State of Connecticut v. American Electric Power Company Inc.

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Argued: June 7, 2006

BEFORE: McLAUGHLIN and HALL, Circuit Judges.[1]

In 2004, two groups of Plaintiffs, one consisting of eight States and New York City, and the other consisting of three land trusts (collectively "Plaintiffs"), separately sued the same six electric power corporations that own and operate fossil-fuel-fired power plants in twenty states (collectively "Defendants"), seeking abatement of Defendants' ongoing contributions to the public nuisance of global warming. Plaintiffs claim that global warming, to which Defendants contribute as the "five largest emitters of carbon dioxide in the United States and... among the largest in the world," Connecticut v. Am. Elec. Power Co., 406 F. Supp. 2d 265, 268 (S.D.N.Y. 2005), by emitting 650 million tons per year of carbon dioxide, is causing and will continue to cause serious harms affecting human health and natural resources. They explain that carbon dioxide acts as a greenhouse gas that traps heat in the earth's atmosphere, and that as a result of this trapped heat, the earth's temperature has risen over the years and will continue to rise in the future. Pointing to a "clear scientific consensus" that global warming has already begun to alter the natural world, Plaintiffs predict that it "will accelerate over the coming decades unless action is taken to reduce emissions of carbon dioxide."

Plaintiffs brought these actions under the federal common law of nuisance or, in the alternative, state nuisance law, to force Defendants to cap and then reduce their carbon dioxide emissions. Defendants moved to dismiss on a number of grounds. The district court held that Plaintiffs' claims presented a non-justiciable political question and dismissed the complaints. See id.

On appeal, Plaintiffs argue that the political question doctrine does not bar adjudication of their claims; that they have standing to assert their claims; that they have properly stated claims under the federal common law of nuisance; and that their claims are not displaced by federal statutes. Defendants respond that the district court's judgment should be upheld, either because the complaints present non-justiciable political questions or on a number of alternate grounds: lack of standing; failure to state a claim; and displacement of federal common law. In addition, Defendant Tennessee Valley Authority ("TVA") asserts that the complaints should be dismissed against it on the basis of the discretionary function exception.

We hold that the district court erred in dismissing the complaints on political question grounds; that all of Plaintiffs have standing; that the federal common law of nuisance governs their claims; that Plaintiffs have stated claints under the federal common law of nuisance; that their claims are not

displaced; and that TVA's alternate grounds for dismissal are without merit. We therefore vacate the judgment of the district court and remand for further proceedings.

Given the number of issues involved, we set out the following table of contents.

BACKGROUND

I. The States' Complaint

In July 2004, eight States-California, Connecticut, Iowa, New Jersey, New York, Rhode Island, Vermont, and Wisconsin-and the City of New York (generally, hereinafter, "the States") filed a complaint against Defendants American Electric Power Co., Inc., American Electric Power Service Corp., Southern Company, TVA, Xcel Energy, and Cinergy Corp.[2] The complaint sought "abatement of defendants' ongoing contributions to a public nuisance" under federal common law, or in the alternative, under state law. Specifically, the States assert that Defendants are "substantial contributors to elevated levels of carbon dioxide and global warming," as their annual emissions comprise "approximately one quarter of the U.S. electric power sector's carbon dioxide emissions and approximately ten percent of all carbon dioxide emissions from human activities in the United States." Moreover, the rate of increase of emissions from the U.S. electric power sector is expected to rise "significantly faster than the projected growth rate of emissions from the economy as a whole" from now until the year 2025. At the same time, the States contend that Defendants have "practical, feasible and economically viable options for reducing emissions without significantly increasing the cost of electricity for their customers."

The complaint cites reports from the Intergovernmental Panel on Climate Change and the U.S. National Academy of Sciences to support the States' claims of a causal link between heightened greenhouse gas concentrations and global warming, explaining that carbon dioxide emissions have persisted in the atmosphere for "several centuries and thus have a lasting effect on climate." The States posit a proportional relationship between carbon dioxide emissions and injury: "The greater the emissions, the greater and faster the temperature change will be, with greater resulting injuries. The lower the level of emissions, the smaller and slower the total temperature change will be, with lesser injuries." The States caution that the earth's climate "can undergo an abrupt and dramatic change when a 'radiative forcing agent' causes the Earth's climate to reach a tipping point." Carbon dioxide emissions constitute such a radiative forcing agent due to its heat-trapping effects, and therefore, as stated by the National Academy of Sciences, the unrestrained and ever-increasing emissions of greenhouse gases from fossil fuel combustion increases the risk of an abrupt and catastrophic change in the Earth's climate when a certain, unknown, tipping point of radiative forcing is reached. An abrupt change in the Earth's climate can transpire in a period as short as ten

years. Defendants' emission of millions of tons of carbon dioxide each year contribute to this risk of an abrupt change in climate due to global warming.

As a result, the States predict that these changes will have substantial adverse impacts on their environments, residents, and property, and that it will cost billions of dollars to respond to these problems.

The complaint details the harms that will befall the States, plaintiff by plaintiff. Not only does the complaint spell out expected future injuries resulting from the increased carbon dioxide emissions and concomitant global warming, but it also highlights current injuries suffered by the States. As an example of global warming having already begun to alter a State's climate, the complaint refers to the reduction of California's mountain snowpack, "the single largest freshwater source, critical to sustaining water to the State's 34 million residents during the half of each year when there is minimal precipitation." The complaint goes on to explain that [d]iminished summer runoff from mountain snow will cause water shortages and disruptions to the interrelated water systems and hydroelectric plants on which the State's residents rely. Flooding will increase in California as a result of the earlier melting. This process of reduced mountain snowpack, earlier melting and associated flooding, and reduced summer streamflows already has begun.

Other current injuries resulting from climate changes that the States allege they have already begun to experience include warmer average temperatures, later fall freezes and earlier spring thaws, and the decrease in average snowfall and duration of snow cover on the ground in New England and California. While the complaint does not articulate the impact of these changes on the States currently, it does discuss the effect of these changes in the context of future injuries.

With regard to future injuries, the complaint categorizes in detail a range of injuries the States expect will befall them within a span of ten to 100 years if global warming is not abated. Among the injuries they predict are: increased illnesses and deaths caused by intensified and prolonged heat waves; increased smog, with a concomitant increase in residents' respiratory problems; significant beach erosion; accelerated sea level rise and the subsequent inundation of coastal land and damage to coastal infrastructure; salinization of marshes and water supplies; lowered Great Lakes water levels, and impaired shipping, recreational use, and hydropower generation; more droughts and floods, resulting in property damage; increased wildfires, particularly in California; and the widespread disruption of ecosystems, which would seriously harm hardwood forests and reduce biodiversity. The States claim that the impact on property, ecology, and public health from these injuries will cause extensive economic harm.

Seeking equitable relief, the States seek to hold Defendants jointly and severally liable for creating, contributing to, or maintaining a public nuisance. They also seek permanently to enjoin each Defendant to abate that nuisance first by capping carbon dioxide emissions and then by reducing emissions by a specified percentage each year for at least ten years.

II. The Land Trusts' Complaint

Also in July 2004, three land trusts ("the Trusts")-the Open Space Institute ("OSI"), the Open Space Conservancy ("OSC"), and the Audubon Society of New Hampshire ("Audubon")-filed a complaint against the same six Defendants named in the States' complaint. The Trusts are "nonprofit land trusts that acquire and maintain ecologically significant and sensitive properties for scientific and educational purposes, and for human use and enjoyment. They own nature sanctuaries, outdoor research laboratories, wildlife preserves, recreation areas, and open space." OSI "was formed to help protect the natural environment by, among other means, preserving open space and open land for recreation, conservation, and resource and wildlife protection. OSI holds and manages interests in real property in order to preserve and enhance those properties' natural and ecological values." OSC, organized and operated to carry out the purposes of OSI, "holds and manages lands, and conservation easements on lands, in order to preserve and enhance those lands' natural and ecological values." It has an inventory of land and conservation easements "with a book value of approximately $56 million." Audubon "owns and preserves more than 6,000 acres of sensitive land" throughout New Hampshire as nature sanctuaries. "Tens of thousands of people" visit the OSC/OSI properties annually, and all of Audubon's properties are open to the public. Their complaint asserts that "[w]hile the global warming to which Defendants contribute injures the public at large, Plaintiffs suffer special injuries, different in degree and kind from injuries to the general public." They then enumerate how the ecological value of specific properties in which they have an interest will be diminished or destroyed by global warming. For example, the Trusts claim that the accelerated sea level rise and coastal storm surges caused by global warming would permanently inundate some of their property, salinizing marshes and destroying wildlife habitat. Increased smog attributed to global warming would "diminish or destroy the health of the forests that are central ecological features of [their] properties" and cause the loss or decline of other species inhabiting those properties.

The Trusts also base their claims on the federal common law of nuisance or, in the alternative, "the statutory and/or common law of private and public nuisance of each of the states where [Defendants] own, manage, direct, and/or operate fossil fuel-fired electric generating facilities." They assert that reductions in Defendants' "massive carbon dioxide emissions will reduce all injuries and risks of injuries to the public, and all special injuries to Plaintiffs, from global warming." Accordingly, the Trusts seek to abate Defendants' "ongoing contributions to global warming."

In many ways, the Trusts' complaint mirrors that of the States. It explains the heat-trapping effects of carbon dioxide, identifies the significant emissions by Defendants, outlines the current and projected impact of global warming, and posits that a reduction of emissions would prevent, diminish, or delay the harmful effects of global warming. The principal difference between the complaints lies in the nature of the injury alleged, as the Trusts' complaint details the special injuries to their property interests that would occur as a result of global warming. The Trusts predict that global warming would "diminish or destroy the particular ecological and aesthetic values that caused

[them] to acquire, and cause them to maintain, the properties they hold in trust" and would "interfer[e] with their efforts to preserve ecologically significant and sensitive land for scientific and educational purposes, and for human use and enjoyment."

III. The District Court's Amended Opinion and Order

In district court, Defendants moved to dismiss both complaints on several grounds. They asserted that Plaintiffs failed to state a claim because: "(1) there is no recognized federal common law cause of action to abate greenhouse gas emissions that allegedly contribute to global warming; (2) separation of powers principles preclude this Court from adjudicating these actions; and (3) Congress had displaced any federal common law cause of action to address the issue of global warming." Am. Elec. Power Co., 406 F. Supp. 2d at 270. They also contended that the court lacked jurisdiction over Plaintiffs' claims because: "(1) Plaintiffs do not have standing to sue on account of global warming and (2) Plaintiffs' failure to state a claim under federal law divests the court of § 1331 jurisdiction." Id. In addition, four of the defendants moved to dismiss for lack of personal jurisdiction and TVA moved to dismiss on the ground of the discretionary function exception. Id.

In an Amended Opinion and Order, the district court dismissed the complaints, interpreting Defendants' argument that "separation-of-powers principles foreclosed recognition of the unprecedented 'nuisance' action plaintiffs assert" as an argument that the case raised a non-justiciable political question. Id. at 271. Drawing on Baker v. Carr, 369 U.S. 186, 198 (1962), in which the Supreme Court enumerated six factors that may indicate the existence of a non-justiciable political question, the district court stated that "[a]lthough several of these [Baker v. Carr] indicia have formed the basis for finding that Plaintiffs raise a non-justiciable political question, the third indicator is particularly pertinent to this case." Am. Elec. Power Co., 406 F. Supp. 2d at 271-72. The court based its conclusion that the case was non-justiciable solely on that third Baker factor, finding that Plaintiffs' causes of action were "'impossib[le] [to] decid[e] without an initial policy determination of a kind clearly for nonjudicial discretion.'" Id. (quoting Vieth v. Jubelirer, 541 U.S. 267, 278 (2004)). In the court's view, this factor counseled in favor of dismissal because it would not be able to balance those "interests seeking strict schemes to reduce pollution rapidly to eliminate its social costs" against "interests advancing the economic concern that strict schemes [will] retard industrial development with attendant social costs." Id. (quoting Chevron USA, Inc. v. Natural Res. Def. Council, Inc., 467 U.S. 837, 847 (1984) (internal quotation marks omitted)). The district court concluded that balancing those interests required an "'initial policy determination' first having been made by the elected branches to which our system commits such policy decisions, viz., Congress and the President." Id.

In addition, the district court rejected Plaintiffs' arguments that they were presenting "simple nuisance claim[s] of the kind courts have adjudicated in the past," observing that none of the other public nuisance cases involving pollution "touched on so many areas of national and international policy." Id. According to the district court, the broad reach of the issues presented revealed the

"transcendently legislative nature of this litigation." Id. If it were to grant the relief sought by Plaintiffs-capping carbon dioxide emissions-the court believed that it would be required, at a minimum, to: determine the appropriate level at which to cap the emissions and the appropriate percentage reduction; create a schedule to implement the reductions; balance the implications of such relief with the United States' ongoing climate change negotiations with other nations; and assess and measure available alternative energy resources, "all without an 'initial policy determination' having been made by the elected branches." Id. at 272-73. The district court pointed to the "deliberate inactions of Congress and the Executive," both in the domestic and international arena "in response to the issue of climate change," and remonstrated Plaintiffs for seeking to impose by "judicial fiat" the kind of relief that Congress and the Executive had specifically refused to impose. Id. at 273-74. That fact underscored for the court that the "initial policy determination addressing global climate change" was an undertaking for the political branches, which were charged with the "identification and balancing of economic, environmental, foreign policy, and national security interests." Id. at 274.

Judgment entered on September 19, 2005, and both groups of Plaintiffs timely appealed. Amici have submitted briefs as well, but most of them are untimely and we will therefore not consider them.[3]

DISCUSSION

I. Standard of Review

"We review de novo a district court's grant of a motion to dismiss for lack of subject matter jurisdiction and for failure to state a claim upon which relief may be granted." Flores v. S. Peru Copper Corp., 414 F.3d 233, 241 (2d Cir. 2003). "For the purpose of such review, this Court must accept as true all allegations in the complaint and draw all reasonable inferences in favor of the non-moving party." Gorman v. Consol. Edison Corp., 488 F.3d 586, 591-92 (2d Cir. 2007) (citing Taylor v. Vt. Dep't of Educ., 313 F.3d 768, 776 (2d Cir. 2002)).

If a complaint presents a non-justiciable political question, the proper course is for us to affirm dismissal. See 767 Third Ave. Assocs. v. Consulate Gen. of Socialist Fed. Republic of Yugoslavia, 218 F.3d 152, 164 (2d Cir. 2000) ("[W]here adjudication would force the court to resolve 'political questions,' the proper course for the courts is to dismiss.").

II. The Political Question Doctrine

A. Overview of the Political Question Doctrine

The political question doctrine is "primarily a function of the separation of powers," Baker v. Carr, 369 U.S. 186, 210 (1962), "designed to restrain the Judiciary from inappropriate interference in the business of the other branches of Government," United States v. MunozFlores, 495 U.S. 385, 394

(1990), where that other branch is better suited to resolve an issue. This limitation on the federal courts was recognized in Marbury v. Madison, 5 U.S. (1 Cranch) 137 (1803), in which Chief Justice Marshall wrote, "[q]uestions, in their nature political, or which are, by the constitution and laws, submitted to the executive, can never be made in this court." Id. at 170. Consequently, "[o]ut of due respect for our coordinate branches and recognizing that a court is incompetent to make final resolution of certain matters, these political questions are deemed 'nonjusticiable.'" Lane ex rel. Lane v. Halliburton, 529 F.3d 548, 557 (5th Cir. 2008). See generally Schneider v. Kissinger, 412 F.3d 190, 194-96 (D.C. Cir. 2005) (describing Constitution's textual allocation of authority among three branches of government).

In an effort to "expose the attributes of the [political question] doctrine-attributes which, in various settings, diverge, combine, appear, and disappear in seeming disorderliness," Baker, 369 U.S. at 210, the Court set out six "formulations" which "may describe a political question": Prominent on the surface of any case held to involve a political question is found [(1)] a textually demonstrable constitutional commitment of the issue to a coordinate political department; or [(2)] a lack of judicially discoverable and manageable standards for resolving it; or [(3)] the impossibility of deciding without an initial policy determination of a kind clearly for nonjudicial discretion; or [(4)] the impossibility of a court's undertaking independent resolution without expressing lack of the respect due coordinate branches of government; or [(5)] an unusual need for unquestioning adherence to a political decision already made; or [(6)] the potentiality of embarrassment from multifarious pronouncements by various departments on one question.

Id. at 217. Baker set a high bar for nonjusticiability: "Unless one of these formulations is inextricable from the case at bar, there should be no dismissal for non-justiciability on the ground of a political question's presence." Id. (emphasis added). In a recent pronouncement on the political question doctrine, the Supreme Court noted that the Baker factors "are probably listed in descending order of both importance and certainty." Vieth v. Jubelirer, 541 U.S. 267, 278 (2004). Notwithstanding ample litigation, the Supreme Court has only rarely found that a political question bars its adjudication of an issue. See Rachel E. Barkow, More Supreme Than Court? The Fall of the Political Question Doctrine & the Rise of Judicial Supremacy, 102 Colum. L. Rev. 237, 267-68 (2002) ("In fact, in the almost forty years since Baker v. Carr was decided, a majority of the Court has found only two issues to present political questions, and both involved strong textual anchors for finding that the constitutional decision rested with the political branches.").

Defendants' arguments touch upon the two most highly litigated areas of the political question doctrine: domestic controversies implicating constitutional issues and the conduct of foreign policy. In the first area, courts generally analyze the language of the Constitution to determine whether adjudication of a dispute is "textually committed" to the Executive or Legislative branches. See, e.g., Nixon v. United States, 506 U.S. 224, 228, 238 (1993) (finding political question in case where federal judge alleged that the Senate's impeachment procedures violated the Constitution's Impeachment Clause and the Senate, not the Court, had sole discretion to choose impeachment procedures);

Gilligan v. Morgan, 413 U.S. 1, 7 (1973) (finding political question based on Article I, Section 8, Clause 16 of the U.S. Constitution in case where the relief sought by former Kent State University students over the training, weaponry, and orders of the Ohio National Guard "embrace[d] critical areas of responsibility vested by the Constitution in the Legislative and Executive branches of the Government"); United States v. Sitka, 845 F.2d 43, 46 (2d Cir. 1988) (basing its ruling on the holding in Coleman v. Miller, 307 U.S. 433, 450-56 (1939), that "procedures employed in the ratification of constitutional amendments" presented non-justiciable political questions, and affirming dismissal of taxpayer's challenge to allegedly improper ratification of Sixteenth Amendment).

However, not all cases touching upon constitutional issues that may also raise "an issue of great importance to the political branches" and have "motivated partisan and sectional debate," present non-justiciable political questions. U.S. Dep't of Commerce v. Montana, 503 U.S. 442, 458 (1992). In Montana, the Supreme Court wrote that, in invoking the political question doctrine, a court acknowledges the possibility that a constitutional provision may not be judicially enforceable. Such a decision is of course very different from determining that specific congressional action does not violate the Constitution. That determination is a decision on the merits that reflects the exercise of judicial review, rather than the abstention from judicial review that would be appropriate in a case of a true political question.

Id.; see also, e.g., Wesberry v. Sanders, 376 U.S. 1 (1964) (ruling that challenge to state districting decisions relating to the election of Members of Congress was justiciable).

The second-and more frequently litigated-area where cases "might pose special questions concerning the judiciary's proper role [is] when adjudication might have implications in the conduct of this nation's foreign relations." Kadic v. Karadzic, 70 F.3d 232, 248 (2d Cir. 1995). The Supreme Court has explained that "[t]he conduct of the foreign relations of our Government is committed by the Constitution to the executive and legislative-'the political'-departments of the government, and the propriety of what may be done in the exercise of this political power is not subject to judicial inquiry or decision." Oetjen v. Cent. Leather Co., 246 U.S. 297, 302 (1918). Baker summarized the areas where federal courts have found nonjusticiable political questions in foreign relations matters, such as "recognition of foreign governments," "which nation has sovereignty over disputed territory," "recognition of belligerency abroad," determination of "a person's status as representative of a foreign government," and "[d]ates of duration of hostilities." Baker, 369 U.S. at 212, 213; see, e.g., Johnson v. Eisentrager, 339 U.S. 763, 789 (1950) (challenging the President's decision to deploy troops in a foreign land); Jones v. United States, 137 U.S. 202, 212 (1890) ("Who is the sovereign, de jure or de facto, of a territory, is not a judicial, but a political, question, the determination of which by the legislative and executive departments of any government conclusively binds the judges, as well as all other officers, citizens, and subjects of that government."); Whiteman v. Dorotheum GmbH & Co., KG, 431 F.3d 57, 59-60 (2d Cir. 2005) (holding that deference to U.S. statement of foreign policy interests urging dismissal of claims against foreign sovereign was appropriate where Executive branch and U.S. Government had entered agreements and therefore resolution of issue in alternate

international forum would be superior to federal court litigation of issue); In re Austrian & German Holocaust Litig., 250 F.3d 156, 164 (2d Cir. 2001) (holding that a district court order that "seemingly requires the German legislature to make a finding of legal peace and to do so before its summer recess" improperly intruded into the Executive's realm); 767 Third Ave. Assocs., 218 F.3d at 159-60 (determining whether successor States succeeded to liabilities of dissolved former State); Can v. United States, 14 F.3d 160, 162-63 (2d Cir. 1994) (holding that a determination of title to blocked South Vietnamese assets would require resolution of issues of state succession and the President's power to recognize foreign governments, which were constitutionally committed to the Executive branch).

In sum,

[t]he political question doctrine excludes from judicial review those controversies which revolve around policy choices and value determinations constitutionally committed for resolution to the halls of Congress or the confines of the Executive Branch. The Judiciary is particularly ill suited to make such decisions, as 'courts are fundamentally underequipped to formulate national policies or develop standards for matters not legal in nature.'

Japan Whaling Ass'n v. Am. Cetacean Soc'y, 478 U.S. 221, 230 (1986) (quoting United States ex rel. Joseph v. Cannon, 642 F.2d 1373, 1379 (D.C. Cir. 1981) (footnote omitted)). Nevertheless, "[t]he political question doctrine must be cautiously invoked," Can, 14 F.3d at 163, and simply because an issue may have political implications does not make it non-justiciable, see Baker, 369 U.S. at 211, 217 (cautioning that the doctrine "is one of 'political questions,' not one of 'political cases'" and that, in the foreign relations sphere, "it is error to suppose that every case or controversy which touches foreign relations lies beyond judicial cognizance"). As the Fifth Circuit recently wrote, "[t]he Baker analysis is not satisfied by 'semantic cataloguing' of a particular matter as one implicating 'foreign policy' or 'national security.' Instead, Baker demands a 'discriminating inquiry into the precise facts and posture of the particular case' before a court may withhold its own constitutional power to resolve cases and controversies." Lane, 529 F.3d at 558 (quoting Baker, 369 U.S. at 216). This Court has held that the "preferable approach is to weigh carefully the relevant considerations on a case-by-case basis." Kadic, 70 F.3d at 249.

B. Application of the Baker Factors

As noted above, the district court found the third Baker factor "particularly pertinent" to its "finding that Plaintiffs raise a non-justiciable political question." Connecticut v. Am. Elec. Power Co., 406 F. Supp. 2d 265, 272 (S.D.N.Y. 2005). The court explained that an "initial policy determination" by the elected branches was required before it could adjudicate a global warming nuisance claim. Id. (internal quotation marks omitted). In buttressing its determination, the district court characterized Plaintiffs' arguments as "touch[ing] on so many areas of national and international policy," where the "scope and magnitude of the relief" sought "reveal[] the transcendently legislative nature of this

litigation." Id. On appeal, Plaintiffs contend that none of the Baker factors apply, while Defendants assert that each Baker factor applies.

1. The First Baker Factor: Is There a Textually Demonstrable Constitutional Commitment of the Issue to a Coordinate Political Department?

This Court has described the first Baker factor as the "dominant consideration in any political question inquiry." Lamont v. Woods, 948 F.2d 825, 831 (2d Cir. 1991). The first factor "recognizes that, under the separation of powers, certain decisions have been exclusively committed to the legislative and executive branches of the federal government, and are therefore not subject to judicial review." McMahon v. Presidential Airways, Inc., 502 F.3d 1331, 1358-59 (11th Cir. 2007).

Defendants define the issue in these two cases as "whether carbon dioxide emissions... should be subject to mandatory limits and/or reductions" and argue that resolution of that issue is "textually committed to Congress by the Commerce Clause" as a matter of "high policy." Beyond this cursory reference to "high policy," Defendants fail to explain how the emissions issue is textually committed to the Commerce Clause. We find this position insufficiently argued and therefore consider it waived. See Norton v. Sam's Club, 145 F.3d 114, 117 (2d Cir. 1998) ("Issues not sufficiently argued in the briefs are considered waived and normally will not be addressed on appeal.").

Next, Defendants argue that "permitting these and other plaintiffs to use an asserted federal common law nuisance cause of action to reduce domestic carbon dioxide emissions will impermissibly interfere with the President's authority to manage foreign relations"; that "unilateral reductions of U.S. carbon dioxide emissions would interfere with the President's efforts to induce other nations to reduce their emissions"; and the court's interjection in this arena would usurp the President's authority to "resolve fundamental policy questions" that he is seeking to solve through diplomatic means.

Again, Defendants make conclusory statements but provide no support for their argument in this section of their brief. They do, however, shed some light on these arguments in other parts of their brief. In their Statement of the Case, they note that the Senate urged President Clinton "not to sign any agreement that would result in serious harm to the economy or that did not include provisions limiting emissions by developing nations." In their discussion of displacement, they cite H.R. REP. NO. 102-474, pt. 1, at 152 (1992), which provides that mandatory emissions measures should be undertaken "only in the context of concerted international action," and state that three Presidents have worked "within the United Nations framework and elsewhere to develop... an effective and science-based response to the issue of global warming." Defendants conclude that "unilateral, mandatory emissions reductions... will undermine the nation's multilateral strategy" and "reduce[] the bargaining leverage the President needs to implement a multilateral strategy by giving him less to offer in exchange for reductions by other nations."

It cannot be gainsaid that global warming poses serious economic and ecological problems that have an impact on both domestic politics and international relations. Nevertheless, Defendants' characterization of this lawsuit as implicating "complex, inter-related and far-reaching policy questions about the causes of global climate change and the most appropriate response to it" magnifies to the outer limits the discrete domestic nuisance issues actually presented. A result of this magnification is to misstate the issues Plaintiffs seek to litigate. Nowhere in their complaints do Plaintiffs ask the court to fashion a comprehensive and far-reaching solution to global climate change, a task that arguably falls within the purview of the political branches.[4] Instead, they seek to limit emissions from six domestic coal-fired electricity plants on the ground that such emissions constitute a public nuisance that they allege has caused, is causing, and will continue to cause them injury. A decision by a single federal court concerning a common law of nuisance cause of action, brought by domestic plaintiffs against domestic companies for domestic conduct, does not establish a national or international emissions policy (assuming that emissions caps are even put into place). Nor could a court set across-the-board domestic emissions standards or require any unilateral, mandatory emissions reductions over entities not party to the suit.[5] In contrast to cases such as Whiteman v. Dorotheum GmbH & Co. and In re Austrian & German Holocaust Litig., where courts have found political questions barring adjudication, invocation of the political question doctrine here is unwarranted because the relief for which Plaintiffs pray applies in only the most tangential and attenuated way to the expansive domestic and foreign policy issues raised by Defendants.[6]

In this common law nuisance case, "[t]he department to whom this issue has been 'constitutionally committed' is none other than our own-the Judiciary." Klinghoffer v. S.N.C. Achille Lauro, 937 F.2d 44, 49 (2d Cir. 1991); see also Me. People's Alliance & Natural Res. Def. Council v. Mallinckrodt, Inc., 471 F.3d 277, 286 (1st Cir. 2006) ("[N]uisance principles contribute heavily to the doctrinal template that underbraces [environmental] statutes... and the tasks involved in adjudicating environmental cases are well within the federal courts' accustomed domain.") (internal citation omitted).

We find no textual commitment in the Constitution that grants the Executive or Legislative branches responsibility to resolve issues concerning carbon dioxide emissions or other forms of alleged nuisance. Accordingly, we hold that the first Baker factor does not apply.

2. The Second Baker Factor: Is There a Lack of Judicially-Discoverable and Manageable Standards for Resolving This Case?

"One of the most obvious limitations imposed by [Article III, Section 1 of the Constitution] is that judicial action must be governed by standard, by rule." Vieth v. Jubelirer, 541 U.S. 267, 278 (2004) (plurality opinion). Defendants point to the complexities involved in pollution control cases and assert that such intricacies "pale in comparison to those presented here," given the uncertainties surrounding the precise effect of greenhouse gas emissions on climate. Those uncertainties, Defendants argue, are "mere preludes to the unmanageable policy questions a court would then have to confront" in adjudicating Plaintiffs' claim, including: How fast should emissions be reduced?;

Should power plants or automobiles be required to reduce emissions?; Who should bear the cost of reduction?; and How are the impacts on jobs, the economy, and the nation's security to be balanced against the risks of future harms? Quoting City of Milwaukee v. Illinois, 451 U.S. 304, 317 (1981) ("Milwaukee II"), Defendants assert that the "vague and indeterminate nuisance concepts and maxims of equity" gleaned from public nuisance cases or the Restatement (Second) of Torts § 821B (1979)[7] provide no guidance for resolving these unmanageable issues.

Defendants' argument is undermined by the fact that federal courts have successfully adjudicated complex common law public nuisance cases for over a century. The first cases involved States bringing claims against other States, or against private parties in other States, in the Supreme Court under its original jurisdiction. For example, in 1901, the Supreme Court decided Missouri v. Illinois, 180 U.S. 208 (1901) ("Missouri I"), a public nuisance case in which Missouri sued to prevent Illinois from discharging sewage into a channel that emptied into the Mississippi River forty-three miles above St. Louis, which Missouri feared would make the water unfit for human, agricultural, or manufacturing purposes. The Court held that Missouri could maintain a lawsuit for equitable relief even before it actually sustained injury.[8] Illinois later began discharging sewage into the river. In Missouri v. Illinois, 200 U.S. 496 (1906) ("Missouri II"), Missouri brought a second suit before the Court, seeking to enjoin the discharge on the ground that it constituted a public nuisance. The Court carefully appraised the sophisticated scientific and expert evidence offered (such as whether the typhoid bacillus could survive the waterborne journey), weighed the equities, and concluded that Missouri had not made its case, particularly with respect to establishing injury and causation. Id. at 522-26.

Another example of the federal courts' masterful handling of complex public nuisance issues concerned an air pollution controversy. Between 1907 and 1916, the State of Georgia appeared before the Supreme Court on four different occasions in its suit against Tennessee Copper Company and another copper foundry, alleging that noxious emissions from the plants were destroying forests, orchards, and crops in Georgia. In the first action, the Court characterized Georgia's injuries as "analogous to torts" and adjudicated the merits. Georgia v. Tenn. Copper Co., 206 U.S. 230, 237-39 (1907). Next, the Court assessed the adequacy of steps taken by the defendants to abate the fumes and ordered injunctive relief including a reduction of sulfur dioxide emissions and total emissions to not more than 20 tons per day from April to October of each year and to not more than 40 tons per day during the rest of the year. Georgia v. Tenn. Copper Co., 237 U.S. 474, 474-78 (1915). The Court then discussed facts relevant to appropriate emissions limitations. Georgia v. Tenn. Copper Co., 237 U.S. 678, 678-80 (1915). In its final decree, the Court set definitive emissions limits, imposed monitoring requirements, and apportioned costs between the defendants. Georgia v. Tenn. Copper Co., 240 U.S. 650, 650-51 (1916). In adjudicating this dispute, the Court evaluated the evidence, considered the magnitude of the injury, causation, and equitable factors, and granted injunctive relief to Georgia, "satisfied, by a preponderance of evidence, that the sulphurous fumes cause and threaten damage on so considerable a scale to the forests and vegetable life, if not to health, within the plaintiff state, as to make out a case within the requirements of [Missouri II]." Tenn. Copper, 206 U.S. at 238-39.

These cases were among the first in a long line of federal common law of nuisance cases where federal courts employed familiar public nuisance precepts, grappled with complex scientific evidence, and resolved the issues presented, based on a fully developed record. See, e.g., New Jersey v. City of New York, 283 U.S. 473 (1931) (seeking to enjoin New York from dumping garbage into the ocean and polluting New Jersey beaches and water); North Dakota v. Minnesota, 263 U.S. 365 (1923) (seeking to enjoin, as public nuisance, a Minnesota irrigation project that contributed to flooding of North Dakota farmland); New York v. New Jersey, 256 U.S. 296 (1921) (seeking to enjoin sewage discharge into boundary waters and causing pollution); Pennsylvania v. Wheeling & Belmont Bridge Co., 54 U.S. (13 How.) 518 (1851) (alleging interference with navigation on Ohio River by low bridge as constituting public nuisance). See also Illinois v. City of Milwaukee, 406 U.S. 91 (1972) ("Milwaukee I") (agreeing that sewage discharge constituted public nuisance and that case could still be adjudicated by federal courts under federal common law because amendments to Clean Water Act did not provide remedy).

Moreover, as a general matter, the Supreme Court and this Court have often turned to the Restatement (Second) of Torts for assistance in developing standards in a variety of tort cases.[9] See, e.g., United States v. Atl. Research Corp., 551 U.S. 128, 141 (2007) (invoking Restatement (Second) of Torts § 886A(2) in applying traditional rules of equity when assessing liability in CERCLA case); Anza v. Ideal Steel Supply Corp., 547 U.S. 451, 466-67 (2006) (citing Restatement for proximate cause and certainty of damages); Higazy v. Templeton, 505 F.3d 161, 175 (2d Cir. 2007) (applying Restatement's proximate cause/superseding cause analysis in Bivens action); Khulumani v. Barclay Nat'l Bank Ltd., 504 F.3d 254, 287-88 (2d Cir. 2007) (per curiam) (Hall, J., concurring) (adopting Restatement's definition of aiding and abetting in Alien Tort Claims Act case); Project Hope v. M/V IBN SINA, 250 F.3d 67, 76 (2d Cir. 2001) (quoting Restatement (Second) of Torts § 879 for proposition that "federal common law permits imposition of joint and several liability"); see also Commonwealth Edison Co. v. United States, 271 F.3d 1327, 1353 (Fed. Cir. 2001) (looking to Restatement for contours and scope of common law nuisance). It is true that the Restatement's definition of public nuisance-"an unreasonable interference with a right common to the general public"-is broad. Restatement (Second) of Torts § 821B. But Judge James Oakes, sitting on the district court by designation, successfully applied the Restatement's standard in a common law nuisance action brought by the United States to reduce pollution of Lake Champlain by vessels that transported oil, ordering a detailed remedial plan. See United States v. Bushey & Sons, 363 F. Supp. 110, 120-21 (D. Vt. 1973), aff'd without opinion, 487 F.2d 1393 (2d Cir. 1973); see also Cox v. City of Dallas, 256 F.3d 281, 291 (5th Cir. 2001) (describing remedies available in nuisance actions by citing Restatement (Second) of Torts §§ 821B and 821C, and explaining that nuisance actions were "the common law backbone of modern environmental law" (citation omitted)); Nat'l Sea Clammers Ass'n v. City of New York, 616 F.2d 1222, 1234 (3d Cir. 1980), vacated on other grounds, 453 U.S. 1 (1981) (adopting Restatement definition of public nuisance and observing that the Restatement formulation "encompasses the injury alleged in this case"). In Section IV(B), infra, we apply the Restatement definition of public nuisance to the federal common law of nuisance and demonstrate that it provides a workable standard.

Following the Restatement and common law tort principles is consistent with the exigencies of common law decision-making, which proceeds through the incremental, analogical application of broadly-stated principles, and... is therefore not amenable to the formulation of finely detailed rules in the manner of a regulatory code.... [T]he contextual nature and factual sensitivity of common law judicial rulemaking takes account of the "practical problems" that can result from ill-designed legal rules, and the flexibility of the common law process allows those problems to be addressed and avoided as they arise.

Khulumani, 504 F.3d at 290 (Hall, J., concurring).

Federal courts have applied well-settled tort rules to a variety of new and complex problems. For example, in Klinghoffer, a wrongful death case where an American passenger on an ocean liner was killed by Palestinian Liberation Organization ("PLO") operatives, this Court rejected the PLO's argument that the claim presented a non-justiciable political question because it raised "foreign policy questions and political questions in a volatile context [, i.e., international terrorism,] lacking satisfactory criteria for judicial determination." Klinghoffer, 937 F.2d at 49. This Court looked beyond "[t]he fact that the issues before us arise in a politically charged context," discerned that the actual cause of action was "an ordinary tort suit, alleging that the defendants breached a duty of care owed to the plaintiffs or their decedents," and concluded that the political implications of the suit did not "convert what is essentially an ordinary tort suit into a non-justiciable political question." Id. With regard to the standards employed to assess the claims, this Court stated that "because the common law of tort provides clear and well-settled rules on which the district court can easily rely, this case does not require the court to render a decision in the absence of judicially discoverable and manageable standards." Id. (internal quotation marks omitted).

Accordingly, we do not agree that there are no judicially discoverable and manageable standards for resolving this case. Well-settled principles of tort and public nuisance law provide appropriate guidance to the district court in assessing Plaintiffs' claims and the federal courts are competent to deal with these issues. Defendants' arguments to the contrary are overstated. As noted above, Plaintiffs' complaints do not ask the district court to decide overarching policy questions such as whether other industries or emission sources not before the court must also reduce emissions or determine how across-the-board emissions reductions would affect the economy and national security. In adjudicating the federal common law of nuisance claim pleaded here, the district court will be called upon to address and resolve the particular nuisance issue before it, which does not involve assessing and balancing the kind of broad interests that a legislature or a President might consider in formulating a national emissions policy. The question presented here is discrete, focusing on Defendants' alleged public nuisance and Plaintiffs' alleged injuries. As the States eloquently put it, "[t]hat Plaintiffs' injuries are part of a worldwide problem does not mean Defendants' contribution to that problem cannot be addressed through principled adjudication."

That the district court may be called upon to decide causation issues and apply a remedy does not

remove the case from the ambit of nuisance actions. Federal courts have long been up to the task of assessing complex scientific evidence in cases where the cause of action was based either upon the federal common law or upon a statute. They are adept in balancing the equities and in rendering judgment. See, e.g., Amoco Prod. Co. v. Vill. of Gambell, 480 U.S. 531, 545 (1987) ("Environmental injury, by its nature, can seldom be adequately remedied by money damages and is often permanent or at least of long duration, i.e., irreparable. If such injury is sufficiently likely, therefore, the balance of harms will usually favor the issuance of an injunction to protect the environment."). The fact that a case may present complex issues is not a reason for federal courts to shy away from adjudication; when a court is possessed of jurisdiction, it generally must exercise it. Cohens v. Virginia, 19 U.S. (6 Wheat.) 264, 404 (1821). Additionally, the fact that this case is governed by recognized judicial standards under the federal common law of nuisance "obviates any need to make initial policy decisions of the kind normally reserved for nonjudicial discretion" and "further undermines the claim that such suits relate to matters that are constitutionally committed to another branch." Kadic, 70 F.3d at 249.

Defendants are not entitled to dismissal based on the second Baker factor.

3. The Third Baker Factor: Is It Impossible to Decide this Case Without an Initial Policy Determination of a Kind Clearly for Nonjudicial Discretion?

The district court relied upon the third Baker factor in dismissing Plaintiffs' complaints. It concluded that a solution to the problems created by carbon dioxide emissions must be global in nature and based on domestic policy considerations-such as the need to balance relevant environmental and economic interests and the possible impact on national security-and held that only the political branches are empowered to act in such a context. Am. Elec. Power Co., 406 F. Supp. 2d at 272-73. On appeal, Defendants contend that the relevant policy decision is not, as Plaintiffs argue, abatement of a nuisance. Instead, "[t]he missing policy decision is whether to impose mandatory greenhouse gas emissions limits and, if so, on whom, in what manner and at what cost. No such... decision can be found in statutes in which Congress has called for additional study but declined to impose such limits." Defendants argue that the "very nature of this phenomenon requires a comprehensive response."

The district court found it significant that the political branches had failed to supply an initial policy decision because they had refused to regulate carbon dioxide emissions. The court viewed the possibility of any regulation coming out of the courts as countering the political branches' refusal to act. Am. Elec. Power Co., 406 F. Supp. 2d at 273-74. The district court's reliance on a refusal to legislate results in a decision resting on particularly unstable ground. The Supreme Court has stated, in the context of displacement of federal common law, that "Congress's mere refusal to legislate... falls far short of an expression of legislative intent to supplant the existing common law in that area." United States v. Texas, 507 U.S. 529, 535 (1993). The district court's reasoning in this regard is inapposite in a case making a federal common law of nuisance claim where, if regulatory gaps exist,

common law fills those interstices. See generally Khulumani, 504 F.3d at 287 (citing U.S. v. Kimbell Foods, 440 U.S. 715, 727 (1979)).

The holding in Milwaukee I accentuates that point. In Milwaukee I, the federal government had "enacted numerous laws touching interstate waters," including the Federal Water Pollution Control Act and statutes researching the aquatic environment. Milwaukee I, 406 U.S. at 101-02. Because the pollution abatement remedy sought by Illinois was not "within the precise scope of remedies prescribed by Congress," the Court looked to federal common law to abate the nuisance, and to supply an appropriate remedy. Id. at 103-04. The Court wrote:

It may happen that new federal laws and new federal regulations may in time preempt the field of federal common law of nuisance. But until that comes to pass, federal courts will be empowered to appraise the equities of the suits alleging creation of a public nuisance by water pollution.

Id. at 107. Milwaukee I stands for the proposition that if the extant statutes governing water pollution do not cover a plaintiff's claims and provide a remedy, a plaintiff is free to bring its claim under the federal common law of nuisance; a plaintiff is not obliged to await the fashioning of a comprehensive approach to domestic water pollution before it can bring an action to invoke the remedy it seeks. See id. at 101-02. Similarly, the fact that the Clean Air Act ("CAA") or other air pollution statutes, as they now exist, do not provide Plaintiffs with the remedy they seek does not mean that Plaintiffs cannot bring an action and must wait for the political branches to craft a "comprehensive" global solution to global warming. Rather, Plaintiffs here may seek their remedies under the federal common law. They need not await an "initial policy determination" in order to proceed on this federal common law of nuisance claim, as such claims have been adjudicated in federal courts for over a century.

It is also fair to say that the Executive branch and Congress have not indicated they favor increasing greenhouse gases. On the contrary, the political branches are at the very least concerned about global warming, and Congress has passed laws that call for study of climate change and research into technologies that will reduce emissions. See, e.g., Global Climate Protection Act of 1987, Pub. L. No. 100-204, Title XI, §§ 1103, 101 Stat. 1407, as amended by Pub. L. No. 103-199, 107 Stat. 2327, reprinted as note to 15 U.S.C. § 2901 (stating that United States policy should seek to "(a) increase worldwide understanding of the greenhouse effect and its environmental and health consequences;... [and] (3) identify technologies and activities to limit mankind's adverse effect on the global climate by-(A) slowing the rate of increase of concentrations of greenhouse gases in the near term...."

As other courts have found, where a case "appears to be an ordinary tort suit, there is no 'impossibility of deciding without an initial policy determination of a kind clearly for nonjudicial discretion.'" McMahon v. Presidential Airways, Inc., 502 F.3d 1331, 1365 (11th Cir. 2007) (quoting Baker, 369 U.S. at 217). Such is the case here. Accordingly, the third Baker factor does not apply.

4. The Fourth, Fifth, and Sixth Baker Factors: Will Adjudication of This Case Demonstrate "Lack of Respect" for the Political Branches, Contravene "An Unusual Need for Unquestioning Adherence to a Political Decision Already Made," or "Embarrass" the Nation as a Result of "Multifarious Pronouncements by Various Departments"?

"The fourth through sixth Baker factors appear to be relevant only if judicial resolution of a question would contradict prior decisions taken by a political branch in those limited contexts where such contradiction would seriously interfere with important governmental interests." Kadic, 70 F.3d at 249. Defendants lump these final Baker factors together, arguing only that because "U.S. policy is manifestly not to engage in unilateral reductions of domestic emissions," where Congress opted only to study the issue, a judicially imposed resolution enjoining domestic emissions through federal common law would demonstrate a "lack of respect" for the political branches, contravene a "political decision already made," and create the potential for "embarrassment from multifarious pronouncements by various departments on one question."

Lurking behind Defendants' arguments is this salient question: What exactly is U.S. "policy" on greenhouse gas emissions? At one point in their briefs, Defendants acknowledge that this country's official policy and Congress's strategy is to reduce the generation of greenhouse gases. Elsewhere, they point to a policy of research as a prelude to formulating a coordinated, national policy. They also assert that U.S. policy is "not to engage in unilateral reduction of domestic emissions" (relating, in particular, to the international arena). These variegated pronouncements underscore the point that there really is no unified policy on greenhouse gas emissions.[10] Allowing this litigation where there is a lack of a unified policy does not demonstrate any lack of respect for the political branches, contravene a relevant political decision already made, or result in multifarious pronouncements that would embarrass the nation. See Alperin v. Vatican Bank, 410 F.3d 532, 558 (9th Cir. 2005) ("Because of a lack of a policy decision on point, we do not reach the question posed by the fifth Baker test whether there is an 'unusual need for unquestioning adherence' thereto." (quoting Baker, 369 U.S. at 217)); Klinghoffer, 937 F.2d at 50 ("[N]o prior political decisions are questioned-or even implicated-by the matter before us.").

At the same time, to the extent that Defendants claim U.S. emissions policy does not aim to reduce emissions, their argument is undermined by the legislation they cite in their brief, which supports a conclusion that U.S. emissions policy seeks to eventually achieve the "stabilization and eventual reduction in the generation of greenhouse gases," Energy Policy Act of 1992, 42 U.S.C. § 13382(a)(2), (g), and to "limit mankind's adverse effect on the global climate...," Global Climate Protection Act of 1987, § 1103(a)(3). In this respect, adjudication would certainly not contravene any political decision already made.

Certainly, the political implications of any decision involving possible limits on carbon emissions are important in the context of global warming, but not every case with political overtones is non-justiciable. It is error to equate a political question with a political case. See Baker, 369 U.S. at

217 ("The doctrine... is one of 'political questions,' not one of 'political cases.'"). Given the checks and balances among the three branches of our government, the judiciary can no more usurp executive and legislative prerogatives than it can decline to decide matters within its jurisdiction simply because such matters may have political ramifications.

Furthermore, given the nature of federal common law, where Congress may, by legislation, displace common law standards by its own statutory or regulatory standards and require courts to follow those standards, there is no need for the protections of the political question doctrine. The legislative branch is free to amend the Clean Air Act to regulate carbon dioxide emissions, and the executive branch, by way of the EPA, is free to regulate emissions, assuming its reasoning is not "divorced from the statutory text." Massachusetts v. EPA, 549 U.S. 497, 532 (2007). Either of these actions would override any decision made by the district court under the federal common law.

In sum, we hold that the district court erred when it dismissed the complaints on the ground that they presented non-justiciable political questions.

III. Standing

The district court explicitly declined to address Defendants' standing arguments, reasoning in a footnote that "because the issue of Plaintiffs' standing is so intertwined with the merits and because the federal courts lack jurisdiction over this patently political question, I do not address the question of Plaintiffs' standing." Connecticut v. Am. Elec. Power Co., 406 F. Supp. 2d 265, 271 n.6 (S.D.N.Y. 2005). In Friends of the Earth, Inc. v. Laidlaw Environmental Services, Inc., 528 U.S. 167 (2000), the Supreme Court held that when a lower court dismisses a case without deciding whether standing exists and the basis for the dismissal was found to be error, the Court has an obligation sua sponte to assure itself that the plaintiffs have Article III standing before delving into the merits. See id. at 180; see also Ross ex rel. Dunham v. Lantz, 408 F.3d 121 (2d Cir. 2005) (standing must be established to invoke jurisdiction before a federal court can consider the merits of a case). Because we hold that the complaints should not have been dismissed on the ground that they presented non-justiciable political questions, we must explore whether Plaintiffs have standing. The parties in this appeal have fully briefed the issue of standing.

The procedural posture of a case is important when assessing standing. The standard against which a court measures allegations of standing on the pleadings is well known:

[W]e presume the general factual allegations embrace those facts necessary to support the claim, see Lujan v. Defenders of Wildlife, 504 U.S. 555, 561 (1992), and are constrained not only to accept the truth of the plaintiffs' jurisdictional allegations, but also to construe all reasonable inferences to be drawn from those allegations in plaintiffs' favor. See Warth [v. Seldin], 422 U.S. [490,] 501-02 [(1975)]; Robinson v. Gov't of Malaysia, 269 F.3d 133, 140 (2d Cir. 2001).

Brooklyn Legal Servs. Corp. v. Legal Servs. Corp., 462 F.3d 219, 226 (2d Cir. 2006). The Supreme Court has commented on the lowered bar for standing at the pleading stage, stating that "general factual allegations of injury resulting from the defendant's conduct may suffice, for on a motion to dismiss we 'presum[e] that general allegations embrace those specific facts that are necessary to support the claim.'" Lujan v. Defenders of Wildlife, 504 U.S. 555, 561 (1992) (quoting Lujan v. Nat'l Wildlife Fed'n, 497 U.S. 871, 889 (1990)). This Court echoed that point in Baur v. Veneman, 352 F.3d 625, 631 (2d Cir. 2003), stating that "at the pleading stage, standing allegations need not be crafted with precise detail, nor must the plaintiff prove his allegations of injury." See also Bldg. & Constr. Trades Council of Buffalo v. Downtown Dev., Inc., 448 F.3d 138, 145 (2d Cir. 2006) (holding that federal pleading rules do not require heightened pleading standards to allege standing).

At this point in the litigation, Plaintiffs need not present scientific evidence to prove that they face future injury or increased risk of injury, that Defendants' emissions cause their injuries, or that the remedy they seek will redress those injuries. As the Baur Court wrote:

[T]o the degree that defendants challenge the factual underpinnings of [plaintiffs'] standing the argument is premature. Defendants may certainly test [plaintiffs'] standing as the litigation progresses by requesting an evidentiary hearing or by challenging [plaintiffs'] standing on summary judgment or even at trial. However, allegation of a credible risk may be sufficient at the pleading stage without further factual confirmation or quantification of the precise risk at issue. Adopting a more stringent view of the injury-in-fact requirement in environmental cases... would essentially collapse the standing inquiry into the merits.

Baur, 352 F.3d at 642 (alteration, internal quotation marks, and citations omitted). Although we are not reviewing the district court's ruling on a motion to dismiss for lack of standing, as the district court did not address that issue, we nevertheless are assessing two cases at the pleading stage and thus the Lujan-Baur reasoning applies.

In Connecticut v. Cahill, 217 F.3d 93 (2d Cir. 2000), this Court enumerated three capacities in which States may bring suit in federal court: "(1) proprietary suits in which the State sues much like a private party suffering a direct, tangible injury; (2) sovereignty suits requesting adjudication of boundary disputes or water rights; or (3) parens patriae suits in which States litigate to protect 'quasi-sovereign' interests." Id. at 97 (citations omitted). Here, the States are suing in both their proprietary and parens patriae capacities, and New York City and the Trusts are suing in their proprietary capacities. We analyze the States' parens patriae standing first, followed by an analysis of New York City's, the States', and the Trusts' proprietary standing.

A. The States' Parens Patriae Standing

1. Background

Parens patriae is an ancient common law prerogative which "is inherent in the supreme power of every state... [and is] often necessary to be exercised in the interests of humanity, and for the prevention of injury to those who cannot protect themselves." Late Corp. of the Church of Jesus Christ of Latter-Day Saints v. United States, 136 U.S. 1, 57 (1890). The Supreme Court, in Missouri I, articulated the rationale behind parens patriae standing in common law nuisance cases when it allowed Missouri to sue Illinois to enjoin it from dumping sewage that poisoned Missouri's water supply. The Court stated that:

[A]n adequate remedy can only be found in this court at the suit of the state of Missouri. It is true that no question of boundary is involved, nor of direct property rights belonging to the complainant state. But it must surely be conceded that, if the health and comfort of the inhabitants of a state are threatened, the state is the proper party to represent and defend them. If Missouri were an independent and sovereign State all must admit that she could seek a remedy by negotiation, and, that failing, by force. Diplomatic powers and the right to make war having been surrendered to the general government, it was to be expected that upon the latter would be devolved the duty of providing a remedy, and that remedy, we think, is found in the constitutional provisions we are considering.

Missouri I, 180 U.S. at 241. A few years later, the Court drew upon Missouri I's principles and extended this approach to a state's suit against a private party-once again in a common law nuisance suit. In Georgia v. Tenn. Copper Co., 206 U.S. 230 (1907), the Supreme Court's first major air pollution case, Georgia sought to enjoin Tennessee Copper from discharging noxious gases that, it claimed, injured its citizens and its land. Although the Court referred to Georgia's proprietary claims as a "makeweight," it allowed the state to sue "for an injury to it in its capacity of quasi-sovereign. In that capacity the state has an interest independent of and behind the titles of its citizens, in all the earth and air within its domain. It has the last word as to whether... its inhabitants shall breathe pure air." Id. at 237. The Tennessee Copper Court, citing Missouri II, explained that when the states joined the union, "they did not thereby agree to submit to whatever might be done. They did not renounce the possibility of making reasonable demands on the ground of their still remaining quasi-sovereign interests; and the alternative to force is a suit in this court." Id. These cases demonstrate that a state's interests in protecting both its natural resources and the health of its citizens have been recognized as legitimate quasi-sovereign interests since the turn of the last century. See id.; Snapp v. Puerto Rico ex rel. Barez, 458 U.S. 592, 603 (1982) (noting "a line of cases... in which States successfully sought to represent the interests of their citizens in enjoining public nuisance");[11] Pennsylvania ex rel. Shapp v. Kleppe, 533 F.2d 668, 673-74 (D.C. Cir. 1976) ("The earliest cases allowing a state to sue as representative of its citizenry involved the protection or preservation of land or other natural resources.... While the state thus lacked standing to sue in its own right, it was found to be a proper party to bring suit because of its residual interest independent of and behind the titles of its citizens, in all the earth and air within its domain." (citation and internal quotation marks omitted)).

2. Parens Patriae as a Species of Article III Standing

State standing is not monolithic and depends on the role a state takes when it litigates in a particular case. See Cahill, 217 F.3d at 97. In Snapp, the seminal modern-day parens patriae standing case, the Supreme Court explained how the capacity in which a state sues has an impact on the standing analysis. After discussing a state's sovereign interests, the Court drew a distinction between a state's proprietary and quasi-sovereign interests:

Not all that a State does, however, is based on its sovereign character. Two kinds of nonsovereign interests are to be distinguished. First, like other associations and private parties, a State is bound to have a variety of proprietary interests. A State may, for example, own land or participate in a business venture. As a proprietor, it is likely to have the same interests as other similarly situated proprietors. And like other such proprietors it may at times need to pursue those interests in court. Second, a State may, for a variety of reasons, attempt to pursue the interests of a private party, and pursue those interests only for the sake of the real party in interest....

Quasi-sovereign interests stand apart from... the above: They are not sovereign interests, proprietary interests, or private interests pursued by the State as a nominal party. They consist of a set of interests that the State has in the well-being of its populace. Formulated so broadly, the concept risks being too vague to survive the standing requirements of Art. III: A quasi-sovereign interest must be sufficiently concrete to create an actual controversy between the State and the defendant. The vagueness of this concept can only be filled in by turning to individual cases.

Snapp, 458 U.S. at 601-02 (emphases added).

In order to ensure that a state suing on behalf of its injured citizens properly asserts a case or controversy sufficient for Article III standing purposes, Snapp formulated a test for parens patriae standing. A state: (1) "must articulate an interest apart from the interests of particular private parties, i.e., the State must be more than a nominal party"; (2) "must express a quasi-sovereign interest"[12]; and (3) must have "alleged injury to a sufficiently substantial segment of its population."[13] Id. at 607; see also People of the State of N.Y. by Abrams v. Seneci, 817 F.2d 1015, 1017 (2d Cir. 1987) (analyzing state parens patriae standing according to Snapp criteria). This Court, in People of the State of New York by Abrams v. 11 Cornwell Co., 695 F.2d 34 (2d Cir. 1982), vacated in part on other grounds, 718 F.2d 22 (2d Cir. 1983) (en banc), added another requirement for states to sue as parens patriae: the Court must also make "a finding that individuals [upon whose behalf the state is suing] could not obtain complete relief through a private suit." Id. at 40; see also, e.g., Connecticut v. Physicians Health Servs. of Conn., Inc., 287 F.3d 110, 119-20 (2d Cir. 2002) (reviewing factors that the Supreme Court, Second Circuit, and other courts have viewed as prerequisites for parens patriae standing, including whether there were "'adequate alternative means of civil enforcement by which individual plaintiffs may obtain complete relief'" (quoting Connecticut v. Physicians Health Servs. of Conn., Inc., 103 F. Supp. 2d 495, 509 (D. Conn. 2000))).

The Snapp Court applied its test, post-hoc, to the public nuisance cases of Missouri and Tennessee Copper, finding that "the injury to the public health and comfort was graphic and direct," thereby giving an after-the-fact imprimatur to parens patriae standing in those public nuisance cases that satisfied Article III's "Case" or "Controversy" requirement. 458 U.S. at 604.

In the decades following Snapp, federal courts have applied its test to determine whether a state had standing as parens patriae. For the most part, in our increasingly statutory and regulatory system, courts have explored whether states have parens patriae standing under a statute, see, e.g., Seneci, 817 F.2d at 1017 (standing under RICO), rather than under federal common law.[14] The view that states' parens patriae standing sufficed for Article III standing was not called into question until the recent Supreme Court opinion in Massachusetts v. EPA, 549 U.S. 497 (2007).

3. Effect of Massachusetts v. EPA

In April 2007, the Supreme Court decided Massachusetts, ruling that the plaintiffs (ten states and six trade associations) could challenge: (1) a decision by the Environmental Protection Agency ("EPA") not to regulate greenhouse gas emissions from new motor vehicles under the CAA; and (2) EPA's stated reasons for refusing to regulate those emissions. See id. Prior to its merits assessment, the Supreme Court focused on the contentious issue of standing, given that each member of the D.C. Circuit panel had written a separate opinion and had come to a different conclusion about whether the States had standing to bring the action. The Court summarized the circuit court opinions as follows: "Judge Randolph avoided a definitive ruling as to petitioners' standing, reasoning that it was permissible to proceed to the merits because the standing and the merits inquiries overlapped"; "Judge Sentelle wrote separately because he believed petitioners failed to demonstrate the elements of injury necessary to establish standing under Article III"; and Judge Tatel dissented, concluding "that at least Massachusetts had satisfied each element of Article III standing-injury, causation, and redressability." Id. at 514-16 (internal quotation marks and citations omitted).[15]

The Supreme Court ruled that Massachusetts had Article III standing. The Court introduced the standing section by citing the three-part Lujan test, focusing in its initial analysis on the States' proprietary interests as property owners. This approach is consistent with Snapp's distinction between a state suing as parens patriae and a state suing in a capacity similar to that of an individual landowner. The Court observed that Congress had explicitly authorized a procedural right to challenge EPA actions under the CAA, see 42 U.S.C. § 7607(b)(1) (pertaining to judicial review), reaffirming Congress's power to "'define injuries and articulate chains of causation that will give rise to a case or controversy where none existed before.'" Id. at 516 (quoting Lujan, 504 U.S. at 580). This procedural right was "of critical importance to the standing inquiry" and permitted the States a short cut in the Lujan standing analysis, as they were not obliged to "'meet[] all the normal standards for redressability and immediacy.'" Id. at 516-17 (quoting Lujan, 504 U.S. at 572 n.7).[16]

But the Massachusetts Court then added another layer to its analysis-one which arguably muddled

state proprietary and parens patriae standing. The majority noted that it was "of considerable relevance that the party seeking review here is a sovereign State and not, as it was in Lujan, a private individual." Id. at 518. The majority also quoted language from Tennessee Copper, 206 U.S. at 237, which defined injury to a state "in its capacity of quasi-sovereign. In that capacity the state has an interest independent of and behind the titles of its citizens...." Massachusetts, 549 U.S. at 518-19. The Massachusetts Court likened Massachusetts' injury to Georgia's injury in Tennessee Copper: "Just as Georgia's 'independent interest... in all the earth and air within its domain' supported federal jurisdiction a century ago, so too does Massachusetts' well-founded desire to preserve its sovereign territory today." Id. at 519.[17]

In the midst of invoking language that hearkened to a state's quasi-sovereign interests, the Massachusetts Court mentioned proprietary injury to the State as a landowner, commenting: "That Massachusetts does in fact own a great deal of the territory alleged to be affected only reinforces the conclusion that its stake in the outcome of this case is sufficiently concrete to warrant the exercise of federal judicial power." Id. (emphasis added) (internal quotation marks omitted). This sentence appears to conflate, to an extent, state parens patriae standing and proprietary standing. The Court seemed to find that injury to a state as a quasi-sovereign is a sufficiently concrete injury to be cognizable under Article III, and its finding of such injury is reinforced by the fact that the State is also a landowner and suffers injury to its land. The Court concluded this section of its standing analysis by opining: "Given that procedural right and Massachusetts' stake in protecting its quasi-sovereign interests, the Commonwealth is entitled to special solicitude in our standing analysis." Id. at 520. The Court then briefly analyzed state standing under the Lujan injury, causation, and redressability tests-in Massachusetts' capacity as a property owner, not as a quasi-sovereign-and found that Massachusetts had satisfied those requirements. Id. at 521-25.

The question is whether Massachusetts' discussion of state standing has an impact on the analysis of parens patriae standing, supra. That is, what is the role of Article III parens patriae standing in relation to the test set out in Lujan? Must a state asserting parens patriae standing satisfy both the Snapp and Lujan tests? However, we need not answer these questions because as discussed in Part III.B, infra, all of the plaintiffs have met the Lujan test for standing. Thus, even assuming that a state asserting parens patriae standing must meet the Lujan requirements, here, those requirements have been met.

4. States' Allegations Satisfy the Snapp Test

The States have adequately alleged the requirements for parens patriae standing pursuant to the Snapp-11 Cornwell Co. standards. They are more than "nominal parties." Their interest in safeguarding the public health and their resources is an interest apart from any interest held by individual private entities. Their quasi-sovereign interests involving their concern for the "health and well-being-both physical and economic-of [their] residents in general," Snapp, 458 U.S. at 607, are classic examples of a state's quasi-sovereign interest. The States have alleged that the injuries

resulting from carbon dioxide emissions will affect virtually their entire populations. Moreover, it is doubtful that individual plaintiffs filing a private suit could achieve complete relief. See Commonwealth of Puerto Rico ex rel. Quiros v. Bramkamp, 654 F.2d 212, 217 (2d Cir. 1981) (noting that vindication of Puerto Rico's rights should not be dependent upon possible relief obtained by individuals, even if they could marshal the resources to institute and prosecute a class action).

Defendants argue that in order for states to sue in their parens patriae capacity, the citizens that the states seek to protect must themselves satisfy Article III's core requirements. In so arguing, Defendants attempt to import into parens patriae standing the Article III requirements for organizational standing set out in Hunt v. Washington State Apple Advertising Commission, 432 U.S. 333 (1977). In Hunt, the Supreme Court stated:

[A]n association has standing to bring suit on behalf of its members when: (a) its members would otherwise have standing to sue in their own right; (b) the interests it seeks to protect are germane to the organization's purpose; and (c) neither the claim asserted nor the relief requested requires the participation of individual members in the lawsuit.

Id. at 343. Snapp did not require states suing as parens patriae to meet the test for organizational standing. In fact, it required the opposite, i.e., that the individuals with adversely affected interests could not obtain relief via a private suit; that the interest asserted by the state must be apart from the interests of the individual citizens on behalf of whom it was suing; and that the injury must affect a substantial segment of the population, not one individual. Snapp, 458 U.S. at 607.

Standing is "gauged by the specific common-law, statutory or constitutional claims that a party presents." Int'l Primate Prot. League v. Admins. of Tulane Educ. Fund, 500 U.S. 72, 77 (1991) (emphasis added). For over a century, states have been accorded standing in common law nuisance causes of action when suing as parens patriae. In this case, the States have satisfied the Snapp-11 Cornwell Co. test.[18]

B. The States' and the Trusts' Article III Proprietary Standing

In Lujan, the Supreme Court explained that standing "is an essential and unchanging part of the case-or-controversy requirement of Article III." Lujan, 504 U.S. at 560. The plaintiff environmental organizations in Lujan sued the U.S. Secretary of the Interior. They sought a declaratory judgment that a newly-promulgated regulation, which offered less protection for endangered species, was in error as to the scope of the statute. They also sought to restore the interpretation embodied in the initial regulation. In holding that the plaintiff organizations lacked standing, the Court set out the well-known three-part test:

First, the plaintiff must have suffered an injury in fact-an invasion of a legally protected interest which is (a) concrete and particularized and (b) actual or imminent, not conjectural or hypothetical.

Second, there must be a causal connection between the injury and the conduct complained of-the injury has to be fairly trace[able] to the challenged action of the defendant, and not... th[e] result [of] the independent action of some third party not before the court. Third, it must be likely, as opposed to merely speculative, that the injury will be redressed by a favorable decision.

Id. at 560-61 (internal quotation marks and citations omitted). "In essence the question of standing is whether the litigant is entitled to have the court decide the merits of the dispute or of particular issues." Warth v. Seldin, 422 U.S. 490, 498 (1975).

The States and New York City have sued in their proprietary capacity as property owners. The Trusts' complaint does not state whether the Open Space Institute ("OSI"), the Open Space Conservancy ("OSC"), and the Audubon Society of New Hampshire ("Audubon") are membership organizations; rather, it describes the Trusts as not-for-profit corporations. The allegations in the complaint indicate that each organization is suing on its own behalf, in its proprietary capacity as an owner of particular pieces of property dedicated to conservation uses.[19]

See Havens Realty Corp. v. Coleman, 455 U.S. 363, 379 n.19 (1982) ("[O]rganizations are entitled to sue on their own behalf for injuries they have sustained."); Warth, 422 U.S. at 511 ("There is no question that an association may have standing in its own right to seek judicial relief from injury to itself and to vindicate whatever rights and immunities the association itself may enjoy."). The Trusts must "meet[ ] the same standing test that applies to individuals [and] must show actual or threatened injury in fact that is fairly traceable... and likely to be redressed by a favorable court decision." Spann v. Colonial Vill., Inc., 899 F.2d 24, 27 (D.C. Cir. 1990); see also Irish Lesbian & Gay Org. v. Giuliani, 143 F.3d 638, 649 (2d Cir. 1998).

1. Have Plaintiffs Sufficiently Alleged Injury-in-Fact?

The D.C. Circuit, in Public Citizen, Inc. v. National Highway Traffic Safety Administration, 489 F.3d 1279 (D.C. Cir. 2007), adroitly distilled the definitions for the terms used in Lujan's injury-in-fact requirement:

1. The Supreme Court has stated that the asserted injury must be concrete-which the Court has also described as direct, real, and palpable-not abstract. See, e.g., Lujan, 504 U.S. at 560 ("concrete"); Whitmore, 495 U.S. at 155 ("palpable, as opposed to merely abstract"); Allen, 468 U.S. at 751 ("palpable"); City of Los Angeles v. Lyons, 461 U.S. 95, 102 (1983) ("real"); Warth v. Seldin, 422 U.S. 490, 501 (1975) ("palpable"); United States v. Richardson, 418 U.S. 166, 180 (1974) ("a direct injury");....

2. The Supreme Court also has stated that the asserted injury must be particularized-which the Court has also described as personal, individual, distinct, and differentiated-not generalized or undifferentiated. See, e.g., Lujan, 504 U.S. at 560 n.1 ("By particularized, we mean that the injury must affect the plaintiff in a personal and individual way."); DaimlerChrysler Corp. v. Cuno, [547]

U.S. [332, 342] (2006) ("personal"); Whitmore, 495 U.S. at 155 ("distinct"); Allen, 468 U.S. at 751 ("personal"); Valley Forge, 454 U.S. at 472 (litigant must show "he personally has suffered some actual or threatened injury"); Richardson, 418 U.S. at 177 (not "undifferentiated");....

3. The Supreme Court has further stated that the asserted injury must be actual or imminent-which the Court has also described as certainly impending and immediate-not remote, speculative, conjectural, or hypothetical. See Lujan, 504 U.S. at 560 ("actual or imminent"); DaimlerChrysler, [547 U.S.] at [345] ("certainly impending"); Whitmore, 495 U.S. at 155 ("not conjectural or hypothetical"); ASARCO Inc. v. Kadish, 490 U.S. 605, 615 (1989) (opinion of Kennedy, J., joined by Rehnquist, C.J., and Stevens and Scalia, JJ.) (not "remote or speculative"); Lyons, 461 U.S. at 102 ("immediate")....

Public Citizen, Inc., 489 F.3d at 1292-93 (internal citations modified). "The injury-in-fact necessary for standing 'need not be large, an identifiable trifle will suffice.'" LaFleur v. Whitman, 300 F.3d 256, 270 (2d Cir. 2002) (quoting Sierra Club v. Cedar Point Oil Co., 73 F.3d 546, 557 (5th Cir. 1996)); see also Summers v. Earth Island Inst., 129 S.Ct. 1142, 1149 (2009) ("While generalized harm to the forest or the environment will not alone support standing, if that harm in fact affects the recreational or even the mere esthetic interests of the plaintiff, that will suffice.").

The States claim current injury as a result of the increase in carbon dioxide levels that has already caused the temperature to rise and change their climates; devastating future injury to their property from the continuing, incremental increases in temperature projected over the next 10 to 100 years; and increased risk of harm from global warming, including an abrupt and catastrophic change in climate when a "tipping point of radiative forcing is reached." The Trusts do not allege any current injury. But like the States, they allege a multitude of future injuries and an increased risk of harm resulting from global warming, and assert that these future injuries constitute "special injuries" to their property interests-injuries different in kind and degree from the injuries suffered by the general public.

Defendants challenge the proprietary standing of the States and the Trusts on the same grounds. They contend that no Plaintiff has alleged a current injury, that the future harms alleged in the complaints are not "imminent" enough to satisfy Article III injury-in-fact, and that the increased risks of harm cited by Plaintiffs are not cognizable because they rely on Baur v. Veneman, 352 F.3d 625 (2d Cir. 2003), which "identified enhanced risk as an injury only when Congress had enacted statutes to prevent the very increased risk the plaintiffs alleged."

a. Current Injury

One current harm that the States mention is the reduced size of the California snowpack. "This process of reduced mountain snowpack, earlier melting and associated flooding, and reduced summer streamflows already has begun." The current declining water supplies and the flooding occurring as a result of the snowpack's earlier melting obviously injure property owned by the State

of California. In Massachusetts, the State alleged that coastal erosion caused by global warming constituted a current injury to its property. The Court held that this erosion sufficed as an allegation of "particularized injury in [Massachusetts'] capacity as a landowner," and served as a harbinger of injuries to come: "The severity of that injury will only increase over the course of the next century." 549 U.S. at 522. Similarly, the destruction of California property wrought by the flooding associated with the earlier-melting snowpack qualifies as a current injury-in-fact for Article III purposes. Such an injury is "concrete," as property damage is "plainly [a] concrete harm[] under Supreme Court precedents," Public Citizen, 489 F.3d at 1292, "particularized," as California is harmed in a distinct way, and "actual or imminent," "not 'conjectural' or 'hypothetical,'" as the injury is occurring now and is not speculative. See, e.g., Massachusetts, 549 U.S. at 521 (characterizing reduction in snow-cover extent and earlier melting of rivers and lakes as "significant harms"). Moreover, the injuries to California far exceed the "identifiable trifle" required by Article III. LaFleur, 300 F.3d at 270 (citation and internal quotation marks omitted). We thus reject Defendants' argument that the Plaintiff States do not allege any current injury.

b. Future Injury

The bulk of the States' allegations concern future injury. For example, those Plaintiff States with ocean coastlines, including New York City, charge that a rise in sea level induced by global warming will cause more frequent and severe flooding, harm coastal infrastructure including airports, subway stations, tunnels, tunnel vent shafts, storm sewers, wastewater treatment plants, and bridges, and cause hundreds of billions of dollars of damage. In addition, they assert that some low-lying public property would be permanently inundated unless protective structures are built, with the cost falling heavily on those coastal Plaintiffs. Further, a rise in sea level would salinize marshes and tidelands, destroy habitat for commercial and game species, migratory birds, and other wildlife; accelerate beach erosion; and cause saltwater intrusion into groundwater aquifers. Global warming threatens Plaintiff States bordering the Great Lakes with substantial injury by lowering the water levels of the Great Lakes, which would disrupt hydropower production. Warmer temperatures would threaten agriculture in Iowa and Wisconsin and increase the frequency and duration of summer heat waves with concomitant crop risk. Global warming will also disrupt ecosystems by negatively affecting State-owned hardwood forests and fish habitats, and substantially increase the damage in California due to wildfires. Plaintiff States predict these injuries will come to pass in the next 10 to 100 years.

The Trusts' complaint also focuses on future injury. For instance, the Trusts claim that the ecological value of their properties will be diminished or destroyed by the global warming to which Defendants' emissions contribute. They contend that sea level rise caused by global warming will "permanently inundate some low-lying property along coasts and tidal rivers, including property that Plaintiffs own or on which they hold conservation easements" and will salinize marshes on their properties, destroying fish and migratory bird habitats. They assert that global warming "will diminish or destroy the particular ecological and aesthetic values that caused [them] to acquire, and cause them to maintain, the properties they hold in trust," and will undermine their objectives by "interfering

with their efforts to preserve ecologically significant and sensitive land for scientific and educational purposes, and for human use and enjoyment." They posit that reducing carbon dioxide emissions will reduce those injuries. Like the claims asserted by the States and New York City, the Trusts' allegations of injury are not stated in terms of possibilities or contingencies, but certainties. While the Trusts do not provide a time frame for the injuries they expect to sustain from global warming, they assert that those injuries are "imminent."

Defendants challenge Plaintiffs' contentions of future injury by arguing that injuries occurring at "some unspecified future date" are not the kind of "imminent" injury referred to in Lujan and therefore neither the States nor the Trusts have properly alleged injury-in-fact. They claim that "[t]here must be a close temporal proximity between the complained-of conduct and the alleged harm," citing McConnell v. FEC, 540 U.S. 93, 226 (2003), for its observation that Senator McConnell's alleged injury in that case was "too remote temporally to satisfy Article III standing." Defendants' analysis misses the mark.

In Lujan, the Court elaborated upon what it meant by "imminent" in the context of the standing inquiry. The Court wrote:

Although "imminence" is concededly a somewhat elastic concept, it cannot be stretched beyond its purpose, which is to ensure that the alleged injury is not too speculative for Article III purposes-that the injury is "certainly impending," [Whitmore v. Arkansas, 495 U.S.] at 158 (emphasis added). It has been stretched beyond the breaking point when, as here, the plaintiff alleges only an injury at some indefinite future time, and the acts necessary to make the injury happen are at least partly within the plaintiff's own control. In such circumstances we have insisted that the injury proceed with a high degree of immediacy, so as to reduce the possibility of deciding a case in which no injury would have occurred at all. See, e.g., id., at 156-160; Los Angeles v. Lyons, 461 U.S. 95, 102-106 (1983).

Lujan, 504 U.S. at 564 n.2. In describing imminence, the Court was not imposing a strict temporal requirement that a future injury occur within a particular time period following the filing of the complaint. Instead, the Court focused on the certainty of that injury occurring in the future, seeking to ensure that the injury was not speculative. See 520 South Michigan Ave. Assocs. Ltd. v. Devine, 433 F.3d 961, 962 (7th Cir. 2006) (discussing imminence and stating "[s]tanding depends on the probability of harm, not its temporal proximity"). The Court also expressed wariness that if the future injury was contingent, at least to some extent, on a plaintiff acting in a particular way in the future, that plaintiff would have within its control whether the future injury would actually occur at all. If the plaintiff did not act in such a way as to incur the injury, a court would be left with a hypothetical injury-an insufficient basis upon which to confer standing.[20] See Clinton v. City of New York, 524 U.S. 417, 459 (1998) ("[H]ypothetical injuries do not suffice for Article III standing.").

This Court's discussion of future injury in Baur, 352 F.3d at 625, is instructive. Baur was held to have standing to sue the Secretary of Agriculture to challenge regulations that permitted downed cattle to

be used for human consumption. He alleged that the regulations, implementation of which in effect exposed him to downed cattle, posed a significant health risk-contracting variant Creutzfeld-Jacob disease. Id. at 628-29. In analyzing Baur's standing, this Court clarified that "the relevant 'injury' for standing purposes may be exposure to a sufficiently serious risk of medical harm-not the anticipated medical harm itself-thus only the exposure must be imminent, not the actual onset of disease." Id. at 641 (emphasis added). By comparison with Baur, what makes Plaintiffs' future injury claims more compelling here is that Defendants are currently emitting large amounts of carbon dioxide and will continue to do so in the future. Due to Plaintiffs' exposure to the emissions, the future injuries complained of are "certainly impending" and are more concrete than those in Baur because the processes producing them have already begun.[21] As a result, according to Plaintiffs, the future injuries they predict are anything but speculation and conjecture: "Rather, they are certain to occur because of the consequences, based on the laws of physics and chemistry, of the documented increased carbon dioxide in the atmosphere." There is no probability involved. See United Transp. Union v. ICC, 891 F.2d 908, 912, n.7 (D.C. Cir. 1989) (contrasting a plaintiff's speculative allegation of future injury with decidedly unspeculative "application of basic economic logic" and noting that "[a]llegations founded on economic principles..., while perhaps not as reliable as allegations based on the laws of physics, are at least more akin to demonstrable facts than are predictions based only on speculation"). These emissions, which allegedly contribute to global warming, will continue to exacerbate the injuries Plaintiffs are currently experiencing. Moreover, the future injuries that Plaintiffs allege are not in any way contingent on Plaintiffs' actions or inactions.

The Massachusetts majority alluded to the fact that incremental injury suffices for injuryin-fact. It rejected the dissent's view that Massachusetts' injury was "conjectural" because the land loss that the State expected could not be quantified, stating:

Yet the likelihood that Massachusetts' coastline will recede has nothing to do with whether petitioners have determined the precise metes and bounds of their soon-tobe-flooded land. Petitioners maintain that the seas are rising and will continue to rise, and have alleged that such a rise will lead to the loss of Massachusetts' sovereign territory. No one, save perhaps the dissenters, disputes those allegations. Our cases require nothing more.

549 U.S. at 523 n.21. The Massachusetts Court concluded its standing discussion by stating that "[t]he risk of catastrophic harm, though remote, is nevertheless real." Id. at 526. That statement applies to these cases as well.

We find that Plaintiffs have sufficiently alleged future injury. Given the current injury alleged by the States, and the future injuries alleged by all Plaintiffs, we hold that Plaintiffs have alleged injury-in-fact.[22]

2. Causation

To satisfy the causation requirement, the alleged injury must be "fairly traceable to the actions of the defendant." Bennett v. Spear, 520 U.S. 154, 162 (1997) (citation and internal quotation marks omitted). This requirement "ensures that there is a genuine nexus between a plaintiff's injury and a defendant's alleged... conduct," Friends of the Earth, Inc. v. Gaston Copper Recycling Corp., 204 F.3d 149, 161 (4th Cir. 2000), and "is in large part designed to ensure that the injury complained of is 'not the result of the independent action of some third party not before the court,'" id. at 162 (quoting Lujan, 504 U.S. at 560).

Plaintiffs allege that Defendants are the "five largest emitters of carbon dioxide in the United States," Am. Elec. Power Co., 406 F. Supp. 2d at 268, and that Defendants' emissions directly and proximately contribute to their injuries and threatened injuries. Defendants respond that Plaintiffs can neither isolate which alleged harms will be caused by Defendants' emissions, nor can Plaintiffs allege that such emissions would alone cause any future harms. In particular, Defendants claim that Plaintiffs' use of the words "contribute to" is not sufficient to allege causation, that the multiple polluter cases relied upon by Plaintiffs are inapposite because causation was presumed by contributions of a harmful pollutant in amounts that exceeded federally prescribed limits, and that, in any event, carbon dioxide is not inherently harmful[23] but mixes with worldwide emissions that collectively contribute to global warming.[24]

Defendants' arguments are unavailing and we find that Plaintiffs have sufficiently alleged that their injuries are "fairly traceable" to the actions of Defendants. Plaintiffs assert that Defendants' continued emissions of carbon dioxide contribute to global warming, which harms them now and will harm them in the future in specific ways. See Nader v. Democratic Nat'l Comm., 555 F. Supp. 2d 137, 150 (D.D.C. 2008) (opining that injury was "sufficient to establish Article III standing because it traces an injury to the defendant's conduct"); Northwest Envtl. Def. Ctr. v. Owens Corning Corp., 434 F. Supp. 2d 957, 967 (D. Or. 2006) ("It is sufficient for Plaintiffs to assert that emissions from Defendant's facility will contribute to the pollution that threatens Plaintiffs' interests."). Defendants' attempts to argue the insufficiency of Plaintiffs' allegations of traceability must be evaluated in accordance with the standard by which a common law public nuisance action imposes liability on contributors to an indivisible harm. See, e.g., Cox v. City of Dallas, 256 F.3d 281, 292 n.19 (5th Cir. 2001) (declaring that "nuisance liability at common law has been based on actions which 'contribute' to the creation of a nuisance"); Restatement (Second) of Torts § 840E ("[T]he fact that other persons contribute to a nuisance is not a bar to the defendant's liability for his own contribution."); id. § 875 ("Each of two or more persons whose tortious conduct is a legal cause of a single and indivisible harm to the injured party is subject to liability to the injured party for the entire harm."). Moreover, the cases are clear that, particularly at the pleading stage, the "fairly traceable" standard is not equivalent to a requirement of tort causation. Natural Res. Def. Council, Inc. v. Watkins, 954 F.2d 974, 980 n.7 (4th Cir. 1992); see also Barbour v. Haley, 471 F.3d 1222, 1226 (11th Cir. 2006) (explaining that "for purposes of satisfying Article III's causation requirement, we are concerned with something less than the concept of proximate cause" (citation and internal quotation marks omitted)). The cases relied upon by both Plaintiffs and Defendants to buttress their respective positions on

traceability-Gaston Copper, 204 F.3d 149; Cedar Point Oil Co., 73 F.3d 546; Watkins, 954 F.2d 974; and Public Interest Research Group of New Jersey, Inc. v. Powell Duffryn Terminals, Inc., 913 F.2d 64 (3d Cir. 1990)-were decided either on summary judgment or after a bench trial, where the plaintiffs' standing allegations were put to the proof based on the facts elicited. Even in that context, however, courts have pointed out that "tort-like causation is not required by Article III," Powell Duffryn, 913 F.2d at 73 n.10, and "[t]he requirement that plaintiff's injuries be 'fairly traceable' to the defendant's conduct does not mean that plaintiffs must show to a scientific certainty that defendant's effluent, and defendant's effluent alone, caused the precise harm suffered by the plaintiffs." Id. at 72 (footnote omitted).

Gaston Copper, Cedar Point, and Watkins all relied upon Powell Duffryn's three-part test to determine whether an injury was fairly traceable under the CWA to a defendant's discharge. After discussing the causation requirement that plaintiffs "need only show that there is a substantial likelihood that defendant's conduct caused plaintiff's harm," the Powell Duffryn Court wrote:

[T]his likelihood may be established by showing that a defendant has (1) discharged some pollutant in concentrations greater than allowed by its permit (2) into a waterway in which the plaintiffs have an interest that is or may be adversely affected by the pollutant and that (3) this pollutant causes or contributes to the kinds of injuries alleged by the plaintiffs.

913 F.2d at 72. Defendants focus exclusively on the first prong of the test. The first prong is inapplicable here, however, because there is no statute governing carbon dioxide emissions. Nor in a case based on common law nuisance, such as this one, would there necessarily be a regulatory reference against which to measure the offending conduct. Defendants' effort to impose that part of the test as the determinative measure of causation is neither legally nor factually meaningful. The third element of the test, however-whether the "pollutant causes or contributes to the kind of injuries alleged by the plaintiffs"-is relevant to our analysis. Id.

The Powell Duffryn Court observed that "[i]n order to obtain standing, plaintiffs need not sue every discharger in one action, since the pollution of any one may be shown to cause some part of the injury suffered. The size of injury is not germane to standing analysis." Id. at 72 n.8 (citing United States v. Students Challenging Regulatory Agency Procedures, 412 U.S. 669, 689 n.14 (1973)). The Fourth Circuit in Gaston Copper and Watkins echoed Powell Duffryn: "Rather than pinpointing the origins of particular molecules, a plaintiff 'must merely show that a defendant discharges a pollutant that causes or contributes to the kinds of injuries alleged'.... In this way a plaintiff demonstrates that a particular defendant's discharge has affected or has the potential to affect his interests." Gaston Copper, 204 F.3d at 161 (quoting Watkins, 954 F.2d at 980). The same result obtained in Cedar Point, 73 F.3d at 558 (finding that the polluted water "contributes to the types of injuries" alleged by a plaintiff, and stating that the Constitution does not require an affiant who claims that defendant's discharge "in particular injured him in some way" given the number of entities discharging pollutants into Galveston Bay).

In view of this widely accepted case law, and the procedural posture of the case, Defendants' argument that many others contribute to global warming in a variety of ways, and that therefore Plaintiffs cannot allege traceability, does not defeat the causation requirement.

Defendants also claim that their emissions, which "allegedly account for 2.5% of man-made carbon dioxide emissions" are, in essence, too insignificant to cause future injuries, particularly since only the collective effect of worldwide emissions allegedly causes injury. They conclude that the States cannot allege that their emissions would alone cause any future harms. This is simply a variation on their argument that a polluter who "contributes to" pollution does not allege causation, an argument we have addressed supra. Additionally, this is an issue best left to the rigors of evidentiary proof at a future stage of the proceedings, rather than dispensed with as a threshold question of constitutional standing. Tellingly, in Massachusetts' discussion of causation, the Court rejected EPA's argument that "its decision not to regulate greenhouse gas emissions from new motor vehicles contributes so insignificantly to petitioners' injuries that the agency cannot be haled into federal court to answer for them." Massachusetts, 549 U.S. at 523.

Plaintiffs have sufficiently alleged that their current and future injuries are "fairly traceable" to Defendants' conduct. For purposes of Article III standing they are not required to pinpoint which specific harms of the many injuries they assert are caused by particular Defendants, nor are they required to show that Defendants' emissions alone cause their injuries. It is sufficient that they allege that Defendants' emissions contribute to their injuries.

3. Redressability

Finally, a complaint must sufficiently allege "a substantial likelihood that the requested relief will remedy the alleged injury in fact." Jana-Rock Const., Inc. v. N.Y. State Dep't of Econ. Dev., 438 F.3d 195, 204 (2d Cir. 2006). Put another way, "it must be likely, as opposed to merely speculative, that the injury will be redressed by a favorable decision." Lujan, 504 U.S. at 561 (quotations and citation omitted). A party need only demonstrate that it would receive "at least some" relief to establish redressability. Tozzi v. U.S. Dep't of Health & Human Servs., 271 F.3d 301, 310 (D.C. Cir. 2001).

Plaintiffs assert that, because Defendants are major emitters of carbon dioxide, capping Defendants' emissions and reducing them by a specified percentage each year for at least a decade "is necessary to avert or reduce the risk of the injuries described above." Defendants insist that Plaintiffs' injuries are not redressable because Plaintiffs do not and cannot allege that capping and reducing emissions by an unidentified percentage "would or could remediate the alleged future harms they seek to forestall." Defendants maintain that the emissions reductions are "merely a part of the overall reductions 'necessary' to slow global warming." In addition, Defendants contend that the harms of global warming can only be redressed by reaching the actions of third party emitters, and cite Supreme Court decisions such as Simon v. Eastern Ky. Welfare Rights Org., 426 U.S. 26, 41-42 (1976), in support of the proposition that federal courts cannot redress injury "that results from the

independent action of some third party not before the court."

Addressing Defendants' last argument first, the holding in Simon is inapposite. In that case, the plaintiffs-indigent citizens and organizations composed of indigent members-sued the Secretary of the Treasury and the Commissioner of the IRS in response to a ruling that allowed hospitals favorable tax treatment if they offered indigents emergency room services, but did not require the hospitals to provide indigents with other necessary services. The plaintiffs claimed that adoption of the ruling "encouraged" hospitals to deny them services. Id. at 42. The Court observed that some individual plaintiffs who complained of being denied hospital services had not sued the hospitals that actually caused them injury by not treating them. The Court then rejected as too speculative the "implicit corollary" of plaintiffs' theory-i.e., that an IRS requirement that all hospitals serve indigents as a condition of favorable tax treatment would discourage hospitals from denying services to them. Id. at 42-43. By suing the wrong entities, the Simon plaintiffs could not establish injury, nor could the lawsuit redress the actual injuries they allegedly suffered. Simon does not apply here, as Plaintiffs have sued Defendants who, they allege, are directly causing them injury.

Defendants' assertions echo their arguments for nonjusticiability under the political question doctrine: because global warming is a world-wide problem, federal courts are not the proper venue for this action, nor could the courts redress the injuries about which Plaintiffs complain because global warming will continue despite any reduction in Defendants' emissions. Massachusetts disposed of this argument. The Court recognized that regulation of motor vehicle emissions would not "by itself reverse global warming," but that it was sufficient for the redressability inquiry to show that the requested remedy would "slow or reduce it." Massachusetts, 549 U.S. at 525 (citing Larson v. Valente, 456 U.S. 228, 244, n.15 (1982) ("[A] plaintiff satisfies the redressability requirement when he shows that a favorable decision will relieve a discrete injury to himself. He need not show that a favorable decision will relieve his every injury.")). In other words, that courts could provide some measure of relief would suffice to show redressability, and the proposed remedy need not address or prevent all harm from a variety of other sources. Moreover, the Court observed that although EPA regulation of greenhouse gas emissions might not reverse global warming, in light of the fact that China and India were "poised to increase greenhouse gas emissions substantially over the next century," the remedy sought-reduction of domestic emissions-"would slow the pace of global emissions increases, no matter what happens elsewhere." Massachusetts, 549 U.S. at 525-26. This rationale undercuts Defendants' position that a reduction in their emissions will not have an impact on Plaintiffs' injuries because global warming will continue due to emissions by other parties.[25] As the States rightly assert: "Even if emissions increase elsewhere, the magnitude of Plaintiffs' injuries will be less if Defendants' emissions are reduced than they would be without a remedy." This perspective has particular resonance in a federal common law of nuisance case involving air pollution, where the ambient air contains pollution from multiple sources and where liability is joint and several. Plaintiffs have adequately alleged redressability.

In conclusion, we hold that all Plaintiffs have standing to maintain their actions.

V. Stating a Claim under the Federal Common Law of Nuisance

A. Standard of Review

Defendants have also argued-here and before the district court-that Plaintiffs have failed to state a claim under the federal common law of nuisance. Connecticut v. Am. Elec. Power Co., 406 F. Supp. 2d 265, 267 (S.D.N.Y. 2005). The district court did not reach this issue, dismissing the cases on the ground that they presented political questions. In the interest of judicial economy, we exercise our discretion to address the question now, which has been fully briefed to this Court. See Singleton v. Wulff, 428 U.S. 106, 121 (1976) ("The matter of what questions may be taken up and resolved for the first time on appeal is one left primarily to the discretion of the courts of appeals, to be exercised on the facts of individual cases.").

In reviewing the complaints to determine whether Plaintiffs have stated a claim, we will "constru[e] the complaint[s] liberally, accepting all factual allegations in the complaint[s] as true, and drawing all reasonable inferences in the plaintiff[s'] favor." Chambers v. Time Warner, Inc., 282 F.3d 147, 152 (2d Cir. 2002). A complaint may be dismissed for failure to state a claim only if the plaintiff fails to provide factual allegations sufficient "'to raise a right to relief above the speculative level.'" Goldstein v. Pataki, 516 F.3d 50, 56 (2d Cir. 2008) (quoting Bell Atl. Corp. v. Twombly, 550 U.S. 544, 555 (2007)). That said, Plaintiffs' pleading obligation still "requires more than labels and conclusions, and a formulaic recitation of the elements of a cause of action will not do." Twombly, 550 U.S. at 555.

B. The Federal Common Law of Nuisance and the Restatement's Definition of Public Nuisance

The American colonies imported public nuisance law from England. One of the earliest definitions of public nuisance (then known as "common nuisance") included any "act not warranted by law, or omission to discharge a legal duty, which obstructs or causes inconvenience or damage to the public in the exercise of rights common to all Her Majesty's subjects." Restatement (Second) of Torts § 821B cmt. a (1977) (quoting J. Stephen, A General View of the Criminal Law of England 105 (1890)). Originally, public nuisance was a crime, and it was used against those who interfered with a public right of way, or ran 'noisome trades,' but its flexibility became apparent in the varied activities prosecuted under its name over the years: digging up a wall of a church, helping a 'homicidal maniac' to escape, being a common scold, keeping a tiger in a pen next to a highway....

Robert Abrams & Val Washington, The Misunderstood Law of Public Nuisance: A Comparison with Private Nuisance Twenty Years after Boomer, 54 Alb. L. Rev. 359, 362 (1990). In Mugler v. Kansas, 123 U.S. 623 (1887), Justice Harlan took the opportunity to wax eloquent on nuisance law and its equitable roots:

The ground of this jurisdiction, in cases of purpresture, as well as of public nuisances, is the ability of courts of equity to give a more speedy, effectual, and permanent remedy than can be had at law. They

cannot only prevent nuisances that are threatened, and before irreparable mischief ensues, but arrest or abate those in progress, and, by perpetual injunction, protect the public against them in the future.... This is a salutary jurisdiction, especially where a nuisance affects the health, morals, or safety of the community. Though not frequently exercised, the power undoubtedly exists in courts of equity thus to protect the public against injury.

Id. at 673. Public nuisance eventually became a source of common law civil liability.

The earliest Supreme Court public nuisance cases, brought by States pursuant to the Court's original jurisdiction, did not define what constituted a "public nuisance," as the damage or threatened damage caused by air or water pollution was readily apparent from the pleadings and testimony. For example, the noxious, "sulphurous acid gas" released from the Tennessee Copper Company foundry was alleged to cause "wholesale destruction of forests, orchards and crops." Georgia v. Tenn. Copper Co., 206 U.S. 230, 236, 238 (1907). Similarly, "large quantities of undefecated sewage" were seen as "poison[ing] the water supply of the inhabitants of Missouri and injuriously affect[ing] that portion of the bed or soil of the Mississippi river which lies within its territory." Missouri v. Illinois ("Missouri I"), 180 U.S. 208, 243 (1901). In each instance, the effect of the nuisance was widespread-injuring the public-at-large-and States as parens patriae acted to protect their citizens from the harms caused by the pollution.

United States v. Bushey & Sons, Inc., 363 F. Supp. 110 (D. Vt. 1973), aff'd 487 F.2d 1393 (2d Cir. 1973), cert. denied, 417 U.S. 976 (1974), was one of the first cases to apply the standards of public nuisance, as defined in Restatement § 821B, to the federal common law of nuisance.[26] Judge Oakes, then a member of this Court sitting by designation in Vermont's district court, examined the federal common law of nuisance and recognized the reshaping of "the old law of public nuisance... to fit the 'realities of modern technology.'" Id. at 120. He updated federal nuisance law by adopting the Restatement (Second) of Torts's[27] definition of public nuisance: "an unreasonable interference with a right common to the general public." Judge Oakes opined that the oil spills at issue in the Bushey case[28] interfered "with the right of the public in the waters of Lake Champlain to have those waters preserved from oil-spill pollution."

Id. at 116-17, 120. He determined that the defendants' interference with that public right was "unreasonable" because the oil-spill pollution was proscribed by both the Refuse Act, 33 U.S.C. § 407, and by the fact that it "has been of a recurring nature, although not continuous, producing long-lasting effects and substantial detriment upon the public right, with the actor-in this case, the defendants-knowing or having reason to know of that effect." Bushey, 363 F. Supp. at 120-21 (applying Restatement §§ 821B(2)(b) and (c)). Judge Oakes's approach proved both practical and feasible in forging an equitable remedy, and was upheld on appeal. Bushey, 487 F.2d 1393.

Bushey's application of the Restatement's public nuisance standard was not unwarranted. Federal common law of nuisance cases had for decades referred to abating the "public nuisance" of various

types of pollution and had applied precepts of public nuisance theory when adjudicating such cases. See, e.g., Missouri I, 180 U.S. at 244-46. It was not until Milwaukee I, however, that the Supreme Court explicitly examined "[t]he application of federal common law to abate a public nuisance in interstate or navigable waters...." Illinois v. Milwaukee ("Milwaukee I"), 406 U.S. 91, 104 (1971). The Restatement definition of public nuisance has since been used in other federal cases involving the federal common law of nuisance, see, e.g., Nat'l Sea Clammers Ass'n v. City of New York, 616 F.2d 1222, 1234 (3d Cir. 1980) (applying Restatement's definition of public nuisance in federal common law of nuisance litigation), vacated on other grounds, 453 U.S. 1 (1981), and the Restatement principles have served as the backbone of state nuisance law.[29]

In keeping with the precedents discussed above, we will apply the Restatement's principles of public nuisance as the framework within which to examine the federal common law of nuisance question presented by the instant cases. We believe the Restatement definition provides a workable standard for assessing whether the parties have stated a claim under the federal common law of nuisance.[30] See, e.g., North Carolina v. Tenn. Valley Auth., 593 F. Supp. 2d 812, 829-34 (W.D.N.C. 2009) (in adjudicating state law public nuisance claim against TVA for environmental and health effects allegedly caused by coal-fired power plants, court issued findings of fact and conclusions of law using public nuisance law principles, cited the Restatement, and ordered specific pollution controls). The Restatement definition of public nuisance set out in § 821B(1) has two elements: an "unreasonable interference" and "a right common to the general public." Section 821B(2) further explains:

Circumstances that may sustain a holding that an interference with a public right is unreasonable include the following:

(a) Whether the conduct involves a significant interference with the public health, the public safety, the public peace, the public comfort or the public convenience, or

(b) whether the conduct is proscribed by a statute, ordinance or administrative regulation, or

(c) whether the conduct is of a continuing nature or has produced a permanent and long-lasting effect, and, as the actor knows or has reason to know, has a significant effect upon the public right.

Restatement § 821B(2).

We examine separately the questions of whether the State Plaintiffs and the non-State Plaintiffs (New York City and the Trusts) have stated a claim under the federal common law of nuisance.

C. Have the States Stated a Claim under the Federal Common Law of Nuisance?

1. Applying the Public Nuisance Definition to the States

The States have sued in both their parens patriae and proprietary capacities. As quasi-sovereigns and as property owners, they allege that Defendants' emissions, by contributing to global warming, constitute a substantial and unreasonable interference with public rights in the plaintiffs' jurisdictions, including, inter alia, the right to public comfort and safety, the right to protection of vital natural resources and public property, and the right to use, enjoy, and preserve the aesthetic and ecological values of the natural world.

These grievances suffice to allege an "unreasonable interference" with "public rights" within the meaning of § 821B(2)(a). See In re Starlink Corn Prods. Liab. Litig., 212 F. Supp. 2d 828, 848 (N.D. Ill. 2002) ("The Restatement sweeps broadly in defining a 'public right,' including 'the public health, the public safety, the public peace, the public comfort or the public convenience.'" (quoting Restatement § 821B(2)(a))). The States have additionally asserted that the emissions constitute continuing conduct that may produce a permanent or long lasting effect, and that Defendants know or have reason to know that their emissions have a significant effect upon a public right, satisfying § 821B(2)(c). We hold that the States, in their parens patriae and proprietary capacities, have properly alleged public nuisance under Restatement § 821B, and therefore have stated a claim under the federal common law of nuisance as it incorporates the Restatement's definition of public nuisance.

2. Defendants' Arguments

Defendants do not contest the principle that states, as parties, may state a valid claim for relief pursuant to the federal common law of public nuisance. Rather, Defendants argue that the arguments advanced by the States in this case are "wholly inapplicable" to the long-established line of federal common law of nuisance cases. Specifically, Defendants assert that: (1) principles of constitutional necessity limit the scope of the cause of action for transboundary nuisance disputes between states; and (2) the federal common law of nuisance is available only to abate nuisances of a "simple type" that are "so immediately and severely harmful and so readily traced to an out-of-state source that they would have justified war at the time of the founding." We find these arguments unpersuasive.

a. Constitutional Necessity

We first address Defendants' argument that "constitutional necessity" limits the scope of the interstate nuisance cause of action. Defendants claim that the Supreme Court has not "creat[ed] a broad cause of action" and cite Tennessee Copper for the proposition that the Court has "examined demands for a judicial remedy for 'injuries analogous to torts' with great 'caution.'" Seizing on the principles the Supreme Court has applied to limit that Court's original jurisdiction over the actions of a state in nuisance disputes, Defendants engage in a misguided endeavor to impose those same strictures on the federal common law of nuisance cause of action more generally-and on the States' cause of action in particular.

First, the States do not seek to invoke the Supreme Court's original jurisdiction. Rather, they have

brought their federal common law of nuisance claim to the federal courts under 28 U.S.C. § 1331. The cases on which Defendants rely, which discuss the limits of original jurisdiction, are inapposite.

Moreover, Defendants take the language quoted from Tennessee Copper out of context. In confronting "a suit by a state for an injury to it in its capacity of quasi-sovereign," the Tennessee Copper Court stated that "[t]he caution with which demands of this sort, on the part of a state, for relief from injuries analogous to torts, must be examined, is dwelt upon in [Missouri II]." Tenn. Copper Co., 206 U.S. at 237. Analyzing Missouri II, we find the Court engaged in a discussion of the purview of its original jurisdiction. See Missouri II, 200 U.S. at 519 ("The Constitution extends the judicial power of the United States to controversies between two or more states, and between a state and citizens of another state, and gives this court original jurisdiction in cases in which a state shall be a party."). The Missouri II Court recognized that its responsibility to adjudicate cases in which a state is a party means that "if one state raises a controversy with another, [the Supreme Court] must determine whether there is any principle of law, and, if any, what, on which the plaintiff can recover." Id.; see also West Virginia ex rel. Dyer v. Sims, 341 U.S. 22, 28 (1951) ("A State cannot be its own ultimate judge in a controversy with a sister State. To determine the nature and scope of obligations as between States, whether they arise through the legislative means of compact or the 'federal common law' governing interstate controversies, is the function and duty of the Supreme Court of the Nation." (citation omitted)).

At the same time, the Court acknowledged that it must make these declarations of law carefully because of the respect due to the state as a quasi-sovereign. See Missouri II, 200 U.S. at 521 ("But it does not follow that every matter which would warrant a resort to equity by one citizen against another in the same jurisdiction equally would warrant an interference by this court with the action of a state."). The Court cautioned that "the words of the Constitution [granting the Court original jurisdiction] would be a narrow ground upon which to construct and apply to the relations between states the same system of municipal law in all its details which would be applied between individuals." Id. at 520. To put the matter another way, the Supreme Court limits its original jurisdiction over actions in which a state is a party so as not to infringe unduly on the state's sovereignty. See id. at 521 ("It hardly can be that we should be justified in declaring statutes ordaining such action void in every instance where the circuit court might intervene in a private suit, upon no other ground than analogy to some selected system of municipal law, and the fact that we have jurisdiction over controversies between states.").

The Tennessee Copper Court's passing reference to exercising "caution" did not, as Defendants claim, refer to whether states could bring nuisance suits for relief from injuries analogous to torts-that question was answered in the affirmative in Tennessee Copper, as well as in subsequent nuisance cases. See Tenn. Copper Co., 206 U.S. at 237-39. Rather, the Tennessee Copper Court meant to acknowledge the "special solicitude," Massachusetts v. Envtl. Prot. Agency, 549 U.S. 497, 520 (2007), owed to states bringing suits in a quasi-sovereign capacity, Tenn. Copper Co., 206 U.S. at 237. The Court explained that "[w]hen the states by their union made the forcible abatement of outside

nuisances impossible to each, they did not thereby agree to submit to whatever might be done. They did not renounce the possibility of making reasonable demands on the ground of their still remaining quasi-sovereign interests; and the alternative to force is a suit in this court." Id.

In fact, the precedents Defendants cite in making their "constitutional necessity" argument tend to cut against Defendants' position. In cases like Missouri II, where the opposing parties are each states, the Supreme Court must tread especially carefully because states' quasi-sovereign rights are implicated either way it turns. See Missouri II, 200 U.S. at 521 ("Before this court ought to intervene, the case should be of serious magnitude, clearly and fully proved, and the principle to be applied should be one which the court is prepared deliberately to maintain against all considerations on the other side."); see also Sims, 341 U.S. at 27 ("[T]he delicacy of interstate relationships and the inherent limitations upon this Court's ability to deal with multifarious local problems have naturally led to exacting standards of judicial intervention and have inhibited the formulation of a code for dealing with such controversies."). But in circumstances like those of the instant case, in which a state is involved as a party on only one side of a dispute, the Court has announced that a state raising a claim based on quasi-sovereign interests is "somewhat more certainly entitled to specific relief than a private party might be." Tenn. Copper Co., 206 U.S. at 237; see also Massachusetts, 549 U.S. at 519-20.

We reject Defendants' constitutional necessity argument.

b. The Character of the Alleged Nuisance

Defendants' next argument is based on a reference to North Dakota v. Minnesota, in which the Supreme Court wrote: "It is the creation of a public nuisance of simple type for which a State may properly ask an injunction." 263 U.S. 365, 374 (1923). North Dakota had sought to enjoin Minnesota's continued use of "cut-off ditches," which had the net effect of causing a river to overflow and harm valuable North Dakota farmland. In discussing whether it had jurisdiction over the dispute, the Supreme Court reviewed the public nuisance cases it had previously decided and, in that context, referred to public nuisances "of simple type." Defendants seize upon the phrase and contend that only a public nuisance of a simple type may constitute a valid claim for public nuisance. They then create their own definition for the phrase in an attempt to show that the States have not stated a claim. According to Defendants, nuisances of a "simple type" involve "immediately noxious or harmful substances [that] cause severe localized harms that can be directly traced to an out-of-state source." They assert that carbon dioxide is not "poisonous or noxious" and does not "immediately harm anyone (as contagious and pathogenic bacteria do), or destroy forests, crops and farms (as sulphuric gases and floodwaters do)." Defendants also point out that their carbon dioxide emissions mix "with other greenhouse gases from innumerable sources across the planet." Because the States do not claim that any alleged future harm can be directly traced to their emissions, Defendants submit that the States have not alleged a "simple type" nuisance entitling them to relief.

The North Dakota Court did not otherwise explain or define the phrase "simple type."[31]

Id. An earlier Supreme Court case, however, provides some clue as to what the North Dakota Court meant. In Missouri II, 200 U.S. at 496, the Supreme Court analyzed whether the alleged nuisance-typhoid bacillus from Illinois's discharge of sewage into the Mississippi River-could survive the 357-mile journey to the St. Louis drinking water intake area. In assessing whether Missouri had proved a nuisance claim, the Court examined scientific data specifically directed to the issues, listened to dueling experts, and ultimately held that Missouri did not prove its case. Id. at 522-26. The Court wrote:

[I]f this suit had been brought fifty years ago it almost necessarily would have failed. There is no pretense that there is a nuisance of the simple kind that was known to the older common law. There is nothing that can be detected by the unassisted senses-no visible increase of filth, no new smell.... The plaintiff's case depends upon an inference of the unseen.

Id. at 522 (emphases added).

The phrase "simple type" thus appears to describe a kind of rudimentary nuisance that could easily be detected by "the unassisted senses"-apparently the only kind of pollution-related nuisance claim that had been actionable in the mid-1850s-which a complaining State would have little difficulty in proving. But rather than limiting what nuisances were actionable, the Court in Missouri II was, in fact, asserting the opposite. The Court never held that the complexity of Missouri's claim precluded Illinois's legal responsibility or, conversely, that a nuisance of a "simple type" was a sine qua non for a nuisance claim. It was merely making the point that the law of public nuisance had already evolved from the era when only easily perceived nuisances had been actionable. The Missouri II Court's use of the phrase did not operate to divide nuisances into those that were simple or complex so as to cull out the latter, nor did it otherwise imply that only the "simple" type of nuisances were actionable.

As a corollary to their "simple type" of nuisance argument, Defendants additionally contend that the challenged pollution must be directly traced to an out-of-state source in order to be actionable. Because Defendants' emissions "mix with other greenhouse gases from innumerable sources across the planet and contribute to a global process that will allegedly cause a variety of future harms" and pose "the same alleged threat to every sovereign," Defendants assert that Plaintiffs cannot properly complain of a "simple type" nuisance. Defendants contest the States' argument that "[n]atural resources injuries due to pollution-the 'paradigmatic' federal common law case-rarely occur because of just one polluter," and that many sources often contribute to the alleged harm. As an example, Defendants assert that the amount of ocean waste not attributable to defendant New York, in New Jersey v. New York, 283 U.S. 473, 481 (1931), "was negligible." Similarly, they maintain that in Tennessee Copper, "the Court nowhere stated that any forest destruction was attributable to other pollution-as opposed, for example, to other activities such as logging."

Defendants have cited no case law that supports their reasoning. In Tennessee Copper, the issue of whether there were multiple causes of harm never arose. The New Jersey Court's reference to other

pollution sources as "negligible," allowing the nuisance to be directly traced, pertains only to the facts presented in that particular case. The Court has not imposed a requirement upon all federal common law of nuisance cases that the challenged pollution must be "directly traced" or that plaintiffs must sue all sources of the pollution complained of in order to state an actionable claim. On the contrary, "the fact that other persons contribute to a nuisance is not a bar to the defendant's liability for his own contribution." Restatement (Second) of Torts § 840E (note that Comment a. states that this provision applies to both public and private nuisance.); see also, e.g., Illinois ex. rel Scott v. Milwaukee, No. 72 C 1253, 1973 U.S. Dist. LEXIS 15607, at *20-22 (N.D. Ill. Nov. 1, 1973) ("[I]t is sufficient for plaintiffs to show that defendants' nutrient discharges [leading to eutrophication of Lake Michigan] constitute a significant portion of the total nutrient input to the lake. The correct rule would seem to be that any discharger who contributes an aliquot of a total combined discharge which causes a nuisance may be enjoined from continuing his discharge. Either that is true or it is impossible to enjoin point dischargers."), aff'd in relevant part and rev'd in part, 599 F.2d 151 (7th Cir. 1979), vacated on other grounds, Milwaukee II, 451 U.S. 304; cf. Student Pub. Interest Research Group of N.J., Inc. v. Tenneco Polymers, Inc., 602 F. Supp. 1394, 1397 (D.N.J. 1985) (holding, in the context of finding causation for standing purposes, that pollution may derive from multiple sources and that it is not necessary to pinpoint which polluter caused a specific harm).

Yet another limitation that Defendants seek to impose on the federal common law of nuisance is that the nuisance must be "poisonous" or "noxious" in order to be actionable. They insist that because carbon dioxide is neither, Plaintiffs' claim must fail. But none of the federal common law of nuisance cases impose this requirement. Defendants' position, moreover, runs counter to the holding in North Dakota, for example, where the Court held that a life-giving substance such as water could be a nuisance under certain circumstances, such as when it flooded farmland. 263 U.S. at 374.

Nor does public nuisance theory require that the harm caused must be immediate, as even threatened harm is actionable under the federal common law of nuisance.[32] See Mugler v. Kansas, 123 U.S. 623, 673 (1887) (observing that courts of equity, in adjudicating public nuisance cases, can both prevent threatened nuisances, "before irreparable mischief ensues," as well as abate those in progress). Judge Oakes, in Bushey, recognized this attribute of nuisance law, writing that "'[o]ne distinguishing feature of equitable relief is that it may be granted upon the threat of harm which has not yet occurred.'" Bushey, 346 F. Supp. at 150 (quoting W. Prosser, Handbook of the Law of Torts 624 (3d ed. 1964)); see also Texas v. Pankey, 441 F.2d 236, 242 (10th Cir. 1971) (reversing district court refusing to issue injunction against pesticide spraying that was both threatened at the time the suit was instituted and had since been done); 7 Stuart M. Speiser, Charles F. Krause & Alfred W. Gans, The American Law of Torts § 20.19 (Thomson West 2003) ("We deem it necessary to explain that a prospective nuisance is a fit candidate for injunctive relief.... One distinguishing feature of equitable relief is that it may be granted upon the threat of harm which has not yet occurred."); Andrew H. Sharp, Comment, An Ounce of Prevention: Rehabilitating the Anticipatory Nuisance Doctrine, 15 B.C. Envtl. Aff. L. Rev. 627, 633-36 (1988).

Defendants' assertion that the federal common law of nuisance mandates that the harm be localized is similarly misplaced. The touchstone of a common law public nuisance action is that the harm is widespread, unreasonably interfering with a right common to the general public. See Tenn. Copper Co., 206 U.S. at 238-39 ("[W]e are satisfied, by a preponderance of evidence, that the sulphurous fumes cause and threaten damage on so considerable a scale to the forests and vegetable life, if not health, with the plaintiff State as to make out a case...."); Missouri I, 180 U.S. at 241 ("The health and comfort of the large communities inhabiting those parts of the state situated on the Mississippi river are not alone concerned, but contagious and typhoidal diseases introduced in the river communities may spread themselves throughout the territory of the state.").

The only qualification that the Supreme Court has placed upon a state bringing a nuisance action against another state was that "the case should be of serious magnitude, clearly and fully proved." Missouri II, 200 U.S. at 521. As discussed above, this statement was not intended to limit the scope of the nuisance cause of action, but to recognize the sensitivity with which the Court must undertake, pursuant to its original jurisdiction, adjudication of disputes involving a state's quasi-sovereign interests. But even assuming, arguendo, that the Court intended such a limitation to apply more broadly, the Court in Missouri II immediately went on to characterize as "a question of the first magnitude whether the destiny of the great rivers is to be the sewers of the cities along their banks or to be protected against everything which threatens their purity." Id. In this case, the States have properly asserted parens patriae standing with respect to a public nuisance, and the "serious magnitude" of the nuisance caused by climate change, as it has been alleged, is apparent.

In sum, the States have stated a claim under the federal common law of nuisance.

D. May Non-State Parties Sue under the Federal Common Law of Nuisance? Analysis of Federal Common Law of Nuisance Case Law

Defendants' primary arguments that New York City and the Trusts have not asserted a claim under the federal common law of nuisance are, respectively, that "only states can bring a federal common law claim to abate nuisances of a simple type" and that "private plaintiffs cannot invoke any federal common law cause of action to abate interstate nuisances." Defendants note that cities and private parties "surrendered no sovereign rights in exchange for a remedy, and are not beneficiaries of the Article III jurisdictional grant under which the Court fashioned that remedy." Defendants conclude that the federal common law of nuisance cause of action is reserved only for states.

We believe the correct approach to answering the question of whether non-state parties may sue under the federal common law of nuisance is to examine first how the small number of federal nuisance cases have treated the issue and then to analyze the Restatement provision § 821C, which concerns whether private parties may sue for public nuisance.[33] Both lines of analysis lead us to conclude that non-state entities may bring such claims.

1. Federal Common Law of Nuisance Case Law Concerning Non-State Parties

The question of whether a non-state entity could plead a federal common law of nuisance claim did not arise until the Supreme Court ruled in Ohio v. Wyandotte Chemicals Corp., 401 U.S. 493, 495 (1971) and Milwaukee I, 406 U.S. at 108, that states could bring nuisance claims in the district courts. In allowing such suits in the lower federal courts, the Court untethered the nuisance cause of action from the strictures of Supreme Court original jurisdiction that until then had been a component in all federal common law of nuisance cases. In determining whether non-state parties may bring a federal common law of nuisance claim, district courts have parsed the language of Milwaukee I, focusing particularly on footnote 6 of the Court's decision, which reads:

Thus, it is not only the character of the parties that requires us to apply federal law. See Tennessee Copper Co., 206 U.S. at 237; cf. Wisconsin v. Pelican Ins. Co., 127 U.S. 265, 289 (1888); The Federalist No. 80 (A. Hamilton). As Mr. Justice Harlan indicated for the Court in Banco Nacional de Cuba v. Sabbatino, 376 U.S. 398, 421-27 (1964), where there is an overriding federal interest in the need for a uniform rule of decision or where the controversy touches basic interests of federalism, we have fashioned federal common law.... Certainly these same demands for applying federal law are present in the pollution of a body of water such as Lake Michigan bounded, as it is, by four States.

Milwaukee I, 406 U.S. at 105 n.6 ("footnote 6") (emphasis added) (citations modified).

a. The Federal Government and Municipalities as Plaintiffs

Once nuisance suits were initiated in the district courts, the federal government began to bring cases. See, e.g., United States v. Stoeco Homes, Inc., 498 F.2d 597, 611 (3d Cir. 1974) ("The United States can, of course, sue to abate a public nuisance under federal common law."). The expansion of the class of federal nuisance plaintiffs to encompass the federal government became so well-established that then-district court Judge Newman remarked that the federal common law of nuisance had been extended "beyond cases brought by states as plaintiffs to include cases brought by the United States." Parsell v. Shell Oil Co., 421 F. Supp. 1275, 1281 (D. Conn. 1976), aff'd mem. sub nom. East End Yacht Club, Inc. v. Shell Oil Co., 573 F.2d 1289 (2d Cir. 1977).

The only reference in this Circuit as to whether municipal and private plaintiffs could bring a federal common law of nuisance claim can be found in a footnote in New England Legal Found. v. Costle, 475 F. Supp. 425, 441 n.18 (D. Conn. 1979). There, Second Circuit Judge Newman, sitting in the district court, wrote: "It may not be essential for the state to be a formal party to a federal common law nuisance action, however, where the interests of the state are sufficiently implicated in a dispute of clearly interstate nature." Id. (citing Twp. of Long Beach v. City of New York, 445 F. Supp. 1203, 1213-14 (D.N.J. 1978)). Because this Court has not yet addressed the issue, we look for additional guidance from outside our circuit.

In City of Evansville v. Ky. Liquid Recycling, Inc., 604 F.2d 1008 (7th Cir. 1979), the Seventh Circuit explicitly held that a municipality could assert a claim under the federal common law of nuisance. Id. at 1018-19. The defendant-polluters had argued that, under Milwaukee I, "only a state may file such an action," and that municipal plaintiffs did not represent the "'quasi-sovereign interest'" or "'ecological rights'" of the State of Indiana. Id. at 1017 (quoting Tenn. Copper Co., 206 U.S. at 237; Texas v. Pankey, 441 F.2d 236, 240 (10th Cir. 1971)). The Evansville Court looked to Milwaukee I to "determin[e] the content and scope" of the federal common law of nuisance, noting that the Supreme Court "did not address itself... to the question of whether parties other than states were protected by, or could invoke, that law." Id. Specifically, it found footnote 6 in Milwaukee I, 406 U.S. at 105 n.6, to be "particularly suggestive of the correct resolution of the issue." Evansville, 604 F.2d at 1017. The court concluded that "there can be little doubt that the reasons the Supreme Court found compelling for declaring a federal common law of interstate water pollution are applicable here" given that the plaintiff municipal corporations, subdivisions of the state, were required to "spend public funds because of pollution of an interstate waterway by acts done in another state. The interests of the state in this interstate pollution dispute are implicated in the same way such interests were implicated in [Milwaukee I]." Id. at 1018.[34]

Defendants here assert that Evansville was "wrong." They argue that courts had not recognized a federal common law of nuisance cause of action because states were "required to spend public funds," but rather because they had surrendered their sovereign powers upon entering the union and had received a judicial remedy. Once again, Defendants confuse the underlying basis for the Supreme Court's original jurisdiction over actions involving a state as a party with what is necessary to state a federal nuisance claim. The Evansville court drew a parallel between the plaintiff municipalities' interests and those of the States in Milwaukee I, holding that the former were proper parties to assert a water pollution claim under the federal common law of nuisance and rejecting the defendants' narrow reading of footnote 6 to the effect that only a state could maintain a suit under the federal common law. The holding in Evansville rested on footnote 6's pronouncement of "an overriding federal interest in the need for a uniform rule of decision" in interstate pollution cases and its call for a uniform federal law governing the federal tort of polluting federal waters. Id. at 1017-18 (quoting Milwaukee I, 406 U.S. at 105 n.6).

Defendants also cite to original jurisdiction cases such as New Jersey v. New York, 345 U.S. 369 (1953), for the propositions that the Supreme Court has refused to allow cities to intervene in a suit between states and that, in order to maintain a separate cause of action, a city should assert a separate and "compelling interest" different from that asserted by its state. In New Jersey, the Court refused to allow the City of Philadelphia to intervene in a suit between New Jersey and New York-where Pennsylvania had already been allowed to intervene as a party-because Philadelphia represented only a part of the citizens of Pennsylvania who reside in the watershed area of the Delaware River and its tributaries and depend upon those waters. If we undertook to evaluate all the separate interests within Pennsylvania, we could, in effect, be drawn into an intramural dispute over the distribution of water within the Commonwealth.

Id. at 373. Guarding against the expansion of its original jurisdiction, the Court commented that "[a]n intervenor whose state is already a party should have the burden of showing some compelling interest in his own right, apart from his interest in a class with all other citizens and creatures of the state, which interest is not properly represented by the state." Id.

Defendants in the instant case argue that because New York City does not show some "compelling interest in [its] own right," particularly where New York State is suing in its parens patriae capacity on behalf of all of its citizens, New York City cannot state a claim under the federal common law of nuisance. The Evansville defendants raised this same argument, quoting the same passage from New Jersey, and the Seventh Circuit rejected it. The Evansville court observed that "[w]hat the [Supreme] Court said in addressing [the intervention] issue has no bearing on whether a party other than a state can maintain a federal common law nuisance action in a district court." Evansville, 604 F.2d at 1018. That conclusion is sound, and we hold that it applies to these cases as well.

b. Private Plaintiffs

As with cases involving municipal plaintiffs, cases addressing the issue of whether private parties may sue under the federal common law of nuisance have been sparse. Courts' interpretations of footnote 6 figure prominently in the analysis.

In Committee for the Consideration of the Jones Falls Sewage System v. Train, 375 F. Supp. 1148 (D. Md. 1974), individuals and citizen associations sought to restrain EPA from granting permits for sewer hookups. Confronting a possible dismissal of their statutory causes of action, the plaintiffs asked the court whether they could amend their complaint to allege public nuisance under federal common law. The defendants countered that only governmental units could bring such claims. The district court agreed, pointing to the fact that only states had previously brought such actions. Id. at 1153-54. In a footnote, the court observed that the first sentence in Milwaukee I's footnote 6 stating, "it is not only the character of the parties that requires us to apply federal law," was ambiguous and could be read in at least two different ways:

[I]t could mean a) that there were other considerations sufficient in themselves to require application of federal law, or b) that there were other federal interests which in addition to the character of the parties required the application of federal law although those other interests in themselves would not have been sufficient.

Id. at 1154 n.12. The Jones Falls district court opted for the latter interpretation, and denied the plaintiffs' motion to amend. Id.

The Fourth Circuit affirmed, although it did not squarely hold that only states could assert a federal common law nuisance cause of action. It grounded its ruling on the alleged pollution's lack of interstate effect:

Here, where the controversy is strictly local, where there is no claim of vindication of the rights of another state and where there is no allegation of any interstate effect, we conclude there is no body of federal common law to which the plaintiffs may resort in their effort to obtain judicial relief from discharges which the federal statute and the federal regulatory agency permit.

Comm. for the Consideration of the Jones Falls Sewage System v. Train, 539 F.2d 1006, 1010 (4th Cir. 1976) (en banc). The opinion sent somewhat mixed signals with regard to the issue of who could properly bring a claim. The Fourth Circuit viewed Milwaukee I as limiting the federal common law to "interstate controversies in which the rights of a state are sought to be vindicated," id. at 1010 (emphasis added), and observed in a footnote that "[i]t is not essential that one or more states be formal parties if the interests of the state are sufficiently implicated," id. at 1009 n.8. It is important to note that the Fourth Circuit never held that states were the only proper parties to a federal common law of nuisance cause of action. In fact, it signaled a willingness to consider whether non-state parties asserting the "rights of a state" could be proper plaintiffs in this kind of action. See id. at 1010.

The Jones Falls opinion sparked a strong dissent. In addition to criticizing other matters, the dissenting judge took issue with the majority's view that only a state's rights could be vindicated in a federal nuisance suit. He pointed out that while the Milwaukee I Court had held that a state was a proper party plaintiff, "its discussion concerning the nature of the federal common law applicable to navigable waters is not expressly limited to actions brought by states." Id. at 1013 (Butzner, J., dissenting). Rather, in the dissent's view, the federal common law of nuisance was "fashioned from the policies of national laws dealing with the country's natural resources," and its function was "to fill statutory interstices and to provide uniform rules regarding the waters of the United States." Id. The dissent regarded footnote 6 as a caution against "confusing parties with subject matter in determining whether to apply federal common law." Id. Returning to subject matter jurisdiction under 28 U.S.C. § 1331(a), conferred by the federal nature of the dispute, the dissent concluded that "[n]o authority justifies placing a gloss on this basic jurisdictional statute to limit its application to controversies involving a state," and that a private person could enjoin a public nuisance in the circumstances presented in that case. Id. at 1014.

In this Circuit, Judge Newman, in Parsell v. Shell Oil Co., 421 F. Supp. 1275 (D. Conn. 1976),[35] culled three important factors from Milwaukee I regarding what was required for federal question jurisdiction in public nuisance cases: 1) the plaintiff was a governmental entity; 2) the water pollution affected more than one state; and 3) the claim was for equitable relief. Id. at 1280. As to the first factor, Judge Newman acknowledged that the federal common law of nuisance had been extended to include cases brought by the United States, and cited the holding of the Jones Falls district court as refusing to extend that claim to private plaintiffs. Id. at 1281. Without deciding the question of who could bring such an action, Judge Newman held that, "at the very least this right of action should be limited to suits involving pollution with an impact on more than one state." Id. However, the court also noted that "there is some justification for limiting any right of action under [Milwaukee I] to

private parties seeking injunctive relief rather than damages." Id. at 1282 (citing Milwaukee I, 406 U.S. at 107-08).

The leading case holding that private parties may bring a federal common law of nuisance cause of action is National Sea Clammers Ass'n v. City of New York, 616 F.2d 1222 (3d Cir. 1980), vacated on other grounds, Middlesex County Sewerage Authority v. National Sea Clammers Ass'n, 453 U.S. 1 (1981). In that case, the Third Circuit declared that "the common law nuisance remedy recognized in [Milwaukee I] is available in suits by private parties." Id. at 1233. The court interpreted footnote 6 as calling for the application of a uniform federal standard when dealing with interstate pollution, because "[r]elegating these litigants to possibly conflicting New York and New Jersey nuisance standards would ignore the clear intent of the Supreme Court to federalize those standards and would undermine that federal uniformity." Id. at 1233-34. The court added that, in order to give full effect to the federal common law of nuisance, "private parties should be permitted, and indeed encouraged, to participate in the abatement of such nuisances. Courts have already extended the [Milwaukee I] remedy to the federal government and to municipalities, and one district court has applied it on behalf of private litigants." Id. at 1234 (citing Bryam River, 394 F. Supp. at 622) (footnotes omitted). Relying on Restatement §§ 821B and C, which defines public nuisance and describes when a private party may recover for a public nuisance, the Third Circuit found that the plaintiffs had alleged that they had suffered "sufficient individual harm to sue for damages arising from that public nuisance" and allowed their claims to go forward. Id. at 1234-35.[36]

Defendants here argue that the Supreme Court overruled the Third Circuit on this point in Middlesex County Sewerage Authority v. National Sea Clammers Ass'n, 453 U.S. 1 (1981). In Sea Clammers, the Supreme Court held that the federal common law of nuisance had been fully displaced in the area of ocean pollution by the amended Federal Water Pollution Control Act and the Marine Protection, Research, and Sanctuaries Act, and it thus vacated and remanded the portion of the Third Circuit's opinion holding otherwise. The Court explicitly declined to address, however, the Third Circuit's holding that a cause of action could be brought under the federal common law of nuisance by a private plaintiff seeking damages. Id. at 11 n.17 ("We therefore need not discuss the question whether the federal common law of nuisance could ever be the basis of a suit for damages by a private party."). The Third Circuit's holding in that regard, therefore, remains undisturbed.

Finally, in the last of the long line of decisions in Milwaukee I and II, the Seventh Circuit in Illinois v. Milwaukee, 731 F.2d 403 (7th Cir. 1984), discussed footnote 6 in terms consistent with the view that a party need not be a state to bring an action under the federal common law of nuisance. The court wrote: "Milwaukee I's second reason for applying federal law was the character of the parties. It is clear, however, that the federal nature of the problem, and the basic interests of federalism do not depend on the case being a state versus state case." Id. at 407.

c. Whether Municipal and Private Parties Can State a Claim Under the Federal Common Law of Nuisance-An Examination of Milwaukee I's Footnote 6

By extrapolating from the fact that only states have been plaintiffs in Supreme Court nuisance cases, Defendants conclude that only states may state a claim under the federal common law of nuisance. In effect, as already noted, Defendants have conflated the rationale that limits the Supreme Court's original jurisdiction over nuisance conflicts in which a state is a party-a matter implicating parens patriae standing-with the elements required to state a claim under the federal common law of nuisance.[37] The structure of footnote 6 in Milwaukee I and case law applying the principles of federal common law lead us to conclude that a plaintiff need not be a state in order to sue under the federal common law of nuisance.

Analysis of the sentence structure of footnote 6 supports our reading that it is not necessary for a complaining party to be a state in order to bring a federal common law of nuisance cause of action. Milwaukee I, 406 U.S. at 105 n.6. Justice Douglas, writing for the Court, discussed two factors that bear on whether a party may bring a federal common law nuisance cause of action. These factors are set out in separate sentences. The Court stated first, in its only reference to the nature of the parties before it: "Thus, it is not only the character of the parties that requires us to apply federal law." Id. It followed that sentence with citations to Tennessee Copper, a case in which the Court discussed nuisance suits by States in their quasi-sovereign capacities, and to Wisconsin v. Pelican Insurance Co., 127 U.S. 265 (1888), a case in which the Court explained the rationale for the Supreme Court's original jurisdiction over suits involving states as parties. Milwaukee I, 406 U.S. at 105 n.6. The Court then began a new sentence focused on a distinct and equally valid ground for invoking federal common law: the overriding federal interest in the need for a uniform rule of decision or in a controversy that touches basic interests of federalism. In support of this latter ground the Court cited Banco Nacional de Cuba v. Sabbatino, 376 U.S. 398 (1964), a case in which an instrumentality of the Cuban government had sued a commodities broker. Milwaukee I, 406 U.S. at 105 n.6. The Court observed in Sabbatino that the involvement of private parties did not affect the intrinsically federal nature of the interests at issue. Sabbatino, 376 U.S. at 426-27 ("The decision implies that no State can undermine the federal interest in equitably apportioned interstate waters even if it deals with private parties."). In the final sentence of footnote 6, the Court referred to both grounds-state actors and the overriding federal interest-as having been satisfied. The Court noted that "[c]ertainly these same demands for applying federal law are present in the pollution of a body of water such as Lake Michigan bounded, as it is, by four States." Milwaukee I, 406 U.S. at 105 n.6. The Court went on to apply the federal common law of nuisance to the interstate nuisance claim.

Tellingly the Milwaukee I Court did not write what it easily could have articulated, to wit: "it is not only the character of the parties that requires us to apply federal law, but also where there is an overriding federal interest in the need for a uniform rule of decision... we have fashioned federal common law." Had the Court presented the proposition in that way, the footnote would leave little if any doubt that both the character of the party-as a state-and an overriding federal interest in a uniform rule of decision were needed in order to apply the federal common law of nuisance. But it did not do so, choosing instead to note that certain federal interests could serve as an alternate basis for applying federal common law. While the Court noted the character of the party as a factor

bearing on its decision to apply the federal common law of nuisance, it was only one factor and not a sine qua non for its application. The Court set out no requirement that only states could bring claims under the federal common law of nuisance.

In addition to the structure of footnote 6, the Court's reference to Sabbatino provides additional guidance on whether non-states may pursue an action grounded in federal common law of nuisance. The Supreme Court, of course, has not explicitly addressed whether private parties may bring such a nuisance action. But in other areas of the federal common law-areas involving the same kind of overriding federal interest in the need for a uniform rule of decision or presenting a controversy that touches basic interests of federalism-the Court has focused on the claim, not on the party presenting the claim, and has held that private plaintiffs may bring actions and may seek remedies under federal common law. See, e.g., Nat'l Audubon Soc'y v. Dep't of Water, 869 F.2d 1196, 1211-12 (9th Cir. 1988) (Reinhardt, J., dissenting) (citing Supreme Court cases in which federal common law claims by private parties were allowed to proceed); cf. Sabbatino, 376 U.S. 398 (1964) (permitting an action brought by an instrumentality of the Cuban government); Nat'l Sea Clammers, 616 F.2d at 1234-35. It would make no sense to carve out the federal common law of nuisance from other areas of the federal common law as the one area that permits states, and only states, to bring actions. Private parties and governmental entities that are not states may well have an equally strong claim to relief in a circumstance invoking an overriding federal interest or where the controversy touches issues of federalism.

For the foregoing reasons, we hold that New York City and the Trusts are not precluded from bringing claims sounding in the federal common law of nuisance.

2. The Restatement (Second) of Torts's Requirements for Maintaining an Action for Public Nuisance under § 821C

Because we apply the Restatement's definition of public nuisance in federal common law of nuisance suits, we will also look to the Restatement for guidance on whether non-state entities may bring claims for public nuisance. The question of whether such entities may maintain a public nuisance suit under § 821C is a threshold issue that must be addressed before the Court can examine whether the parties have stated a claim for public nuisance under § 821B.

Section 821C, entitled "Who can recover for public nuisance," provides:

(1) In order to recover damages in an individual action for public nuisance, one must have suffered harm of a kind different from that suffered by other members of the public exercising the right common to the general public that was the subject of the interference.

(2) In order to maintain a proceeding to enjoin to abate a public nuisance, one must

(a) have the right to recover damages, as indicated in Subsection (1), or

(b) have the authority as a public official or public agency to represent the state or a political subdivision in the matter, or

(c) have standing to sue as a representative of the general public, as a citizen in a citizen's action or as a member of a class in a class action.

Restatement (Second) of Torts § 821B; see also, e.g., In re Exxon Valdez, 104 F.3d 1196, 1197 (9th Cir. 1997) (applying § 821C to whether individuals could assert a public nuisance claim under Alaska law); Nat'l Sea Clammers, 616 F.2d at 1234 (applying § 821C to the question of whether a private party may recover damages for public nuisance).

a. Can New York City Maintain a Public Nuisance Suit under § 821C?

New York City has alleged that it is "responsible for protecting the health and well-being of its citizens and residents and protecting the natural resources of the City." It maintains that unrestrained emissions of greenhouse gases will increase the temperature in the City, which will in turn increase heat-related deaths, damage the coastal infrastructure, and wreak havoc in residents' daily lives. Under these circumstances, the City has sufficiently alleged interference with rights common to the general public. In addition, cities are political subdivisions of states. Buckhannon Bd. & Care Home, Inc. v. W. Va. Dep't of Health & Human Res., 532 U.S. 598, 609 n.10 (2001). New York City appears as a party plaintiff in its own name. See e.g., N.Y. State Nat'l Org. for Women v. Terry, 886 F.2d 1339, 1362 (2d Cir. 1989) (stating that New York City was a "proper party to bring an action to restrain a public nuisance that allegedly may be injurious to the health and safety of its citizens" under New York State public nuisance law). Accordingly, pursuant to Restatement § 821C(2)(b), New York City may maintain an action for public nuisance.

b. Can the Trusts Maintain a Public Nuisance Suit under § 821C?

We must conduct a more extensive analysis to determine if the Trusts, as private entities, may maintain an action for public nuisance. The relevant subsection of § 821C(2) asks whether the Trusts would "have the right to recover damages." Restatement § 821C(2)(a); see also Restatement § 821C(1). In order to maintain a public nuisance action, the Trusts must allege that they have suffered a harm different from that suffered by other members of the public, and that they suffered that harm when exercising a public right with which Defendants interfered.

The Trusts assert that the public rights at issue in this case are "the rights to use, enjoy, and preserve the aesthetic and ecological values of the natural world." Their complaint provides specific examples of how the ecological value of the properties they own will be diminished or destroyed by global warming, and alleges that they suffer "special injuries, different in degree and kind from injuries to

the general public." Restatement § 821B "sweeps broadly in defining a 'public right,' including 'the public health, the public safety, the public peace, the public comfort, or the public convenience.'" In re Starlink Corn Prods. Liab. Litig., 212 F. Supp. 2d 828, 848 (N.D. Ill. 2002) (quoting Restatement § 821B(2)(a)). As did the States and New York City, the Trusts assert that the deleterious effects of global warming interfere with public rights. Specifically, the Trusts assert a public right to a climate that will not drastically change as a result of greenhouse gas 'pollution,' thereby devastating the ecology and the human population. Public nuisance cases have traditionally defined public rights broadly. We find that the Trusts have asserted an interference with a public right in protecting natural resources. See, e.g., Nat'l Adver. Co. v. City & County of Denver, 912 F.2d 405, 409 (10th Cir. 1990) (noting that there is a governmental, i.e., public, interest in preserving aesthetic values); Phila. Elec. Co. v. Hercules, Inc., 762 F.2d 303, 316 (3d Cir. 1985) (holding that right to pure water is a public right); Celanese Corp. v. Coastal Water Auth., 475 F. Supp. 2d 623, 639 (S.D. Tex. 2007) (observing that public rights include enjoyment of clean air or water); Graham Oil Co. v. BP Oil Co., 885 F. Supp. 716, 723 (W.D. Pa. 1994) (finding that the public right interfered with the right to soil and water free of contamination).

The next question is whether the Trusts may maintain an action for public nuisance because they have suffered harm to that right of a kind different from that suffered by the general public. Section 821C, cmt. b, provides some insight into what constitutes harm different in kind and degree:

The private individual can recover in tort for a public nuisance only if he has suffered harm of a different kind from that suffered by other persons exercising the same public right. It is not enough that he has suffered the same kind of harm or interference but to a greater extent or degree.... The explanation of the refusal of the courts to take into account these differences in extent undoubtedly lies in the difficulty or impossibility of drawing any satisfactory line for each public nuisance at some point in the varying gradations of degree, together with the belief that to avoid multiplicity of actions invasions of rights common to all of the public should be left to be remedied by action by public officials.

Restatement § 821C, cmt. b. Difference in degree, however, as a measure of a different kind of harm, is not entirely out of the picture. Comment c provides:

Difference in degree of interference cannot, however, be entirely disregarded in determining whether there has been difference in kind. Normally there may be no difference in the kind of interference with one who travels a road once a week and one who travels it every day. But if the plaintiff traverses the road a dozen times a day he nearly always has some special reason to do so, and that reason will almost invariably be based upon some special interest of his own, not common to the community. Significant interference with that interest may be particular damage, sufficient to support the action in tort.... Thus in determining whether there is a difference in the kind of harm, the degree of interference may be a factor of importance that must be considered.

Id. § 821C, cmt. c.

Numerous commentators have discussed the problems associated with determining whether a private entity may maintain an action for public nuisance. Despite the still-evolving nature of public nuisance, especially when plaintiffs are seeking equitable remedies, the experts agree that a line must be drawn between the many who suffer from a public nuisance and those who may properly bring an action. That line is especially important in this case, where the harms allegedly inflicted by global warming have an impact on millions of people to greater or lesser degrees. Prosser states that "Defendants are not to be harassed, and the time of the courts taken up, with complaints about public matters from a multitude who claim to have suffered.... This insistence upon the rejection of the trivial has been especially marked in the decisions...." William L. Prosser, Private Action for Public Nuisance, 52 Va. L. Rev. 997, 1007 (1966). Twenty-five years later, commentators observed,

[A] court confronted with a private plaintiff would likely require a stronger showing that the plaintiff indeed represented the larger public interest before a public nuisance was found. Logically, a private citizen whose interest in the litigation arises solely from having incurred special-and private-damages should not be regarded as equivalent to the public official who brings an action in public nuisance.

Robert Abrams & Val Washington, The Misunderstood Law of Public Nuisance: A Comparison with Private Nuisance Twenty Years After Boomer, 54 Alb. L. Rev. 359, 389 (1990). These views underscore the importance of setting forth how the difference in "kind" must be assessed when private entities seek to maintain an action for public nuisance, particularly when the nuisance concerns carbon dioxide and other greenhouse gas emissions that lead to global warming.

Fortunately, in the case before us, we need not demarcate the outer limits of § 821C(1)'s requirement that the harms be different in kind (sometimes called "special injury"), because the harms asserted by the Trusts qualify. The Trusts are nonprofit land trusts with legally recognized missions to preserve ecologically sensitive land areas, and they own land threatened with significant harm (as a result of global warming). The Trusts have opened that land for public use-an invitation the public has accepted in significant numbers. Put another way, although the Trusts are private entities, they share similar features with public entities due to the facts that their lands are open to the public and they are private property owners "whose charter, purpose and mission is to preserve land for public use, enjoyment, and benefit." These factors lead us to conclude that the Trusts will suffer harms different in kind from the harms suffered by other members of the public, including individual landholders. The magnitude of the Trusts' land ownership also constitutes such a difference in degree as to become a difference in kind, the sort of difference explicated in § 821C, cmt. c. Because the Trusts have satisfied the requirements of § 821C(1), they may maintain an action for public nuisance.

We hold that New York City and the Trusts may properly maintain actions under the federal common law of nuisance. We now turn to the question of whether the Trusts and New York City

have stated a claim.

3. Have New York City and the Trusts Stated a Claim for Public Nuisance under § 821B?

We have determined that the City and private entities are not barred by their status from bringing a public nuisance cause of action. We now return to the ultimate question: have the non-State Plaintiffs alleged a public nuisance, i.e., an "unreasonable interference with a right common to the general public," pursuant to the definition found in Restatement § 821B(1)? Section 821B(1) refers us to three circumstances listed in § 821B(2), any of which may sustain a holding that an interference with a public right is unreasonable: (1) whether the "conduct involves a significant interference with the public health, the public safety, the public peace, the public comfort or the public convenience," Restatement § 821B(2)(a); (2) "whether the conduct is proscribed by a statute," id. § 821B(2)(b); or (3) "whether the conduct is of a continuing nature or has produced a permanent or long-lasting effect, and, as the actor knows or has reason to know, has a significant effect upon the public right," id. § 821B(2)(c). The Restatement comments that these three circumstances for determining unreasonable interference are not conclusive tests controlling the determination of whether an interference with a public right is unreasonable. They are listed in the disjunctive; any one may warrant a holding of unreasonableness. They also do not purport to be exclusive. Some courts have shown a tendency, for example, to treat significant interferences with recognized aesthetic values or established principles of conservation of natural resources as amounting to a public nuisance. The language of Subsection (2) is not intended to set restrictions against developments of this nature.

Id. § 821B, cmt. e. The Restatement goes on to explain how conduct interferes with a public right so as to be cognizable as a public nuisance:

Conduct does not become a public nuisance merely because it interferes with the use and enjoyment of land by a large number of persons. There must be some interference with a public right. A public right is one common to all members of the general public. It is collective in nature and not like the individual right that everyone has not to be assaulted or defamed or defrauded or negligently injured....

It is not, however, necessary that the entire community be affected by a public nuisance, so long as the nuisance will interfere with those who come in contact with it in the exercise of a public right or it otherwise affects the interests of the community at large.... The spread of smoke, dust or fumes over a considerable area filled with private residences may interfere also with the use of the public streets or affect the health of so many persons as to involve the interests of the public at large.

Id. § 821B, cmt. g. Courts apply a "permissive" standard in assessing public nuisance pleadings. See, e.g., In re Starlink Corn Prods. Liab. Litig., 212 F. Supp. 2d at 848.

We have found that New York City and the Trusts have alleged interference with rights common to

the general public. Their pleadings must also satisfy § 821B(2)'s requirement that the interference be unreasonable. Subsections 821B(2)(a) ("whether the conduct involves a significant interference with the public health, the public safety, the public peace, the public comfort, or the public convenience") and 821B(2)(c) ("whether the conduct is of a continuing nature or has produced a permanent or long-lasting effect, and, as the actor knows or has reason to know, has a significant effect upon the public right") apply here.

New York City, as a public entity, has pleaded an unreasonable interference with public rights. It has alleged significant interference: with public health (where heat-related deaths could double and increased smog will increase residents' respiratory illnesses); with public safety (where increased flooding in its coastal areas will damage to city-owned property, creating hazardous conditions); and with public comfort and convenience (by flooding of airports, subway stations, tunnels, storm sewers and wastewater treatment plants). These allegations constitute significant interference, satisfying § 821B(2)(a). The City has also claimed that the conduct is of a continuing nature, pointing out that Defendants' plants have been in continuous operation and have emitted large amounts of carbon dioxide from the combustion of fossil fuels for decades, and that "Defendants know or should know that their emissions of carbon dioxide contribute to global warming and to the resulting injuries and threatened injuries to the plaintiffs, their citizens and residents, and the environment." New York City has thus pleaded a claim that satisfies the requirements of Restatement § 821B(2)(c) and the federal common law of nuisance.

Similarly, the Trusts have pleaded an unreasonable interference with public rights. The Trusts have asserted that Defendants' carbon dioxide emissions, "by contributing to global warming, constitute a substantial and unreasonable interference with public rights including, inter alia, the rights to use, enjoy, and preserve the aesthetic and ecological values of the natural world." This alleged significant interference with the public right to be free from widespread environmental harm caused by the effects of global warming satisfies § 821B(2)(a)'s requirement that Defendants' conduct significantly interferes with the public health, comfort, and convenience. The Trusts have also asserted that "Defendants know or should know that their emissions of carbon dioxide contribute to global warming, to the general public injuries such warming will cause, and to plaintiffs' special injuries," and that "Defendants and their predecessors in interest have emitted large amounts of carbon dioxide from the combustion of fossil fuels for at least many decades." These statements are sufficient to allege that Defendants' conduct was "of a continuing nature," as well as that it has already produced a "permanent or long-lasting effect," and that Defendants "know or have reason to know" that their conduct "has a significant effect on the public right." As such, the allegations establish a claim for public nuisance under § 821B(2)(c).

We note that Defendants have raised the same argument against New York City and the Trusts as that Defendants raised against the States-i.e., that the common law of nuisance exists only for "simple type" nuisances involving substances that cause immediate, localized harms directly traceable to out-of-state sources, and that the nuisance asserted by New York City and the Trusts

does not fit that definition. We have already examined those contentions and found them to be without merit. The same result obtains here.

In conclusion, we hold that New York City and the Trusts have stated a claim under the federal common law of nuisance.

V. Displacement of Plaintiffs' Federal Common Law Claim

Defendants allege that even if Plaintiffs can raise a federal common law nuisance claim, any such cause of action has been displaced[38] by federal legislation. A cause of action has been displaced when "federal statutory law governs a question previously the subject of federal common law." Milwaukee II, 451 U.S. at 316.

A. The Displacement Standard

Because "federal common law is subject to the paramount authority of Congress," federal courts may resort to it only "in absence of an applicable Act of Congress." Milwaukee II, 451 U.S. at 313-14 (alteration and internal quotation marks omitted). Federal common law is a "necessary expedient" to which federal courts may turn when "compelled to consider federal questions which cannot be answered from federal statutes alone." Id. at 314 (internal quotation marks omitted). But "when Congress addresses a question previously governed by a decision rested on federal common law the need for... lawmaking by federal courts disappears." Id. "[T]he question [of] whether a previously available federal common-law action has been displaced by federal statutory law involves an assessment of the scope of the legislation and whether the scheme established by Congress addresses the problem formerly governed by federal common law." Id. at 315 n.8.

The state of Illinois's suit against the City of Milwaukee resulted in the leading Supreme Court cases addressing the circumstances under which courts may find Congress has displaced the federal common law.[39] In Milwaukee I, 406 U.S. 91 (1972), the Supreme Court determined that federal common law governed the water pollution dispute at issue in that case, notwithstanding that Congress had "enacted numerous laws touching interstate waters." Id. at 101.

At the time of Milwaukee I, the Federal Water Pollution Control Act required EPA to "prepare or develop comprehensive programs for eliminating or reducing the pollution of interstate waters and tributaries thereof and improving the sanitary condition of surface and underground waters." 33 U.S.C. § 1153 (1970) (emphasis added). The Court noted that the Rivers and Harbors Act of 1899, which "established some surveillance by the Army Corps of Engineers over industrial pollution, not including sewage," had been "reinforced and broadened by a complex of laws recently enacted." Milwaukee I, 406 U.S. at 101. The Court described the legislative landscape existing at the time as follows:

By the National Environmental Policy Act of 1969, 83 Stat. 852, 42 U.S.C. § 4321 et seq., Congress "authorizes and directs"... that "all agencies of the Federal Government shall... identify and develop methods and procedures... which will insure that presently unquantified environmental amenities and values may be given appropriate consideration in decisionmaking along with economic and technical considerations."

Congress has evinced increasing concern with the quality of the aquatic environment as it affects the conservation and safeguarding of fish and wildlife resources.

Buttressed by these new and expanding policies, the Corps of Engineers has issued new Rules and Regulations governing permits for discharges or deposits into navigable waters.

Id. at 101-02 (citations omitted and additional internal paragraph breaks inserted). Perhaps most importantly:

The Federal Water Pollution Control Act, tightens control over discharges into navigable waters so as not to lower applicable water quality standards....

The Federal Water Pollution Control Act... makes clear that it is federal, not state, law that in the end controls the pollution of interstate or navigable waters. While the States are given time to establish water quality standards, if a State fails to do so the federal administrator promulgates one. Section 10(a) makes pollution of interstate or navigable waters subject "to abatement" when it "endangers the health or welfare of any persons." The abatement that is authorized follows a long-drawn out procedure unnecessary to relate here. It uses the conference procedure, hoping for amicable settlements. But if none is reached, the federal administrator may request the Attorney General to bring suit on behalf of the United States for abatement of the pollution.

Id. at 101-03 (footnotes and citations omitted) (emphasis added); see also 33 U.S.C. § 1160(a) (1970).[40]

The Court determined that relief was available under the federal common law because "[t]he remedy sought by Illinois"-to abate the public nuisance of water pollution-was "not within the precise scope of remedies prescribed by Congress." Id. at 103. The Court stated presciently, however, that "[i]t may happen that new federal laws and new federal regulations may in time pre-empt the field of federal common law of nuisance. But until that comes to pass, federal courts will be empowered to appraise the equities of the suits alleging creation of a public nuisance by water pollution." Id. at 107 (emphasis added).

Following the decision in Milwaukee I, Congress passed the more comprehensive Federal Water Pollution Control Act Amendments of 1972 ("FWPCA" or "the Amendments"), just as the Milwaukee I Court had anticipated. See Pub. L. 92-500, 86 Stat. 816; Milwaukee II, 451 U.S. at 310-11. The Supreme Court "granted certiorari to consider the effect of this legislation on the previously

recognized cause of action." Milwaukee II, 451 U.S. at 308-09.[41]

The Milwaukee II Court explained that Congress had enacted the amended FWPCA in recognition that "the Federal water pollution control program... has been inadequate in every vital aspect." Id. at 310 (citation and internal quotation marks omitted). The Court characterized the Amendments as "not merely another law 'touching interstate waters' of the sort surveyed in Milwaukee I]." Id. at 317. Rather, the new federal legislation had "occupied the field through the establishment of a comprehensive regulatory program supervised by an expert administrative agency," in which "[e]very point source discharge is prohibited unless covered by a permit." Id. at 317-18. Looking to the legislative history of the Amendments, the Court found that "Congress'[s] intent in enacting the Amendments was clearly to establish an all-encompassing program of water pollution regulation." Id. at 318 ("The 'major purpose' of the Amendments was 'to establish a comprehensive long-range policy for the elimination of water pollution.'" (quoting S. Rep. No. 92-414, at 95 (1975) (emphasis added in Milwaukee II))). Accordingly, the Court stated, "[t]he establishment of such a self-consciously comprehensive program by Congress, which certainly did not exist when [Milwaukee I] was decided, strongly suggests that there is no room for courts to attempt to improve on that program with federal common law." Id. at 319.[42]

Turning to the particular claims involved in the case, the Milwaukee II Court concluded that there was "no question that the problem of effluent limitations has been thoroughly addressed" by the FWPCA administrative regime, thereby precluding the federal courts from applying the federal common law to impose "more stringent limitations than those imposed under the regulatory regime." Id. at 320. Illinois had complained that the defendants' sewage treatment plants and sewer systems were discharging inadequately treated sewage into Lake Michigan at discrete points. See id. at 308-09, 319-20. The Court stated that the permitting system and specific effluent limitations established pursuant to the Act "addressed the problem" of harmful pollution stemming from point source discharges such that there was "no 'interstice' here to be filled by federal common law." Id. at 319-24; see also id. at 310-11 ("The Amendments established a new system of regulation under which it is illegal for anyone to discharge pollutants into the Nation's waters except pursuant to a permit."). Significantly, the "complaint... that the permits issued... under the Act do not control overflows or treated discharges in a sufficiently stringent manner" did "not suffice to create an 'interstice' to be filled by federal common law." Id. at 324 n.18. "The question is whether the field has been occupied, not whether it has been occupied in a particular manner." Id. at 324.

This Court has noted that Milwaukee II articulated:

[A] strict test for determining the preemptive effect of a federal statute. Instead of inquiring whether "Congress ha[s] affirmatively proscribed the use of federal common law," we are to conclude that federal common law has been preempted as to every question to which the legislative scheme "spoke directly," and every problem that Congress has "addressed."

Matter of Oswego Barge Corp., 664 F.2d 327, 335 (2d Cir. 1981) (quoting Milwaukee II, 451 U.S. at 315) (citations omitted). To put it another way, in determining whether a federal statute has displaced a federal common law cause of action, a court must consider whether the federal statute "[speaks] directly to [the] question" otherwise answered by federal common law. As we stated in Milwaukee II, federal common law is used as a "necessary expedient" when Congress has not "spoken to a particular issue."

County of Oneida v. Oneida Indian Nation of N.Y. State, 470 U.S. 226, 236-37 (1985) (citations omitted). A statute need "not address every issue of [an area of law],... but when it does speak directly to a question, the courts are not free to 'supplement' Congress'[s] answer so thoroughly that the [statute] becomes meaningless." Milwaukee II, 451 U.S. at 315 (quoting Mobil Oil Corp. v. Higginbotham, 436 U.S. 618, 625 (1978)). The displacement question requires courts to distinguish between situations in which regulatory coverage leaves a "gap" which federal common law can appropriately fill, and situations in which the federal common law overlaps with an existing regulatory scheme but would supply a different approach than the one Congress has mandated. See Milwaukee II, 451 U.S. at 324 n.18.

In analyzing Defendants' contention that federal legislation has displaced Plaintiff's federal common law nuisance claim, we are mindful that dueling presumptions apply. On the one hand, "separation of powers concerns create a presumption in favor of preemption of federal common law whenever it can be said that Congress has legislated on the subject." Oswego Barge, 664 F.2d at 335 (citation omitted). At the same time, "[s]tatutes which invade the common law... are to be read with a presumption favoring the retention of long-established and familiar principles, except when a statutory purpose to the contrary is evident." United States v. Texas, 507 U.S. 529, 534 (1993) (internal quotation marks omitted). "[C]ourts may take it as a given that Congress has legislated with an expectation that the common law principle will apply except when a statutory purpose to the contrary is evident." Id. (internal quotation marks and alteration omitted).

B. Analysis

Defendants' primary argument is that the CAA is a "comprehensive legislative scheme," providing the backdrop against which Congress has "legislated repeatedly on the subjects of carbon dioxide emissions and global climate change." Defendants argue that the CAA and five other statutes-which primarily require scientific research, technology development, and reporting of emissions levels by electric utilities-sufficiently "address" global climate change and carbon dioxide emissions such that the federal common law of nuisance has been displaced because Congress has "legislated on the subject."

1. The Clean Air Act

a. Overview: the Clean Air Act

As this Court has previously stated, "[t]he Clean Air Act, created a complex and comprehensive legislative scheme to protect and improve the nation's air quality."[43] Weiler v. Chatham Forest Prod., Inc., 392 F.3d 532, 534 (2d Cir. 2004) (citation omitted). Under the CAA, the EPA Administrator must specify the "criteria" for "air quality" by determining which "air pollutant[s]..., in his judgment, cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare [and] the presence of which in the ambient air results from numerous or diverse mobile or stationary sources."[44] 42 U.S.C. § 7408(a)(1)(A)-(B); see also Natural Res. Def. Council, Inc. v. Train, 545 F.2d 320, 328 (2d Cir. 1976). For each of these so-called "criteria" air pollutants, the Administrator promulgates "national... ambient air quality standard[s]" ("NAAQS") to limit the amount of each pollutant in the ambient air, 42 U.S.C. § 7409(a), to levels "requisite to protect the public health... [and] the public welfare,"[45] id. § 7409(b)(1)-(2); see also id. § 7408(a)(2); Whitman v. Am. Trucking Ass'n, 531 U.S. 457 (2001); Weiler, 392 F.3d at 534. EPA has interpreted "ambient air" to mean "that portion of the atmosphere, external to buildings, to which the general public has access." 40 C.F.R. § 50.1(e). Under the CAA, each State bears "the primary responsibility for assuring air quality" in accordance with these standards within its borders, and for developing a "State Implementation Plan" ("SIP") for how to do so, subject to EPA oversight. 42 U.S.C. §§ 7407, 7410.

Notably, the CAA distinguishes between stationary and mobile sources of air pollution.[46] See, e.g. Weiler, 392 F.3d at 534 ("'Broadly speaking, Title I of the statute regulates stationary sources of pollution and Title II regulates mobile sources, most importantly motor vehicles.'" quoting Sierra Club v. Larson, 2 F.3d 462, 464 (1st Cir. 1993)); Daniel A. Farber, et al., Cases and Materials on Environmental Law 533 (7th ed. 2006) ("The Act treats mobile sources differently than stationary sources."). The CAA defines the term "stationary source" as "generally any source of an air pollutant except those emissions resulting directly from an internal combustion engine for transportation purposes or from a nonroad engine or nonroad vehicle," 42 U.S.C. § 7602(z), or more specifically as "any building, structure, facility, or installation which emits or may emit any air pollutant," id. § 7411(a)(3). In the instant case, Plaintiffs complain of a nuisance resulting from greenhouse gas emissions from Defendants' power plants, so we must look specifically at the regulation of stationary sources.

Pursuant to the NAAQS, "'[w]hether new construction of polluting facilities is permitted in an area, and what kind of controls [on pollution] are required, depends on whether the area is below or above the standard for each pollutant.'" Weiler, 392 F.3d at 534 (quoting Sierra Club, 2 F.3d at 464). The emissions of criteria pollutants by stationary sources are largely regulated through the Title V permitting process. See 42 U.S.C. §§ 7661-7661f. A permit requires that a permit holder abide by emissions limits and imposes monitoring requirements. See id. §§ 7661a(a)-(b), 7661c. Title V permitting of stationary sources was added as part of the 1990 Amendments to the CAA and is administered by the states through their SIPs. See id. § 7661a(d), (i). "The state must calculate the emissions reductions necessary to achieve compliance with NAAQS and allocate the reductions among the sources of emissions.... [S]o long as the national standards are met, the state may use any mix of controls it wishes, no matter how lax or how strict." Farber, Environmental Law 563-64. In

addition to the SIPs and Title V permitting process, the CAA authorizes EPA to establish technology-based standards for new stationary sources. See 42 U.S.C. § 7411.

At the present time, EPA has set NAAQS for only six criteria pollutants. Those pollutants are: sulfur dioxide, see 40 C.F.R. §§ 50.4, 50.5; particulate matter, see 40 C.F.R. §§ 50.6, 50.7, 50.13; carbon monoxide, see 40 C.F.R. § 50.8; ozone, see 40 C.F.R. §§ 50.9, 50.10, 50.15; nitrogen dioxide, see 40 C.F.R. § 50.11; and lead, see 40 C.F.R. §§ 50.12, 50.16. EPA does not currently regulate carbon dioxide under the CAA-at least not in the sense that EPA requires control of such emissions at this time.[47]

The Supreme Court recently held in Massachusetts v. EPA, 549 U.S. 497 (2007), that "[b]ecause greenhouse gases fit well within the Clean Air Act's capacious definition of 'air pollutant'... EPA has the statutory authority to regulate the emission of [greenhouse] gases from new motor vehicles." Id. at 532. The Massachusetts Court rejected EPA's arguments and held that section 202(a)(1) of the CAA, 42 U.S.C. § 7521, authorized EPA "to regulate greenhouse gas emissions from new motor vehicles in the event that it forms a 'judgment' that such emissions contribute to climate change." Id. at 528 (emphasis added). The Court was careful to state that it did not "reach the question whether... EPA must make an endangerment finding." Id. at 534 (emphasis added). And only "[i]f EPA makes a finding of endangerment, [does] the Clean Air Act require[] the agency to regulate emissions of the deleterious pollutant from new motor vehicles." Id. at 533 (emphasis added). Accordingly, while the Court viewed greenhouse gases as falling under the broad definition of "air pollutant" under the statute, id. at 528-29, 532, its holding was narrow. Whether EPA would in fact regulate greenhouse gas emissions was to be decided by EPA upon remand.

In April 2009, EPA issued a Proposed Rule, in which it proposed to make a finding that "greenhouse gases in the atmosphere endanger the public health and welfare of current and future generations" due to the effects of climate change. Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 18886, 18886 (proposed Apr. 24, 2009). Specifically, the EPA Administrator proposed to find that:

* "atmospheric concentrations of greenhouse gases endanger public health and welfare within the meaning of Section 202(a) of the Clean Air Act";

* this occurs "specifically with respect to six greenhouse gases that together constitute the root of the climate change problem: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride";

* "the combined emissions of carbon dioxide, methane, nitrous oxide, and hydrofluorocarbons from new motor vehicles and new motor vehicle engines are contributing to this mix of greenhouse gases in the atmosphere"; and

* as a result, "emissions of these substances from new motor vehicles and new motor vehicle engines

are contributing to air pollution which is endangering public health and welfare under section 202(a) of the Clean Air Act."

Id. EPA also proposed to "define a single air pollutant that is the collective class of the six greenhouse gases." Id. at 18904. It views "this collective approach... [as] most consistent with the treatment of greenhouse gases by those studying climate change science and policy" where greenhouse gases are commonly evaluated on "a collective [carbon dioxide]-equivalent basis." Id.

b. Analysis: Whether the Clean Air Act Displaces Federal Common Law in the Area of Greenhouse Gas Emissions from Stationary Sources

Defendants suggest that the Clean Air Act, on its own, is a "comprehensive" scheme sufficient to displace federal common law in the area of global warming regulation. As an initial matter, we point out that, in contrast to the "the area of water pollution," with respect to which the Milwaukee II and Sea Clammers cases held that the FWPCA "entirely" displaced the federal common law of nuisance, Middlesex County Sewerage Authority v. National Sea Clammers Ass'n, 453 U.S. 1, 21-22 (1981), no Supreme Court case has held that the CAA has displaced federal common law in the area of air pollution.[48]

After Massachusetts, it is clear that EPA has statutory authority to regulate greenhouse gases as a "pollutant" under the Clean Air Act. Massachusetts, 549 U.S. at 532. While the Massachusetts holding was made with explicit reference to emissions of greenhouse gases "from new motor vehicles," Massachusetts, 549 U.S. at 528-29, 533, we consider it reasonable to assume that the Massachusetts Court's finding that EPA has the statutory authority to deem greenhouse gases an "air pollutant" under the statute would apply to emissions of greenhouse gases from stationary sources as well. The Massachusetts Court primarily based its analysis on the Act's "capacious" definition of "air pollutant" found in the "General Provisions" of Title III:

The Clean Air Act's sweeping definition of "air pollutant" includes "any air pollution agent or combination of such agents, including any physical, chemical... substance or matter which is emitted into or otherwise enters the ambient air...." § 7602(g) (emphasis added). On its face, the definition embraces all airborne compounds of whatever stripe, and underscores that intent through the repeated use of the word "any." Carbon dioxide, methane, nitrous oxide, and hydrofluorocarbons are without a doubt "physical [and] chemical... substance [s] which [are] emitted into... the ambient air." The statute is unambiguous.

Id. at 528-29, 532 (emphases in original) (footnotes omitted); see also 42 U.S.C. § 7602(g). The Court could hardly find otherwise because, as one commentator has noted, "CAA section 302(g) provides a definition of 'air pollutant' that is not only broad, it is absurdly broad.... The [portion] of the definition... establish[ing] what the term air pollutant 'includes[]' classifies nearly everything in the known universe that enters the air a CAA air pollutant." Christopher T. Giovinazzo, Defending

Overstatement: The Symbolic Clean Air Act and Carbon Dioxide, 30 Harv. Envtl. L. Rev. 99, 151-52 (2006).

As the Massachusetts Court also made clear, however, the CAA requires regulation of greenhouse gas emissions from new motor vehicles only if EPA determines that the emissions of greenhouse gases from "new motor vehicles... cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare." 42 U.S.C. § 7521(a)(1); Massachusetts, 549 U.S. at 528-29, 533; see also Giovinazzo, 30 Harv. Envtl. L. Rev. at 152 ("Since CAA regulation will only be triggered when a pollutant is shown to harm health or welfare, the absurd[ly broad] definition does not lead to absurd results."). To regulate emissions from stationary sources, like those at issue in the instant case, the CAA requires that EPA likewise find that emissions of greenhouse gases "cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare." 42 U.S.C. § 7408(a)(1)(A). But in the stationary source context, EPA must additionally find that "the presence of [greenhouse gases] in the ambient air results from numerous or diverse mobile or stationary sources." Id. § 7408(a)(1)(B).

At this time, EPA has not made any such findings. EPA has proposed to find that greenhouse gases endanger public health and welfare. Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. at 18886. It has also proposed to find that emissions of such gases from motor vehicles contribute to an endangerment of public health and welfare. Id. As EPA notes succinctly on its website: "This proposed action, as well as any final action in the future, would not itself impose any requirements on industry or other entities." EPA, Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases under the Clean Air Act, http://www.epa.gov/climatechange/endangerment.html. A proposed finding has no effect in law that would affect any rights at issue here. After reviewing public comments EPA might legitimately determine-subject to the requirements of administrative law-that its proposed finding is unwarranted or that regulation of greenhouse gases is otherwise inappropriate under the terms of the Act. We cannot say, therefore, that EPA's issuance of proposed findings suffices to regulate greenhouse gases in a way that "speaks directly" to Plaintiffs' problems and thereby displaces Plaintiffs' existing remedies under the federal common law. See Milwaukee II, 451 U.S. at 319-24.

Furthermore, EPA's proposed 'cause and contribute' findings are made with reference to section 202(a) of the CAA, 42 U.S.C. § 7521(a), which requires EPA to set standards for emissions of "any air pollutant from any class or classes of new motor vehicles or new motor vehicle engines, which in his judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare. Such standards shall be applicable to such vehicles and engines." Id. (emphases added). As EPA acknowledges on its website: "An endangerment finding under one provision of the Clean Air Act would not by itself automatically trigger regulation under the entire Act." EPA, Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases under the Clean Air Act, http://www.epa.gov/climatechange/endamgerment.html. EPA has not even

proposed to make any finding with respect to whether greenhouse gases are also an "air pollutant... the presence of which in the ambient air results from numerous or diverse mobile or stationary sources." Id. § 7408(a)(1)(B). Such a particularized finding would be required before EPA could regulate greenhouse gas emissions from stationary sources.

Additionally, at whatever point in the future EPA might make final and publish the necessary proposed findings, EPA must still complete the remaining steps in the rulemaking process before it could actually regulate greenhouse gas emissions, including setting NAAQS and "delay[ing] any action 'to permit the development and application of the requisite technology, giving appropriate consideration to the cost of compliance.'" Massachusetts, 549 U.S. at 531 (quoting 42 U.S.C. § 7521(a)(2)). Until EPA completes the rulemaking process, we cannot speculate as to whether the hypothetical regulation of greenhouse gases under the Clean Air Act would in fact "speak[] directly" to the "particular issue" raised here by Plaintiffs, which is otherwise governed by federal common law. County of Oneida, 470 U.S. at 236-37 (quoting Milwaukee II, 451 U.S. at 313-15) (alterations omitted).

We also note that the regulatory scheme set up by the CAA bears more similarity to the Federal Water Pollution Control Act in place at the time of Milwaukee I than to the amended FWPCA addressed in Milwaukee II. When Milwaukee I was decided, the statute provided that pollution of interstate waters was "subject to abatement" when it "endanger[ed] the health or welfare of any persons." 33 U.S.C. § 1160(a) (1970). States were to adopt water quality criteria; if they did not, EPA was required to "promulgate such standards" itself. Id. § 1160(c)(2). Where pollution met the criteria for abatement, EPA would first convene parties to seek a voluntary resolution and, "[i]f the Administrator believes... effective progress toward abatement... is not being made and that the health or welfare of any persons is being endangered he shall recommend" remedial action to the appropriate State agency. Id. § 1160(e). If remedial action or "action which in the judgment of the Administrator is reasonably calculated to secure abatement" had not been taken after six months, the Administrator "shall call a public hearing." Id. § 1160(f)(1). Finally, upon all other actions failing, EPA could request the Attorney General bring suit to secure abatement of interstate water pollution "which is endangering the health or welfare of persons." Id. § 1160(g)(1). Under the regime in place at the time of Milwaukee I the EPA could take action to abate water pollution that the Administrator found to "endanger[]... health or welfare," id., just as under the CAA, EPA may seek to regulate air pollutants "which, in [the Administrator's] judgment, cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare." 42 U.S.C. §§ 7408(a)(1)(A), 7521(a)(1). The two statutes appear to afford the EPA Administrator a strikingly similar degree of discretion as to what and when to regulate.

In contrast, at the time of Milwaukee II, the amended FWPCA made it "illegal for anyone to discharge pollutants into the Nation's waters except pursuant to a permit" and EPA had "promulgated regulations establishing specific effluent limitations." Milwaukee II, 451 U.S. at 310-11. As this Court has noted previously, the FWPCA "regulated every point source of water

pollution," while under the CAA "the states and the EPA are not required to control effluents from every source, but only from those sources which are found by the states and the agency to threaten national ambient air quality standards."[49] New England Legal Found. v. Costle, 666 F.2d 30, 32 n.2 (2d Cir. 1981) (emphasis added); cf. United States v. Tenn. Air Pollution Control Bd., 185 F.3d 529, 534 (6th Cir. 1999) (noting "significant differences between the Clean Water Act and the Clean Air Act"). Additionally, the discharges at issue in the dispute between Illinois and Milwaukee were already subject to statutorily required permits and had been subject to statutory enforcement actions by the time of Milwaukee II. See Milwaukee II, 451 U.S. at 311. With respect to the greenhouse gas emissions causing the alleged nuisance at issue in the instant cases, however, EPA has yet to make any determination that such emissions are subject to regulation under the Act, much less endeavor actually to regulate the emissions.

In sum, at least until EPA makes the requisite findings, for the purposes of our displacement analysis the CAA does not (1) regulate greenhouse gas emissions or (2) regulate such emissions from stationary sources. Accordingly, the problem of which Plaintiffs complain certainly has not "been thoroughly addressed" by the CAA. Milwaukee II, 451 U.S. at 320. We express no opinion at this time as to whether the actual regulation of greenhouse gas emissions under the CAA by EPA, if and when such regulation should come to pass, would displace Plaintiffs' cause of action under the federal common law.

2. All Legislation "on the Subject" of Greenhouse Gases

a. Overview: the Legislative Landscape

Defendants further suggest that, against the "background" of the Clean Air Act, the various statutes Congress has enacted "touching" in some way on greenhouse gases or climate change are sufficient to displace Plaintiffs' federal common law of nuisance cause of action. The additional statutes to which Defendants refer require, inter alia, that the President establish a national climate program and make recommendations for responses to climate-induced problems; that research be undertaken; and that the Department of Energy assess policy mechanisms to reduce generation of greenhouse gases. Defendants argue that this conglomeration of statutes shows that Congress has "legislated on the subject" and that any federal common law cause of action has therefore been displaced.

Defendants refer to five statutes that they claim "address global climate change and carbon dioxide emissions." The earliest of these statutes, the National Climate Program Act of 1978, Pub. L. No. 95-367, 92 Stat. 601 (codified at 15 U.S.C. §§ 2901-2908), was enacted with the stated purpose of "establish[ing] a national climate program that will assist the Nation and the world to understand and respond to natural and man-induced climate processes and their implications." 15 U.S.C. § 2902; see also S. Rep. No. 95-740, at 1 (1978) (Rep. of S. Comm. on Commerce, Sci., & Transp.) ("The purposes of the National Climate Act are to expand the nation's understanding of natural and man-induced climate processes, to relate knowledge of climate and its implications and effects to

human welfare and the environment, and to respond more effectively to climate-induced problems."). The law exclusively provides for research-related activities. The program's elements include:

(1) assessments of the effect of climate on the natural environment, agricultural production, energy supply and demand, land and water resources, transportation, human health and national security.... Where appropriate such assessments may include recommendations for action;

(2) basic and applied research to improve the understanding of climate processes, natural and man induced, and the social, economic, and political implications...;

(3) methods for improving climate forecasts...;

(4) global data collection, and monitoring and analysis activities to provide reliable, useful and readily available information on a continuing basis;

(5) systems for the management and active dissemination of climatological data, information and assessments...;

(6) measures for increasing international cooperation in climate research, monitoring, analysis and data dissemination;

(7) mechanisms for intergovernmental climate-related studies and services.... Such mechanisms may provide, among others, for the following State and regional services and functions: (A) studies relating to and analyses of climatic effects...; (B) atmospheric data collection and monitoring...; (C) advice to regional, State, and local government agencies regarding climate-related issues; (D) information to users within the State regarding climate and climatic effects; and (E) information to the Secretary regarding the needs of persons within the States for climate-related services, information, and data....;

(8) experimental climate forecast centers...; and (9) a preliminary 5-year plan [which] shall establish the goals and priorities for the Program....

15 U.S.C. § 2904(d) (emphases added). The Senate Report recommending enactment of the bill stated that the program's objectives were: "(1) to develop more reliable knowledge about climate and to improve the capability of forecast...; (2) to organize effectively the federal government's planning, management and budgeting functions for climate research and advisory services, and (3) to use existing and future climate information to determine the effect of climatic change." S. Rep. No. 95-740, at 2 (1978) (emphases added). Nowhere does the law require any actions to limit greenhouse gas emissions that could even remotely "address" the problems of which Plaintiffs complain.

Defendants next cite the Global Climate Protection Act of 1987, Pub. L. No. 100-204, Title XI, §§

1101-1106, 101 Stat. 1407, as amended by Pub. L. No. 103-199, 107 Stat. 2327, reprinted as note to 15 U.S.C. § 2901. This Act stated that:

United States policy should seek to-

(1) increase worldwide understanding of the greenhouse effect and its... consequences;

(2) foster cooperation among nations to develop more extensive and coordinated scientific research efforts with respect to the greenhouse effect;

(3) identify technologies and activities to limit mankind's adverse effect on the global climate...; and

(4) work toward multilateral agreements.

Id. § 1103(a) (emphases added). The Act additionally provided that the "President... shall be responsible for developing and proposing to Congress a coordinated national policy on global climate change" and that the "Secretary of State... shall be responsible to coordinate those aspects of United States policy requiring action through... diplomacy." Id. § 1103(b)-(c) (emphasis added). Although all of these requirements ostensibly serve as a "mandate for action on the global climate," id. § 1103, the Act consists almost entirely of mere platitudes. Beyond requiring that within two years the Secretary of State and EPA submit to Congress a report "analy[zing]... scientific understanding" and "assess[ing]" and "describ[ing]" U.S. "efforts" and "strategy" to further international cooperation in limiting global climate change, id. § 1104, the 1987 Act appears to require no action of any kind.

The Global Climate Change Act of 1990, Pub. L. No. 101-606, § 2, 104 Stat. 3096 (codified at 15 U.S.C. §§ 2921, 2931-2938), sought "to provide for development and coordination of a comprehensive and integrated United States research program which will assist the Nation and the world to understand, assess, predict, and respond to human-induced and natural processes of global change." 15 U.S.C. § 2931(b) (emphases added). A Senate Committee Report describes the purpose of the bill as to "provide the information needed to achieve effective policies for addressing changes in the global climate and environment." S. Rep. No. 101-40, at 1 (1989) (Rep. of S. Comm. on Commerce, Sci., & Transp.) (emphases added). The Act requires, in pertinent part:

establishment of a Committee "for the purpose of increasing the overall effectiveness and productivity of Federal global change research efforts," 15 U.S.C. § 2932 (emphasis added);

establishment of an "interagency United States Global Change Research Program to improve understanding of global change," id. § 2933 (emphases added);

development of a National Global Change Research Plan, which shall "contain recommendations for national global change research," id. § 2934 (emphases added); and

preparation of a "scientific assessment" that "integrates, evaluates, and interprets the findings of the Program..., analyzes the effects of global change..., and analyzes current trends in global change... and projects major trends," id. § 2936 (emphases added).

As with the statutes described above, this Act requires only research, which at best is a precursor to "speaking directly" to the problems created by climate change.[50] Significantly, however, the Act also provides that "[n]othing in this subchapter shall be construed, interpreted, or applied to preclude or delay the planning or implementation of any Federal action designed, in whole or in part, to address the threats of stratospheric ozone depletion or global climate change." Id.

§ 2938(c). This provision could be read as an acknowledgment by Congress that the legislation does little to avert the danger posed by climate change.

The Energy Policy Act of 1992, Pub. L. No. 102-486, § 2, 102 Stat. 2776 (codified at 42 U.S.C. §§ 13381-13388), provides in relevant part that:

the Secretary of Energy shall submit reports to Congress that (1) "include[] an assessment of... the feasibility and... implications... of stabilizing [or reducing] the generation of greenhouse gases in the United States," 42 U.S.C. § 13381, and (2) "contain[] a comparative assessment of alternative policy mechanisms for reducing the generation of greenhouse gases," id. § 13384 (emphases added);

each "National Energy Policy Plan... shall include a least-cost energy strategy," which "shall be designed to achieve to the maximum extent practicable and at least-cost to the Nation," inter alia, "the stabilization and eventual reduction in the generation of greenhouse gases," id. § 13382 (emphasis added);

the Secretary of Energy shall establish a Director of Climate Protection who will, inter alia, "serve as the Secretary's representative for interagency and multilateral policy discussions of global climate change... [and] monitor... domestic and international policies for their effects on the generation of greenhouse gases," id. § 13383 (emphases added);

the Secretary of Energy shall "develop... an inventory of the national aggregate emissions of each greenhouse gas" for the years 1987-1990, though without "any new data collection authority," id. § 13385 (emphasis added);

the Secretary of Energy shall "develop policies and programs to encourage the export and promotion of domestic energy resource technologies, including renewable energy, energy efficiency, and clean coal technologies," id. § 13386 (emphasis added); and

the Secretary of the Treasury shall "establish a Global Climate Change Response Fund to act as a mechanism for United States contributions to assist global efforts in mitigating and adapting to

global climate change," id. § 13388.

Essentially, the Act requires only research, planning and strategizing, technology development, assessments, and monitoring, but no real action to abate emissions. According to the House Committee Report recommending its enactment, "[t]he greenhouse title requires several reports and analyses, establishes a greenhouse gas reduction technology transfer program, and establishes an accounting system for voluntary gas reductions." H.R. Rep. No. 102-474, pt. 1, at 152-53 (1992) (Rep. of H. Comm. on Energy and Commerce) (emphases added). In particular, "[t]he studies will advance the greenhouse warming debate significantly by giving Congress the information it needs to make the important choices it will need to make, perhaps soon, on greenhouse warming policy." Id. (emphasis added).

Similarly, the Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594 (codified at 42 U.S.C. § 13389), requires that:

the President "establish a Committee on Climate Change Technology to-integrate Federal climate reports; and coordinate Federal climate change technology activities and programs," 42 U.S.C. § 13389(b)(1), and to "submit... a national strategy to promote the deployment and commercialization of greenhouse gas intensity reducing technologies and practices," id. § 13389(c)(1) (emphases added).

the Secretary of Energy "establish... the Climate Change Technology Program to-assist the Committee in the interagency coordination of climate change technology research, development, demonstration, and deployment," id. § 13389(d) (emphases added);

the Secretary "conduct and make public an inventory and evaluation of greenhouse gas intensity reducing technologies... to determine which technologies are suitable for commercialization and deployment," report on the results of the inventory to Congress, and "use the results... as guidance in the commercialization and deployment of greenhouse gas intensity reducing technologies," id. § 13389(e) (emphases added);

the Secretary "may establish... a Climate Change Technology Advisory Committee to identify... barriers to the commercialization and deployment of [such] technologies," id. § 13389(f) (emphasis added), and "develop recommendations that would provide for the removal of domestic barriers," id. § 13389(g) (emphasis added);

the Secretary "shall develop standards and best practices for calculating, monitoring, and analyzing greenhouse gas intensity," id. § 13389(h) (emphasis added); and

the Secretary "shall... support demonstration projects that... increase the reduction of greenhouse gas intensity," id. § 13389(i)(1) (emphasis added).

As Senators debating the 2005 Act stressed, "the bill does not include any provisions to address global warming." 151 Cong. Rec. S9335, 9339 (daily ed. July 29, 2005) (statement of Sen. Leahy) (stating also that "[t]his bill's refusal to take any steps to combat global warming is not only disappointing, but dangerous to our future generations"); see also id. at 9353 (statement of Sen. Mikulski) ("I am also disappointed that the bill does not include... steps to deal with global warming...."); id. at 9360 (statement of Sen. McCain) ("[This bill] won't assure the growing threat of global warming is addressed in any meaningful way....").

This review of the statutes cited by Defendants shows that Congress has not acted to regulate greenhouse gas emissions in any real way. Congress has prescribed research, reports, technology development, and monitoring, but-as we discuss below-has not enacted any legislation that "addresses" the problem that climate change presents to Plaintiffs.

b. Analysis: All Statutes "Touching" on Greenhouse Gases

Seizing on language from this Court's decision in Oswego Barge, Defendants claim that federal common law is displaced if Congress has "legislated on the subject." Oswego Barge, 664 F.2d at 335. Defendants interpret the terms "legislate" and "subject" as broadly as possible and conclude that Congress's passage of the statutes described above indicates that the common law cause of action in this case has been displaced. Defendants make the related argument that displacement does not require a "comprehensive and effective remedial scheme" and that Congress "need not provide substitute remedies to displace a judicially-created one." These arguments miss the mark.

The language from Oswego Barge upon which Defendants rely for their displacement argument must be interpreted in the context of that case, as well as alongside the other language the Supreme Court and this Court have employed when determining whether federal common law has been displaced. The phrase from Oswego Barge relied upon by Defendants-that displacement occurs when Congress has "legislated on the subject"-does not describe the standard for displacement, but rather is a comment on when the presumption in favor of displacement should be employed. Oswego Barge, 664 F.2d at 335 ("[S]eparation of powers concerns create a presumption in favor of preemption of federal common law whenever it can be said that Congress has legislated on the subject." (emphasis added)). The relevant inquiry, as set out in Milwaukee II, is whether the statute "speak[s] directly to a question." Milwaukee II, 451 U.S. at 315 (quoting Mobil Oil v. Higginbotham, 436 U.S. 618, 625 (1978)). And when Congress has not "spoken to a particular issue," the federal courts may apply federal common law. Id. at 313. This Court in Oswego Barge acknowledged as much. Oswego Barge, 664 F.2d at 335 ("[W]e are to conclude that federal common law has been preempted as to every question to which the legislative scheme 'spoke directly,' and every problem that Congress has 'addressed.'").

This articulation focuses narrowly on the issue at hand. See, e.g., United States v. Texas, 507 U.S. 529, 534-35 (1993) (holding that federal common law was not displaced by the Debt Collection Act because

the Act did not speak directly to the issue, i.e., the government's right to collect prejudgment interest on debts owed to it by the States, and opining that Congress's "mere refusal to legislate with respect to [that issue] falls far short of an expression of legislative intent to supplant the existing common law in that area" (internal quotation marks omitted)); County of Oneida, 470 U.S. at 235-40 (holding that the Nonintercourse Act of 1793 did not displace the Oneidas' federal common law right to sue to enforce their aboriginal land rights because the Act did "not speak directly to the question of remedies for unlawful conveyances of Indian land"); Higginbotham, 436 U.S. at 625 (concluding that a federal maritime tort remedy allowing recovery for loss of society was displaced by Death on High Seas Act ("DOHSA") with respect to deaths occurring outside of state territorial waters because Congress in DOHSA had expressly limited damages for deaths to recovery of pecuniary losses; while the Act did "not address every issue of wrongful-death law," "when it does speak directly to a question, the courts are not free to 'supplement' Congress' answer"); Matter of Oswego Barge, 673 F.2d at 48 (dismissing petition for rehearing and finding displacement of maritime tort remedy for nuisance only because of "the precise and comprehensive statutory damage remedy Congress has created"). The "particular" issues here concern whether Congress has regulated emissions of greenhouse gases and whether it has legislated a remedy for the injuries caused by such emissions. The statutes cited by Defendants, together or separately, do not "speak directly" to those "particular issues."

The linchpin in the displacement analysis concerns whether the legislation actually regulates the nuisance at issue. Study is not enough. The FWPCA Amendments actually regulated the very discharges at issue in Milwaukee II. The Court in Milwaukee I and II underscored the importance of regulation of the particular nuisance in displacing federal common law by averring that federal common law would apply "[u]ntil the field has been made the subject of comprehensive legislation or authorized administrative standards." Milwaukee II, 451 U.S. at 314 (quoting Texas v. Pankey, 441 F.2d 236, 241 (10th Cir. 1971)). These statements indicate that in a federal nuisance cause of action, unless the statute regulates the nuisance itself, the federal common law that would otherwise be invoked to abate the particular nuisance applies. A collection of non-regulatory statutes focused on studying the issue is insufficient to displace the common law.

Furthermore, even at the time of Milwaukee I, as discussed above, "Congress ha[d] enacted numerous laws touching interstate waters," but those laws did not displace the federal common law cause of action. Milwaukee I, 406 U.S. at 101. We see a parallel between the posture of the instant cases and that of Milwaukee I. The various laws that currently "touch[]" greenhouse gas emissions-but do not regulate them-more closely resemble the hodgepodge of legislation relating to water pollution that the Supreme Court found did not displace the common law in Milwaukee I, than they do the comprehensive regulation of the amended FWPCA. See id.

Moreover, Defendants' argument that displacement can be found here even though Congress has not enacted a remedy misses the point and is undercut by Supreme Court case law. In Milwaukee I, the Court surveyed the existing statute, concluded that "[t]he remedy sought by Illinois is not within the

precise scope of remedies prescribed by Congress," 406 U.S. at 103, and went on to point the way to the creation of federal common law remedies. In County of Oneida, the Court focused on remedies when determining whether federal common law was displaced. It held that because the statute at issue did not "speak directly to the question of remedies for unlawful conveyances of Indian land," and there was no indication in the legislative history of the statute that Congress intended to "pre-empt common-law remedies," the plaintiffs' "right of action under the federal common law was not pre-empted by the passage of the [statute]." County of Oneida, 470 U.S. at 237, 240 (emphasis added). The Oneida Court distinguished the statute at issue, which "did not establish a comprehensive remedial plan for dealing with violations of Indian property rights," with the FWPCA discussed in Milwaukee II, which provided "a comprehensive solution to the problem of interstate water pollution." Id. at 237.[51]

We hold that neither Congress nor EPA has regulated greenhouse gas emissions from stationary sources in such a way as to "speak directly" to the "particular issue" raised by Plaintiffs. If and when a statute or administrative regulation "speaks directly" to the question of whether stationary sources are required to control greenhouse gas emissions, then the parties may very well find themselves in circumstances similar to those of the parties in Milwaukee II, 451 U.S. 304. But until that occurs, Plaintiffs have stated a viable cause of action under federal common law.

C. Displacement on Foreign Policy Grounds

Finally, Defendants argue that this lawsuit would undermine the nation's strategy concerning global climate change, thereby reducing the bargaining leverage the President needs to implement that strategy. Defendants reason that because the Supreme Court has held that state law is preempted when it gives the President "less to offer" other countries, and because displacement of federal common law is more readily found than preemption of state law, it follows that a federal common law cause of action that undermines the President's ability to implement Congress' approach to addressing climate change would also be "necessarily displaced." This argument-essentially that Plaintiffs' federal common law cause of action has been displaced by the President's conduct of foreign affairs-simply reiterates their political question argument and must be rejected for similar reasons.

VI. Defendant Tennessee Valley Authority's Separate Arguments

Defendant Tennessee Valley Authority ("TVA") urges that the district court's dismissal of the complaints against it should be affirmed on political question grounds. It also asserts that the discretionary function exception (also called the discretionary function doctrine) provides an additional reason for dismissal of the complaints.

A. Background

In 1933, Congress passed the TVA Enabling Act which created TVA "in the interest of the national defense and for agricultural and industrial development, and to improve navigation in the Tennessee River and to control the destructive flood waters in the Tennessee River and Mississippi River Basins." 16 U.S.C. § 831. The Act also empowered TVA to dispose of "surplus power" generated as an incident to navigation and flood control. See id. §§ 831i; 831h-1. Currently, TVA operates fossil-fuel fired electric generating facilities located in Alabama, Kentucky, Tennessee, and Mississippi. Due to the growth in TVA's power business, Congress made all of TVA's power programs self-financed. See id. § 831n-4. In charging its customers for power, TVA may set rates, with the caveat that it sell power at rates "as low as are feasible." Id. § 831n-4(f).

"TVA is a hybrid creature. It was created by Congressional charter in 1933, yet structured to operate much like a private corporation." North Carolina ex rel. Cooper v. Tenn. Valley Auth., 439 F. Supp. 2d 486, 490 (W.D.N.C. 2006), aff'd, 515 F.3d 344 (4th Cir. 2008). Congress "intend[ed] that [TVA] shall have much of the essential freedom and elasticity of a private business corporation," H.R. Rep. No. 73-130, at 19 (1933), and this Court has observed that TVA "operates in much the same way as an ordinary business corporation, under the control of its directors in Tennessee, and not under that of a cabinet officer or independent agency headquartered in Washington," Natural Res. Defense Council, Inc. v. Tenn. Valley Auth., 459 F.2d 255, 257 (2d Cir. 1972).

While Congress "endowed TVA with some features governmental in nature, [it] deprived it the benefit of others. One of the governmental features specifically denied to TVA was the right to sovereign immunity, which Congress withheld by virtue of the TVA Act's 'sue-and-be-sued' clause. 16 U.S.C. § 831c(b)." North Carolina, 439 F. Supp. 2d at 490 (citation omitted). In Grant v. Tennessee Valley Authority, 49 F. Supp. 564 (E.D. Tenn. 1942), the district court distinguished between TVA's governmental and commercial activities, finding immunity in the former case and liability in the latter case. Liability was premised on the government "respond[ing] in damages for wrongs committed when it is engaged in the same activities as its citizens," which included "all wrongs committed for conduct pertaining to its generating, use and sale of electric energy made from the power created by its dams." Id. at 566. Over the years, courts have continued to draw a distinction between TVA's performance of government functions, such as flood control, where it is immune from suit, see Edwards v. Tennessee Valley Authority, 255 F.3d 318, 322 (6th Cir. 2001); Peoples National Bank of Huntsville v. Meredith, 812 F.2d 682, 685 (11th Cir. 1987); Queen v. Tennessee Valley Authority, 689 F.2d 80, 85-86 (6th Cir. 1982), and its commercial or nongovernmental functions, where it has no immunity, see Latch v. Tennessee Valley Authority, 312 F. Supp. 1069, 1072 (N.D. Miss. 1970); Adams v. Tennessee Valley Authority, 254 F. Supp. 78, 80 (E.D. Tenn. 1966).

In addressing TVA's arguments for dismissal, we rely on the North Carolina district court's and Fourth Circuit's decisions in North Carolina for guidance. That case largely parallels this one; the primary difference is that North Carolina sued TVA under state public nuisance law, alleging that the emissions from TVA's coal-burning electric generating plants in a number of states adversely affected the health of its citizens, damaged the state's natural resources, and harmed the state's

finances. The State sought an injunction to abate the alleged nuisance. TVA raised both political question and discretionary function exception issues in seeking dismissal of the complaint. The district court did not accept those arguments, and the Fourth Circuit affirmed that holding. In this case, TVA has made many of the same arguments and cited many of the same cases that the North Carolina district and appellate courts rejected.

B. Political Question Arguments

TVA contends that the political question doctrine precludes review of Plaintiffs' complaints against it, not only for the reasons stated by the district court, but because there are additional reasons, "unique to TVA, based on TVA's status as a Federal agency charged with the multipurpose development of the Tennessee Valley region for the public good," that warrant dismissal. TVA grounds its political question argument in the Property Clause of the Constitution (art. IV, § 3, cl. 2), which provides that "[t]he Congress shall have Power to dispose of and make all needful Rules and Regulations respecting the Territory or other Property belonging to the United States." This Clause grants Congress the "full power in the United States to protect its lands [and] to control their use." Utah Power & Light Co. v. United States, 243 U.S. 389, 404 (1917). Because Congress has "expressly authorized TVA to acquire and hold real property in the name of the United States (16 U.S.C. § 831c(h)), and to construct and operate 'power houses'... on that real property as TVA deems necessary," TVA posits that the Property Clause serves as a "textually demonstrable constitutional commitment" that relegates the emission issue to the legislative branch, thereby satisfying the first Baker factor and rendering the complaints against it non-justiciable.

The flaw in TVA's "textual commitment" argument is that TVA is not the United States or Congress. The Supreme Court has unequivocally held that TVA is "a corporate entity, separate and distinct from the Federal Government itself." Pierce v. United States, 314 U.S. 306, 310 (1941). TVA maintains "a separate corporate identity, a separate legal staff, and a separate headquarters"; it is "removed from centralized control in Washington"; and enjoys numerous "marks of independence which Congress has provided" it. North Carolina ex rel Cooper v. Tenn. Valley Auth., 515 F.3d at 348-49. Tellingly, this federally-chartered corporation has taken positions adverse to the United States in a number of cases. See, e.g., Tenn. Valley Auth. v. EPA, 278 F.3d 1184 (11th Cir. 2002); Tenn. Valley Auth. v. United States, 13 Cl. Ct. 692 (1987). TVA acts in the name of the United States only when it condemns real property. Tenn. Valley Auth., 13 Cl. Ct. at 697, 698 (citing 16 U.S.C. §§ 831c(h), 831x). TVA's reliance on cases against the United States upholding Congress's power over public land and rejecting the input of the courts is therefore misplaced. See, e.g., United States v. City & County of San Francisco, 310 U.S. 16, 29 (1940); see also North Carolina, 515 F.3d at 349 (affirming district court's holding that separation of powers concerns did not bar North Carolina from suing TVA on nuisance cause of action and observing "[b]ecause the TVA is so far removed from the control of the Executive Branch, operating as the functional equivalent of a private corporation, the judiciary does not run the same risk of overstepping its bounds and prevent[ing] the Executive Branch from accomplishing its constitutionally assigned functions" (internal quotation marks omitted)).

We find TVA's other political question arguments unpersuasive, and therefore reject TVA's contention that the complaints present non-justiciable political questions.

C. The Discretionary Function Exception

The discretionary function exception "insulates the Government from liability if the action challenged... involves the permissible exercise of policy judgment." Berkovitz v. United States, 486 U.S. 531, 537 (1988). TVA contends that because it is an executive agency with governmental status, the sue-and-be-sued clause in the TVA Enabling Act does not apply to it when it engages in the government functions of its power program. Plaintiffs respond that the discretionary function exception only applies to the federal government and agencies that engage in governmental functions. They further respond that if the function is non-governmental (e.g., commercial), even if performed by a federal agency, then the exception does not apply. Because TVA's electricity generating activities are commercial functions, Plaintiffs argue that TVA has no immunity from suit with respect to those activities.

Sue-and-be-sued clauses "have long been recognized as broad waivers of sovereign immunity and the 'sue-and-be-sued' clause was specifically intended to be a broad waiver when included in the TVA Act." North Carolina, 439 F. Supp. 2d at 490 (citing cases). Accordingly, "there is certainly no indication that Congress included or intended to include any express 'discretionary function' exemption in the TVA Act." Id. Even so, Congress has, in limited circumstances, recognized that broad waivers of immunity may be circumscribed. In order to determine whether this kind of implied limitation on immunity pertains here, we apply the test to which the Supreme Court refers in Loeffler v. Frank, 486 U.S. 549 (1988):

[W]hen Congress establishes [a sue and be sued] agency, authorizes it to engage in commercial and business transactions with the public, and permits it to 'sue and be sued,' it cannot be lightly assumed that restrictions on that authority are to be implied. Rather if the general authority to 'sue and be sued' is to be delimited by implied exceptions, it must be clearly shown that [(1)] certain types of suits are not consistent with the statutory or constitutional scheme, [(2)] that an implied restriction of the general authority is necessary to avoid grave interference with the performance of a governmental function, or [(3)] that for other reasons it was plainly the purpose of Congress to use the 'sue and be sued' clause in a narrow sense. In the absence of such showing, it must be presumed that when Congress launched a governmental agency into the commercial world and endowed it with authority to 'sue or be sued,' that agency is not less amenable to judicial process than a private enterprise under like circumstances would be.

Id. at 554-55 (internal quotation marks omitted).

On the first prong of the Loeffler test-whether a nuisance suit relating to TVA's emission of air pollutants is inconsistent with the statutory or constitutional scheme-the North Carolina district

court could find no such inconsistencies, and TVA had not identified any. North Carolina, 439 F. Supp. 2d at 491. The same circumstances exist here.

As to the second prong of the test-whether an implied limitation must be recognized to avoid grave interference with a governmental function-the North Carolina Court found unpersuasive TVA's argument that "it must be considered as always performing a governmental function." Id. at 491. TVA relied on the language of tax and other cases from the early and mid-1900s where the Supreme Court "evidenced an unwillingness... to give effect to a 'governmental' versus 'non-governmental' distinction." Id. The North Carolina Court reasoned that where a broad waiver of sovereign immunity had been authorized in the TVA statute, and Congress "clearly indicated its intention that the entity be subject to suit as if it were privately owned," the plain language of Loeffler required that a governmental versus non-governmental distinction should be made. Id. at 491-92. It further found that TVA had not established that its production of electricity by operating coal-burning power plants was a "governmental function," nor had it explained how allowing the lawsuit to proceed would "gravely interfere" with that function. The district court held that TVA had failed to meet the second prong of the test. Id. at 492.

The North Carolina Court's analysis is squarely on point. In this case,[52] as in North Carolina, TVA has made many of the same arguments and cited many of the same cases in arguing that the discretionary function exception applies. But as was the case in North Carolina, TVA has not identified any "grave interference" with the performance of a governmental function. In their complaints, Plaintiffs have alleged that Defendants had "available to them practical, feasible and economically viable options for reducing carbon dioxide emissions without significantly increasing the cost of electricity to their customers." Given that those allegations must be taken as true, no "grave interference" would occur.

The third prong of the Loeffler test requires a determination that Congress plainly intended to use the sue-and-be-sued clause in a narrow sense. The North Carolina Court opined that "all available evidence points to the conclusion that Congress intended TVA's waiver of sovereign immunity to be as broad as possible." Id. (emphasis in original). The decision quoted Queen v. Tennessee Valley Authority, 689 F.2d 80, 85 (6th Cir. 1982), in which the Sixth Circuit referred to the legislative history of the sue-and-be-sued clause in the TVA statute as "plac[ing] no limitations whatever upon the suability of the [TVA], so that all persons who had a cause of action against the corporation might have their day in court." Id. (internal quotation marks omitted). We agree with the North Carolina Court that TVA has not met the requirements of this prong of the Loeffler test.

In sum, we hold that neither the political question doctrine or the discretionary function exception warrant dismissal of Plaintiffs' claims against TVA.

VII. State Law Claims

In the alternative, the States and New York City have alleged that "[D]efendants are liable under the statutory and/or common law of public nuisance of each of the States where their fossil-fuel fired electric generating facilities are located." The Trusts have also alleged "[i]n the alternative, if federal common law were not to apply, Defendants are liable to Plaintiffs under the statutory and/or common law of private and public nuisance of each of the states where they own, manage, direct, and/or operate fossil fuel-fired electric generating facilities."

In Milwaukee II, the Supreme Court observed that federal and state nuisance law could not both apply to the case. "If state law can be applied, there is no need for federal common law; if federal common law exists, it is because state law cannot be used." Milwaukee II, 451 U.S. at 314 n.7. Accordingly, since we hold that the federal common law of nuisance applies in this case, we do not address the States' and Trusts' alternative claims based on state public nuisance law.

CONCLUSION

As we have explained, supra, the district court erred in dismissing the two complaints on the ground that they presented non-justiciable political questions. We now review our additional holdings. The States have parens patriae and Article III standing, in their quasi-sovereign and proprietary capacities respectively, and New York City and the Trusts have Article III standing. All parties have stated a claim under the federal common law of nuisance, which we find is grounded in the definition of "public nuisance" found in the Restatement (Second) of Torts § 821B. Federal statutes have not displaced Plaintiffs' federal common law of nuisance claim. The complaints against Defendant-Appellant TVA may not be dismissed on the grounds of the political question doctrine or the discretionary function exception. Finally, because we apply the federal common law of nuisance, we do not adjudicate Plaintiffs-Appellants' alternative state law public nuisance claims.

With regard to air pollution, particularly greenhouse gases, this case occupies a niche similar to the one Milwaukee I occupied with respect to water pollution. With that in mind, the concluding words of Milwaukee I have an eerie resonance almost forty years later. To paraphrase: "It may happen that new federal laws and new federal regulations may in time pre-empt the field of federal common law of nuisance. But until that comes to pass, federal courts will be empowered to appraise the equities of the suits alleging creation of a public nuisance" by greenhouse gases. Milwaukee I, 406 U.S. at 106.

The judgment of the district court is VACATED, and the cases are REMANDED for further proceedings.

1. The Honorable Sonia Sotomayor, originally a member of the panel, was elevated to the Supreme Court on August 8, 2009. The two remaining members of the panel, who are in agreement, have determined the matter. See 28 U.S.C. § 46(d); Local Rule 0.14(2); United States v. Desimone, 140 F.3d 457 (2d Cir. 1988).

2. Although there are six named Defendants in the caption, American Electric Power Service Corporation provides

management and professional services on behalf of American Electric Power Company, Inc., and does not generate carbon dioxide emissions.

3. The Alliance of Automobile Manufacturers, et al., Unions for Jobs and the Environment, Sen. James M. Inhofe, et. al., and Law Professors filed amicus briefs in support of Defendants' arguments in the States' case, and the Alaska Inter-Tribal Council and Akiak Native Community filed an amicus brief in support of Plaintiffs' arguments. The same groups filed as amici in the Trusts' case (although Sen. Inhofe did not file a separate brief, he stated that the arguments contained in the brief filed in the States' case applied equally to the Trusts' case). However, only the Law Professors' brief complied with Fed. R. App. P. 29(e), requiring amici to file their briefs "no later than seven days after the principal brief of the party being supported is filed." We therefore disregard the untimely briefs and will consider only the brief filed by the Law Professors.

4. In many of the cases where courts have found non-justiciable political questions, plaintiffs sued the United States, United States officials, or foreign government officials, thereby directly challenging the foreign policy determinations at issue. See, e.g., Schneider, 412 F.3d 190; Can, 14 F.3d 160. This case presents at best an indirect challenge. See Lane, 529 F.3d at 560 (opining that the first Baker factor "is primarily concerned with direct challenges to actions taken by a coordinate branch of the federal government") (emphasis added).

5. The possibility that mandatory emissions reductions may be imposed upon these defendants is quite different from "mandatory emissions reduction requirements on American industry" that the Professors' amicus brief views as a consequence of adjudication.

6. We could envision a political question arising if, for example, Plaintiffs sued the President directly, in an effort to force him to sign international global warming treaties.

7. The Restatement (Second) of Torts § 821B(1) (1979) defines a public nuisance as "an unreasonable interference with a right common to the general public." See Section IV(B), infra.

8. The Court articulated a standard for granting an injunction in a common law nuisance case: We fully agree with the contention of defendants' counsel that it is settled that an injunction to restrain a nuisance will issue only in cases where the fact of nuisance is made out upon determinate and satisfactory evidence; that if the evidence be conflicting and the injury be doubtful, that conflict and doubt will be a ground for withholding an injunction; and that, where interposition by injunction is sought, to restrain that which it is apprehended will create a nuisance of which its complainant may complain the proofs must show such a state of facts as will manifest the danger to be real and immediate. Missouri, 180 U.S. at 248.

9. In Field v. Mans, 516 U.S. 59, 70 (1995), the Supreme Court characterized the Restatement (Second) of Torts as "the most widely accepted distillation of the common law of torts." A torts compendium has described the first and second Restatement of Torts as being "frequently followed and applied by the courts. Each of these editions has had a profound influence and serious impact on American tort law." 1 Stuart M. Speiser, Charles F. Krause & Alfred W. Gans, The American Law of Torts 64 (Thomson West 2003).

10. When Defendants briefed this argument, they were focusing on the greenhouse gas emissions policy of the former administration. Now that a new administration is in office, the emissions policy is changing. See Section V on Displacement, infra.

11. The cases mentioned by Snapp included: North Dakota v. Minnesota, 263 U.S. 365 (1923); Wyoming v. Colorado, 259 U.S. 419 (1922); New York v. New Jersey, 256 U.S. 296 (1921); Kansas v. Colorado, 206 U.S. 46 (1907); Tenn. Copper Co., 206 U.S. at 230; Kansas v. Colorado, 185 U.S. 125 (1902); and Missouri I, 180 U.S. at 208.

12. The Court identified two types of quasi-sovereign interests: (1) protecting "the health and well-being... of its residents," and (2) "securing observance of the terms under which [the state] participates in the federal system." Snapp, 458 U.S. at 607-08. Only the "health and well-being" quasi-sovereign interest is at issue here, and our analysis is thus limited to this interest.

13. Justice Brennan, in a four-Justice concurrence in Snapp, suggested that the state, as "no ordinary litigant," was "entitled to assess its needs, and decide which concerns of its citizens warrant its protection and intervention." Snapp, 458 U.S. at 612 (Brennan, J., concurring).

14. In Texas v. American Tobacco Co., 14 F. Supp. 2d 956, 962 (E.D. Tex. 1997), the district court held that Texas had parens patriae standing to bring its claim under common law.

15. Judges Randolph and Sentelle did not focus on the State's quasi-sovereign role when analyzing standing. In fact, Judge Sentelle introduced his injury analysis with a quote from Ex Parte Levitt, 302 U.S. 633 (1937), which discussed injury in the context of a private individual. Massachusetts v. EPA, 415 F.3d 50, 59 (D.C. Cir. 2005). Judge Tatel made only a glancing reference to Massachusetts' claim of injury, which seemed to refer to the State's proprietary interests as landowner. He cited Massachusetts' "loss of land within its sovereign boundaries-that 'affects [it] in a personal and individual way.'" Id. at 65 (quoting Lujan, 504 U.S. at 560 n.1).

16. See Bradford Mank, Should States Have Greater Standing Rights Than Ordinary Citizens?: Massachusetts v. EPA's New Standing Test for States, 49 Wm. & Mary L. Rev. 1701 (2008) (proposing that courts relax the immediacy and redressability prongs of the standing test when states bring parens patriae suits to protect their quasi-sovereign interests in the health, welfare, and natural resources of their citizens).

17. In parrying the Chief Justice's dissenting argument that the majority was devising a new doctrine of state standing, the Court emphasized that no less an authority than Hart & Wechsler viewed Tennessee Copper as a standing decision, and that Hart & Wechsler had chronicled "the long development of cases permitting States to litigate as parens patriae to protect quasi-sovereign interests." Massachusetts, 549 U.S. at 520 n.17 (quoting R. Fallon, D. Meltzer, & D. Shapiro, Hart & Wechsler's The Federal Courts and the Federal System 290 (5th ed. 2003)).

18. New York City may not assert parens patriae standing. See Cmty. Commc'ns Co. v. City of Boulder, 455 U.S. 40, 53-54 (1982). Given that the States have successfully alleged standing in their parens patriae capacity, however, New York City's standing is assured because, as a party to the States' lawsuit, "the presence of one party with standing is sufficient to

satisfy Article III's case-or-controversy requirement." Rumsfeld v. Forum for Academic & Institutional Rights, Inc., 547 U.S. 47, 52 n.2 (2006).

19. Even if OSI is not a property owner asserting injury to its proprietary interests, as long as either OSC or Audubon has standing, that will suffice to provide standing to OSI. See Forum for Acad. & Inst'l Rights, 547 U.S. at 52 n.2.

20. This was the problem in McConnell, in which the Court held that Senator McConnell lacked standing where: (a) he brought suit in 2002 to challenge a campaign finance provision that could not apply to him until 2008 at the earliest, (b) he would not stand for re-election until 2009, and (c) it was not certain that he would even be running again. Because the reasoning behind the imminence requirement is "to ensure that the court avoids deciding a purely hypothetical case in which the projected harm may ultimately fail to occur," Baur, 352 F.3d at 632, if Sen. McConnell ultimately decided not to run, there would have been no "Case or Controversy," and the Court would have issued an advisory opinion. See Whitmore, 495 U.S. at 158 (cataloguing cases where contingent behavior had defeated standing).

21. Whether such injuries are properly viewed as current injuries or future injuries may be a distinction without a difference in the standing analysis. The actual onset of property destruction is alleged to have already begun, although the full deleterious effects have not fully materialized because the effect of carbon dioxide emissions is cumulative. The future injuries complained of are "certainly impending," given that they are already in process as a result of the ongoing emissions by Defendants that contribute to increasing temperatures.

22. Plaintiffs have also alleged that Defendants' continued emissions will increase their risk of future injury because "unrestrained and ever-increasing emissions of greenhouse gases from fossil fuel combustion increases the risk of an abrupt and catastrophic change in the Earth's climate when a certain, unknown, tipping point of radiative forcing is reached." In Baur, 352 F.3d at 633, this Court held that an increased risk of future harm constituted injury-in-fact. Because we find that all Plaintiffs have alleged future injury sufficient to constitute Article III injury-in-fact, we do not reach the question of whether Plaintiffs' allegations of increased risk of harm also suffices for Article III injury-in-fact.

23. After the briefs had been submitted in this case, the Supreme Court decided Massachusetts v. EPA wherein the majority ruled that carbon dioxide was in fact a "pollutant" within the meaning of the Clean Air Act. 549 U.S. at 532-33. The CAA provides that EPA, by regulation, shall prescribe standards applicable to emissions from new motor vehicles which "cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare." Id. at 528 (quoting 42 U.S.C. § 7521(a)(1)). However, as of the date of this opinion, EPA has not regulated such emissions.

24. Defendants contend that where "numerous entities contribute to an alleged harm, plaintiffs bear a special burden of linking their injury to defendants' particular emissions," citing Texas Independent Producers & Royalty Owners Ass'n v. EPA, 410 F.3d 964, 974 (7th Cir. 2005) (emphasis added). This assertion mischaracterizes the court's ruling in Texas Independent Producers. The court held that the plaintiffs lacked standing because they did not link the pollution to the defendants' discharges and had not claimed actual injury. Id. at 974-75. The case established no "special" traceability burden for plaintiffs where multiple polluters contribute to pollution.

25. In Northwest Envtl. Def. Ctr. v. Owens Corning Corp., 434 F. Supp. 2d 957 (D. Or. 2006), the plaintiffs alleged that a

manufacturer was building a plant without first receiving permits required under the CAA, and that the emissions that would be generated constituted greenhouse gases. The court observed: Plaintiffs need not show that the entire problem (for instance, global warming) will be cured if the Plaintiffs prevail in this action, or that the challenged action is the exclusive source of that harm. Particularly in environmental and land use cases, the challenged harm often results from the cumulative effects of many separate actions that, taken together, threaten the plaintiff's interests. The relief sought in the Complaint need not promise to solve the entire problem, any more than a legislative body is forbidden to enact a law addressing a discrete part of a problem rather than the entire problem. Cf. Railway Express Agency, Inc. v. New York, 336 U.S. 106, 110 (1949) ("It is no requirement of equal protection that all evils of the same genus be eradicated or none at all."). Id. at 968 (internal citation modified).

26. In Matter of Oswego Barge, 664 F.2d 327, 333 n.5 (2d Cir. 1981), this Circuit also cited the Restatement definition of public nuisance used by Judge Oakes in Bushey when commenting on what a plaintiff would need to show to make a claim under the federal common law of nuisance.

27. All references to the "Restatement" refer to the Restatement (Second) of Torts (1979).

28. In Bushey, the federal government had sued the New York corporate owners of vessels that transported petroleum products across Lake Champlain. The vessels had been responsible for a number of oil spills affecting Vermont waters and the federal government sought injunctive relief. Bushey, 363 F. Supp. 1110.

29. A majority of states have adopted the Restatement's definition of public nuisance. See David A. Grossman, Warming Up to a Not-So-Radical Idea: Tort-Based Climate Change Litigation, 28 Colum. J. Envtl. L. 1, 53 (2003). While the public nuisance tort principles in the Restatement have been culled primarily from state court cases, the application of the principles of state common law to federal common law is well understood. See Milwaukee I, 406 U.S. at 103 n.5 ("'We conclude that the substantive law to apply in suits under [Labor Management Relations Act] § 301(a) is federal law, which the courts must fashion from the policy of our national labor laws.... Federal interpretation of the federal law will govern, not state law. But state law, if compatible with the purpose of § 301, may be resorted to in order to find the rule that will best effectuate the federal policy. Any state law applied, however, will be absorbed as federal law and will not be an independent source of private rights.'" (quoting Textile Workers v. Lincoln Mills, 353 U.S. 448, 456-57 (1957)); id. at 107 ("While federal law governs, consideration of state standards may be relevant."); see also City of Evansville v. Ky. Liquid Recycling, Inc., 604 F.2d 1008, 1021 n.43 (7th Cir. 1979) (in federal common law action for damages caused by discharge of contaminants into interstate waterway, court stated, "[a]lthough federal common law controls, federal statutes as well as state statutes and common law are nevertheless highly relevant").

30. See Section II(B)(2), supra.

31. In Milwaukee I, the Supreme Court quoted the paragraph from North Dakota containing the sentence on which Defendants rely. Milwaukee I, 406 U.S. at 106 n.8. The quotation was presented to support the Milwaukee I Court's statement that "[w]hen it comes to water pollution this Court has spoken in terms of 'a public nuisance.'" Id. at 106. The quotation should not be read to imply that the kinds of pollution addressed by the federal common law were limited to those of a "simple type."

32. See Standing Section III(B)(1)(b) on future injury, discussing how threatened injury has been adequately pled to allow Article III standing.

33. Casting the issue as one of failure to state a claim, Defendants have argued that only States may bring a federal common law of nuisance claim to abate public nuisances. It may be that Defendants have confused the requirements of standing-who may bring an action-with what is necessary to state a claim, a confusion that is understandable, given the interrelationship that sometimes occurs between the two legal doctrines. See Raines v. Byrd, 521 U.S. 811, 818 (1997) ("The standing inquiry focuses on whether the plaintiff is the proper party to bring this suit, although that inquiry 'often turns on the nature and source of the claim asserted.'" (quoting Warth v. Seldin, 422 U.S. 490, 500 (1975) (other citations omitted)). We have already examined the standing of the non-State plaintiffs in great detail, and have determined that they have standing to proceed. The effort to identify whether the relevant question is one of standing or of stating a claim is not made easier by Restatement § 821C. Section 821C discusses who may recover for public nuisance, but appears to mix issues of who may state a claim in § 821C(1) with who may "maintain a proceeding" to enjoin a public nuisance in § 821C(2), potentially implicating standing concerns. See § 821C cmt. j ("It has been the traditional rule that if a member of the public has not suffered damages different in kind and cannot maintain a tort action for damages, he also has no standing to maintain an action for an injunction."). We have opted to treat the issue of whether non-State entities may maintain an action under the federal common law of nuisance as a question of whether they have stated a claim. The analysis for both New York City and the Trusts returns to § 821C(1), which concerns whether a party has stated a claim. Cf. Davis v. Passman, 442 U.S. 228, 239 n.18 (1979) ("[S]tanding is a question of whether a plaintiff is sufficiently adversary to a defendant to create an Art. III case or controversy...; cause of action is a question of whether a particular plaintiff is a member of the class of litigants that may, as a matter of law, appropriately invoke the power of the court...." (citation omitted)).

34. One additional district court has allowed municipal plaintiffs to bring a federal common law of nuisance action. In Township of Long Beach v. City of New York, 445 F. Supp. 1203 (D.N.J. 1978), the court held that the township-plaintiff should be allowed to bring an action under the federal common law of nuisance because the extension of Milwaukee I "to include governmental units does not appear to be a drastic or an unwarranted application," but rather "appears to aid in the effectuation of the concerns which prompted the Court to take the action further implementing the evolution of the federal common law." Id. at 1214.

35. There are few cases addressing the issue in this Circuit, and those that do provide little guidance. A few years after Parsell, in New England Legal Foundation v. Costle, 475 F. Supp. 425 (D. Conn. 1979), aff'd, 666 F.2d 30 (2d Cir. 1981), private plaintiffs sought to convince the court that they could maintain a federal common law nuisance action in an air pollution case. Judge Newman, then a Circuit Judge sitting by designation in the district court, held that the plaintiffs had failed to state a claim because EPA had granted a variance allowing the defendant electricity generating plant to burn oil containing specific sulfur components, and thus he would not devise an equitable remedy to proscribe conduct that EPA had specifically legitimated. Id. In Bryam River v. Village of Port Chester, 394 F. Supp. 618 (S.D.N.Y. 1975), however, an individual and association brought suit to abate the depositing of inadequately treated sewage into a river. On a motion to dismiss, the court held, without analysis, that the plaintiffs "should be permitted to produce evidence to prove its [federal common law of nuisance] cause of action against the defendants." Bryam River, 394 F. Supp. at 629.

36. Also in 1980, the Seventh Circuit weighed in on the import of footnote 6 in Illinois v. Outboard Marine Corp., 619 F.2d 623 (7th Cir. 1980), vacated by Milwaukee II, 453 U.S. 304 (1981), aff'd in part, rev'd in part, 680 F.2d 473 (7th Cir. 1982). The subsequent vacatur, reversal, and remands focused on the question of whether the federal common law cause of action in water pollution cases had been displaced. But one of the issues presented in the district court and before the Seventh Circuit was whether the federal common law of nuisance applied to intrastate as well as interstate pollution. The initial Seventh Circuit decision interpreted footnote 6 to provide that the federal common law of nuisance applied when the dispute at issue was "a matter of federal concern. When it is, as in this case, federal courts should be accessible." Outboard Marine, 619 F.2d at 630. The court also noted that "[t]here is no language in the Supreme Court's [Milwaukee I] opinion to suggest that the predicate for the decision is one state's adversely affecting the environment or ecology of another." Id. at 627; see also United States v. Solvents Recovery Serv. of New England, 496 F. Supp. 1127, 1135-36, 1141 (D. Conn. 1980) (Cabranes, J.) (adopting a similar, expansive approach to the language of footnote 6 and holding that the federal common law of nuisance governed under a particular provision of the Resource Conservation and Recovery Act, and that such body of law did not require allegation of interstate effect).

37. In Pennsylvania v. New Jersey, 426 U.S. 660 (1976), the Supreme Court reviewed two grounds upon which a state could invoke that Court's original jurisdiction: the first was when a plaintiff state demonstrated "that the injury for which it seeks redress was directly caused by the actions of another [s]tate." Id. at 663. A state also had such "standing to sue only when its sovereign or quasi-sovereign interests are implicated and it is not merely litigating as a volunteer the personal claims of its citizens." Id. at 665. As examples of the latter category, the Court cited numerous nuisance suits over the course of the last century. See id.; accord Oklahoma v. Cook, 304 U.S. 387, 393 (1938). Snapp v. Puerto Rico, 458 U.S. 592, 607 (1982), essentially incorporated this test when setting out the elements for parens patriae standing.

38. As noted above, the concept of 'displacement' refers to a situation in which "federal statutory law governs a question previously the subject of federal common law." Milwaukee II, 451 U.S. 304, 316 (1981). The term 'pre-emption,' in contrast, generally addresses a circumstance in which a federal statute supersedes state law, but courts have also frequently used the word "pre-emption" when discussing whether a statute displaces federal common law. See, e.g., id. at 317 n.9; Oneida Indian Nation of N.Y. v. County of Oneida, 719 F.2d 525, 530 (2d Cir. 1983), aff'd in part and rev'd in part on other grounds, 470 U.S. 226 (1985). We further note that the "appropriate analysis" in determining whether displacement of the federal common law has occurred "is not the same as that employed in deciding if federal law pre-empts state law." Milwaukee II, 451 U.S. at 316.

39. Illinois sued "four cities of Wisconsin, the Sewerage Commission of the City of Milwaukee, and the Metropolitan Sewerage Commission of the County of Milwaukee" seeking abatement of a public nuisance caused by the defendants' discharge of "raw or inadequately treated sewage and other waste materials" into Lake Michigan, "a body of interstate water." Milwaukee I, 406 U.S. at 93.

40. The Court further noted that the "[t]he application of federal common law to abate a public nuisance in interstate or navigable waters is not inconsistent with the Water Pollution Control Act," because "Congress provided in § 10(b) of that Act that, save as a court may decree otherwise in an enforcement action, '(s)tate and interstate action to abate pollution of interstate or navigable waters shall be encouraged and shall not... be displaced by Federal enforcement action.'" Milwaukee I, 406 U.S. at 104.

41. Because the Supreme Court in Milwaukee I declined to exercise original jurisdiction over the state of Illinois's complaint, Milwaukee I, 406 U.S. at 108, Illinois filed a complaint in the federal district court, which entered judgment in favor of Illinois, see Milwaukee II, 451 U.S. at 310-12, and the City of Milwaukee appealed. The Seventh Circuit affirmed in part and reversed in part, Illinois v. City of Milwaukee, 599 F.2d 151 (7th Cir. 1979), ruling, inter alia, that the 1972 Amendments to the FWPCA had not pre-empted the federal common law of nuisance. See Milwaukee II, 451 U.S. at 312. The Supreme Court granted certiorari to consider this issue in Milwaukee II, 451 U.S. at 307-08, 310 n.4.

42. A Supreme Court case decided two months later, Middlesex County Sewerage Auth. v. Nat'l Sea Clammers Ass'n, 453 U.S. 1 (1981), explicitly held that the FWPCA displaced federal common law in the entire area of water pollution.

43. We caution that our previous observation that the CAA is "comprehensive" was not made in a displacement context. Weiler addressed whether section 304(a)(3) of the Act, 42 U.S.C. § 7604(a)(3), allowed a private litigant to sue to challenge the determination of a state environmental agency with respect to whether the defendant could construct a factory without obtaining a particular kind of permit. Weiler, 392 F.3d at 534-36; cf. Nat'l Audubon Soc'y v. Dep't of Water, 869 F.2d 1196, 1213 n.12 (9th Cir. 1988) (Reinhardt, J., dissenting).

44. The CAA defines "air pollutant" as "any air pollution agent or combination of such agents, including any physical, chemical, biological, radioactive... substance or matter which is emitted into or otherwise enters the ambient air." 42 U.S.C. § 7602(g). The Act also separately regulates "hazardous air pollutants," "which present, or may present": (1) "a threat of adverse human health effects" such as substances which are potentially "carcinogenic, mutagenic, teratogenic, neurotoxic, which cause reproductive dysfunction, or which are acutely or chronically toxic," or (2) "adverse environmental effects." 42 U.S.C. § 7412(b)(2).

45. The Act defines "welfare" as "includ[ing], but not limited to, effects on soils, water, crops, vegetation, manmade materials, animals, wildlife, weather, visibility, and climate, damage to and deterioration of property, and hazards to transportation, as well as effects on economic values and on personal comfort and well-being." 42 U.S.C. § 7602(h).

46. The CAA regulates mobile sources primarily by requiring standards for tailpipe emissions and by regulating fuel content. See 42 U.S.C. §§ 7521, 7545. While the states have significant latitude in setting stationary source emissions limits to meet the NAAQS, the Act reserves to the federal government exclusive authority to regulate motor vehicle emissions, although it permits the state of California to adopt its own standards. See id. § 7543.

47. The Clean Air Act Amendments of 1990 provided that EPA "shall promulgate regulations" to "monitor" carbon dioxide emissions, Pub. L. No. 101-549, § 821(a), and EPA has done so, see 40 C.F.R. § 75. (Section 821 was not codified as part of the Act and appears as a note to 42 U.S.C. § 7651k.) A recent decision of the Environmental Appeals Board ("EAB") addressed whether this monitoring of carbon dioxide meant that the gas was "subject to regulation" for the purposes of the provision of the CAA requiring that the "best available control technology" ("BACT") be applied to emissions of any pollutant "subject to regulation" under the Act. See 42 U.S.C. § 7475(a)(4); In re: Deseret Power Electric Cooperative (Bonanza), PSD Appeal No. 07-03, 14 E.A.D. ___, 2008 WL 5572891 (EAB Nov. 13, 2008). The EAB found that the phrase "subject to regulation" was "not so clear and unequivocal" as to dictate whether EPA must impose a BACT limit for carbon dioxide, essentially leaving the matter to EPA's discretion. See Deseret Power, Slip Op. at 2.

48. Two district courts have held that the CAA preempts federal common law, but they addressed regulated, local air pollution, not interstate or unregulated pollution. See Reeger v. Mill Serv., Inc., 593 F. Supp. 360, 363 (W.D. Pa. 1984) (involving local emissions from a hazardous waste facility); United States v. Kin-Buc, Inc., 532 F. Supp. 699 (D.N.J. 1982) (concerning local air pollution from a landfill). Based on statements made in Congress when the CAA was passed that termed the CAA "comprehensive," the Kin-Buc court equated the CAA with the FWPCA-without further analyzing the two statutes-and held that the CAA preempted federal common law. As we discuss in this section, we respectfully disagree that the broad pronouncement in these two cases applies to our analysis of the law applicable to the emissions in this case.

49. In New England Legal Foundation v. Costle, 666 F.2d 30 (2d Cir. 1981), this Court was presented with the question of whether the CAA "totally preempts federal common law nuisance actions based on the emission of chemical pollutants into the air," but affirmed on narrower grounds, never reaching that issue. Id. at 32. In a footnote, the Costle panel pointed out substantial differences between the FWPCA and the CAA "in areas which the majority of the Court in City of Milwaukee found were especially significant." Id. at 32 n.2.

50. Likewise, the International Cooperation in Global Change Research Act of 1990, Pub. L. No. 101-606, § 207, 104 Stat. 3096 (codified at 15 U.S.C. §§ 2951-2953), provides in pertinent part only that the "President should direct the Secretary of State... to initiate discussions with other nations leading toward international protocols and other agreements to coordinate global change research activities," 15 U.S.C. § 2952(a) (emphases added), and "establish an Office of Global Change Research Information... to disseminate... scientific research information... which would be useful in preventing, mitigating, or adapting to the effects of global change," id. § 2953 (emphases added).

51. Defendants selectively quote language from Illinois v. Outboard Marine, 680 F.2d 473 (7th Cir. 1982) to support their contention that "Congress need not provide substitute remedies to displace a judicially-created one." They assert that the Outboard Marine Court rejected the State's request "to find that Congress has not 'addressed the question' because it has not enacted a remedy against polluters," id. at 478, adopting instead the defendant's position that "Congress has 'addressed the question,' since it has addressed the broader problem of pre-1972 pollution, even if it has not done so by means of remedies against the polluters themselves." Id. at 477. The issue in Outboard Marine was whether the State retained its right under federal common law to abate a nuisance resulting from discharge of pollutants prior to the 1972 amendments to the FWPCA. Id. at 474. The Court held that due to the comprehensive nature of the FWPCA, which addressed all aspects of water pollution, and given the fact that (1) Congress "obviously considered the problem of pre-1972 discharges" when it wrote the legislation and (2) "Milwaukee II and Sea Clammers, taken together, establish that the 'question' Congress 'addressed' in the 1972 Amendments was the entire question of water pollution," id. at 478, the FWPCA displaced all issues related to water pollution. That same result cannot, by extrapolation, be reached with regard to the Clean Air Act, which is not as comprehensive as the FWPCA, and does not benefit from a Supreme Court case stating that all air pollution issues and remedies are subsumed under it. The reasoning and holding governing Outboard Marine cannot be imported into this case to dispose of the air pollution claims here.

52. Also, as Plaintiffs note, TVA's citations to cases construing the discretionary function exception to the Federal Tort Claims Act ("FTCA") are not relevant, as the FTCA expressly states that it does not apply to "[a]ny claim arising from the activities of the [TVA]." 28 U.S.C. § 2680(l). Cases discussing the exception in the context of liability of the U.S. Postal

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Service are similarly beside the point.