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January 11, 2013

Ken Blodgett
Surface Transportation Board
395 E Street SW
Washington, D.C. 20423-0001

Attention: Environmental Filing, Docket No. FD 30186

Dear Mr. Blodgett:

On October 17, 2012, the Surface Transportation Board (STB) issued a Notice of Intent (NOI) to prepare an Environmental Impact Statement to analyze potential impacts from the Tongue River Railroad Company's proposed rail line in Custer, Powder River, and Rosebud Counties, Montana (Tongue River Railroad). Surface Transp. Bd., U.S. Dep't of Transp., Notice of Intent to Prepare an Environmental Impact Statement, Tongue River Railroad Company, Inc.—Rail Construction and Operation—In Custer, Powder River and Rosebud Counties, Mont., STB Finance Docket No. 30186 (Oct. 17, 2012) [hereinafter NOI]. The NOI described the proposed rail line as extending from Miles City, Montana, to two ending points near Ashland, Montana: one near the previously proposed Montco Mine site, and one at the proposed Otter Creek Mine site. Id. at 1. A December 17, 2012, Supplemental Application for Construction and Authority submitted to the STB by the Tongue River Railroad Company, Inc. (TRRC) proposed a new preferred alignment. Tongue River Railroad Co., Inc., Supplemental Application for Construction and Operation Authority, Tongue River Railroad Company, Inc.—Rail Construction and Operation—In Custer, Powder River and Rosebud Counties, Mt., STB Finance Docket No. 30186 (Dec. 17, 2012) [hereinafter Supp. App.]. While the two endpoints remain the same, the northern terminus of the new, preferred line connects with Burlington Northern Santa Fe's (BNSF) Colstrip Subdivision near Forsyth. Id. at 2, 3.

We submit to you the following comments in response to the NOI's solicitation of scoping comments on the Tongue River Railroad. NOI at 3. In addition to this letter, we attach for STB's consideration a January 2013 report by Dr. Thomas Michael Power and Donovan S. Power, The "Economics" of the Proposed Otter Creek Coal Mine: A Critique of One-Sided Economic Analysis (Jan. 2013) [hereinafter Power Economic Report]. These comments are provided on behalf of the Montana Environmental Information Center, Sierra Club, Climate Solutions, and Washington Environmental Council. These organizations have members that live in the vicinity of the proposed Tongue River Railroad, the Otter Creek mine, and in communities throughout the West that would be directly affected by the increased coal-train traffic and development of coal-export terminals that are almost certain to result from this project. They urge STB to consider the full scope and magnitude of the project under consideration, including the significant environmental impacts of exporting Otter Creek coal. Both the STB's scoping notice and TRRC's Supplemental Application understate the potential consequences of this project. Although the specific action under consideration is the construction of a 40-90 mile

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railroad in three Montana counties, the harmful impacts of the proposed action will be great and far-reaching.

I. BACKGROUND

A. The Tongue River Railroad, Otter Creek Mine, and Coal Exports

TRRC first applied to the Interstate Commerce Commission—STB's predecessor agency—to construct a railroad from the Ashland area to the BNSF line in Miles City, Montana in 1983. The railroad's purpose was at that time, as it is now, to serve new coal mines proposed for the Otter Creek area. Subsequently, TRRC proposed two separate southern extensions of the railroad.

Now, having lost a legal challenge to STB's prior approvals and environmental review, N. Plains Res. Council v. Surface Transp. Bd., 668 F.3d 1067, 1084-85 (9th Cir. 2011), and having abandoned its proposals for the southern extensions of the railroad, TRRC has submitted a revised application to construct the northern portion of the railroad, designed to bring coal from the proposed Otter Creek coal mine to BNSF's northern line. As TRRC President Stevan B. Bobb explains in his verified statement, the two projects are entirely interdependent: without the railroad, the proposed Otter Creek coal mine could not economically bring coal to markets and would not be developed; without the mine, the Tongue River Railroad would have no purpose. Supp. App., Appendix A, Verified Statement of Stevan B. Bobb, at 5 ("In fact, there is no viable alternative means of transporting coal in the volumes that will be produced at the Otter Creek mine, other than rail and no rail line other than the TRRC line will be capable of transporting the coal produced in the Otter Creek and Ashland areas of the Northern Powder River Basin."). See also Supp. App., Appendix D, Patrick M. Barkey and Paul E. Polzin, The Impact of Otter Creek Coal Development on the Montana Economy 8 (2012) ("the economic competitiveness of the mine depends critically on access to the rail transportation network"); N. Plains Res. Council, 668 F.3d at 1082 ("the Board relied on the coal mine development in Otter Creek to justify the financial soundness of the [rail line] proposal"). Therefore, any evaluation of the Tongue River Railroad must also consider the direct, indirect,[1] and cumulative[2] impacts associated with the coal mine that it will facilitate.

Renewed interest in the Tongue River Railroad at this time is best explained by the vigorous demand for Powder River Basin coal overseas, particularly in Asia. As explained by economist Tom Power:

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[1] "Indirect effects" are those "caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable." 40 C.F.R. § 1508.8. They "may include … effects on air and water and other natural systems, including ecosystems." Id.

[2] Cumulative impacts are "impact[s] on the environment which result … from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." 40 C.F.R. § 1508.7.

> Clearly Arch Coal is not counting on U.S. domestic coal markets to the east which did not support development of Tongue River Valley coal even when the demand for Powder River Basin coal was booming in the 1984-2008 period. The markets driving the current interest in the Otter Creek coal mine and the [Tongue River Railroad] are not domestic U.S. markets to the east but foreign export markets to the west. The economic rationale for the [Tongue River Railroad] has fundamentally changed [since the railroad was initially proposed in the mid-1980s].

Thomas Michael Power & Donovan S. Power, Changes in the Market for Montana Powder River Basin Coal between 1986 and 2012 19 (Nov. 2012) [hereinafter Power PRB Report]. Indeed, an economic report commissioned by Arch Coal and its Montana subsidiary, Otter Creek Coal, LLC (and attached to TRRC's Supplemental Application) "anticipate[s] that the dominant market for this coal will be Asia, with coal shipped by rail to the (new and existing) Pacific northwest coal ports." Barkey & Polzin at 8.

As further evidence of Arch Coal's plans to export Otter Creek coal, the company acquired a 38% interest in Millennium Bulk Terminals-Longview, LLC, owner of a bulk commodity terminal near Longview, Washington. In announcing the purchase, Arch Coal's chairman and CEO stated:

> This transaction gives us a direct stake in participating in the growth of U.S. coal exports off the West Coast. With our superior operating position in the Powder River Basin and Western Bituminous Region, we have the capability to service growing coal demand in Asia, the world's largest and fastest-growing coal market. We believe this first project—along with others in the pipeline—will provide Arch with more exposure to the seaborne thermal market and will further unlock the value inherent in our western coal assets.

Press Release: Arch Coal Acquires Equity Interest in West Coast Terminal (Jan. 12, 2011). That press release also notes that this terminal is served by BNSF railroads, "which will provide Arch with the flexibility to export its southern Powder River Basin and Western Bituminous coals, and eventually coal from its recently-acquired Montana reserves." Id.

Several days after the Longview transaction, Arch entered into an agreement with Canadian Crown Corporation Ridley Terminals, Inc., another coal and bulk commodity marine terminal located in British Columbia. Press Release: Arch Coal Announces Agreement with Canada's Ridley Terminal for Pacific Coast Exports (Jan. 18, 2011). Over 80% of this terminal's total volume consists of coal, and Asia is its primary destination. Id. Again, Arch's chairman and CEO explains: "This transaction is another important step in accomplishing our strategic objective of expanding Powder River Basin coal sales into the Asia-Pacific Region. This throughput agreement gives us direct, immediate access to the growing seaborne thermal market. It … complements our recently announced investment in the Millennium Bulk Terminal in Longview, Wash., and other continuing terminal negotiations." Id. Echoing this enthusiasm, Ridley Terminal's President declared that "Arch Coal's guaranteed U.S. coal volumes will support our goal of doubling our capacity by 2015." Id.

Given the clear nexus, STB must evaluate the environmental impacts of exporting Otter Creek coal, as enabled by construction of the Tongue River Railroad, in addition to the impacts of transporting and burning the coal domestically.

B. NEPA

The National Environmental Policy Act ("NEPA"), 42 U.S.C. § 4321 et seq., "is our basic national charter for protection of the environment." 40 C.F.R. § 1500.1(a). NEPA has two fundamental purposes: (1) to guarantee that agencies take a "hard look" at the consequences of their actions before the actions occur by ensuring that "the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts," Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 349 (1989); and (2) to ensure that "the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process and the implementation of that decision," id. at 349. NEPA "emphasizes the importance of coherent and comprehensive up-front environmental analysis to ensure informed decision making to the end that 'the agency will not act on incomplete information, only to regret its decision after it is too late to correct.'" Blue Mountains Biodiversity Project v. Blackwood, 161 F.3d 1208, 1216 (9th Cir. 1998) (internal citation omitted).

Pursuant to NEPA, "all agencies of the Federal Government shall … include in every recommendation or report on … major Federal actions significantly affecting the quality of the human environment, a detailed statement … on the environmental impact of the proposed action, any adverse environmental effects which cannot be avoided should the proposal be implemented, alternatives to the proposed action" (including a "No Action" alternative), and other environmental implications of the action. 42 U.S.C. § 4332(2)(C). This Environmental Impact Statement ("EIS") helps to ensure "that environmental concerns [will] be integrated into the very process of agency decision-making." Andrus v. Sierra Club, 442 U.S. 347, 350 (1979).

The scoping process is the first stage of NEPA review, and is critical for setting the stage for appropriate and comprehensive environmental analysis. It also informs members of the public who may be affected by a proposed action that the environmental review process has commenced: a scoping notice must therefore "ensure[] that interested parties are aware of and … able to participate meaningfully in the entire EIS process, from start to finish." Kootenai Tribe of Idaho v. Veneman, 313 F.3d 1094, 1116-17 (9th Cir. 2002) (overruled in part on other grounds, Wilderness Soc'y v. U.S. Forest Serv., 630 F.3d 1173 (9th Cir. 2011)) (finding no NEPA violation based on failure to provide maps during the scoping period where "the location of the affected areas was reasonably known to the plaintiffs prior to the receipt of the maps").

The purpose of this letter is to ensure that the requirements of NEPA, both with respect to preparation of the EIS and scoping, are met. STB's NOI for the Tongue River Railroad lists a variety of impacts that must be considered in its EIS. See NOI at 7-10. While this list represents a starting point, it neglects to mention or give due emphasis to several critical issues: the link between rail transport, coal excavation, and global export markets; climate change impacts; and the impacts on several listed and candidate species under the U.S. Endangered Species Act. The

NOI also neglects to make clear that the TRRC line will serve not just the Otter Creek mine, but "other considerable coal resources in the Ashland area." Supp. App. at 7 (emphasis added). See also id. at 17 ("Construction of the TRRC line will provide, for the first time, rail service to one of the largest remaining undeveloped reserves of low sulfur, sub-bituminous coal in the United States."); id. at 19 ("The TRRC rail line is the only viable transportation option for a vast coal source that a subsidiary of Arch is currently developing in the Otter Creek area"). As detailed in this letter, STB must consider, in a meaningful manner, the direct, indirect, and cumulative impacts of each of these activities in the EIS process. To the extent uncertainty, incomplete or unavailable information exists, STB should follow the procedures outlined in 40 C.F.R. § 1502.22.

II. STB'S SCOPING PROCESS HAS FAILED TO ALLOW FOR MEANINGFUL PARTICIPATION BY THE PUBLIC

STB must re-open the scoping period and provide clarification regarding TRRC's preferred route to provide a meaningful opportunity for participation at this stage by members of the public that are affected by the proposed railroad. On December 17, 2012, a full month after STB's public scoping meetings had concluded, TRRC submitted a supplemental revised application for the construction and operation of the Tongue River Railroad, in which it identified for the first time in the project's 30-year history the "Colstrip route" as the company's preferred route for the railroad. See generally Supp. App. At the same time, STB released to the public a new map of the Colstrip route, now available on the STB's Tongue River Railroad web page. STB also mailed a map to Colstrip-area landowners—a map not available to the general public—that depicts a Colstrip route that is different from the route depicted in the map available on STB's website. This map reportedly shows the proposed route of the railroad traversing land owned by an Amish community—land not shown to be impacted by any other map.

In a letter to STB dated January 3, 2013, the Montana Environmental Information Center and Sierra Club requested clarification of the TRRC's new preferred route. The organizations also requested in that letter an expanded scoping process, including a public meeting in the town of Colstrip. Although the Colstrip route has been included among the railroad's alternatives since the project was first proposed, it was previously rejected as technically infeasible. The public was only notified of the Tongue River Railroad Company's apparent change-of-heart regarding the feasibility and desirability of the Colstrip route when the Company submitted its supplemental revised application on December 17, 2012. Thus, Colstrip-area residents—including owners of land that would be bisected by the railroad's new preferred route—did not have any reason to know that they are likely to be directly affected by the construction of the railroad.

STB's failure to provide the requested clarification and expanded scoping process undermines the purpose of NEPA scoping, namely to "ensure[] that interested parties are aware of and therefore are able to participate meaningfully in the entire EIS process, from start to finish." Kootenai Tribe of Idaho, 313 F.3d at 1116-17. We therefore request that STB re-open the scoping period to provide an opportunity for complete participation by Colstrip residents that would be directly affected by construction of the railroad's new, preferred route.

III. TRRC'S SUPPLEMENTAL APPLICATION MISREPRESENTS OR MISSTATES KEY ASSUMPTIONS ABOUT THE VOLUME OF AND MARKETS FOR TONGUE RIVER VALLEY COAL

A. STB's Scoping Notice Substantially Underestimates the Quantity of Coal that Will Be Transported by the Tongue River Railroad

According to TRRC, "[t]he coal resources available for transportation from the Otter Creek area will be substantial, consisting of the [sic] about 1.5 billion tons, which makes Otter Creek one of [sic] largest undeveloped sources of low sulfur, sub-bituminous coal in the United States." Supp. App. at 6. At full production, TRRC estimates 20 million tons of coal will be transported annually from the Otter Creek mine in 26 round-trips per week. Id. at 17. Conveniently, TRRC's rail capacity predictions come to 3.7 loaded coal trains per day (7.4 trains per day, loaded and empty, id., Exhibit D, at 2)—just under the 8-train threshold that triggers TRRC's obligation to conduct more thorough down-line impact analysis. See 49 C.F.R. § 1105.7(e)(5), (6); 63 Fed. Reg. 31,829, 31,831 (June 10, 1998) ("Those segments of rail line that meet or exceed the Board's thresholds for environmental review, as defined in 49 CFR 1105.7, will be evaluated. In cases where the Board's environmental rules do not provide a threshold, the EIS will use eight trains per day or more as the threshold for environmental evaluation.").

TRRC's 3.7 loaded train estimate is substantially lower than the 5.1 loaded coal trains per day figure used by Barkey and Polzin in their economic analysis—an analysis on whose "substantial" benefits TRRC relies in promoting the railroad project. Barkey & Polzin at 27-28. It is also lower than what would be calculated from the 33.2 million tons of coal each year estimated in the appraisal of Otter Creek coal resources prepared for the Montana Department of Natural Resources and Conservation for its lease of the state-owned portion of the Otter Creek coal tracts. Norwest Corp., Montana Otter Creek State Coal Valuation, at 3-5; id. at Appendix C (Jan. 30, 2009), available at http://dnrc.mt.gov/trust/MMB/ottercreek/2009/ValuationReport.pdf [hereinafter Norwest Valuation].

Yet even these higher estimates may not account for additional coal reserves in the Ashland area—upwards of a billion tons—whose mining, transport, and burning would be facilitated by the Tongue River Railroad. Verified Statement of Bobb, at 5 ("There are several billion tons of coal overall in the Ashland area. For that reason, TRRC is proposing to build its line not only to Otter Creek, but also to Terminus Point 1, so that TRRC will be positioned to transport coal that may be mined in the Ashland area."). See also Petition to Revoke Supplemental Application, Tongue River Railroad Company—Rail Construction and Operation—Miles City to Ashland Montana, STB Finance Docket No. 30186 (Jan. 7, 2013) [hereinafter Petition to Revoke], Verified Statement of Gerald W. Fauth III at 6-7, 22 ("TRRC … estimates that the Otter Creek mine will produce approximately 20 million tons of coal per year at full production, which understates the potential Otter Creek volume [especially given modern production techniques] and ignores other potential mines sites on the line. In its original ICC application, TRRC projected coal production levels which ranged from 33 to 44 million tons from potential five (5) mine sites."). According to Gerald W. Fauth III, an economic consultant with over 30 years of experience working for and before the STB and its predecessor:

> TRCC has understated, downplayed and virtually ignored the potential downline or downstream impacts of BNSF's existing system by misrepresenting the destination market and significantly understating the potential annual coal volumes.

Verified Statement of Fauth at 6. If the full volume of coal reserves was taken into account, annual exports would approximate 48.5 million tons, amounting to ~9-loaded trains per day. Id. at 23; id. at 24, Table 2.

An accurate assessment of potential annual coal volumes to be transported on the Tongue River Railroad is a prerequisite to an accurate, informed decision-making process. The various numbers bandied about in the early stages of this EIS process do not lend themselves well to such an informed analysis. STB should undertake an independent analysis of the coal reserves that will likely be transported on the Tongue River Railroad, and use those figures to determine the true magnitude of the environmental impacts that will result from this project.

B. The Tongue River Railroad Will Transport Coal for Overseas Export

The NOI fails to acknowledge that export of Otter Creek coal from proposed West Coast ports is nearly certain, and will cause a host of environmental impacts that are different from, and often more harmful than, the impacts of domestic transport and combustion of coal. The NOI describes "the principal purpose of the construction and operation of TRRC's proposed rail line" as the "transport [of] low sulfur, sub-bituminous coal from the proposed mine sites in Rosebud and Powder River Counties, Montana, including the proposed mines in the Otter Creek area." NOI at 5. See also Supp. App. at 6 (same). TRRC explains that the railroad "will … be used to transport vital coal resources in response to market demands." Id. at 5. While TRRC tries to argue that "US domestic electric utilities represent the prime demand potential for Otter Creek coal that the TRRC would haul," id., Exhibit D, at 2, and that it is impossible "to predict how much coal traffic will head east" for domestic use "versus west" for export, Supp. App. at 27, that argument is belied by historic trends and energy forecasts. See generally Int'l Energy Agency, World Energy Outlook 2012: Executive Summary (2012), available at iea.org/publications/freepublications/publication/English.pdf; id. at 1 (noting "a pronounced shift away from … coal … towards natural gas and renewables" in OECD countries including the United States); id. at 2 (commenting that "low-priced natural gas is reducing coal use in the United States"); id. at 5 ("The policy decisions carrying the most weight for the global coal balance will be taken in Beijing and New Delhi – China and India account for almost three-quarters of projected non-OECD coal demand growth (OECD coal use declines)").

Historically, Montana coal has primarily been burned in Midwest electrical generating plants, near Colstrip, and in the Pacific Northwest. Barkey & Polzin at 15-16. However, "[d]omestic markets are unlikely to provide significant growth for Montana coal" because "overall production of U.S. coal has been stable or declining due [to] increased environmental concerns about coal-fired electric generating plants." Id. Falling natural gas prices are further reducing domestic demand for coal. See generally Thomas Michael Power & Donovan S. Powre, Changes in the Market for Montana Powder River Basin Coal between 1986 and 2012 2-5, 12-13 (Nov. 2012) [hereinafter Power 1986-2012 Report]. In contrast, "in Asia, especially Southeast Asia, … demand [for coal] is mushrooming." Barkey & Polzin at 16. U.S. steam coal

exports to Asia increased from approximately 4.9 million short tons in 2010 to 7.8 million short tons in 2011; projections for 2012 exceed 12 million short tons. Terry C. Whiteside et al., Heavy Traffic Ahead: Rail Impacts of Powder River Basin Coal to Asia by Way of Pacific Northwest Terminals 2 (2012). Montana is strategically positioned to serve these rapidly-growing Asian markets, given its geographic proximity to Pacific Northwest port facilities. Power 1986-2012 Report at 17. See also Whiteside et al. at 21 ("As a result of the expected increase in demand for export coal and a gradual decrease in demand from domestic users, a significant shift in PRB railroad coal traffic from current domestic destinations … to the [Pacific Northwest] export terminals will likely take place.") (emphasis in original). As the economic study cited by TRRC in its Supplemental Application states, "We anticipate that the dominant market for this coal will be Asia with coal shipped by rail to the (new and existing) Pacific northwest coal ports." Barkey & Polzin at 8. See also id. at 27 ("This rail line would provide access to domestic and export markets for coal mined in the Ashland area and other nearby sites.").

Arch Coal, which entered into a lease agreement to mine the Otter Coal tracts (and is also a partial owner of TRCC), announced that this coal will "provide Arch … with an additional supply source to export into the fast growing Pacific Rim coal market[.]" Press Release, Arch Coal and Great Northern Properties Enter Into Montana Coal Lease on Otter Creek Reserves (Nov. 12, 2009). TRRC itself acknowledges that "[c]oal use is predicted to increase … for export and that "[t]here is … demand for coal overseas." Supp. App. at 20. See also id., Appendix A, Verified Statement of William M. Rowlands, at 4 ("We believe that the Otter Creek Mine project "will help [Arch] … supply … coal for export to emerging Asia [sic]"); Press Release: Arch Coal Secures State-Controlled Otter Creek Coal Reserves in Montana (Mar. 18, 2010) (same). TRRC hedges its stated reliance on domestic demand by noting that "there are no contracts in place for this coal and prevailing market conditions will determine the eventual destinations." Supp. App., Exhibit D, at 2. TRRC also points to "the Obama Administration's National Export Initiative to grow the nation's exports [as] underscor[ing] that export traffic is consistent with the national interests." Supp. App. at 21. TRRC's selection of the Colstrip alternative as the preferred alternative further suggests an export-oriented focus, as that route offers a reduction in total mileage (and thus fuel, operational, and maintenance costs) from origin to ultimate West Coast destination. Id. at 26, 27. See also Verified Statement of Bobb at. 8 ("For Otter Creek/Ashland Coal traffic heading westbound, the Colstrip Alignment … offers a reduction in the total mileage from origin to ultimate destination for the coal, eliminating approximately 50 miles"). The Colstrip route increases mileage (and thus fuel, operational, and maintenance costs) for coal traveling eastbound, however. Supp. App. at 26. See also Verified Statement of Bobb at 8 ("Eastbound coal traffic would ultimately travel about 38 miles farther under the Colstrip Alignment"). It would make little sense from a business standpoint for TRRC to "prefer" this route if the company expected most coal to travel east.

The STB should temper assessment of the project's benefits with the reality that the coal export market is highly volatile with a long history of failure. See Eric de Place, Northwest Coal Exports – Some Common Questions About Economics, Health, and Pollution, Sightline Institute. (Sep. 2011). Earlier coal export facilities at the Port of Portland and in Los Angeles in the 1990s failed. The Port of Los Angeles closed six years after it opened following at least two fires and the accumulation of large amounts of coal dust. Id. Furthermore, there are substantial questions as to whether the American taxpayers are receiving "full value for energy resources held in the

public trust, especially when mining companies are seeking to export hundreds of millions of tons of coal for premium prices." Id.

STB must acknowledge the near-certainty of coal export and its environmental consequences. As addressed in further detail in the sections below, exporting coal will result in environmental impacts beyond what could reasonably be expected to occur if the coal is transported and burned in the United States. A valid NEPA analysis must analyze these indirect effects.

IV. CONSTRUCTION OF THE TONGUE RIVER RAILROAD WILL CONTRIBUTE TO GLOBAL WARMING AND ITS DEVASTATING IMPACTS IN MONTANA AND WORLDWIDE

Although STB's scoping notice fails to even mention global warming, any valid NEPA analysis for the Tongue River Railroad must consider the significant contribution of the proposed railroad and mine to global warming and its harmful environmental impacts locally and worldwide. NEPA requires STB to analyze the secondary impacts of coal combustion, including the contribution to global warming, due to construction of the Tongue River Railroad. For example, in Mid States Coalition for Progress v. Surface Transp. Bd., 345 F.3d 520 (8th Cir. 2003), the court required STB to examine the secondary "effects on air quality that an increase in the supply of low-sulfur coal to power plants would produce" due to the construction of a rail line to transport coal. Id. at 548-49. The Ninth Circuit also has required the EPA to examine the global warming impacts of federal fuel efficiency standards that were not as stringent as considered alternatives. See Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin., 538 F.3d 1172, 1225-26 (9th Cir. 2008). These authorities make clear that the global warming impacts of mining, transporting, and burning Otter Creek coal and other coal within the Tongue River Valley are within the proper scope of environmental study for the Tongue River Railroad.

The Council for Environmental Quality ("CEQ"), which implements NEPA at the federal level, has also issued draft federal guidance on how to evaluate the effects of greenhouse gases (GHG) under NEPA. Memorandum From Nancy H. Sutley, Chair, Council on Envtl. Quality, to Heads of Federal Departments and Agencies (Feb. 18, 2010), available at http://ceq.hss.doe.gov/nepa/regs/Consideration_of_Effects_of_GHG_Draft_NEPA_Guidance_FINAL_02182010.pdf. The Federal Guidance confirms that both direct and indirect GHG emissions should be evaluated in the context of "cumulative effects" in an EIS if significant. Id. at 5 ("Analysis of emissions sources should take account of all phases and elements of the proposed action over its expected life, subject to reasonable limits on feasibility and practicality."). Under the Federal Guidance, NEPA documents should put direct and indirect GHG emissions associated with a project in the context of the "aggregate effects of past, present, and reasonably foreseeable future actions" related to climate. Id. at 9-10. As the guidance confirms, the duty to evaluate all climate-related impacts is not "new." Rather, climate is an important factor to be considered within NEPA's existing framework. Id. at 11.

The Tongue River Railroad will enable the development of billions of tons of coal in the Tongue River Valley. The Otter Creek mine alone could produce for sale to power plants 33.2 million tons of coal each year, nearly doubling Montana's total coal production. Norwest

Valuation at 3-5, Appendix C. If mined and burned as planned, the massive quantity of coal contained within the Otter Creek tracts will constitute one of the nation's largest single sources of carbon dioxide ("CO_2"), contributing to climate change and its potentially disastrous impacts in Montana and globally. Nearly all of the Otter Creek coal is destined for combustion at coal-fired power plants and could result in emissions of approximately 2.4 billion tons of CO_2.[3] When coal production from Otter Creek is at its peak, combustion of Otter Creek coal will result in 60.4 million tons of annual CO_2 emissions. These emissions would amount to nearly double all of Montana's yearly CO_2-equivalent emissions generated (37 million tons in 2005).[4] Ctr. for Climate Strategies, Montana Greenhouse Gas Inventory and Reference Case Projections 1990-2020 iii, 4 (Sept. 2007), available at http://deq.mt.gov/ClimateChange/Data/pdfs/GreenhouseGasInventory.pdf.

In addition, it is unlikely that U.S. coal will simply displace coal mined in China and other countries in Asia. Instead, an influx of U.S. coal will increase the available supply, reducing prices and thus stimulating demand. As described by Dr. Tom Power:

> Opening the Asian import market to dramatic increases in U.S. coal will drive down coal prices in that market. Several empirical studies of energy in China have demonstrated that coal consumption is highly sensitive to cost. One recent study found that a 10 percent reduction in coal cost would result in a 12 percent increase in coal consumption. Another found that over half of the gain in China's "energy intensity" improvement during the 1990s was a response to prices. In other words, coal exports will mean cheaper coal in Asia, and cheaper coal means more coal will be burned than would otherwise be the case.

Thomas M. Power, The Greenhouse Gas Impact of Exporting Coal from the West Coast: An Economic Analysis 1 (2011), available at http://www.sightline.org/research/greenhouse-gas-impact-of-exporting-coal. Further,

> [l]ower coal prices reduce the incentives to retire older, inefficient, coal-using production processes and discourage additional investments in the energy efficiency of new and existing coal-using enterprises. As those lower prices flow through to consumers, it also reduces the incentives to shift to more energy efficient appliances. Furthermore, lower coal costs will encourage investments in new coal-burning facilities in Asia—which in turn create a 30- to 50-year demand for coal.

[3] Montana sub-bituminous coal has an average carbon dioxide emissions factor of 213.4 pounds of carbon dioxide per million BTUs. Energy Info. Admin., U.S. Dep't of Energy, Carbon Dioxide Emission Factors for Coal, DOE/EIA-0121, Table FE4 (Aug. 1994), *available at* http://www.eia.gov/cneaf/coal/quarterly/co2_article/co2.html. Otter Creek coal heating values average 8,500 to 8,600 BTU/lb on an as-received basis. Norwest Valuation at E-3. Taking the median of 8,550 BTU/lb, one ton of Otter Creek coal will emit 1.82 tons CO_2 when combusted (3649.1 lbs CO_2/2000 lbs coal = 1.82).

[4] This accounting reflects Montana's gross consumption-based CO_2-equivalent emissions, which exclude Montana's electricity exports.

Id. at 2. In short, "lower prices may encourage China to build more coal-burning power plants than they otherwise would, an investment that would lock in elevated coal burning [and associated greenhouse gas emissions] and pollution for decades to come." Eric de Place, Northwest Coal Exports: Some Common Questions About Economics, Health, and Pollution 7 (Nov. 2012), available at http://www.sightline.org/. The result is that construction of the Tongue River Railroad, enabling the mining and export of a very large volume of Tongue River Valley coal to Asia, is likely to increase global greenhouse gas emissions, in addition to emissions of other air pollutants common in coal-fired power plant exhaust.

The billions of tons of CO_2 emissions stemming from the proposed Otter Creek Mine and other area mines would contribute to the ongoing warming of the Earth's climate. In 2007, the Intergovernmental Panel on Climate Change (IPCC) released its Fourth Assessment Report, stating that "[w]arming of the climate system is unequivocal," and human caused. Intergovernmental Panel on Climate Change, Climate Change 2007: Synthesis Report – Summary for Policymakers 2, 5 (Nov. 2007) ("IPCC Report), available at http://www.ipcc.ch/ pdf/assessment-report/ar4/syr/ar4_syr_spm.pdf. Climate models for the northern Rocky Mountains project an average annual temperature increase of between 3.6 and 7.2°F by the end of this century, based on a range of CO_2 emissions scenarios. If CO_2 emissions continue to grow unabated, the region will likely experience warming at the high end of this range.

This warming threatens major environmental impacts in Montana and worldwide. According to the U.S. Global Change Research Program (GCRP), climate change could affect the Great Plains region, including eastern Montana, by causing "more frequent extreme events such as heat waves, droughts, and heavy rainfall[,] … [jeopardizing] the region's already threatened water resources, essential agricultural and ranching activities, unique natural and protected areas, and the health and prosperity of its inhabitants." U.S. Global Change Research Program, Global Climate Change Impacts in the United States, at 123 (Thomas R. Karl et al., eds., 2009), available at http://downloads.globalchange.gov/ usimpacts/pdfs/climate-impacts-report.pdf. In western Montana and the northwestern United States, "[h]igher summer temperatures and earlier spring snowmelt are expected to increase the risk of forest fires …. Drought stress and higher temperatures … will also increase the frequency and intensity of mountain pine beetle and other insect attacks." Id. at 136. Global warming also could profoundly affect the health of western fisheries, by "hamper[ing] efforts to restore depleted salmon populations," id. at 137, and "lead[ing] to increasing fragmentation of remaining habitats and accelerated decline" of Montana's native Bull trout. Bruce E. Reiman et al., Anticipated Climate Warming Effects on Bull Trout Habitats and Populations Across the Interior Columbia River Basin, 136 TRANSACTIONS AM. FISHERIES SOC'Y 1552 , 1552(2007), available at http://www.fs.fed.us/rm/boise/publications/fisheries/ rmrs_2007_riemanb001.pdf.

Concentrations of CO_2 in the atmosphere "are projected to continue increasing unless the major emitters take action to reduce emissions." Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66,496, 66,539 (Dec. 15, 2009). The U.S. Environmental Protection Agency recognized the cumulative nature of both the climate change problem and the strategies needed to combat it:

> [N]o single greenhouse gas source category dominates on the global scale, and many (if not all) individual greenhouse gas source categories could appear small in comparison to the total, when, in fact, they could be very important contributors in terms of both absolute emissions or in comparison to other source categories, globally or within the United States. If the United States and the rest of the world are to combat the risks associated with global climate change, contributors must do their part even if their contributions to the global problem, measured in terms of percentage, are smaller than typically encountered when tackling solely regional or local environmental issues.

Id. at 66,543 (emphasis added). Consistent with this finding, the Ninth Circuit has rejected the argument that individual actions represent too minor of a contribution to the global problem to merit consideration under NEPA: "The impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct. Any given rule setting a [vehicle fuel-efficiency] standard might have an 'individually minor' effect on the environment, but these rules are 'collectively significant actions taking place over a period of time.'" Ctr. for Biological Diversity, 538 F.3d at 1217 (internal citations omitted).

STB's EIS must analyze and evaluate alternatives and mitigation measures to avoid or minimize these potentially devastating, secondary effects of the Tongue River Railroad. In its analysis, STB must heed the Ninth Circuit's admonition that "mitigation measures, while necessary, are not alone sufficient to meet the Board's NEPA obligations to determine the projected extent of the environmental harm to enumerated resources before a project is approved. Mitigation measures may help alleviate impact after construction, but do not help to evaluate and understand the impact before construction." N. Plains Res. Council, 668 F.3d at 1084.

V. STB MUST CONDUCT A THOROUGH ANALYSIS OF THE ISSUES IDENTIFIED IN THE NOI

While STB's scoping notice failed to identify one of the railroad's most significant environmental impacts—global warming—the notice included a laundry list of other issues that STB intends to evaluate. We urge STB to undertake a thorough analysis of these issues (identified below by italicized text), including not just the direct impacts of the railroad and the Otter Creek mine, but also the indirect impacts caused by coal combustion, coal transport along the entire route from the mine to the coal's destination, and the specific impacts associated with exporting coal.

A. Transportation & Safety Issues

STB plans to "[e]valuate the potential impacts resulting from TRRC's proposed route and each alternative on the *existing transportation network* in the project area." NOI at 7. This transportation network includes the entire rail network over which Otter Creek and other area coal will be transported. Impacts to existing rail traffic (e.g., import and export container traffic carrying consumer, agricultural, petroleum, and industrial products) must be considered, as well as impacts to passenger and commuter trains. See Whiteside et al. at 28. Probable chokepoints, bottlenecks, and major congestion areas must also be identified, and possible means of

alleviating those problems discussed. A discussion of who is responsible for ironing out logistical problems arising from increased rail traffic should be included in the EIS as well. To the extent that coal train traffic might displace other rail traffic, the financial and employment implications of such displacement should be included in the discussion.

Many of the rail lines that will carry coal beyond the Tongue River Valley to the Pacific Northwest are already overburdened. Thus, one of the most important questions for STB to consider in this portion of the analysis is who is responsible for paying for rail infrastructure improvement, expansion, and maintenance. It has been suggested that "[s]tate and local governments would likely bear the brunt and burden of the related infrastructure costs in their localities and would likely be required to spend hundreds of millions of dollars in related mitigation, litigation, debt and other costs associated with the necessary improvements to accommodate export coal traffic levels." Whiteside et al. at 6. The fairness and feasibility of these financial burdens must be discussed in the EIS. Impacts to transportation networks could cause a host of trickle-down effects as well; for example, increases in vehicular delays at rail crossings could lead to increased localized air pollution. Coal dust from trains passing through towns could have air and water quality human health impacts and could cause to train derailments and right of way fires. More cars and trains on the road could increase human and wildlife mortality. A discussion of all such direct, indirect, and reasonably foreseeable impacts must be included in the EIS.

A related set of effects identified by STB for analysis in the NOI includes *safety issues*, such as road/rail crossing safety, increased accident potential, and the potential for delay or disruption to emergency vehicle traffic. NOI at 7. This analysis should include a discussion of coal dust and fires.

1. Coal Dust

An analysis of the impacts of coal dust, which the Surface Transportation Board has found to be a "pernicious ballast foulant," on track integrity and potential derailments is essential to a valid NEPA analysis, particularly given that coal from this region is known to be "extremely friable." de Place at 4. As the STB coal dust proceeding has acknowledged, the quantity of coal emitted by a train into the air, water and onto tracks is not insignificant.[5] An average of 500 pounds of coal dust per rail car is lost during each trip. BNSF Railway, Coal Dust Frequently Asked Questions (2011).[6] Each train is composed of 120 cars or more. See Hearing, July 29, 2010, Arkansas Electric Cooperative Association—Petition for Declaratory Order, Surface Transportation Board, Docket No. FD 35305, at 42: 5-13. The risk of train derailments is heightened on lines with heavy coal-train traffic. "Coal dust, even in small amounts, poses a real threat to the integrity of the ballast section and track stability." Id. at 46:18-20. There was a host of coal train derailments in the U.S. this summer. STB must analyze this significant safety risk.

[5] The STB has conducted two proceedings related to coal dust, referenced at Docket numbers 35557 and 35305. The latter is ongoing. See http://www.stb.dot.gov/newsrels.nsf/219d1aee5889780b85256e59005edefe/72355569b86fcf0485257950006d6966?OpenDocument.

[6] Note that this website has been taken down by BNSF, but a pdf copy is on file with authors of this letter.

STB's analysis of coal dust should include a discussion of the efficacy of surfactants to control coal dust, potential impacts of the use of surfactants to control dust emissions, as well as consequences from not using surfactants. First, although use of surfactants is common, their efficacy and safety for use on coal-carrying trains is unproven. Second, surfactants contain myriad undisclosed chemicals, many of whose biological and ecological effects have not yet been adequately studied. Surfactants could cause a number of potential harms, including: danger to human health during and after application; surface, groundwater and soil contamination; air pollution; changes in hydrologic characteristics of the soils; and impacts on native flora and fauna populations. See Environmental Protection Agency, Potential Environmental Impacts of Dust Suppressants: Avoiding another Times Beach § 3 (May 30-31, 2002). Third, while BNSF currently mandates the use of surfactants, STB proceedings evaluating that practice are ongoing. As a result, the use of surfactants may become voluntary. Thus, STB should analyze the impact of coal dust emitted from the Tongue River Railroad both without and with any sort of surfactant use.

2. Fires

STB must also assess the potential for spontaneous combustion and slow smoldering on rail cars. de Place at 4. Coal can smolder and catch fire while in storage piles, and rail cars or barges delivering coal sometimes catch partially on fire. See Roderick J. Hossfeld and Rod Hatt, PRB Coal Degradation – Causes and Cures, PRB Coal Users Group Annual Meeting 3 (Apr. 5-7, 2005), available at http://www.prbcoals.com/pdf/paper_archives/56538.pdf. Coal train traffic across the arid eastern Montana landscape presents a particular risk of fire in the rail line right-of-way, which includes both public land and private ranches.[7] Fires are a significant safety issue that should be assessed in the Tongue River Railroad EIS.

B. Land Use & Recreation Issues

STB has stated that it will consider how the preferred and alternative rail routes impact existing *land use* patterns. NOI at 7. While TRRC touts the newly preferred Colstrip alternative as "the shortest, most cost effective and least environmentally impactful routing for the proposed line[,]" agricultural lands and wildlife habitat must still be severed and/or acquired for the railroad's completion. Supp. App. at 2. See also id. at 4 (same specifically as to land use impacts). The 7,600-acre Otter Creek mine will also impact regional land uses, as will other coal mines in the region. Verified Statement of Rowlands at 3. The STB must consider direct impacts to land use from the railroad and coal mines, including reduced land prices, displacement of agricultural operations, lost production value, and impacts to wildlife and fishery

[7] Several coal-related fires occurred along a railway in North Dakota in the fall of 2012. See Coal Dust Keeps South Heart Fire Crews Busy, The Dickinson Press (Sep. 1, 2012), available at http://www.thedickinsonpress.com/event/article/id/61008/. Coal dust in the tracks and from constantly passing coal trains kept the track fires smoldering for several days. As South Heart Fire Chief Ken Koppinger said, "When there is that much coal dust, there is not a lot we can do…you think you have it out…and then half-a-day later, it flares up once again." Id.

habitats (including increased potential for wildfires and introduction of invasive weeds). In addition, STB must consider whether and how construction of a railroad in this area might affect non-traditional land uses, such as established conservation easements, and *recreation* opportunities, including big game hunting, bird hunting, and fishing. NOI at 7. STB should consider how the railroad will impact landowner participation in Montana Fish, Wildlife and Parks' Block Management Program and public access to and use of Tongue River Ranch. Related issues such as liability should also be discussed.

STB should also expressly consider the temporal implications of coal mining and rail activity. According to William M. Rowlands, President of Otter Creek Coal, LLC, "the Otter Creek Mine should allow for nearly 20 years of mineable coal production." Verified Statement of Rowlands at 3. The relatively short-term nature of this project stands in contrast to the nearly perpetual nature of economic activity flowing from agriculture and recreation. Transforming this pastoral countryside into an industrial neighborhood may be irreversible, at least on a meaningful time scale. STB must consider the long-term land use impacts that will result from the railroad and mine. If the railroad is to be abandoned and reclaimed after 20 years, a reclamation plan should be included with the EIS. If the railroad is to transform into a true "common carrier" whose operations will extend beyond 20 years, the EIS must discuss what industry(s) it expects to sustain the railroad, and who will be responsible for ongoing maintenance and upkeep of the rail infrastructure. See, e.g., Supp. App. at 29 ("the TRRC would be a common carrier for all commodities"). The EIS must also include a discussion of the land use impacts associated with the building of export terminals on the West Coast, as well as any marine impacts from overseas transport and land use impacts from burning the Otter Creek coal domestically or overseas (e.g., mercury deposition).

C. Biological Resource Issues

The EIS must include an analysis of impacts to *biological resources* on both public and private lands in the affected area. NOI at 8. Such resources include wildlife (e.g., mule deer, white-tailed deer, elk, pronghorn, black bears, mountain lions, game and non-game resident and migratory bird species, raptors, songbirds, amphibians, reptiles), fisheries, aquatic invertebrates, wetlands, and vegetative communities. STB must ensure that up-to-date information on all potentially impacted flora and fauna is made available, such that adequate impact analyses can be completed. Habitat degradation, fragmentation, and loss must all be assessed, along with any resulting impacts to wildlife species. Increased wildlife mortality from railroad and mining-related activity (including but not limited to increased human conflicts, habitat loss, and increased hunting pressure) must be discussed. Impacts to wildlife migration corridors must be evaluated. The potential for introduction of exotic species, specifically weeds, must be assessed. The efficacy and environmental effects of different methods of controlling weed spread (e.g., steam sterilization, chemical herbicides, physical removal) must also be evaluated. Effects on sensitive lands (e.g., Glacier National Park, along whose southern edge the BNSF line runs on its way to the Pacific Northwest) must also be described.

Effects on threatened, endangered, and candidate species must be included in this portion of the EIS. Specifically, STB must consider the effects of the railroad and related projects on the pallid sturgeon (Scaphirhynchus albus), the black-footed ferret (Mustela nigripes), and the greater sage-grouse (Centrocercus urophasianus). With respect to the pallid sturgeon and black-

footed ferret, STB must reinitiate consultation with the U.S. Fish and Wildlife Service under § 7 of the Endangered Species Act to determine whether any of the proposed railroad routes or associated coal mining or combustion activities will adversely affect this species. This need is particularly acute with respect to the newly modified Colstrip route, whose effects were not considered in previous assessments. STB should also consider the effects of the project on the sauger (Sander canadensis), a species of special concern in Montana.

The pallid sturgeon was listed as endangered under the federal Endangered Species Act in 1990. See 55 Fed. Reg. 36,641 (Sep. 6, 1990). Pallid sturgeons require "large, turbid, free-flowing riverine habitat with rocky or sandy substrate." Office of Pesticide Programs, U.S. Envtl. Protection Agency, Appendix C: Status and Life History of the Pallid Sturgeon (Scaphirhynchus albus) 5 (Aug. 31, 2007). Sturgeon habitat in the upper Missouri River basin has been much reduced, and what remains is highly fragmented. Id. at 4, 5. Further habitat fragmentation or disturbance, including sedimentation of spawning grounds, has the potential to adversely affect pallid sturgeon living in the project area. See id. at 8 ("Destruction and alteration of habitats by human modification of the river system is believed to be the primary cause of decline in reproduction, growth, and survival of pallid sturgeon.").

In the past, the primary concern arising from the Tongue River Railroad with respect to this species has been the vibration effects on sturgeon at the Miles City Fish Hatchery. The TRRC explains that the Colstrip route "has the additional benefit of … avoid[ing] … the Miles City Fish Hatchery[,] … thereby eliminat[ing] a source of environmental impact … that ha[s] proven controversial in the past." Supp. App. at 4. While this may be the case, the EIS must evaluate the environmental impacts flowing from all alternative routes; thus, potential impacts to the Miles City Fish Hatchery remain relevant.

The black-footed ferret was listed as endangered under the Endangered Species Act on June 2, 1970.[8] U.S. Fish & Wildlife Serv., Black-footed Ferret (Mustela nigripes) 5-Year Status Review: Summary and Evaluation 4 (Nov. 2008). Currently all free-ranging populations of black-footed ferrets occur in managed reintroduction sites. Id. at 15.

Habitat modification and destruction in conjunction with the demise of the prairie dog—the ferret's primary food source—served as primary causes for the species' decline. Id. at 13. Approximately 97% of the suitable habitat available to the ferret prior to European contact has been lost. Id. at 28. "Much of the remaining prairie dog occupied habitat is highly fragmented and repeatedly impacted by poisoning and/or disease, with few complexes of an adequate size to support black-footed ferrets." Id. Climate change is also affecting the recovery of this species through localized range shifts and via the "strong relationship between plague outbreaks and climatic variables[.]" Id. at 22, 24-25. STB must consider whether the Tongue River Railroad will have any direct, indirect, or cumulative impacts that might affect black-footed ferret recovery or impact suitable ferret habitat.

[8] The black-footed ferret had previously been listed as endangered rangewide under the Endangered Species Preservation Act, with that listing occurring on March 11, 1967. U.S. Fish & Wildlife Serv., *Black-footed Ferret (*Mustela nigripes) *5-Year Status Review: Summary and Evaluation* 15 (Nov. 2008).

The greater sage-grouse is a candidate for listing under the Endangered Species Act. Sage-Grouse Conservation Objectives Team, Sage-Grouse Conservation Objectives Draft Report 1 (Aug. 1, 2012). While the U.S. Fish and Wildlife Service has determined that the species warrants protection under the Endangered Species Act, its listing is precluded due to other higher-priority actions. Id. Greater sage-grouse "are a landscape-scale species, requiring conservation actions that span ecological province and political boundaries." Id. The species depends upon a variety of shrub steppe habitats throughout its life cycle, and "[f]ragmentation of sagebrush habitats has been cited as a primary cause of the decline of sage-grouse populations[.]" Id. at 2, 9. Individual greater sage-grouse display high site-fidelity to seasonal habitats (including breeding, nesting, brood-rearing, and wintering grounds), thus limiting their ability to adapt to changing habitat conditions. Sage-Grouse Conservation Objectives Team at 2. The fact that the species' preferred habitat is considered "one of the most imperiled ecosystems in North America due to continued degradation and lack of protection" exacerbates the threats the species faces. Id. at 3.

The greater sage-grouse faces "substantial, imminent" threats in the Powder River Basin and "moderate, imminent" threats in the Yellowstone watershed. Id. at 17, Table 2; id. at 47-48. STB should procure or produce up-to-date information on the population status of the sage-grouse in the project area. The EIS should discuss the extent to which the Tongue River Railroad and its associated projects (e.g., Otter Creek mine, rail transport to Pacific Northwest) might further fragment remaining habitat; affect lek persistence or attendance; impact population recruitment, or yearling or adult survival; or affect female nest site selection or initiation. See id. at 9. This analysis should also consider whether the projects will lead to "[f]unctional habitat loss, … as greater sage-grouse avoid areas due to human activities, including noise[.]" Id. Human-caused wildfires can also affect the species; indeed, "[f]ire is one of the primary factors linked to loss of sagebrush-steppe habitat and corresponding population declines of greater sage-grouse." Id. at 10. The extent to which the Tongue River Railroad might contribute to increased wildfire risk, either directly through railroad operations or coal mining or transport, or indirectly through the introduction of nonnative annual grasses and noxious perennials, should be considered. See id. Finally, the EIS should identify any regulatory mechanisms that might be in place to alleviate the project's impact on this imperiled species. Id. at 11.

STB should include in its analysis of biological resources a review of the project's potential impacts on the sauger, a species of special concern in Montana. Montana Chapter, Am. Fisheries Soc'y, Sauger (2010), available at http://www.fisheriessociety.org/AFSmontana/Sauger.html. Sauger typically live in large, turbid rivers and shallow, turbid lakes. Sauger populations have declined by an estimated 53% from historical levels, and the species' status is uncertain or unknown across much of its historic range. Id. It can still be found in the mainstem Yellowstone River downstream of Rosebud Creek, and may persist in small numbers in the Tongue River and upper Powder River. Id. The sauger's migratory nature and selectivity in spawning grounds makes conservation efforts challenging. Id.

STB should determine whether the sauger exists in rivers or lakes that would be impacted by the proposed railroad routes. The agency should also assess whether and to what extent the project would directly or indirectly adversely impact the species. Primary known threats to the

sauger include habitat loss (including loss of spawning and rearing habitat), migration barriers, environmental degradation, water flow fluctuations and low streamflow, channelization, and angler harvest. Id. Mitigation alternatives that eliminate or minimize habitat fragmentation and loss and facilitate sauger movement and migration should be provided.

D. Impacts to Water Resources and Navigation

STB must consider effects to all surface and ground *water resources* within the project area, as well as impacts to *navigation*. NOI at 8. TRRC asserts that the newly preferred Colstrip route "will substantially reduce environmental impacts, particularly … impacts to … water quality." Supp. App. at 4. Nonetheless, STB must consider all potential water quality impacts (e.g., increased sediment loads, possible spills including high sodium coal ash spills, coal dust impacts, mercury deposition, changes to alluvial groundwater quality, degradation of drinking well water) and water quantity impacts (e.g., drawdown of aquifers, diversions or diminutions of surface flow, hydrologic changes affecting seeps and springs, drinking water impacts) of all alternative rail routes. STB should ensure that the EIS describes, in detail, the possible sources of all water needed for the railroad and associated mining activities, including water originating in any overallocated water source.

The agency also must consider cumulative water resource impacts flowing from the Otter Creek mine and other reasonably foreseeable coal mines (e.g., disruption of hydrologic systems, pollution impacts), as well as impacts to water resources that would be expected to flow from construction of the planned export facilities and any impacts to water resource that would be expected from burning the Otter Creek coal, whether domestically or overseas.

In addition to water availability considerations, the EIS must examine the railroad's potential impacts to water quality. Contamination of the river and drinking water supplies can occur with diesel emissions and diesel spills both during project construction and during the ongoing operation of the project, which relies on continuous activity of trains. In addition, the drinking water supplies can also occur from coal dust and coal spills. Coal will be delivered in open top rail cars to the site. Regular movement of uncovered rail cars and the loading and unloading of these cars cause the release of fugitive coal dust, which can further contaminate the water supplies. Construction and operation of the railroad may also result in water quality impacts in the way of increased sedimentation and other changes. The EIS must assess these impacts; detail how federal, state, and local water quality standards will be met, monitored, and maintained; and identify whether any permits under section 402 or 404 of the Clean Water Act will be required.

E. Impacts to Geology & Soils

The EIS must include an evaluation of impacts to *geology and soils*, including erosion impacts and impacts to prime farmlands. NOI at 8-9. As noted in the 1983 FEIS, "the majority of the soils in the project area exhibit poor reconstruction suitability ratings, a condition which increases the cost of reclamation." Supp. App., Exhibit H, at 146. Appropriate mitigation techniques must account for such soil characteristics. STB must also consider the suite of soil and geological impacts associated with coal mining at Otter Creek and other Ashland-area mines, including potential impacts to alluvial valley floors.

F. Human Health Impacts, Including Air Quality, Noise & Vibration

The EIS must include an analysis of human health impacts from the railroad and associated coal mining and combustion activities. For example, STB must consider *air quality* effects, including emissions of diesel fumes, particulates, greenhouse gases, NO_x, SO_x, sulfur particulates, carbon monoxide, ozone, arsenic, mercury and other toxic metals, and coal dust. NOI at 9. The human health implications of these and other significant pollutants must be thoroughly addressed. This discussion should note that Otter Creek coal has a relatively high sodium content, which can interfere with air pollution control devices in power plants; this shortcoming cannot be mitigated to the extent that this coal is burned overseas, beyond U.S. jurisdiction. Power PRB Report at 14. The EIS should also include an assessment of impacts to visibility, including potential impairment of the Class I airshed on the Northern Cheyenne Indian Reservation. Letter from Leroy A. Spang, President, Northern Cheyenne Tribe, to Ms. Linda DeVine, HQ ACC/A7PP (Dec. 20, 2010) ("At the Tribe's request, the EPA designated the Northern Cheyenne Reservation a Class I air shed in 1977."). The human health portion of the analysis must also assess effects from *noise and vibration*. NOI at 9.

Further, a valid NEPA analysis must consider air pollution impacts that specifically accompany transporting and burning coal overseas. Each trip of a fully loaded container ship to China, for example, uses around 500 tons of bunker fuel per trip, generating both significant CO_2 emissions in its own right as well as a variety of toxic and harmful air emissions, including diesel particulates that are highly damaging to human health as well as black carbon, one of the most potent greenhouse gases in existence.

Exporting coal may also increase the air-quality impacts associated with its combustion. When coal is burned domestically, we can be reasonably certain of the pollution-control regulations to which it will be subject. For example, the Clean Air Act requires new and significantly modified sources of air pollution to install the "best available control technology" for pollutants such as sulfur dioxide, nitrogen oxides, particulate matter, and other pollutants. See 42 U.S.C. § 7475(a)(4). Many of the largest and dirtiest coal-fired power plants are subject to new retrofit obligations to reduce their contribution to visibility impairment due to sulfur dioxide and nitrogen oxide emissions. See id. § 7491. In addition, recently adopted mercury and air toxics standards will regulate coal-plant emissions of mercury and harmful acid gases. See NESHAPs from Coal- and Oil-Fired Electric Utility Steam Generating Units, 77 Fed. Reg. 9,304, 9,304 (Feb. 16, 2012). There is no guarantee that such stringent regulations will be in place in the Asian countries where Otter Creek coal is likely to be sold and burned. As a result, the air pollution impacts of exporting Otter Creek coal may be far greater than if the coal were to be burned domestically. Yet these impacts will not stay in Asia. Airborne transport of soot, sulfur compounds, mercury, ozone, and other byproducts of coal combustion can travel across the Pacific Ocean and affect the health of western states' ecosystems and residents. de Place at 7. These kinds of impacts are "indirect effects" of the shipment of Tongue River-area coal to a coal export facility and should be evaluated in an EIS, along with any appropriate mitigation.

G. Socioeconomic Analysis (including Energy Distribution)

STB intends to provide, in the EIS, a *socioeconomic* assessment. NOI at 9. In its Supplemental Application, TRRC touts the myriad socioeconomic benefits it expects to flow from construction and operation of the railroad and associated Otter Creek mine, including coal royalties, increased employment, and "associated economic development." Supp. App. at 5. A study provided as an appendix to TRRC's Supplemental Application goes into some detail about these perceived "substantial" economic benefits, concluding that "with the Otter Creek coal development the state economy would be significantly larger, more prosperous, and more populous than would otherwise be the case." Supp. App. at 19, 20, citing Barkey & Polzin at 4, 13. But see Power Economic Report at 20-22 (questioning the "substantial"-ness of such impacts).

The study referred to by TRRC is properly termed an "economic impact analysis." Id. at 8. As such, "[i]t is peculiar within economics because it typically describes economic ventures as having only benefits and no costs for the local community." Id. (emphasis added). Thus, "no economic choices or tradeoffs need to be made." Id. This type of analysis denies to decision-makers the information needed to "weigh … benefits and costs and … mak[e] … rational choices." Id. Only by providing decision-makers and the public with information on both costs and benefits can an informed (i.e., economically rational) decision be made. STB should provide, in its EIS, a complete economic cost-benefit analysis that includes full disclosure of all relevant information, including externalities and negative impacts to public goods[9] resulting from construction of the mine and its related projects. Only by providing such comprehensive information can the public weigh in on and decision-makers make a choice among the options before them. Only by providing such information can the STB comply with the letter and the spirit of NEPA.

Several interrelated costs that must factor into STB's socioeconomic analysis relate to land use, land ownership, and community character. Currently, the land that will be impacted by the railroad is used primarily for livestock grazing and agriculture. Supp. App. at 29-30. If the railroad is constructed and the landscape industrialized, the agricultural viability and integrity of this land will be compromised. As the Interstate Commerce Commission (STB's predecessor) explained in the 1983 Final Environmental Impact Statement (FEIS) on the Tongue River Railroad:

> Impacts expected to occur as a result of mining operations in the Tongue River region would be of greater significance on a region-wide basis than those directly attributable to railroad activities. The magnitude of the anticipated development will have enduring effects on the social and economic fabric of the area. Economic dependence on agriculture will diminish and a new focus on industrial development will ensue. Smaller communities will experience large population increases, altering their political and social structure. Utilization of natural

[9] "The Otter Creek Mine wishes to make use of public lands, water, air, and natural systems. The owners of those public resources, represented by various government agencies, need to analyze whether the benefits to the public will justify what will be lost to the public if these public resources are committed to Arch Coal's business plan" Power Economic Report at 10-11.

> resources will increase correspondingly, both out of economic necessity and for recreational purposes. Conflicts will occur in these areas.

Supp. App., Exhibit H, at ii. Putting a dollar value on community character is challenging, but that does not relieve STB of the task of fully and thoroughly assessing, in its EIS, the tradeoffs that would ensue should the agricultural character of the project area be altered or destroyed by the railroad. This was recognized in the 1983 FEIS, in which the ICC stated that "population growth in the region would have some adverse effects on the social fabric of the area[,]" and some communities "would have … difficulty adjusting to the increased population." Supp. App., Exhibit H, at 145. See also Barkey & Polzin at 40 ("expect[ing] to see a significant increase in the population of southeastern Montana resulting from coal development").

The STB also must identify and analyze potential "boomtown" impacts (e.g., increased crime and other social ills, increased traffic congestion) that might attend railroad and coal development in the region, Supp. App., Exhibit H, at viii, as well as any strains that might be experienced by communities (e.g., overburdened police and fire departments, emergency responders, school systems, water and sewer systems, the *energy resource distribution* networks). NOI at 9. Impacts to environmental resources and ecosystem services should be incorporated into the cost-benefit analysis. Again, as briefly explained in the Executive Summary to the 1983 FEIS:

> Population growth due to immigration of railroad and mining personnel would result in sociological impacts. Changes in lifestyle and in the political and social character of communities may occur. The quality of recreational opportunities available to residents will diminish somewhat as competition for available resources increases.

Supp. App., Exhibit H, at ix. The STB must look beyond the rosy picture painted in the Barkey & Polzin report and consider the full suite of economic costs and benefits that might result from the Tongue River Railroad and associated mining activities.

H. Cultural, Historic & Aesthetic Values

The EIS must describe how the proposed rail line will affect *cultural and historic resources*, as well as *aesthetic values* of the impacted area. NOI at 10. This analysis should be undertaken in connection with STB's compliance with the National Historic Preservation Act, 16 U.S.C. § 470 et seq., including requisite consultation with affected Indian tribes. The 1983 FEIS identified a number of prehistoric and historic sites that would be impacted by the railroad and related mines, Supp. App., Exhibit H, at xii; a similar analysis using updated information must be completed. The EIS should include, as requested by the Northern Cheyenne Tribe, a description of how the projects will affect ethnographic and archeological resources. An assessment of the impacts to "pastoral landscapes," wild and scenic vistas, and other visual resources must also be undertaken. See id.

I. Environmental Justice

STB must analyze the *environmental justice* impacts flowing from this project. NOI at 10. Several low-income or minority communities stand to be disproportionately impacted by the Tongue River Railroad and Otter Creek Mine complex, including the Northern Cheyenne Tribe, an Amish community, and low-income residents of Ashland and elsewhere within the project area. The Northern Cheyenne Indian Tribe has expressed concern over the years about the impacts the proposed railroad and related coal-mining activities would have on the health, well-being, culture, and sacred sites of the tribe. See, e.g., Supp. App., Exhibit H, at vii; Jack McNeel, Railroad to Disaster? Inland Tribes Fight to Avert Coal-Train Destruction, IndianCountryToday MediaNetwork.com (Dec. 17, 2012) (noting that "the Northern Cheyenne Tribe … fear[s] that coal mining and the construction of a railroad to transport the coal would devastate their essential Otter Creek and the Powder River Basin" and that members of the Tribe "are fighting against what they say would be the degradation of the area and its ruinous effects on its multitude of wildlife"). Nine members of the Tribe recently traveled 1300-miles round-trip to a public comment session in Spokane, Washington to voice their opposition to the mine, railroad, and port complex. Id. The concerns of these tribal members must be taken into account, and any disproportionate impacts that they or other minority or low-income communities will face as a result of the construction of the Tongue River Railroad must be addressed.

VI. STB MUST CONSIDER A MEANINGFUL NO ACTION ALTERNATIVE

In addition to the need for thorough consideration of the impacts of constructing the Tongue River Railroad, STB must consider the option of not constructing the railroad at all. Among the alternatives that must be considered in an EIS is the "no action" alternative. 40 C.F.R. § 1502.14(d). Indeed, "[i]nformed and meaningful consideration of alternatives—including the no action alternative—is ... an integral part of the statutory scheme." Bob Marshall Alliance v. Hodel, 852 F.2d 1223, 1228 (9th Cir.1988).

STB's evaluation of the no action alternative cannot be a meaningless exercise. To satisfy NEPA, STB must consider this alternative without prejudgment of the outcome of its analysis. "[F]ull and meaningful consideration of the no-action alternative can be achieved only if all alternatives available … are developed and studied on a clean slate." Bob Marshall Alliance v. Lujan, 804 F. Supp. 1292, 1297-98 (D. Mont. 1992). The need to develop project alternatives, including the no action alternative, on a clean slate is especially important given the 30-year history of this project, which has involved significant resource investments by TRRC as well as STB. STB signaled its mindfulness of this requirement when it determined that a new NEPA process was required to evaluate TRRC's most recent proposal to construct the railroad. We encourage STB to continue on this path by giving serious consideration in its NEPA analysis to disallowing construction of the railroad.

VII. STB MUST CONSIDER THE PUBLIC INTEREST IN DETERMINING WHETHER THE TONGUE RIVER RAILROAD IS CONSISTENT WITH "THE PUBLIC CONVENIENCE AND NECESSITY"

Accurate and thorough environmental analysis, as described above, should inform STB's determination of whether the Tongue River Railroad is consistent with "the public convenience and necessity." See 49 U.S.C. § 10901(c). As STB implicitly conceded in its analysis of TRRC III, see N. Plains Res. Council, 668 F.3d at 1094, the "public convenience and necessity" inquiry can properly include the public interest. The magnitude of the environmental harms flowing from construction of the railroad—including the railroad's contribution to the potentially devastating effects of global warming—in conjunction with the socio-economic impacts to rail-line communities from Ashland to the West Coast, should weigh heavily in STB's decision whether to approve TRRC's application.

Most sincerely,

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