

- Center for Biological Diversity - Defenders of Wildlife - Earthjustice -
- The Humane Society of the United States -
- The International Center for Technology Assessment -
- Natural Resources Defense Council - National Wildlife Federation -
- Marine Fish Conservation Network – Ocean Conservancy - Sierra Club -
- Southern Environmental Law Center - The Wilderness Society -

May 24, 2010

Council on Environmental Quality
722 Jackson Place, N.W.
Washington, D.C. 20503

ATTENTION: Ted Boling, Senior Counsel, Council on Environmental Quality

RE: Draft NEPA Guidance on Consideration of the Effects of Climate Change and
Greenhouse Gas Emissions

Dear Mr. Boling:

We commend the Council on Environmental Quality (CEQ) for its publication of draft guidance regarding how agencies should consider climate change in the course of compliance with the National Environmental Policy Act (NEPA).¹ Such guidance is long overdue, and we very much support CEQ's decision to publish the draft guidance for public review and comment and to hold listening sessions around the country regarding this and companion pieces of draft NEPA guidance.

We are, however, dismayed by several extremely significant omissions regarding the scope, coverage, and content of the guidance. We strongly urge CEQ to address these omissions prior to publication of final guidance. Indeed, we believe that issuance of final guidance that omits coverage of Federal land and resource management actions would be a mistake of enormous magnitude that would ill serve both the federal agencies and the public. NEPA requirements as interpreted by both CEQ and the courts are flexible enough that available qualitative and quantitative information can appropriately be used to inform decisionmaking in all areas of federal actions. We also strongly believe that the guidance misses the mark in its emphasis on determining the significance of a particular level of emissions and that instead, CEQ should emphasize the use of the NEPA process to identify alternatives and mitigation that reduce greenhouse gas (GHG) emissions and other climate change related phenomena and mitigate the effect of climate change effects. While individual GHG emissions accumulate to cause climate change, individual emission reductions also accumulate to reduce its effects, and the latter, rather

¹ The Natural Resources Defense Council is also submitting separate comments on the Draft NEPA Guidance, "Consideration of the Effects of Climate Change and Greenhouse Gas Emissions."

than simply an accounting of GHG emissions, should be an important purpose of this guidance. We discuss our specific concerns below.

Omission of Federal Land and Resource Management Actions from the Guidance: No justification exists and none is proffered for this shockingly large gap in the draft guidance. There is nothing in NEPA’s history, statutory language, CEQ’s regulations or prior guidance, or in any case law supporting this omission. CEQ cannot, in a guidance document, simply remove these activities from NEPA’s coverage or somehow relieve the federal agencies from their responsibility to consider climate change effects in the course of their compliance with NEPA.

We recognize that the draft guidance does not say that agencies are excused from analyzing the effects of their land management strategies upon GHG emissions or from analyzing the effects of climate change on land and resource management activities. However, the explicit omission of land and resource management activities in this long-awaited, highly significant document inevitably will be misinterpreted by some federal employees, as well as others, to mean that CEQ believes that, as a matter of law, NEPA mandates consideration of GHGs only for some ill-defined subset of federal actions. Such confusion will, in turn, lead some to avoid NEPA compliance for proposed actions of tremendous importance. This will lead to controversy which, in turn, will lead to litigation and losses of time and resources for the government and ultimately the public.

Even if CEQ explicitly clarified in the next iteration of the guidance that as a matter of law, appropriate consideration of climate change effects is required for the whole panoply of covered federal actions, the omission of discussion of federal land and resource management actions in this guidance would be doing a tremendous disservice to the agencies and to the public. Indeed, it would truly be the exception that swallows the guidance. Over the past three years, based on the statistics available through www.nepa.gov, proposed federal land and resource management actions account for the overwhelming majority of Environmental Impact Statements (EISs). From May 18, 2007 through May 7, 2010, 1,504 EISs (draft, final and supplemental) were filed with the Office of Federal Activities at the Environmental Protection Agency (EPA). Of those, the majority were focused on federal land and resource management actions.² Many of those agencies are clearly looking to CEQ for guidance. For example, recent policy guidance from the Bureau of Land Management Oregon/Washington State Office states that, “[a]ddressing effects on atmospheric greenhouse gas levels within the scope of NEPA is difficult due to the lack of explicit regulatory guidance on how to meaningfully apply existing

² The draft guidance does not define the parameters of “federal land and resource management actions”, but during the three year period noted above, there were 849 EISs filed by the Forest Service, the National Oceanic and Atmospheric Administration, Bureau of Land Management, National Park Service, US Fish and Wildlife Service, and the Bureau of Reclamation for proposed land management actions and by the military services for installation management planning. An additional 124 EISs were filed by the Bureau of Reclamation, the Army Corps of Engineers, the International Boundary and Water Commission, the Natural Resources Conservation Service, the Tennessee Valley Authority and the National Science Foundation on proposals that dealt with federal decisions on water delivery systems, water quality, etc. If these decisions are considered to fall within the land and resource management category, this would mean that 973 EISs out of a total of 1,504 in that period were in the category of federal land and resource management actions. This calculation is conservative and omits many other EISs that could arguably fall within the category not covered by the guidance, such as EISs prepared by the Federal Energy Regulatory Commission, the Bonneville Power Administration, and the Bureau of Indian Affairs.

NEPA regulations to this evolving issue . . . ”³ Pursuant to NEPA and the Environmental Quality Improvement Act, CEQ’s role is to provide this guidance. It is needed and, in many cases, wanted now.

Not surprisingly, litigation based on NEPA claims reflects the predominance of federal land and resource management actions among all federal activities falling under NEPA. According to CEQ’s NEPA litigation statistics, 98 out of 132 cases in 2008 and 60 out of 89 such cases in 2007 were filed against federal agencies managing federal lands or resources. Thus, if CEQ continues to omit this class of federal decisions that fall under NEPA and are the major focus of both executive agency action and judicial review, it will ultimately leave the agencies at more, rather than less, risk of successful litigation. We urge CEQ to revisit this unwise exclusion and encompass the entire range of NEPA actions in its next iteration of the guidance.

The Definition of Greenhouse Gases Is Too Narrow: The draft guidance defines “GHGs” by using the definition found in Executive Order 13514. As recommended in our letter of December 17, 2009 to Chairman Sutley, the guidance should be expanded to direct agencies to evaluate all GHGs and GHG-precursor emissions associated with the wide range of activities undertaken by the federal government. These include but are not limited to construction, electricity use, fossil fuel use, downstream combustion of fossil fuels extracted or refined by the project, water consumption, water pollution, waste disposal, transportation, the manufacture of building materials, land conversion, agriculture, logging and other forestry practices and livestock grazing.⁴

The deposition of black carbon should also be specifically addressed in the final guidance, including its direct and indirect warming effects, (e.g., the albedo effect) ultimately causing the acceleration of the melting of sea ice and glaciers. We are already seeing the direct effects of black carbon emissions on glaciers and sea ice in the northern part of the United States (e.g., Glacier National Park) and significantly in Alaska. Both off and on road vehicles are a major source of black carbon in the United States, and while we recognize progress is being made in reducing emissions, there is much work left to be done and there is no justification for omitting analysis of it, where relevant to a proposed federal action.⁵ Because black carbon is a subset of particulate matter, measures aimed at generally reducing particulate matter may not result in reductions in black carbon emissions. Specific attention to black carbon will allow for the consideration of measures, such as the use of diesel particulate filters on stationary and vehicular diesel engines, which will result in needed reductions in black carbon emissions. As

³ Instruction Memorandum (OR-2010-012), “Analysis of Greenhouse Gas Emissions and Consideration of Climate Change in National Environmental Policy Act Documents.”

⁴ See, e.g., *Mid-States Coalition for Progress v. Surface Transportation Board*, 345 F.3d 520, 549-550 (8th Cir. 2003) holding that an EIS for railroad expansion to facilitate coal transportation failed to consider indirect “air quality impacts associated with the increased availability and utilization of” coal and must consider “any adverse effects that result from burning [that] coal.”)

⁵ For additional information about black carbon, please see, Center for Biological Diversity, “Petition for Water Quality Criteria for Black Carbon on Sea Ice and Glaciers under Section 304 of the Clean Water Act, 33 U.S.C. § 1314, available at

http://www.biologicaldiversity.org/programs/climate_law_institute/global_warming_what_how_why/black_carbon/pdfs/EPA_CWA_Black_Carbon_Petition_2-22-10.pdf (last visited May 19, 2010).

discussed below, including in our response to Question 7, the current lack of regulatory standards for black carbon (or any other pollutant) does not excuse agencies from analyses of its emissions and effects under NEPA.

Additionally, and as also discussed in our December 17, 2009 letter to CEQ, it is important to include direction in the final guidance regarding analysis of the destruction of carbon sinks. The GHG effects of destruction of carbon sinks should be analyzed both in terms of the release of carbon already stored in the forest and soil itself and in terms of the loss of a forest's ongoing carbon-capturing properties. There are a number of mechanisms and tools available and being refined to conduct this type of analysis. For example, the USDA Forest Service continues to do work through the Forest Inventory and Analysis National Program to develop modeling tools, one of which is the Carbon On-Line Estimator developed by the USDA Forest Service and the National Council for Air and Stream Improvement, Inc.⁶

Finally, the Federal Government's efforts to address climate change cannot be complete as long as the EPA is prevented from collecting data on GHG emissions from Concentrated Animal Feeding Operations (CAFOs). In last year's Department of the Interior, Environment, and Related Agencies Appropriations Act, Congress carved out an exemption for mandatory GHG reporting requirements so that even the nation's very largest industrial animal agriculture facilities – those emitting 25,000 metric tons or more of GHG emissions per year – would not have to report.⁷ It may do the same this year. This directly undermines a statutory requirement directing the EPA to provide for “mandatory reporting of greenhouse gas emissions above appropriate thresholds in all sectors of the economy of the United States.”⁸

Ignoring GHG emissions from CAFOs creates a serious deficiency that masks the adverse impacts of these operations and undermines the broader effort to comprehensively assess nationwide GHG emissions data. International entities, such as the Food and Agriculture Organization of the United Nations, are continuing to assess GHG emissions from animal agriculture, and the United States should be a leader in that ongoing effort. Furthermore, such

⁶ For a discussion of the applicability and limitations of this tool, see A. Ingerson, and W.M. Loya, “Measuring Carbon: Strengths and Weaknesses of Available Tools”, (2008), available at <http://wilderness.org/files/Measuring-Forest-Carbon.pdf> (last visited May 18, 2010).

⁷ H.R. 2996, Section 425, “Notwithstanding any other provision of law, none of the funds made available in this or any other Act may be used to implement any provision in a rule, if that provision requires mandatory reporting of greenhouse gas emissions from manure management.”

⁸ <http://edocket.access.gpo.gov/2009/E9-23315.htm> Current data already shows that manure management systems in the industrial animal agriculture sector are responsible for a significant amount of GHGs; however, there is much to be learned about levels of emissions and how those emissions are affected by different standards and practices. Domestically, manure management and enteric fermentation are responsible for about one-third of all anthropogenic methane emissions, and methane is more than 20 times as potent a GHG as carbon dioxide. In 2008, methane emissions from manure management were 54 percent higher than in 1990. The EPA notes that “[t]he majority of this increase was from swine and dairy cow manure, where emissions increased 50 and 91 percent, respectively,” and that one reason for the increase has been the shift toward livestock facilities that use liquid manure management systems. In addition, according to the EPA, the direct and indirect emissions of nitrous oxide – 310 times as potent a GHG as carbon dioxide – from manure management increased 19 percent between 1990 and 2008.

information is a necessary precursor to developing the most effective national and international climate change mitigation policies. We ask that CEQ oppose the inclusion of legislative provisions that exclude such reporting this year and in future years.

Clarity in Direction: As a threshold matter, CEQ must include stronger language to clarify agency responsibility to consider climate impacts. For example, stating that “where a proposed Federal action that is analyzed in an EA or EIS would be anticipated to emit GHGs to the atmosphere in quantities that the agency may find meaningful, it is appropriate for the agency to quantify and disclose its estimate of the expected annual direct and indirect GHG emissions in the environmental documentation for the proposed action,” does not provide useful clarity or guidance to the agencies. Indeed, this statement largely reiterates the status quo, where many agencies act without guideposts to determine whether or how to consider GHG emissions and may have vastly different conclusions about the impacts of actions that emit the same level of GHGs. Instead, CEQ should instruct agencies that where a proposed Federal action will likely emit GHGs or destroy carbon sinks, agencies must disclose, and analyze those emissions regardless of the level of emissions.

Quantitative and Qualitative Analyses: While the draft guidance anticipates and allows for qualitative analysis, we are concerned, as discussed more specifically in response to Question 7 below, that there is an overemphasis on identifying quantitative indicators and thresholds and that its tone will encourage agencies to believe that climate change analysis requires numerical responses. There is an ever increasing amount of information available regarding quantitative projections of climate change effects. Where credible scientific information and data is available and relevant, agencies have an obligation to incorporate that information into their NEPA analyses. However, there has never been a requirement in NEPA that agencies must use quantitative analysis, or, put conversely, there is nothing in NEPA that excuses agencies from analysis if quantitative information is not available. Indeed, reliable quantitative analysis is not always available nor is it necessarily the best way to analyze all effects that are cognizable under NEPA. Because of this, Congress directed agencies in Section 102(2) (B) of NEPA to “identify and develop methods and procedures, in consultation with the Council on Environmental Quality . . . which will insure that presently unquantified environmental amenities and values may be given appropriate consideration in decisionmaking along with economic and technical considerations.”⁹ And it is why the Court of Appeals for the Ninth Circuit reminded one agency that argued against including analysis due to lack of quantitative information that, “No provision of NEPA, or any other authority cited by the Commission, allows the NRC to eliminate a possible environmental consequence from analysis by labeling the risk as ‘unquantifiable.’”¹⁰

In your deliberations, you might consider this current California Environmental Quality Act (CEQA) guideline, which could be adapted to a number of analytical situations, including Federal land and resource management actions. The guidelines require responsible parties to

“make a good-faith effort, based on the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular

⁹ That direction is codified in CEQ’s NEPA regulations at 40 C.F.R. § 1507.2(b).

¹⁰ *San Luis Obispo Mothers for Peace v. Nuclear Regulatory Comm’n*, 449 F.3d 1016, 1032 (9th Cir. 2006).

project whether to: (1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use. The lead agency has discretion to select the model or methodology it considers most appropriate provided it supports its decisions with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use; and/or (2) Rely on a qualitative analysis or performance based standards.” CEQA Guidelines § 15064.4(a).¹¹

Again, while we value and indeed insist on the inclusion of credible scientific quantitative analyses when available, the lack of availability should not in any way deter agencies from engaging in professionally accepted qualitative assessments and identification of appropriate alternatives and mitigation strategies. All too often, agencies have used the fact that the climate crisis is a classic, and indeed the ultimate, cumulative impact problem, as an excuse for skipping analysis because the agency’s sole action will not stop climate change by itself and/or will only contribute a “small” amount to overall GHG levels or climate impacts when measured quantitatively. An exclusive or over emphasis on quantitative analysis can in fact increase the risk of agencies falling into this trap. This is especially true when agencies attempt to calculate the increase in global temperatures that will result from their action.

For example, the National Highway Traffic Safety Administration’s (NHTSA) EIS for Corporate Average Fuel Economy standards for model year 2012-2016 automobiles, one of the most significant rulemakings affecting overall GHG levels, focused almost exclusively on the difference in global GHG concentrations at the end of the century that would result from the different alternatives analyzed for model year 2012-2016 fuel economy standards. The alternatives considered produced a spread of “only” 4ppm in total GHG concentrations at the end of the century, and therefore, according to the EIS, precluded the discussion of resource impacts from distinguishing between the alternatives. In the EIS, NHTSA stated that:

“As shown in Section 4.4, although the alternatives could substantially decrease GHG emissions, they would not prevent climate change...., the magnitude of the changes in climate effects that the alternatives would produce – 4 ppm of CO₂, a few hundredths of a degree Centigrade difference in temperature, a small percentage change in the rate of precipitation increase, and 1 or 2 millimeters of sea-level rise, *see* Section 4.4.4 – are too small to address quantitatively in terms of their impacts on resources.... Consequently, the discussion of resource impacts does not distinguish among the CAFE alternatives....”¹²

Even the most significant agency action today, such as setting the CAFE standards, will have a “small” impact on global GHG concentrations and temperatures in the future when

¹¹ The legislative history for this guideline provides examples of how the guideline would apply to particular projects and clarifies that a quantitative analysis would be appropriate for projects where modeling is readily available and a qualitative analysis would be suitable for projects that are small in scale and where emissions are not easily modeled. California Natural Resources Agency, Final Statement of Reasons for Regulatory Action, Amendments to the State CEQA Guidelines Addressing Analysis and Mitigation of Greenhouse Gas Emissions Pursuant to SB 97 at 20-24 (Dec. 2009), *available at* <http://ceres.ca.gov/ceqa/guidelines/>.

¹² National Highway Traffic Safety Administration, Final Environmental Impact Statement for the Proposed Corporate Average Fuel Economy (CAFE) Standards for Model Years 2012-2016, February 2010, at 4-66.

considered in isolation. This is simply part of the truism that no single agency and indeed, no single country, can solve global warming on its own. Truncating the analysis of alternatives, and/or leaving the reader with the impression that the agency action won't make much difference one way or another, simply because the agency cannot provide a complete solution to the problem circumvents NEPA's purpose and prevents the consideration and adoption of solutions which together *will* solve the problem. Yet federal agencies routinely take this misguided approach to GHG analysis. We hope CEQ will take this opportunity to instruct agencies that neither the lack of a quantitative analysis nor an analysis showing the agency's action will have a "small" impact on global GHG concentrations, temperatures, or other indicators can excuse agencies from a good faith analysis of alternatives and mitigation measures to reduce a project's impact, as discussed further below.

The context in which agencies present quantitative information is also critically important. For example, in its response to comments, the CAFE FEIS provided additional insight into the alternatives by comparing them to President Obama's pledge at Copenhagen to reduce U.S. GHG emissions by 17 percent over 2005 levels by 2020. According to the FEIS, the various alternatives by 2020 would result in emission reductions from the light duty vehicle sector in the range of .06 percent above (Alternative 2) to 5.4 percent below (alternative 9) 2005 levels.¹³ This provides a context that the reader can understand: none of the alternatives considered would result in GHG reductions from the light duty vehicle fleet consistent with the goal of reducing U.S. GHG emissions by 17 percent over 2005 levels by 2020. For the United States to meet this goal, other sectors would have to make up the difference.

We urge CEQ to provide guidance that will assist agencies in generating, collecting, analyzing and expressing quantitative GHG emissions data in ways which are understandable and meaningful to the public and decisionmakers. While different methods will be useful in different contexts, we urge CEQ to issue guidance that will help agencies analyze their actions with reference to the latest science, and in particular, to the emissions reductions needed to solve the climate crisis.

Alternatives and Mitigation:

Alternatives

As the CEQ regulations so eloquently state, the purpose of the NEPA process is not better documents or paperwork, but rather better decisions and "excellent action." It is important to remind agencies of this injunction in the context of all NEPA compliance, but it is particularly important here as agencies grapple with evolving science and new information. We share CEQ's vision set forth in the regulations that the process should lead to improved policies, and we believe the guidance should be recast in that light. There could be no better opportunity to demonstrate the true value of the NEPA process than by showing that information and public involvement can lead to better decisions. The point of this process is not to produce a perfect document, but rather a decision that will help, as relevant, to reduce GHG emissions, mitigate

¹³ *Id.* at 14.

impacts of climate change and implement the policies set forth in NEPA for today's world and for future generations.

Though there is a brief mention in the draft guidance of the need for agencies to consider mitigation measures and reasonable alternatives to reduce action-related GHG emissions, this discussion should be significantly strengthened. As it stands now, the linkage between the analyses produced in the course of the NEPA process and the agency's actual decision is more of an afterthought than a primary focus in the guidance. Instead, the draft guidance devotes much more space to a discussion of what level of emissions warrants disclosure and consideration in a NEPA document. As we discuss below in response to Question 7, we believe the current draft is misguided in this emphasis. This focus can lend credence to the false premise that NEPA is principally a difficult paperwork exercise that produces little of value and a lot of delay and expense.

Rather, we suggest CEQ focus on assisting the agencies in two key ways. First, from a process perspective, agencies should be reminded of key points in the NEPA process, beginning with scoping, that specifically relate to the identification of alternatives and mitigation measures that reduce GHG emissions and related effects. For example, the CEQ regulations require agencies to explain how each alternative analyzed in an EIS and decisions based on the EIS will or will not achieve the policy goals of NEPA and other environmental laws and policies. 40 C.F.R. § 1502.2(d). Combined with a summary of the analysis of effects of each of the alternatives, this can help focus attention on the implications of the ultimate agency decision.

Second, CEQ should assist federal agencies in developing categories of measures that agencies could include in alternatives to reduce emissions. Those measures must be sufficient to ensure that a project following the recommended measures would result in the reduction or elimination of GHGs and other global warming pollutants in the atmosphere. Just as individual GHG emissions accumulate to cause climate change, so do individual emission reductions accumulate to reduce the effects of climate change. Rather than focusing on the numeric significance of thresholds, it would be more productive to direct the agencies to look at the relative percentage of GHG emissions reductions an alternative could produce compared to the baseline carbon performance, regardless of absolute magnitude. This is the approach taken, for example, in the President's Executive Order 13514 of October 5, 2009, Federal Leadership in Environmental, Energy, and Economic Performance, which states, in part, "It is therefore the policy of the United States that Federal agencies shall increase energy efficiency; measure, report, and reduce their greenhouse gas emissions from direct and indirect activities".

To be effective, these measures could be tailored to address different sectors of the economy and different federal agencies. Many of these types of measures are likely readily available, may cost very little, and may not alter the project in any substantial way. For example, many underground coal mines in the West cannot be mined unless significant amounts of explosive methane are removed from the mine. In many cases, the methane is then simply vented to the atmosphere untreated, where it has over 21 times the heat trapping ability of CO₂. In an EA finalized in February 2010, the Bureau of Land Management (BLM) disclosed that an 800-acre mine expansion on a federal coal lease (known as Elk Creek East) would require about 2 miles of road construction and 5 acres of disturbed area from well pads and roads. Although the EA disclosed that the mine expansion could allow the mine to vent over the course of a year

an additional seven million cubic feet of methane every day, BLM did not consider any measures to mitigate or offset these greenhouse emissions, even though measures such as capturing and burning the methane - which are used routinely in other countries and elsewhere in the U.S. - would significantly reduce those impacts. Instead, BLM simply relied upon representations from the coal mine company that such mitigation measures would be too expensive, and limited its analysis to the surface disturbance effects of the roads and drill pads.

BLM similarly brushed off mitigation measures to capture and use or burn methane in a draft EA on the New Elk Coal Company Lease Application in December 2009. Rather than examine the effectiveness of, or require, mitigation measures, BLM proposed an “adaptive management process” that puts off the adoption of any mitigation measures indefinitely, and may never result in one molecule of methane pollution being prevented or mitigated.¹⁴

Federal land management agencies also appear to be missing opportunities to consider mitigation to reduce methane pollution from federally-permitted oil and gas leases. EPA’s “Natural Gas STAR Program” encourages oil and natural gas companies to cut methane waste to reduce climate pollution and recover value.¹⁵ If required by BLM, companies would be able to utilize federal EPA resources to develop and execute a GHG reduction implementation plan.¹⁶ EPA has already identified 150 proven technologies and practices to reduce methane waste and make operations more efficient; many of these measures cost less than \$10,000 and would pay back the purchaser within a year.¹⁷ EPA’s Natural Gas STAR Program suggests there are opportunities to cumulatively and significantly reduce GHG emissions from many small federal actions that approve oil and gas development, *if* the identified technologies and practices are implemented at the proper scale and are properly analyzed by federal agencies. For calendar year 2008, EPA estimated that this program avoided 46.3 million tons of CO₂ equivalent, equal to the annual GHG emissions from approximately 6 million homes per year.¹⁸

Despite the potential reduction of climate impacts from these technologies, land management agencies have not, to our knowledge, ever considered requiring these technologies in NEPA, planning, or decision-making documents. If CEQ’s guidance acts to discourage agencies from considering individual emissions of less than 25,000 metric tons of CO₂-equivalent, it may result in agencies failing to consider adopting alternatives or mitigation measures, like these, that may result in a small reduction of GHGs at any one site, but collectively could help significantly reduce the Federal Government’s contribution to climate change.

¹⁴ See BLM New Elk Coal Company Lease Application Environmental Assessment 11-12 (2009), available at http://www.blm.gov/pgdata/etc/medialib/blm/co/information/nepa/royal_gorge_field.Par.49661.File.dat/DOI-BLM-CO-200-2009-0018%20EA.pdf at 11-12 (last visited May 18, 2010).

¹⁵ EPA, Natural Gas STAR Program, www.epa.gov/gasstar/ (last visited May 18, 2010).

¹⁶ EPA, Key Components of Natural Gas STAR, www.epa.gov/gasstar/guidelines/keycomponents.html (detailing how the program works) (last visited May 18, 2010).

¹⁷ EPA, Recommended Technologies and Practices, www.epa.gov/gasstar/tools/recommended.html (last visited May 18, 2010).

¹⁸ EPA, Accomplishments, 2008: Continuing Excellence. www.epa.gov/gasstar/accomplishments/index.html#three (last visited May 18, 2010); *see also id.* (detailing EPA Natural Gas STAR Program accomplishments for years 2002 - 2007).

While CEQ's national-level development and continued oversight of qualified measures is essential, it is equally vital that CEQ tasks the agency proposing the project with demonstrating through its NEPA analysis how it can apply the proper scope and quantity of measures.¹⁹ Such an approach will provide federal agencies with the incentive to develop innovative approaches to achieve the needed GHG reductions, consider the most current science and help ensure that the cumulative effects of GHG impacts from numerous proposals are not overlooked or missed.

Directing agencies to consider alternatives that address the impacts of a proposed action on climate change does not require agencies to prepare an EIS for every project that will emit some level of GHGs. Nor does it require CEQ to predetermine what level of emissions is meaningful or to set a predetermined "threshold" for significance. Rather, if an agency is already preparing an EA or an EIS and considering alternatives or mitigation for the effects of the project, its consideration of alternatives that reduce GHG emissions would simply become part of the process. *See* 40 C.F.R. §§ 1500.2 (e)-(f) and 40 C.F.R. § 1502.14, 1502.16(h); (NEPA requires agencies to consider alternatives to the proposed action in EAs and EISs regardless of whether impacts of the proposed action are significant); Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations, 46 Fed. Reg. 18,026, 18,031 (March 23, 1981).²⁰

In addition, addressing the issue in this manner prevents agencies from dismissing the effects of project's GHG emissions by comparing each project's emissions to the national or worldwide emissions of GHGs, and simply concluding that the project's emissions need not be considered because they represent a relatively small percentage of nationwide or worldwide emissions.²¹ Following this approach, agencies cannot make a blanket determination that the climate change impacts of individual projects will never be "meaningful" thereby evading their clear duty to evaluate those impacts under NEPA. As discussed above, directing agencies to consider alternatives that reduce or eliminate GHG emissions – and providing the assistance in the form of suggested measures that would achieve this goal – would significantly further NEPA's goals to "restore and enhance the quality of the human environment and avoid or minimize any possible effects of" and to take actions that restore and protect the quality of the environment.

Mitigation

In the draft guidance, CEQ has taken the important step of providing agencies with examples of technical tools for quantifying GHGs. CEQ should provide federal agencies with similar resources on measures to mitigate GHGs, since agencies must evaluate mitigation

¹⁹*See Idaho Sporting Cong. v. Thomas*, 137 F.3d 1146, 1151 (9th Cir. 1998) (a "mere listing of mitigation measures is insufficient to qualify as the reasoned discussion required by NEPA.") (internal citations omitted); *Blue Mountains Biodiversity Project v. Blackwell*, 161 F.3d 1208, 1214 (9th Cir. 1998) (holding that analysis of mitigation measures must be sufficient to "support the . . . conclusion that the proposed [measures] will be adequate" to mitigate effects of actions in an area where other actions had already caused degradation").

²⁰ *See also* 40 C.F.R. § 1502.14(f) (agencies shall consider "appropriate mitigation measures not already included in the proposed action or alternatives").

²¹ *CBD v. NHTSA*, 538 F.3d at 1225 (determining "mere magnitude of percentage increase" of greenhouse gases is insufficient NEPA analysis).

measures in their NEPA documents.²² To date, few NEPA documents have quantified the GHGs of proposed federal actions, and fewer still have considered measures to mitigate emissions. CEQ can help to rectify this problem by providing and updating a list of mitigation measures. This would make the process even easier for individual agencies, especially since some mitigation measures, particularly off-site mitigation, can be implemented for projects regardless of project type. California, Massachusetts, and New York already provide this guidance to local agencies for their respective state NEPA equivalents.²³ CEQ should follow suit and provide a list of both on-site and off-site mitigation measures broken down into categories, such as building design and construction, mobile source emissions, etc.

Furthermore, CEQ should indicate that, in general, efforts to mitigate climate change effects should prioritize on-site measures that avoid or minimize emissions in the first instance over off-site measures. In the recently issued Draft Guidance for NEPA Mitigation and Monitoring, CEQ acknowledged that agencies have historically done a poor job of implementing and monitoring mitigation measures.²⁴ Given that on-site mitigation is generally easier to implement and monitor than off-site mitigation, CEQ should encourage agencies to prioritize on-site mitigation measures that avoid or minimize emissions while allowing agencies to utilize off-site measures where on-site mitigation is not available.

Baseline: To accurately identify alternatives that will best mitigate climate change effects, it is important to direct agencies to set an accurate baseline that will allow for a fact-based comparison of alternatives' effects and the value or additionality of mitigation. A combination of the discussion of the affected environment and a robust (not typical boilerplate) analysis of the "no action" alternative should provide this type of information to the public and decisionmakers. CEQ guidance should specifically require that the no action alternative analysis project and evaluate climate change impacts on resources over time and evaluate the effects of the proposed action, as well as the efficacy of mitigation measures, against that changing baseline. Effects that might be considered minor at the outset of the action can become more significant over time, and mitigation measures that offer protection at the outset of the project might become less effective as a specific area or species responds to the impacts of climate change over time. As we explained in our December 17, 2009 letter, the data and modeling tools are increasingly available to assist agencies in developing a changing baseline for the lifespan of individual projects.

²² 40 C.F.R. § 1502.14(f).

²³ California Attorney General, Fact Sheet: Addressing Climate Change at the Project Level, (Rev. 1/16/2010), available at http://ag.ca.gov/globalwarming/pdf/GW_mitigation_measures.pdf. Massachusetts Executive Office of Energy and Environmental Affairs, MEPA Greenhouse Gas Emissions Policy and Protocol (2010), available at <http://www.env.state.ma.us/mepa/downloads/RevisedGHGPolicy.pdf> (last visited May 18, 2010); New York State Department of Environmental Conservation, Guide for Assessing Energy Use and Greenhouse Gas Emissions in Environmental Impact Statements (2009), available at http://www.dec.ny.gov/docs/administration_pdf/eisghgpolicy.pdf (last visited May 18, 2010).

²⁴ CEQ, Draft Guidance for NEPA Mitigation and Monitoring at 1 (Feb. 23, 2010) "[A]s identified in several studies, ongoing agency implementation and monitoring of mitigation measures is limited and in need of improvement."

Consideration of the Impacts of Climate Change on Proposals for Agency Action (Adaptation under NEPA)

We strongly support CEQ's efforts to insure that agencies take climate change's current and projected effects upon their actions into account, and encourage CEQ to strengthen this guidance still further. As the Intergovernmental Panel on Climate Change puts it, "climate changes are being imposed on ecosystems experiencing other substantial and largely detrimental pressures."²⁵ CEQ therefore appropriately recognizes that "[c]limate change can increase the vulnerability of a resource, ecosystem, or human community," exacerbating the impacts of actions that might, previously, have had more limited effects. This recognition and the attendant analysis under NEPA is essential in meeting the goals of Executive Order 13514 which requires federal agencies to assess their risk and vulnerabilities in the light of climate change, and in meeting the goals of the interagency Climate Change Adaptation Task Force.

Climate change interactions are pervasive, making it rarely appropriate, if ever, to confine "discussion of climate change in an EA or EIS [in] a separate section," as CEQ presently suggests. Instead, CEQ should recognize that such synergisms are not only common, but may render some formally minor impacts significant, either directly or by undermining mitigation strategies. For instance, the effects of releasing a toxic chemical or pesticide into the environment may be significantly greater if warmer days or heavier rains increase the rate at which the compound volatilizes or enters streams, or if species are already under significant thermal stress that renders them less able to recover from even a mild dose.²⁶ Similarly, a mitigation plan for wetland fills that depends upon constructing high quality new wetlands may fail if changed hydrological regimes damage the mitigation site or alter its species composition.

This integrated consideration should extend from impact analysis to shaping alternatives and mitigation decisions. Agencies should recognize that ecosystems may be declining or changing even under a no action alternative, and should forecast the likely nature of those changes. From this baseline, they should design, and select between, alternatives with the understanding that reducing ecosystem stressors, including those resulting from the proposed action, will often be necessary in order to limit significant environmental impacts.²⁷ As part of this analysis, agencies should consider the likelihood that their actions, coupled with climate change, may result in the crossing of major ecological thresholds, points where even small impacts can cause "an abrupt change in an ecosystem quality, property, or phenomenon, or where small changes in one or more external conditions produce large and persistent responses in an ecosystem."²⁸

²⁵ Andreas Fischlin et al., *Ecosystems, Their Properties, Good and Services. Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* at 241 (2007).

²⁶ See, e.g., Noyes, P.D., et al., *The Toxicology of Climate Change: Environmental Contaminants in a Warming World*, *Environment International* 35: 971-86 (2009).

²⁷ See generally Lara Hansen et al., World Wildlife Fund, *Buying Time: A User's Manual for Building Resistance and Resilience to Climate Change in Natural Systems* (2003).

²⁸ Daniel B. Fagre et al., U.S. Climate Change Science Program, *Synthesis and Assessment Product 4.2: Thresholds of Change in Ecosystems* at viii (January 2009).

Effective cumulative effects analyses and monitoring strategies will help identify these risks. The U.S. Global Change Research Program cautions that, “[i]n general, it is essential to increase the resilience of ecosystems and thus to slow or prevent the crossing of thresholds; to identify early warning signals of impending threshold changes; and to employ adaptive management strategies to deal with new conditions, new successional trajectories and new combinations of species.”²⁹ NEPA documents should follow this prudent course.

A full consideration of climate impacts will be particularly useful, as the guidance should recognize, in the land management context, where long-term, landscape-level plan decisions, and site-specific projects, have the potential to render millions of acres more or less vulnerable to climate change. Land managers should therefore be especially attuned to the likelihood that synergistic stressors – including, again, stresses resulting from their proposed management actions – will threaten public lands and undermine management objectives unless agency decisions are carefully designed, conducted, and monitored. Decisions made in the context of marine ecosystems likewise bear close scrutiny of this nature.

CEQ should provide guidelines to ensure that agencies: a) analyze the impacts of climate change on the affected environment and include those effects in their baseline for analysis of alternatives, mitigation, and in the “no action” alternative; b) include in their cumulative effects analysis the impacts of climate change on the affected environment combined with the impacts of the proposed action and other reasonably foreseeable effects; and c) include in their alternatives analysis actions that may avoid, reduce, and/or otherwise ameliorate the direct, indirect, and cumulative effects of climate change and the proposed action on the affected environment.

Linkage to other guidance documents: There are important linkages between this draft guidance and the other guidance CEQ published for public review and comment regarding the development and use of categorical exclusions and the implementation of monitoring and mitigation for federal actions under NEPA. To ensure that the relevance of these three important guidance documents is understood far into the future, it would be wise to include important cross-references. For example, effectiveness monitoring will be essential in understanding whether mitigation intended to address climate change effects is working as intended. Similarly, agencies need to reconsider the categorization of their classes of action for purposes of levels of NEPA analyses in light of climate change effects.

CEQ’s Specific Questions:

1. How should NEPA documents regarding long-range energy and resource management programs assess GHG emissions and climate change impacts?

As noted in the draft guidance itself, programmatic EISs on long range energy and resource management programs offers a particularly effective framework for identifying, analyzing, and choosing criteria designed to address climate change concerns. This approach offers the potential for both substantive benefits in identifying and implementing policy choices that will make real improvements while providing for procedural efficiencies. Again, as in other

²⁹ *Id.* at ix.

contexts relevant to this guidance, we urge that the emphasis be placed on identifying alternatives and mitigation measures that will be beneficial in reducing activities that contribute to or exacerbate climate change effects, as well as changes to programs needed for long-term adaptation to climate change effects.

The guidance should also clarify that because NEPA requires consideration of the direct *and* indirect effects of agency action, a GHG analysis must include a discussion of the emissions resulting from the combustion of resources extracted under a long-range energy or resource management plan. 40 CFR § 1508.8 (indirect effects defined as those “caused by an action and are later in time or farther removed in distance, but are still reasonably foreseeable.”) For example, the Mineral Management Service’s (MMS) 2007-2012 Five-Year Plan for lease sales in the Outer Continental Shelf anticipated the extraction of approximately 10 billion barrels of oil and 45 trillion cubic feet of gas over a 25-40 year period. Although the combustion of this oil and gas for fuel would generate over 5 billion tons of carbon dioxide – an amount approaching the annual GHG emissions of the United States – MMS failed to include this information in the EIS, thereby frustrating consideration of the full extent of project impacts and identification of potential alternatives.³⁰

The one caution we would offer in this context is rooted in the reality that, given resource restraints and competing priorities, agencies often lag behind in even the statutorily mandated production of long-range energy and resource management plans, along with the associated NEPA compliance. While we believe that climate change adds urgency to the need to consider classes of actions on a programmatic basis, we caution against direction that would imply or could be misinterpreted or misused as an excuse to delay consideration of climate change effects until and unless an agency is initiating a programmatic EIS of an energy or resource management program.

2. What should be included in specific NEPA guidance for projects applicable to the federal land management agencies?

Until recently, it was fair to say that NEPA analysis for climate-related impacts associated with site-specific projects was much more difficult than analysis at the programmatic level because of the lack of scientific study and modeling at smaller scales. While precise climate change effects analysis of most small, low effect site-specific projects is still often out of reach, scientific study is increasingly focusing on regional and localized impacts of changes on the environment and human populations. We expect that trend to continue and accelerate, and our December 17, 2009 letter to CEQ identifies some examples.

However, rather than trying to shape guidance to the agencies around whatever particular science and tools are available at the moment the guidance is issued, CEQ should instead stress the basic requirements and principles of the NEPA process and then establish a mechanism by which federal agencies can identify and consider credible downscaled climate information as it becomes available. As we recommended in our December 17, 2009 letter, we believe CEQ, working with the Department of the Interior, the Environmental Protection Agency, the National

³⁰ MMS, FEIS, Outer Continental Shelf Oil & Gas Leasing Program (April 2007) at I-9, *available at* <http://www.mms.gov/5-year/2007-2012FEIS.htm>

Oceanic and Atmospheric Administration and many other federal, state, tribal agencies and other public and private institutions, could develop a component of the U.S. Global Change Research Program that could function as a clearinghouse for climate change information and modeling. Without this type of “go to” resource, some agencies, particularly agencies without in-house scientific resources, will be uncertain and reluctant to engage in climate change analyses. Conversely, for those agencies that do have in-house scientific resources, such a clearinghouse could assist in avoiding duplicative efforts and ensuring a more robust coverage of issues.

3. What should be included in specific NEPA guidance for land management planning applicable to the federal land management agencies?

All of the general observations made above and below are applicable to NEPA compliance for land management planning. Agencies should be instructed that they have a basic obligation under NEPA to identify, disclose, and analyze the effects of plan alternatives on climate change and to identify alternatives and mitigation that would lessen or eliminate those effects. They should be assisted in identifying sources of credible methodologies and information, while reminded that precise quantification is not necessary and that there is a protocol for addressing unavailable and incomplete information. They should be directed to clearly separate out the analysis of climate change on the affected environment and alternatives, including the no action alternative, under the proposed plan and consider how the cumulative effects of the proposed plan alternatives will or will not adapt to, exacerbate, or mitigate the effects of climate change on the affected planning area.

Additionally, as mentioned in our December 17, 2009 letter, federal land management agencies should develop NEPA analyses that include full life-cycle modeling to evaluate the carbon released or stored by various types of land management activities. Again, it will be vital to develop an accurate baseline that takes into account leakage and other induced effects.

4. Should CEQ recommend any particular protocols for assessing land management practices and their effect on carbon release and sequestration?

Whether for land management practices or in any other area of climate change analysis, we caution CEQ against recommending any particular protocol in guidance that is so widely applicable to so many different types of actions in a wide variety of ecosystems. CEQ has traditionally refrained from recommending particular technical protocols, methodologies, models, etc., relying instead on agencies’ obligations under the CEQ regulations to “insure the professional integrity, including scientific integrity” of the analyses in EISs. 40 C.F.R. § 1502.24.³¹ This is particularly wise in the climate change field, given the rapid evolution of science in this area.

As included in our December 17, 2009 letter and as referenced above in response to Question 2, we believe CEQ’s efforts are better spent providing a mechanism to provide agencies with the ability to identify and utilize the most appropriate protocols for a particular

³¹ As CEQ noted in its draft guidance on categorical exclusions, the Information Quality Act requires agencies to meet standards of integrity and transparency that are consistent with this mandate in the CEQ regulations. We believe a brief reminder of these requirements would also be appropriate in the NEPA climate change guidance.

type of action (whether land management practices or something else) in a particular type of ecosystem. We believe this is a sounder practice than CEQ trying to identify and endorse a particular protocol.

5. How should uncertainties associated with climate change projections and species and ecosystem responses be addressed in protocols for assessing land management practices?

Many of these questions imply that the NEPA practice for land and resource management actions is somehow fundamentally different than the minority of federal actions falling under NEPA that do not involve these actions. As should be clear by now, we do not agree with that proposition. While the technical methodologies, protocols, and models naturally vary depending upon the subject, the flexible yet rigorous framework of the NEPA process remains the same.

This is equally true of the obligation to deal with uncertainties in the context of climate change projections and species and ecosystem responses. There is an ever-growing body of information already available on these issues, much of it generated by or available through federal agencies. And as stated in the proposed guidance, “Where climate change effects are likely to be important but there is significant uncertainty about such effects, it may also be useful to consider the effects of any proposed action or its alternatives against a baseline of reasonably foreseeable future conditions that is drawn as distinctly as the science of climate change effects will support.” If there is incomplete or unavailable information concerning the effects of the action and the conditions under which it will take place and that information cannot be obtained by the action agency, the guidance should make clear that the agency must follow 40 C.F.R. § 1502.22(b) and point out the missing data and its relevance to evaluating reasonably foreseeable significant adverse impacts, as well as summarizing the existing evidence and the agency’s evaluation of impacts based on methods accepted in the scientific community. In this context, “‘reasonably foreseeable’ includes impacts which have catastrophic consequences, even if their probability of occurrence is low, provided that the analysis of the impacts is supported by credible scientific evidence, is not based on pure conjecture, and is within the rule of reason.”

This consideration extends to the effects of climate change on proposed actions as well as the effects of proposed actions on climate change. If an agency is considering the effects of an action on a marine ecosystem, for example, it should refer to the reasonably foreseeable, indeed well-established, future conditions of sea level rise and ocean acidification that could affect the severity of the impacts of a proposed action on, for example, sea turtle nesting beaches or coral reef survival. There is a growing body of scientific evidence of significant changes in phenology and distribution of marine species associated with rising water temperatures, changes in ice cover, salinity, oxygen levels, biochemistry and ocean circulation patterns, and these studies indicate that changes are occurring rapidly.³² Global warming may have even greater repercussions for marine ecosystems than for terrestrial ecosystems because marine species and ecosystems have shown high sensitivity to changes in sea temperature.³³ Consideration of present and reasonably foreseeable future effects of warming sea temperatures on fish populations will be important when preparing NEPA documents for setting catch limits and for amending fishery management plans to reflect changes in the long-term potential yield from

³² A.J. Richardson, *In Hot Water: Zooplankton and Climate Change*, ICES J. Mar. Sci. 65 (2008): 279-295.

³³ *Id.*

stocks. In the event that information is incomplete or unavailable, agencies must undertake the required analysis, including evaluating catastrophic impacts of low probability such as very rapid sea level rise or ocean acidification.

We again caution, however, that precision about impacts is not necessary to a meaningful NEPA process. We already know a great deal about the trends and projections regarding regional climate change impacts and potential effects on species. Alternatives that reduce adverse impacts of either the proposed action or the impacts of climate change on the management area in question, for example by preserving a species' current habitat and potential future refugia as climate alters habitat use, and protecting corridors between those future habitats and present habitats can be intelligently identified and shaped even without precise quantitative information.

6. How should NEPA analyses be tailored to address the beneficial effects on GHG emissions of Federal land and resource management actions?

Agencies are obligated to analyze both the adverse and beneficial effects of proposed federal actions. 40 C.F.R. § 1508.8(b). The underlying premise of the NEPA process is an obligation to analyze effects of proposed actions and reasonable alternatives no matter whether they are labeled as beneficial or adverse. History is replete with examples of actions agency officials took to implement what they believed was sound beneficial public policy, only to learn later that their conclusions were based on faulty factual information.

In that regard, we do want to raise a concern regarding the possible implications of this question in the context of resource management actions that are advocated as means to address GHG emissions through, for example, thinning of forests, production of biofuels or various types of alternative energy projects. Whether these proposals have merit can only be determined after the proposal goes through the same type of impartial and rigorous analysis that any other proposed federal action enjoys under NEPA. So, for example, assertions that thinning will lower net emissions, notwithstanding reduction in standing biomass, would need careful, science-based analysis of the potential for 1) displaced demand from other potential users; 2) induced logging from economic subsidies; 3) unwanted fire effects; and 4) the contribution to carbon emissions made by replacement fire regimes.

7. Should CEQ provide guidance to agencies on determining whether GHG emissions are “significant” for NEPA purposes. At what level should GHG emissions be considered to have significant cumulative effects?

We do not believe CEQ's focus should be on determining a quantitative level of “significance” for NEPA purposes. Such an approach would be in contrast to the typical CEQ-approved (and indeed, mandated) agency practice of identifying classes of actions that are considered “significant” for purposes of NEPA made by federal agencies, through promulgation of procedures that categorize the agencies' typical mission activities based on overall environmental impacts,³⁴ and then, secondarily, through the established process for identifying

³⁴ A typical class of action denominated as generally requiring preparation of an EIS is exemplified in the Forest Service's NEPA procedure that requires an EIS for “Proposals to carry out or to approve aerial application of

the effects of a particular proposed action, whether it is programmatic or site specific. CEQ has never required or even advised agencies to develop numerical thresholds for significance, and it would seem particularly counterproductive to do so in this context for two reasons: First, the “heart” of the NEPA process lies not in labeling a particular effect significant, but rather in identifying alternatives that advance our nation’s environmental policies, and second, the rapidly evolving science suggests any attempt at a numerical approach will shortly fail.

In that regard, we understand that CEQ’s suggestion of 25,000 metric tons or more of a CO₂ equivalent GHG emissions on an annual basis is not a threshold for significance, but rather meant to be an indicator of when a quantitative and qualitative assessment would be appropriate. There are at least two fundamental problems with this approach. First, there is no principled reason to draw this number from the EPA reporting rule. The Clean Air Act (CAA) rule and NEPA serve different ends and are considerably different in purpose and scope. NEPA requires consideration and disclosure of impacts to inform decision-making and the public with the goal of implementing this nation’s environmental policies; the CAA’s provisions focus on quantitative standards with specific regulatory consequences. Because NEPA is focused on providing information needed to make better decisions, NEPA necessarily sweeps in more than just those impacts that would violate substantive mandates in other laws.³⁵ It is well-established that agencies are required to consider in their NEPA documents impacts at levels far below regulatory limits. The USDA Forest Service, for example, is not excused from considering a project’s effects on a protected fish population even though the U.S. Fish and Wildlife Service has determined that the project will not jeopardize the fish’s continued existence under Section 7 of the ESA, 16 U.S.C. 1536(a)(2). Similarly, the agency may consider alternatives that lessen impacts to fisheries even when the effects of the action do not violate a substantive state or federal law.³⁶ There is no justification for treating GHG emissions – and alternatives that may reduce those emissions – differently than all other environmental impacts. Agencies should quantify and disclose GHG emissions levels, and consider alternatives that may reduce those emissions, regardless of whether the impacts are ultimately determined “meaningful” or significant.

Second, CEQ’s suggested indicator level ignores the nature of climate change. Climate change is the result of cumulatively significant - though perhaps individually insignificant -

chemical pesticides on an operational basis”. Vol. 73 Fed. Reg. 43095 (July 24, 2008), § 220.5. Three examples of pesticide use are offered to illustrate this type of action but there is no reference to a numerical threshold of active ingredients in pesticides that triggers the need to prepare an EIS, or a quantitative threshold level of effects. Indeed, NEPA procedures that depend on numerical thresholds are the exception, not the rule.

³⁵ It is for this reason that proposals for a 25,000 ton significance threshold were rejected by the State of California in its development of GHG guidance under CEQA. California Natural Resources Agency, Final Statement of Reasons for Regulatory Action, Amendments to the State CEQA Guidelines Addressing Analysis and Mitigation of Greenhouse Gas Emissions Pursuant to SB 97 at 26 (Dec. 2009), available at <http://ceres.ca.gov/ceqa/guidelines/> (because 25,000 ton reporting threshold under California Global Warming Solutions Act (AB 32) “reflects a policy decision regarding regulation,” not “the level at which environmental harm may occur,” it is not relevant to determining a significance threshold under CEQA.).

³⁶ *South Fork Band Council of Western Shoshone of Nevada v. U.S. Dep’t of Interior*, 588 F.3d 718, 726 (9th Cir. 2009) (rejecting argument that “off-site impacts need not be evaluated because the Goldstrike facility operates pursuant to a state permit under the Clean Air Act.”).

additions of GHGs and other global warming pollutants from sources around the world.³⁷ Viewing a project's contribution to GHG emissions through the lens of cumulative significance is consistent with prior CEQ guidance. CEQ has stated "that cumulative effects analysis should be conducted within the context of resource, ecosystem, and human community thresholds-levels of stress beyond which the desired condition degrades. ... [T]he natural ecosystem and the human community have maximum levels of cumulative effects that they can withstand before the desired conditions of ecological functioning and human quality of life deteriorate."³⁸ In the same 1997 document, CEQ also identified GHGs emissions resulting in climate change modification as a potential cumulative effect that should be analyzed in NEPA documents.³⁹ Even "[w]ithout a definitive threshold, the NEPA practitioner should compare the cumulative effects of multiple actions with appropriate national, regional, state, or community goals to determine whether the total effect is significant."⁴⁰

When examined through this lens, and based on the mounting scientific information that dramatic cuts in GHG emissions are necessary to avoid dangerous climate change, focusing solely on identifying a level that warrants consideration of GHG emissions in NEPA documents is not useful or warranted.⁴¹ Indeed, determining what constitutes a "meaningful" addition to a

³⁷ Cumulative impacts are defined by CEQ as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions," and "can result from individually minor but collectively significant actions taking place over a period of time." 40 C.F.R. § 1508.7. See also, *CBD v. NHTSA*, 538 F.3d,1221-25 (9th Cir. 2008) (finding that evidence as to the incremental impacts of increases in GHG emissions strongly suggested that such incremental impacts would be significant); *City of Los Angeles v. NHTSA*, 912 F.2d 478, 501 (D.C. Cir. 1990) (Wald, C.J., dissenting) ("[W]e cannot afford to ignore even modest contributions to global warming. If global warming is the result of cumulative contributions of myriad sources, any one modest in itself, is there not a danger of losing the forest by closing our eyes to the felling of the individual trees?"); *Klamath-Siskiyou Wildlands Ctr. v. Bureau of Land Mgmt.*, 387 F.3d 989, 994 (9th Cir. 2004) (noting that multiple actions' impacts can be "greater than the sum of the parts.... [A] small amount of sediment [added] to a creek may have only a limited impact on salmon survival, or perhaps no impact at all. But the addition of a small amount here, a small amount there, and still more at another point could add up to something with a much greater impact, until there comes a point where even a marginal increase will mean that no salmon survive"); *id.* at 996 (rejecting cumulative impacts analysis that "only considers the effects of the very project at issue. It does not appear to take into account the combined effects that can be expected as a result of undertaking" other foreseeable projects).

³⁸ *Considering Cumulative Effects under the National Environmental Policy Act* at 7, <http://www.nepa.gov/nepa/ccenepa.htm> (last visited May 8, 2010).

³⁹ *Id.*, Table 2-1, 13.

⁴⁰ *Id.*; see also *Kern v. U.S. Bureau of Land Mgmt.*, 284 F.3d 1062, 1076 (9th Cir. 2002) ("[I]f the cumulative impact of a given project and other planned projects is significant, an applicant cannot simply prepare an EA for its project, issue a FONSI, and ignore the overall impact of the project") (quoting *Soc'y Hill Towers Owners' Ass'n v. Rendell*, 210 F.3d 168, 180 (3d Cir. 2000)).

⁴¹ Studies show that even recommendations tied to the goal of limiting GHGs to 450 ppm by midcentury may be overly optimistic. Leading scientists, including NASA's James Hansen, believe that we are already beyond a sustainable level of GHGs in our atmosphere and that stabilization requires a reduction from current levels to 350 ppm. James Hansen, et al., *Target Atmospheric CO₂: Where Should Humanity Aim?*, 2 OPEN ATMOS. SCI. J. 271 (2008). The accelerating impacts of global warming that are already occurring give credence to this reevaluation. Similarly, scientists are also questioning the belief that the 80 percent reduction in emissions below 1990 levels by 2050 will be sufficient. A paper by H. Damon Matthews and Ken Caldeira suggests that in order to stabilize atmospheric levels of greenhouse gases, CO₂ emissions must be reduced not just to 80 percent below 1990 levels but to "nearly zero" by mid-century. H. Damon Matthew & Ken Caldeira, *Stabilizing Climate Requires Near-zero Emissions*, 35 GEOPHYS. RES. LETTERS L04705, L04705 (2008).

problem that is by its very nature the sum of cumulative emissions of all sizes becomes an exercise in setting an arbitrary level. CEQ's final guidance must instead be consistent with scientific understanding of the nature of the cause and contributions of GHG emissions to climate change. It is more pragmatic and effective for CEQ to instead help federal agencies consider ways that they can reduce or eliminate GHG emissions.

Because atmospheric concentrations of GHG already exceed safe levels and GHG emissions must be drastically reduced from existing levels to avoid severe impacts, from a scientific perspective, any additional contribution of GHG results in a significant cumulative effect on the climate. Therefore, if CEQ chooses to propose an "indicator" of the level at which GHGs are considered significant for NEPA purposes, scientific evidence would most strongly support a net-zero emissions significance level. A net-zero threshold would not necessarily result in the preparation of an EIS in every instance. Due to the array of potential on and off-site options to mitigate GHG, an agency that would prepare an EIS due to GHG concerns alone could fully mitigate this impact and still issue a FONSI.

If in response to agency requests, CEQ chooses to adopt a non-zero "indicator" of significance, CEQ should clarify that this level is not indicative of when agencies should consider GHG emissions, but rather is to be used only for the purpose of determining whether a project requires an EIS simply because of the level of its GHG emissions. In other words, an indicator level should be used only in the limited situation where, but for climate impacts, the agency would not otherwise be required to prepare an EIS. For example, if the agency is preparing an EA/FONSI for a project based on its analysis of all other impacts, but finds that it will emit substantial levels of GHGs, an indicator level could be useful in determining whether it must prepare an EIS, or whether those emissions can be sufficiently mitigated and the agency can still issue a FONSI.

To be useful for this limited purpose, the significance threshold must be set at a level that captures a far broader array of actions than the proposed 25,000 metric tons/year level.⁴² As discussed above, NEPA's action-forcing procedural requirements can be effective only where an agency's analysis looks at a broad range of effects and considers a broad array of alternatives. Setting a threshold based on levels that would require regulation under the CAA undermines this broad consideration. If CEQ is to set an indicator, however, it should consider other science-based approaches used or examined by other agencies and states. For example, in California, Bay Area Air Quality Management District has finalized a 10,000 ton threshold for stationary sources and proposed an 1,100 ton and alternative 4.6 ton per capita threshold for residential and commercial projects.⁴³ The South Coast Air Quality Management District adopted an identical 10,000 metric ton significance threshold for industrial facilities in the District (which largely rely on natural gas). That threshold is intended to capture 90 percent of the emissions from stationary

⁴² Moreover, because the 25,000 ton screening criteria proposed by CEQ is limited to direct emissions, it also fails to capture actions where indirect emissions represent a sizeable fraction of total emissions. Because effects under NEPA include both direct and indirect effects, any indicator proposed by CEQ for determining significance should include both direct and indirect emissions from an agency action. 40 C.F.R. § 1508.8.

⁴³ <http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Proposed-Guidelines.aspx>

sources in the District.⁴⁴ When applied to residential and commercial projects in the District, the 90 percent capture rate methodology yields a threshold of approximately 3,000 metric tons.⁴⁵

And in yet another example from California, the California Air Resources Board (“ARB”) proposed a draft industrial threshold of 7,000 metric tons/year. Using data from a comprehensive survey of industrial boilers by Oak Ridge National Laboratory, ARB calculated that this threshold would capture 93% of industrial boilers. “ARB staff evaluated industrial boilers because they are a very common piece of equipment, are essential in many energy-intensive industries, and are a top contributor to industrial combustion emissions.”⁴⁶

Finally, there is no reasoned justification for focusing on a project’s annual, rather than lifetime, emissions as the indicator level of significance. Nothing in NEPA restricts the agencies’ impacts analysis to a rate or a one year time scale. If CEQ does not delete the discussion of an indicator level from the final guidance, it should at least buttress its indicator level with a life-cycle or life-of-the-project “volume” indicator. That level should be set low enough to capture actions that may not emit the full threshold rate in any given year, but would still contribute to the larger overall volume of GHG emissions over the life of the project. For example, while a 20-year project may not emit more than 7,000 tons GHG/year, its total volume of emissions will be far above even the high level identified as “meaningful” in the draft guidance. Thus, if CEQ wishes to indicate a level of significant emissions, it must ensure that its indicator accounts both for the rate of the emissions and the volume of emissions (over the life of the project).

Conclusion

CEQ’s first report to the President and Congress included a remarkably prescient discussion entitled, “Man’s Inadvertent Modification of Weather and Climate”.⁴⁷ Issuance of guidance integrating our evolving scientific understanding of climate change with the dynamic and flexible framework of NEPA analyses will be another landmark in CEQ’s work on climate change.

We strongly urge CEQ to include in its next iteration of this guidance direction that is applicable to all federal actions that fall under NEPA. We believe that the guidance should broadly but firmly focus on implementing NEPA’s goals of encouraging agencies to make “decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment,” 40 C.F.R. § 1500.1(c), to “[u]se the NEPA process to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects” of federal actions, and to “[u]se all practicable means, consistent with the requirements of the Act and other essential considerations of national policy, to restore and enhance the quality of the human environment and avoid or minimize any possible effects of”

⁴⁴ See <http://www.aqmd.gov/hb/2008/December/081231a.htm>

⁴⁵ See <http://www.aqmd.gov/ceqa/handbook/GHG/2009/nov19mtg/nov19.html>. The South Coast Air Quality Management District proposal for thresholds for residential and commercial development is not yet finalized and may also include a performance-based efficiency metric similar to the Bay Area proposal or other alternative method for determining significance.

⁴⁶ See http://www.opr.ca.gov/ceqa/pdfs/Prelim_Draft_Staff_Proposal_10-24-08.pdf at 10.

⁴⁷ First Annual Report of the Council on Environmental Quality 93-104 (Aug., 1970).

federal actions. 40 C.F.R. § 1500.2 (e)-(f).⁴⁸ Ultimately, NEPA’s goal is to “promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man.” 42 U.S.C. § 4321.

Finally, we ask that another draft of this guidance, inclusive of Federal land and resource management actions, be published for public review and comment for thirty days.

Sincerely,

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⁴⁸ See 40 C.F.R. § 1500.1(c) (“it is not better documents, but better decisions that count. NEPA’s purpose is not to generate paperwork – even excellent paperwork – but to foster excellent action. . . . [T]o help public officials . . . take actions that protect, restore, and enhance the environment.”)

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