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Rethinking the Strategy: Using Disaster Law to Combat Climate Change in Indian Country
by
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INTRODUCTION

Climate change, for many, is an amorphous concept.¹ It is a theory which warns of anticipated, yet currently intangible, consequences to the fossil fuel-based lifestyles of the modern world.² The average American is concerned,³ but knows not how climate change will manifest,⁴ and cannot comprehend how, when, or even if climate change will impact his life or the lives of his children.⁵ If climate change is a problem, many believe it is one to be solved by future generations.⁶

However, this familiar narrative fails to describe American Indian tribes. Rather than merely anticipate the effects of global climate change, their communities are already experiencing them.⁷ Often located in climate-sensitive areas,⁸ tribes are experiencing extreme weather events, such as flooding and wildfires, with increased frequency as a consequence of rising sea levels and warmer, drier temperatures.⁹ With a greater reliance on subsistence foods than the nation's majority,¹⁰ tribes are now finding provisions more difficult to obtain as plants

¹ TASK FORCE ON THE INTERFACE BETWEEN PSYCHOLOGY & GLOBAL CLIMATE CHANGE, AM. PSYCHOLOGICAL ASS'N, PSYCHOLOGY & GLOBAL CLIMATE CHANGE: ADDRESSING A MULTIFACETED PHENOMENON AND SET OF CHALLENGES 21-22 (2010), *available at* <http://www.apa.org/science/about/publications/climate-change.aspx>.

² *Id.*; ANTHONY LEISEROWITZ, NICHOLAS SMITH & JENNIFER R. MARLON, YALE UNIV., YALE PROJECT ON CLIMATE CHANGE COMM'N, AMERICANS' KNOWLEDGE OF CLIMATE CHANGE 10 (2010), *available at* <http://environment.yale.edu/climate/publications/knowledge-of-climate-change>.

³ TASK FORCE ON THE INTERFACE BETWEEN PSYCHOLOGY & GLOBAL CLIMATE CHANGE, *supra* note 1, at 23 (citing 2006 Pew Project findings that 75% of Americans believe global warming is a "very serious" or "somewhat serious" problem).

⁴ *See* LEISEROWITZ, SMITH & MARLON, *supra* note 2, at 10-11.

⁵ *See* TASK FORCE ON THE INTERFACE BETWEEN PSYCHOLOGY & GLOBAL CLIMATE CHANGE, *supra* note 1, at 22.

⁶ *See id.* at 22-25.

⁷ *See generally* NAT'L TRIBAL AIR ASS'N, IMPACTS OF CLIMATE CHANGE ON TRIBES IN THE UNITED STATES (2009), *available at* www.tribesandclimatechange.org/docs/tribes_95.pdf.

⁸ KIRSTY GALLOWAY MCLEAN, UNITED NATIONS UNIV., ADVANCE GUARD: CLIMATE CHANGE IMPACTS, ADAPTATION, MITIGATION AND INDIGENOUS PEOPLES 6 (2010), *available at* http://www.ias.unu.edu/resource_centre/UNU_Advance_Guard_Compendium_2010_final_web.pdf.

⁹ RENEE CURRY, ET AL., NAT'L WILDLIFE FED'N, FACING THE STORM: INDIAN TRIBES, CLIMATE-INDUCED WEATHER EXTREMES, AND THE FUTURE FOR INDIAN COUNTRY 8, 12 (2011), *available at* <http://www.tribesandclimatechange.org/database.php>.

¹⁰ *See* MCLEAN, *supra* note 8, at 6.

and animals migrate in response to or fail to survive in altered temperatures.¹¹ Despite such far-reaching impacts, no tribes have experienced the effects of climate change quite to the extent of Alaska Native Villages, twelve of which are either actively seeking or exploring relocation to escape the continuing erosion and constant flooding which plague their communities.¹²

Historically, United States law has been of little help to tribes suffering the effects of climate change.¹³ In 2008, the Native Village of Kivalina, a relocating Alaska Native Village, filed suit against energy and utility companies in an attempt to recover damages for corporate contributions to global warming.¹⁴ The result: a ruling that global warming liability is outside the purview of the judiciary, and is instead the responsibility of Congress and the United States Environmental Protection Agency (EPA).¹⁵ Tribes have attempted to mitigate climate change impacts by accessing aid through legislatively-authorized federal disaster relief programs, yet often fail to qualify for such reasons as cost-sharing provisions and prerequisite requirements that natural disasters first be statutorily declared as such.¹⁶ However, it appears that federal disaster law may soon provide at least a partial solution to tribal difficulty in mitigating and recovering from climate change-induced weather events.¹⁷

On January 29, 2013, President Obama signed the Sandy Recovery Improvement Act of 2013 into law.¹⁸ The act, in part, grants tribes the same status as states under the Stafford Act,¹⁹

¹¹ NAT'L TRIBAL AIR ASS'N, *supra* note 7, at 11; CURRY, ET AL., *supra* note 9, at 21.

¹² U.S. GOV'T ACCOUNTABILITY OFFICE, ALASKA NATIVE VILLAGES: LIMITED PROGRESS HAS BEEN MADE ON RELOCATING VILLAGES THREATENED BY FLOODING AND EROSION 16-18 (2009), www.gao.gov/new.items/d09551.pdf.

¹³ Tribes have, however, could possibly be successful under humans rights law. *See* MCLEAN, *supra* note 8, at 22.

¹⁴ Native Vill. of Kivalina v. ExxonMobil Corp., (Kivalina I), 663 F. Supp. 2d 863, 869 (N.D. Cal. 2009).

¹⁵ Native Vill. of Kivalina v. ExxonMobil Corp., (Kivalina II), 696 F.3d 849, 856-58 (9th Cir. 2012).

¹⁶ U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 12, at 20-24; Elizabeth Harball, *Alaska Natives Try to Flee Climate Change Impacts But Find Little Help*, CLIMATEWIRE, Jan. 31, 2013, <http://www.eenews.net/climatewire/2013/01/31/archive/2?terms=Alaska+Natives>.

¹⁷ *See infra* Part VI.

¹⁸ JARED T. BROWN, FRANCIS X. MCCARTHY & EDWARD C. LIU, CONG. RESEARCH SERV., ANALYSIS OF THE SANDY RECOVERY IMPROVEMENT ACT OF 2013 2 (2013), <http://www.fas.org/sgp/crs/misc/R42991.pdf>.

the federal legislation which authorizes the majority of federal disaster relief programs.²⁰ Furthermore, the act allows a waiver of cost-sharing provisions for Indian tribes.²¹ This paper explores how this new legislation now allows federal disaster law to serve as, at least, a partial solution to combating climate change in Indian Country.²² Given their newly elevated legal status and flexibility in cost-sharing, tribes will now have access to federal funding and services for disaster planning, mitigation, adaptation, and relocation.²³ However, there are still areas of disaster law in need of improvement before it can fully address the effects of climate change.²⁴

Part I of this paper provides a brief background on global climate change, describing how it occurs and its anticipated effects,²⁵ while part II explains why American Indian communities currently are and will continue to disproportionately bear its burdens.²⁶ Part III shares the story of the Native Village of Kivalina, an Alaska Native Village that will have to relocate as a result of climate change-induced disasters.²⁷ In the wake of climate change-induced flooding and erosion, this Village attempted to recover through a lawsuit against energy and utility companies, also discussed.²⁸ Part IV contextualizes climate change in American society, and makes the case for considering solutions based in existing law rather than pursuing specialized climate change regulation and policy.²⁹ Parts V, VI, and VII conclude the paper, providing a description of

¹⁹ Sandy Recovery Improvement Act of 2013, Pub. L. No. 113-2, § 1110 (2013), *available at* <http://www.gpo.gov/fdsys/pkg/PLAW-113publ2/pdf/PLAW-113publ2.pdf>.

²⁰ DANIEL A. FARBER, ET AL., *DISASTER LAW AND POLICY* 90 (2010).

²¹ Sandy Recovery Improvement Act of 2013, *supra* note 19, § 1110.

²² *See infra* Part VI.

²³ *See id.*

²⁴ *See infra* Part VII.

²⁵ *See infra* Part I.

²⁶ *See infra* Part II.

²⁷ *See infra* Section II.A.

²⁸ *See infra* Section II.B.

²⁹ *See infra* Part IV.

United States disaster law,³⁰ the ways in which it can now aid American Indian tribes combating climate change,³¹ and areas for future improvement.³²

I. GLOBAL CLIMATE CHANGE

The term ‘global climate change,’ describes a phenomenon of altered weather patterns caused by the build-up of carbon dioxide and other greenhouse gases³³ in Earth’s atmosphere.³⁴ These greenhouse gases, released mostly from the extraction and use of fossil fuels, keep heat from the sun’s rays at Earth’s surface, retaining it and inhibiting its escape back into outer space.³⁵ By doing so, these gases cause global warming – an increase in Earth’s surface temperature.³⁶ While a change in climate toward increased temperatures can be devastating in and of itself,³⁷ the warmer weather already experienced across much of the globe³⁸ has caused a variety of natural disasters, such as hurricanes, floods, and wildfires.³⁹ Such consequences are

³⁰ See *infra* Part V.

³¹ See *infra* Part VI.

³² See *infra* Part VII.

³³ In addition to carbon dioxide, the three other greenhouse gases most-emitted in the United States are methane, nitrous oxide, and fluorinated gases. *Greenhouse Gas Emissions*, U.S. ENVTL. PROT. AGENCY (Aug. 31, 2012), <http://www.epa.gov/climatechange/ghgemissions/gases.html> (last visited April 13, 2013).

³⁴ *Climate Change: Basic Information*, U.S. ENVTL. PROT. AGENCY (March 21, 2013), <http://www.epa.gov/climatechange/basics/> (last visited April 3, 2013).

³⁵ *Id.*; *Greenhouse Gas Emissions*, *supra* note 33.

³⁶ *Climate Change: Basic Information*, *supra* note 34.

³⁷ Such effects include heat waves and droughts, which have implications for human health and safety as well as food security. See THE WORLD BANK, TURN DOWN THE HEAT: WHAT A 4°C WARMER WORLD MUST BE AVOIDED 6, 13-16 (2012), http://climatechange.worldbank.org/sites/default/files/Turn_Down_the_heat_Why_a_4_degree_centrigrade_warmer_world_must_be_avoided.pdf.

³⁸ While, overall, the Earth is experiencing an increase in average temperature, *id.* at 6, that will not be the case for all areas. Portions of the northern hemisphere have actually been experiencing colder winters. Kate Ravilious, *Global Warming Set to Bring Colder, Snowier Winters*, ENVIRONMENTALRESEARCHWEB (Jan. 13, 2013), <http://environmentalresearchweb.org/cws/article/news/48293> (last visited April 3, 2013). Furthermore, should melting glaciers disrupt the Atlantic Ocean’s gulf stream current, England will enter another ice age. Bill McGuire, *Will Global Warming Trigger a New Ice Age?*, Guardian (Nov. 12, 2003), <http://www.guardian.co.uk/environment/2003/nov/13/comment.research> (last visited April 3, 2013).

³⁹ THE WORLD BANK, *supra* note 37, at 16, 18; *The Consequences of Global Warming on Weather Patterns*, NATURAL RES. DEF. COUNCIL, <http://www.nrdc.org/globalwarming/fcons/fcons1.asp> (last visited April 3, 2013); Agence France-Fresse, *New Study Links Extreme Weather to Climate Change*, GLOBAL POST (February 25,

only predicted to increase in area and frequency as greenhouse gas emissions continue, and Earth's surface temperature continues to rise.⁴⁰

II. CLIMATE CHANGE AND AMERICAN INDIANS

Climate change poses unique risks for American Indian tribes and Alaska Native Villages.⁴¹ Not only are tribes geographically vulnerable to altered weather patterns, but have also suffered and will continue to suffer indirect effects on subsistence and cultural activities.⁴² Furthermore, the socioeconomic status of American Indians compounds these consequences, as most tribes and individual members lack the funds to rebuild or relocate following climate change-induced disasters.⁴³

A. Climate Change in Indian Country

Indigenous peoples across the globe reside in ecologically sensitive areas prone to the effects of climate change,⁴⁴ and American Indians are no exception.⁴⁵ In the United States there are 566 federally recognized Indian tribes and 322 Indian reservations, most of which are located in the far west and southwest of the country.⁴⁶ Indian country is a legally-defined term; Indian reservations, dependent Indian communities, and land held in trust for Indian tribes are all

2013), <http://www.globalpost.com/dispatch/news/afp/130225/new-study-links-extreme-weather-climate-change> (last visited April 1, 2013).

⁴⁰ THE WORLD BANK, *supra* note 37, at 16.

⁴¹ See *Climate Change*, NAT'L CONG. OF AM. INDIANS, <http://www.ncai.org/policy-issues/land-natural-resources/climate-change> (last visited April 13, 2013).

⁴² See *id.*; see generally NAT'L TRIBAL AIR ASS'N, *supra* note 7; KATHY LYNN, KATHARINE MACKENDRICK & ELLEN M. DONOGHUE, U.S. DEP'T OF AGRIC., SOCIAL VULNERABILITY AND CLIMATE CHANGE: SYNTHESIS OF LITERATURE 42-44 (2011), www.fs.fed.us/pnw/pubs/pnw_gtr838.pdf.

⁴³ CURRY, ET AL., *supra* note 9, at 3; Saskia de Melker & Rebecca Jacobson, *Climate Change Strikes Especially Hard Blow to Native Americans*, RUNDOWN BLOG (July 19, 2012, 3:42 PM), <http://www.pbs.org/newshour/rundown/2012/07/climate-change-strikes-hard-blow-to-native-americans.html> (last visited April 13, 2013).

⁴⁴ MCLEAN, *supra* note 8, at 6.

⁴⁵ CURRY, ET AL., *supra* note 9, at 2.

⁴⁶ *Id.* at 3; U.S. GOV'T ACCOUNTABILITY OFFICE, FLOOD INSURANCE: PARTICIPATION OF INDIAN TRIBES IN FEDERAL AND PRIVATE PROGRAMS 11 (2013), DAVID H. GETCHES, ET AL., CASES AND MATERIALS ON FEDERAL INDIAN LAW 9-12 (2011).

included.⁴⁷ These often coastal, polar, and desert Indian reservations and communities are expected to be those most affected, and first affected, by climate change-induced natural disasters.⁴⁸ Based on these locations, the National Wildlife Federation identifies four types of disaster to which tribes are vulnerable in the wake of climate change: drought, wildfire, flooding, and snowstorms.⁴⁹

As Earth's surface temperature increases and the air becomes warmer, tribal water sources are either evaporating or failing to form.⁵⁰ For example, Indian tribes, along with others in the southwest, are reliant upon melting mountain snowpack to feed freshwater sources.⁵¹ However, climate change has caused a decline in snowpack formation, resulting in less water reaching water bodies and land.⁵² The subsequent drought is highly detrimental to tribes, with impacts on the availability of drinking water, irrigation and crop growth, and availability of plant and water-based food sources.⁵³ Drier seasons and water-parched lands are also the leading causes of wildfires - the second major disaster type facing tribal communities in the wake of climate change.⁵⁴ Wildfires not only directly affect tribes through the loss of important natural resources and culturally significant locations, but also cause indirect effects, such as decreased air quality from smoke and particulates.⁵⁵

Flooding is yet another, and arguably the most devastating, effect of climate change currently facing Indian tribes.⁵⁶ Warmer temperatures are melting the polar ice caps, causing a

⁴⁷ 18 U.S.C. § 1151 (2011), available at <http://www.gpo.gov/fdsys/browse/collectionUScode.action?selectedYearFrom=2011&go=Go>.

⁴⁸ See generally CURRY, ET AL., *supra* note 9; see also MCLEAN, *supra* note 8, at 6.

⁴⁹ See generally CURRY, ET AL., *supra* note 9.

⁵⁰ *Id.* at 5.

⁵¹ *Id.*; NAT'L TRIBAL AIR ASS'N, *supra* note 7, at 7.

⁵² CURRY, ET AL., *supra* note 9, at 5; NAT'L TRIBAL AIR ASS'N, *supra* note 7, at 7.

⁵³ See NAT'L TRIBAL AIR ASS'N, *supra* note 7, at 5-9.

⁵⁴ CURRY, ET AL., *supra* note 9, at 8.

⁵⁵ *Id.* at 8-9.

⁵⁶ See *id.* at 11.

rise in sea level; however, the causation of flooding experienced by tribes is much more complex.⁵⁷ For example, rising sea levels are exacerbated for coastal Alaska Native Villages by melting permafrost.⁵⁸ As the frozen ground thaws in warmer temperatures, it becomes increasingly subject to erosion, and decreased land mass results in water levels coming yet closer to Indian communities.⁵⁹ Nationwide, however, rainstorms have been the main cause of flooding.⁶⁰ As warmer temperatures both enable the air to hold more water as well as compromise the ability of land to absorb water, rainstorms become longer and more disastrous.⁶¹ In the southwest, warm temperatures have so parched the soil, that fast-falling rainwater is not absorbed, and rather lays stagnant on the ground's surface.⁶² In Alaska, warmer temperatures have decreased the formation of sea ice that traditionally shielded Alaska Native Villages from harsh storm events.⁶³ Flood waters, especially combined with storms, can be extremely destructive to Tribal infrastructure and residences.⁶⁴ The increased water absorbed by warmer air has also been the cause of extreme snowstorms, which have the ability to incapacitate Indian communities by downing power lines, freezing water pipes, and inhibiting access to fuel.⁶⁵

While disasters such as drought, wildfire, flooding, and snowstorms have implications on the availability of subsistence foods as well as for the preservation of culturally significant places,⁶⁶ warmer temperatures alone are enough to alter the availability and presence of traditional food sources.⁶⁷ A changing climate also changes the presence of plants and animals;

⁵⁷ *Id.* at 11-12.

⁵⁸ *Id.* at 12; NAT'L TRIBAL AIR ASS'N, *supra* note 7, at 10.

⁵⁹ *See* CURRY, ET AL., *supra* note 9, at 12.

⁶⁰ *Id.* at 11-12.

⁶¹ *See id.* at 11-12.

⁶² *Id.* at 11-12.

⁶³ *Id.* at 12, 14.

⁶⁴ *Id.* at 14.

⁶⁵ *Id.* at 17-18.

⁶⁶ *See* text accompanying notes 53, 55, 64-65.

⁶⁷ NAT'L TRIBAL AIR ASS'N, *supra* note 7, at 4-11.

those once suited to their habitat may find it more difficult to survive.⁶⁸ Furthermore, any native species which can survive the warmer temperatures, may merely be out-competed by new, invasive species, which are then able to infiltrate habitats and ecosystems.⁶⁹ Or, pest populations once kept in check by colder seasonal temperatures, may live longer, with adverse impacts on other vital species.⁷⁰ With a greater reliance on subsistence foods than the average American,⁷¹ American Indians not only suffer culturally in an inability to access, prepare, and celebrate traditional foods,⁷² but suffer economically and nutritionally in having to purchase food that will not often carry the same nutrition and health benefits.⁷³ Thus, the manifestation of climate change in Indian Country carries serious consequences and raises serious concerns.

B. Environmental Justice Concerns

The United States Environmental Protection Agency defines environmental justice as, “the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.”⁷⁴ Environmental justice is thus both a participatory concept as well as one that is results driven.⁷⁵ The agency elaborates,

⁶⁸ *Id.* at 4-8, 10-11. For example, Northeastern Indian Tribes have reported that, with changing temperatures, the ranges in which medicinal plants grow are becoming smaller and smaller. *Id.* at 4.

⁶⁹ *Id.* at 4, 6-7, 9, 11. For example, Indian Tribes in the southwest and western United States have reported the presence of invasive grass species, which place their reservations at increased risk of wildfire. *Id.* at 6-7.

⁷⁰ *Id.* at 4-6, 8. For example, midwestern Tribes have found that warmer temperatures increase the season in which Bruce spanworms defoliate Maple Trees, which has an adverse effect on tree survival and, ultimately, syrup production. *Id.* at 5.

⁷¹ *See* CURRY, ET AL., *supra* note 9, at 2.

⁷² MCLEAN, *supra* note 8, at 14.

⁷³ *See* MICHAEL BRUBAKER, ET AL., ALASKA NATIVE TRIBAL HEALTH CONSORTIUM, CLIMATE CHANGE IN KIVALINA, ALASKA 47 (2011), www.anthc.org/chs/ces/climate/upload/Climate-Change-in-Kivalina-Alaska-Strategies-for-Community-Health-2.pdf.

⁷⁴ *Environmental Justice*, U.S. ENVTL. PROT. AGENCY (Feb. 11, 2013), <http://www.epa.gov/environmentaljustice/> (last visited April 14, 2013).

⁷⁵ *See id.*

“[environmental justice] is achieved when everyone enjoys the same degree of protection from environmental and health hazards and equal access to the decision-making process.”⁷⁶

Climate change aside, Native Americans are already the minority group most disproportionately affected by environmental risks.⁷⁷ As American Indian communities will also be disproportionately affected by climate change due to both their geographic locations as well as reliance on natural resources,⁷⁸ environmental justice, or the lack thereof, is a concern in the development of climate change adaptation and mitigation strategies.⁷⁹ Its relevance only heightens when considering the socio-economic status of American Indians, which is, on average, much lower than other Americans.⁸⁰ A lack of funds paralyzes these communities in preparations for and recovery from climate change-induced disaster.⁸¹

As an unofficial subset of environmental justice,⁸² scholars now recognize a similar link between socio-economic status, minority status, and the devastating effects of natural disasters.⁸³ Minority and impoverished individuals tend to suffer disproportionately following natural disasters due to a lack of resources, preparedness, and political disenfranchisement.⁸⁴ As climate change in Indian Country will manifest, in part, as natural disasters,⁸⁵ American Indians are also

⁷⁶ *Id.*

⁷⁷ See generally Devon Payne-Sturges & Gilbert C. Gee, *National Environmental Health Measures for Minority and Low-Income Populations: Tracking Social Disparities in Environmental Health*, 102 ENVTL. RES. 154 (2006), available at [http://yosemite.epa.gov/ochp/ochpweb.nsf/content/Disparities2.htm/\\$file/Disparities2.pdf](http://yosemite.epa.gov/ochp/ochpweb.nsf/content/Disparities2.htm/$file/Disparities2.pdf).

⁷⁸ See *supra* Section II.A.

⁷⁹ Sarah Krakoff, *Radical Adaptation, Justice, and American Indian Nations* 4 ENVTL. JUST. 207, 208 (2011); Raina Wagner, *Adapting Environmental Justice: In the Age of Climate Change, Environmental Justice Demands a Combined Adaption-Mitigation Response*, ARIZ. J. ENVTL. L. & POL'Y (2012), <http://www.ajelp.com/articles/adapting-environmental-justice-in-the-age-of-climate-change-environmental-justice-demands-a-combined-adaption-mitigation-response/>.

⁸⁰ CURRY, ET AL., *supra* note 9, at 2.

⁸¹ *Id.*

⁸² Daniel A. Farber, *Disaster Law and Inequality*, 25 LAW & INEQ. 297, 308 (2007).

⁸³ See generally *id.*; see also generally Robert R.M. Verchick, *Disaster Justice: The Geography of Human Capability*, 23 DUKE ENVTL. L. & POL'Y F. 23 (2012).

⁸⁴ Verchick, *supra* note 83, at 42-44.

⁸⁵ See *supra* Section II.A.

at risk of this phenomenon, which one scholar has labeled, “disaster justice.”⁸⁶ Thus, this too may inhibit the ability of tribes to respond to and recover from climate-change induced weather events.

III. THE NATIVE VILLAGE OF KIVALINA

The Native Village of Kivalina is an Inupiat Eskimo Alaska Native Village located on a six mile long barrier island in northwestern Alaska.⁸⁷ For over forty years the Village has experienced destructive flooding and erosion, in addition to other climate change effects.⁸⁸ Today, an expensive relocation is its only long-term solution for survival.⁸⁹ In 2008, the Village sued energy and utility companies in an attempt to recover damages.⁹⁰ Although it was ultimately unsuccessful, its experience helped solidify what is necessary for climate change regulation and liability in the United States.⁹¹

A. Effects of Climate Change

The Village of Kivalina is extremely vulnerable to the effects of climate change, not only due to its geographic location, but also its infrastructure. Kivalina consists of approximately 400 residents, living in approximately seventy homes with no piped water system or paved roadways.⁹² The city washeteria, consisting of three washing machines, three clothes dryers, and

⁸⁶ Verchick, *supra* note 83, at 24.

⁸⁷ BRUBAKER, ET AL., *supra* note 73, at 1, 9; Christine Shearer, *The Political Ecology of Climate and Adaptation Assistance: Alaska Natives, Displacement, and Relocation*, 19 J. POL. ECOLOGY 174, 174 (2012).

⁸⁸ BRUBAKER, ET AL., *supra* note 73, at 13-14, 22-50; *see infra* Section III.A.

⁸⁹ U.S. ARMY CORPS OF ENG'RS, KIVALINA, ALASKA RELOCATION PLANNING PROJECT MASTER PLAN ES1-2 (2006), available at <http://www.cakex.org/virtual-library/2973>.

⁹⁰ *See infra* Section III.B; *see Kivalina Loses Its Climate-Change-Relocation Lawsuit Against Major Energy Companies*, INDIAN COUNTRY TODAY MEDIA NETWORK (Oct. 22, 2012), <http://indiancountrytodaymedianetwork.com/article/kivalina-loses-its-climate-change-relocation-lawsuit-against-major-energy-companies-140964> (last visited May 8, 2013).

⁹¹ *See infra* Section III.B.

⁹² U.S. ARMY CORPS OF ENG'RS, *supra* note 89, at ES-1; BRUBAKER, ET AL., *supra* note 73, at 10, 38.

public showers, is one of three places on the island with running water - the others being the local school and teacher housing.⁹³ The only ways off the island are by plane or boat.⁹⁴

Residents rely on native plants and animals for a substantial portion of their diet, and are the only Native Village which still hunts bowhead whale.⁹⁵ Other important species, around which the Inupiat seasons are centered, include caribou, crabs, seals, fish, birds, and polar bears.⁹⁶ Residents take advantage of their cold climate to dry fish and other meats, and store them year-round in underground freezers that keep foods frozen simply by the fact that they are dug into frozen ground layers called permafrost.⁹⁷

However, climate change-induced flooding and erosion now pose a direct threat to this way of life. Warmer temperatures have decreased the formation of the sea ice that once shielded the island from harsh winter storms, increasing the occurrence of flooding.⁹⁸ These same temperatures have also caused the permafrost to thaw, and portions of the island are eroding into the sea.⁹⁹ The melting permafrost has also caused the underground freezers to thaw and leak, making them inadequate to store food.¹⁰⁰ Warmer temperatures further threaten food security in that subsistence species are becoming more difficult to find, and the climate is not always as suitable for drying meats as it once was.¹⁰¹

The storms and flooding which have ravaged Kivalina have also had disastrous public health effects. For example, a recent storm damaged the washeteria, leaving the village without

⁹³ BRUBAKER, ET AL., *supra* note 73, at 38; Hannah Heimbuch, *Kivalina Gets Creative Solving Water Shortage*, Arctic Sounder (Jan. 25, 2013), available at http://www.thearcticsounder.com/article/1304kivalina_gets_creative_solving_water_shortage.

⁹⁴ BRUBAKER, ET AL., *supra* note 73, at 10.

⁹⁵ *Id.* at 5, 9, 47-50.

⁹⁶ *Id.* at 19.

⁹⁷ *Id.* at 47, 49.

⁹⁸ *Native Vill. of Kivalina v. ExxonMobil Corp.*, (Kivalina II), 696 F.3d 849, 853 (9th Cir. 2012).

⁹⁹ BRUBAKER, ET AL., *supra* note 73, at 25.

¹⁰⁰ *Id.* at 47.

¹⁰¹ *Id.* at 16, 48.

full use of its public washing facilities and on water restriction for months.¹⁰² Without access to proper washing facilities, incidences of illness and skin disease increase.¹⁰³ Storms have also caused the Village lagoon, where residents place human waste, to overflow into a body of water into which they fish and swim.¹⁰⁴ Lastly, health practitioners have documented increased adverse mental health effects in the form of stress and anxiety over impending floods and storms.¹⁰⁵ Although a recently constructed revetment wall has served to place some minds at ease,¹⁰⁶ residents have not quickly forgotten the 2007 storm in which they had to evacuate the island.¹⁰⁷

As the erosion and storms are expected to continue, relocation is the only viable option for Kivalina's survival.¹⁰⁸ While ultimate costs depend on the location to which the Village relocates, the United States Army Corps of Engineers has estimated it to be anywhere from about \$150 to \$250 million.¹⁰⁹ Other estimates, however, range as high as \$400 million.¹¹⁰ Kivalina is now struggling to select its new location, secure funding for the relocation, and establish protective measures in the interim.¹¹¹ However, it has been over twenty years since the Village first decided to relocate,¹¹² and conditions on the island continue to worsen as government agencies are hesitant to invest in maintaining and repairing the limited infrastructure at a location which Kivalina residents may not inhabit for much longer.¹¹³

B. Litigation

¹⁰² Heimbuch, *supra* note 93.

¹⁰³ Michael Brubaker, et al., *Climate Change and Health Effects in Northwest Alaska*, 4 GLOBAL HEALTH ACTION 8445, 8447 (2011); BRUBAKER, ET AL., *supra* note 73, at 39-40.

¹⁰⁴ BRUBAKER, ET AL., *supra* note 73, at 43.

¹⁰⁵ *Id.* at 28; Brubaker, et al., *supra* note 103, at 8447-48.

¹⁰⁶ BRUBAKER, ET AL., *supra* note 73, at 3, 13, 27.

¹⁰⁷ *Id.* at 5; Brubaker, et al., *supra* note 103, at 8447.

¹⁰⁸ U.S. ARMY CORPS OF ENGINEERS, *supra* note 89, at ES-2.

¹⁰⁹ *Id.*

¹¹⁰ *See* Native Vill. of Kivalina v. ExxonMobil Corp., (Kivalina I), 663 F. Supp. 2d 863, 869 (N.D. Cal. 2009).

¹¹¹ *Id.* at ES-2-3; BRUBAKER, ET AL., *supra* note 73, at 14.

¹¹² U.S. ARMY CORPS OF ENGINEERS, *supra* note 89, at ES-1.

¹¹³ BRUBAKER, ET AL., *supra* note 73, at 3.

In 2008, the Village sued twenty-four energy and utility companies in federal district court to recover damages for the disastrous climate change effects it has endured.¹¹⁴ It claimed that global warming was a public nuisance, in violation of federal and state law, to which these companies had substantially contributed.¹¹⁵ The Village also claimed that the defendants were engaged in conspiracy and concert of action with respect to their carbon dioxide-emitting activities, as well as their efforts to discredit climate change science.¹¹⁶ In response, the defendant companies filed motions to dismiss.¹¹⁷ The companies claimed that the allocation of liability for global warming was a non-justiciable political question and that the Village also lacked standing to bring suit.¹¹⁸

The court first considered the question of whether global warming was justiciable, and in doing so, asked three questions: “(i) Does the issue involve resolution of questions committed by the text of the Constitution to a coordinate branch of government? (ii) Would resolution of the question demand that a court move beyond areas of judicial expertise? [and] (iii) Do prudential considerations counsel against judicial intervention?”¹¹⁹ While the court did not find that the Constitution assigned the authority to address global warming or air pollution to any branch of

¹¹⁴ See *Kivalina Loses Its Climate-Change-Relocation Lawsuit Against Major Energy Companies*, *supra* note 90; *Native Vill. of Kivalina v. ExxonMobil Corp.*, (Kivalina I), 663 F. Supp. 2d 863, 868 & n.1, 869 (N.D. Cal. 2009) (“Defendants are: (1) ExxonMobil Corporation; (2) BP P.L.C.; (3) BP America, Inc.; (4) BP Products North America, Inc.; (5) Chevron Corporation; (6) Chevron U.S.A., Inc.; (7) ConocoPhillips Company; (8) Royal Dutch Shell P.L.C.; (9) Shell Oil Company; (10) Peabody Energy Corporation; (11) The AES Corporation; (12) American Electric Power Corporation; (13) American Electric Power Services Corporation; (14) DTE Energy Company; (15) Duke Energy Corporation; (16) Dynergy Holdings, Inc.; (17) Edison International; (18) MidAmerican Energy Holdings Company; (19) Mirant Corporation; (20) NRG Energy; (21) Pinnacle West Capital Corporation; (22) Reliant Energy, Inc.; (23) The Southern Company; and (24) Xcel Energy, Inc.”).

¹¹⁵ *Id.* at 868-69.

¹¹⁶ *Id.* at 869; *Kivalina Compl.*, 1-2, 47-53, 65-66, available at <http://www.climatelaw.org/cases/country/us/kivalina/Kivalina%20Complaint.pdf>.

¹¹⁷ *Kivalina I*, 663 F. Supp. at 870.

¹¹⁸ *Id.* at 870.

¹¹⁹ *Id.* at 871-72 (quoting *Wang v. Masaitis*, 416 F.3d 992, 996 (9th Cir. 2005) (consolidating the factors from *Baker v. Carr*, 369 U.S. 186, 210 (1962)).

government, thus leaving it an issue available for consideration by the judiciary,¹²⁰ it did answer the latter two questions in the affirmative.¹²¹ The court concluded that past nuisance cases did not provide adequate guidance for it to allocate responsibility for global warming, and that such allocation would require a legislative policy judgment as to which individuals or entities were at fault since, “virtually everyone on Earth is responsible on some level for contributing to such emissions.”¹²² Thus, the case was non-justiciable.

The court then addressed the issue of standing,¹²³ although determining that the Village presented a non-justiciable claim was enough to decide the case. In this analysis, the court focused its efforts on determining whether the Village could show that the defendant corporations caused their claimed injuries.¹²⁴ Finding that the Village lacked proof or the ability to prove that the corporations’ actions were directly responsible for the global warming-related events which specifically affected the Village, the court also ruled in favor of the defendant corporations on this issue.¹²⁵

Following the district court’s decision, the Village appealed its case to the Ninth Circuit Court of Appeals.¹²⁶ However, by this time, the issue’s legal framing had changed. In between the case and the appeal, the Supreme Court decided *American Electric Power Company, Inc. v. Connecticut*,¹²⁷ holding that federal common law principles, such as public nuisance, could not be utilized to address global warming.¹²⁸ The Ninth Circuit explained that federal common law is not a collection of statutory principles; rather, it is based off of the body of judicial action taken

¹²⁰ *Id.* at 873.

¹²¹ *Id.* at 876-77.

¹²² *Id.*

¹²³ *Id.* at 877-82.

¹²⁴ *Id.* at 877.

¹²⁵ *Id.* at 881-83.

¹²⁶ *Native Vill. of Kivalina v. ExxonMobil Corp.*, (Kivalina II), 696 F.3d 849, 849, 853 (9th Cir. 2012).

¹²⁷ 131 S. Ct. 2527 (2011).

¹²⁸ *Kivalina II*, 696 F.3d at 856-57.

in the absence of federal legislation.¹²⁹ Thus, the federal common law is nothing more than a placeholder for congressional action.¹³⁰ As *American Electric Power* found that Congress had already delegated its responsibility to regulate greenhouse gases to the EPA through the Clean Air Act, this field of law is already occupied.¹³¹ Consequently, the Ninth Circuit affirmed the District Court's decision.¹³² Liability for global warming and its related events are no longer issues to address in the courts; they are ones to address with the EPA or with Congress.¹³³

IV. THE NECESSITY OF A NEW APPROACH

Despite a federal court ruling that the responsibility to address the legality of greenhouse gas emissions is now solely in the hands of the EPA and Congress,¹³⁴ regulation has proven difficult. Global climate change and global warming are, and have been, very contentious issues in the United States.¹³⁵ The nation has a great economic interest in fossil fuel production and use, and despite the near scientific consensus that global warming and climate change are realities, the scientists, politicians, and public interest groups that have continued to oppose their existence¹³⁶ have been persuasive with the American public.¹³⁷ Thus, although the EPA has begun addressing the emission of greenhouse gases by promulgating regulations for the

¹²⁹ *Id.* at 856.

¹³⁰ *Id.*

¹³¹ *Id.* at 857-58.

¹³² *Id.* at 858.

¹³³ See text accompanying notes 130-131.

¹³⁴ See *supra* Section III.B.

¹³⁵ See DAVID VOGEL, *THE POLITICS OF PRECAUTION: REGULATING HEALTH, SAFETY, AND ENVIRONMENTAL RISKS IN EUROPE AND THE UNITED STATES* 142 (2012).

¹³⁶ See, e.g., Claude Allegre, et al., Op-Ed., *No Need to Panic About Global Warming*, WALL ST. J. ONLINE, <http://online.wsj.com/article/SB10001424052970204301404577171531838421366.html> (last visited April 7, 2013), and *Global Warming Skeptic Organizations*, UNION OF CONCERNED SCIENTISTS (Oct. 20, 2005), http://www.ucsusa.org/global_warming/science_and_impacts/global_warming_contrarians/global-warming-skeptic.html (last visited April 7, 2013).

¹³⁷ See VOGEL, *supra* note 135, at 132-36, 142.

transportation and industrial sectors,¹³⁸ its actions were not implemented without challenge and scrutiny.¹³⁹ And yet, even with these new regulations, the United States' commitments and actions toward combating global climate change as well as shifting toward renewable energy sources are considered to be behind those of other countries.¹⁴⁰ Furthermore, there exists no liability scheme to hold actors accountable for decades of prior greenhouse gas emissions or the resultant climatic disasters.¹⁴¹

With Indian tribes presently experiencing the effects of climate change, they can no longer wait for the favorable social, political, and economic circumstances necessary to stop climate change at its source.¹⁴² The time has come to evaluate what laws and statutory schemes exist currently to help tribes combat, remedy, and prepare for the consequences. Although the effects of climate change often manifest as natural disasters,¹⁴³ United States disaster law is, surprisingly, a relatively new area for tribes to find aid and relief.¹⁴⁴

V. FEDERAL DISASTER LAW AND INDIAN TRIBES

¹³⁸ *EPA Greenhouse Gas Regulation FAQ*, CTR. FOR CLIMATE & ENERGY SOLUTIONS, <http://www.c2es.org/federal/executive/epa/greenhouse-gas-regulation-faq> (last visited April 7, 2013); *see also Climate Change Regulatory Initiatives*, U.S. ENVTL. PROT. AGENCY (Aug. 31, 2012), <http://www.epa.gov/climatechange/EPAactivities/regulatory-initiatives.html> (last visited April 7, 2013).

¹³⁹ Dina Cappiello, *EPA Greenhouse Gas Rules Upheld by Federal Court*, HUFFINGTON POST (June 26, 2012), http://www.huffingtonpost.com/2012/06/26/epa-greenhouse-gas-rules_n_1627445.html (last visited April 7, 2013).

¹⁴⁰ *See* VOGEL, *supra* note 135, at 129-52 (comparing the climate policies of the United States and the European Union); *See* JUDITH SHAPIRO, CHINA'S ENVIRONMENTAL CHALLENGES 62-64, 71-72 (2012) (discussing China's actions to reduce greenhouse gas emissions and leadership in the renewable energy market).

¹⁴¹ This is not to say that such a scheme will never exist. If greenhouse gas producers were one day held accountable for the effects of global climate change, it would not be the first time Congress has acted to impose retroactive liability in the face of a large-scale environmental problem. *See* Comprehensive Response, Compensation, and Liability Act, 42 U.S.C. § 9601 (2011), *available at* <http://www.gpo.gov/fdsys/browse/collectionUScode.action?selectedYearFrom=2011&go=Go>. In 1980, Congress passed the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) which held polluters responsible for the clean-up of the nation's toxic waste sites, regardless of whether the pollution was technically legal at the time of their action. *Id.* § 9607(a).

¹⁴² *See* text accompanying note 137.

¹⁴³ *See supra* Part I, *and* Section II.A.

¹⁴⁴ *See infra* Section V.

United States disaster law provides the nation’s statutory and regulatory framework for responding to, recovering from, and preparing for both natural and man-made disasters.¹⁴⁵ However, American Indian tribes have just recently gained the ability to participate as response and recovery partners with the federal government in a way that corresponds to their sovereign status.¹⁴⁶ Recent amendments to the nation’s main piece of disaster legislation now establish disaster law as a meaningful solution to the effects of climate change.¹⁴⁷

A. The Stafford Act

Passed in 1988, the Robert T. Stafford Disaster Relief and Emergency Assistance Act (the Stafford Act)¹⁴⁸ is the center of United States disaster law.¹⁴⁹ While other laws can, and do, provide aid to states and localities in times of trouble,¹⁵⁰ the Stafford Act provides the basis for almost every federal disaster relief program.¹⁵¹ Its purpose is to enable the federal government to support the efforts of states, local governments, and now, explicitly, tribes¹⁵² during a statutorily defined “major disaster” or “emergency.”¹⁵³ A major disaster encompasses any “natural catastrophe,” such as a flood, wildfire, earthquake, or hurricane,¹⁵⁴ while an emergency is essentially any other situation, such as a terrorist attack, in which state and local governments

¹⁴⁵ See *infra* Section V.A.

¹⁴⁶ See *infra* Section V.B.

¹⁴⁷ See *infra* Part VI.

¹⁴⁸ 42 U.S.C. §§ 5121-208 (2011).

¹⁴⁹ *Robert T. Stafford Disaster Relief and Emergency Assistance Act (PL 93-288) As Amended*, FED. EMERGENCY MGMT. AGENCY (June 15, 2012), <http://www.fema.gov/robert-t-stafford-disaster-relief-and-emergency-assistance-act-public-law-93-288-amended> (last visited April 7, 2013); see DANIEL A. FARBER, ET AL., *DISASTER LAW AND POLICY* 90 (2010).

¹⁵⁰ FARBER, ET AL., *supra* note 149, at 103-06. These laws include: The Defense Against Weapons of Mass Destruction Act and the Public Health Service Act. *Id.* at 103-04.

¹⁵¹ *Robert T. Stafford Disaster Relief and Emergency Assistance Act (PL 93-288) As Amended*, *supra* note 149.

¹⁵² See *infra* Section V.B.

¹⁵³ FARBER, ET AL., *supra* note 149, at 90-91.

¹⁵⁴ 42 U.S.C. § 5122(2).

would require assistance “to save lives and to protect public health and safety.”¹⁵⁵ The Federal Emergency Management Agency (FEMA) within the Department of Homeland Security (DHS) is the act’s administering agency.¹⁵⁶

The Stafford Act, in its second subchapter,¹⁵⁷ first addresses disaster preparedness and mitigation.¹⁵⁸ Its provisions allow the President to establish and fund, in part, programs and activities that lessen the effects of disasters, warn affected individuals and agencies in times of disaster, and aid disaster recovery efforts.¹⁵⁹ Furthermore, the act establishes the National Predisaster Mitigation Fund, to which state governors or the President can recommend local governments in need of funding assistance for disaster mitigation projects.¹⁶⁰

The next subchapter provides for the administrative aspects of disaster relief.¹⁶¹ It creates federal emergency support teams,¹⁶² allows federal agencies to work alongside as well as with local governments, contractors, and relief organizations,¹⁶³ and establishes the insurance standards, if any, to which individuals must adhere in order to receive assistance.¹⁶⁴ The subchapter also outlines the requirements for federally-funded mitigation plans and specifies that any structures built or re-built with federal disaster relief funds, must meet applicable public safety and building standards.¹⁶⁵

¹⁵⁵ *Id.* § 5122(1).

¹⁵⁶ FARBER, ET AL., *supra* note 149, at 90.

¹⁵⁷ The Act’s first subchapter is comprised of definitions and congressional findings. 42 U.S.C. §§ 5121-22.

¹⁵⁸ *Id.* §§ 5131-34.

¹⁵⁹ *Id.* §§ 5131(a), 5132.

¹⁶⁰ *Id.* §§ 5133(b), (d), (i).

¹⁶¹ *Id.* §§ 5141-5165d.

¹⁶² *Id.* § 5144.

¹⁶³ *Id.* §§ 5149-50, 5152.

¹⁶⁴ *Id.* §§ 5154-55.

¹⁶⁵ *Id.* §§ 5165-65a.

The Stafford Act's fourth subchapter describes the process for states, and now Tribes,¹⁶⁶ to receive federal assistance, as well as delineates what types of federal assistance are available in times of major disaster.¹⁶⁷ First, a state governor or, now,¹⁶⁸ the chief executive of an Indian tribe, must submit a request for assistance.¹⁶⁹ Pending Presidential approval, the federal government may then provide a variety of aid for any aspect of disaster recovery, including debris removal, food provisions, medical services, crisis counseling, and unemployment assistance.¹⁷⁰ The next subsection goes on to provide a similar declaration process for emergencies, and describes the types of federal assistance available in emergency situations.¹⁷¹ The remainder of the Stafford Act is primarily dedicated toward establishing emergency preparedness programs to respond to man-made disasters.¹⁷² In its totality, the Stafford Act is an extremely comprehensive piece of legislation, covering all aspects of a disaster or emergency - from preparation to recovery.¹⁷³

B. Tribes as States

The Sandy Recovery Improvement Act of 2013 just recently amended the Stafford Act to, in part, grant tribes a status equal to states.¹⁷⁴ This designation, referred to as “Tribes as States,” is one which allows tribes to “exercise their jurisdiction over a subject matter,”¹⁷⁵ and

¹⁶⁶ See *infra* Section V.B.

¹⁶⁷ 42 U.S.C. §§ 5170-89e.

¹⁶⁸ See *infra* Section V.B.

¹⁶⁹ 42 U.S.C. § 5170.

¹⁷⁰ *Id.* §§ 5170a-89e.

¹⁷¹ *Id.* §§ 5191-93; FARBER, ET AL., *supra* note 149, at 91.

¹⁷² 42 U.S.C. §§ 5195-208.

¹⁷³ See *supra* text accompanying notes 148-172.

¹⁷⁴ Sandy Recovery Improvement Act of 2013, *supra* note 19, § 1110; *Bipartisan Disaster Relief Bill Approved: Tribes to be Treated Like States, Navajo President Encouraged*, NAVAJO NATION (Jan. 29, 2013), available at <http://nnwo.org/content/bipartisan-disaster-relief-bill-approved> (last visited April 7, 2013).

¹⁷⁵ *Tribal Government Leadership Forum: Note on “Tribes As States” (TAS)*, ARIZ. STATE UNIV., <http://outreach.asu.edu/tglf/book/note-%E2%80%9Ctribes-states%E2%80%9D-tas> (last visited May 8, 2013).

has been enacted into at least three other federal laws.¹⁷⁶ Tribes as States provisions in federal legislation are important to the status of federally recognized Indian tribes as sovereign entities.¹⁷⁷ Tribes retain their rights to self-governance, among others, and are not subject to state jurisdiction.¹⁷⁸

Yet, before January 29, 2013, tribes did not possess those rights under the Stafford Act.¹⁷⁹ They were defined as “local governments” for the purposes of disaster relief, and could not, like state governors, directly request federal assistance.¹⁸⁰ Instead, all disaster declarations had to first go through the requisite governor of the state in which the affected tribe was located.¹⁸¹ Thus, as climate change-related natural disasters began occurring in Indian country, disaster law was, for years, unable to act as a viable mechanism for solution or relief.¹⁸² Without the ability to declare disasters, many flooding events in Indian country, which may have qualified, went without such designation and consequently could not commission the provision of aid under the Stafford Act.¹⁸³ A lack of tribal disaster mitigation plans, which the Stafford Act requires only of entities seeking mitigation funding, also compromised the eligibility of Indian tribes for federal relief

¹⁷⁶ *Id.* Tribes as States provisions can also be found in the Clean Water Act, Clean Air Act, and Safe Drinking Water Act. *Id.*

¹⁷⁷ *See id.*; *see also* U.S. ENVTL. PROT. AGENCY, EPA POLICY FOR THE ADMINISTRATION OF ENVIRONMENTAL PROGRAMS ON INDIAN RESERVATIONS (1984), *reprinted in* JUDITH C. ROYSTER & MICHAEL C. BLUMM, NATIVE AMERICAN NATURAL RESOURCES LAW: CASES AND MATERIALS 229 (2008).

¹⁷⁸ *See* GETCHES, ET AL., *supra* note 46, at 367-68. This is not entirely true for tribes subject to Public Law 280, which grants certain states jurisdiction over crimes in Indian Country. Ada Pecos Melton & Jerry Gardner, *Public Law 280: Issues and Concerns for Victims of Crime in Indian Country*, Am. Indian Dev. Assocs., Inc. (2004), <http://www.aidainc.net/Publications/pl280.htm> (last visited May 8, 2013).

¹⁷⁹ BROWN, MCCARTHY & LIU, *supra* note 18, at 2; *see infra* text accompanying notes 187-188.

¹⁸⁰ *Bipartisan Disaster Relief Bill Approved: Tribes to be Treated Like States, Navajo President Encouraged*, *supra* note 174; Rob Capriccioso, FEMA Wants Tribes to be Equal to States, INDIAN COUNTRY TODAY MEDIA NETWORK (Dec. 7, 2011), <http://indiancountrytodaymedianetwork.com/article/fema-wants-tribes-to-be-equal-to-states-66244> (last visited April 7, 2013).

¹⁸¹ Capriccioso, *supra* note 180.

¹⁸² U.S. GOV'T ACCOUNTABILITY OFFICE, ALASKA NATIVE VILLAGES: LIMITED PROGRESS HAS BEEN MADE ON RELOCATING VILLAGES THREATENED BY FLOODING AND EROSION 20-24 (2009), *available at* www.gao.gov/new.items/d09551.pdf.

¹⁸³ *See id.* at 7, 20-24, 37.

programs.¹⁸⁴ Lastly, even if tribes could have declared disasters and developed mitigation plans, the Stafford Act's cost-sharing provisions would have made it difficult, if not impossible, for tribes and villages to receive federal aid.¹⁸⁵

While there remain other barriers to relief,¹⁸⁶ the Sandy Recovery Improvement Act's amendments are an improvement. Now, with few exceptions, the chief executive of an Indian tribe, including that of an Alaska Native Village, can take the same actions as a state governor under the Stafford Act.¹⁸⁷ The Sandy Recovery Improvement Act also provides that, with respect to the disaster assistance provided to Indian tribes, the President can alter or waive any of the Stafford Act's cost sharing provisions.¹⁸⁸

FEMA has already begun soliciting comments regarding its regulation of tribal disaster declarations and is specifically requesting suggestions as to how the regulations already in place for state governors may or may not be appropriate for tribal application.¹⁸⁹ For example, to be eligible for certain types of federal disaster assistance, states are required to have developed hazard mitigation plans.¹⁹⁰ States that do not yet have approved plans at the time of their disaster declaration, are given thirty days to comply with this requirement.¹⁹¹ Yet, that same time constraint may be inappropriate and unduly burdensome for Indian tribes, which have much smaller governmental units and less funding than states.¹⁹²

¹⁸⁴ *Id.* at 20-23; *see infra* Section VI.B and text accompanying note 190.

¹⁸⁵ U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 182, at 20-24.

¹⁸⁶ *See infra* Section VII.A.

¹⁸⁷ Sandy Recovery Improvement Act of 2013, *supra* note 19, § 1110. Tribes may not make recommendations regarding locales to receive National Predisaster Mitigation Plan funds and are eligible for the vast majority, but not all, types of federal major disaster assistance. *See id.*

¹⁸⁸ Sandy Recovery Improvement Act of 2013, *supra* note 19, § 1110.

¹⁸⁹ Solicitation for Comments Regarding Current Procedures to Request Emergency and Major Disaster Declarations, 78 Fed. Reg. 15,026, 15,027 (March 8, 2013).

¹⁹⁰ *Id.*; 42 U.S.C. § 5165; 44 C.F.R. § 201.4 (2012).

¹⁹¹ Solicitation for Comments Regarding Current Procedures to Request Emergency and Major Disaster Declarations, *supra* note 189, at 15,027.

¹⁹² *Id.*

However, the current lack of regulations has not stopped tribes from submitting disaster declaration requests. On March 1, 2013, just shortly over a month after the passage of the Sandy Recovery Improvement Act, the Eastern Band of Cherokee Indians received the first tribal federal disaster declaration following flooding to its North Carolina reservation.¹⁹³ The President granted a second tribal disaster declaration request just four days later to aid the Navajo Nation in its recovery from freezing temperatures, which caused pipes to crack and decimated the Nation's drinking water system.¹⁹⁴

VI. DISASTER LAW AS A SOLUTION

Effectively utilizing federal disaster law could help tribes seeking to remedy the effects of global climate change – not only through aid in responding to and rebuilding from climate change-induced natural disasters, but also by providing a formalized framework for climate change mitigation and adaptation activities.¹⁹⁵

A. Disaster Declarations

An official disaster declaration is a prerequisite to receiving disaster aid under the Stafford Act.¹⁹⁶ Now that tribes have the ability to request aid directly from the President,¹⁹⁷ there is a greater chance that a greater number of declaration-worthy disasters will be recognized

¹⁹³ *First Presidential Disaster Declaration for a Tribe*, FRIENDS COMM. ON NAT'L LEGISLATION, http://fcn.org/issues/nativeam/first_tribal_stafford/ (last visited April 8, 2013); United Southern and Eastern Tribes, *EBCI First Tribe to Receive FEMA Funds Under Stafford Act*, CHEROKEE ONE FEATHER (March 4, 2013), <http://theonefeather.com/2013/03/ebei-first-tribe-to-receive-fema-funds-under-stafford-act/> (last visited April 8, 2013).

¹⁹⁴ *President Obama Signs Disaster Declaration for Navajo Nation, the Second Tribe to Receive Direct FEMA Assistance*, Indian Country Today Media Network (March 5, 2013), <http://indiancountrytodaymedianetwork.com/2013/03/05/president-obama-signs-disaster-declaration-navajo-nation-second-tribe-receive-direct-fema> (last visited April 20, 2013).

¹⁹⁵ See *infra* Sections VI.A, B, C, D.

¹⁹⁶ U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 182, at 23.

¹⁹⁷ Sandy Recovery Improvement Act of 2013, *supra* note 19, § 1110.

as such.¹⁹⁸ While tribes have always had the ability to receive federal aid in times of disaster, the disaster declaration had to be made by the governor of the state in which the affected tribe was located. Thus, Indian tribes had a gatekeeper; the governors and their requisite staff could act as middlemen and potentially pass judgment over whether a tribal request truly rose to the level of “disaster.” Even in cases where a state governor would agree with a tribe’s chief executive and forward a tribal declaration request onto the President, this extra step and the time it could take for the governor’s initial review seems prejudicial to tribes in need of relief.

In 2009, the United States Government Accountability Office reported that, “since 1978, there have been 228 flooding events that have led to state disaster declarations for 119 different Alaska communities.”¹⁹⁹ But, “[s]ince 1953, Alaska has had 32 federal disaster declarations 15 were for flooding.”²⁰⁰ Thus, in a fifty year period there had been over 200 floods, yet only fifteen rose to a level at which the governor believed federal assistance to be required. While the severity and location of these flooding events are not mentioned in the report²⁰¹ - given the propensity of indigenous peoples to reside in regions vulnerable to the effects of climate change, such as the coastal arctic,²⁰² as well as the fact that the United States government has identified thirty-one “imminently threatened” Alaska Native Villages, twelve of which are relocating²⁰³ - an assumption arises that American Indians were bearing the brunt of these disasters. Further, knowledge of the amount of development and quality of the infrastructure present within these villages²⁰⁴ only enhances the skepticism that these communities had the resources to adequately

¹⁹⁸ See U.S. GOV’T ACCOUNTABILITY OFFICE, *supra* note 182, at 7, 23.

¹⁹⁹ *Id.* at 7.

²⁰⁰ *Id.* at 23.

²⁰¹ See generally *id.*

²⁰² See *supra* text accompanying notes 44-48.

²⁰³ U.S. GOV’T ACCOUNTABILITY OFFICE, *supra* note 182, at 12-18.

²⁰⁴ See *supra* text accompanying notes 92-97 for a description of the conditions in one Alaska Native Village – Kivalina.

prepare for and recover from over 200 floods. In the past, the Native Village of Kivalina has been reliant on congressional appropriation to fund disaster mitigation activities.²⁰⁵

The United States Government Accountability Office further reported that, “[a]bout 40 percent of these flood disasters occurred from 2000 to 2008,” which shows a correlative increase between a warming planet and flood frequency. Thus, the ability that tribes and villages now have to request disaster declarations has never been more important. The purpose of the Stafford Act and the disaster declaration process is to provide relief when “effective response is beyond the capabilities of the [s]tate and the affected local governments.”²⁰⁶ The Sandy Recovery Improvement Act recognizes that no one is better capable of determining when disaster recovery exceeds tribal resources and expertise than the tribes themselves,²⁰⁷ and thus increases the chances of tribal access to federal assistance as the effects of climate change begin to increase in their manifestation and severity.

B. Mitigation and Adaptation Plans

The Stafford Act has always required hazard mitigation plans for all states, local governments, and tribes wishing to be considered for federal hazard mitigation funding.²⁰⁸ However, prior to the Sandy Recovery Improvement Act of 2013, states also had access to additional mitigation funding following declared disasters.²⁰⁹ Typically, the President can engage in cost-sharing with states, tribes, and local governments, paying up to 75% of hazard mitigation activities so long as the amount does not exceed a certain percentage of the federal government’s

²⁰⁵ Shearer, *supra* note 87, at 177.

²⁰⁶ 42 U.S.C. § 5170.

²⁰⁷ Sandy Recovery Improvement Act of 2013, *supra* note 19, § 1110.

²⁰⁸ 42 U.S.C. § 5165; *see also* Solicitation for Comments Regarding Current Procedures to Request Emergency and Major Disaster Declarations, *supra* note 189, at 15,027.

²⁰⁹ *See* Solicitation for Comments Regarding Current Procedures to Request Emergency and Major Disaster Declarations, *supra* note 189, at 15,026-27.

available funding.²¹⁰ However, following declared disasters, the President may increase the percentage of total funds which can be spent to 20 percent.²¹¹ Thus, for states, the benefits of having a FEMA-approved disaster mitigation plan could be very profitable.²¹² States which do not have approved disaster mitigation plans in place at the time of their declaration, have thirty days to develop one in order to take advantage of the aid opportunity.²¹³

Now that tribes are considered states under the Stafford Act, they too will have the ability to take advantage of enhanced hazard mitigation assistance in the wake of declared disasters.²¹⁴ But, they will first have to develop hazard mitigation plans.²¹⁵ Currently, despite the fact that it disqualifies them for general hazard mitigation funding, many tribes and villages do not seem to have plans - “[a]s of April 2009, only 33 Alaska Native villages had [hazard mitigation] plans in place.”²¹⁶ However, it is likely the Sandy Recovery Improvement Act’s amendments, tying hazard mitigation plans to increased funding post-disaster declaration,²¹⁷ will cause this number to increase.

Tribal development of hazard mitigation plans will be immensely important in combating the effects of climate change. While tribes have already begun considering the effects that climate-change induced disasters can and will have on their communities,²¹⁸ the development of FEMA-approved hazard mitigation plans provides a formalized process.²¹⁹ Tribes now have an increased incentive to evaluate the disaster risks to which their communities are vulnerable,

²¹⁰ 42 U.S.C. §§ 5165(d), 5170c.

²¹¹ *Id.* §§ 5165(e) 5170c(a).

²¹² *See id.*

²¹³ Solicitation for Comments Regarding Current Procedures to Request Emergency and Major Disaster Declarations, *supra* note 189, at 15,027.

²¹⁴ *See id.*; *see also* Sandy Recovery Improvement Act of 2013, *supra* note 19, § 1110.

²¹⁵ Solicitation for Comments Regarding Current Procedures to Request Emergency and Major Disaster Declarations, *supra* note 189, at 15,027.

²¹⁶ U.S. GOV’T ACCOUNTABILITY OFFICE, *supra* note 182, at 22.

²¹⁷ *See* sources cited *supra* note 214.

²¹⁸ *See generally* NAT’L TRIBAL AIR ASS’N, *supra* note 7.

²¹⁹ 44 C.F.R. § 201.7 (2012).

begin brainstorming strategies to mitigate damages in cases of disaster, and identify sources of funding to put mitigation measures in place.²²⁰ Thus, these plans can provide a springboard for tribal action.

C. Funding Opportunities

Perhaps the Sandy Recovery Improvement Act's greatest step toward making disaster law an accessible solution to climate change effects in Indian country is the provision which allows the President to waive cost sharing requirements for tribes.²²¹ While the President is under no obligation to effectuate such a waiver,²²² this amendment recognizes that cost sharing was holding tribes back from full participation in disaster relief programs, and would continue to do so into the future.²²³ Many of FEMA's programs, including those under the Stafford Act, have cost sharing requirements,²²⁴ and in making a disaster declaration, states, and now tribes, must agree to them.²²⁵ Programs authorized by the Stafford Act usually require a state or local government entity to contribute at least twenty-five percent of the total project cost.²²⁶

As American Indian communities often lack excess expendable resources,²²⁷ in the past, they may have held back requests for assistance, or simply ruled out applying for disaster aid altogether. Now that tribes can also make disaster declarations,²²⁸ the standard cost-sharing requirements may have inhibited future requests as well. Hopefully, with the knowledge that the federal government can now fund disaster relief to an increased extent or even in its entirety,

²²⁰ *See id.*

²²¹ Sandy Recovery Improvement Act of 2013, *supra* note 19, § 1110.

²²² *See id.*

²²³ *See* U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 182, at 20-22.

²²⁴ *Id.*

²²⁵ 42 U.S.C. § 5170;

²²⁶ *See, e.g.*, 42 U.S.C. §§ 5170b(b), 5170c, 5174(g).

²²⁷ CURRY, ET AL., *supra* note 9, at 2.

²²⁸ Sandy Recovery Improvement Act of 2013, *supra* note 19, § 1110.

tribes will be able to make full use of FEMA support in the wake of climate change induced disasters.

D. DHS and FEMA Climate Change Action Plan

In 2009, President Obama issued Executive Order 13514, entitled *Federal Leadership in Environmental, Energy, and Economic Performance*.²²⁹ Its purpose was to encourage federal agencies to consider how climate change would impact their missions and resources.²³⁰ The order required all agencies to create a Strategic Sustainability Performance Plan, establishing climate-conscious goals as well as methods by which to achieve them.²³¹ In compliance with the executive order, DHS issued its Climate Change Adaptation Roadmap in June 2012.²³²

In this roadmap, DHS has identified four actions which will allow the agency to combat the impacts of climate change on its work: (1) Cross-Cutting, Departmental Activities, (2) Resilient Critical Infrastructure and Key Resources, (3) Resilience to Disasters, and (4) Safety, Stability, Security, and Environmental Protection in the Artic.²³³ It is in its third action that DHS recognizes climate change will cause natural disasters to occur in greater numbers and intensities, for which it is then responsible for providing aid and support.²³⁴ DHS plans to study their relief programs and how climate change may alter their efficacy, so that they can be amended accordingly.²³⁵ DHS also plans to incorporate climate change into risk evaluation and

²²⁹ Exec. Order No. 13,514, *available at* http://www.whitehouse.gov/the_press_office/President-Obama-signs-an-Executive-Order-Focused-on-Federal-Leadership-in-Environmental-Energy-and-Economic-Performance; CENTER FOR CLIMATE CHANGE & ENERGY SOLUTIONS, CLIMATE CHANGE ADAPTATION: WHAT FEDERAL AGENCIES ARE DOING 5 (2012), *available at* <http://www.c2es.org/docUploads/federal-agencies-adaptation.pdf>.

²³⁰ CENTER FOR CLIMATE CHANGE & ENERGY SOLUTIONS, *supra* note 229, at 5.

²³¹ *Id.*

²³² DEP'T OF HOMELAND SEC., CLIMATE CHANGE ADAPTATION ROADMAP (2012), *available at* http://www.dhs.gov/sites/default/files/publications/Appendix%20A%20DHS%20FY2012%20Climate%20Change%20Adaptation%20Plan_0.pdf.

²³³ *Id.* at vi.

²³⁴ *Id.* at v, 25-26.

²³⁵ *Id.* at 25

disaster recovery, rebuilding communities to standards that will withstand future climate change-induced disasters.²³⁶ FEMA published these same goals just six months earlier in its Climate Change Adaptation Policy Statement.²³⁷

Although DHS released its Roadmap less than a year ago,²³⁸ should it, and FEMA, successfully implement the prescribed actions, disaster law will only become a more effective solution to combating the effects of climate change. Currently, disaster risks are based off of historical data, which may not be the best predictor of future weather activity in the face of climate change.²³⁹ Similarly, building standards based on former area characteristics and probability of disaster may no longer be appropriate.²⁴⁰ While the incorporation of relevant climate change data into risk and recovery activities will not lessen the frequency or intensity of natural disasters, it will help communities prepare for and withstand their effects and ensure that disaster law provides lasting solutions to the effects of climate change.²⁴¹ It will also help ensure FEMA has the resources to respond to these increased disasters as they arise.²⁴²

VII. AREAS FOR IMPROVEMENT

While the Sandy Recovery Improvement Act as well as DHS and FEMA policies are establishing disaster law as a forefront solution to climate change-induced disaster,²⁴³ there is still room for improvement. The Stafford Act still incorporates at least one consideration into

²³⁶ *Id.* at 26.

²³⁷ FED. EMERGENCY MGMT. AUTH., FEMA CLIMATE CHANGE ADAPTATION POLICY STATEMENT 2-3 (2011), available at <http://stormsmart.org/wp-content/blogs.dir/1/files/group-documents/22/1328980794-FEMACCAPolicyStatement12312.pdf>.

²³⁸ See generally DEP'T OF HOMELAND SEC., *supra* note 232.

²³⁹ *Id.* at 24, 26.

²⁴⁰ *Id.* at 26.

²⁴¹ See *id.*

²⁴² See *id.* at 24.

²⁴³ See *supra* Part VI.

mitigation funding that may be prejudicial to tribes,²⁴⁴ and FEMA, despite its goals, is not currently incorporating climate change into its programs.²⁴⁵ As climate change-induced disasters are impending, Congress as well as FEMA, should continue their focus on disaster law to ensure it provides adequate climate change protection not only to Indian tribes, but the nation as a whole.

A. The Stafford Act

There are two areas under the Stafford Act currently acting as barriers to relief for climate change-induced disasters. The first, is the act's statutory requirement that, in funding disaster mitigation projects, FEMA must prioritize grants based on the cost-efficacy of applications.²⁴⁶ While factoring cost-efficacy into funding decisions seems reasonable in theory, it has proven detrimental in practice.²⁴⁷ With a greater propensity to live in more rural and climate-extreme areas of the country,²⁴⁸ the mitigation projects of Indigenous communities, the communities most susceptible to the effects of climate change,²⁴⁹ will not likely ever be the most cost-effective.²⁵⁰ When their mitigation projects are not economically efficient, these communities may have to relocate in order to avoid the effects of natural disasters. The Native Village of Kivalina is currently planning to relocate because relocation is more cost-effective than improving the island to withstand increased flooding.²⁵¹ As land is often culturally and spiritually significant to American Indian tribes, they will pay a higher price than the average

²⁴⁴ See *infra* Section VII.A.

²⁴⁵ See *infra* Section VII.A., VII.B.

²⁴⁶ See U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 182, at 22-23; see also 42 U.S.C. §§ 5133, 5170c(a).

²⁴⁷ See U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 182, at 22-23.

²⁴⁸ See *supra* Section II.A.

²⁴⁹ See *id.*

²⁵⁰ U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 182, at 22-23.

²⁵¹ U.S. ARMY CORPS OF ENG'RS, *supra* note 89, at ES-1-2.

American by not only losing their homes, but also their traditions.²⁵² Thus, Congress and FEMA should reconsider the strict requirement of cost-efficacy in funding mitigation projects under the Stafford Act.

The second area in need of improvement is the FEMA requirements for hazard mitigation plans. The Stafford Act has always required mitigation plans for those states and tribes wishing to receive mitigation funding; however now that tribes are considered states, they will also need plans to receive mitigation funding in the wake of a tribal disaster declaration.²⁵³ While there is no prohibition against considering climate change in mitigation plans, FEMA does not currently require it.²⁵⁴ Last October, the National Resources Defense Council began petitioning FEMA to reject those state plans which did not account for the effects of climate change, claiming they failed to follow the regulatory requirement of including “all natural hazards that can affect the State.”²⁵⁵

Tribes certainly have a unique interest in ensuring their communities are protected from the effects of climate change,²⁵⁶ and would hopefully consider climate change in their development of hazard mitigation plans. However, if a tribe lacked the expertise to account for climate change effects, or did not realize climate change could affect its community, it is worrisome to think that FEMA would approve those plans regardless. FEMA should work with both tribes and states in developing hazard mitigation plans which truly protect their

²⁵² See *supra* Section II.A.

²⁵³ See *supra* text accompanying notes 208-209, 215.

²⁵⁴ Anne Siders, *NRDC Petitions FEMA to Require Climate Change Assessment in State Disaster Plans*, CLIMATE L. BLOG (Oct. 3, 2012), <http://blogs.law.columbia.edu/climatechange/2012/10/03/nrdc-petitions-fema-to-require-climate-change-in-state-disaster-plans/> (last visited April 23, 2013); Becky Hammer, *FEMA Must Require States to Plan for Climate Change’s Water-Related Impacts*, SWITCHBOARD: NAT. RESOURCES DEF. COUNCIL STAFF BLOG (Oct. 2, 2012), http://switchboard.nrdc.org/blogs/rhammer/fema_must_require_states_to_pl.html (last visited April 23, 2013).

²⁵⁵ Hammer, *supra* note 254; 44 C.F.R. § 201.4(c)(2)(i).

²⁵⁶ See *supra* Section II.A.

communities from risk. If climate change is a concern, it is FEMA, as the authorizing agency,²⁵⁷ that should ensure it is responsibly considered and mitigated.

B. The National Flood Insurance Program

The National Flood Insurance Program is another area in need of vast improvement, especially as it relates to Indian tribes. Established in 1968 through the National Flood Insurance Act,²⁵⁸ the National Flood Insurance Program was Congress' response to the fact that uninsured flood recovery was a burden to national resources.²⁵⁹ Like the Stafford Act, it too is administered by FEMA.²⁶⁰ Participation in the insurance program is available to all communities willing to regulate their land use in a manner consistent with encouraging smart or no development in flood-prone areas, and is required in areas where the federal government has already once provided disaster relief to rebuild following flood damage.²⁶¹

While the program is considered successful in helping homeowners keep down costs related to flood damage, it is run at a loss to the government.²⁶² However, it is not only the program's economic efficiency that needs improvement, but also the rates of tribal participation. Tribal participation is extremely low, at only seven percent.²⁶³ The United States Government Accountability Office, in investigating this issue, has identified a few reasons why this is the case.²⁶⁴ First, not all tribes have reservations, and thus they may be unable to regulate land use.²⁶⁵

²⁵⁷ FARBER, ET AL., *supra* note 149, at 90.

²⁵⁸ *National Flood Insurance Program (NFIP)*, NAT'L ASS'N INS. COMM'RS (Jan. 9, 2013), http://www.naic.org/cipr_topics/topic_nfip.htm (last visited April 23, 2013).

²⁵⁹ 50 U.S.C. § 4001(a).

²⁶⁰ *National Flood Insurance Program (NFIP)*, *supra* note 258; *see supra* text accompanying note 156.

²⁶¹ 50 U.S.C. § 4022; 42 U.S.C. § 5154(a). *See also* 50 U.S.C. § 4106(a) (requiring NFIP participation for federal construction funding in any flood-prone area).

²⁶² U.S. GOV'T ACCOUNTABILITY OFFICE, HIGH RISK SERIES: AN UPDATE 255 (2013), *available at* <http://www.gao.gov/products/GAO-13-283>.

²⁶³ U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 46, at 13.

²⁶⁴ *Id.* at 11-20.

²⁶⁵ *Id.* at 11, 18-20.

Second, as tribal communities are often located in more remote areas, FEMA has not yet developed the requisite flood plain maps for many of them.²⁶⁶ This map shortage has hindered the ability of those tribes which can institute land use controls to do so.²⁶⁷ Lastly, administration and premium costs are a concern.²⁶⁸ Tribes which do not yet have land use codes may find it difficult or impossible to fund their creation and enforcement.²⁶⁹ Furthermore, even if tribal governments have those resources, tribal residents may not.²⁷⁰ Higher than average rates of poverty amongst American Indians often means that even government-sponsored flood insurance is unattainable.²⁷¹

As the National Flood Insurance Program is amended in the future, Congress and FEMA should discuss ways to make this resource more accessible to tribal communities. It seems as though they will, given that a recent amendment to the National Flood Insurance Act commissioned the Government Accountability Office's report, which describes not only the problem, but also potential solutions.²⁷² The Office recommends that FEMA conduct more outreach activities to engage tribal communities.²⁷³ It also recommends the development or extension of grants to make flood insurance more affordable.²⁷⁴

Lastly, another area of the National Flood Insurance Program in need of improvement, at least with respect to the program's ability to combat climate change effects, is FEMA's current inability to consider climate change in mapping flood risks.²⁷⁵ Currently, despite push back from

²⁶⁶ *Id.* at 14.

²⁶⁷ *Id.* at 14, 20.

²⁶⁸ *Id.* at 16-17.

²⁶⁹ *Id.* at 16.

²⁷⁰ *Id.* at 16-17.

²⁷¹ *Id.*

²⁷² *Id.* at 23-29.

²⁷³ *Id.* at 24.

²⁷⁴ *Id.*

²⁷⁵ Star-Ledger Editorial Board, *FEMA's Climate Change Denial: Editorial*, NJ.COM (March 31, 2013), http://blog.nj.com/njv_editorial_page/2013/03/femas_climate_change_denial_ed.html (last visited April 23, 2013).

New Jersey residents desiring updated information in the wake of Hurricane Sandy, FEMA's official position is that the Biggert-Waters Flood Insurance Reform Act of 2012 statutorily bars the agency from updating their maps to reflect rising sea levels.²⁷⁶ It seems that this may be the case, as the recent amendment delegates the determination of whether climate change should be considered, and how, to the Technical Mapping Advisory Council.²⁷⁷

This is troublesome for New Jersey residents, in that they are only required to purchase enough flood insurance to insure and subsequently re-build to heights that will withstand FEMA-predicted risks.²⁷⁸ If FEMA is not providing a complete evaluation in the wake of climate change, residents are concerned their reconstruction efforts may one day be in vain, subject to future flood destruction.²⁷⁹ The same will be true for tribal communities, or any coastal community attempting to prepare for or rebuild from flood risks. The Technical Mapping Advisory Council should make a recommendation that rising sea levels not only should be considered, but must be considered in mapping flood risks. Failing to do so goes against the current goals of DHS and FEMA to incorporate climate change effects into risk evaluation and building standards.²⁸⁰

CONCLUSION

Although there are aspects of disaster law that could, and should, be improved to better facilitate tribal participation,²⁸¹ disaster law is quickly becoming a solution for mitigating climate

²⁷⁶ *Id.*

²⁷⁷ *Summary of Changes to the National Flood Insurance Program: The Biggert-Waters Flood Insurance Reform Act of 2012*, LA. RESILIENCY ASSISTANCE PROGRAM (March 13, 2013, 9:33 AM), <http://www.resiliency.lsu.edu/content/summary-changes-national-flood-insurance-program-biggert-waters-flood-insurance-reform-act-2> (last visited April 23, 2013).

²⁷⁸ Star-Ledger Editorial Board, *supra* note 275.

²⁷⁹ *Id.*

²⁸⁰ *See supra* Section VI.D.

²⁸¹ *See supra* Part VII.

change impacts in Indian Country.²⁸² The Sandy Recovery Improvement Act of 2013's recent amendments to the Stafford Act, the nation's main piece of disaster legislation, have placed tribes on the same footing as states in their ability to request disaster aid.²⁸³ Furthermore, the amendments account for issues of social inequality through the potential waiver of the Stafford Act's cost-share provisions.²⁸⁴

While a logical solution to combating the natural disaster effects of climate change, disaster law was not always this accessible to tribes, and not the first strategy chosen.²⁸⁵ The Native Village of Kivalina filed suit in 2008 against energy and oil producers, hoping to recover damages under public nuisance for the adverse effects of climate change upon its community.²⁸⁶ However, litigation proved unsuccessful, with responsibility for action placed upon the EPA and Congress.²⁸⁷ While the EPA has shown willingness to regulate greenhouse gases, rulemaking has proven difficult in a social and political atmosphere hostile to remedying climate change.²⁸⁸

As the effects of climate change begin to manifest, it is expected Native Americans will be most affected.²⁸⁹ Their geographic location in coastal, arctic, and desert climates make their communities particularly vulnerable to disasters such as flooding, storms, drought, and wildfires.²⁹⁰ Tribes also have more at stake: the loss of subsistence lifestyles, cultural traditions, and sacred places.²⁹¹ Thus, although climate change poses risks for the entire world, Indigenous populations will experience them first.²⁹² Rather than wait for regulations or legislation, tribes

²⁸² *See supra* Part VI.

²⁸³ *See supra* Section V.B.

²⁸⁴ *See supra* Section VI.C.

²⁸⁵ *See supra* Sections V.B., III.B.

²⁸⁶ *See supra* Part III.

²⁸⁷ *See supra* Section III.B.

²⁸⁸ *See supra* Part IV.

²⁸⁹ *See supra* Part II.A.

²⁹⁰ *See supra id.*

²⁹¹ *See supra id.*

²⁹² *See supra id.*

should seek innovative solutions within already existing statutory schemes, such as disaster law.²⁹³

²⁹³ *See supra* Part IV.