter season, and in recent winters, the snow has melted too quickly and this oral history thus cannot be shared with Sariel and the community. Climate change is impacting Sariel's ability to partake in cultural and spiritual activities, central to her individual dignity.

- 30. There has been an increase in wildfires on the Flathead Reservation where Sariel lives, and she is forced to remain indoors when the smoke is concentrated in the area to preserve her overall health and safety.
- 31. Sariel's family members hunt wild game on the Flathead Reservation, including bison. Sariel and her family rely on this food source for the rest of the year. Bison in particular, are a central part of her Salish and Kootenai cultural heritage and also a critical food source for Sariel and her community. Sariel and her family pick huckleberries, which they dry, freeze, and make into jam, syrup, and other foods, such as cheesecake for Sariel's birthday. However, Sariel has to travel farther to pick huckleberries, and the huckleberry picking season has been pushed later into the year because the berries are not ripe due to fluctuating and extreme temperatures. Sariel is concerned that as the climate crisis worsens, traditional food sources and cultural practices may be lost with the declining access to bison, berries, and other foods.
- 32. Climate disruption has made it difficult for Sariel to learn and engage in traditional and cultural practices and customs that have been passed down for generations. The passing on of cultural knowledge is incredibly important to Sariel, and she is increasingly worried that the impacts of climate change are threatening her opportunity and right to learn these

practices so that she might carry them on. The climate crisis has a profound emotional and psychological impact on Sariel, who stresses about the impacts her community is facing and will face in the near future. Sariel is distraught when thinking about her future and if she will have one.

33. Plaintiff **Kian T.** is 14 years old and lives with his family on 27 acres in Bigfork, Montana. As the climate crisis causes warmer winters and increased insect activity, trees on his family's property—including birch, spruce, aspen, cottonwood, and fir of various age classes—are dying with heightened frequency. Kian likes to recreate on the creek to which he and his family own water rights, and which borders his family's property. The creek is primarily fed by snowmelt, but due to human-caused climate disruption there is earlier spring snowmelt in the surrounding mountains, which threatens the creek's water supply in the summer and fall. Kian's family property, where he lives and recreates, is directly harmed as a result of the climate crisis.

34. Kian is a passionate fly fisher; he has been fishing Montana's lakes, ponds, and rivers since he was four years old. Fly fishing is a part of Kian's cultural heritage and family traditions; his father has been fishing for over 50 years and Kian hopes that he will be able to preserve this tradition and fish for the next 50 years or more. However, such fishing opportunities are already diminishing. Kian especially enjoys fishing the Flathead and Missouri Rivers, where he catches rainbow and cutthroat trout. He was featured fishing in the 2019 fishing and hunting documentary, "In the Heart of the Rockies" on the Sportsman Channel. The warmer water temperatures, lower oxygen levels, and declining in-stream flows due to climate disruption are harming Montana's rivers and fish. These climate impacts have decreased fishing opportunities for Kian as the rivers become warmer and hold less water in the summer. He has had to cancel fishing trips due to warm water temperatures and low flows. Climate destabilization is thus restricting and infringing on Kian's ability to fish.

- 35. Kian lives near Glacier National Park, which he enjoys visiting. Kian hopes to continue recreating in Glacier National Park, a place of significance to him, but the dead and dving forests, melting glaciers, and declining snowpack diminishes these experiences and recreational opportunities. He is distressed that he will never be able to see the natural glaciers as they have historically existed, and as other generations experienced.
- 36. Increased smoke in the summer has impacted Kian's ability to play soccer, fish, hike, camp, and otherwise recreate outside, activities which are central to his health and foundational to his family. The smoke makes Kian feel sick, and he is forced to seek refuge inside. During the summer of 2017, his family had to cancel a camping trip because the smoke conditions were so oppressive and dangerous.
- 37. Kian has a black belt in taekwondo, which is a discipline and practice he has trained in since the age of five. Kian is inspired and strives to live by the five taekwondo principles: courtesy, integrity, perseverance, self-control, and indomitable spirit-principles that encourage him to be conscientious about the impact he has in the world. He has taken numerous steps in his personal life to conserve energy and natural resources in order to protect the planet for both his generation and future generations.
- 38. Plaintiff Georgianna F. ("Georgi") is 17 years old and lives in Bozeman, Montana. Georgi is a competitive Nordic skier and she trains 11 months of the year and practices 15 hours each week, 7 days a week. She primarily trains for her competitions in Montana and has competed in Junior National competitions for the past three years.

39. Georgi's ability to compete and participate in Nordic skiing has been directly impacted by climate disruption. With less snowfall in the winter, and the snow melting at rapid rates, Georgi's training season is curtailed and has overall shortened in length. In recent years there has not been enough snow to groom trails or create tracks in the snow to Nordic ski race until January, although historically tracks were created in November. The lack of snow has inhibited Georgi's ability to complete all her necessary and appropriate training and hinders her ability to continue to compete at a high level, which adversely impacts her health and mental well-being.

40. In the summer, when Georgi trains for Nordic skiing and winter competition, the wildfire smoke limits her ability to train outdoors, which is important for the sport. Practices in the summer have been cancelled or curtailed due to smoke from wildfires in Montana. The smoke makes it so Georgi cannot fully breathe or train at a high intensity level; she is increasingly worried about the long-term effects that the exposure to heavy smoke while training has on her health and respiratory system. In or around August 2017, while training in Canmore, Alberta, Canada, Georgi had to wear a mask to protect herself from the ash that fell from the sky.

41. Georgi also enjoys paddleboarding, backpacking, hiking, and other activities in the outdoors. She has noticed that there is less flow in the local rivers, in particular the Smith, Flathead, and Missouri Rivers, and at times these rivers have been closed due to low water levels, which inhibits her access and restricts activities important to her health and foundational to her family life. Additionally, due to less water flows, the season for recreating on the river is shortened and it is increasingly difficult for Georgi and her family to receive a permit to recreate on the Smith River, further inhibiting access. At times, even

with a permit, Georgi and her family have been forced to cancel float trips on the river because there is not enough water due to climate disruption, thus impacting important familial activities.

42. Georgi sometimes has feelings of despair and hopelessness; she has invested years into a snow-based sport, but understands that snow and the sport may not exist in her future.

43. Plaintiff Kathryn Grace S. ("Grace") is 16 years old and resides in Missoula, Montana. Grace and her family kayak and recreate on the Clark Fork River, which is near her house, and other nearby rivers and creeks. However, due to higher temperatures, decreasing snowpack, and drought, the water level in the river is sometimes so low during the summer months that it is impossible to float on the river. During the summer of 2013, Grace and her family had to drag her raft down the river because it ran aground due to low water levels. Grace's access to the river is also impeded when the water level rises too high, which can occur when unusually warm springs cause rapid snowmelt, because rafting, kayaking, floating, and other activities become too dangerous. Flood warnings have become more common due to the dangerously high water levels in the spring, caused by unusually warm weather causing rapid snowmelt. Because of the climate crisis, Grace's access to the Clark Fork River for recreational activities has been increasingly limited and impaired, thus limiting her ability to enjoy activities important to her health and family.

44. In the summers of 2017 and 2018, the smoke from wildfires impacted Grace's ability to go outside and enjoy outdoor activities, and placed her safety, health, and well-being at risk. The smoke triggered coughing, as well as throat irritation. The extreme heat and wildfire smoke adversely impact Grace's ability to play competitive soccer and has led to fewer soccer practices.

45. Witnessing climate change impacts occur around her is devastating emotionally to Grace and she is anxious about her future and fearful that her generation may not survive the climate crisis. Grace has doubts about whether she would want to have her own children given her anxieties about the future. Grace participates in Students Against Violating the Environment ("SAVE"), a school club, and participated in a campaign to eliminate singleuse plastic from the cafeteria at her school. Grace also launched and led a service project in her community to eliminate disposable containers at restaurants. Grace feels that she must do these activities to protect her environment but knows that her state government also needs to stop its actions that are perpetuating the use of fossil fuels.

- 46. Plaintiff **Eva L.** is 14 years old and is based in Livingston, Montana, just north of Yellowstone National Park. Eva enjoys learning about nature and travels with her family, exploring national parks and public lands. Eva enjoys many activities outdoors, which are central to her health and foundational to her family, including backpacking, climbing, and riding bikes; she also enjoys swimming and rafting on the Yellowstone River.
 - 47. In the summer of 2017, wildfire smoke from several fires in Montana created very poor air quality in Livingston, harming Eva's health and security. During that time, from June to October, Eva was unable to enjoy the high-intensity activities she normally enjoys outdoors, which are an integral part of her lifestyle and family life. Eva often felt ill that summer, as the thick layer of smoke lingered in Livingston. She suffered from eye and nose irritation, a sore throat, and headaches.
 - 48. In or around September 2017, Eva and her family traveled to Glacier National Park for a family vacation. Eva and her family were unable to hike as planned or enjoy the park due to the thick smoke that permeated the area. The smoke was so bad that the glaciers were

not visible, even from just a few hundred yards away. Eva found it difficult to breathe while at Glacier National Park and she and her family ended the trip early to escape the smoke and protect their health and safety.

49. In May 2018, all of the rivers, tributaries, and streams near Eva's home flooded when higher than average temperatures rapidly melted the snowpack – an event that was called "the Tsunami of 2018." The Shields River in Shields Valley flooded and the bridge that crosses the Shields River near Eva's house was severely damaged. Ultimately, the local government declared the bridge unsafe for vehicle use and condemned it, even though it was Eva and her family's primary route from their home to the city of Livingston. Eva and her family would drive one car to the bridge from their home, walk across the bridge, and then drive their other car parked on the other side of the river into town. When the fuel had run out in their vehicle, Eva and her family biked across the bridge to their home, which was an approximately 2-mile bike ride. Park County built a temporary bridge for the residents to use during construction of the new bridge, which was expected to be completed before spring runoff in May 2019. Unexpected, early season snow melt in March of 2019, due to abnormally warm temperatures, completely destroyed the temporary bridge, washing the bridge planks downriver. Eva and her family were forced to drive an additional 45 minutes around the river to get to town each day. This period of time was incredibly stressful on Eva and her family. Because of their inability to access the bridge and town, and increased hardship and stress in their everyday life, Eva and her family made the decision to relocate; they sold their home and moved in with Eva's grandparents in Livingston. Eva is anxious about how, as the climate crisis impacts worsen, her family and community will be able to adapt to the devastation of public resources and infrastructure.

50. During the summer of 2016 abnormally high air temperatures and historically low flows allowed a parasite to grow in the Yellowstone River, which caused kidney disease in Yellowstone cutthroat and rainbow trout and other fish, and killed tens of thousands of fish. Over 180 miles of the Yellowstone River were closed for several weeks, prohibiting Eva and her family from accessing the river to swim, float, raft, or let her dog play near the river. These are traditional activities for Eva, her friends, and her family, central to her identity, well-being, and family foundations.

- 51. Eva is increasingly anxious about the climate change impacts she and her family are experiencing. She is distressed that the climate crisis will worsen if action is not immediately taken.
- 52. Plaintiff **Mica K.** is 11 years old and resides in Missoula, Montana. Mica has experienced stress over the impacts of the climate crisis since he was three, when he saw the film *Chasing Ice*. Mica participates in climate strikes on most Fridays, writes to elected officials, and participates in other acts of civic engagement because he knows Montana must stop promoting fossil fuel projects and address the climate crisis.
- 53. Rising temperatures due to climate disruption have made it difficult for Mica to recreate outdoors and participate in the activities that he enjoys, which are important to his health and development, and overall well-being. Mica suffers from headaches, fatigue, and eye irritation because of the increase in wildfires and smoke, direct impacts to his physical health and safety, as well as the indirect psychological impacts, and behavioral issues when he is required to stay indoors during the summer. Wildfires and smoke during the summer of 2017 forced him to stay inside for six weeks in August and September. The lengthening wildfire season and the resulting smoke have caused Mica's school to cancel recess for

approximately three weeks in 2017, forcing Mica and his classmates to remain inside due to dangerous levels of smoke and pollution. Because of where Mica lives, in a valley, the airshed is particularly susceptible to air pollution such as smoke, thus further exacerbating the harm to Mica from wildfire smoke.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

- 54. On August 1, 2019, a forest fire started approximately one mile away from Mica's house. Mica watched the helicopters and firefighters work to prevent the fire from spreading. The event was distressing to Mica and he feared that the fire would destroy his home. Mica is anxious that, as the climate crisis worsens he will lose his family home to climate disruption.
- 55. Mica trains for and runs half marathons in the spring and summer months in Montana with his family. The wildfire smoke makes Mica feel sick when he runs outside, and he becomes lethargic and suffers from headaches. During a trail running class in the summer of 2017, Mica became ill due to the smoke and he could not participate in the remainder of the classes for that season. Mica and his family used to go backpacking and camping in late summer, recreational activities that are foundational to their family and lifestyle, but now avoid camping or other outdoor activities in August and September because of the smoke and its negative effect on Mica's health and safety.

56. Mica and his dad and brother fish in the Blackfoot river and catch cutthroat, rainbow, and brown trout. In the spring, the Blackfoot, Clark Fork, and Bitterroot Rivers now regularly flood at frequencies not historically seen due to the abnormally warm spring temperatures and increased spring rainfall, causing rapid snowmelt and increased runoff. This prevents Mica and his family from fishing and obstructs their access of the river. Fishing restrictions in middle-late summer limit the hours during the day that Mica is able to fish due to the

low water levels and warm water temperatures, which deprive the fish of needed oxygen, putting them under stress, resulting in an increase in fish mortality.

- 57. Mica has seen how the glaciers and lakes have been impacted by climate disruption first hand in Glacier National Park and this has a profound emotional impact on Mica. This summer he is planning a backpacking trip to Glacier National Park in order to hike up to a glacier and see one up close before it melts further and eventually disappears. Mica's favorite animal is the pika; however, as the number of pikas continue to decline, it will be increasing difficult for Mica to see or hear pikas while recreating outdoors.
- 58. Plaintiff **Olivia V.** is 16 years old and lives in Missoula, Montana. Olivia takes numerous steps to minimize her impact on the environment. She has been actively involved with the local Sunrise Movement and helped organize a climate strike in Missoula in or around September 2019.
- 59. The summers in Missoula are increasingly hot and smoky. Olivia has exercise induced asthma, which she was diagnosed with at the age of 13. Olivia is particularly vulnerable to the smoke-filled air because of her asthma. When the air is filled with wildfire smoke, Olivia feels like she is suffocating if she spends more than five minutes outside. Olivia's throat and lungs are irritated by the smoke, and she often suffers from a cough during these conditions. Olivia feels as if her lungs are closing up. The higher temperatures and smoke have had an impact on her asthma. Olivia was prescribed an inhaler at the age of 13 but, over the years, her asthma attacks have become more frequent and severe. Due to the smoke, Olivia is forced to stay inside and has had to eliminate and reduce outdoor activities that she enjoys, such as hiking, biking, and swimming. Missoula has particularly poor air quality, which only exacerbates Olivia's respiratory health issues. Because of the smoke-

filled air and her asthma, Olivia has been forced to leave Montana entirely in past summers, most recently in 2018, in search of cleaner air.

- 60. Olivia also suffers from spring pollen allergies which has caused her eyes to swell shut, and her eyes are in pain for weeks at a time. Allergies first impacted Olivia at or around the age of 14, but have become progressively worse in recent years.
- 61. Olivia is profoundly impacted by the climate crisis emotionally and psychologically. She experiences bouts of depression when she thinks about the dire projections of the future, and doubts whether society and civilization will even exist. Olivia values her family and would like to have and raise children of her own, but she questions whether this is even an option in a world devastated by the climate crisis. She fears that if she has children they, or their children, would suffer or starve. Imagining the future that she will inherit, or that her children would live in, and the current suffering that the climate crisis is already causing her and others is a heavy burden for her to carry, and Olivia feels heartbroken and desperate.
- 62. Plaintiffs Jeffrey K. and Nathaniel ("Nate") K. live in Montana City, Montana. Jeffrey is six years old and Nate is two years old. Jeffrey has a pulmonary sequestration. As a result, Jeffrey is uniquely susceptible to respiratory complications, such as infections. Nate also has respiratory issues and, at the age of two, is sick frequently. Nate has gone to the emergency room twice due to difficulty breathing. Both Jeffrey and Nate, given their unique lung and health conditions, are especially vulnerable to poor air quality, such as smoke-filled air caused by wildfires. Climate disruption is increasing the length and severity of Montana's wildfire season which poses a threat to Jeffrey and Nate's health, especially given their young age and respiratory health conditions.

63. As a result of Jeffrey and Nate's unique vulnerabilities and sensitivities to poor air quality and wildfire smoke, their family has been forced to make changes in their daily activities. Jeffrey and Nate are kept indoors when the air is filled with wildfire smoke and they are unable to go hiking, camping, or participate in other outdoor activities that are central to their lifestyle, family, and overall well-being. This is difficult because Jeffrey and Nate both enjoy playing outside and being in Montana's beautiful natural environment.

64. Plaintiff **Claire V.** is 17 years old and lives in Bozeman, Montana. Claire is very active in her community and has worked on a number of projects to promote reliable and clean energy. For example, in middle school Claire raised \$120,000 to put solar panels on her school and other municipal buildings in Bozeman and she is the president of her high school's Solar Club. Claire is also on the Bozeman Climate Team, where she is working with stakeholders develop a climate plan for the city.

65. Claire works as a ski instructor at Big Sky Resort. However, her ability to earn money is jeopardized by climate disruption, which is causing a decrease in Montana's winter snowpack and, consequently, fewer visitors and decreased opportunities for work. If there is not enough snow and too few visitors, Claire is sent home without working her scheduled shift.

66. Claire is an avid road cyclist and enjoys participating in long distance bike rides across the country. In the summer of 2017, she cycled around Montana and in 2018 rode her bike across the United States. Claire has biked through Glacier National Park, where she was dismayed to see firsthand the receding glaciers. The extreme heat and increasing temperatures in the summer makes it harder for Claire to bike, especially long distances. Claire recalls that, in one instance while cycling, the extreme heat melted the asphalt.

67. Claire is on her school's cross-country team and trains year-round. As a result of climate destabilization, the increasing heat and smoke from wildfires in the summer and fall, have altered her training schedule – some of her practices have been cancelled while others have been moved entirely indoors. The heat and smoke make it harder for Claire to train and compete at a high level.

- 68. Bozeman Creek, which Claire's family has water rights to, runs through Claire's property and is Claire and her family's water source. She feels threatened and is concerned that with melting glaciers, declining snowpack, and increasing summer drought conditions—all as a result of climate disruption—water scarcity will impact her and her family in the future.
- 69. Despite Claire's work to raise money to install solar panels on her school, Montana law limits the size of solar panel arrays. Consequently, Claire's school is forced to continue to buy energy instead of using the cheaper energy generated by solar panels on site. As a result, her school has fewer financial resources to spend on programs, teachers, and facilities and, therefore, Claire's educational opportunities have been diminished by Montana's efforts to hinder large-scale solar arrays and instead, promote fossil fuels as an energy source.
- 70. Plaintiff Ruby D. is 11 years old, and Plaintiff Lilian D. is 9 years old. Ruby and Lilian reside in Bozeman, Montana. Ruby and Lilian are of Crow descent and a member of the Crow Tribe of Montana—Ruby's Crow name is Biachəgata, which means "pretty girl," and Lilian's Crow name is Malesch, which means "loved by many." Many of Ruby and Lilian's family members live on the Crow Reservation, where they visit during the summer and for special occasions and celebrations.

71. Each year in August, Ruby, Lilian, and their family travel to Crow, Montana for Crow Fair, during which they engage in a number of traditional cultural and spiritual activities and practices, including Pow Wows, toymaking, horse-riding, dancing, story-telling, playing games, sleeping in a tipi, and eating traditional foods. Ruby is a jingle dress dancer and often dances at Crow Fair, and travels to jingle dress dance at different Pow Wows in the region. Lilian is a fancy shawl dancer and dances at Crow Fair and competes at different Pow Wows in the region. The past two Fairs have been abnormally wet, cold, and muddy, which makes it difficult to complete the dances and other events as planned—events and cultural practices that are central to their spirituality and individual dignity.

- 72. Ruby and Lilian pick wild chokecherries, and use the berries to make syrup. They also pick wild huckleberries, raspberries, Oregon grapes, and other wild fruits. They pick the berries before Crow Fair; however, recently they have experienced abnormal weather conditions and the berries and other fruits are not ripe. The increase in wildfires in Montana has restricted access to certain areas where they used to pick berries.
- 73. Ruby was diagnosed with asthma in 2015. She has had multiple asthma attacks since her diagnosis and has been prescribed an inhaler. As a result of her asthma, Ruby is uniquely vulnerable to the increased wildfire smoke in Montana due to climate change, which irritates her lungs and makes it more difficult for her to breathe and partake in physical activities such as sports, impacting her overall health and safety.
- 74. Increasingly frequent and destructive wildfires have also diminished Lilian and Ruby's ability to recreate in and enjoy Montana's forests. Seeing dead and degraded forests, both due to wildfires and pine beetles, is distressing to Ruby. Wildfires also making it more difficult to engage in cultural practices, including building the tipis that are an integral part

of Ruby and Lilian's experience at Crow Fair. The tipis can only be built out of lodgepole pine. However, once lodgepole pine trees have been exposed to heat from a wildfire it is no longer possible to peel the bark off the tree, which is necessary for constructing the tipi and to avoid damaging the tipi. As wildfires are increasingly common in Montana, it is becoming difficult to find lodgepole to build tipis and for Ruby and Lilian to engage in this cultural practice.

- 75. One of Ruby and Lilian's favorite rivers is the Madison River, where they like to go rafting. At times, however, low water levels due to climate disruption cause her raft to get stuck and otherwise make rafting more challenging. Lilian and Ruby used to enjoy outdoor ice skating but, as a result of Montana's warmer winters, the outdoor ice-skating rink has been closed more frequently because it is too warm for the ice to form.
- 76. Ruby and Lilian are aware that their cultural practices and individual dignity are worthy of protection. They advocate for their rights and for the environment by selling toys that they make, and donating the proceeds to support different advocacy campaigns and organizations that they care about but they know that they alone cannot protect their future and Lilian and Ruby need support from their state government.
- 77. Plaintiff **Taleah H.** is 16 years old and lives in Polson, Montana, on the Flathead Indian Reservation. Taleah enjoys ice skating on Flathead Lake; however, in 2019, she could not ice skate on the lake because rising temperatures due to climate destabilization prohibited a sufficient amount of ice from forming. The increase in wildfires near Taleah's home, due to rising temperatures and an increase in drought conditions, has prohibited Taleah from recreating outdoors, including hiking and paddle boarding, and forced her to remain inside

for long periods of time during the summer due to poor air quality and to preserve her health.

- 78. Taleah and her mother participate in an annual Mother's Day bike ride on Going-to-the-Sun Road in Glacier National Park. Taleah's recreational, aesthetic, and family interests are being harmed as glaciers in the park recede, and are at risk of being lost forever due to climate change, which would fundamentally alter the nature of this annual bike ride.
- 79. Taleah lives on the Flathead Indian Reservation, near a bison range. Taleah fears that, as the climate crisis worsens, the increase in transmittable diseases between other wildlife and bison will increase and this resource, which she cares deeply about, will be lost. Taleah's father hunts deer and elk, which is an important food source for Taleah and her family. As temperatures increase and viral diseases are more easily transmitted, this food source will be impacted.
- 80. Taleah's ancestry is Taíno (an Indigenous Puerto Rican group). Taleah has plans to visit her father's family in Puerto Rico, and immerse herself in her cultural and familial traditions. Taleah's family, however, was impacted by Hurricane Maria, and Taleah experiences stress when thinking about their future and her ability to visit her family, which is important for her cultural and individual dignity.

81. All Youth Plaintiffs are adversely affected by the Defendants' conduct in perpetuating a fossil fuel-based energy system that is disproportionately impacting children.

DEFENDANTS

82. Defendant State of Montana is the sovereign trustee over the Public Trust Resources within its domain, including the atmosphere (air), water, public lands, and fish and wildlife.As a sovereign trustee, Defendant Montana is charged with protecting Public Trust Resources from substantial impairment and alienation for the benefit of present and future

Montanans. Defendant Montana has a constitutional duty to maintain and improve a clean and healthful environment for present and future generations. The State of Montana, through its legislature and governor, enacted Montana's State Energy Policy and MEPA Climate Change Exception.

- 83. Defendant Governor Steve Bullock is sued in his official capacity as Governor of the State of Montana. Pursuant to the Montana Constitution, "the executive power is vested in the governor who shall see that the laws are faithfully executed." Mont. Const. art. VI, § 4. Defendant Bullock has supervisory authority over the principal departments of the executive branch, which include all allocated executive and administrative offices, boards, bureaus, commissions, agencies and instrumentalities of the executive branch.³ Defendant Bullock directs departments' implementation of policies and procedures to meet the objectives of the State Energy Policy. Mont. Const. art. VI, § 8.
- 84. Defendant Bullock holds cabinet meetings, communicates with other state officers, oversees budget expenditures, and has authority to issue executive orders. By and through his actions, Defendant Bullock implements and directs implementation of the State Energy Policy.
- 85. Defendant Bullock has used the authority of his office, and has directed the Defendants, to facilitate, and authorize activities resulting in dangerous levels of CO_2 and GHGs, thus causing, contributing to, and exacerbating the climate crisis and infringing on Youth Plaintiffs' constitutional rights. He has taken these actions while acknowledging the dangers of climate change, simultaneously telling the public that "climate change poses a serious threat" to Montana and that the "irreversible impacts of a changing climate require
- 23

³ Mont. Const. art. VI, § 7 ("except for the office of the governor, lieutenant governor, secretary of state, attorney general, superintendent of public instruction, and auditor").

an urgent effort to reduce emissions and build resilience for communities."⁴ A declaration of the constitutional parameters of the Governor's conduct in this time of climate crisis will assist his office in ensuring that it is not infringing on the rights of citizens, like these children, when carrying out state laws.

- 86. Defendant Montana Department of Environmental Quality ("DEQ") is a department of the State of Montana created by Chapter 418, Laws of 1995.
- 87. Defendant DEQ has a constitutional duty to maintain and improve a clean and healthful environment for present and future generations. Defendant DEQ also has broad statutory authority to protect, sustain, and improve a clean and healthful environment to benefit present and future generations⁵ but has used its authority in a manner that has resulted in dangerous levels of GHG emissions.
- 88. Defendant DEQ, as the primary administrator of Montana's environmental regulatory, environmental cleanup, environmental monitoring, pollution prevention, and energy conservation laws, has implemented its authority in a manner that has contributed to the constitutional violations described herein.⁶ Defendant DEQ's actions, pursuant to and in furtherance of the State Energy Policy, have contributed to dangerous levels of GHG emissions.⁷
- 89. Defendant DEQ is mandated to ensure that all projects and activities for which it issues permits, licenses, authorizations or other approvals comply with Montana's environmental laws and rules (including the MEPA) to protect the quality of Montana's natural

23

⁷ Mont. Admin. R. 17.1.101.

⁴ Executive Order Creating the Montana Climate Solutions Council and Joining the State of Montana to the U.S. Climate Alliance, Mont. Exec. Order No. 8-2019 (July 1, 2019).

⁵ Montana Department of Environmental Quality, Mission Statement and Guiding Principles: Department Goals and Objectives, http://deq.mt.gov/DEOAdmin/about/mission (last visited Feb. 5, 2020).

⁶ Organization of Department, Mont. Admin. R. 17.1.101 (2019).

environment.⁸ Defendant DEO is responsible for enforcing compliance with its permitting requirements.

- 90. Defendant DEQ issues air quality permits to facilities that emit GHG emissions, including but not limited to coal mining operations, energy power plants, and oil and gas refineries. Through its Board of Environmental Review,⁹ which adopts rules and determines appeals under regulatory statutes, Defendant DEQ has broad statutory authority to set and enforce a quantitative limit for emissions as necessary to prevent or control air pollution.¹⁰
- 91. Defendant DEQ authorizes the construction, operation, and maintenance of interstate pipelines under the Major Facility Siting Act, Mont. Code Ann. § 75-20-101, et seq. Pursuant to the Major Facility Siting Act, Defendant DEQ certifies all pipeline facilities that are constructed or operated in Montana. See Mont. Code Ann. § 75-20-102(4).

92. Defendant DEQ has permitted strip and underground coal mining operations and mining and prospecting activities that are causing dangerous amounts of GHG emissions.¹¹ DEQ has issued permits for surface coal mining in Montana on state and federal land.¹² Defendant DEQ actively works with coal mining companies in Montana to implement the State Energy Policy.¹³ In approving such activities, DEQ has repeatedly refused to disclose the significant harms to human health and the environment from its decisions.

& Environmental Assessments, http://deg.mt.gov/Public/ea/coal (last visited Feb. 5, 2020). ¹² State-Federal cooperative agreement, 30 C.F.R. § 926.30 (2020) (agreement for Montana state control and

⁸ Clean Air Act of Montana, Mont. Code Ann. § 75-2-101, et seq. (2019). Air Quality, Mont. Admin. R. 17.8 (2019). See Mont. Code Ann. § 2-15-3502 (2019).

¹⁰ See Board to Set Emission Levels, Mont. Code Ann. § 75-2-203 (2019).

¹¹ Montana Strip and Underground Mine Reclamation Act, Mont. Code Ann. § 82-4-201, et seq. (2019); Mont. Admin. R. 17.24.301-1309 (2019); Strip and Underground Mine Reclamation Act, Mont. Code Ann. § 82-4-226 (2019); Mont. Admin. R. 17.24.101, et seq. (2019). See Montana Department of Environmental Quality, Prospecting Permitting, http://deq.mt.gov/Mining/Resources/prospect (last visited Feb. 5, 2020); Mont. Admin. R. 17.24.1018, 17.24.1001, 1003, 1016, 1102 (2019). See also Montana Department of Environmental Quality, Coal EA's: Pending Applications

regulation of surface coal mining and reclamation operations on Federal lands and fostering coal exploration operations not subject to 43 C.F.R. Group 3400).

¹³ Montana Department of Environmental Quality, Coal Section, http://deq.mt.gov/mining/coal (last visited Feb. 5, 2020).

93. DEQ has authorized, permitted, and encouraged fossil fuel extraction, transportation, and combustion, which activities generate dangerous levels of GHG emissions, contribute to the climate crisis, and harm Youth Plaintiffs.

- 94. Defendant Montana Department of Natural Resources and Conservation ("DNRC") is charged with "help[ing] ensure Montana's land and water resources provide benefits for present and future generations."¹⁴ Defendant DNRC has a constitutional duty to maintain and improve a clean and healthful environment for present and future generations. In accordance with the State Energy Policy, the DNRC regulates, permits, and authorizes activities that result in significant emissions of GHGs in Montana.
- 95. Defendant DNRC manages all the resources of the state trust lands through the State Board of Land Commissioners ("Land Board").¹⁵ The Land Board is bound by the public trust to permit only those activities on state land that are in the best interests of the state.¹⁶ To comply with its constitutional and statutory public trust mandate, the Land Board is required to manage Montana resources in a manner that is not detrimental to public welfare or the environment.
 - 96. Defendant DNRC issues leases, permits, and licenses for all uses of state land.¹⁷ Pursuant to the State Energy Policy, Defendant DNRC has authority to pursue energy development on state land. DNRC issues licenses for exploration and leases for production and
- 19
- 20

¹⁵ The state trust lands total 5.2 million surface acres and 6.2 subsurface acres, which includes 8,935 agriculture and

¹⁴ See Organization of Department, Mont. Admin. R. 36.1.101 (2019).

²¹

grazing leases; 1,486 oil and gas leases; and 137 commercial real estate leases. The state trust lands gross revenue from all activities was \$87.4 million in 2019. Montana Department of Natural Resources & Conservation, 2019 Report to the Montana Legislature, 5 (2019), http://dnrc.mt.gov/2019FinalReportWebVersion.pdf. See also Montana Department of Natural Resources & Conservation, Land Board, http://dnrc.mt.gov/landboard (last visited Feb. 5, 2020); see Office of Public Instruction, Montana Board of Land Commissioners, https://opi.mt.gov/DNRCLB (last visited Feb. 5, 2020).

¹⁶ See Mont. Code Ann. §§ 77-1-202, 77-1-203(1)(a), 77-3-301 (2019); Mont. Const. art. X, § 11 ("[a]]I lands of the state that have been or may be granted by congress ... shall be held in trust for the people.").

¹⁷ Leasing or Other Use of State Lands, Mont. Admin. R. 36.2.1001 (2019).

extraction of oil and gas in Montana, and permits for drilling in Montana, which result in dangerous levels of GHG emissions and contribute to the climate crisis. Defendant DNRC has exercised its authority to grant easements for the operational right-of-way for interstate pipelines, with the approval of the Land Board, and issue land use licenses for the construction right-of-way and other activities on state lands and waterways for the construction and operation of interstate pipelines, which are used to transport fossil fuels. In approving such activities, DNRC has repeatedly failed to disclose the significant harms to human health and the environment from its decisions.

97. Defendant DNRC, through its Forestry Division, is responsible for planning and implementing forestry and fire management programs, as well as authorizing and 10 permitting commercial timber sales on public trust lands.¹⁸ Although only 4% of Montana's 12 forests are within state trust lands, activity on this acreage accounted for nearly 25% of Montana's total timber volume sold in 2017.¹⁹ 13

98. As of 2018, Defendant DNRC managed 9,714 acres of leased riverbed and island tracts, in part to facilitate the development of oil and gas resources.²⁰ The leased tracts provided the State of Montana with \$914,373 in oil and gas revenues in 2018, which is less than 1% of the amount of money the state spent fighting wildfires in 2018 (which was \$95 million).²¹

17 18

19

1

2

3

4

5

6

7

8

9

11

14

15

¹⁸ of Natural Resources & Montana Department Conservation, Timber Permit Information, http://dnrc.mt.gov/divisions/trust/forest-management/timber-permit-information (last visited Feb. 5, 2020). ¹⁹ 2019 Report to the Montana Legislature, supra note 15, at 7.

²⁰See Navigable Waterways, Mont. Admin. R. 36.25.1102 ("[p]ursuant to Article X, Section 11(1) of the 1972 20 Montana Constitution and 70-1-202(1) and 77-1-102(2), MCA, the title to all navigable rivers is held by the board in trust for the benefit of the public."). See also Ownership of certain islands and riverbeds, Mont. Code Ann. § 77-1-21 102.

²¹ Resources & Conservation, Montana Department of Natural See Minerals Management. http://dnrc.mt.gov/divisions/trust/minerals-management (last visited Feb. 5, 2020); Montana Department of Natural 22 Resources & Conservation, Annual Report Fiscal Year 2018 Trust Lands Management Division, 12 (2018), http://dnrc.mt.gov/divisions/trust/docs/annual-report/FY2018TrustLandsAnnualReport.pdf. See Associated Press, 23

Large Wildfires Cost Montana More than \$95M this Year, Great Falls Trib. (Nov. 10, 2018), https://www.greatfallstribune.com/story/news/2018/11/10/large-wildfires-cost-montana-more-than-95-myear/1957095002/.

99. The DNRC, through the Montana Board of Oil and Gas Conservation, administers all oil and gas conservation laws and issues licenses for exploration and leases for production and extraction of oil and gas in Montana, and permits for drilling in Montana pursuant to and in furtherance of the State Energy Policy. Mont. Code Ann. § 90-4-1001(1)(e).

100. Defendant DNRC has authorized, permitted, licensed, and encouraged fossil fuel exploitation, extraction, and production, and forestry practices and activities that have caused and contributed to dangerous concentrations of atmospheric GHGs and the climate crisis and harmed Youth Plaintiffs.

101. Defendant Montana Department of Transportation ("MDT") is responsible for the planning, authorization, and operation of programs for the construction, maintenance, and monitoring of Montana's transportation infrastructure and operations, including Montana's highway network, railroads, and airports.²² Defendant MDT is responsible for state planning in the transportation sector and is charged with collecting and enforcing fuel taxes.²³

102. Defendant Montana Public Service Commission ("PSC") regulates, supervises, and controls public utilities, common carriers, railroads, and pipelines. Mont. Code Ann. § 69-3-102. Defendant PSC is responsible for reviewing standard-offer contracts and utility rates, as well as prescribing suitable commercial units of product or service for each kind of public utility. Mont. Code Ann. § 69-3-108.

²² See Montana Department of Transportation, 2019 About MDT: Moving Montana Forward (2019), https://www.mdt.mt.gov/mdt/docs/about-mdt.pdf.

Montana Department Transportation, Plan TranPlanMT 2017). of Summary, (Nov. https://www.mdt.mt.gov/tranplan/docs/TPMT-SUMMARY.pdf. Montana's transportation system is mainly funded through a combination of federal and state funding sources. Of the total transportation revenue, approximately 60% is generated from federal sources and 40% is received from state sources. See also Montana Department of Transportation, Volume IV **Transportation** Management, TranPlanMT, 11 (Nov. 2017), https://www.mdt.mt.gov/tranplan/docs/TPMT-MANAGEMENT.pdf.

103. Defendant PSC is specifically authorized to adopt rules to implement renewable energy sources for utilities, Mont. Code Ann. § 69-3-2006, because "utilities should support expanded development of these resources to meet the state's electricity demand and stabilize electricity prices." Mont. Code Ann. § 69-3-2002. However, Defendant PSC continues to certify energy projects and utilities that rely on fossil fuels.

104. Defendant PSC is responsible for the safety of interstate pipelines (such as gas pipelines that cross state borders) as well as all liquid lines, including crude oil or petroleum products, that operate within or through Montana.²⁴ Defendant PSC has exercised its authority over pipelines in a manner that perpetuates the use of fossil fuels by locking in infrastructure that will result in GHG emissions for decades.

105. In sum, through the State Energy Policy, and the actions taken pursuant to and in furtherance of the Policy, Defendants have taken affirmative actions to authorize, permit, and encourage fossil fuel extraction, transportation, and combustion resulting in dangerous levels of GHG emissions and contributing to climate destabilization. Defendants affirmative actions have degraded and depleted Montana's environment, are causing substantial impairment to Montana's Public Trust Resources, and are causing substantial harm to Youth Plaintiffs in violation of their constitutional rights.

²⁴ U.S. Department of Trans. Pipeline & Hazardous Materials Safety Admin., *Regulatory Fact Sheet: Montana*, https://primis.phmsa.dot.gov/comm/FactSheets/States/MT_State_PL_Safety_Regulatory_Fact_Sheet.htm?nocache= 8808 (last revised Jan. 9, 2017). *See* Montana Public Service Commission, *Pipeline Safety*, http://psc.mt.gov/Public-Safety.

STATEMENT OF THE FACTS

DEFENDANTS' STATE ENERGY POLICY AND THE CLIMATE CHANGE EXCEPTION TO MEPA PERPETUATE FOSSIL FUELS AND CONTRIBUTE TO THE CLIMATE CRISIS

106. Carbon dioxide is the GHG that is most responsible for trapping excess heat within Earth's atmosphere. Excess CO₂ and other GHGs from human activity create an "energy imbalance" that drives warming temperatures and climate disruption. A substantial portion of every ton of CO₂ emitted by human activity persists in the atmosphere for as long as a millennium or more. As a result, CO₂ steadily accumulates in the atmosphere. It is the cumulative effect of GHG emissions that causes climate disruption. The Earth will continue to heat up even as more emissions of today and tomorrow continue to increase atmospheric concentrations of GHGs.

107. This means that the harm from present day GHG emissions will be disproportionately borne by today's children and future generations, including the Youth Plaintiffs. This scientific concept has been well understood by the Defendants for decades.
108. Notwithstanding their longstanding knowledge of the dangers that climate disruption and GHG emissions pose, more particularly described below, Defendants have developed and implemented a State Energy Policy in Montana for decades, which involves systemic authorization, permitting, encouragement, and facilitation of activities promoting fossil fuels and resulting in dangerous levels of GHG emissions, without regard to climate change impacts or the fundamental rights of Youth Plaintiffs and future generations of Montanans. Mont. Code Ann. § 90-4-1001(c)-(g), State Energy Policy. Moreover, pursuant to the Climate Change Exception to MEPA, Mont. Code Ann. § 75-1-201(2)(a), Defendants have deliberately ignored the dangerous impacts of the climate crisis.

A. <u>Defendants' State Energy Policy Perpetuates a Fossil-Fuel Based Energy System that</u> <u>Causes and Contributes to the Climate Crisis and Youth Plaintiffs' Injuries</u>

- 109. The State of Montana has a stated policy to "promote energy efficiency, conservation, production, and consumption of a reliable and efficient mix of energy sources that represent the least social, environmental, and economic costs and the greatest long-term benefits to Montana citizens." Mont. Code Ann. § 90-4-1001(a).
- 110. Contrary to this policy, Montana's State Energy Policy explicitly promotes the use of dangerous fossil fuels that cause numerous social, environmental, and economic costs and harms to the short- and long-term detriment of Montana citizens. Fossil fuel energy is the least efficient form of energy available to the State of Montana. The provisions of the State Energy Policy that promote fossil fuels and that Youth Plaintiffs challenge the constitutionality of in this action state that it is the policy of Montana to:
 - (c) promote development of projects using advanced technologies that convert coal into electricity, synthetic petroleum products, hydrogen, methane, natural gas, and chemical feedstocks;
 - (d) increase utilization of Montana's vast coal reserves in an environmentally sound manner that includes the mitigation of greenhouse gas and other emissions;
- (e) increase local oil and gas exploration and development to provide high-paying jobs and to strengthen Montana's economy;
 - (f) expand exploration and technological innovation, including using carbon dioxide for enhanced oil recovery in declining oil fields to increase output;
- (g) expand Montana's petroleum refining industry as a significant contributor to Montana's manufacturing sector in supplying the transportation energy needs of Montana and the region;
 - Mont. Code Ann. § 90-4-1001(c)-(g).
 - 2 111. Additionally, the Climate Change Exception to MEPA states:
 - Except as provided in subsection (2)(b), an environmental review conducted pursuant to subsection (1) may not include a review of actual or potential impacts beyond Montana's

23

borders. It may not include actual or potential impacts that are regional, national, or global in nature.

Mont. Code Ann. § 75-1-201(2)(a).

This has been interpreted to mean that Defendants cannot consider the impacts of climate change in their environmental reviews.

112. Montana's fossil fuel-based energy system is the result of Montana's State Energy Policy, and actions taken pursuant to that policy, which defines Montana's energy policies, goals, and development process and explicitly calls for the use of dangerous fossil fuels. The State Energy Policy has existed for decades and is now codified in law. Mont. Code Ann. § 90-4-1001(c)-(g).

113. According to Senator Jackson, who sponsored amendments to the State Energy Policy in 2011, the "State Energy Policy will guide Montana's energy production."²⁵ The purpose of the State Energy Policy is to ensure an adequate supply of energy and avoid a high cost of energy.²⁶ Those purposes are readily achievable without perpetuating a form of energy that is known to cause dangerous climate change, cause harm to children, and result in a myriad of other adverse impacts to humans and the environment.

114. During a hearing before the full Montana Senate on the 2011 amendments to the State Energy Policy, Senator Ron Erickson, in encouraging a no vote on the bill, stated "above all . . . this is a bill that leaves out the major context of our time, it leaves out the fact that global climate change is occurring and that we ought to be a part of the solution

²⁵ Senate Energy and Telecommunications: Hearing on SB 305 Revise Energy Policy Before the Senate Energy and Telecomm. Communications, 62nd Cong. 11, 9:23:30-9:34:00 (Feb. 15, 2011), http://sg001harmony.sliq.net/00309/Harmony/en/PowerBrowser/PowerBrowserV2/20170221/-1/22357?agendaId=100797.

²⁶ Senate Floor Session: Hearing on SB 305 Revise Energy Policy, 62nd Cong. 492, 13:08:51-13:09:38 (Feb. 22, 2011), http://sg001-harmony.sliq.net/00309/Harmony/en/PowerBrowser/PowerBrowserV2/20170221/-1/21606?agendaId=98099.

as this nation moves ahead. I would doubt if there is another nation in the world that would talk about an energy policy without mentioning that we should be a part of the solution to climate change."²⁷

- 115. Despite opposition to the 2011 amendments to the State Energy Policy, the bill passed and thus Montana's State Energy Policy, which implicitly promoted fossil fuels for decades, was amended to explicitly promote fossil fuels and to expand the already substantial extraction and use of fossil fuels in Montana.
- 116. Montana's State Energy Policy, and the actions taken pursuant to and in furtherance of the Policy, leads to fossil fuel development, extraction, transport, and combustion and other activities that promote fossil fuels and cause emissions of dangerous and substantial levels of GHG pollution into the atmosphere within Montana and outside of its borders and contributes to climate destabilization.
- 117. Just as invidious majoritarian state policies that segregated children on the basis of race or failed to adequately fund schools would be unconstitutional and undermine fundamental rights, so too, Montana's State Energy Policy, which explicitly promotes the use of dangerous fossil fuel-based energy and endangers children, violates Youth Plaintiffs' constitutional rights.

 ²⁷ Senate Floor Session: Hearing on SB 305 Revise Energy Policy, 62nd Cong. 492, 13:10:12 – 13:11:03 (Feb. 22, 2011), http://sg001-harmony.sliq.net/00309/Harmony/en/PowerBrowser/PowerBrowserV2/20170221/-1/21606?agendaId=98099.

B. Defendants' Aggregate Acts Pursuant to and in Furtherance of the State Energy Policy Demonstrate an Unconstitutional Systemic Course of Conduct and Cause **Dangerous Levels of GHG Pollution and Climate Destabilization**

118. Despite Defendants' knowledge of climate change dangers and Defendants' rhetoric on the importance of reducing GHG emissions and the "profound consequences"²⁸ of climate change, Defendants, pursuant to and in furtherance of the State Energy Policy, have taken, and continue to take, affirmative actions to authorize, implement, and promote projects, activities, and plans (hereinafter, "aggregate acts") that cause emissions of dangerous levels of GHG pollution into the atmosphere. For example:

- a. Defendants authorize and certify energy projects and facilities within the State of Montana that emit substantial levels of GHG pollution, including, but not limited to, projects that burn and promote the use of fossil fuels.
 - b. Defendant PSC significantly cut utility contract lengths and rates for NorthWestern Energy in June 2017 demonstrating biased decisions obstructing solar projects.²⁹ Defendant PSC was found to have violated solar companies' due process rights by making decisions based on bias and policy preferences.³⁰
 - c. Defendant PSC exercises its authority to obstruct solar projects.³¹ The public service commissioners have publicly expressed their affinity for coal power and publicly disparaged renewable energy sources. PSC Commissioner Bob Lake

²⁸ The Montana Climate Change Advisory Committee, Montana Climate Change Action Plan: Final Report of the Governor's Climate Change Advisory Committee, Montana Department of Environmental Quality, 1-9 (2007), https://deq.mt.gov/Portals/112/Energy/ClimateChange/Documents/FinalReportChapters.pdf.

²⁹ See Catherine Morehouse, Montana judge rules PSC intentionally set PURPA rates to kill solar projects, Utility Dive (2019), https://www.utilitydive.com/news/montana-judge-rules-psc-intentionally-set-purpa-rates-to-kill-solarproject/552236/ ("The PSC cut the rates utilities have to pay solar producers under the Public Utility Regulatory Policies Act by 40%, from \$66/MWh to \$31/MWh, and cut contracts from 25 to 15 years.").

³⁰ Vote Solar v. Montana Dept. of Public Service Reg. Comm., Findings of Fact and Conclusions of Law for the Symmetry Finding in MTSUN Order No. 7535b, No. BDV-17-0776 (8th Jud. D. Mont. 2019), https://montanafreepress.org/wp-content/uploads/2019/06/19-06-20-Findings-of-Fact-and-Conclusions-of-Law.pdf. ³¹ Catherine Morehouse, supra note 29. See also 350 Montana, Blocking Montana's Future (2017), http://350montana.org/docs/BlockingMtFuture.pdf.

1		admitted that Defendant PSC was setting rates and contract lengths to eliminate	
2		small solar projects. ³²	
3	d.	Defendant PSC affirmatively acts to promote public utilities reliant on fossil fuels	
4		and against the public safety in the face of dangerous climatic changes.	
5	e.	Defendants engage in a systemic pattern and practice of issuing permits, licenses,	
6		and leases that result in GHG emissions without considering how the additional	
7		GHG emissions will contribute to the climate crisis.	
8	f.	Defendants authorize four private coal plants to operate in the state, and these coal	
9		plants are responsible for 30% of Montana's energy production.	
10	g.	Defendants continue to permit surface coal mining and reclamation in Montana,	
11		which results in substantial GHG emissions. Defendant DEQ approved the AM4	
12		expansion of the Rosebud Strip Mine in December 2015. Defendant DEQ issued a	
13		permit to expand the coal mining operation and reclamation plan at Bull Mountain	
14		Mine in July 2016. ³³ Pursuant to the Climate Change Exception to MEPA, DEQ	
15		refused to analyze how these decisions would aggravate the impacts of climate	
16		change.	
17	h.	In 2018, Defendant DEQ, pursuant to the Climate Change Exception to MEPA,	
18		refused to analyze or discuss any climate change impacts from the TR3 expansion	
19		of the Decker Mine, which allowed the coal company to strip-mine 23 million tons	
20			
21	$\frac{1}{3^2}$ A tape recording was released by local media, in which Commissioner Lake is recorded admitting to PSC staff that		
22	the rates would effectively kill small projects: "[t]he 20 year might do it if the price doesn't, and honestly at this low price I can't imagine anyone going to get into it, so it becomes a totally moot point because just dropping the rate that much probably took care of the whole thing." Catherine Morehouse, <i>supra</i> note 29.		
23	 ³³ Montana Department of Environmental Quality, <i>Signal Peak Energy LLC Letter of Approval, Amendment 3</i>, (July 6, 2016), https://deq.mt.gov/Portals/112/Land/CoalUranium/Documents/SPE%20AM3/Approval%20Letter%20July%202016 .pdf. 		

of coal, which will lead to nearly 50 million tons of carbon dioxide emissions when burned, aggravating the impacts of climate change including causing negative socioeconomic impacts to Montanans.

i. In 2020, Defendant DEQ is preparing to revise its permit to Spring Creek Mine, the largest coal producer in the state. The proposed revision would add 977 acres of new mining disturbance to recover approximately 72 million tons of coal. In August 2019, Defendant DEQ, pursuant to the Climate Change Exception to MEPA, refused to analyze impacts on the social cost of carbon and the economic impacts from climate change in its draft environmental impact statement for the Spring Creek Mine. Although public comments urged Defendants to consider these impacts in the DEQ analysis, Defendants did not review how their decision would aggravate impacts of climate change, and the substantial socioeconomic impacts on Montanans.

j. Defendant DEQ authorizes the operation of the Colstrip Steam Electric Station, which produced 13.2 million metric tons of CO_{2e}, 38,015 metric tons of methane, and 65,919 metric tons of nitrous oxide in 2018.³⁴

k. Defendant DEQ granted the Bull Mountain Mine an air quality permit in January 2016, authorizing Bull Mountain Mine to produce 15 million tons of coal during any rolling 12-month period.³⁵ Pursuant to the Climate Change Exception to

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

²¹

See U.S. Environmental Protection Agency, Facility Level Information on Greenhouse Gases Tool, Colstrip, https://ghgdata.epa.gov/ghgp/service/facilityDetail/2018?id=1001020&ds=E&et=&popup=true. See generally Montana Department of Environmental Quality, All Things Colstrip, http://deq.mt.gov/DEQAdmin/mfs/AllColstrip; 22 Montana Department of Environmental Quality, Understanding Energy in Montana 2018, 2017-2018 Energy and Telecommunications Interim Committee, 71 (2018), https://leg.mt.gov/content/Committees/Interim/2017-23 2018/Energy-and-Telecommunications/Understanding%20Energy%202018.pdf.

Montana Department of Environmental Quality, Montana Air Quality Permit #3179-12, 1 (2016), https://deq.mt.gov/Portals/112/Air/AirQuality/Documents/ARMpermits/3179-12.pdf.

MEPA, DEQ refused to analyze how this decision would aggravate the impacts of climate change.

- Defendant DEQ issued a certificate of compliance for the Keystone XL Pipeline in March 2012, which authorized the construction, operation, and maintenance of the Montana portion of the pipeline that would result in substantial GHG emissions.
 Defendant DNRC leased public land for the easement for the operational right-ofway, with the approval of the Land Board, and issued a land use license for the construction right-of-way and other activities on state lands and waterways.³⁶
- m. Defendants DEQ and DNRC issued permits, licenses, and leases for the
 construction, operation, and maintenance of the Keystone XL Pipeline project in
 Montana, which would transport Canadian tar sands crude oil, the most greenhouse
 gas intense source of petroleum in the world. Pursuant to the Climate Change
 Exception to MEPA, neither DEQ nor DNRC disclosed to the public the health or
 climate consequences of these decisions.³⁷
 - n. Defendants authorize, through licenses and leases, the exploration and extraction of oil and gas in Montana.
 - Defendants have adopted and enforced GHG emissions standards for petroleum refineries that authorize dangerous levels of GHG emissions. Secondary emissions are not considered by Defendants in determining potential to emit.³⁸

15

16

17

18

19

1

2

3

4

5

6

7

8

²⁰

²¹

 ³⁶ Montana Department of Environmental Quality, *In the Matter of the Application of TransCanada Keystone Pipeline*, *LP (Keystone) for a Certificate of Compliance under the Major Facility Siting Act: Findings Necessary for Certification and Determination*, 4 (March 30, 2012), http://deq.mt.gov/Portals/112/DEQAdmin/MFS/Documents/KXL_Cert_Final_Signed.PDF.
 ³⁷ Id.

^{23 &}lt;sup>1/1/2</sup> ³⁸ Montana Department of Environmental Quality, *Instructions for Registering, Updating, or Deregistering an Oil or Gas Well Facility* (June 6, 2018), http://deq.mt.gov/Portals/112/Air/AirQuality/Documents/forms/InstructionsMTOGRegistration-01.pdf.

1	p.	Defendants continue to certify and authorize four petroleum refineries-
2		Exxon/Mobil, Phillips 66, CHS Laurel, and Calumet Refining-in the State of
3		Montana. In 2016, these refineries exported 66.5 million barrels of crude oil. The
4		four refineries combined released 2.0 million metric tons of CO_{2e} in 2018. ³⁹
5		Pursuant to the Climate Change Exception to MEPA, Defendants have failed to
6		disclose to the public the health or climate consequences of these decisions.
7	q.	Defendants have explicitly adopted and endorsed fuel and fuel tax requirements for
8		vehicles, commercial carriers, and aviation that lock in dangerous levels of GHG
9		emissions from the transportation sector. ⁴⁰
10	r.	Defendants have exempted certain facilities that burn fossil fuels from present and
11		future compliance with GHG emission standards.
12	S.	Defendants continue to finance, incentivize, and subsidize fossil fuel infrastructure
13		and energy and transportation systems that are endangering Youth Plaintiffs, while
14		refusing to harness Montana's potential for wind energy.
15	t.	Defendants continue to aggressively pursue expansion of the fossil fuel industry in
16		Montana, particularly the expansion of coal and mining development, as well as oil
17		and gas development.
18	u.	Defendant Bullock has stated that "[] coal will continue to be a critical part of the
19		nation's energy portfolio for years to come, and increasing electricity demand will
20		
21		
22		
23	³⁹ U.S. Environ	mental Protection Agency, 2018 Greenhouse Gas Emissions from Large Facilities, Facility Level

 ³⁹ U.S. Environmental Protection Agency, 2018 Greenhouse Gas Emissions from Large Facilities, Facility Level Information on Greenhouse Gases Tool ("Flight") (last updated Aug. 4, 2019), https://bit.ly/2HqZvMM.
 ⁴⁰ 2019 About MDT: Moving Montana Forward, supra note 22, at 2-3, 8, 13.

ensure that we will need both carbon-based and renewable sources of energy, and not enough is done in this country to advance clean-coal technologies."⁴¹

- v. Defendant Bullock continues to support policies that incentivize technologies for coal, including but not limited to: (1) providing favorable tax treatment for investments in carbon capture, sequestration, and transportation; and (2) calling for stronger policies and incentives to advance enhanced oil recovery and CO₂ capture at power plants and other industrial sources; both of which directly authorize GHG emissions to continue at dangerous levels in Montana.
- w. Defendants continue to "safeguard existing economic and energy assets"⁴² by authorizing Montana fossil fuel extraction, production, consumption, transportation, and exportation.
- 119. Defendants' aggregate acts described herein, taken pursuant to and in furtherance of the State Energy Policy, continue to be executed by Defendants and their agents and employees in their official capacities, and such actions are causing and contributing to the ongoing deprivation of Youth Plaintiffs' fundamental rights secured by the Montana Constitution.

120. Given that Defendants have persisted in, and continue to persist in, a wrongful and unconstitutional systemic course of conduct affirmatively authorizing, permitting, and promoting fossil fuels and dangerous GHG emissions, with knowledge of the dangers of climate change since at least the 1960s, there is substantial likelihood that Defendants' State Energy Policy, and aggregate acts taken pursuant to the State Energy Policy, will

⁴¹ Amended Executive Order Establishing an Interim Montana Clean Power Plan Advisory Council, Exec. Order No. 01-2016 (Jan. 7, 2016).

⁴² Executive Order Creating the Montana Climate Solutions Council and Joining the State of Montana to the U.S. Climate Alliance, Exec. Order No. 8-2019, 3 (July 1, 2019).

continue and will, inter alia, further deprive Youth Plaintiffs of their constitutional rights. This evidence demonstrates that similar illegal conduct will continue in the future absent judicial intervention.

DEFENDANTS' STATE ENERGY POLICY HAS RESULTED IN DANGEROUS AMOUNTS OF GREENHOUSE GAS EMISSIONS IN MONTANA

121. As a result of Defendant's State Energy Policy, and actions taken consistent with that policy, Defendants are responsible for dangerous amounts of GHG emissions from Montana – both cumulative emissions and ongoing emissions, which in turn causes and contributes to the Youth Plaintiffs' injuries.

122. According to U.S. Energy Information Administration ("EIA") data, in 2017, 30.5 million metric tons of CO₂ were emitted in Montana from fossil fuel consumption, or emissions that result from burning fossil fuels within the boundaries of the State of Montana.⁴³ Of that amount, 14.9 million metric tons of CO₂ was attributable to coal consumption, 11.2 million metric tons of CO₂ from the consumption of petroleum products; and 4.4 million metric tons of CO₂ from natural gas consumption.⁴⁴

123. According to EIA data, Montana's 2017 CO₂ emissions have increased by 56% from 1980, when Montana emitted 19.5 million metric tons of CO₂, and increased by 13% compared to 1990 levels, which were 27.0 million metric tons of CO2.45

124. The above emissions data significantly underestimates total greenhouse gas emissions attributable to Montana. The EIA inventory only reports CO₂ emissions from fossil fuel consumption in Montana. It does not include: (a) GHG emissions from the

⁴³ These numbers include CO₂ emissions for all electricity generation in Montana, including the electricity that is eventually sent to other states.

⁴⁴ U.S. Energy Information Admin. (EIA) State Carbon Dioxide Emissions Data, Montana Carbon Dioxide Emissions from Fossil Fuel Consumption (1980-2017), https://www.eia.gov/environment/emissions/state/excel/montana.xlsx (last updated Oct. 23, 2019). ⁴⁵ *Id*.

combustion of fossil fuels extracted in Montana and then exported and combusted out of state; (b) non-CO₂ emissions (methane and nitrous oxide, for example) resulting from fossil fuel extraction and combustion; (c) GHG emissions from non-energy sources (land use, agriculture, forestry, and process emissions from cement manufacture, for example); (d) GHG emissions resulting from the extraction and out of state transport of imported fossil fuels; or (e) embedded GHG emissions—those emissions resulting from the production and transportation of goods and energy produced outside of Montana but ultimately consumed in Montana. Consequently, the EIA data *significantly* underestimates GHG emissions attributable to Montana. For sense of scale, if we look at the U.S. as a whole, CO₂ emissions from fossil fuel consumption in 2017 are only 76% of U.S. territorial carbon dioxide equivalent ("CO₂e") emissions.⁴⁶

125. The most complete (albeit outdated) data for GHG emissions that result from Montana's State Energy Policy⁴⁷ is from a 2007 report, *Montana Climate Change Action Plan*, a report of the Governor's Climate Change Advisory Committee ("CCAC").⁴⁸ According to this report, Montana's GHG emissions were 39.2 million metric tons of CO₂e in 1990; 43.7 million metric tons of CO₂e in 2000; and were projected to be 50.0 million metric tons of CO₂e in 2010 and 54.6 million metric tons of CO₂e in 2020.⁴⁹ This data is outdated and so significantly underestimates the GHG emissions attributable to Montana

⁴⁶ U.S. Energy Information Admin. (EIA), *Inventory of U.S. Greenhouse Gas Emissions and Sinks:* 1990 – 2017 (2019).

^{21 &}lt;sup>47</sup> GHG emissions include emissions from carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

 ⁴⁸ This November 2007 report was prepared with input from the Montana Department of Environmental Quality and the Center for Climate Strategies and relied heavily on in the September 2007 report titled *Montana GHG Emissions Inventory and Reference Case Projections, 1990-2020*, for Montana's GHG inventory and projections. The September 2007 report was presented to the CCAC, which unanimously approved it.
 ⁴⁹ Mentang Climate Change Achieve Department of the Community of Community and Projections Communities and the Communities of the Communities of

⁴⁹ Montana Climate Change Action Plan: Final Report of the Governor's Climate Change Advisory Committee, supra note 28, at 1-9. These emissions numbers include emissions from agriculture and from the generation of electricity sent out of state. They do not include emissions sinks, such as forestry and soil sinks. *Id*.

because it excludes emissions from fossil fuels extracted in Montana but exported and combusted out of state as well as embedded emissions. The lack of transparency regarding these emissions is due in part to Defendants ongoing and systemic refusal, pursuant to the Climate Change Exception to MEPA, to disclose the climate change impacts of their actions. Since 2011, the Montana legislature has barred state agencies from considering climate change under MEPA. Mont. Code Ann. § 75-1-201(2)(a).

126. Nevertheless, despite having the authority to do so, Defendants have never completed a comprehensive accounting and inventory that accounts for all of Montana's GHG emissions, including emissions from fossil fuels extracted in Montana but exported and combusted out of state and embedded emissions. As such, Defendants failed to disclose to the public the danger caused by its implementation of its State Energy Policy.

127. Based on EIA data, in 2017, Montana's electrical power sector, over which Defendants exercise regulatory control, was responsible for 15.5 million metric tons of CO₂ emissions, 51% of statewide emissions. The next largest source of CO₂ emissions in 2017 was the transportation sector, which accounted for 8.0 million metric tons of CO₂ in 2017, 26% of Montana's emissions. The industrial sector accounted for 3.8 million metric tons of CO₂ in 2017, 12.5% of Montana's emissions. Finally, the residential sector accounted for 1.7 million metric tons of CO₂ in 2017, 5.6% of emissions, and the commercial sector accounted for 1.5 million metric tons of CO₂, or 4.9% of emissions.⁵⁰

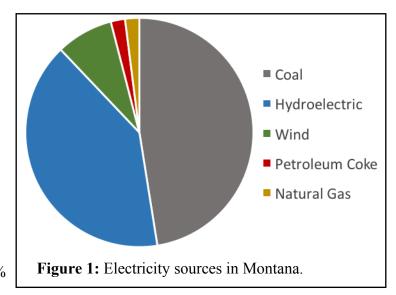
128. In 2017, Montana consumed 156.1 trillion Btu of coal, 83.3 trillion Btu of natural gas, 60.8 trillion Btu of motor gasoline (excluding ethanol), 51.9 trillion Btu of distillate fuel oil, 44.5 trillion Btu of other petroleum products, 100.9 trillion Btu of hydroelectric

⁵⁰ Montana Carbon Dioxide Emissions from Fossil Fuel Consumption (1980-2017), supra note 44.

power, 20.5 trillion Btu of other renewables (excluding biomass), and 19 trillion Btu of biomass.⁵¹

Montana's per capita energy consumption is among the top one-third of all states,
 ranking 12th highest energy use per capita in 2017.⁵²

130. Coal-fired power
plants, which are authorized to
operate by Defendants,
provide the largest share of
Montana's electricity
generation, roughly 47% in
2018 (see Figure 1⁵³). Besides
coal, Montana gets about 40%



of its electricity from hydroelectric power plants and 8% from wind power. Natural gas and oil each currently represent almost 2% of electric power generation.⁵⁴ Roughly half of the electricity generated in Montana is used in-state while the other half is sent to other states via high-voltage transmission lines.

131. In September 2019, Montana, pursuant to its State Energy Policy, generated 1,383
thousand MWh of electricity from coal; 49 thousand MWh of electricity from natural gas;
543 thousand MWh of electricity from hydroelectric power plants; and 186 thousand MWh

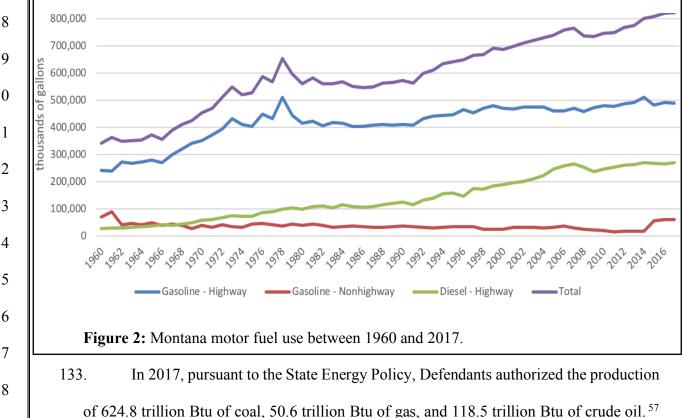
⁵¹ U.S. Energy Information Admin., *Montana State Energy Profile*, https://www.eia.gov/state/print.php?sid=MT (last updated Jan. 16, 2020).

 ⁵² U.S. Energy Information Admin, *Table C13. Energy Consumption Estimates per Capita by End-Use Sector, Ranked by State, 2017, State Energy Data 2017: Consumption (2017), https://www.eia.gov/state/seds/sep_sum/html/pdf/rank_use_capita.pdf.
 ⁵³ See Montana State Energy Profile, supra note 51.*

⁵⁴ *Id*.

of electricity from nonhydroelectric renewable energy sources.⁵⁵ All power plants in Montana are authorized by Defendants.

132. In 2017, Montana's transportation sector, which Defendant MDT regulates and authorizes, consumed two-thirds of all the petroleum burned in Montana. Montana's total motor fuel use continues to increase (see Figure 2⁵⁶) while the CO₂ emissions resulting from burning fossil fuel for transportation increased 38% from 5.8 million metric tons of CO₂ in 1990 to 8.0 million metric tons of CO₂ in 2017.



⁵⁶ Figure prepared with data from Montana Department of Environmental Quality, Petroleum Tables Workbook – 2019 Update, Table P8. Motor Fuel Use, 1960-2017 (thousand gallons), http://deq.mt.gov/Portals/112/Energy/Documents/Energy_Statistics/PetroleumTables2019.xlsx.

⁵⁵ U.S. Energy Information Admin., *Montana Net Energy Generation by Source, Sept. 2019*, Montana: State Profile and Energy Estimates, https://www.eia.gov/state/?sid=MT#tabs-4 (last updated Jan. 16, 2020). *See also* U.S. Energy Information Admin., *Electric Power Monthly, Net Generation by State by Type of Producer by Energy Source*, https://www.eia.gov/electricity/data/state/generation monthly.xlsx (last accessed on Jan. 2, 2020).

⁵⁷ U.S. Energy Information Admin, *Table P2. Primary Energy Production Estimates in Trillion Btu, 2017*, State Energy Data 2017: Production, https://www.eia.gov/state/seds/sep_prod/pdf/P2.pdf (last accessed Dec. 23, 2019).

That same year Defendants authorized the production of just 136 trillion Btu from renewable sources. Montana produced nearly six times as much energy from fossil fuel as it produced from renewables. In other words, only 14.6% of the energy produced in Montana is from renewable sources. Defendants—who manage, operate, and regulate the energy sector by and through the State Energy Policy—have the authority to produce renewable energy sources. Nevertheless, Defendants are manifestly indifferent to Youth Plaintiffs' injuries and continue to authorize energy from fossil fuels as opposed to renewables.

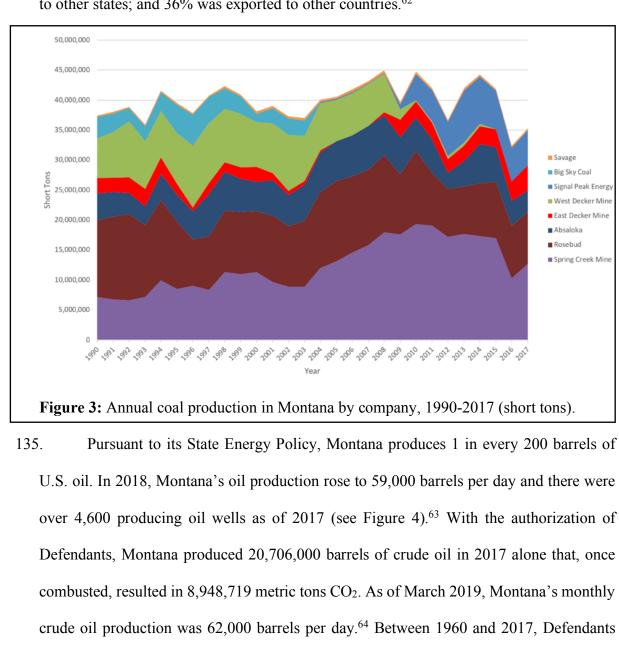
134. Montana has six coal mines (see Figure 3⁵⁸), all of which Defendants authorize to operate, and the Nation's largest estimated recoverable coal reserves, accounting for nearly one-third of the Nation's recoverable coal reserves, and is a substantial supplier of coal for the rest of the country.⁵⁹ Between 1960 and 2017 over 1.63 billion short tons of coal were mined in Montana,⁶⁰ with authorization from Defendants, releasing 3,073 million metric tons of CO₂ emissions once combusted. In 2018, over 38 million short tons of coal were mined from Montana, with authorization from Defendants, making it the sixth largest coal producer in the United States.⁶¹ Once combusted, that 38 million short tons of coal is equivalent to approximately 72.8 million metric tons CO₂ emissions. Montana's coal production increased for the first time in three years during 2017. About 22% of the coal

⁵⁸ Montana Department of Environmental Quality, *Coal Tables Workbook – 2018 Update* (2018), http://deq.mt.gov/Portals/112/Energy/Documents/Energy_Statistics/CoalTables2018_Final.xlsx.

 ⁵⁹ See Montana State Energy Profile, supra note 51; U.S. Energy Information Admin, Annual Coal Report 2018, Table 15, Recoverable Coal Reserves at Producing Mines, Estimated Recoverable Reserves, and Demonstrated Reserve by Mining Method, 2018, Annual Coal Report, https://www.eia.gov/coal/annual/pdf/table15.pdf (last accessed Feb. 5, 2019).
 23

⁶⁰ U.S. Energy Information Admin, *Table PT1 Primary Energy Production Estimates in Physical Units, Montana, 1960-2017*, https://www.eia.gov/state/seds/sep_prod/xls/PT1_MT.xlsx.

⁶¹ See Montana State Energy Profile, supra note 51; Understanding Energy in Montana 2018, supra note 34.



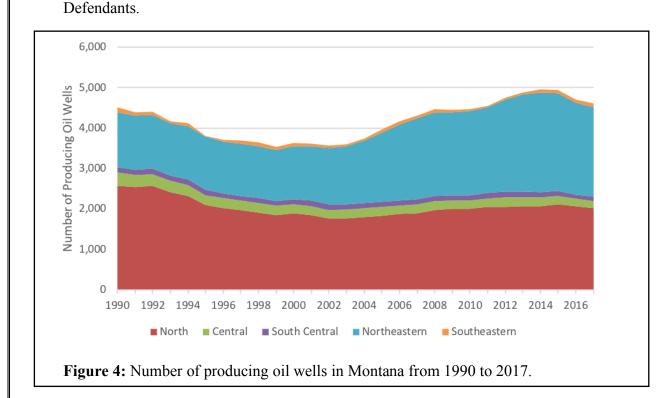
mined in 2018 was consumed in state, almost all in the electric power sector; 42% was sent to other states; and 36% was exported to other countries.⁶²

⁶² U.S. Energy Information Admin., *Profile Analysis*, Montana State Profile and Energy Estimates https://www.eia.gov/state/analysis.php?sid=MT (last updated Jan. 16, 2020); *Understanding Energy in Montana 2018, supra* note 34.

⁶³ Montana Department of Environmental Quality, *Petroleum Tables Workbook – 2019 Update, Table P3* (2019), http://deq.mt.gov/Portals/112/Energy/Documents/Energy_Statistics/PetroleumTables2019.xlsx; *see also Montana State Energy Profile, supra* note 51.

⁶⁴ U.S. Energy Information Admin., *Montana Supply Data and Map*, https://www.eia.gov/beta/states/states/mt/data/dashboard/production-capacity-generation (last accessed Dec. 24, 2019).

authorized the production of 1.59 billion barrels of crude oil that, once combusted, resulted in 689 million metric tons of CO₂. The drilling and production of oil is authorized by



136. There are four state-authorized oil refineries in Montana with a combined oil processing capacity of roughly 205,000 barrels per day. The refineries process crude oil largely from Canada and Wyoming and distribute the refined product by railroad and pipeline throughout Montana and to nearby states.

137. According to EIA data, there were over 7,400 state-authorized natural gas producing wells in 2018 and Montana's monthly natural gas production was approximately 4,000 million cubic feet as of September 2019.⁶⁵ Total gas production in 2017 was 46,090 million cubic feet that, once burned resulted in 2,509,139 metric tons of CO₂. Between 1960 and 2017, 3.26 trillion cubic feet of gas were produced in Montana, resulting in 177.7

23

⁶⁵ Admin., U.S. Energy Information Montana Natural Gas Data and Map, https://www.eia.gov/beta/states/states/mt/data/dashboard/natural-gas (last visited Dec. 24, 2019).

million metric tons of CO₂. Pursuant to its State Energy Policy, Montana consumes more natural gas than it produces, making it a net gas importer.⁶⁶

138. In 2017, almost one-fifth of all U.S. natural gas imports from Canada entered the United States by pipelines that go through Montana and are authorized by Defendants. Roughly 95% of the natural gas that enters Montana passes right through the state to other states.

139. Montana's lands contain a significant quantity of fossil fuels yet to be extracted, but that can be extracted under the State's Energy Policy. According to EIA data, as of 2018 there were over 817 million short tons of recoverable coal at producing mines.⁶⁷ If burned, this would release some 1,541 million metric tons of CO₂. The state also contains 279 million barrels of proven crude oil reserves⁶⁸ that, if combusted, would release 121 million metric tons of CO₂. Almost 600 billion cubic feet dry natural gas reserves are contained within Montana's borders⁶⁹ that, if combusted, would release 32 million metric tons of CO₂. Pursuant to and in further of the State Energy Policy, Defendants continue to permit, promote, authorize, and encourage fossil fuel use and production in Montana and other activities resulting in dangerous levels of GHG emissions.

In sum, between 1960 and 2017, the coal, oil, and gas extracted from Montana, with state authorization, resulted in 3,940 million metric tons of CO₂ emissions once combusted.
 For perspective, that is roughly equivalent to 80% of all energy-related U.S. CO₂ emissions

⁶⁷ U.S. Energy Information Admin., *Montana Coal Data and Map*, https://www.eia.gov/beta/states/mt/data/dashboard/coal (last visited Dec. 24, 2019).

⁶⁶ Montana State Energy Profile, supra note 51.

U.S. Energy Information Admin., *Montana Crude Oil and Petroleum Products Data and Map* https://www.eia.gov/beta/states/states/mt/data/dashboard/crude-oil-petroleum (last visited Dec. 24, 2019). ⁶⁹ *Montana Natural Gas Data and Map, supra* note 65.

for 2018.⁷⁰ This amount of cumulative emissions would rank as the third largest when compared to the annual emissions of countries (behind China and the United States, using 2018 emissions data).⁷¹

141. Additionally, between 1980 and 2017, a cumulative 1,083 million metric tons of CO₂ were emitted from fossil fuel consumption in Montana.⁷² Compared to the emissions of all countries around the world in 2018, that quantity of emissions would rank sixth in the world.⁷³

142. Whether looking at a particular year or Montana's historical and cumulative GHG emissions, the state, as a result of actions taken pursuant to and in furtherance of the State Energy Policy, is responsible for a significant and dangerous quantity of GHG emissions that have contributed to dangerous climate change and infringed the constitutional rights of Youth Plaintiffs. The GHG emissions have continued, and only grown, notwithstanding the passage of the 1972 Montana Constitution, MEPA, and Defendants' longstanding knowledge of the dangers posed by fossil fuels and the climate crisis.

ANTHROPOGENIC CLIMATE DESTABILIZATION IS ALREADY CAUSING **DANGEROUS IMPACTS IN MONTANA**

There is an overwhelming scientific consensus that human-caused climate 143. disruption is occurring and is dangerous to humans and other life and ecosystems on which humans depend. The present rate of global heating and ocean acidification is a result of anthropogenic GHG emissions, primarily CO₂ emissions, from the combustion of fossil fuels. This release of GHG emissions into the atmosphere, combined with carbon released

²²

⁷⁰ U.S. Energy Information Admin., U.S. Energy-Related CO2 Emissions Increased in 2018 but Will Likely Fall in 2019 and 2020, Today in Energy (Jan. 28, 2019), https://www.eia.gov/todayinenergy/detail.php?id=38133.

⁷¹ Global Carbon Atlas, CO₂ Emissions (2019), http://www.globalcarbonatlas.org/en/CO₂-emissions.

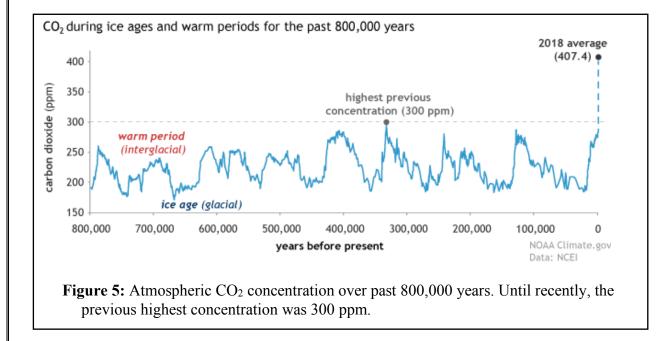
⁷² Montana Carbon Dioxide Emissions from Fossil Fuel Consumption (1980-2017), supra note 44.

⁷³ Global Carbon Atlas, *supra* note 71.

through deforestation and soil degradation, has disrupted Earth's energy balance, thereby changing Earth's climate, resulting in climate disruption globally and in Montana.

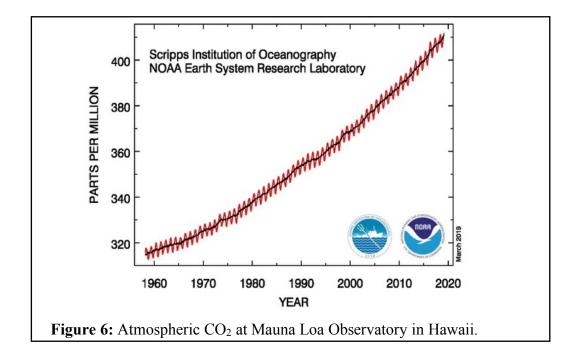
A. Anthropogenic Climate Disruption and the Dangers of Increased Global Warming

144. The global annual average atmospheric CO₂ concentration for 2019 was 411.4 ppm compared to the pre-industrial concentration of 280 ppm.⁷⁴ The atmospheric CO₂ concentration has been increasing, and continues to increase, as a direct result of human combustion of fossil fuels (see Figures 5 and 6).⁷⁵ Current atmospheric CO₂ concentrations are higher than levels in millions of years. Atmospheric CO₂ is the primary forcer of climate change.



⁷⁴ *Mauna Loa CO₂ Annual Mean Data*, ftp://aftp.cmdl.noaa.gov/products/trends/co2/co2_annmean_mlo.txt (last updated Mar. 5, 2020).

⁷⁵ Rebecca Lindsey, *Climate Change: Atmospheric Carbon Dioxide*, National Oceanic and Atmospheric Administration (NOAA) (Feb 20, 2020), https://www.climate.gov/news-features/understanding-climate/climate-change-atmospheric-carbon-dioxide; National Oceanic and Atmospheric Administration (NOAA), *Global carbon dioxide growth in 2018 reached 4th highest on record*, Climate Research, (Mar. 22, 2019), https://www.noaa.gov/news/global-carbon-dioxide-growth-in-2018-reached-4th-highest-on-record.



145. The atmosphere and water are inextricably linked and there is a continuous movement of water between the earth and atmosphere.⁷⁶ Almost all of the water in the atmosphere is from evaporation from water bodies or evapotranspiration by plants and vegetation. Subsequent precipitation adds water back into land-based hydrological systems.⁷⁷ Thus, there is both a functional and physical connection between the land-based water and the atmosphere. The atmosphere contains more freshwater than the rivers and lakes of Montana and indeed contains atmospheric rivers that provide precipitation for Montana. The atmosphere, the oceans, other freshwater resources, and the biosphere are all interconnected.

146.

For the first time in the measurable paleoclimatic record, CO₂ levels have risen by

130 ppm within only 150 years, a rate 100 times faster than the natural increase in carbon

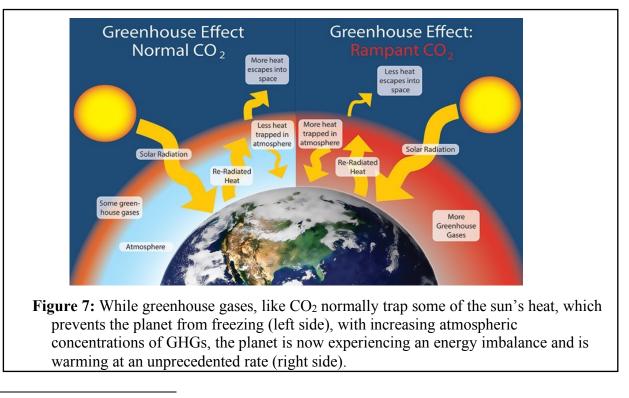
⁷⁶ National Oceanic and Atmospheric Administration (NOAA), *Water Cycle*, Education, https://www.noaa.gov/education/resource-collections/freshwater-education-resources/water-cycle (last updated Feb. 2019).

⁷⁷ United States Geological Survey (USGS), *A Comprehensive Study of the Natural Water Cycle*, Water Science School, https://www.usgs.gov/special-topic/water-science-school/science/a-comprehensive-study-natural-water-cycle?qt-science_center_objects=0#Condensation (last visited Feb. 20, 2020).

dioxide from 180 to 280 ppm following the last ice age, which ended some 12,000 years ago.

147. The concentrations of other GHGs in the atmosphere have also increased. For example, the concentration of methane, a GHG that is 86 times⁷⁸ more potent than carbon dioxide, has increased approximately 250% since the mid 1800s.

148. GHGs in the atmosphere act like a blanket over Earth to trap the heat received from the sun (see Figure 7).⁷⁹ Without this greenhouse effect, the Earth's average surface temperature would be 0° F (-18° C) instead of 59° F (15° C). Scientists have understood this basic mechanism of global heating since at least the late-nineteenth century. More GHGs in the atmosphere means that more heat is being retained on Earth, with less heat radiating back out into space, causing a disruption in Earth's energy balance.



 ⁷⁸ Gunnar Myhre et al., *Chapter 8: Anthropogenic and Natural Radiative Forcing: Climate Change 2013: The Physical Science Basis*, Intergovernmental Panel on Climate Change (IPCC), 714 (2013), http://www.climatechange2013.org/images/report/WG1AR5_Chapter08_FINAL.pdf.
 ⁷⁹ Will Elder, *What is Climate Change?*, U.S. National Park Service, https://www.nps.gov/goga/learn/nature/climate-change-causes.htm (last updated Sep. 13, 2019).

149. A substantial portion of every ton of CO₂ emitted by humans persists in the atmosphere for as long as a millennium or more. As a result, CO₂ steadily accumulates in the atmosphere. The Earth will continue to warm in response to the atmospheric concentrations of GHGs caused by past emissions, as well as future emissions; therefore, the impacts associated with the CO₂ emissions of today will be mostly borne by Youth Plaintiffs, other youth, and future generations.

150. Unless GHGs are reduced to meet science-based targets, climatic tipping points, such as massive species extinction and rapid ice sheet disintegration, will be reached and the Earth will cross a point of no return after which catastrophic climate change impacts will be unavoidable and irreversible. The continued GHG emissions from fossil fuels will further disrupt Earth's climate system and that, in turn, will impose profound and mounting risks of ecological, economic, and social collapse.

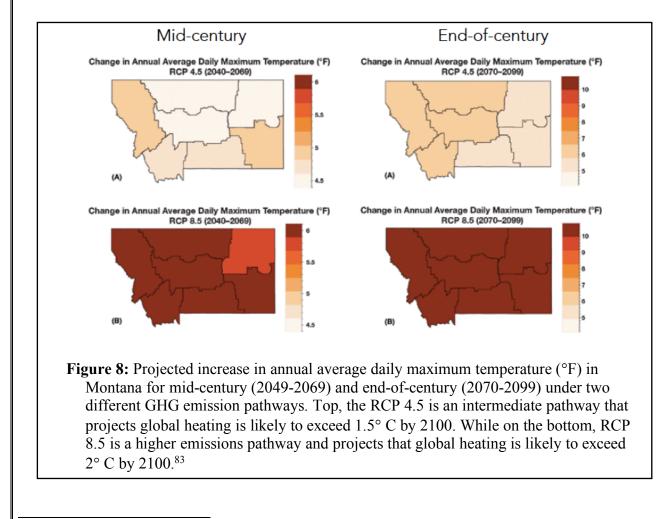
B. <u>The Impacts of Climate Disruption in Montana are Pervasive</u>

151. One key observable change in the climate system, and in Montana, is the rapid increase in recorded global surface temperatures. The last decade, 2010-2019, was the warmest on record. The increased concentrations of GHGs in our atmosphere have raised average global surface temperature by more than 1° C (over 2.0° F) from 1880 to 2019.⁸⁰ This is well above the maximum warming of the Holocene era, the ~12,000 year epoch of relatively stable climate, which allowed human civilization to develop.

152. The impacts of climate disruption in Montana are pervasive. Annual average temperatures across Montana have risen significantly more than the global average,

⁸⁰ National Oceanic and Atmospheric Administration (NOAA), 2019 was 2nd hottest year on record for Earth say NOAA, NASA (January 15, 2020), https://www.noaa.gov/news/2019-was-2nd-hottest-year-on-record-for-earth-say-noaa-nasa.

between 2° and 3° F between 1950 and 2015.⁸¹ It is as if the Earth has a constant fever, and just as in the human body, even a slight rise in temperature weakens the organism, increases the vulnerability of the organism, and can have dangerous long-term effects on the system. By mid-century, when the Youth Plaintiffs will be adults, models project that the annual average daily maximum temperature in Montana will increase by approximately 4.5-6.0° F, a temperature increase that would imperil human civilization (see Figure 8). By the end of the century, models predict that the annual average daily maximum temperature in Montana will increase by approximately 5-10° F.⁸²

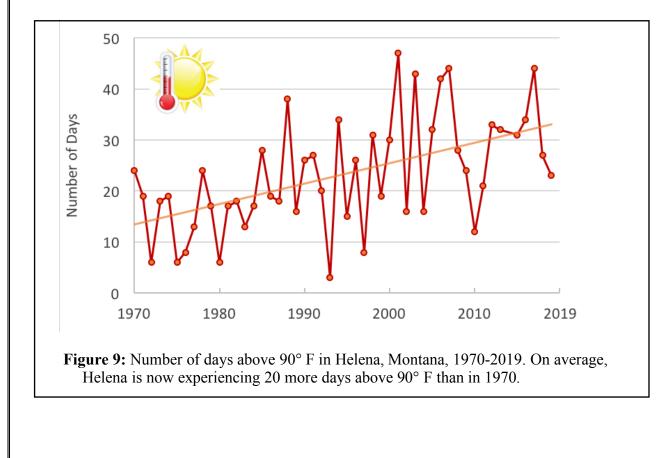


⁸¹ Cathy Whitlock et al., 2017 Montana Climate Assessment, Montana Institute on Ecosystems, 10 (2017), http://livemca-site.pantheonsite.io/sites/default/files/thumbnails/image/2017-Montana-Climate-Assessment-Ir.pdf.

⁸² *Id.* at 10 ("Montana temperatures are projected to rise by approximately 5.6-9.8° F" by the end-of-century).

⁸³ Cathy Whitlock et al., *supra* note 81, at 48.

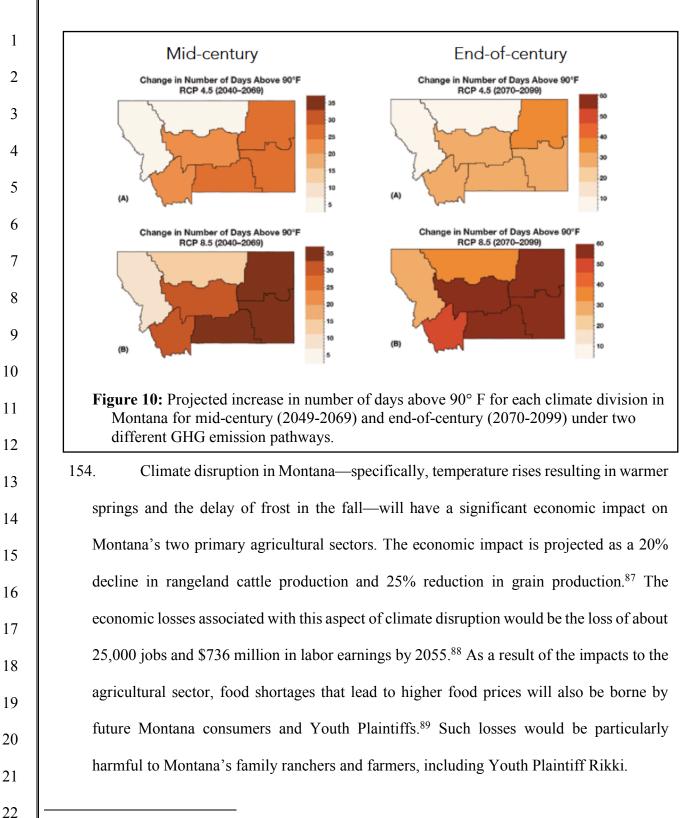
153. Montana has warmed more than most of the contiguous United States because northern latitudes heat more quickly.⁸⁴ As a result of the average temperature increase, heat waves are becoming more common and snow is melting earlier in the spring season. In Helena, for example, the number of summer days above 90° F has increased by 20 days between 1970 and 2019 (see Figure 9).⁸⁵ By mid-century, extreme heat days (above 90° F) are projected to increase by 5-35 additional days (see Figure 10) while frost-free days are projected to increase by 24-44 days.⁸⁶



⁸⁴ U.S. Environmental Protection Agency, *What Climate Change Means for Montana* (Aug. 2016), https://19january2017snapshot.epa.gov/sites/production/files/2016-09/documents/climate-change-mt.pdf.

⁸⁵ Figure prepared with data from the Applied Climate Information System, Helena Airport Association weather station, http://scacis.rcc-acis.org/. Trend line is the linear regression.

⁸⁶ Cathy Whitlock et al., *supra* note 81, at 66.



⁸⁷ Thomas Michael Power, et al., *The Impact of Climate Change on Montana's Agriculture Economy*, Montana Farmers Union, 16 (2016), https://montanafarmersunion.com/wp-content/uploads/2016/02/FINAL_Impact_Climate_Change_MT_Ag_Econ_Power_Consulting_2-24-2016.pdf. ⁸⁸ *Id.* at 18.

⁸⁹ Expert Report of Joseph E. Stiglitz, Juliana v. United States, No. 6:15-cv-01517-TC, ¶ 33 (D. Or. June 8, 2016).

155. While Montana's growing season has lengthened with warming temperatures, future climate changes will become increasingly disruptive to Montana's agricultural sectors. For example, reduced irrigation capacity from decreasing mountain snowpack is projected to impact hay, sugar beet, malt barley, market garden, and potato production.⁹⁰ In addition, warmer winter temperatures will lead to increased winter annual weeds, which are projected to decrease crop yields and forage productivity.⁹¹

156. The longer growing seasons also allows trees, grasses, and other plants to produce pollen for a longer period, resulting in aggravated and prolonged allergies for millions of Americans, including Youth Plaintiffs Lander and Olivia.

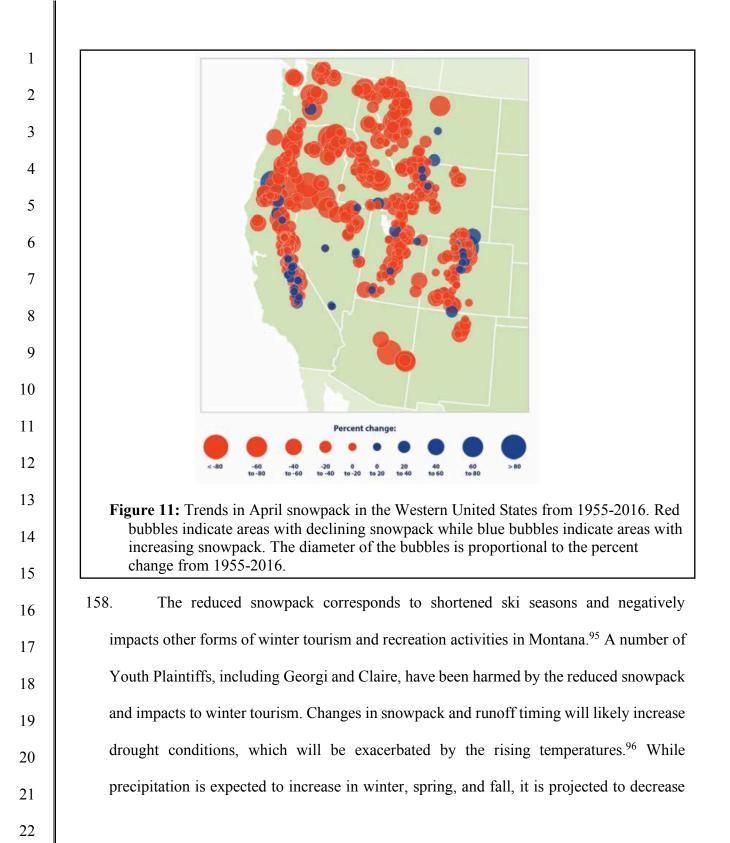
157. Montana encompasses part of the northern Rocky Mountain region. The northern Rocky Mountains are a headwaters region, including the Missouri river system to the East and the Columbia River system to the West, where most of the water originates as snow.⁹² Due to the warming climate, the water cycle in the atmosphere is disrupted and less precipitation falls as snow, and more snow melts during winter.⁹³ Consequently, Montana's snowpack has been decreasing and is likely to continue decreasing with warming temperatures (see Figure 11).⁹⁴

⁹⁰ Cathy Whitlock et al., *supra* note 81, at 198.

⁹¹ *Id.* at 199.

 ⁹² Gregory T. Pederson et al., *Climatic Controls on the Snowmelt Hydrology of the Northern Rocky Mountain*, 24 Journal of Climate 1666 (2011), https://journals.ametsoc.org/doi/pdf/10.1175/2010JCLI3729.1.
 ⁹³ What Climate Change Means for Montana, supra note 84.

⁹⁴ Cathy Whitlock et al., *supra* note 81, at 88, 91.



⁹⁵ What Climate Change Means for Montana, supra note 84.

⁹⁶ Cathy Whitlock et al., *supra* note 81, at 123.

in summer.⁹⁷ Demand for groundwater will likely grow with temperature increases and changes in availability of surface water sources.⁹⁸

159. Glacier National Park is a world-renowned landmark, major driver of the regional economy, and source of fresh water for countless communities.⁹⁹ In Glacier National Park, the effects of climate disruption are dramatic as the glaciers are rapidly retreating (see Figure 12¹⁰⁰).¹⁰¹ Glaciers retreat when melting outpaces accumulation of new snow.¹⁰² Scientific surveys of Glacier National Park have observed that "all glaciers have been reduced in area since 1966 with some glaciers having been reduced by as much as 85% by 2015."¹⁰³ Specifically, the glaciers in the Blackfoot-Jackson Glacier Basin of Glacier National Park decreased in area from 21.6 square kilometers ("km²") in 1850 to 7.4 km² in 1979.¹⁰⁴ Of the approximately 150 glaciers present in the park in 1850, only 26 glaciers (larger than 25 acres) remained in 2015. As Dr. Eric Rignot, an expert in glaciology and climate change, has stated: "Glacier National Park will soon have no glaciers left. Most of the glaciers in that park no longer qualify as glaciers per my definition of what a glacier is, which is an entity of ice thick enough to deform under its own weight, which requires ice to be at least 100 m thick."¹⁰⁵

 $[\]frac{1}{97}$ *Id*. at 10.

 $^{^{98}}$ *Id.* at 114.

 ⁹⁹ D.B. Fagre et al., *Glacier Margin Time Series (1966, 1998, 2005, 2015) of the Named Glaciers of Glacier National Park, MT, USA*, U.S. Geological Survey data release, United States Geological Survey (USGS) (2017), https://www.sciencebase.gov/catalog/item/58af7022e4b01ccd54f9f542_

¹⁰⁰ National Park Service, *Melting Glaciers*, https://www.nps.gov/glac/learn/nature/melting-glaciers.htm (last accessed Jan. 14, 2020).

 ¹⁰¹ United States Geological Survey (USGS), *Retreat of Glaciers in Glacier National Park*, https://www.usgs.gov/centers/norock/science/retreat-glaciers-glacier-national-park?qt-science_center_objects=0 - qt-science_center_objects (last visited Feb. 20, 2020).
 ¹⁰² Id

 $^{23 \}qquad \begin{array}{c} 1a. \\ 1^{03} Id. \\ 1^{04} M \end{array}$

¹⁰⁴ Myrna H. P. Hall et al., *Modeled Climate-Induced Glacier Change in Glacier National Park*, 1850–2100, 53 BioScience 131 (2003), https://academic.oup.com/bioscience/article/53/2/131/254976.

¹⁰⁵ Expert Report of Eric Rignot, Juliana v. United States, No. 6:15-cv-01517-TC (D. Or. June 28, 2018).

ACKSON GLACIER 1911 AND 200 JACKSON GLACIER 1911 AND 2009 ACKFOOT AND JACKSON GLACIER BLACKFOOT AND JACKSON GLACIER 1914 AND 2009 GRINNELL GLACIER 1910 AND 201 Figure 12: From top to bottom: Jackson Glacier in 1911 (left) and 2009 (right); Blackfoot and Jackson Glacier in 1914 (left) and 2009 (right); Grinnell Glacier in 1910 (left) and 2017 (right). Youth Plaintiffs, including Kian, Eva, Mica, and Claire, are losing their ability to 160. access and recreate near and around glaciers. The loss of glaciers, which are also important

water sources, has significant consequences for the surrounding ecosystems as well as

impacting landscape aesthetics valued by visitors to the national parks.¹⁰⁶ Seasonal snow accumulation does not function the same as glacial melt, as it melts early in the summer season. Glaciers, instead, "act as a 'bank' of water (stored as ice) whose continual melt helps regulate stream temperatures and maintains streamflow during late summer and drought periods when other sources are depleted."¹⁰⁷ Without glacial melt, stream temperatures will likely increase, which may have detrimental effects for temperature sensitive aquatic insects, thereby disrupting the aquatic food chain.¹⁰⁸ Warming stream temperatures have led to a reduction in native fish growth, and an increase in nonnative fish growth.¹⁰⁹ The impact of the melting glaciers in Glacier National Park is having an effect on the downstream watershed, Montana's economy, and the livelihoods of many Montanans.

161. Montana's rivers are already experiencing the impacts of climate disruption as the water levels are decreasing and temperatures are increasing. As shown in Figure 13, the snow water equivalent ("SWE"), or the amount of water contained in the snow, for the river basins for the Clark Fork, Missouri, and Yellowstone Rivers, rivers Youth Plaintiffs, including Kian, Georgi, Grace, Mica, and Eva, fish and recreate in, are expected to continue to decline significantly in the coming decades, which will result in lower instream flows.¹¹⁰ At the same time, as Figure 14 shows, the summer water temperatures for Montana's rivers are expected to continue to rise.¹¹¹

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

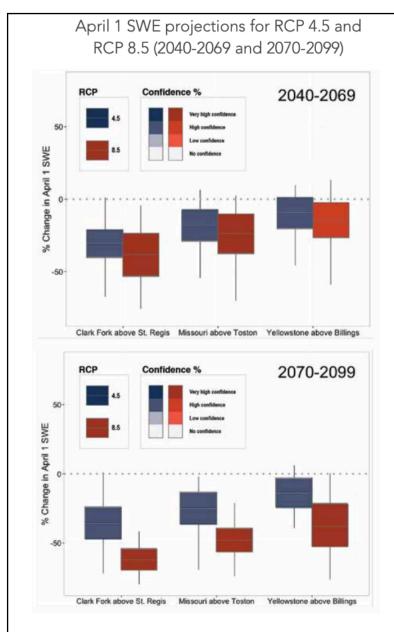
22

¹⁰⁶ Retreat of Glaciers in Glacier National Park, supra note 101.

¹⁰⁷ Id. ¹⁰⁸ Id.

¹⁰⁹ Andrew J. Hansen et al., *Trends in Vital Signs for Greater Yellowstone: Application of a Wildland Health Index*, Ecosphere (Aug. 16 2018), https://esajournals.onlinelibrary.wiley.com/doi/full/10.1002/ecs2.2380. ¹¹⁰ Cathy Whitlock et al., *supra* note 81, at 135.

¹¹¹ Id. at 97.



2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

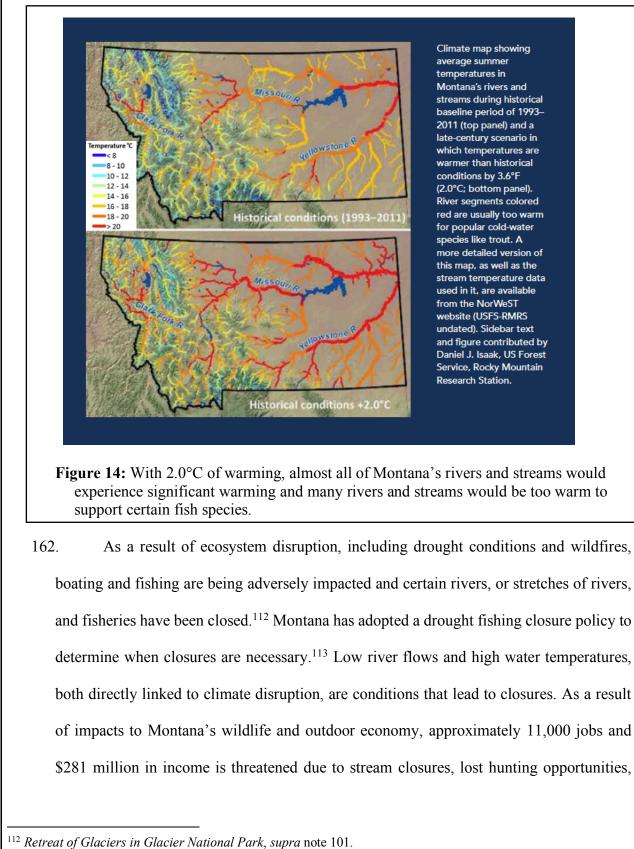
23

Figure 3-10. APRIL 1 SWE projections for three snowmelt-dominated basins in Montana under two scenarios (RCP4.5 and RCP8.5) and two time periods (2040-2069 and 2070-2099). Data are presented as the projected percent change in April 1 SWE between the baseline period 1970-2000 and two future time periods (2040-2069: upper panel; 2070-2099: lower panel). Box and whiskers plots show variation in projections among the different models. These types of plots appear in other graphs below that depict model projections.

The line in the middle of the boxplot represents the median value of all model projections. The bottom and top of the box represent the 25th and 75th percentiles (or first and third quartiles), respectively, of model projections. The upper whisker (line extending from the box) extends from the box to the largest model value no further than 1.5*IQR from the box (where IQR is the inter-quartile range, or distance between the first and third quartiles). The lower whisker extends from the box to the smallest model projection that is no further than 1.5*IOR of the hinge. Few model projections fall beyond the end of the whiskers (i.e., outliers), and these are not shown in the figures.

For explanation of specific confidence levels, refer to Future Projections in Water Chapter.

Figure 13: The snow water equivalent ("SWE") projections for three of Montana's major river basins will be significantly less with continued climate disruption, which will cause a decrease in streamflow levels for these three rivers, and other Montana rivers and streams.



¹¹³ Montana Fish, Wildlife & Parks, *Drought Fishing Closure Policy*, http://fwp.mt.gov/news/drought/closurepolicy.html (last visited Feb. 21, 2020).

wildfires, and reduced snowpack.¹¹⁴ Youth Plaintiffs' ability to fish and access rivers has been impaired due to river and fishery closures due to climate disruptions. For example, Youth Plaintiffs Mica, Kian, Lander, and Badge have all had their ability to fish limited, or completely foreclosed in some instanced, due to fishery closures as a result of the conditions in Montana rivers. Other Youth Plaintiffs, including Eva, Georgi, Lander, and Badge, have had their access to rivers limited for other recreational activities.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

163. Yellowstone and Glacier National Park are economic powerhouses for Montana. Together, the parks receive a combined five million visitor days per year.¹¹⁵ Yellowstone National Park, the world's first National Park, spreads into southeastern Montana. In addition to providing a tourism-based economy, Yellowstone National Park is the heart of the Greater Yellowstone Ecosystem.¹¹⁶ Ongoing and anticipated impacts of climate disruption on Yellowstone National Park include more extreme hot and cold days, change to the composition of flora and fauna in the park, and increasing fire frequency, all of which threatens the continued viability of this national treasure and the ability of Youth Plaintiffs, including Eva, to continue to access for recreational activities.¹¹⁷

164. As Montana temperatures increase, ski areas will have to compete for water rights or use energy to make snow. The ski season will be shorter and skiers will likely have to travel farther for snow. Lack of precipitation and declines in snowpack will reduce the ski and snow mobile industry by an estimated 1,500 jobs and \$37 million.¹¹⁸ The rising

¹¹⁵ *Id*. at iii.

¹¹⁷ U.S. National Park Service, *Climate Change*, Yellowstone National Park, https://www.nps.gov/yell/learn/nature/climate-change.htm_(last updated June 25, 2019).

 ¹¹⁴ Thomas Michael Power, et al., *The Impact of Climate Change on Montana's Outdoor Economy*, Montana Wildlife Federation, 29 (Dec. 2015), https://montanawildlife.org/wp-content/uploads/2015/12/Impact-of-Climate-Change-on-the-Montana-Outdoor-Economy-Dec-2015-Final-Report.pdf.

^{23 &}lt;sup>116</sup> Andrew J. Hansen et al., *supra* note 109, at 5-6.

¹¹⁸ The Impact of Climate Change on Montana's Outdoor Economy, supra note 114, at iii-iv.

temperatures will cause profound changes and disruption in those Montana communities built around these activities, such as Big Sky, West Yellowstone, Phillipsburg, and Whitefish.

165. Climate disruption is harming Montana's wildlife. As many as one in six species are threatened with extinction due to climate disruption. Many more species that do not face extinction will face changes in abundance, distributions, and species interactions that cause adverse impacts for ecosystems and humans. Almost two-thirds of common plants and half of all animals are projected to decline dramatically in population this century as a result of climate disruption, absent science-based GHG reductions. This has an impact for wildlife viewing and hunting, and dramatically disrupts the ecology of the state. These cascading effects of climate disruption will affect children and youth in Montana, including Youth Plaintiffs. For example, opportunities to view certain animals, like wolverines, may be lost forever. Pikas are another animal that Youth Plaintiffs, including Mica, enjoy seeing in the wild that are being adversely impacted by rising temperatures, declining snowpack, and other climate impacts. Likewise, the ability of Youth Plaintiffs to inherit hunting and wildlife knowledge from their parents, and to pass that knowledge on to their children is threatened to be lost forever due to climate disruption.¹¹⁹

166. The climate crisis is also having an impact on Montana's hunting heritage. As Montana warms, big game, including elk, bighorn sheep, and mountain goats, are moving to higher country, increasing difficulty for hunters. Additional, certain bird species, including grouse, are shifting their ranges north, impacting hunters. Montana's wildlife is also adversely impacted by climate impacts such as rising temperatures, drought, increased

¹¹⁹ The Impact of Climate Change on Montana's Outdoor Economy, supra note 114.

wildfire activity, loss of forest and grassland habitat, declining snowpack, and other climate impacts. Climate disruption is decreasing the productivity and range of big game and bird hunting, has led to the closure of public lands previously available for hunting, and leads to an overall deterioration in the quality of the hunting experience, including for Youth Plaintiffs Lander and Badge. In turn, the decrease in hunting is resulting in job losses, costing the state millions, and undermining an important way of life and cultural heritage for Montanans.¹²⁰

167. These changes are also having an effect on the health of Montana's fisheries and relatedly, the angling and sportfishing industries. Estimates include a loss of one-third of angling days, resulting in a loss of about 1,800 jobs and \$49 million to the Montana economy.¹²¹

168. Climate disruption is already having a significant impact on Montana's natural environment and, as a result, the state's recreation and tourism industry. Not only does this effect Youth Plaintiffs' ability to use and enjoy Montana's Public Trust Resources, it also carries implications for the future of the Montana economy as the recreation and tourism industry in Montana is responsible for between 34,000 (nonresident) and 89,000 (nonresident and resident) jobs. The tourism industry brings in between \$1 billion (nonresident) and \$2.3 billion (nonresident and resident) per year to Montana.¹²²

169. Rising temperatures and increased droughts in Montana have dried out the forests and soil, killing trees, increasing the risk of forest fires, and enabling outbreaks of forest insects.¹²³

- ¹²⁰ *Id*. ¹²¹ *Id*. at vii.
- 122 *Id*. at v.

¹²³ What Climate Change Means for Montana, supra note 84.

170. Rising temperatures due to climate disruption in Montana disturb the life cycle of the bark beetle, an insect which kills trees.¹²⁴ With rising winter temperatures and fewer freezing days that would normally kill off beetle larva, the bark beetle are living longer, reproducing faster, and accessing trees at higher elevations that had formerly been resistant due to the cold temperatures. In Helena, for example, the winters were, on average, 2.6° F warmer in 2019 than in 1970.¹²⁵ Since 2000, bark beetles have decimated more than 85,000 square miles of forest in the western United States—their rapid advance fueled by climate disruption—with Montana experiencing some of the worst impacts.¹²⁶ The forest decimation by the bark beetle has massive impacts on Montana's logging industry, including deterioration in quality of logging products, as well as impacting wildlife habitat, hunting, and recreation. Youth Plaintiffs Kian, Lander, and Badge have been directly impacted by pine beetles, which have killed trees on their property and in places they recreate.

171. The whitebark pine is an example of an important tree threatened by mountain pine beetles. The seeds of whitebark pine are an important food for grizzly bears, birds, and other animals. The whitebark pine is dying out across much of Montana, with the most serious declines in and near Glacier National Park and the Blackfeet Indian Reservation and Yellowstone National Park.¹²⁷

23 ¹²⁶ Cheryl Katz, *Small Pests, Big Problems: The Global Spread of Bark Beetles*, Yale Environment 360 (Sept. 21, 2017), https://e360.yale.edu/features/small-pests-big-problems-the-global-spread-of-bark-beetles.

^{21 &}lt;sup>124</sup> Zeoann Murphy & Chris Mooney, *Gone in A Generation*, Washington Post (Jan. 29, 2019), https://www.washingtonpost.com/graphics/2019/national/gone-in-a-generation/forest-climate-change.html (updated Sept. 26, 2019).

^{22 &}lt;sup>125</sup> Applied Climate Information System, Helena Airport Association Weather Station, <u>http://scacis.rcc-acis.org/;</u> Zeoann Murphy & Chris Mooney, *supra* note 124.

¹²⁷ Laura Roady, *Whitebark Pine*, Montana Outdoors (Sept. 2010), http://fwp.mt.gov/mtoutdoors/HTML/articles/portraits/whitebarkpine.htm.

Montana's trees provide the crucial function of acting as a "carbon sink," pulling
CO₂ from the atmosphere. In the 1990s, Montana's forests pulled around 20 million tons
of CO₂ from the atmosphere per year. With the decimation of forests due to the combination
of drought, pest infestations, and wildfires, forests that have been a sink for GHGs may no
longer be able to store as much carbon.¹²⁸

173. Higher temperatures are leading to increased severity, frequency, and extent of wildfires (see Figure 15).¹²⁹ Wildfires are expected to get significantly worse in the coming years without immediate steps to limit global heating (see Figure 16).¹³⁰ According to experts, the wildfire season in the western United States is at least 87 days longer than it was in the 1980s.¹³¹ Additionally, the number of large fires (over 1000 acres) has increased four times and the number of acres burned has increased six times. Aside from the danger posed to residents–including Youth Plaintiffs–wildfires also impact ecosystems, property, and livelihoods.¹³² Increases in fire risk is expected due to prolonged fire seasons from warmer temperatures and increased fuel load.¹³³ In 2017—Montana's worst wildfire season in more than 100 years in terms of number of acres burned—wildfires cost the state approximately \$70 million.¹³⁴ In 2018 wildfires cost the state more than \$95 million.¹³⁵

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

¹²⁸ Cathy Whitlock et al., *supra* note 81, at 170.

¹²⁹ Figure prepared with historical incident data from the Northern Rockies Coordination Center, National Interagency Fire Center, https://gacc.nifc.gov/nrcc/predictive/intelligence/ytd_historical/ytd_historical.htm.

^{19 &}lt;sup>130</sup> National Research Council, *Climate Stabilization Targets: Emissions, Concentrations, and Impacts over Decades* to Millennia 180 (2011).

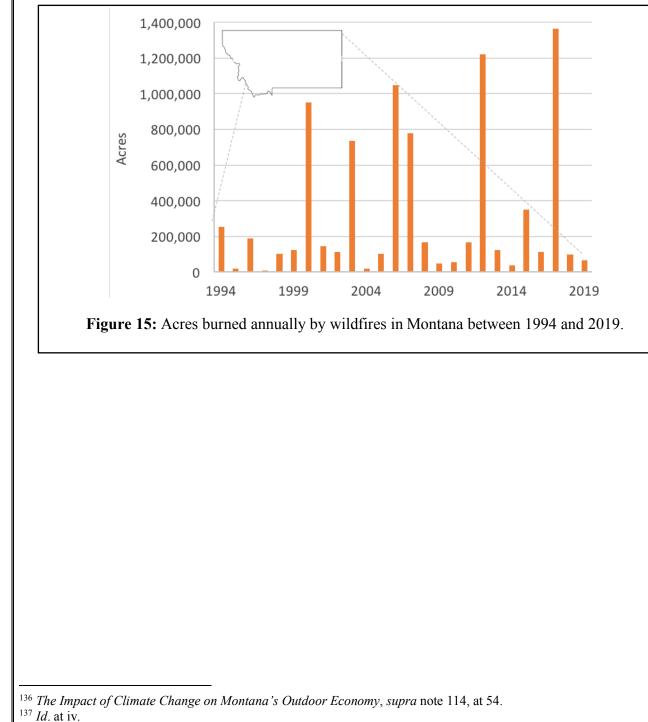
 ¹³¹ Expert Report of Steve W. Running, Juliana v. United States, No. 6:15-cv-01517-TC, 13 (D. Or. June 6, 2018) (citing A.L. Westerling, et al., Warming and Earlier Spring Increase Western U.S. Forest Wildfire Activity, 313 Science 940-43 (2006)).

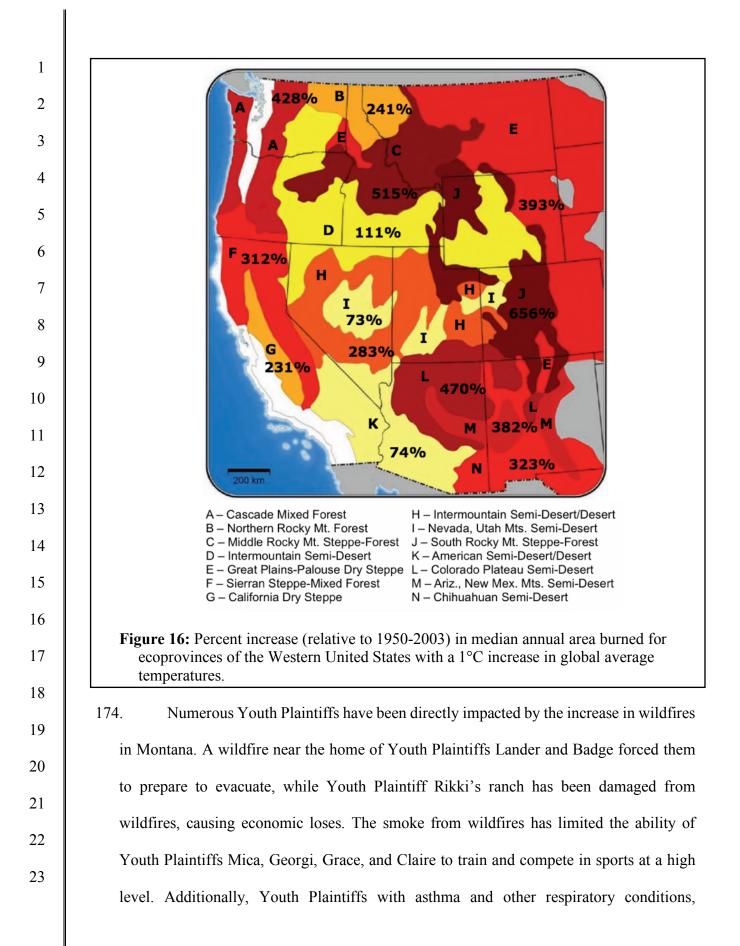
^{21 &}lt;sup>132</sup> *What Climate Change Means for Montana, supra* note 84. ¹³³ Cathy Whitlock et al., *supra* note 81, at 170.

^{22 &}lt;sup>134</sup> Karl Puckett, 2017 Was State's Worst Fire Season Since 1910, Great Falls Tribune, (Feb. 8, 2018), https://www.greatfallstribune.com/story/news/2018/02/08/2017-fire-season-no-1-produced-largest-fire-stateshistory/319952002/.

 ¹³⁵ Associated Press, *Large Wildfires Cost Montana more than \$95M This Year*, Great Falls Tribune (Nov. 20, 2018), https://www.greatfallstribune.com/story/news/2018/11/10/large-wildfires-cost-montana-more-than-95-m-year/1957095002/.

Both years were well above the state's average of around \$20 million per year over the last decade. Wildfires in Montana are estimated to result in potential annual losses of 227 homes worth \$53 million, from 2016 to 2050.¹³⁶ Experts expect increased risk of home loss due to wildfires and increased expenditures on firefighting.¹³⁷





including Ruby, Jeffrey, Nate, and Olivia have to limit outdoor activities when it is smoky as they are uniquely vulnerable to the smoky conditions.

175. Fossil fuel extraction and combustion and the resulting climate crisis harms public health and welfare and is already contributing to an increase in asthma, cancer, cardiovascular disease, stroke, heat-related morbidity and mortality, food-borne diseases, and neurological diseases and disorders. Climate disruption also increases occurrence of infectious diseases, including those spread by mosquitos, ticks, and other pests. Doctors and leading medical institutions are recognizing the climate crisis as a "health emergency."¹³⁸

176. There is further risk that as the climate and land use pattern changes, disease vectors may also move north from southern tropical climates. This could lead to increases in public health costs, specifically in terms of vaccinations and treatments. Furthermore, Youth Plaintiffs will be at risk of enduring one or more of these increased health concerns or diseases, and only a portion of the associated health costs may be picked up by insurance or public assistance. The economic impacts of climate disruption will also lead to increasing inequality, as those with financial means are more able to privately bear the costs of disasters, such as floods and wildfires, while those without financial means will not. This will impose a greater burden on those less able to pay for the direct, local consequences of climate disruption.¹³⁹

¹³⁸ Caren G. Solomon, et al., *Climate Change – A Health Emergency*, 380 N. Engl. J. Med. 3 (2019).

¹³⁹ Expert Report of Joseph E. Stiglitz, *supra* note 89, at ¶ 34.

C. Children are the Most Vulnerable to the Climate Crisis and Its Dangerous Impacts

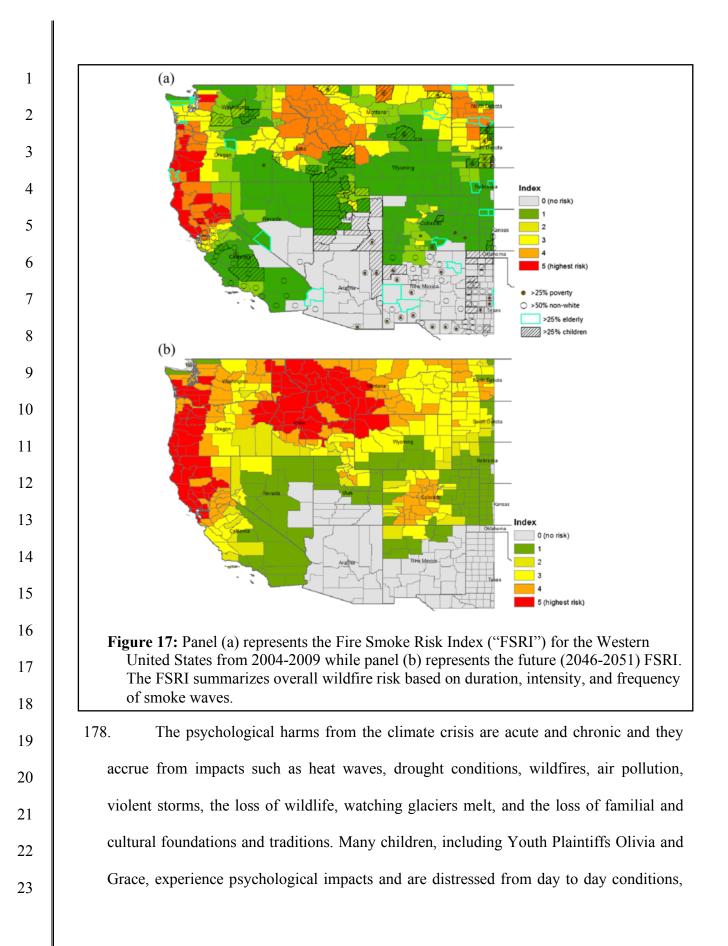
Children are the Wost vulnerable to the Children Crisis and its Dangerous Impacts

177. All children, even those without pre-existing illness, are considered a "sensitive population" to the effects of the climate crisis because their bodies are still developing.¹⁴⁰ Air pollution poses severe health risks for Montana's youth and is shown to impede their physical development. Montana's persistent drought conditions and record wildfire seasons have doubled respiratory-related emergency room visits.¹⁴¹ As illustrated in Figure 17, panel (a) below, Montana, in particular western Montana, already experiences some of the worst wildfire smoke conditions in the United States.¹⁴² Unless the climate crisis is addressed, the smoke conditions in Montana will get significantly worse, with much of western Montana facing the highest risk factor (Figure 17, panel (b)).

¹¹⁴⁰ U.S. Environmental Protection Agency et al., Wildfire Smoke A Guide for Public Health Officials, Montana
Department of Environmental Quality (revised May 2016),
http://deq.mt.gov/Portals/112/Air/FireUpdates/Documents/wildfire may2016.pdf.

 ¹⁴¹ Phil Drake, *Gov. Bullock Creates Climate Change Council*, Great Falls Tribune (Jul. 1, 2019, 1:05 PM), https://www.greatfallstribune.com/story/news/2019/07/01/montana-governor-creates-climate-solutionscouncil/1619878001/?cid=twitter GFTribune.

¹⁴² Jia Coco Liu., et al., *Particulate air pollution from wildfires in the Western US under climate change*, 138 Climate Change, 655, 662 (2016).



anxious about the climate crisis, and are unable to alleviate their concerns.¹⁴³ Youth Plaintiffs are acutely aware that the window to avoid locking in irreversible climate change impacts is closing. As climate disruption transforms communities, Youth Plaintiffs and children are likely to experience a feeling that they are losing a place that is important to them, which is a phenomenon called *solastalgia*.¹⁴⁴ Solastalgia describes the gripping sense of existential loss when treasured places are irreparably damaged or destroyed as a result of human carelessness or willful disregard for them, and can cause profound distress.¹⁴⁵ This captures the way Youth Plaintiff Badge feels when knowing that the area he was named after is being damaged and degraded due to climate disruption.

179. The psychological health effects include elevated levels of anxiety, depression, post-traumatic stress disorder, increased incidences of suicide, substance abuse, social disruptions like increased violence, and a distressing sense of loss. The psychological harms caused by the climate crisis can result in a lifetime of hardships for children.

180. Importantly, there can be prompt redress for Youth Plaintiffs' psychological injuries with declaratory and/or injunctive relief. If the Court granted declaratory relief, it would help redress Youth Plaintiffs psychological injuries by making it clear that their fears were understood by the judiciary and by restoring their confidence that there is recourse for government conduct that violates their constitutional rights—it would give them hope and restore their confidence in their government. Injunctive relief would also provide redress for Youth Plaintiffs psychological injuries because they would then know

 ¹⁴³ Expert Report of Lise Van Susteren, *Juliana v. United States*, No. 6:15-cv-01517-TC, 2-3 (D. Or. June 8, 2016).
 ¹⁴⁴ *Id.* at 8.

¹⁴⁵ *Id.* at 8 (citing Glenn Albrecht, 'Solastalgia': A New Concept in Health and Identity, 3 PAN: Philosophy Activism Nature 41).

that their government was taking meaningful action to respond to the dangers posed by the climate crisis.

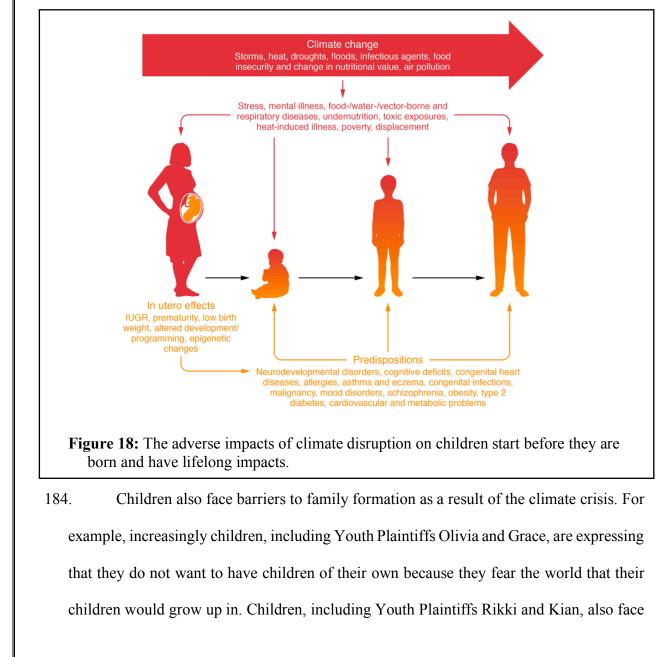
181. The physiological features of children make them disproportionately vulnerable to the impacts of the climate crisis and air pollution. Perhaps most important, their organs, such as lungs and brain, are still developing, which makes youth more vulnerable to environmental stresses, pollution, and injuries. Children breathe in more air per unit time than adults and consume more food and water proportional to their body weight, making them more susceptible to polluted or contaminated air, water, or food.¹⁴⁶ The behavior of children, which includes spending more time recreating outside and having a harder time self-regulating, also makes them more vulnerable to excess heat, poor air quality, and other climate impacts. Childhood exposure to climate disruptions and air pollution can result in impaired physical and cognitive development with life-long consequences.

182. Children are particularly vulnerable to climate change-related diseases. The vast majority (approximately 88%) of current sufferers of diseases due to climate disruption are children.¹⁴⁷ Allergies are highly prevalent among children and climate disruption exacerbates allergy symptoms, including asthma. An increase in these symptoms can affect children's physical and psychological health by interfering with sleep, play, school attendance, and performance. Certain categories of children are especially vulnerable to climate change impacts and air pollution, for example, children that have pre-existing medical conditions, such as Youth Plaintiffs Jeffrey and Nate, as well as children that are economically disadvantaged or from minority populations, including indigenous peoples.

¹⁴⁶ Wildfire Smoke A Guide for Public Health Officials, supra note 140.

¹⁴⁷ World Health Organization (WHO), *Quantitative Risk Assessment of the Effects of Climate Change on Selected Causes of Death*, 2030s and 2050s, 48 (Simon Hales, et al., eds., 2014).

183. The adverse impacts of the climate crisis and air pollution on the physical and mental health of children can result in life-long challenges and consequences (see Figure 18).¹⁴⁸ The climate crisis is limiting children's potential for development and inhibiting their opportunity to engage in Montana's most important institutions and heritage.



¹⁴⁸ Susan E. Pacheco, *Catastrophic effects of climate change on children's health start before birth*, The Journal of Clinical Investigation (Jan. 13, 2020), https://www.jci.org/articles/view/135005.

economic deprivations, including barriers to keeping family wealth and property intact and decreased future economic opportunities. Other children are experiencing forced relocation and the loss of ties to the land, including Youth Plaintiffs Eva, Lander, and Badge. All of these impacts disproportionately impact children, are the consequence of matters beyond their control that they are not responsible for causing, and will impose a lifetime of hardships.

DEFENDANTS' LONGSTANDING KNOWLEDGE OF THE DANGERS OF AIR POLLUTION AND CLIMATE DISRUPTION AND **AUTHORITY TO REDUCE GHG EMISSIONS**

185. Montana has known of, but refused to act on, the dangerous impacts of air pollution and climate disruption for over 50 years. In 1968, the Montana Department of Health held the conference "A Montana Strategy for a Livable Environment" at the Montana House of Representatives, during which state representatives and agencies, professors, and scientists explicitly warned of the impacts of air pollution and GHG emissions into the atmosphere.¹⁴⁹ The findings expressed at the conference were to serve as a guide to state agencies.

186. The state conference proceedings produced a report on its findings, which found

that----

[d]ue to excessive combustion not being counterbalanced by vegetational carbon fixation, it is estimated that by the year 2,000 our atmosphere will contain 50% more CO₂ than at present. The new total seems insignificant. However, the temperature regulating effect of CO₂ is tremendous. Conceivably then, our world will be warmer. This sounds enticing at first glance, but from a biological equilibrium standpoint it could spell disaster. As we realize, the ideal endpoint of complete combustion is CO_2 + water. Thus it is predictable that if CO_2 production increases at present rates, we

²³

¹⁴⁹ Montana Department of Health, A Montana Strategy for a Livable Environment: Conference Proceedings, 1 (Sep. 15, 1969), https://ia800907.us.archive.org/15/items/montanastrategyf1968mont/montanastrategyf1968mont.pdf.

will encounter a WATER problem resulting from enough glacial melting to even inundate some coastal cities-like smoggy Los Angeles.¹⁵⁰ The state report determined that waste is produced faster than can be recycled and that "our atmosphere is a prime receptacle for much of this waste," and found that, although air is "mandatory for the life process," our "air resource is finite." 187. In 1972, the State of Montana held a Constitutional Convention, during which delegates placed significant emphasis on adding a natural resources article to the Constitution that would protect and improve the environment of Montana. In introducing the majority committee report of the Natural Resources Committee of the 1972 Constitutional Convention, Delegate C.B. McNeil stated: [t]he committee recommends the strongest environmental section of any state constitution. It is the only constitutional provision with an affirmative duty to enhance the environment [. . .] It provides that the term environmental life-support system is all encompassing, including but not limited to air, water and land. And whatever interpretation is afforded this phrase by the legislature and the courts, there is no question that it cannot be degraded.¹⁵¹ Likewise, aware of the dangers of air pollution, Delegate Harper testified: I do not believe that we are in a time when business as usual will get the job done. I do not subscribe to the theory that everything is going along just fine and if we do not change any present laws or present attitudes or present actions, that everything is going to turn out all right [...] every intelligent citizen is alarmed, and duly alarmed, at what is happening to the environmental life system in this world today.¹⁵² 188. As evidenced by its transcripts, it was the intention of the Constitutional Convention to adopt the strongest constitutional environmental provisions because the delegates were concerned of the irreparable harm of continued pollution and degradation

¹⁵¹ Montana Constitutional Convention 1971-1972 Verbatim Transcript Vol. IV, supra note 1 at 1200.

¹⁵² Montana Constitutional Convention 1971-1972 Verbatim Transcript Vol. V, at 1217 (Mar. 1, 1972), https://courts.mt.gov/portals/189/library/mt cons convention/vol5.pdf.

of the Montana environment, including the atmosphere, waters, and lands.¹⁵³ Delegate Burkhardt noted, "[n]othing is as important that we will do here as guarantee the future of our citizens, and those who come from all over this country and the world, to enjoy the sense of cleanliness and the health of our environment in Montana."¹⁵⁴

189. The 1972 Constitutional Convention also made clear that the delegates were concerned about protecting Montana's natural environment for their children and future generations. For example, Delegate Champoux stated, "I love Montana; this is why I'm here. And I hope it remains the way it is today, because I want it to be like this for my children."¹⁵⁵ Delegate Bugbee added, "[a]nd I'd just like each of you to question yourselves about your own children, your own grandchildren, and your own great-grandchildren, and I submit to you that we are using something right now that belongs to them. We're using their land, and we're using their air, and we're using their water; and we have no right to do this. We have no right to take it from them "¹⁵⁶

In 1989, Montana Senator Max Baucus¹⁵⁷ testified before the federal Senate on the 190. perils of "global climate change."¹⁵⁸ Referring to the available climate science, he warned that "we can probably not afford to wait until all of the uncertainties have been resolved before we do act. Time will not make the problem go away."¹⁵⁹ Senator Baucus urged that prudent steps be taken to address climate change, and criticized the federal government's failure to act on climate, as well as for altering James Hansen's congressional testimony

20

22

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

¹⁵⁵ Montana Constitutional Convention 1971-1972 Verbatim Transcript Vol. V, supra note 152 at 1231.

¹⁵⁶ *Id.* at 1231. 23

¹⁵⁹ Id.

¹⁵³ Montana Constitutional Convention 1971-1972 Verbatim Transcript Vol. IV, supra note 1 at 1200. ("I believe the 21 entire delegation will agree that, whichever we adopt, that it is the intention of this Convention to adopt the stronger of the two."). ¹⁵⁴ *Id.* at 1205.

¹⁵⁷ Senator Max Baucus was the Executive Director of Montana's 1972 Constitutional Convention.

¹⁵⁸ 135 Cong. Rec. S. 14458 (1989).

and thereby burying evidence of the grave threat of climate change.¹⁶⁰ Notwithstanding his critique of the federal government's efforts to bury evidence of climate change, Montana is now doing the very same thing via the Climate Change Exception in MEPA, which prohibits the State from considering the impacts of climate change.

- 191. In 2005, then-Governor Brian Schweitzer directed Defendant DEQ to establish a Climate Change Advisory Committee ("CCAC"). The then-DEQ director Richard Opper appointed 18 Montana citizens to the CCAC, which was also supported by scientific experts, technical and policy experts, and DEQ staff.¹⁶¹
- As part of the CCAC initiative, Montana's GHG emissions were inventoried in 2007, at which time inventories were estimated for each year from 2007 to 1990.¹⁶²
 Defendant DEQ published the GHG inventory report in 2007.¹⁶³
- 193. In 2007, the final report of the Governor's Climate Change Advisory Committee was released, which included Montana' GHG emissions inventory and 54 policy recommendations that were designed to reduce Montana's GHG emissions to 1990 levels by 2020.¹⁶⁴
- 194. In 2007, the Montana legislature commissioned the Environmental Quality Council to produce a report on climate change in Montana, which it published in 2008.¹⁶⁵ The report
- 19

¹⁶⁰ Id.

20

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

¹⁶¹ Montana Climate Change Action Plan: Final Report of the Governor's Climate Change Advisory Committee, supra

²¹

note 28 at EX-1. ¹⁶² Id. ¹⁶³ See generally Alison Bailie, et al., Montana Greenhouse Gas Inventory and Reference Case Projections 1990-

 ^{2020,} Center for Climate Strategies (CCS) (Sep. 2007), https://deq.mt.gov/Portals/112/Energy/ClimateChange/Documents/GreenhouseGasInventory.pdf.
 ¹⁶⁴ Montana Climate Change Action Plan: Final Report of the Governor's Climate Change Advisory Committee, supra

Montana Climate Change Action Plan: Final Report of the Governor's Climate Change Advisory Committee, supra note 28 at EX-1.
 Neuropeanetic An Anglasia of Climate Change Balian January A Banart to the Cist Legislature.

¹⁶⁵ Sonja Nowakowski, An Analysis of Climate Change Policy Issues in Montana: A Report to the 61st Legislature,
EnvironmentalQualityCouncil(EQC)(2008),https://leg.mt.gov/content/Publications/Environmental/2008climatechange.pdf.

suggests the early adoption of cost-effective measures to reduce Montana's greenhouse gas emissions.¹⁶⁶ These included, but are not limited to, laws to increase building energy efficiency standards, programs to incentivize weatherization and energy efficiency for low-income Montanans, and laws to promote Montana's local economy.¹⁶⁷

- 195. These reports make clear that Defendants have been aware of Montana's contributions to anthropogenic climate change for decades and of readily available options to reduce the State's reliance on fossil fuels and GHG emissions.
- 196. Despite knowledge of the dangers posed by fossil fuels and climate disruption and the readily available policies to reduce the State's reliance on fossil fuels, in 2011, Montana's State Energy Policy was amended to explicitly promote fossil fuels as an energy source for Montana.
- 197. Testimony by Senator Ron Erickson regarding the State Energy Policy reveals that the dangers of climate change were specifically raised as reasons for *not* to amending the State Energy Policy to call for the explicit promotion of fossil fuels. Senator Erickson stated before the full Senate that the bill ignored the fact that global climate change is occurring and that "[Montana] ought to be a part of the solution as this nation moves ahead."¹⁶⁸ Notwithstanding concerns raised about climate change, and the available of reliable and cheap sources of renewable energy, the State Energy Policy was amended in 2011 to explicitly promote fossil fuels as an energy source for Montana.
- 22

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

¹⁶⁶ *Id*. at 1. ¹⁶⁷ *Id*.

²³

 ¹⁶⁸ Senate Floor Session: Hearing on SB 305 Revise Energy Policy, 62nd Cong. 492, 13:10:12 – 13:11:03 (Feb. 22, 2011), http://sg001-harmony.sliq.net/00309/Harmony/en/PowerBrowser/PowerBrowserV2/20170221/-1/21606?agendaId=98099.

198. Conversely, numerous efforts to pass climate change related legislation in Montana have failed, with the legislation never making it out of committee.¹⁶⁹

199. State government officials continue to be aware of the perils of runaway climate change. Governor Bullock recently issued an executive order creating a Montana Climate Solutions Council ("Council") to prepare the state for the impacts of climate change.¹⁷⁰ According to the executive order, "[c]limate change poses a serious threat to Montana's natural resources, public health, communities, and economy." However, the executive order neither directs any state agencies to actually reduce GHG emissions, nor does it direct the Council to tailor its plan to the best available climate science. Moreover, the executive order explicitly states that the Council should consider ways to safeguard existing energy assets (which are primarily fossil fuel based). There is no indication that the executive order will actually lead to any reduction in Montana's GHG emissions, which is further supported by the fact that the Council should cease to exist by August 1, 2020.

200. On February 11, 2020, the Council released the *Montana Climate Solutions Plan: Preliminary Recommendation and Key Questions*, which once again simply includes a series of "recommendations" to address climate change adaptation and reducing GHG emissions.¹⁷¹ Even assuming *arguendo* all the "recommendations" were fully implemented, which the Governor's Executive Order does not require, the preliminary plan fails to delineate how much Montana's GHG emissions would be reduced, let alone demonstrate that it would bring the State Energy Policy into constitutional compliance.

 ¹⁶⁹ See, e.g., H.J. 60, 60th Leg. Sess. (Mont. 2007); H.J. 10, 60th Leg. Sess. (Mont. 2007); S.J. 20, 60th Leg. Sess. (Mont. 2007); H.B. 753, 60th Leg. Sess. (Mont. 2007); S.J. 17, 64th Leg. Sess. (Mont. 2015); S.B. 177, 64th Leg. Sess. (Mont. 2015); H.B. 504, 65th Leg. Sess. (Mont. 2017); H.B. 215, 65th Leg. Sess. (Mont. 2017), S.B. 190, 66th Leg. (Mont. 2019); S.B. 189, 66th Leg. Sess. (Mont. 2019); H.B. 193, 65th Leg. Sess. (Mont. 2019).
 ¹⁷⁰ Phil Drake, *supra* note 141.

¹⁷¹ See supra note 161, regarding a similar 2005 process by Governor Schweitzer.

THE SCIENCE DICTATES WHAT IS NEEDED TO PROTECT YOUTH PLAINTIFFS

201. The best available science today prescribes that global atmospheric CO₂ concentrations must be restored to no more than 350 ppm by 2100 (with further reductions thereafter) in order to stabilize Earth's energy balance and restore the climate system on which human life depends. A global emission reduction and sequestration pathway back to 350 ppm by 2100 would stabilize long-term global heating at no more than 1° C above pre-industrial temperatures, with a short-term peak of approximately 1.3° C as a global average. Each government has an obligation to contribute to the requisite CO₂ emission reductions and CO₂ sequestration.

202. More than 45 eminent scientists from over 40 different institutions have published in peer-reviewed journals finding that the maximum level of atmospheric CO_2 consistent with protecting humanity and other species is 350 ppm and no one, including the Intergovernmental Panel on Climate Change ("IPCC"), has published any scientific evidence to counter that 350 ppm is the maximum safe concentration of CO_2 .¹⁷²

203. Two steps are required to reduce the atmospheric CO₂ concentration to 350 ppm by 2100: (1) reducing CO₂ emissions; and (2) sequestering excess CO₂ already in the atmosphere. There are various pathways to reduce the atmospheric CO₂ concentration to 350 ppm by 2100. For example, if CO₂ emissions were reduced globally, on average, by

¹⁷² James Hansen et al., *Target Atmospheric CO₂: Where Should Humanity Aim?*, 2 The Open Atmospheric Science Journal 217 (2008); James Hansen et al., *Assessing "Dangerous Climate Change": Required Reduction of Carbon Emissions to Protect Young People, Future Generations and Nature*, 8 PloS one e81648 (2013); James Hansen et al., *Ice Melt, Sea Level Rise and Superstorms; Evidence From Paleoclimate Data, Climate Modeling, and Modern*

Observations That 2°C Global Warming Could Be Dangerous, 16 Atmospheric Chemistry 3761 (2016); James Hansen et al., Young People's Burden: Requirement of Negative CO₂ Emissions, 8 Earth Syst. Dynam. 577 (2017); J.E.N.

Veron. et al., *The Coral Reef Crisis: The Critical Importance of <350 ppm CO*₂, 58 Marine Pollution Bulletin 1428 (2009); K. Frieler, et al., *Limiting global warming to 2 °C is unlikely to save most coral reefs*, 3 Nature Climate Change 165 (2013).

10.9% per year, beginning in 2020, 100 gigatons (equivalent to 100 billion metric tons) of CO₂ would need to be sequestered globally by 2100 through improved land management practices and protection of forests and soils. Alternatively, if CO₂ emission reductions of 6% per year began in 2021, 153 gigatons of CO₂ would need to be sequestered globally by 2100 through improved land management practices and protection of forests and soils to reach 350 ppm by 2100.

204. Importantly, for every additional year of delay, it becomes that much more difficult to reach 350 ppm by 2100. Research indicates 153 gigatons of CO_2 is approaching the upper limit of natural carbon sequestration potential globally, meaning if global emissions peak *after* 2021, achieving 350 ppm by 2100 will almost certainly require extremely expensive technological methods of carbon sequestration. At some point in time, governments' ability to return to safe CO_2 concentrations will become physically impossible for hundreds of years to come.

205. These emission reduction pathways reflect the global average emission reductions required to remedy the current climate emergency and stabilize the climate system. While Montana cannot on its own achieve the GHG emission reduction and sequestration measures needed to restore the entirety of Earth's energy imbalance and stop dangerous climate disruption entirely, there are multiple feasible pathways to reduce Montana's emissions in line with what is required to protect Youth Plaintiffs' constitutional rights. If Montana acts to reduce emissions and enhance natural sequestration, it will at minimum reduce the risks of harm to these children by slowing the ongoing heating. Action to reduce emissions today also keeps the achievement of long-term safety a realistic possibility. Regardless of the pathway Defendants choose to reduce emissions, emission reductions

should be consistent with the global average emission reductions required to return the global atmospheric CO_2 concentration to 350 ppm by the end of the century.

- 206. Critically, non-fossil fuel-based energy systems across all sectors, including electricity generation and transportation systems, are currently economically feasible and technologically available to employ in Montana.¹⁷³
- 207. Experts have already concluded the feasibility of, and prepared a roadmap for, the transition of Montana's all-purpose energy systems (for electricity, transportation, heating/cooling, and industry) to a 100% renewable portfolio by 2050, which, in addition to direct climate benefits, will create jobs, reduce air pollution, and save lives and costs associated with air pollution.
- 208. Opportunities to sequester carbon through improved land use practices are technically and economically feasible. For example, improved forestry and agricultural practices, such as improved stand management, avoiding tillage with no-till technology, adding winter cover crops to avoid bare soil, diversifying crop rotation, growing perennial grasses or trees on degraded soils, and increasing plant productivity on pastures and rangeland, can provide a net drawdown of atmospheric CO₂, helping to return to safe levels of atmospheric CO₂ or preventing the additional accumulation of dangerous CO₂.
- 209. Any reduction in GHG emissions that results from a declaration that Montana's fossil fuel-based energy system is unconstitutional and an order directing Defendants to bring the energy system into constitutional compliance would help redress Youth

¹⁷³ See, e.g., Clean Energy Transition Institute, Meeting the Challenge of Our Time: Pathways to a Clean Energy Future for the Northwest: An Economy-Wide Deep Decarbonization Pathways Study (2019); Evolved Energy Research, Northwest Deep Decarbonization Study (2019); Mark Z. Jacobson, et al., 100% Clean and Renewable Wind, Water, and Sunlight (WWS) All-Sector Energy Roadmaps for the 50 United States, 8 Energy & Environmental Science 2093, 2111 (2015).

Plaintiffs' injuries because the amount of additional GHG emissions emitted into the climate system in the near-term will dictate the severity of the heating, the severity of Youth Plaintiffs injuries, and whether Youth Plaintiffs and future generations can survive. The theory of "perfect substitution" or "leakage" under which it is assumed that limiting production of fossil fuels in one place will never limit consumption or affect emissions because another source somewhere else will always step in to substitute for the missing production, has been shown to be false and contrary to basic supply and demand economic principles.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

210. Protecting Youth Plaintiffs' constitutional rights and Montana's environment and natural resources from the climate crisis would save billions of dollars in costs to be borne by Montanans both now and in the future. The costs of climate change mitigation are far smaller than the costs of the damage that climate change could inflict. Renewable energy systems are readily available and feasible to employ in Montana and are already costcompetitive with all fossil fuel energy sources and significantly cheaper than coal. As renewable energy technologies continue to improve and the efficiency increases, renewable energy sources will be significantly cheaper than fossil fuel energy sources in the coming years. If fossil fuel externalities (i.e., the costs of their pollution that are borne by the public) are included in the cost of electricity from coal and gas, the cost of renewable energy is orders of magnitude cheaper.

CLAIMS

COUNT I—RIGHT TO CLEAN AND HEALTHFUL ENVIRONMENT, INCLUDING THE RIGHT TO A STABLE CLIMATE SYSTEM (Mont. Const. Art. II, § 3, § 15, § 17, Art. IX, § 1)

211. Youth Plaintiffs hereby reallege all paragraphs above as if set forth fully herein.

1	212. The Montana Constitution provides that, "All persons are born free and have certain
2	inalienable rights. They include the right to a clean and healthful environment" Mont.
3	Const. Art. II, § 3. Moreover, "In enjoying these rights, all persons recognize corresponding
4	responsibilities." Id. Consistent with the provision of these rights and responsibilities the
5	Montana Constitution further provides that, "The state and each person shall maintain and
6	improve a clean and healthful environment in Montana for present and future generations."
7	Mont. Const. Art. IX, § 1. As cogently articulated by the Montana Supreme Court:
8	We conclude, based on the eloquent record of the Montana Constitutional Convention that to give effect to the rights guaranteed by Article II, Section
9	3 and Article IX, Section 1 of the Montana Constitution they must be read together and consideration given to all of the provisions of Article IX,
10	Section 1 as well as the preamble to the Montana Constitution. In doing so, we conclude that the delegates' intention was to provide language and
11	protections which are both anticipatory and preventative. The delegates did not intend to merely prohibit that degree of environmental degradation
12	which can be conclusively linked to ill health or physical endangerment. Our constitution does not require that dead fish float on the surface of our
13	state's rivers and streams before its farsighted environmental protections can be invoked.
14	Montana Envtl. Info. Ctr. v. Dep't of Envtl. Quality, 1999 MT 248, ¶ 77, 296 Mont. 207,
15	230, 988 P.2d 1236, 1249.
16	213. Moreover, eliminating any doubt that these farsighted anticipatory and preventative
17	provisions can be invoked by the Youth Plaintiffs, the Montana Constitution further
18	provides that, "The rights of persons under 18 years of age shall include, but not be limited
19	to, all the fundamental rights of this Article unless specifically precluded by laws which
20	enhance the protection of such persons." Mont. Const. Art. II, § 15.
21	214. At its most fundamental level, a clean and healthful environment includes and
22	requires a stable climate system capable of sustaining human life and liberties. The "quality
23	of life, equality of opportunity and the blessings of liberty for this and future generations,"

which the Montana Constitution enshrines all, depend upon a stable climate system. Without a stable climate system there is no clean and healthful environment—and Montana as we know it would cease to exist.

215. Montana's clean and healthful environment provides an essential life support system and is necessary in order for Youth Plaintiffs to be able to enjoy their lives and liberties. A clean and healthful environment is one that is free from dangerous levels of anthropogenic CO₂ and other GHG emissions. Montana's constitutional right to a clean and healthful environment prohibits environmental degradation that causes ill health or physical endangerment and unreasonable depletion or degradation of the state's natural resources.

216. Defendants, by and through their implementation of the State Energy Policy, Mont. Code Ann. § 90-4-1001(c)-(g), including the aggregate acts of Defendants that affirmatively authorize fossil fuel production, consumption, and combustion resulting in dangerous levels of GHGs described herein, and MEPA's Climate Change Exception, are unconstitutionally depleting and degrading Montana's environment and natural resources and causing and contributing to the dangerous destabilization of the climate system, thereby depriving the Youth Plaintiffs of their constitutionally guaranteed rights under the Montana Constitution Article II, Sections 3, 15, 17, and Article IX, Section 1.

217. Regarding the Youth Plaintiffs' right to a clean and healthful environment, the Montana Supreme Court has further instructed that "as to any statute or rule which implicates that right must be strictly scrutinized and can only survive scrutiny if the State establishes a compelling state interest and that its action is closely tailored to effectuate that interest and is the least onerous path that can be taken to achieve the State's objective."

Montana Envtl. Info. Ctr. v. Dep't of Envtl. Quality, 1999 MT 248, \P 63. There is no interest, compelling or otherwise, that justifies Defendants' deprivation of Youth Plaintiffs' fundamental right to a clean and healthful environment "for present and future generations," including a stable climate system. Nor is Defendants' conduct narrowly tailored to effectuate any such interest.

218. Youth Plaintiffs have no adequate and speedy remedy to obtain full legal redress other than to seek declaratory and injunctive relief in this Court. Youth Plaintiffs lack non-equitable remedies to restrain Defendants from acting in a manner that violates Youth Plaintiffs' constitutional rights under Article II, Sections 3, 15, and 17, and Article IX, Section 1, of the Montana Constitution.

COUNT II—RIGHT TO SEEK SAFETY, HEALTH, AND HAPPINESS (Mont. Const. Art. II, § 3, § 15, § 17, Art. IX, § 1)

219. Youth Plaintiffs hereby reallege all paragraphs above as if set forth fully herein.

220. Article II, Section 3 of the Montana Constitution guarantees the rights to seek safety, health, and happiness in all lawful ways to all persons. Article II, Section 17 provides, "No person shall be deprived of life, liberty, or property without due process of law." Article II, Section 15 specifically extends these rights to persons under 18 years of age.

221. Despite Defendants' longstanding knowledge of the dangers of fossil fuels and GHG emissions, Defendants continue to perpetuate a State Energy Policy, Mont. Code Ann. § 90-4-1001(c)-(g), and implement actions thereunder, that unconstitutionally interfere with Youth Plaintiffs safety, health, and happiness. Furthermore, under the Climate Change Exception to MEPA, Mont. Code Ann. § 75-1-201(2)(a), Defendants have

failed to disclose the climate impacts of their state-sponsored projects and state actions including climate impacts to children's safety, health, and happiness.

222. Defendants' conduct dangerously deprives the Youth Plaintiffs of their rights under Article II, Section 3 to seek safety, health, and happiness because it exposes these vulnerable children to physical injury and disease; serious psychological, social, and spiritual harm and trauma; interferes with their capacity for growth and development; and threatens their personal security and family life, all in violation of Youth Plaintiffs rights under Article II, Section 17.

223. Pursuant to and in furtherance of Defendants' State Energy Policy, Defendants have acted, and continue to act, affirmatively to place Youth Plaintiffs in a position of foreseeable danger, with deliberate indifference to their safety, health, and happiness.

224. Defendants' continue to place Youth Plaintiffs in a position of danger, violating their rights to seek safety, health, and happiness, by failing to implement readily available laws, policies, plans, and laws for climate stabilization, or any other comprehensive remedial measures that would protect Youth Plaintiffs' safety, health, and happiness. Although Defendants have longstanding, actual knowledge of the substantial risk of harm to Youth Plaintiffs, Defendants have not taken necessary or feasible steps to address, ameliorate, and/or reduce the risk of such harm.

225. There is no interest, compelling or otherwise, that justifies Defendants' deprivation of Youth Plaintiffs' fundamental rights to due process and to seek safety, health, and happiness in all lawful ways. Nor is Defendants' conduct narrowly tailored to effectuate any such interest.

226. Youth Plaintiffs have no adequate speedy remedy to obtain full legal redress other than to seek declaratory and injunctive relief in this Court. Youth Plaintiffs lack non-equitable remedies to restrain Defendants from acting in a manner that violates Youth Plaintiffs' constitutional rights under Article II, Sections 3, 15, and 17, and Article IX, Section 1 of the Montana Constitution.

COUNT III—INDIVIDUAL DIGNITY AND EQUAL PROTECTION (Mont. Const. Art. II, § 4, § 15)

227. Youth Plaintiffs hereby reallege all paragraphs above as if set forth fully herein.

228. The dignity clause of Article II, Section 4 commands that, "The dignity of the

human being is inviolable. No person shall be denied the equal protection of the laws." As

the Montana Supreme Court has instructed:

Article II, Section 15 provides: 'Rights of persons not adults. The rights of persons under 18 years of age shall include, but not be limited to, all the fundamental rights of this Article unless specifically precluded by laws which enhance the protections of such persons.' This section must be read in conjunction with the guarantee of equal protection found in Article II, Section 4. The report of the Bill of Rights Committee of the Constitutional Convention indicates that one of the primary purposes of Article II, Section 15 was to remedy the fact that minors had not been accorded full recognition under the equal protection clause of the United States Constitution.

Matter of S.L.M., 287 Mont. 23, 951 P.2d 1365 (1997) (*citing* Montana Constitutional Convention, Vol. II at 635–36).

229. The State Energy Policy, Mont. Code Ann. § 90-4-1001(c)-(g), the MEPA Climate Change Exception, and aggregate acts taken by Defendants described herein, have violated and continue to violate the fundamental rights of Youth Plaintiffs to individual dignity under Article II, Section 4 of the Montana Constitution. Defendants' conduct deprives Youth Plaintiffs of "the moral right and moral responsibility to confront the most fundamental questions about the meaning and value of their own lives and the intrinsic value of life in general, answering to their own consciences and convictions," which the Montana Supreme Court has described as the hallmark of individual dignity. *Armstrong v. State*, 1999 MT 261 ¶ 72, 296 Mont. 361, 989 P.2d 364 (1999).

230. The Defendants have demeaned the "worth and [] basic humanity" of Youth Plaintiffs by infringing on their ability to freely and meaningfully practice their cultural and spiritual beliefs.

231. Children and youth hold the same constitutional rights as adults yet their political powerlessness, unique physiological characteristics and vulnerabilities, and lack of autonomy and dependency on caregivers render children and youth more vulnerable to rights violations. Children and youth are at a critical development stage in life, as their capacities evolve and their physiological and psychological maturity develops more rapidly than at any other time in life.

232. These immutable characteristics of children and youth place Youth Plaintiffs in a separate suspect, or quasi-suspect, class in need of extraordinary protection pursuant to the principles of equal protection.

- 233. Children and youth, as a suspect class, historically are saddled with such disabilities, subjected to purposeful unequal treatment, and relegated to such position of political powerlessness as to command extraordinary protection from majoritarian political process.
- 234. For purposes of the present action, Youth Plaintiffs should be treated as a protected class. Youth Plaintiffs will continue to disproportionately experience the catastrophic impacts of a destabilized climate. Adults will not experience the harms to the extent experienced by Youth Plaintiffs because youth are disproportionately vulnerable to the

irreversible impacts of the climate crisis and the worst impacts of climate disruption caused by Defendants' aggregate acts today will occur in the future. Youth Plaintiffs are the living generation that will be most affected by the actions of Defendants.

235. Defendants' State Energy Policy also discriminates against Youth Plaintiffs' in the exercise of their fundamental and inalienable constitutional rights to a clean and healthful environment; safety, health, and happiness; individual dignity; and Public Trust Resources. Defendants' continue to materially cause and contribute to irreversible climate damage, infringing on Youth Plaintiffs fundamental rights and abridging central precepts of equality. As a result, the harm caused by Defendants has denied Youth Plaintiffs the same protection of fundamental rights afforded to prior and present generations of adult citizens. The imposition of this disability serves only to disadvantage and subordinate Youth Plaintiffs as members of the class of youth and children.

236. Defendants' aggregate acts in perpetuation of the State Energy Policy and the Climate Change Exception to MEPA reflect a short-term policy to favor the present generation's interests to the long-term detriment to Youth Plaintiffs. Montana's tri-partite constitutional democratic system of government is designed to check such a dysfunctional majoritarian outcome and to protect those that are in the minority or are politically powerless, such as the Youth Plaintiffs who cannot vote, from the tyranny of the majority. Here, this check is especially appropriate because irreparable harm is imminent if Defendants are not restrained, and Youth Plaintiffs will no longer be able to secure equal protection of the laws.

237. Defendants' State Energy Policy and the Climate Change Exception to MEPA discriminate against Youth Plaintiffs as members of the protected class of children *and*

with respect to Youth Plaintiffs' fundamental rights, and are not narrowly tailored to serve a compelling state interest. Similarly, Defendants cannot satisfy intermediate scrutiny or rational basis review.

238. As a result of Defendants' unlawful State Energy Policy and the Climate Change Exception to MEPA, Youth Plaintiffs seek declaratory and injunctive relief in this Court. Youth Plaintiffs suffer and will continue to suffer injury due to Defendants' implementation and enforcement of the State Energy Policy, and until Defendants are restrained.

COUNT IV—PROTECTION OF MONTANA'S CLEAN AND HEALTHFUL ENVIRONMENT AND PUBLIC TRUST RESOURCES FOR PRESENT AND FUTURE GENERATIONS (Mont. Const. Art. IX, § 1, § 3)

- 239. Youth Plaintiffs hereby re-allege and incorporate by reference each of the allegations set forth above.
- 240. The rights of the public and future generations as beneficiaries under the Public Trust Doctrine are an attribute of sovereignty that predate Montana's Constitution, they are secured by the Constitution, and they cannot be abrogated. *Montana Coalition for Stream Access v. Curran*, 210 Mont. 38, 682 P.2d 163 (1984); *Montana Coalition for Stream Access v. Hildreth*, 211 Mont. 29, 684 P. 2d 1088 (1984).

241. Under Article IX, Section 1(1), "The state and each person shall maintain and improve a clean and healthful environment in Montana for present and future generations." Likewise reflecting public trust principles, the Preamble to Montana's Constitution states that the Constitution was ordained and established for "this and future generations."

242. Article IX, Section 1(3) mandates that, "The legislature shall provide adequate remedies for the protection of the environmental life support system from degradation and

1	provide adequate remedies to prevent unreasonable depletion and degradation of natural
2	resources." At the 1972 Montana Constitutional Convention, Delegate C.B. McNeil
3	emphasized that:
4	Subsection 3 mandates the Legislature to provide adequate remedies to
5	protect the environmental life-support system from degradation. The committee intentionally avoided definitions, to preclude being restrictive.
6 7	And the term 'environmental life-support system' is all-encompassing, <i>including but not limited to air, water and land; and whatever interpretation is afforded this phrase by the Legislature and courts, there is no question that it cannot be degraded.</i> ¹⁷⁴
1	inui il cumol de degraded.
8	243. Under Article IX, section 3(3), " <i>All</i> surface, underground, flood, and <i>atmospheric</i>
9	waters within the boundaries of the state are the property of the state for the use of its
10	people and are subject to appropriation for beneficial uses as provided by law" (emphasis
11	added). The Montana Supreme Court has recognized this provision as an underpinning of
12	the Public Trust Doctrine for water rights, including atmospheric waters, under the
13	Montana Constitution. Galt v. Montana, 225 Mont. 142, 731 P.2d 912, 914-15 (1987); see
14	also, Montana Trout Unlimited v. Beaverhead Water Co., 2011 MT 151, ¶¶ 29, 30, 361
15	Mont. 77, 255 P.3d 179.
16	244. The nature of the environmental rights and responsibilities provided for by Articles
17	II and IX cannot be interpreted separately and are applied in tandem. ¹⁷⁵ Thus, state action
18	that implicates either will be strictly scrutinized. ¹⁷⁶ Moreover, Articles II and IX, taken
19	together with Montana's common law, provide a compelling basis for the Courts'
20	recognition of the Public Trust Doctrine over the atmosphere in Montana.
21	
22	¹⁷⁴ Larry M. Elison & Fritz Snyder, The Montana State Constitution: A Reference Guide 168

⁽Greenwood Press 2001) (emphasis added); see also Montana Constitutional Convention Proceedings

vol. 4, 1201 (Mont. Legis. & Legis. Council 1972), http://courts.mt.govlibrary/montanalaws. mcpx.

¹⁷⁵ Montana Envtl. Info. Ctr. v. Dep't of Envtl. Quality, 1999 MT 248, ¶77, 296 Mont. 207, 230, 988 P.2d 1236, 1249. ¹⁷⁶ *Id*.

245. Montana's Public Trust Resources also include those other essential natural resources that are of vital public concern to the citizens of Montana, including the atmosphere (air), fish and wildlife, wetlands, public lands, submerged lands, and the banks of waters to the high water mark. Public Trust rights, secured by the Public Trust Doctrine, include the rights of present and future generations to access, use, and enjoy these essential resources that are protected by Montana's Public Trust Doctrine. The public's interest in using and accessing such vital natural resources includes the rights of navigation, fishing, hunting, commerce, and recreational uses. The atmosphere is indistinguishably interrelated with water and there is always water in the atmosphere. Harm to the atmosphere negatively affects waters, fish and wildlife, wetlands, and public lands.

246. The Public Trust Doctrine requires all sovereign governments, including Defendants as trustees, to maintain control, protect, preserve, and prevent substantial impairment to and waste of Public Trust Resources for the benefit of all Montanans, including Youth Plaintiffs and future generations of Montanans. Defendants, as trustees, also have an obligation to refrain from acting in a manner that abdicates control of Public Trust Resources.

247. Defendants, as trustees, have a duty to administer and manage Public Trust Resources with loyalty to and in the interest of trust beneficiaries—all present and future generations of Montanans, including Youth Plaintiffs. As trustees, Defendants have a duty of impartiality prohibiting them from favoring one class or generation of beneficiaries over another in the management of Public Trust Resources. Present and future generations are equally protected classes of beneficiaries under Montana's Constitution. Defendants have

a duty of care to exercise appropriate skill, prudence, and caution in managing Public Trust Resources.

248. By and through Defendants' State Energy Policy, Mont. Code Ann. § 90-4-1001(c)-(g), and the Climate Change Exception to MEPA, as evidenced by and implemented through Defendants' affirmative aggregate and systemic actions, Defendants have unconstitutionally caused, and continue to cause, the substantial impairment to, and waste of, Public Trust Resources, including the atmosphere, waters of Montana, fish and wildlife, and other Public Trust Resources. The dangerous levels of greenhouse gas emissions that Defendants have authorized to be emitted into the atmosphere have a scientifically demonstrable effect on the Youth Plaintiffs' ability to use, access, enjoy and navigate the state's waters and other Public Trust Resources.

249. By and through Defendants' State Energy Policy, Mont. Code Ann. § 90-4-1001(c)-(g), and the Climate Change Exception to MEPA, as evidenced by their affirmative aggregate and systemic actions, Defendants have abdicated control over and alienated substantial portions and capacities of Public Trust Resources in favor of the short-term interests of private parties, authorizing those private parties to treat our atmosphere as a dump for their carbon emissions and profit off of developing Montana's fossil fuel resources to the detriment of Youth Plaintiffs and future generations of Montanans. Such policies, practices, and customs prejudice the Public Trust rights and interests of Youth Plaintiffs and future generations of beneficiaries in violation of Defendants' duties of loyalty, impartiality, and prudence.

23

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

250.

By and through Defendants' State Energy Policy, Mont. Code Ann. § 90-4-1001(c)(g), and the Climate Change Exception to MEPA, as evidenced by their affirmative

aggregate and systemic actions. Defendants have breached their affirmative duty to protect and improve a clean and healthful environment in Montana—which includes the protection and improvement of the atmosphere (air) and all essential natural Public Trust Resources for present and future generations under Article IX, Section 1(1) of the Montana Constitution.

251. As a result of Defendants' unlawful State Energy Policy, Youth Plaintiffs seek declaratory and injunctive relief in this Court. Youth Plaintiffs suffer and will continue to suffer injury due to Defendants' implementation and enforcement of the State Energy Policy and the Climate Change Exception to MEPA until Defendants are restrained.

PRAYER FOR RELIEF

WHEREFORE, Youth Plaintiffs respectfully requests that this Court grant the following relief:

1. Adjudge and declare that the State Energy Policy, Mont. Code Ann. § 90-4-1001(c)-(g), the aggregate affirmative acts, policies, and conditions taken thereunder, and the Climate Change Exception to MEPA, Mont. Code Ann. § 75-1-201(2)(a), are in violation of the following Articles of the Montana Constitution: Article II, Section 3; Article II, Section 4; Article II, Section 17; Article IX, Section 1; Article IX, Section 3; and the Public Trust Doctrine;

2. Adjudge and declare that the State Energy Policy, Mont. Code Ann. § 90-4-1001(c)-(g), is facially unconstitutional;

3. Adjudge and declare that the Climate Change Exception to MEPA, Mont. Code Ann. § 75-1-201(2)(a), is facially unconstitutional;

4. Adjudge and declare that Youth Plaintiffs' fundamental constitutional right to a clean and healthful environment includes a stable climate system that sustains human lives and liberties and that said right is being violated;

If awarded declaratory relief, Youth Plaintiffs respectfully request the Court fashion an equitable remedy that it deems just and proper, including granting the following equitable relief:

- Permanently enjoin Defendants, their agents, employees and all persons acting in concert with them, from subjecting Youth Plaintiffs to the State's Energy Policy, Mont. Code Ann. § 90-4-1001(c)-(g), the aggregate affirmative acts, policies, and conditions described herein, and the Climate Change Exception to MEPA, Mont. Code Ann. § 75-1-201(2)(a);
- 6. An order requiring Defendants to prepare a complete and accurate accounting of Montana's GHG emissions, including those emissions caused by the consumption of fossil fuels extracted in Montana and consumed out of state, and Montana's embedded emissions;
- 7. An order requiring Defendants to develop a remedial plan or policies to effectuate reductions of GHG emissions in Montana consistent with the best available science and reductions necessary to protect Youth Plaintiffs' constitutional rights from further infringement by Defendants, and to reduce the cumulative risk of harm to those rights; to submit the remedial plan to the Court by a date certain; and to implement the plan;
- 8. An order that, if necessary, a special master or equivalent, with appropriate expertise, be appointed to assist the Court in reviewing the remedial plan for efficacy;
- 9. An order retaining jurisdiction over this action until such time as Defendants have fully complied with the orders of this Court, or there are adequate assurances that Defendants will continue to comply in the future absent continuing jurisdiction;

1	10. An order awarding Youth Plaintiffs their reasonable attorneys' fees and costs; and
2	11. Such further or alternative relief as the Court deems just and equitable.
3	
4	Respectfully submitted this 13th day of March, 2020,
5	
	/s/ Shiloh S. Hernandez
6	Shiloh S. Hernandez Western Environmental Law Center
7	103 Reeder's Alley Helena, MT 59601
8	(406) 204-4861
9	hernandez@westernlaw.org
	<u>/s/ Roger Sullivan</u>
10	Roger Sullivan
11	Dustin Leftridge
11	McGarvey Law 345 1st Avenue East
12	Kalispell, MT 59901
12	(406) 752-5566
13	rsullivan@mcgarveylaw.com
13	dleftridge@mcgarveylaw.com
14	
	Nathan Bellinger (<i>pro hac vice pending</i>)
15	Our Children's Trust
	1216 Lincoln Street
16	Eugene, OR 97401
17	(413) 687-1668
17	nate@ourchildrenstrust.org
18	Attorneys for Youth Plaintiffs
19	
20	
21	
22	
23	