No. 14-71180

IN THE UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

MICHELLE BARNES, ET AL.,
Petitioners,

v.

THE FEDERAL AVIATION ADMINISTRATION,
Respondent,

and

THE PORT OF PORTLAND,
Intervenor-Respondent.

ON PETITION FOR REVIEW OF AN ORDER OF THE FEDERAL AVIATION ADMINISTRATION

BRIEF FOR THE FEDERAL RESPONDENTS

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AAIA	Airports and Airways Improvement Act
EDMS	Emissions and Dispersion Modeling System
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
OAR	Oregon Administrative Rule
Oregon DEQ	Oregon Department of Environmental Quality

STATEMENT OF JURISDICTION

The Petitioners, Michelle Barnes, Patrick Conry, Blaine Ackley, David Barnes, James Lubischer, and Oregon Aviation Watch, challenge a final order issued by the Federal Aviation Administration ("FAA") on February 21, 2014. ER1–18.[1] Jurisdiction in this Court is proper under 49 U.S.C. § 46110(a), as the Petitioners timely filed their petition with this Court on April 21, 2014.

STATEMENT OF THE ISSUES

Intervenor-Respondent Port of Portland (the "Port") plans to construct an additional runway at Hillsboro Airport in Hillsboro, Oregon to run parallel to an existing runway. ER5. The Port sought federal funding and required certain approvals from the FAA for this project. ER5. Accordingly, the FAA analyzed the project under the National Environmental Policy Act ("NEPA"), as well as analyzing compliance with the Airports and Airways Improvement Act ("AAIA") environmental requirements, before approving the project. In an earlier petition for review, this Court upheld most of the FAA's decision, but remanded to the agency single issue for further consideration: the potential for induced demand for aviation services generated by construction of the runway.

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[1] "ER" refers to the Petitioners' Excerpts of Record.

Barnes v. U.S. Dep't of Transp., 655 F.3d 1124 (9th Cir. 2011) (hereafter, "*Barnes I*"). FAA has now completed that analysis and issued a new decision. Petitioners challenge FAA's decision on numerous grounds. This case presents the following issues for review:

1. Whether the FAA's forecasting of aviation demand was arbitrary and capricious.
2. Whether the FAA's determination that its forecasts' predictions of demand were "reasonably foreseeable" only through 2021 was arbitrary and capricious.
3. Whether the FAA's assessment of the potential impacts from leaded gasoline used in aviation fuel was arbitrary and capricious.
4. Whether the FAA was required to prepare an Environmental Impact Statement because the project allegedly affects public health and safety, contained unique risks, took place in a unique geographic area, and was highly controversial.
5. Whether the FAA's determination of consistency with local planning under the AAIA was arbitrary and capricious.

PERTINENT STATUTES AND REGULATIONS

Pertinent statutes and regulations are reproduced in the addendum to this brief.

STATEMENT OF THE CASE

A. Statutory Background

1. National Environmental Policy Act

Congress passed NEPA to focus governmental and public attention on the potential environmental effects of any proposed "major federal action." *See* 42 U.S.C. § 4332; *Marsh v. Or. Natural Res. Def. Council*, 490 U.S. 360, 371 (1989). NEPA does not dictate results, but rather is an "essentially procedural" statute. *Vt. Yankee Nuclear Power Corp. v. Natural Res. Def. Council, Inc.*, 435 U.S. 519, 558 (1978). Federal agencies must consider and disclose the potential environmental consequences of their actions before acting. *See Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989). Stated differently, NEPA "simply provides the necessary process to ensure that federal agencies take a hard look at the environmental consequences of their actions." *Neighbors of Cuddy Mountain v. Alexander*, 303 F.3d 1059, 1070 (9th Cir. 2002) (citations omitted).

As part of its procedural mandate, NEPA requires federal agencies to prepare an Environmental Impact Statement ("EIS") for any major federal action "significantly affecting the quality of the human environment." 42 U.S.C. § 4332(C). If an action does not on its face require an EIS, the agency may complete an Environmental Assessment ("EA") to determine whether

an EIS is necessary. 40 C.F.R. §§ 1501.3–1501.4. An EA must "include brief discussions of the need for the proposal," alternatives to the proposal, and "the environmental impacts of the proposed action and alternatives." 40 C.F.R § 1508.9(b).

Through its EA, an agency must examine the proposed action's direct, indirect, and cumulative impacts. *See* 40 C.F.R. §§ 1508.7, 1508.8. If, after a "hard look" at the potential effects, the agency concludes that there will not be any significant environmental impacts, the agency may issue a Finding of No Significant Impact and is not required to issue an EIS. 40 C.F.R. § 1508.9(a)(1).

2. Airport and Airway Improvement Act

Congress passed the AAIA, 49 U.S.C. §§ 47101 et seq., to, among other things, fund projects that improve safety and reduce delays at airports by increasing their capacity. 49 U.S.C. § 47101(a)(1)-(9). In particular, the AAIA aims to expand the nation's network of reliever airports, which accommodate local communities' demand for general aviation and accept overflow from nearby commercial airports. *Id*. at §§ 47101(a)(3), 47102(22). Under the AAIA, before approving a project grant, the FAA must be "satisfied that the project is consistent with plans" for development of the local area. *Id*. § 47106(a)(1).

B. Factual Background

1. The Hillsboro Airport

Much of the relevant background is set forth in *Barnes I*, 655 F.3d at 1124. Hillsboro Airport is located twelve miles from downtown Portland, Oregon. ER5. It is owned and operated by the Port of Portland. ER5. Hillsboro Airport is a general aviation airport, which means that it does not accommodate commercial flights, but instead serves small, general aviation aircraft. SER12.[2] In addition, Hillsboro Airport serves as a general aviation reliever airport to Portland International Airport. SER20. "FAA has encouraged the development of high capacity general aviation airports in major metropolitan areas." *Id*. These reliever airports reduce congestion at hub airports, like Portland International, and increase access to general aviation. *Id*.

In 2005, the Port recognized that its facilities, which included a 6,600 foot primary runway and a 4,049 foot crosswind runway, required additional capacity. SER20. Capacity at airports is measured by calculating the "Annual Service Volume" or "ASV." Annual Service Volume is the annual level of air traffic that corresponds to a particular level of average

[2] "SER" refers to the Respondents' Supplemental Excerpts of Record.

delay for aircraft.[3] ER5. Annual Service Volume can also be expressed as a ratio of demand to capacity. ER575. This number represents the amount of delay that aircraft will encounter in taxiing, takeoff, and landing and is not a *ceiling* on the number of flights that an airport can accommodate. *See Barnes I*, 655 F.3d at 1128. Thus, airports can continue to service all flights, even when demand is in excess of 100 percent of Annual Service Volume.

The 2005 Master Plan revealed that Hillsboro Airport was operating at nearly 100 percent of its Annual Service Volume and estimated that the airport would reach 146 percent of Annual Service Volume by 2025. SER22. The FAA recommends that airports begin planning for increased capacity when they reach 60 to 75 percent of Annual Service Volume. *Id*. Accordingly, the Master Plan recommended development of a new runway that would run parallel to the primary runway. *Id*. This would also improve safety by separating small and large planes from one another. *Id*.

2. The Environmental Assessment

The Port needed FAA's approval of its proposed runway project and also requested federal funding for the project. This FAA involvement triggered federal environmental review under NEPA. Accordingly, the FAA,

[3] Annual Service Volume can be calculated in more than one way and the FAA's Advisory Circular 150/5060-5 (Airport Capacity and Delay) defines those appropriate methodologies. ER575.

and the Port as the project sponsor, analyzed the proposed action in an EA to determine whether preparation of an EIS was warranted. *See* SER20 (hereafter, the "2010 EA").

As relevant to this case, the 2010 EA explained that increased delay resulting from a high Annual Service Volume has impacts on emissions from aviation: "[a]s more aircraft attempt to access an airport at the same time, some aircraft operations must be slowed or held in place to allow sufficient time and distance between other aircraft operating in the vicinity of the airport." SER25. Reducing this delay by building the new runway was estimated to, for example, "reduce carbon monoxide (CO) emissions by 19 tons per year in 2012 compared to the No Action Alternative." *Id*. In making these predictions, the FAA relied on forecasts of future aviation activity that were prepared as part of Hillsboro Airport's 2005 Master Plan. *See Barnes I*, 655 F.3d at 1129. Taking this information into account, the FAA issued a Finding of No Significant Impact and approved the project. *Id*. at 1126.

The 2010 Finding of No Significant Impact was challenged in a petition for review by many of the same petitioners that have brought the present action. *See Barnes I*, 655 F.3d at 1124. In that case, petitioners challenged numerous aspects of the FAA's analysis. *Id*. For the most part

this Court upheld the FAA's decision. *See id*. at 1139–42. The Court rejected claims that the airport planned to build a new control tower and was required to consider a new tower as a cumulative impact, finding the argument both meritless and waived. *Id*. at 1135. It also found that a claim that the EA failed to consider an alternative that would increase public transportation was both meritless and waived. *Id*. at 1136. The Court considered the petitioners' argument that the "context" and "intensity" of the project required an EIS and held that an EIS was not mandated. *Id*. at 1140–41. The Court then turned to the petitioners' claim that the EA's failure to analyze changes to local zoning ordinances as a cumulative impact was arbitrary and capricious. *Id*. at 1141. It held that any error in not considering the zoning rules was harmless. *Id*. Finally, the petitioners argued that the FAA violated the AAIA because it used an open house format to take public comment and provide for a public hearing. *Id*. at 1141. The Court rejected that claim and held that the FAA's public hearing fully complied with the law. *Id*.

The Court, however, also held that the FAA had failed to consider whether construction of a third runway could itself increase demand for aviation at Hillsboro Airport. *Id*. at 1139. First, the Court acknowledged that earlier cases had held that when the FAA increases airport capacity to

ensure the safety and efficiency of existing air traffic, it need not consider whether those improvements might also induce demand for additional flights. *Seattle Community Council Fed'n v. FAA*, 961 F.2d 829 (9th Cir.1992); *Morongo Band of Mission Indians v. FAA*, 161 F.3d 569, 575 (9th Cir.1998). However, the Court stated that this line of cases was inapplicable in this context and that the FAA was required to consider whether the improvements might induce demand. *Barnes I*, 655 F.3d at 1138.

Turning to the record before it, the Court determined that "remand is necessary for the FAA to consider the environmental impact of increased demand resulting from the [Hillsboro Airport] expansion project, *if any*." *Id*. at 1139 (emphasis added). The Court noted that the current record contained no explanation of why the FAA believed that construction of the third runway would not lead to increased demand for aviation. The Court stated: "The agencies are unable to point to anything in the record showing that they in fact considered the possibility that expanding [Hillsboro Airport's] capacity would lead to increased demand and increased aircraft operations, but discounted it in the face of evidence to the contrary." *Id*. at 1134. The Court noted that "while the pilot survey used to support the [Hillsboro Airport] Master Plan inquired whether the pilots would consider

the availability of rental car services and a restaurant in choosing [Hillsboro Airport] over other airports, it did not inquire whether they would consider a new runway when making that decision." *Id*. at 1137. The scope of the remand was limited and only required the FAA to reconsider the issue of induced demand. *Id*. at 1143.

3. The Supplemental Environmental Assessment

On remand, the FAA updated the forecast used in the 2010 EA to reflect current conditions, provided a full explanation of how the forecasts predict demand, and completed new forecasts to ensure compliance with the Court's remand. ER25. First, the socio-economic data underlying the forecasts were updated based on changes in the economy between 2010, when the first EA was prepared, and 2014, when the Supplemental EA was completed. ER31. The new forecasts prepared on remand demonstrated that, due to these economic changes, the 2010 EA overestimated aviation demand and actual demand was lower than predicted. ER34. However, in 2011 actual runway operations at Hillsboro Airport were at 83 percent of Annual Service Volume and still supported development of a new runway. ER38.

a. Unconstrained Forecast

Next, the FAA provided an explanation of its forecasting methodology, which had not been part of the record for the 2010 EA. *See Barnes I*, 655 F.3d at 1134. Master Plan forecasts are "unconstrained," meaning they do not include any constraints due to physical infrastructure, regulations, or other external limits on aviation. ER125. Instead, unconstrained forecasts predict future airport use based on trends in aviation, the characteristics of the local population (*i.e.*, income and employment), and registered aircraft in the area. ER125. The Unconstrained Forecast used by the FAA in this case "predicts growth in aviation activity, without regard to possible limits on growth, such as the capacity of Hillsboro Airport's existing facilities." ER30.

b. Constrained Forecast

Next, to ensure complete compliance with the directive on remand, the FAA and Port used two different forecasting methods to analyze the potential for induced demand. ER29. First, the FAA "replicate[d] the approach used at commercial service airports [by] identifying constrained and unconstrained activity." ER29. To accomplish this, the FAA created a "constrained" forecast by modifying the methodology used for estimating demand at commercial service airports. ER29. This model modified the

updated Unconstrained Forecast by incorporating the Annual Service Volume as the quantification framework of the constraint on growth. ER29 & ER181. The FAA explained that this Constrained Forecast "is the forecast activity that would occur if the No Action alternative remained in the future." ER30.

The Constrained Forecast showed that, before 2021, there will be no difference in demand for aviation when compared to the Unconstrained Forecast. ER181. The models show that capacity constraints do not impact the growth in aircraft operations until Annual Service Volume is close to 100 percent, which will not occur until at least 2024. ER181. The FAA forecast that general aviation users may initially accept higher delay times. As delays increased, they might then modify their behavior by flying at off-peak times. Over many years, they may also move their activity to other airports. ER182. However, the Constrained Forecast does not predict this to occur at Hillsboro Airport before 2021 (the reasonably foreseeable future) because Annual Service Volume will not approach 100 percent during that time period. *Id*.

c. Remand Forecast

Finally, in response to the Court's suggestion that a pilot survey would be appropriate for assessing the potential for induced demand, the

FAA conducted a survey to "ask pilots and aviation-related businesses how their behavior might change with the availability of the new runway." ER29. The FAA and the Port conducted a survey of registered pilots, existing Hillsboro tenants (including the resident flight school), corporate and business users, and aviation-related businesses at other general aviation airports. ER187. The FAA used the survey results to develop a "remand" forecast that added additional demand potentially induced by the runway to the Unconstrained Forecast. ER195.

In developing the Remand Forecast, the FAA explained that, in its judgment, the Remand Forecast overestimated the potential for induced demand. ER187. Because the Unconstrained Forecast did not include any infrastructure limitations, that forecast captured demand without regard to possible limits on growth. ER30 & ER187. The FAA explained that "the Unconstrained Forecast inherently included a portion of the demand that would be attracted to the airport because of the availability of the new runway." ER187. The FAA believes that the Unconstrained Forecast provides the best prediction of future demand for aviation after construction of the runway. ER34. The FAA prepared the Remand Forecast, however, based on "the Court's commentary about pilot survey input" and

"[o]ut of an abundance of caution and to specifically address the court's decision." ER29 & ER187.

Even the Remand Forecast showed that any potential for induced demand was very small. At most, the model that included the survey feedback predicted a total of 254,020 operations in 2021—an increase of 11,350 yearly operations from the predictions in the Constrained Forecast. ER34. This would have a commensurately minimal impact on the predicted environmental impacts of the project. As relevant here, the Remand Forecast showed that, at most, the project would have a small impact on air quality for all criteria pollutants. As relevant to the challenge before the Court, the Remand Forecast predicted that the proposed project would cause a 0.1 tons/year increase in lead emissions compared to the no action alternative in 2016. This is substantially below the 25 tons/year *de minimis* threshold set by the Environmental Protection Agency ("EPA") and would not cause an exceedance of the National Ambient Air Quality Standards ("NAAQS") under the Clean Air Act.[4] ER64–65.

d. Finding of No Significant Impact

In light of the new information, the FAA reconsidered its analysis under NEPA. The Supplemental EA explained that the FAA looked again at

[4] The Portland area is in attainment for the lead NAAQS.

the purpose and need for the project (ER37), the affected environment (ER41), and the environmental consequences (ER50). The FAA updated its analysis in areas that required re-evaluation due to the new forecasts. ER50. The Supplemental EA also explained what environmental considerations would not be affected by the changed forecasts. ER50. The Supplemental EA also incorporated by reference the 2010 EA. ER35.

Taking all of this information into account, the FAA issued a Finding of No Significant Impact/Record of Decision approving the project and determining that an EIS was not required. ER1–20. The FAA explained that, even under the conservative Remand Forecast, all air quality impacts would remain well below the *de minimis* threshold and that no significant adverse air quality impacts were expected. ER10. It also made the required environmental determinations under the AAIA, including a finding that the project was reasonably consistent with plans for the area around the airport. ER13.

4. Injunction proceedings.

The Petitioners requested an administrative stay of FAA's decision. ER703. In their stay request, they listed fifteen separate reasons why they believed the FAA's NEPA analysis was arbitrary and capricious. ER704–712. They also argued that the decision violated the AAIA. ER712. The FAA

carefully considered the claims and denied the request for a stay. ER728. It explained that its decision fully complied with NEPA and the AAIA. ER730–37.

The Petitioners then moved this Court for an injunction pending appeal. In that motion, the Petitioners argued that the FAA violated NEPA because it (1) did not disclose baseline data about lead; (2) failed to account for all aspects of aircraft operation; (3) did not use a long enough time horizon; (4) did not disclose off-airport impacts to children from lead; (5) did not disclose impacts to water quality; (6) failed to prepare an EIS, as required by the project's significance, uniqueness, and controversial nature; and (7) violated the AAIA. Docket No. 16-1. This Court denied the Petitioners' motion. Docket No. 23. The Port was allowed to begin construction of the third runway.

SUMMARY OF ARGUMENT

The FAA fully considered the environmental impacts of its approval of the Port of Portland's proposed runway at Hillsboro Airport. Moreover, the FAA's determination that the environmental impacts of constructing the runway were not significant was not arbitrary and capricious. As a result, the Petitioners' challenge fails and the petition for review should be denied.

First, the FAA determined that the Unconstrained Forecast is the best available method for predicting future aviation demand if the runway is built. The Unconstrained Forecast assumes that infrastructure limitations or delay would not drive down demand for aviation. The FAA's judgment that this Forecast is the most accurate method falls squarely within the technical expertise of the agency and is entitled to the highest level of deference from the Court. When compared to the Constrained Forecast, the Unconstrained Forecast shows that there will be no change in demand for aviation at Hillsboro Airport within the reasonably foreseeable future if the runway is built. As a result, this Court need not consider the Petitioners' arguments concerning the potential for increased lead emissions.

In an abundance of caution, the FAA went beyond its preferred forecasting model and constructed an additional forecast (the Remand Forecast) that added additional induced demand, which was estimated through a survey distributed to airport users, to the Unconstrained Forecast. The FAA is not required to consider the worst-case scenario under NEPA, but even so, it has done so here. As with the Unconstrained Forecast, the Remand Forecast is entitled to the highest level of deference and none of the Petitioners' criticisms of the FAA's methodology show that the Remand Forecast was arbitrary and capricious.

The FAA's determination that the period before 2021 was "reasonably foreseeable" under NEPA is also entitled to deference and should be upheld. This question turns on the FAA's judgment of the reliability of aviation forecasting far into the future—an inherently speculative activity. The FAA's judgment that aviation demand for the period after 2021 is too remote and speculative to offer useful insights into the decisionmaking process is also entitled to the deference that this Court gives to FAA's forecasting models.

The FAA fully considered the potential for increased emissions of lead identified by the Remand Forecast. The record demonstrates that the models used by the FAA to estimate lead emissions contained appropriate parameters. Furthermore, the FAA was not required to conduct soil sampling to establish a baseline for lead when the models showed that the potential impact from lead would not be significant. Finally, the Petitioners' argument that the FAA did not consider the off-airport impacts of lead on children's health and water quality is simply wrong. The record shows that these potential impacts were considered.

The record also fully supports the FAA's determination that construction of the third runway would not have significant environmental impacts. The Petitioners' attempts to show otherwise fail because, as the

FAA found, the project simply will not have the type of impacts that require the completion of an EIS. Nothing in the record demonstrates otherwise.

Finally, the Petitioners' argument that the FAA did not comply with the AAIA is unavailing. The AAIA requires the FAA to determine whether the projects its funds are reasonably consistent with local plans. The Petitioners have never identified any inconsistency between construction of the third runway and local planning ordinances. The FAA evaluated the local plans and its decision that the runway was reasonably consistent with those plans is not arbitrary and capricious.

STANDARD OF REVIEW

Under the APA an agency's decision may be set aside only if it is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." *Or. Natural Res. Council Fund v. Goodman*, 505 F.3d 884, 889 (9th Cir. 2007) (quoting 5 U.S.C. § 706(2)(A)). The court's inquiry is "narrow" and focuses on whether the agency has "entirely failed to consider an important aspect of the problem or offered an explanation that runs counter to the evidence before the agency or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise." *Lands Council v. McNair*, 537 F.3d 981, 987 (9th Cir. 2008) (en banc) (quotation omitted), *overruled on other grounds by Winter v.*

Natural Res. Defense Council, 555 U.S. 7 (2008); *accord Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983).

A court may not substitute its judgment for that of the agency or rule on the basis that it would have decided an issue differently. *Marsh v. Or. Natural Res. Council*, 490 U.S. 360, 377-78 (1989). Judicial review should be "particularly deferential" in "areas that are within the agency's field of discretion and expertise." *Lands Council v. McNair*, 537 F.3d at 993-94.

Under the APA's arbitrary-and-capricious standard of review, "substantial evidence" is the most stringent standard that can apply to questions of evidentiary sufficiency for factual determinations. *See Dickinson v. Zurko*, 527 U.S. 150, 164 (1999); *see also Wileman Bros. & Elliott v. Espy*, 58 F.3d 1367, 1374-75 (9th Cir. 1995) ("When the arbitrary and capricious standard is performing [the] function of assuring factual support, there is no substantive difference between what it requires and what would be required by the substantial evidence test."), *rev'd on other grounds*, 521 U.S. 457; *Utah Shared Access Alliance v. Carpenter*, 463 F.3d 1125, 1134 (10th Cir. 2006); *Ass'n of Data Processing v. Bd. of Governors*, 745 F.2d 677, 683-84 (D.C. Cir. 1984) (Scalia, J., joined by R.B. Ginsburg, J.). That standard is more deferential even than the "clearly erroneous"

standard for appellate review of trial court findings. *Zurko*, 527 U.S. at 162, 164.

ARGUMENT

I. The FAA Complied with NEPA.

The Petitioners present a laundry list of alleged failures of FAA's environmental analyses. Yet, in each instance the Petitioners fail to demonstrate that FAA's analysis was arbitrary and capricious. Instead, the record demonstrates that the FAA fully considered induced demand during the remand and properly concluded that its impacts—if any—would not be significant.

A. The FAA's forecasts are not arbitrary and capricious.

This Court has long afforded particular deference to agency analysis "in areas of agency expertise such as aviation forecasting." *Nat'l Parks & Conservation Ass'n v. U.S. Dep't of Transp.*, 222 F.3d 677, 682 (9th Cir. 2000). Thus, "where an issue requires a high level of technical expertise," this Court "must defer to the informed discretion of the responsible federal agencies." *Morongo Band of Mission Indians v. Federal Aviation Administration*, 161 F.3d 569, 576 (9th Cir. 1998) (citing *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 378 (1989)) (internal quotations omitted). In previous cases challenging airport expansions, this Court has recognized "that predictions about the future are, of necessity, speculative."

Nat'l Parks & Conservation Ass'n, 222 F.3d at 682 n.5 (citing *City of Los Angeles v. FAA*, 138 F.3d 806, 807 n.2 (9th Cir. 1998)); *see also St. John's United Church of Christ v. FAA*, 550 F.3d 1168, 1172 (D.C. Cir. 2008) ("Moreover, when FAA's determination involves, as here, forecasts of capacity and demand at an airport, even more deference is due."). In both *National Parks & Conservation Association* and *City of Los Angeles*, predictions about the future were necessary, and this Court deferred to the FAA's "own determination about the likely reliability of those prognostications." *National Parks & Conservation Ass'n*, 222 F.3d at 683 n.5. Just as in those two cases, the FAA in this case was required to predict the likely number of future operations at Hillsboro Airport. This Court may review that determination only for whether it is supported by substantial evidence.[5]

[5] In *Barnes I*, this Court acknowledged "the significant deference that courts give aviation activity forecasts actually performed by the FAA." 655 F.3d at 1137. The Court concluded, however, that because the record did not discuss the impact of a third runway on aviation demand, such deference did not apply. *Id*. at 1136. This is not the case, here, where the record provides a detailed explanation of the runway's potential impact on demand.

1. The Unconstrained Forecast is the best estimate of demand for aviation after construction of the third runway.

The FAA explained that in its expert judgment, the Remand Forecast overestimated induced demand. ER187. It explained that the Unconstrained Forecast "predict[s] expected growth in aviation activity, without regard to possible limits on growth." ER30. Specifically, "the unconstrained activity levels [are] estimated based on socio-economic characteristics; aviation demand is not generated by virtue of available pavement, but rather based on socio-economic conditions, such as ownership of an aircraft, and available time." ER34–35. The Unconstrained Forecast models a scenario in which there are *no* physical constraints on aviation. ER187. Therefore, it is an extremely conservative forecast that assumes that infrastructure limitations will not drive down demand for aviation. ER187. As a result, the FAA believes that the Unconstrained Forecast "is likely the best estimate of activity with the availability of a new parallel runway." ER35. As this Court has recognized, forecasting aviation demand is inherently speculative and great deference is due to the FAA's judgment in conducting such forecasts. *Nat'l Parks & Conservation Ass'n*, 222 F.3d at 682; *St. John's United Church of Christ*, 550 F.3d at 1172. The FAA judgment that the Unconstrained Forecast is the best prediction of

future demand if the runway is built is due such deference and should be upheld.

The 2010 EA also used an Unconstrained Forecast. However, the record in that case did not contain an explanation of how physical constraints (or lack thereof) factored into that model or provide any explanation of why the FAA believed that the Unconstrained Forecast was the best method to predict demand. *See Barnes I*, 655 F.3d at 1136–37. Accordingly, the Court in *Barnes I* could not review the FAA's rationale for relying on the Unconstrained Forecast and based its decision on the lack of explanation in the record. *Id*. In no way does the decision in *Barnes I* preclude the FAA's reliance on the Unconstrained Forecast as the most accurate available forecast of demand, given the FAA's explanation of its decision in the Supplemental EA.

Furthermore, the 2010 EA did not include the Constrained Forecast, which provides a comparison to the Unconstrained Forecast and allows the FAA to estimate the change in demand attributable to increased physical capacity. The Constrained Forecast incorporated Hillsboro Airport's estimated Annual Service Volume. ER181. Annual Service Volume is "a reasonable estimate of an airport's annual capacity. It accounts for differences in runway use, aircraft mix, weather conditions, etc." ER181. In

other words, it provides an estimate of the physical constraints of an airport. Because there is no established precedent for considering constrained activity at a General Aviation airport, the Constrained Forecast was adapted by FAA from models that it uses to predict demand at commercial airports. ER29. These methodologies are well established for commercial airports, where market forces will drive demand away from airports with length delays. ER29. The FAA adapted these methods for use in predicting the impact of delay on demand for general aviation. ER29. The FAA's methodology was reasonable and should be given the highest level of deference from this Court. *National Parks & Conservation Ass'n*, 222 F.3d at 683 n.5.

Taken together, the Constrained and Unconstrained Forecasts demonstrate that there will be no increase in demand attributable to construction of the third runway in the reasonably foreseeable future. The models showed that the physical infrastructure limitations would not begin to reduce operations until at least 2024, when the airport is predicted to approach 100% of Annual Service Volume in the absence of the third runway. ER33.

Because the best available models show that there will be no increase in emissions attributable to the project, this Court need not consider the

Petitioners' claims that the FAA failed to adequately address the potential for increased lead emissions predicted by the Remand Forecast. The FAA is not required to base its decision upon the prediction that is consistent with the greatest degree of environmental impact (*i.e.*, a worst-case analysis). *Robertson v. Methow Valley Citizens Council*, 490 U.S. 353, 354 (1989). Instead, the FAA's decision can be upheld because the most accurate prediction of future demand—the Unconstrained Forecast—demonstrated that there will be no increase in lead emissions.

2. The FAA's use of a pilot survey to construct the Remand Forecast was not arbitrary and capricious.

In any event, even if the FAA was required to base its decision on the most conservative estimate of future demand, it has fully considered the environmental impacts of such demand. The Petitioners argue that the Remand Forecast is not conservative enough. *See* Opening Br. 24. As with the FAA's Constrained and Unconstrained Forecasts, the Remand Forecast is entitled to the highest level of deference from the Court and must be upheld if it is supported by substantial evidence. *National Parks & Conservation Ass'n*, 222 F.3d at 683 n.5.

The Petitioners' critique of the Remand Forecast is without basis. The Petitioners cite to their own comment for the proposition that the survey

used by the FAA to estimate the potential for induced demand "did not capture the number of operations from . . . Hillsboro Aviation." Br. 24 (quoting ER606). In their brief, the Petitioners argue that "the survey omitted the single largest general aviation operator at [Hillsboro Airport], Hillsboro Aviation.[6] The Petitioners do not explain why they believe the survey omitted Hillsboro Aviation, nor do they support their claim with any citation to or explanation of the survey itself. *See* Opening Br. 24–28.

Petitioners' claim is incorrect. To construct the remand forecast, the FAA and the Port designed a questionnaire designed "to pursue the Court's suggestion about surveying pilot opinion as to whether the availability of a new runway at Hillsboro Airport would influence a pilot's decision to operate at Hillsboro rather than another airport in the region." SER108–09; ER199–244. The survey responses were anonymous, but the respondents to the survey were provided in an appendix. *See* ER201 ("Please see complete list of respondents in Verbatim Appendix."). The

[6] The comments cited by the Petitioners' brief seem to be making a slightly different point—not that the survey did not include responses from Hillsboro Aviation, but that because the survey did not count operations, its design was flawed. *See* ER606–09. This criticism is no more meritorious. As the FAA explained, questioning survey respondents about the number of operations would serve no purpose when the official records of airport operations provide a much more reliable measure of operations and the point of the survey is to gauge whether the runway would change behavior. SER109.

appendix identifies Hillsboro Aviation as a respondent under "HIO, TTD, PDX Contacts." ER244. Accordingly, the FAA included Hillsboro Aviation's predictions about construction of the proposed runway on its future operations. The Petitioners point to no reason why this was arbitrary and capricious, let alone a reason that could overcome the substantial deference owed to the FAA's forecasting of aviation demand.

3. The FAA's determination that 2021 was "reasonably foreseeable" was not arbitrary and capricious.

NEPA regulations require that agencies consider "[i]ndirect effects, which are 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. To meet this requirement, FAA must make a judgment about how far into the future the model's predictions are "reasonably foreseeable."

The Petitioners argue that the FAA was required to use its long-term forecast (which includes a prediction of aviation activity twenty years in the future), as the reasonably foreseeable future for purposes of NEPA. Opening Br. 32. The Petitioners reason that because twenty-year forecasts exist, twenty years in the future must be "reasonably foreseeable." Opening Br. 32–33. This misunderstands the FAA's use of planning forecasts in master plans. The requirement that agencies focus on reasonably

foreseeable effects necessarily means that the consequences of remote and speculative events will not be analyzed under NEPA. Instead, a focus on reasonably foreseeable impacts "generate[s] information and discussion on those consequences of greatest concern to the public and of greatest relevance to the agency's decision, . . . rather than distorting the decisionmaking process by overemphasizing highly speculative harms. *Methow Valley*, 490 U.S. at 356 (citations omitted).

Nowhere does the FAA maintain that the level of aviation demand predicted by long-term forecasts is "reasonably foreseeable." *See* 40 C.F.R. § 1508.8. Instead, the FAA explains that long-term forecasts should be completed for "a concept-oriented statement of needs."[7] This is in contrast to five year forecasts, which "support a capital improvement program." *Id*. In its guidance for master plans, the FAA explains that "the actual demand will often vary from that forecast, particularly as the time frame increases." *Id*. Aviation demand is forecast using "socioeconomic data, demographics, disposable income, geographic attributes, and external factors such as fuel costs and local attitudes towards aviation"—all of which are subject to

[7] FAA Advisory Circular No. 150/5070-6B, Airport Master Plans (July 29, 2005) at 11, *available at* http://www.faa.gov/regulations_policies/advisory_circulars/index.cfm/go/document.information/documentID/22329.

unforeseen change over a long time period. *Id*. at 37. Thus, while master plans typically contain 20-year forecasts, FAA and airports are aware that predictions about aviation demand that far in the future are uncertain and can be used only for "general planning." *Id*.

The FAA determined that analyzing the time period through 2021 complied with NEPA because it was "likely to occur" or "probable," rather than merely "possible." ER32. As the FAA explained, long-term forecasting is inherently uncertain because intervening events can dramatically change demand. For example, "[t]he forecasts done for the 2005 Master Plan have not accurately reflected conditions observed only 7 years later; they did not anticipate the turn in economic conditions in 2008." ER525–26. This type of judgment regarding the model's reliability is at the core of the deference afforded to FAA's aviation demand forecasting. This Court has acknowledged "that predictions about the future are, of necessity, speculative," and has upheld FAA's exercise of judgment in evaluating those speculative predictions. *Nat'l Parks & Conservation Ass'n*, 222 F.3d at 682 n.5. Here, FAA's rationale is not arbitrary and capricious and should be upheld.

B. The FAA reasonably considered any potential impact from increased lead emissions.

The Petitioners raise numerous arguments about the FAA's consideration of the impacts of lead emissions from aviation fuel. At the outset, the Court need not consider these arguments. The forecast deemed most reliable by the FAA—the Unconstrained Forecast—demonstrates that there will be no increase in demand attributable to the project during the reasonably foreseeable future. *See* Supra 28. Thus, under the best predictions, the project will not lead to increased lead emissions. However, the FAA went beyond this requirement and did consider the potential for increased air pollution under the Remand Forecast. The record shows that the FAA fully and completely considered such impacts and the Petitioners' arguments are without basis.

1. The FAA appropriately modeled lead emissions.

Petitioners argue that the lead analysis included in the Supplemental EA (ER273-96) used incorrect taxi times and altitudes for the cruise phase, and did not include time for the run-up phase. Opening Br. 30–32. None of these contentions has any merit and the FAA's judgment involving these technical model inputs should be upheld if supported by substantial evidence. *See Nat'l Parks & Conservation Ass'n*, 222 F.3d at 682.

The FAA explained its methodology for modeling air emissions, including lead in its Air Quality Technical Memorandum (Appendix E). ER257–70. The FAA explained that it used the Emissions and Dispersion Modeling System ("EDMS"), which is approved by EPA and required by the FAA for modeling air pollution. ER262; ER315; SER52 (explaining development of EDMS). It further explained its choice of model inputs. ER262. For lead, the Memorandum explained that EDMS does not directly calculate lead emissions, and the modelers had to provide additional inputs to calculate those emissions based on the lead content of aviation gasoline. ER262; *see also* ER279. The FAA's model showed that there could be a 0.1 ton/year increase of lead emissions per year in the event that the Remand Forecast was correct. ER55.

The FAA also provided a study on lead emissions conducted by the Port of Portland that modeled 2007 lead emissions (Appendix F). ER273–96. This study was completed by the Port in 2010 after the Oregon Department of Environmental Quality ("Oregon DEQ") released an inventory of lead emissions from airports in the state that suggested a high concentration of lead near Hillsboro Airport. ER278. The study commissioned by the Port used the EDMS model and the EPA's preferred AERMOD dispersion model (instead of the simplified CALPUFF model

used by Oregon DEQ). ER278. The study concluded the lead emissions at Hillsboro Airport would not exceed the NAAQS threshold level of 0.15 µg/m3. ER277.

The Petitioners claim that they are challenging the Port's Hillsboro Airport Lead Study. Opening Brief 29–30. They use this as an excuse for their failure to raise these criticisms during the comment period and to argue that the Port's study is not due deference from the Court. *Id*. However, it is unclear how the Petitioners' believe that these supposed defects in *the Port's* study impact *the FAA's* modeling of lead emissions—which was conducted independently. The Petitioners argue that "[t]he FAA failed to adequately or accurately disclose lead pollution from the use of leaded aviation gasoline because the Hillsboro Airport Lead Study failed to account for three important components of general aviation flights" (taxi in and out time, run-ups, and cruise phase). Opening Br. 29. But the Hillsboro Airport Lead Study was never meant to disclose the potential impacts from *the project*. The Petitioners do not explain why these supposed problems in the Hillsboro Airport Lead Study make the FAA's decision arbitrary and capricious and, therefore, their challenge fails. In any event, the Petitioners have not shown that the model inputs were unreasonable.

a. The choice of taxi-time duration was reasonable.

The Petitioners rely on a chart from the 2010 EA for the proposition that the Port's Hillsboro Airport Lead Study used a 10-minute taxi-time and, therefore, the FAA's analysis in the Supplemental EA is arbitrary and capricious. Opening Br. 30 (citing ER765). As a threshold matter the argument fails because it makes no sense. These are different studies and cannot be used interchangeably as the Petitioners have done here.

In any event, the FAA fully explained its choice of taxi time for modeling emissions. The FAA used taxi times between 10 minutes and 11.75 minutes, depending on the year and the forecast (Constrained, Unconstrained, or Remand). ER262. Those figures were estimated based on the FAA's required EDMS using Annual Service Volume as an input. ER262 & n.1; ER64. The Petitioners' complaints are unfounded.

The Petitioners cite to an EPA analysis of piston-engine aircraft inventories for lead, which discusses an EPA model that provides for a "[d]efault" "16 minute taxi-in/taxi-out time" that the person doing the modeling can modify to reflect local conditions. Opening Br. 30; *see also* Pet. Ex. A at A-19. The 16-minute default is not airport specific, and the EPA document itself explains that "the applicability of these times in mode will vary by airport." Pet. Ex. A at A-19. This default time in no way

demonstrates that taxi times used by the FAA, which corresponded to actual information about Hillsboro Airport operations, were incorrect.

b. The FAA properly accounted for "cruise phase."

Petitioners' contention that the Port's study "limited its cruise phase" by arbitrarily setting the "mixing height" at 2,000 feet instead of the default value of 3,000 feet is also wholly without merit. Opening Br. 30–31. Petitioners once again misunderstand the record. The EPA-approved EDMS instructs modelers to model takeoff and approach using "a single horizontal row of area sources halfway between 1,000 ft and the mixing height." SER87. That is precisely what this model did, explaining that "approach and takeoff operations, are shown as a series of elevated area sources that rise from approximately 22 meters to 619 meters [2030 feet], or the maximum height of the flight profile." ER283. Nowhere is there any support for the Petitioners' notion that the 619 meter figure represented the mixing height. Instead, it is the average of 1,000 feet and the 3,000 foot mixing height and was used exactly as instructed by EDMS. SER87 ("[A]ircraft sources between 1,000 feet and the mixing height are collapsed into the plane halfway between 1,000 feet and the mixing height.").

c. The FAA was not required to model run-up.

While the Petitioners are correct that the Port's study does not include a separate category for the time spent in "run-up," which is the series of safety checks performed by pilots before take off. There is currently no accepted methodology for modeling this phase. Contrary to the Petitioners' representation, the EPA-approved and FAA-required EDMS does not contain a mode for run-up. *See* SER68. As the FAA explained in its response to comments, a methodology for modeling run-up emissions is being developed but is not yet in place and there is currently no scientifically accepted way to measure run-up. ER673-74. Nor have the Petitioners identified any accepted methodology. As a result, the FAA was not required to include a separate mode for runoff in its emissions model.

Finally, although petitioners quibble with the modelers' input choices, they point to nothing that could alter the results in a significant way. See ER276 (explaining that, for example, "review of the data indicated that approximately five percent of the airport's emissions are from ground-level sources associated with taxiing and idling at the airport"). As explained above, the model forecasts that the air around the airport will be at less than half of the NAAQS lead standard and far below the levels that EPA considers *de minimis*. Petitioners have failed to identify anything in the

record that suggests that lead emissions from the new runway could create a significant impact on the environment.

2. The FAA was not required to conduct soil sampling in order to establish a baseline for lead.

Petitioners argue that the FAA violated NEPA because the agency "failed to disclose baseline data for lead dispersion and deposition." Opening Br. 22. Petitioners' argument is misleading. They do not identify any baseline data that the FAA has that the agency failed to disclose, but actually fault the FAA for not conducting a study in the first instance to sample lead in soil surrounding Hillsboro Airport. Such a study is not required.

a. NEPA does not require new studies when the potential impact is not significant.

While this Court has occasionally faulted agencies for relying on outdated studies, *see, e.g.*, *League of Wilderness Defenders/Blue Mountains Diversity Project v. Connaughton*, 752 F.3d 755, 763 (9th Cir. 2014), this Court has never held that NEPA requires an agency to start from scratch by sampling pollutant levels around an airport, especially where the actual impact of the project is not significant. This Court has rejected the argument that NEPA requires new studies where the project at issue will have virtually no effect. *Northwest Envtl. Advocates v. Nat'l Marine*

Fisheries Serv., 460 F.3d 1125, 1140 (9th Cir. 2006). None of the cases cited by petitioners require the FAA here to sample for lead around the airport in order to comply with NEPA's procedural requirements. *See N. Plains Res. Council v. Surface Transp. Board*, 668 F.3d 1067, 1083-86 (9th Cir. 2011) (faulting agency for failing to study potential impacts on endangered species and relying on "stale data"); *Friends of Back Bay v. U.S. Army Corps of Eng'rs*, 681 F.3d 581, 588 (4th Cir. 2012) (faulting agency for assuming that protective no-wake zone would protect refuge where there was no enforcement of the zone).

The record here does not establish the need for the study that petitioners are requesting. Detailed modeling of lead emissions reveals that even the increase predicted by the Remand Forecast will still leave the air surrounding the airport well below EPA's NAAQS for lead, which EPA sets to protect both the public health (including children's health) and the environment. ER63-65, 273-96. Studies completed by the Port and the Oregon DEQ demonstrated that baseline emissions at Hillsboro Airport were well below the NAAQS, which is 0.15 μg/m^3. ER64. Specifically, "[t]he analysis conducted for the study produced the highest concentration of lead emissions at 0.06567 μg/m3, which is less than 50% of the lead NAAQS." ER64. Adding 0.1 ton per year to the lead emissions baseline will fall below

the NAAQS lead standard. ER64. In such a situation, ground sampling is not required.

b. The FAA reasonably relied on emissions models to establish current conditions.

Furthermore, the FAA did disclose and consider the "baseline" for air emissions at Hillsboro Airport. The Port's Hillsboro Airport Lead Study provides detailed information about the current level of lead emissions. In addition, the Constrained Forecast predicts air emissions in the absence of the project and provides a baseline with which to compare project impacts. NEPA does not mandate that the agency measure or model pollution in any particular way. As detailed above, the FAA's Supplemental EA thoroughly examined the issue of lead emissions, modeling lead emission inventories expected from the project and confirming that lead levels would fall well short of the NAAQS lead standard. ER63-65, 273-96. Nothing more was required.

3. The FAA considered the impact of emissions on children's health and water quality.

The Petitioners argue that the FAA "refused" to consider the impact of lead emissions on children's health and water quality. Opening Br. 34–44. They base this argument on the FAA's reliance on and incorporation of parts of the 2010 EA in Chapter 5 of the Supplemental EA, titled "Affected

Environment." *Id*. 34. The Petitioners reason that because this chapter was not updated following the remand, the FAA did not consider the impacts of lead emissions on children's health or on water quality. *Id*.

As the Supplemental EA explains, Chapter 5 ("Affected Environment") describes the environmental resources that the proposed action is likely to *affect*. ER9; *see also* SER26 ("[T]his chapter describes only those environmental resources the proposed action and its reasonable alternatives, if any, are likely to affect." (quotation and alteration omitted). In other words, Chapter 5 provides a baseline against which the FAA can evaluate the proposed action. Unsurprisingly, much of the demographics and environmental baseline for the area did not significantly change between the 2010 EA and the 2014 Supplemental EA. ER10. For those areas that did change (*e.g.*, the decrease in emissions caused by the economic slowdown, changes in population growth rates), the FAA provided an update. ER42; ER47. Much of the Petitioners' complaints amount to a simple misreading of the Supplemental EA.

a. The FAA considered the impact of increased lead emissions on children's health.

The Petitioners rely on a statement in the Supplemental EA that "the proposed project is not expected to have off-airport effects," as evidence that the FAA did not believe there would be any lead deposition off airport

property and did not consider the impacts of lead on children. Opening Br. 34. The quoted statement however, is referring to *direct* effects of the project, i.e., potential for relocation of business. ER47.

The FAA fully considered the potential for impacts to children from lead emissions in the "cumulative impacts" section of Chapter 6 of the EA ("Environmental Consequences"). ER63. That section, titled "Children's Health and Safety Risk," explained the danger to children from lead exposure. ER63. It explained that EPA sets the NAAQS to protect sensitive populations, such as children. ER63–64. The FAA also explained why the project would be in compliance with the NAAQS and therefore not endanger children's health. ER 64; *infra* 43. It concluded that "as the proposed project would result in either no increase in lead emissions, or an increase in lead emissions of 0.1 ton . . . no violation of the NAAQS is expected to result from the proposed runway construction." ER64; ER315 (response to comments discussion potential impacts to children's health). Because the project's emissions are well below the threshold for significance established by the NAAQS, "the FAA concluded that there would be no significant risks to children's health and welfare." ER65. The Petitioners ignore this analysis entirely, and their argument that this potential impact was ignored is without basis.

b. The FAA considered the impact of increased lead emissions on water quality.

The Petitioners argue that the FAA impermissibly relied on a Clean Water Act permit (Permit 1200-Z) to meet its obligation to disclose impacts to water from potential lead emissions. Opening Br. 42. This argument was not presented to the FAA and is therefore waived. *See Dep't of Transp. v. Pub. Citizen*, 541 U.S. 752, 764 (2004). The Court need not consider it further. However, on its merits, the argument once again reveals that the Petitioners fail to understand the record.

The Petitioners cannot show where in the record the FAA relied on Permit 1200-Z to meet its obligations to disclose lead impacts. Indeed, the Petitioners' statement that "the FAA proposes to rely on its 2012 1200-Z permit . . . to fulfill its obligations under NEPA" is without citation to the record. Opening Br. 43. The 1200-Z Permit is a stormwater discharge permit. And while the FAA briefly mentioned it with respect to deicing, the Petitioners' Opening Brief does not argue that the FAA's consideration of impacts from deicing was flawed. *See* ER58; ER68. As a result, it is not clear why the Petitioners believe the 1200-Z Permit is relevant at all.

As with the impacts to children's health, the Petitioners complain that impacts to water quality are not addressed in Chapter 5. Opening Br. 42–43. But the Petitioners entirely ignore Chapter 6, where the FAA included a

lengthy discussion of potential impacts to water quality. ER68–69. In addition, in response to comments, the FAA explained that the NAAQS are protective of water quality and that the consideration of the potential impacts of lead dispersion are properly analyzed with reference to the NAAQS standard. ER576. The FAA fully considered this issue and its analysis should be upheld.

C. The FAA's determination that construction of a third runway would not have significant environmental impacts was not arbitrary and capricious.

Finally, the Petitioners attempt to revive their argument that the proposed action would have significant environmental impacts using arguments that were rejected by this Court in *Barnes I*. 655 F.3d at 1139–41. Nothing that came to light during the remand period supports the reconsideration of these arguments. In fact, the FAA's conclusion that construction of the runway *will not* lead to induced demand further supports the Court's earlier holding that the project does not require an EIS. *Id*.

1. The NAAQS demonstrate that the potential emissions of the project are not significant.

The Clean Air Act requires that federal projects "conform" to emissions limits on six criteria pollutants. 42 U.S.C. § 7506(c)(1); *see City of Las Vegas. v. FAA*, 570 F.3d 1109, 1117 (9th Cir. 2009). A federal agency

must conduct a "conformity determination" analysis for each criteria pollutant where the proposed federal action would cause the total of direct and indirect emissions of the pollutant in a nonattainment or maintenance area to equal or exceed certain levels. 40 C.F.R. § 93.153(b). Agencies are exempt from the conformity determinations, however, if the total emissions from a proposed project "would result in no emissions increase or an increase in emissions that is clearly de minimis." 40 C.F.R. § 93.153(c)(2).

As explained above, Hillsboro Airport is located in an area that is designated as in attainment with the lead NAAQS. Therefore, no conformity analysis is required under the Clean Air Act. Supra 14; SER106. However, even if the area were not in compliance, the predicted emissions increase is *de minimis*. The EPA sets a *de minimis* level for lead emissions at 25 tons/year. Even the most pessimistic emissions scenario (which predicts an increase of 0.1 tons/year) comes nowhere close to this threshold. The EPA is the federal agency tasked with protecting air quality and establishing the NAAQS. FAA reasonably determined that the NAAQS—which reflect EPA's expertise—were an appropriate benchmark to evaluate whether the potential impacts from the project were significant. The FAA's determination that this project did not result in significant environmental impacts from lead emissions was not arbitrary and capricious.

Petitioners argue that the FAA has improperly used the NAAQS "to displace its obligation to disclose environmental impacts." Opening Br. 39. This is not the case. The FAA has used the lead NAAQS in a perfectly appropriate way—to assess whether the increase in lead emissions that might result from building the runway is significant. ER63-65; SER27 ("Potentially significant air quality impacts associated with an FAA project or action would be demonstrated by the project or action exceeding one or more of the NAAQS for any of the time periods analyzed."); SER106. It makes sense for the FAA to rely on EPA's expertise on lead emissions, rather than attempt to craft its own standard. *See, e.g., WildEarth Guardians v. Jewell*, 738 F.3d 298, 311 (D.C. Cir. 2013) (holding that agency took "hard look" under NEPA where agency relied on NAAQS to assess emissions); *Hillsdale Envtl. Loss Prevention, Inc. v. U.S. Army Corps of Eng'rs*, 702 F.3d 1156, 1175 (10th Cir. 2012) (holding that there was no significant impact where mitigation measures ensured that pollution would stay below NAAQS levels). For these same reasons, petitioners' reliance on *South Fork Band Council v. U.S. Dept. of Interior*, 588 F.3d 718, 726 (9th Cir. 2009), is misplaced. Opening Br. 41. The FAA's analysis here is included in the NEPA documents and the agency is not

using EPA's NAAQS in order to avoid analyzing lead; it is using the NAAQS to guide the FAA's analysis.

This conclusion is supported by the independent analysis conducted by Oregon DEQ. Oregon DEQ modelers confirmed that lead emissions from the airport are well below the level of significance, finding "a maximum predicted concentration of 0.00331 μg/m^3 at "receptor" level (ground level), well below the NAAQS of 0.15 μg/m^3." ER64; *See Nw. Envtl. Advocates v. NMFS*, 460 F.3d 1125, 1139 (9th Cir. 2006) ("While not dispositive, we have found it 'significant' when other governmental agencies responsible for environmental protection have sanctioned a particular project's environmental analyses.").

The Petitioners now attempt to challenge the FAA's conclusions by arguing that Oregon DEQ uses a different standard from the EPA. Opening Br. 40. As an initial matter, the Petitioners never raised this issue in their comments on the draft EA and it is waived now. *See Pub. Citizen*, 541 U.S. at 764. In any event, the argument is without merit. The provision of Oregon law the Petitioners rely on are not analogous to the NAAQS. Instead, it applies only to sources "referred to in Table 1 of [Oregon Administrative Rule ("OAR")] 340-216-8010 and to "Oregon Title V Operating Permit program sources when an [Air Contaminant Discharge

Permit] is required by 340-218-0020 or 340-224-0010." OAR 340-216-0020. Sources need only obtain such a permit if their lead emissions exceed 10 tons/year. OAR 340-216-8010, Table 1, Part C., 8. The Petitioners have shown no reason why this provision would apply to Hillsboro Airport or would impact FAA's analysis.

Nothing in the record supports the Petitioners' view that the impacts from lead emissions would be significant. Even if the Remand Forecast (a worst case scenario) is relied on, the small increase in possible lead emissions falls *250 times* below the threshold set by the EPA for *de minimis* emissions. Given this overwhelming record evidence, the FAA's determination that lead did not pose a significant environmental impact was not arbitrary and capricious.

2. "Unique effects" of the proposed action do not require an EIS.

The Petitioners next argue that an EIS is required because "the possible effects on the human environment are highly uncertain or involve unique or unknown risks." Opening Br. 47 (40 C.F.R. § 1508.27(b)(5)). The Petitioners also claim that the project implicates "[u]nique characteristics of the geographic area." Opening Br. 47 (40 C.F.R. § 1508.27(b)(3)). As support for these contentions, the Petitioners point to the "unique" risk of lead for children and the urban characteristics of Hillsboro. Opening Br. 47.

None of this is sufficient to require an EIS. As explained above, the FAA fully considered the potential impacts of lead on children and reasonably concluded that any impact from the project would be well below the threshold for significance. Supra 40. Furthermore, the impact of lead in urban areas and on children are far from unknown. Indeed, the record (and the literature cited by the Petitioners) demonstrates that these issues are well understood and have been thoroughly considered by the EPA, whose guidance the FAA has followed here. No EIS is required.

3. The effects of the project are not "highly controversial."

Under NEPA, an agency must evaluate whether "the degree to which the effects on the quality of the human environment are likely to be highly controversial." 40 C.F.R. § 1508.27(b).This Court has long held whether a proposed action is "highly controversial" turns on whether there is "a substantial dispute exists as to the size, nature, or effect of the major Federal action rather than to the existence of opposition to a use." *Sierra Club v. United States Forest Serv.*, 843 F.2d 1190, 1193 (9th Cir. 1988).

To support their argument, the Petitioners use the example of the San Carlos Airport in San Mateo, California, which emits less lead than Hillsboro Airport, but has a higher ambient air lead level than Hillsboro Airport. Opening Br. 49. From this, the Petitioners reason that a

"significant controversy" exists. Opening Br. 50. The Petitioners misunderstand how compliance with the NAAQS is measured. Ambient air quality is measured not for an individual *source* like an airport, but rather is location specific. As a result, the overall pollution levels are a factor of climate, geography, and the type of sources in a particular area. Thus, the Petitioners' attempt to compare San Carlos and Hillsboro Airports based on the ambient lead levels is unavailing because it fails to factor in the other reasons why the area surround the San Carlos Airport might lead to higher ambient levels.

The Petitioners also misrepresent the conclusion of Oregon DEQ. The Petitioners acknowledge that after initially modeling lead levels exceeding the NAAQS, Oregon DEQ reassessed its model inputs and ultimately concluded that lead levels were well below the NAAQS. Opening Br. 50; ER64. It suggests that the initial model results "without the influence of the Port," demonstrate that the impacts of lead emissions are unknown. Opening Br. 50–51. First, there is nothing to suggest that Oregon DEQ's reassessment of its model was due to untoward influence from the Port. The Petitioners suggestion to the contrary is without merit.

To the contrary, the record demonstrates the flaws with Oregon DEQ's initial approach and explains why the results were different after

refining the inputs. ER64. First, the potential NAAQS exceedance was flagged on an initial screening run that looked at air toxics with the Portland-Vancouver air shed. ER64. In that screening run, Oregon DEQ captured all lead emissions as ground-level sources—an assumption that was not realistic. *See* ER 276 (modeling showed only 5% of emissions were at ground level). After Oregon DEQ refined its model from the screening run and adjusted its emission release parameters, the model showed that the NAAQS would not be exceeded. ER64. Contrary to the Petitioners' contention, Oregon DEQ did not "abandon" its CALPUFF model, it merely refined it. ER64. Thus, Oregon DEQ's CALPUFF model and the EDMS model used by the Port and the FAA returned consistent results which bolster the FAA's conclusions. ER64.

Finally, in arguing that the effects of the proposed action (the construction of the third runway) are highly controversial, the Petitioners unreasonably conflate the impact of *the project* with the impact of the operation of Hillsboro Airport as a whole. Opening Br. 49. In determining whether the project triggered the controversy requirement, thereby triggering an EIS, the FAA was only required to evaluate the potential impact of construction of the runway, not operation of the entire airport. The Petitioners' attempts to overstate the impact of the proposed action by

including the impact of the baseline operation of the airport should be rejected.

II. The FAA complied with the AAIA.

The AAIA requires the FAA to determine whether projects it funds are "consistent with plans (existing at the time the project is approved) of public agencies authorized by the State in which the airport has located to plan for the development of the area surrounding the airport." 49 U.S.C. § 47106(a)(1). The Petitioners argue that the FAA did not comply with the AAIA because its analysis included discussion of zoning ordinances that were invalidated in Oregon state court proceedings. Opening Br. 51; *see Barnes v. City of Hillsboro*, 243 P.3d 139 (Or. Ct. App. 2010). This argument was not raised in the Petitioners' comments on the EA and is therefore waived. *See* 49 U.S.C. § 46110(d). In any event, the Petitioners fail to demonstrate that the FAA's determination was arbitrary and capricious.

The FAA evaluated the project's consistency with local planning. ER12. The FAA found no conflict between local ordinances and the proposed action, nor have the Petitioners identified any conflict. ER12. The FAA also considered the extensive coordination between the Port of Portland and the City of Hillsboro, Oregon statutory requirements for

compatibility between airport development and other land uses, and the record evidence of public and agency coordination. ER13.

The Petitioners argue that because the Oregon state court invalidated the specific zoning update discussed in the EA, the entire determination is invalid. Opening Br. 53. But compliance with § 47106(a)(1) does not turn on such hyper-technical distinctions. The FAA need only establish "reasonable" consistency with local land use provisions. *Tinicum Twp. v. U.S. Dep't of Transp.*, 685 F.3d 288, 299 (3d Cir. 2012). The FAA established such consistency here. The FAA explained that Hillsboro Airport has been in its present location since 1928 and that the current zoning (which places the airport in Industrial zones) has been in place since 1963. ER736. Despite the invalidation of the recent zoning updates, the airport's operation is entirely consistent with the current zoning. ER736. Furthermore, the FAA explained that the City is in the process of addressing the deficiencies identified in *Barnes v. City of Hillsboro* through updates to the County code. ER737. Accordingly, the FAA's determination that the project is reasonably consistent with existing plans of public agencies for development of the area surrounding the airport was not arbitrary and capricious.

CONCLUSION

The petition for review should be denied.

Respectfully submitted,

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STATEMENT OF RELATED CASES

Counsel is unaware of any related case within the meaning of Circuit Rule 28-2.6.

s/ Maggie B. Smith
MAGGIE B. SMITH

CERTIFICATE OF COMPLIANCE WITH FEDERAL RULE OF APPELLATE PROCEDURE 32(A)

I hereby certify that this brief complies with the requirements of Fed. R. App. P. 32(a)(5) and (6) because it has been prepared in 14-point Georgia, a proportionally spaced font.

I further certify that this brief complies with the type-volume limitation of Fed. R. App. P. 32(a)(7)(B) because it contains **11,021 words**, excluding the parts of the brief exempted under Rule 32(a)(7)(B)(iii), according to the count of Microsoft Word.

s/ Maggie B. Smith
MAGGIE B. SMITH

CERTIFICATE OF SERVICE

I hereby certify that on November 4, 2014, I electronically filed the foregoing brief with the Clerk of the Court for the United States Court of Appeals for the Ninth Circuit by using the appellate CM/ECF system.

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s/ Maggie B. Smith
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STATUTORY AND REGULATORY ADDENDUM

Addendum Contents

49 U.S.C.A. § 46110, Judicial review

(a) Filing and venue.--Except for an order related to a foreign air carrier subject to disapproval by the President under section 41307 or 41509(f) of this title, a person disclosing a substantial interest in an order issued by the Secretary of Transportation (or the Under Secretary of Transportation for Security with respect to security duties and powers designated to be carried out by the Under Secretary or the Administrator of the Federal Aviation Administration with respect to aviation duties and powers designated to be carried out by the Administrator) in whole or in part under this part, part B, or subsection (l) or (s) of section 114 may apply for review of the order by filing a petition for review in the United States Court of Appeals for the District of Columbia Circuit or in the court of appeals of the United States for the circuit in which the person resides or has its principal place of business. The petition must be filed not later than 60 days after the order is issued. The court may allow the petition to be filed after the 60th day only if there are reasonable grounds for not filing by the 60th day.

(b) Judicial procedures.--When a petition is filed under subsection (a) of this section, the clerk of the court immediately shall send a copy of the petition to the Secretary, Under Secretary, or Administrator, as appropriate. The Secretary, Under Secretary, or Administrator shall file with the court a record of any proceeding in which the order was issued, as provided in section 2112 of title 28.

(c) Authority of court.--When the petition is sent to the Secretary, Under Secretary, or Administrator, the court has exclusive jurisdiction to affirm, amend, modify, or set aside any part of the order and may order the Secretary, Under Secretary, or Administrator to conduct further proceedings. After reasonable notice to the Secretary, Under Secretary, or Administrator, the court may grant interim relief by staying the order or taking other appropriate action when good cause for its action exists. Findings of fact by the Secretary, Under Secretary, or Administrator, if supported by substantial evidence, are conclusive.

(d) Requirement for prior objection.--In reviewing an order under this section, the court may consider an objection to an order of the Secretary, Under Secretary, or Administrator only if the objection was made in the proceeding conducted by the Secretary, Under Secretary, or

Administrator or if there was a reasonable ground for not making the objection in the proceeding.

(e) Supreme Court review.--A decision by a court under this section may be reviewed only by the Supreme Court under section 1254 of title 28.

49 U.S.C.A. § 47106(a), Project grant application approval conditioned on satisfaction of project requirements

(a) Project grant application approval.--The Secretary of Transportation may approve an application under this subchapter for a project grant only if the Secretary is satisfied that--

(1) the project is consistent with plans (existing at the time the project is approved) of public agencies authorized by the State in which the airport is located to plan for the development of the area surrounding the airport;

(2) the project will contribute to carrying out this subchapter;

(3) enough money is available to pay the project costs that will not be paid by the United States Government under this subchapter;

(4) the project will be completed without unreasonable delay;

(5) the sponsor has authority to carry out the project as proposed; and

(6) if the project is for an airport that has an airport master plan, the master plan addresses issues relating to solid waste recycling at the airport, including--

(A) the feasibility of solid waste recycling at the airport;

(B) minimizing the generation of solid waste at the airport;

(C) operation and maintenance requirements;

(D) the review of waste management contracts; and

(E) the potential for cost savings or the generation of revenue.

40 C.F.R. § 1508.7, Cumulative impact.

Cumulative impact is 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 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. § 1508.8, Effects.

Effects include:

(a) Direct effects, which are caused by the action and occur at the same time and place.

(b) Indirect effects, which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.

Effects and impacts as used in these regulations are synonymous. Effects includes ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative. Effects may also include those resulting from actions which may have both beneficial and detrimental effects, even if on balance the agency believes that the effect will be beneficial.

40 C.F.R. § 1508.9, Environmental assessment.

Environmental assessment:

(a) Means a concise public document for which a Federal agency is responsible that serves to:

> (1) Briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact.
>
> (2) Aid an agency's compliance with the Act when no environmental impact statement is necessary.
>
> (3) Facilitate preparation of a statement when one is necessary.

(b) Shall include brief discussions of the need for the proposal, of alternatives as required by section 102(2)(E), of the environmental impacts of the proposed action and alternatives, and a listing of agencies and persons consulted.

40 C.F.R. § 1508.27, Significantly.

Significantly as used in NEPA requires considerations of both context and intensity:

(a) Context. This means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.

(b) Intensity. This refers to the severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action. The following should be considered in evaluating intensity:

> (1) Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.
>
> (2) The degree to which the proposed action affects public health or safety.
>
> (3) Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.
>
> (4) The degree to which the effects on the quality of the human environment are likely to be highly controversial.
>
> (5) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.
>
> (6) The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.

(7) Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.

(8) The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.

(9) The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

(10) Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.