Case No. 18-36082

IN THE UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

KELSEY CASCADIA ROSE JULIANA, et al.,
Plaintiffs-Appellees

v.

UNITED STATES OF AMERICA, et al.,
Defendants-Appellants

On Appeal from the United States District Court for the District of Oregon (No. 6:15-cv-01517-AA)
Hon. Ann Aiken

AMICUS CURIAE BRIEF OF YOUTH EXPERTS IN SUPPORT OF PLAINTIFFS-APPELLEES

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CORPORATE DISCLOSURE STATEMENT

The Youth Experts are all individual persons that are not required to file a Corporate Disclosure Statement.

Date: March 12, 2020

Eric S. Laschever

/s/ Eric S. Laschever
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STATEMENT OF INTEREST

This Amicus Curiae Brief is filed on behalf of seventeen of the expert witnesses (hereafter collectively referred to as the "Youth Experts") who volunteered their time to prepare and submit expert opinions in opposition to Defendants' Motions for Summary Judgment and Judgment on the Pleadings, which motions were largely denied and are the subject of this interlocutory appeal. ER 1-62; E.R. 184-89. These expert opinions go to the salient issues in this case, including the ability of the federal government to redress the youth plaintiffs' injuries.[1] The Youth Experts come from all over the world and include a Nobel laureate economist and scientists, award-winning historians, President Carter's head of the Council on Environmental Quality, renowned physicians in the field of climate change and the top climate scientists in the world. Exhibit A lists the names and affiliations of these Youth Experts.

The Youth Experts have a strong interest in ensuring that appellate courts honor the important role of the district courts in overseeing and determining factual and evidentiary issues and that appellate courts do not disturb this role by substituting their own judgment in evidentiary matters, including expert

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[1] All parties have consented to the filing of this brief. No party or person other than amicus curiae and its counsel has authored this brief or made a monetary contribution towards the preparation or submission of this brief.

evidentiary matters, as the majority did here. *See Edmo v. Corizon*, 949 F.3d 489 (9th. Cir. 2020) (O'Scannlain, Callahan, Bea, Ikuta, R. Nelson, Bade, Bress, Bumatay, and VanDyke, dissenting from denial of rehearing *en banc* where panel decision "substituted the medical conclusions of federal judges for the clinical judgments of prisoners' treating physicians. . . .").

The Youth Experts also have a personal and unique interest in this Court basing its decision on the most accurate and complete understanding of their testimony currently in the record on appeal, rather than the majority's selective and often incorrect reading.

INTRODUCTION

In an exception to the general rule, the district court reluctantly certified this case for interlocutory review. *Juliana v. United States*, No. 6:15-cv01517-AA, 2018 WL 6303774, at *3 (D. Or. Nov. 21, 2018). The majority's misreading and mistreatment of the evidence confirms the general rule's wisdom—that the trial court is best able to act as fact finder, particularly where, as here, the facts matter so much.

The collective opinion of the Youth Experts submitted in connection with the orders that are the subject of this appeal is that the court can provide meaningful relief to redress the Youth Plaintiffs' injuries. Significantly, the Youth Experts also emphasize that such equitable relief must be ordered immediately.

This urgency makes the judicial branch, in contrast to the legislative or executive branches, the necessary institution to initiate the action that will relieve these injuries at this time.

ARGUMENT

After careful review of the Youth Experts' opinions and the bases therefor offered in opposition to defendants' motion for summary judgment, along with substantial other evidence, the district court denied summary judgment. *Juliana v. United States*, 339 F.Supp.3d 1062 (D. Or. Oct. 15, 2018). In so doing, the district court considered the evidence in the light most favorable to the Youth Plaintiffs, the nonmoving parties below, and found genuine issues of material fact as to each element of standing.[2] "[A]t the summary judgment stage the judge's function is not . . . to weigh the evidence and determine the truth of the matter but to determine whether there is a genuine issue for trial." *Anderson v. Liberty Lobby Inc.*, 477 U.S. 242, 249 (1986).

In contrast to this careful review, the majority fails to consider much of the Youth Experts' evidence at all. When the majority does reference an expert, the reference is often inaccurate or incomplete. Consistently, the majority

[2] For Judge Aiken's thorough review of the Youth Experts' evidence, see *Juliana*, 339 F.Supp.3d at 1086-1090, 1093-1095.

inappropriately views the evidence offered by the Youth Experts *unfavorably* to Youth Plaintiffs.

The Youth Experts' opinions and scientific bases therefore, fully considered in the light most favorable to the Youth Plaintiffs, show a substantial likelihood that a favorable decision will redress Plaintiffs' injuries. *Larson v. Valente*, 456 U.S. 228, 243 n.15 (1982); *Simon v. Eastern Ky. Welfare Rights Org*., 426 U.S. 26, 38 (1976); *accord, Arlington Heights v. Metropolitan Housing Dev. Corp.*, 429 U.S. 252, 262 (1977).

The Court, therefore, should grant rehearing *en banc*, vacate the panel decision, and remand the case to the district court so that the Youth Plaintiffs' important constitutional claims can be resolved in the light of a full factual record, not in an interlocutory appeal of a denial of summary judgment.

I. THE YOUTH EXPERTS UNIFORMALLY STATE THAT REMEDIAL ACTION BY THESE DEFENDANTS CAN RELIEVE PLAINTIFFS' INJURIES

On the pivotal issue of redressability, the majority mistakenly reads the opinions of the Youth Experts as stating that "an order simply enjoining [defendants'] activities will not . . . even ameliorate plaintiffs' injuries." App. 23. However, the opinions and reports of the Youth Experts, in evidence, in fact support the opposite conclusion—an order that directs Defendants to change their behavior will provide relief.

For example, Professor Hoegh-Guldberg[3] notes: "Eliminating U.S. emissions and keeping U.S. fossil fuels in the ground alone will have a significant impact in . . . slow[ing] the rate of ocean warming." SER 421. Professor Rignot[4] echoes this point, "we have an opportunity to reduce the amount by which the seas rise, and how quickly." SER 365. Dr. Trenberth[5] concurs: "What the U.S. government does with our national energy system and emissions matters immensely to our ability to preserve a livable climate for our posterity." SER 178.

In sum, as Professor Williams[6] and Dr. Hansen[7] note respectively, "Federal government policy can transform the U.S. energy system from one powered by

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[3] Ove Hoegh-Guldberg is the Deputy Director of the Australian Research Council for Excellence for Coral Reef Studies at the University of Queensland. He provided expert testimony to the district court regarding how human-caused CO_2 emissions are affecting ocean chemistry, temperature and sea life.

[4] Eric Rignot, is Chair, Department of Earth System Science University of California Irvine. He provided expert testimony to the district court regarding how human-caused CO_2 emissions affect the interactions between climate and ice.

[5] Kevin E. Trenberth is a senior scientist in the Climate Analysis Section at the National Center for Atmospheric Research and is affiliated with the University of Auckland. He was a lead author of the 1995, 2001 and 2007 Scientific Assessment of Climate Change reports from the Intergovernmental Panel on Climate Change (IPCC) and shared the 2007 Nobel Peace Prize awarded to the IPCC.

[6] James Williams is an Associate Professor at the University of San Francisco. Professor Williams provided expert testimony regarding the feasible pathways to achieve deep decarbonization of the U.S. energy system in line with best available science for stabilizing the climate system, and the policies that could be used to achieve this outcome.

fossil fuels to one powered by renewable and other low carbon energy sources" and "the Federal Defendants have a heavy hand in how far that control knob [on warming] is turned due to . . . continuing support of fossil fuels." SER 142 and ER 284.

While the Youth Experts consistently confirm that the government's conduct matters immensely for purposes of whether these Plaintiffs' injuries are remedied or worsened, the Youth Experts emphatically emphasize the urgency with which that conduct must change in order to protect Youth Plaintiffs. As Professor Running[8] explains: "In my expert opinion it is critical that action to reduce carbon emissions and increase carbon sequestration occur immediately." SER 311. Professor Rignot concurs, "[W]hat states do today in 2018[9] will have a profound impact on the climate system mid-century." SER 362. As discussed below, the

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[7] Dr. James Hansen is the Director of Climate Science, Awareness and Solutions Program at Columbia University's Earth Institute. Dr. Hansen is not one of the Youth Experts for purposes of this Amicus Curiae because he is plaintiff in the case below.

[8] Steven Running is professor emeritus of Global Ecology at the University of Montana. He provided expert testimony to the district court regarding how human-caused CO_2 emissions are harming terrestrial ecosystems, human communities, and the Plaintiffs themselves.

[9] The loss of two years of action since Professor Rignot filed his opinion heightens his message's urgency.

Youth Experts' evidence shows that such rapid changes in Defendants' conduct is not only necessary, but possible.

II. THE YOUTH EXPERTS RECOGNIZE THAT PARTIAL RELIEF IS BOTH AVAILABLE AND WOULD BE BENEFICIAL

The Youth Experts recognize that relief exists on a continuum that begins with stopping the practices that cause Plaintiffs' injury and proceeds with a range of possible actions discussed in Section III below. As Professor Running colloquially puts it, "[i]f you find yourself in a hole, quit digging." SER 311. Professor Stiglitz[10] gives technical content to "quit digging," explaining that a short-term measure that the U.S. Government could "readily implement is to cease approvals for any new fossil fuel infrastructure, pending completion of a national climate recovery plan." SER 221-222. Professor Wanless[11] starkly presents the continuum of outcomes that depend on whether the U.S. Government stops or just keeps digging:

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[10]Joseph Stiglitz is a professor at Columbia University with joint appointments in the Faculty of Arts and Sciences, the Graduate School of Business, and the School of International and Public Affairs. His many professional awards include the 2001 Nobel Memorial Prize for Economics. Professor Stiglitz provided his expert opinion to the district court on the economics of transitioning to a non-fossil fuel economy.

[11] Harold Wanless is a professor of Geography and Regional Studies at the University of Miami. He provided expert testimony to the district court regarding how human-caused CO_2 emissions are causing sea level rise.

> How much more climate forcing humans put into the system through . . . greenhouse gas emissions in the near-term, and how much carbon we sequester, will dictate the severity of the warming and whether these young Plaintiffs and future generations can thrive, or even survive. SER 43.

In sum, this Court does not face a binary choice of either totally solving climate change or continuing towards what the majority itself has called the "eve of destruction." App. 11. Rather, there is a range of relief that could result from a court order. Such partial relief satisfies the redressability requirement. *Larson v. Valente*, 456 US at 243, fn 15 (to establish redressability a plaintiff "need not show that a favorable decision will receive [plaintiff's] *every* injury") (emphasis in the original). As discussed below, the U.S. Government has a variety of tools available to "stop digging" and pursue needed change.

III. THE YOUTH EXPERTS IDENTIFY MANY POTENTIAL REMEDIES

The majority also bases its redressability conclusion on a cramped reading of the Youth Experts' evidence regarding possible solutions. Rather than stating, as the majority paraphrases, that carbon reduction "'**must**' come largely from reforestation,"[12] Dr. Hansen indicates that, "[d]rawdown **can** be achieved largely via reforestation of marginal lands with improved forestry and agricultural

[12]App. 23 (emphasis supplied).

practices." SER 251 (emphasis supplied). Thus, reforestation is a potential tool in the remedial tool kit, not the only, or mandatory, solution.

Renewable energy is another available technology. As Professor Ackerman[13] notes, "[w]ind power is fully competitive with other power sources in suitably windy areas . . . and solar power and battery storage are moving rapidly in the same direction." SER 453.

Regarding the menu of remedial actions available, Professors Williams and Jacobson[14] explicitly state: "Multiple alternative pathways exist to achieve [needed] reductions" and "There is not just one way of achieving transition, but many pathways." SER 142 and 374.

IV. THE YOUTH EXPERTS STATE THAT REDUCING EMISSIONS IS TECHNICALLY FEASIBLE

Regarding the technical feasibility of reducing emissions, the majority erroneously summarizes the evidence in the light most favorable to the moving parties, Defendants. App. at 23. At the summary judgment stage, all record

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[13] Frank Ackerman (deceased) was an economist at Synapse Energy Economics.

[14] Mark Jacobson is a professor of civil and environmental engineering. He serves as Director of the Atmosphere/Energy Program and is a Senior Fellow with the Woods Institute for the Environment and Stanford University's Precourt Institute for Energy. He provided expert testimony about the feasibility of transitioning the United States of America to 100% clean and renewable energy in all energy sectors.

evidence must be viewed in the light most favorable to the nonmoving party, who also must be afforded the benefit of all reasonable inferences. *Anderson at* 255. To defeat summary judgment, the nonmoving party must produce evidence of a genuine dispute of material fact that could satisfy its burden at trial. *See id.* at 254–55; *see also Celotex Corp. v. Catrett*, 477 U.S. 317, 322–23 (1986).

In contrast to the majority's pessimistic characterization, Professor Stiglitz explains: "Moving the U.S. economy away from fossil fuels is both feasible and beneficial, especially over the next 30 years." SER 189. Most importantly, Professor Stiglitz presents the technological and scientific evidence to support his opinion. SER 209-228. He also notes that even a modest change, such as "Basing decisions (policies, programs, and actions) on appropriate discount rates" would help minimize the burdens on Youth Plaintiffs. SER 189. Putting a finer point on the matter, Professor Jacobson states:

> [I]t is technologically and economically possible to electrify fully the energy infrastructures of all 50 United States and provide that electricity with 100% clean, renewable wind, water, and sunlight (WWS) at low cost, if the transition is commenced immediately . . . SER 372.

The means of doing so are not so complex as to confound Defendants as they develop a plan. As Mr. Erickson[15] explains, "[L]imiting oil supply from the U.S. would lead to an increase in global oil prices and decrease in global oil consumption, and in turn lead to a decrease in global CO_2 emissions." SER 444. A court order directing Defendants to begin phasing out oil and gas development on federal lands would begin this process. SER 445. Professor Stiglitz concludes that some Governmental actions would actually save money ("have a negative cost") and that "there is ample evidence . . . that the cost[s] of transitioning to a low/no carbon economy are far less than the benefits of such a transition." SER 190 and 229.

V. EVIDENCE SUBMITTED BY THE YOUTH EXPERTS DEMONSTRATES THAT ACTION BY DEFENDANTS ALONE WILL PROVIDE RELIEF AND WILL CATALYZE OTHER COUNTRIES TO ACT

Perhaps the majority's most faulty understanding of the Youth Experts' evidence regards Defendants' ability to lessen the Youth Plaintiffs' injuries, even if the government acts alone. For example, Professor Hoegh-Guldberg notes: "the

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[15] Peter Erickson is a senior scientist at the Stockholm Environment Institute (U.S. Center). He provided testimony to the district court about the historic and current amounts of greenhouse (GHG) emissions in the U.S., the adequacy of the Federal Government's GHG emissions accounting, and the effects of federal fossil fuel subsidies and leasing on carbon dioxide (CO_2) emissions.

U.S. contribution is so significant globally," that its actions will make a measurable difference "even if other nations' emissions do not similarly decline in the same time frame." SER 421. Professor Trenberth confirms this point: "What the U.S. government does with our national energy system and emissions matters immensely to our ability to preserve a livable climate for our posterity." SER 178.

The majority's minimization of the remedial benefit of U.S. action also overlooks the Youth Experts' evidence that action by Defendants would likely galvanize global response. For example, at the Motion to Dismiss stage, Youth Plaintiffs offered the declaration of Michael MacCracken,[16] who describes the catalyzing power of U.S. action "[i]f the U.S. takes steps to reduce CO_2 and other greenhouse gas emissions, options become available for other countries to take similar actions . . . **thereby multiplying the total emission reduction benefit of U.S. actions**." SER 605-606 (emphasis supplied). Professor Stiglitz similarly concludes that U.S. actions "both directly, and by the leadership which such actions provide, has a significant impact on these global outcomes." SER 223.

[16] Dr. MacCracken's academic work focused on climate change modeling. He was Executive Director for first U.S. National Assessment on Climate Change and participated in the United Nations' International Panel on Climate Change First, Second, Third, Fourth and Fifth Assessment Reports. Dr. MacCracken's affidavit relating global climate change and impacts was cited favorably by Justice Stevens in *Massachusetts v. EPA*.

Noting that "the emissions from fossil fuel consumption that the Federal Defendants have authorized, permitted, and subsidized exceed, by far, those of any other nation," Dr. Hansen notes our nation's "special responsibility" to lead. ER 284. Mr. Erickson elaborates that just two governmental actions—"eliminating subsidies to fossil fuel producers and phasing out leasing of federal lands for fossil fuel extraction"—would "result in a decrease of global CO_2 emissions." SER 446.

VI. THE YOUTH EXPERTS ESTABLISH THAT THE COURT IS UNIQUELY POSITIONED TO RELIEVE PLAINTIFFS' EMOTIONAL INJURY

As this Court considers the Youth Plaintiffs' request for *en banc* review, it should recognize that a court action in favor of the Youth Plaintiffs would almost immediately reduce Youth Plaintiffs' emotional injuries—a harm the majority completely ignores. Doctor Van Susteren[17] explains:

> When a trusted and powerful institution that people depend on . . . is implicated in causing harm, the trauma is exacerbated. . . It can occur when the institution affirmatively causes the harm, or when the institution fails to take protective, preventative, or responsive actions. SER 104.

[17] Lise Van Susteren is a board certified general and forensics clinical psychiatrist. She has worked with a wide range of individuals and organizations. These include the Central Intelligence Agency (where she worked as psychological profiler), the homeless in metropolitan Washington D.C., displaced persons traumatized by natural disasters, and assessing the credibility of torture victims seeking political asylum in the U.S. She provided expert testimony to the district court on the psychological and mental health impacts of climate change on young people, future generations, and select individual Plaintiffs in this case.

Dr. Van Susteren continues to explain that when people "believe reasonable action to assure their safety and health is being taken by government – recovery from a disaster is less arduous." The opposite, she notes, is also true: "[if] they believe government affirmatively caused or substantially contributed to the disaster, the psychological toll can be expected to rise steeply and greatly impede recovery." SER 105.

Dr. Van Susteren notes that this psychological injury "is uniquely harmful" to "[t]hose who have less power and status in society"—particularly youth—who "are especially vulnerable." Drs. Pacheco[18] and Paulson[19] explain children are not only psychologically vulnerable, but are physically more vulnerable than adults: "[P]hysiological features, including their higher respiratory rate, lung growth and development, immature immune system, higher metabolic demands, and immature

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[18] Dr. Susan Pacheco is an associate professor of pediatrics at McGovern Medical School at the University of Texas.

[19] Dr. Jerome Paulson is a Professor Emeritus in the Department of Environmental & Occupational Health at The George Washington University School of Public Health and Health Services, and a Professor Emeritus in the Department of Pediatrics at The George Washington University School of Medicine and Health Sciences. He has served as a consultant to the American Academy of Pediatrics serving as the Medical Director for the Pediatric Environmental Health Specialty Units – East and the Medical Director for the AAP Initiative on Climate Change and Health.

central nervous system." SER 55. Dr. Frumkin[20] concludes, "[T]hat climate change disproportionately threatens the physical and mental health, and well-being, of children as a class of people." ER 313.

SER 104. Finally, Dr. Van Susteren points out the power that courts, possess to cause—and by implication relieve—such harm. SER 105-106. Professor Smith[21] similarly notes, "There are times when courts step in to protect children from state action when the injury to children is too significant to leave to the political process." SER 237.

Professor Wanless condenses the judiciary's remedial power most simply. In answering adults who question how he "give[s] hope to young people given the dire projections for their future," the Professor tells these grownups, particularly those in positions of power and governmental leadership, "I hope you are listening." SER 42. In her dissent in this matter, Judge Staton notes the power of the judiciary to provide "hope for future generations" by providing constitutional

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[20] Professor Howard Frumkin is Professor Emeritus of Environmental and Occupational Health Sciences at the University of Washington School of Public Health, where he served as Dean from 2010-2016. From 2005 to 2010 he held leadership roles at the U.S. Centers for Disease Control and Prevention.

[21] Professor Catherine Smith is on the faculty at the University of Denver Sturm College of Law. She has served as a legal fellow at the Southern Poverty Law Center.

protection for their lives and liberties. She poignantly asks the same question posed to Professor Wanless, "where is the hope in [the majority's] decision?" App. 64.

The answer lies with Professor Wanless's common sense advice to leaders and those with power: to listen. Fortunately, this advice comports with well-settled legal precedent. Listening, under this case's procedural profile, begins with a trial before a fact-finding judge who can fully hear and consider the Youth Experts' evidence. To paraphrase Justice Stewart, "the proper place for [such listening] is in the trial court, not here." *Baker v. Carr*, 369 U.S. 186, 266 (1962) (Stewart, J., concurring.); *see also Firestone Tire & Rubber Co. v. Risjord,* 49 U.S. 368, 374 (1981) (appellate courts owe deference to the trial judge as the individual initially called upon to decide the many questions of law and fact that occur in the course of a trial).

CONCLUSION

For the foregoing reasons, the Court should grant rehearing *en banc* and vacate the majority decision. The Court should then remand the case to the district court for a trial in which the judge will hear the Youth Experts and all other relevant evidence.

Date: March 12, 2020

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/s/ Eric S. Laschever
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EXHIBIT A

1. Mr. Peter Erickson. See footnote 15.

2. Professor Howard Frumkin. See footnote 20.

3. Director Ove Hoegh-Guldberg. See footnote 3.

4. Professor Mark Jacobson. See footnote 14.

5. Professor Susan Pacheco. See footnote 18.

6. Dr. Jerome Paulson. See footnote 19.

7. Professor Eric Rignot. See footnote 4.

8. G. Phillip Robertson is Distinguished Professor of Ecosystem Science at Michigan State University. His laboratory studies greenhouse gas emissions and mitigation in agriculture.

9. Professor Steve Running. See footnote 8.

10. Professor Catherine Smith. See footnote 21.

11. Gus Speth has held numerous national and international positions related to the environment. He served as President Carter's chair of the Council on Environmental Quality, founded the Natural Resources Defense Council and the World Resources Institute, and was chair of the United Nations Development Program.

12. Professor Joseph Stiglitz. See footnote 10.

13. Professor Harold Wanless. See footnote 11.

14. Dr. Kevin Trenberth. See footnote 5.

15. Dr. Lise Van Susteren. See footnote 17.

16. James Williams. See footnote 6.

17. Andrea Wulf is an award–winning and New York Times bestselling author of six acclaimed books about the natural world. Her book, The Invention of Nature: Alexander von Humboldt's New World, received fifteen international awards including the Royal Society Science Book Prize 2016, the LA Times Book Prize 2016 and the 2016 award for nature writing from the Nature Conservancy and the Kenyon Review. She's a Fellow of the Royal Society of Literature.

CERTIFICATE OF COMPLIANCE

Pursuant to Fed. R. App. P. 32(a)(7)(C), I certify that:

This brief complies with the type-volume limitation of Fed. R. App. P. 32(a)(7)(B) because this brief contains 3920 words, excluding the parts of the brief exempted by Fed. R. App. P. 32(a)(7)(B)(iii).

This brief complies with the typeface requirements of Fed. R. App. P. 32(a)(5) and the type style requirements of Fed. R. App. P. 32(a)(6) because this brief has been prepared in a proportionately spaced typeface using Word 2016 Times New Roman 14-point font.

Date: March 12, 2020

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CERTIFICATE OF SERVICE

I hereby certify that on March 12, 2020, I electronically filed the foregoing with the Clerk of the Court for the United States Court of Appeals for the Ninth Circuit by using the appellate CM/ECF system.

Participants in the case who are registered CM/ECF users will be served by the appellate CM/ECF system.

Date: March 12, 2020

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