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To: Draft EIS Feedback; Columbia River Crossing;
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Subject: PEAC/NEDC Comments on the CRC DEIS
Date: Tuesday, July 01, 2008 4:52:02 PM
Attachments: PEAC_NEDC Comments on DEIS.pdf

O-035-001 The Pacific Environmental Advocacy Center (PEAC) would like to submit the following comments on the Columbia River Crossing Draft Environmental Impact Statement on behalf of the following organizations:

Northwest Environmental Defense Center (NEDC)
Columbia Riverkeeper (CRK)
Portland Audubon
Coalition for a Livable Future (CLF)
Community Health Partnership
Organizing People, Activating Leaders (OPAL)
Upstream Public Health
The Association of Oregon Rail and Transit Advocates (AORTA)

Additionally, PEAC submitted a hard-copy by postal mail on July 1, 2008. This submission includes the CD-Rom with copies of all cited exhibits.

Thank you for considering our comments.

Sincerely,

Elizabeth Zultoski

--
Elizabeth Zultoski
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www.nedc.org

O-035-001

Thank you for taking the time to submit your comments on the I-5 CRC DEIS.

*** IMPORTANT: Do not open attachments from unrecognized senders ***

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I. INTRODUCTION

O-035-002 The Pacific Environmental Advocacy Center at Lewis & Clark Law School ("PEAC") submits these comments on the Columbia River Crossing Draft Environmental Impact Statement ("DEIS"), through its attorneys and student legal interns, and on behalf of the Northwest Environmental Defense Center ("NEDC"), Coalition for a Livable Future ("CLF"), Columbia Riverkeeper ("CRK"), Audubon Society of Portland, Organizing People-Activating Leaders, Community Health Partnership, Upstream Public Health, and the Association of Oregon Rail and Transit Advocates (AORTA). These joint commentators will subsequently be referred to collectively as NEDC. Many of these joint commentators also will be submitting their own separate comments. In addition these NEDC comments adopt and incorporate as their own the comments and documents submitted by Joseph Cortright.[1]

O-035-003 NEDC requests that Columbia River Crossing ("CRC") withdraw their deeply flawed DEIS, prepare a supplemental DEIS that corrects all of the legal, factual and policy errors set forth below, and resubmit that complete and corrected supplemental DEIS for an appropriate public comment period of not less than 120 days.

O-035-004 Even a cursory review of the DEIS discloses that the CRC Project Team, the entity which prepared this document, has presented the public with a DEIS that offers a false choice between doing nothing and spending $4 billion to replace the existing, serviceable I-5 bridges with wider,

[1] Attached as Exhibit A. Copies of all exhibits are submitted digitally on the attached CD.

O-035-002
Thank you for taking the time to submit your comments on the I-5 CRC DEIS.

O-035-003
See response below to comment 035-057.

O-035-004
The DEIS, and FEIS analysis, demonstrate that the project would not increase greenhouse gas emissions or lead to substantial sprawl.

The project team has worked with the public and stakeholders to rigorously evaluate a broad range of different solutions to the project's purpose and need, including options without additional lanes. During the development and screening of alternatives prior to the DEIS, it became clear that a viable solution to the project's Purpose and Need would need to include at least some add/drop lanes on the bridges to accommodate cars entering and/or exiting I-5 at one of the many interchanges that are closely spaced north and south of the river. The DEIS alternatives include different amounts of add/drop lanes over the river- Alternatives 2 and 3 were evaluated with 3 add/drop lanes in each direction over the river (for 6 total lanes in each direction), while Alternatives 4 and 5 only included one add/drop lane in each direction (for a total of 4 lanes in each direction).

Following the initial adoption of the LPA in July of 2008, the CRC Project Sponsors Council (PSC) was developed to provide recommendations to the project on a variety of issues, including the number of add/drop lanes over the river crossing. Over the course of several months, PSC was provided with operational characteristics and potential environmental impacts of 8-, 10-, and 12-lane options. In addition to the technical information, PSC received input from CRC advisory groups and reviewed public comment submitted to the project and obtained during

O-035-004 new bridges, with significantly increased car and truck capacity, which would likely lead to substantial increases in sprawl, greenhouse gas emissions and numerous other adverse impacts to the human environment. NEPA expressly requires that the public be offered a reasonable *range* of alternatives and not just a choice between two similarly unacceptable extremes.[2]

The DEIS also represents a colossal missed opportunity to offer the public innovative potential solutions to transportation issues. Those alternative solutions should have been based generally on 21st Century transportation and thinking, and specifically on the Portland metropolitan area's legal and philosophical commitment to sustainable growth that gives proper regard to protecting this community's public health and unique environmental and natural resources. Those goals should have been featured much more prominently in the DEIS's Purpose and Need section. The fact that they were not explains in part why the DEIS offers such an inadequate range of alternatives. While including public transportation options and bicycle and pedestrian access in the DEIS's four action alternatives is certainly a step in the right direction, those positive aspects do not excuse the much more negative fact that all of those action alternatives continue to rely on significantly, increased lane capacity for cars and trucks as the primary "solution" to congestion and future projected demand. Thus, the DEIS's approach to sustainability and greenhouse gas emissions is sort of like the dieter who thinks that ordering a diet coke and a salad for dinner also allows him to order a large banana split for dessert.

O-035-005 Tolling is not a panacea that somehow excuses such a narrow range of alternatives. Although vaguely offered by the DEIS as a "silver bullet" for controlling demand, it is also offered as an important source of funding to pay for the construction of any new bridges. The DEIS's analysis of this important part of its strategy to address travel demand is cursory and

[2] 40 CFR § 1502.14.

two public Q&A sessions in January 2009 regarding the number of lanes decision, as well as hearings conducted by Portland City Council and by Metro Council. In August 2010, PSC made a final recommendation of up to 10 lanes with the condition that a bi-state Columbia Crossing Mobility Council be formed to monitor the performance of the river crossings and advise the state DOTs and transit districts on adapting demand management measures to optimize performance. For more information regarding the number of lanes decision making process, see Chapter 2 (Section 2.7) of the FEIS.

You also suggest that the DEIS should have had a "sustainable alternative" and you define what the alternative should include and the goals that it should achieve. The CRC LPA includes nearly all the design features you have listed, and achieves all the performance goals that you have outlined. The main difference in design is that the LPA includes new add/drop lanes and does not include sub-standard design speeds for the Interstate. However, both of these design features, were they included, would contradict the ability of the project to meet two of your stated goals for sustainability - reducing congestion and reducing greenhouse gas emissions.

See responses to comments 035-145 regarding GHG analysis and 035-066 regarding induced growth analysis.

See the response to comment 035-032 regarding purpose and need.

O-035-005

Tolling was included in the DEIS alternatives both as a funding source and as a demand management tool. Travel demand modeling conducted for CRC analyzed the effect of tolls on travel behavior, including travelers choosing alternative modes, taking alternative routes, making fewer trips, or simply paying the toll. The DEIS also disclosed anticipated effects on the environment from tolling, such as how the reduced number of trips

O-035-005 wholly insufficient. Basic economics illustrate that any use of tolls to reduce demand would be greatly restricted by the need to maintain adequate toll revenues for paying off the bondholders who would underwrite the construction of any new bridge(s). The DEIS needs to explain how tolls would effectively achieve both potentially contradictory goals.

O-035-006 Rather than offering a reasonable range of creative and innovative alternatives, the DEIS goes to great lengths to greenwash the action alternatives it does offer by overstating the projected need reflected in the no-action alternative, while understating their environmental impacts of the action alternatives and offering misleading, incorrect, and incomplete information regarding those likely adverse impacts. While the National Environmental Policy Act (NEPA) does not require federal agencies to undertake projects that are environmentally friendly, NEPA does require that those agencies clearly and honestly disclose the environmental impacts of their proposals to the public.[3] The DEIS also must offer this information in a way that allows the public to make reasoned judgments about the alternatives and their various environmental trade-offs.[4] Then the public can comment on those proposals and make informed choices before they are asked to pay for them. This DEIS fails completely in that regard.

O-035-007 Indeed, despite the overall, impressive length of the DEIS and its supporting Appendices and Technical Reports (over 5000 pages) NEDC is struck by how little useful (and scientifically supported) information is actually contained in those documents. NEPA emphasizes that an EIS should focus on quality analysis rather than lengthy verbiage.[5] As the 9th Circuit explained, "Girth is not the measure of the analytical soundness of an environmental assessment."[6] The CRC DEIS and its technical documents are lengthy, but they leave out highly relevant

[3] 40 CFR § 1502.1.
[4] *Id.*
[5] 40 CFR §1502.2.
[6] *Anderson v. Evans* 350 F.3d 815, 836 (9th Cir. 2003).

and reduced congestion could lower emissions of greenhouse gases from vehicles crossing the river. See the revised Tolling section in the FEIS (Chapter 2 Section 2.2 and Chapter 3 Sections 3.1, 3.5, and 3.19).

O-035-006

Thank you for your comment.

O-035-007

See responses to specific comments below regarding mitigation measures 035-011, the Biological Assessment 035-113 and induced growth (035-066, 035-074, 035-145).

O-035-007 information like specific mitigation measures a Biological Assessment of impacts on endangered species, and an analysis of possible induced traffic demand and related development impacts

O-035-008 from adding additional highway capacity. Moreover, the "analysis" presented almost always lacks supporting citations to scientific studies or reports. The DEIS sections simply reference generally a lengthy, supporting technical report. Then if a reader wants to review that report she will find that it often also lacks specific citations to supporting documents.[7] Those documents are simply listed at the end of the report. This clearly violates NEPA.[8] NEDC's counsel has reviewed many DEISs. But this is the first he has seen where entire sections of the DEIS and the "supporting" technical reports specifically cite to no technical information. If a high school student wrote a research a paper without any specific citation to his sources in the text of that report he would likely receive a failing grade. This DEIS should suffer a similar fate.

II. OVERARCHING PROBLEMS WITH THE DEIS AND PUBLIC COMMENT PROCESS

O-035-009

A. Inadequate Comment Period

As CRC knows, NEDC requested in writing, on or about May 22, 2008, that the lead federal agencies (FHWA and FTA) extend the public comment period for an additional 60 days. NEDC's five page request[9], attached as Exhibit B, set out multiple detailed reasons under the

[7] *See,* e.g. Ecosystems Technical Report.
[8] 40 CFR § 1502.21 and 40 CFR § 1502.24.
[9] The following organizations joined onto NEDC's request for an extension to the 60-day comment deadline: the Pacific Environmental Advocacy Center, 1000 Friends of Oregon, Association of Oregon Rail & Transit Advocates (AORTA), Bicycle Transportation Alliance, Cascadia Rising Tide, Coalition for a Livable Future, Community Choices, Community Health

O-035-008

As you note, the DEIS generally cites technical reports that were prepared with more detailed analysis to support the main document. Readers looking for more data or backup to information in the DEIS can then refer to a particular technical report. The technical reports cite relevant third party sources and each includes a "References" section at the end.

O-035-009

FTA and FHWA respectfully declined the request from PEAC to extend the DEIS public comment period by an additional 60 days. As noted in the original response from FTA and FHWA to PEAC's request, the DEIS comment period is an important opportunity for input, but it is only one of many opportunities for the public, agencies and tribes to provide input and influence decisions. There was extensive outreach and opportunity for input prior to the DEIS comment period, during the comment period and since the comment period. Appendix B of the DEIS explains the public involvement program prior to publication of the DEIS. Chapter 6 of the FEIS explains the public involvement during the DEIS comment period. The Public Involvement appendix to the FEIS explains public involvement since the DEIS comment period. Also see response to comment 035-026.

O-035-009 National Environmental Policy Act ("NEPA") and its implementing regulations for extending the comment period and offered examples of recent extensions regarding similar highway or public works projects. On May 28, 2008 FHWA and FTA denied NEDC's request.[10] That denial cited to a section of the Safe Accountable Flexible, Efficient, Transportation Equity Act: A Legacy for Users ("SAFETEA-LU") that supposedly creates a presumed 60 day comment period absent a showing of good cause. Curiously, FHWA's letter failed to provide the correct and proper cite to the codified and accessible version of this law.[11] Indeed, that letter also ignored a separate provision in SAFETEA-LU which clearly provides that nothing in this law supersedes, amends or modifies the legal requirements imposed by NEPA.[12] Thus the FHWA's citation to this statute in no way responds to or explains why the FHWA completely ignored the legal and factual basis for NEDC's requested extension of the comment period. In any case, there is little doubt that NEDC's request more than provided good cause for granting the extension, and NEDC therefore objects to being required to review and comment on more than 5000 pages of "analysis" in the DEIS and its supporting documents in less than 60 days. Now that NEDC has had the chance to at least summarily review the entire DEIS and its supporting documents, we believe even more strongly that 60 days was an insufficient comment period. The CRC project team's practice in both the DEIS and the Technical Reports to almost never specifically cite supporting documents has made it impossible for NEDC and the rest of the public to review and

O-035-010 comment on much of that analysis in a meaningful way. NEDC expressly reserves the right to

Partnership, Oregon League of Conservation Voters, Organizing People, Activating Leaders (OPAL), Portland Transport, and Upstream Public Health.
[10] Attached as Exhibit C.
[11] 23 USC § 139 (g)(2)(A).
[12] 23 USC § 139 (k)(2).

O-035-010

Comment noted. We carefully considered all comments received, but only comments submitted during the 60-day DEIS comment period will receive a written response in the FEIS.

O-035-010 submit additional comments after the close of the inadequate comment period if its continuing review of this DEIS discloses additional errors , mistakes or overlooked information.

O-035-011 **B. The DEIS has delayed or put off much analysis that should be in the DEIS.**

For example, although even the FEIS[13] need not include a "complete mitigation plan," it still must take a "hard look" at mitigation issues and must go beyond perfunctory descriptions.[14]

O-035-012 In this case where the DEIS expressly notes that certain undefined mitigation measures will offset many otherwise adverse impacts[15], such as the increased stormwater discharges to the Columbia Slough[16], the DEIS was required to set out those proposed measures in some detail so the public would have an opportunity to evaluate and comment on such proposed mitigation.[17] Yet, the DEIS merely mentions that the conceptual stormwater management approach would require design exceptions to mitigate adverse effects to the water quality of the Slough.[18] This does not provide any explanation of the overall impact of the mitigation plan or examples of specific water quality parameters that the mitigation will address.[19] Without a tangible understanding of these effects, the public will not gain a sufficient understanding to make informed decisions or comments on the DEIS. Waiting to discuss specific issues in any detail until after the FEIS identifies a Locally Preferred Alternative ("LPA") cuts the public out of the

O-035-013 process, in violation of NEPA. Similarly, the CRC Project Staff has delayed starting a biological

[13] This is equally applicable to the CRC DEIS because the CEQ regulations require a DEIS meet the requirements of the FEIS "to the fullest extent possible…" 40 CFR § 1502.9 (a).
[14] *Robertson v. Methow Valley,* 490 US 332, 333 (1989).
[15] Executive Summary at S-35.
[16] DEIS at 3-393.
[17] See *Cuddy Mountain v. USFS,* 137 F.3d 1372 (9th Cir. 1998).
[18] DEIS at 3-393.
[19] *Id.*

O-035-011

Each element of the environment evaluated in the DEIS includes a section that discusses potential mitigation measures that could avoid, minimize or offset potential adverse impacts in that area. These sections include both general characterization of how to mitigate impacts to that element of the environment and/or specific measures that could be implemented as part of the project. See also response to comment 035-057. Additional information on mitigation can be found in FEIS Chapter 3 in corresponding sections.

O-035-012

Due to design refinements, diversion of stormwater from the Hayden Island area to the Columbia Slough is no longer needed. Mitigation for stormwater is discussed as stormwater treatment, treatment facilities, and "best management practices" in Section 3.14 of the FEIS. More detailed information on how treatment facilities are designed, constructed, and operated is presented in the Water Quality and Hydrology Technical Report.

O-035-013

Through coordination with the InterCEP team, discussions related to design, impact minimization, and effects to threatened and endangered species has occurred on a regular basis. Submittal of a Biological Assessment (BA) occurred in July 2010, with the project receiving a letter of concurrence from USFWS in November 2010 and a Biological Opinion (BO) from NMFS in January 2011. Information from these documents was included in the FEIS to provide the most updated analysis available. Such detailed analysis was not required as part of the DEIS. See the FEIS, Section 3.16.3, for an overview of the BO and related findings.

O-035-013 assessment regarding impacts to endangered species and has not even proposed specific tolling

O-035-014 levels, much less analyzed the impacts of such tolling.

O-035-015 These numerous delayed analyses prevent the DEIS from revealing the full environmental impacts of the project. A brief summary of some analyses and mitigation plans delayed until the FEIS or completely missing include:

- The Ecosystems Technical Report fails to identify or describe specific mitigation measures for habitat impacts and has delayed until later the preparation of a Biological Assessment regarding impacts to endangered species.[20]

O-035-016
- The DEIS fails to analyze the water quality impacts on the Columbia River, Columbia Slough, and Burnt Bridge Creek.[21]

O-035-017
- The CRC project team indicated the number of car lanes under the Build Alternatives is undecided and may be modified at a later date.[22]

O-035-018
- The DEIS states that the modeling for the impacts on sprawl will be put off until the FEIS.[23]

O-035-019
- The location of the stage site is undetermined so the environmental impacts and corresponding mitigation plan is not disclosed in the DEIS.[24]

O-035-020
- The DEIS has put off the harm minimization required under 4 (f) until after the LPA is chosen.[25] The 4(f) section also fails to include the effects on the 218 historic resources

[20] *See*, DEIS at 3-331 and 3-352.
[21] DEIS at 3-388.
[22] Attached as Exhibit D. Dylan Rivera. June 25, 2008, "Task force backs new I-5 bridge, light rail over Columbia" *The Oregonian*. Available at http://blog.oregonlive.com/breakingnews/2008/06/task_force_votes_to_recommend.html.

[23] DEIS at 3-135.
[24] DEIS at 3-97.

O-035-014

Specific tolling levels were included and discussed in the DEIS evaluation, as well as a comprehensive analysis of how tolling could affect the environment. Chapter 2 of the DEIS describes the tolling levels included in the DEIS evaluation, and Chapter 3 includes specific analyses of the effects these tolling levels would incur.

O-035-015

The FEIS and Ecosystems Technical Report discuss proposed mitigation activities. Final plans for site-specific restoration of vegetation cannot be completed until local permitting is conducted, as there are specific requirements related to specific impacts. The site restoration language provides an overview of the requirements the project must fulfill. The biological assessment and the biological opinion were not required to be completed prior to issuance of the draft EIS. Submittal of a biological assessment occurred in July 2010, with the project receiving a letter of concurrence from USFWS in November 2010 and biological opinion from NMFS in January 2011. Information from these documents was included in the FEIS to provide the most updated analysis available. See the updated discussion of potential mitigation in the FEIS, Chapter 3.16, and the response to comment O-035-013.

O-035-016

The DEIS, the associated technical reports, and the conceptual stormwater design technical report analyze stormwater impacts. The documents discuss the existing conditions, state the proposed conditions, and model pollutant loads using accepted protocol.

O-035-017

The DEIS did not commit the project to a certain number of lanes, but disclosed that the alternatives with a replacement bridge were assumed to accommodate up to six lanes on each bridge. For most elements of

O-035-020 the alternatives will impact as relevant state agencies "are in the process of reviewing the preliminary findings of effect, with concurrence expected by late spring of 2008."[26]

O-035-021 • The DEIS fails to disclose the full range of property acquisitions and their corresponding mitigation plans.[27]

O-035-022 • The DEIS fails to clearly disclose the mitigation necessary for the impacts of the demolition and removal of the existing I-5 bridges under the replacement bridge scenario. This demolition will result in an extremely large amount of waste including concrete, metal, and other construction debris that will require a significant mitigation plan.

O-035-023 **C. Public participation**

The public cannot adequately review the DEIS without a clear description of the full scope of the CRC project. CEQ regulations state that "public scrutiny is essential to implementing NEPA"[28] The public cannot engage in informed analysis without a full, honest, and adequate disclosure of information in the DEIS. The DEIS must "stand alone" as the complete, comprehensive source for the analysis of the total, direct, indirect, and cumulative impacts of a project.[29] CEQ regulations clearly require that any material used for analyses or to substantiate conclusions must be attached in an appendix.[30] Yet, the DEIS does not include required information in the text, nor does it include or attach many supporting documents referenced in the DEIS.

[25] DEIS 5-76.
[26] DEIS at 5-4.
[27] DEIS at 3-104.
[28] 40 C.F.R. § 1500.1 (b).
[29] *ACT v. Dole*, 610 F.Supp. 1101 (N.D.Tex. 1985).
[30] 40 C.F.R. § 1502.18.

the environment, this provided a reasonable "worst-case" estimate of impacts.

O-035-018

Page 3-135 states "Prior to completion of the FEIS, the project team will review access and land use controls near intersections to ensure that the transportation investment would be adequately protected from unintended or unplanned development." This statement should not be interpreted to say that modeling for land use impacts will be put off until the FEIS.

This refers to specifics of access and land use at each intersection as appropriate. For example, in the State of Oregon, there is a requirement for the completion of Interchange Area Management Plans which function as described in the quote above. Similar processes exist in Washington. These processes do not constitute modeling sprawl. Each of the affected interchanges is within an urban area, where local plans call for both increased residential and non-residential densities. Infill development and increased, compact development within the urban area is not sprawl.

O-035-019

Chapter 2 of the DEIS (page 2-44) explains that the level of design developed for the bridges in the DEIS was conceptual, and could accommodate a variety of bridge structure types. This uncertainty leaves open a range of choices for potential off-site construction staging and/or casting yards, many more than could be feasibly or reasonably evaluated in any precise way in the EIS. A casting yard, for example, could be located many miles from the bridge location. To address the uncertainty, the DEIS lists site characteristics that would be desirable for such staging or casting areas, and identifies the types of activities that would occur on and around these sites. This information is provided to illustrate the general type and magnitude of impacts from the staging

O-035-024 For instance, the DEIS is missing the document describing the evaluation of the range of considered alternatives—the "heart of the EIS."[31] The DEIS cites this document, Development of the Range of Alternatives, 2007, that supposedly explains how the range of alternatives were developed but does not include it in an appendix or technical document.[32] The citation provided no guidance regarding where this document was available. In fact the document is buried on the CRC library website. More disturbing is the fact that this Development of the Range of Alternatives document does not contain any information on the final filtering process[33] that resulted in the alternatives carried forward into the DEIS. Information on the Step B Screening conclusions is actually buried in the CRC Task Force's 11/19/07 262 page meeting packet in the Criterion Performance Report[34] and River Crossing Recommendations PPT slideshow.[35] With the millions of dollars expended to date in the development of the DEIS and the 30 + staff intimately familiar with these documents it would have been an easy task to list where these are available by in-text citation or at a minimum, in the references listed in Appendix F. Yet the CRC chose to shift the burden to the public and agencies by using cryptic, general citations. The DEIS is far from comprehensive if the document describing the alternatives analysis, "the heart of the Environmental Impact Statement" is missing.[36]

O-035-025 The DEIS does not include documents that substantiate traffic and tolling conclusions and the CRC project staff failed to provide these documents upon request. Economist Joe Cortright submitted a public records request on February 22, 2008 requesting all documents and reports relating to "forecasts of traffic volumes, traffic speeds, and levels of congestion related to

[31] 40 CFR § 1502.14.
[32] DEIS at 2-51. Document attached as Exhibit E.
[33] Step B Screening Results
[34] p. 93-149
[35] p. 213-234
[36] 40 CFR § 1502.14.

requirements of the alternatives. The FEIS identifies specific locations that could be used for staging and casting, as well as more information about the activities and impacts that would be expected due to staging of construction equipment and materials. While it is not yet certain that a bridge construction contractor would use any of these sites for construction staging or casting, it is clear that these or any other sites will be subject to all applicable environmental review, permitting and protection requirements.

O-035-020

The Draft Section 4(f) Evaluation that was included with the Draft EIS disclosed the anticipated impacts to significant historic resources. These were preliminary findings pending the final findings of effect from the Oregon State Historic Preservation Office and the Washington Department of Archaeology and Historic Preservation. That the findings were "preliminary" and not "final" is not unusual at the Draft EIS stage, and does not confound the ability of the public to comment on or have meaningful input on the alternatives and impacts. For the FEIS and the Final Section 4(f) Evaluation, findings have been finalized (see Chapter 5 of the FEIS).

The Draft Section 4(f) Evaluation also provided a discussion and analysis of potential minimization measures for all identified and affected 4(f) properties, to the extent such information was available at that stage of project development. The Draft 4(f) Evaluation also provided a preliminary conclusion regarding the least harm alternative, based on the best information available. Draft findings are typical in a DEIS. See the response below to comment 035-160. The Final 4(f) Evaluation that is in Chapter 5 of the Final EIS has further refined the analysis and provided a final conclusion regarding the least harm alternative.

O-035-021

The DEIS describes the full range of property impacts expected from

O-035-025 the CRC… to tolling and financing of the project."[37] The CRC project team did not comply with this request. The CRC project team's failure to furnish documents that would enable the public to properly analyze the DEIS violates CEQ regulations requirement to "encourage and facilitate public involvement."[38] Based upon this failure to disclose crucial documents and release them upon request, NEDC is reasonably concerned there are other examples of hidden documents of significance.

O-035-026 The DEIS improperly cites facts, conclusions, and analyses by using general citations to each technical report at the beginning of each section. The beginning of Chapter 3, Existing Conditions and Environmental Consequences, states, "These findings are based on detailed technical reports included as electronic appendices to this DEIS and cited throughout the chapter."[39] Each section then includes another general citation such as, "All data in this section comes from the CRC Traffic Technical Report [350 pages] and CRC Transit Technical Report [678 pages], unless otherwise noted."[40] This places an undue burden on the public to navigate these extensive technical documents to precisely locate the data utilized to draw certain conclusions. Without specific citations the public cannot verify the accuracy or source of critical conclusions within the DEIS. For instance, to find an explanation for the conclusion, "By 2030, average weekday traffic across the I-5 bridges is forecast to reach 184,000 vehicles per day, an increase of 37 percent over current conditions," a member of the public would have to navigate over 1,008 pages of the cited technical documents[41]. This is an unacceptable burden for the public each time it wishes to locate the source of a statement or conclusion made within the

[37] See attached Exhibit F. CRC. February 26, 2008. Response to Joe Cortright, Public Records Request.
[38] 40 CFR § 1500.2 (d).
[39] DEIS at 3-2.
[40] DEIS at 3-3.
[41] DEIS at 3-19.

each of the alternatives. Page 3-104 of the DEIS explains that the property impacts associated with the bicycle and pedestrian facilities were included in the river crossing element of the project. While the bicycle and pedestrian facilities had not been fully designed at the time of publishing the DEIS, the DEIS explained that every effort would be made to use existing right-of-way or land otherwise acquired by the project to accommodate the new bicycle and pedestrian pathways. The FEIS identifies impacts from the more detailed designs of the bicycle and pedestrian facilities.

Regarding mitigation, it is typical and acceptable for a DEIS to discuss potential mitigation, rather than provide detailed mitigation plans or commitments. Such detail is more commonly included in the FEIS and the Record of Decision. See the updated discussion of mitigation measures in Chapter 3: Existing Conditions and Environmental Consequences, of the FEIS.

O-035-022

Demolition of the existing bridges is described in the DEIS, including potential environmental effects of this activity and possible methods for mitigating adverse effects. For example, page 3-392 describes potential mitigation for adverse effects to water quality, and mentions that mitigation would include plans to control risks of construction-related impacts such as erosion, sedimentation, or accidental spills, and that construction can not begin until such plans are approved by the relevant regulatory agencies.

O-035-023

The DEIS describes the full range of direct, indirect, and cumulative effects from the alternatives as identified through a comprehensive range of analyses. Additional supplemental information describing these analyses and effects were attached to the DEIS as appendices. These analyses are described in the FEIS as well, with more detail about each

O-035-026 DEIS, especially given the short 60-day comment period. These general citations frustrate meaningful participation rather than facilitating it.

Another example of these incoherent citations is found in section 3.18, Hazardous Materials which states, "The information presented in this section is based on the CRC Hazardous Materials Technical Report [873 pages], which is included as an electronic appendix to this DEIS."[42] This section goes on to describe 15 pages of facts and conclusions without specifically citing where these facts are located within the technical report. In verifying the accuracy of the DEIS, the burden should not be on the public to search out the specific location in the technical report. Rather, the drafters of the DEIS should have simply included the specific citations in the text. Similar general citations are found throughout the remainder of the DEIS and frustrate the ability of the public to provide the public scrutiny under NEPA.[43] In the absence of this requisite public scrutiny, conclusions drawn by the DEIS could hide behind the veil of the "technical report" because their location is unverifiable within the report itself. These hidden documents and general citations fail to satisfy NEPA.

O-035-027 **D. Misuse of DEIS/FEIS Process**

CRC project staff appears to believe that the DEIS is simply a "rough draft" that can present the public with interchangeable "concepts" and fluid alternatives, none of which may resemble the Locally Preferred Alternative ("LPA") that will be featured and evaluated in the FEIS. NEDC has been told by multiple members of the public, and especially by local agencies and governmental bodies who will be voting on the LPA, that representatives of CRC have told them that all they need to do now, during the DEIS public comment period, is express a

[42] DEIS at 3-405.
[43] 40 C.F.R. § 1500.1 (b).

in separate technical reports that are attached to the FEIS as appendices.

O-035-024

This document, and the information about how the range of alternatives were developed, was provided to the public in hard copy by request, and was available on the public web site to be viewed or downloaded. It was made available prior to publication of the DEIS, and has been available since then. The description of how the range of alternatives was developed is explained in Section 2.5 of the DEIS, and Appendix C provides more detail on the early development and screening of potential alternatives.

O-035-025

The level of detail in the DEIS provided the public and other stakeholders with relevant information in order to understand the impacts and trade-offs associated with various alternatives. While some readers felt that the DEIS did not have enough detail, others felt that it was too long and detailed. For those who wanted more detail, the DEIS referred them to the technical reports that informed the analysis presented in the DEIS. These were made available on CD and on the project web site, as well as in hard copy. For those who felt that the DEIS was too detailed, an executive summary was distributed along with the DEIS and made available separately in hard copy and on the project web site. Public open houses and numerous public meetings were also held to provide opportunities for specific questions, dialogue, and other public participation. In addition to information available in the DEIS and technical reports, the CRC project made good faith efforts to provide additional information upon request. This included fully complying with the Freedom of Information Act by providing numerous additional documents to Joe Cortright in response to his formal and informal public records requests.

O-035-027

preference for or against a new, generic bridge (framed as "supplemental bridge" versus "replacement bridge"), express a preference for the transit type – light rail or bus rapid transit and identify the terminus of the transit. All the details regarding that "new bridge", the LPA, will be worked out and evaluated in the FEIS, after the close of the public comment period. The DEIS in fact expressly says that a proposed mitigation plan will not even be developed until the LPA is identified and will only be included in the FEIS.[44] While this approach may be consistent with whatever agreements CRC has with its member agencies and governmental bodies, it is flatly inconsistent with NEPA's legal requirements.

NEPA and its implementing regulations clearly require that a DEIS be a nearly complete EIS that contains almost all of the components that will appear in the FEIS.[45] The purpose of preparing a DEIS and circulating it for public comment is precisely so that the public can review the agency's actual alternative proposals and its actual analysis of the impacts of those specific alternatives.[46] The FEIS then must contain responses to the public comments and it should correct any errors identified by those comments.[47] However, if the FEIS includes alternatives that differ significantly from those in the DEIS or contains significant, new information about the impacts of a proposal, it violates NEPA and the responsible agency must instead prepare and circulate for public comment a Supplemental DEIS.[48] An agency cannot avoid this legal obligation by simply labeling a new alternative as a smaller or less harmful version of an alternative included in the DEIS.[49] That would be especially true regarding this DEIS where the

[44] DEIS at S-35.
[45] 40 CFR § 1502.9(a).
[46] See *Id.*; *California v. Block*, 690 F.2d 753 (9th Cir. 1982).
[47] 40 CFR § 1502.9(b).
[48] See 40 CFR Se. 1502.9(c); *Block, 690 F.2d at 769; Dubois v. U.S. Dept of Agriculture*, 102 F.3d 1273, 1292 (1st Cir. 1996).
[49] See, e.g., *Dubois*, 102 F.3d 1273.

O-035-026

The project prepared three "tiers" of information with different degrees of length, complexity, and technical information. First, the DEIS includes a Summary section that is relatively short (36 pages) and provides readers with the basic information about the problems the CRC project seeks to address, the alternatives under consideration in the DEIS, and the main conclusions about how these alternatives compared in regard to performance and environmental impacts. Second, the DEIS document itself provides more lengthy descriptions of the alternatives, their impacts and potential mitigation. Lastly, for readers interested or concerned about methodological approaches employed to determine alternatives' performance and impacts, the technical reports are provided as appendices to the DEIS.

The information in the DEIS is a summary of the information that is in the technical reports. As such, nearly every sentence in the DEIS could have one or more citations to the location(s) in the technical report from which that information is derived. You state that to find an explanation for the statement in the DEIS (on page 3-19) that "By 2030, average weekday traffic across the I-5 bridges is forecast to reach 184,000 vehicles per day" (DEIS page 3-19) it would require a member of the public to "navigate over 1,008 pages of technical reports" (PEAC comment 035-026). It is not necessary to navigate any other document to find that explanation. This particular statement in the DEIS is explained and expanded on, using additional text, sidebars and graphics, in the section of the DEIS where it appears (Section 3.1.3 beginning on page 3-19). A reader wanting to see additional discussion related to that finding, beyond what is in the DEIS, could look to the corresponding section of the Traffic Technical Report (Section 6.2 No Build I-5 and I-205 Performance). Therefore, it would not be necessary to search all of the pages in the Transit Technical Report and all of the pages in the Traffic Technical Report. The technical reports have tables of contents and organizations similar to the DEIS, to make this kind of background

O-035-027 CRC has essentially claimed that the biggest new bridge would have the lowest impacts on the natural environment.[50]

O-035-028 **E. The LPA was chosen before the public had an opportunity to comment on the DEIS**

Although the CEQ regulations strongly encourage federal agencies to integrate the NEPA process with other planning efforts and proceed with those efforts concurrently, see, e.g., 40 CFR Sec. 1500.2(b), that is no excuse for the considerable confusion that has been caused by the CRC simultaneously issuing the DEIS for public comments and insisting that CRC task force members publicly endorse a Locally Preferred Alternative while public comments on the DEIS have not concluded.[51] The DEIS Summary of the "next steps" in the NEPA process clearly, and incorrectly, asserts that the CRC Task Force will recommend a LPA after the DEIS public comment period ends and such comments will be considered when it makes that decision.[52] What actually has happened, however, is that shortly after the DEIS was released for public comment in May of 2008, the governing bodies of each of the sponsor agencies represented on the CRC Project Staff began holding meetings regarding their endorsement of a LPA. Then the CRC Task Force itself endorsed a LPA on June 24, 2008, a week before the DEIS public comment period was scheduled to end. This practice has caused considerable confusion. It also has called into question whether the public has been given a meaningful opportunity to comment

[50] DEIS at 2-51.
[51] The CRC task force is a 39-member advisory body on the project. It includes representatives from the sponsor agencies, excluding the two DOTs, which staff the task force. It provides advice to the eight sponsor agencies governing bodies, and includes representatives of each sponsor agency. It approved an LPA resolution on June 24, 2008, prior to the July 1, 2008, close of the DEIS comment period. This date represents the only time the sponsor agency governing bodies will be convened TOGETHER to consider and approve an LPA.
[52] S-35.

review relatively straightforward and efficient.

In addition to traditional distribution methods, the DEIS and all technical reports were provided electronically on the project's website so that the public could quickly and easily search for key words related to their area(s) of interest.

O-035-027
See the response to comments 035-028 and 035-057.

O-035-028
The CRC Task Force had public discussions on a preferred alternative during the DEIS comment period. The Task Force is not a decision-making body. With representatives from many agencies, neighborhoods, environmental and other interest groups, the Task Force provides input and recommendations to be considered by project management, project sponsors and decision makers, similar to input and recommendations from the public. You are correct that the DEIS summary noted that the Task Force would make a recommendation on a preferred alternative after the end of the DEIS comment period. That was the assumption when the DEIS was prepared. The Task Force initiated discussions and solicited input on a preferred alternative during the comment period as expected, but then made its recommendation near the end of rather than after the comment period.

The LPA endorsed by the elected bodies of each local sponsoring agency and adopted by Metro Council and RTC is well within the range of alternatives evaluated in the DEIS. It identified the replacement river crossing as the preferred river crossing, light rail transit as the preferred high capacity transit mode, and Clark College as the preferred terminus for the transit line. It is a refined version of Alternative 3 from the DEIS. The agencies chose to defer their decisions regarding preferences for other aspects of the project, such as number of auxiliary highway lanes,

O-035-028 on the alternatives and the environmental impacts from those alternatives before an actual decision regarding how to proceed has been made.

The confusion has been caused by the CRC Project Staff's insistence that the CRC Task Force and its individual members may endorse a generic replacement bridge LPA that bears little resemblance to any of the specific alternatives set forth in the DEIS.[53] Specifically, CRC staff insisted that identifying a LPA only required Task Force members and project sponsors to choose between the generic concepts of building a supplemental or replacement bridge and whether to include high speed bus or light rail as the public transit mode, and where the transit alignment and terminus would be.[54] "Design details" such as the number of traffic lanes that would be included on such a LPA would be addressed, and the impacts analyzed, at a later date, in the FEIS.[55]

O-035-029 There are at least two major, practical problems with such an approach. First, the DEIS action alternatives all include additional traffic lanes in comparison to the existing bridge and the inclusion of such substantial, additional car capacity has been one of the most controversial aspects of the DEIS action alternatives. So what is the public supposed to comment on: the actual specific alternatives in the DEIS with additional car capacity or just the generic concept of a supplemental or replacement bridge? Perhaps more importantly, as the DEIS analysis makes clear, the number of traffic lanes is not some minor design detail. The number of traffic lanes

[53] Attached as Exhibit G. Dylan Rivera. June 24, 2008. "City commissioners sign a letter in advance of the Columbia River Crossing project's vote today." *The Oregonian*. Available at http://www.oregonlive.com/news/oregonian/index.ssf?/base/news/1214277924142 60.xml&coll=7.

[54] Attached as Exhibit D. Dylan Rivera. June 25, 2008. "Task force backs new I-5 bridge, light rail over Columbia." *The Oregonian*. Available at http://blog.oregonlive.com/breakingnews/2008/06/task_force_votes_to_recommend.html.

[55] *Id.*

to a later date. However, this does not leave the public out of those decisions. On the contrary, the public commented on these other preferences during the DEIS comment period and has used opportunities to provide additional input since then. The FEIS clearly describes where new information and refinements made since the DEIS have revised any findings from the DEIS. In general, nearly all of the refinements have resulted in lower impacts, and none has resulted in any new significant impacts that weren't discussed in the DEIS.

O-035-029

The evaluation of the alternatives in the DEIS was preceded by an evaluation and screening of a wide array of possible solutions to the CRC project's Purpose and Need statement. Chapter 2 of the DEIS (Section 2.5) explains how the project's Sponsoring Agencies generated ideas and solicited the public, stakeholders, other agencies, and tribes for ideas on how to meet the Purpose and Need. This effort produced a long list of potential solutions, many of which were non-auto oriented options such as various transit modes and techniques for operating the existing highway system more efficiently without any capital investment. After identifying this wide array of options, the project evaluated whether they met the project's Purpose and Need, and found that in order for an alternative to meet the six "needs" included in the Purpose and Need (described in Chapter 1 of the DEIS), it had to provide at least some measure of capital improvements to I-5 in the project area. Alternatives that did not include such improvements generally did not adequately address the seismic vulnerability of the existing I-5 bridges, traffic congestion on I-5, or the existing safety problems caused by sub-standard design of the highway in this corridor.

The analysis in the DEIS demonstrated that alternatives with substantially more transit service and less improvement to the highway (Alternatives 4 and 5) had significantly worse traffic performance and only moderate increases in transit ridership compared

O-035-029 that are included will cause significant differences in the environmental impacts of any replacement bridge. Thus if the CRC sponsor agencies eventually conclude that an LPA replacement bridge with only 6 traffic lanes (the same number as currently exist) should be approved and analyzed in the FEIS, that FEIS analysis likely will differ significantly from that in the current DEIS. Indeed if the DEIS analysis is to be believed, only a significant increase in the number of traffic lanes will prevent many adverse impacts. Waiting to include such critical analysis only in the FEIS does not satisfy NEPA.

Apparently the CRC Project staff believes that the DEIS need only present and analyze a choice between two extreme alternatives- do nothing or spend $4 billion on a new (supplemental or replacement) bridge with significantly increased car capacity. Then after the public examines and comments on this false choice, the real decision makers, in this case the DOTs and FHWA and FTA, can determine what they actually intend to do, which is likely to be somewhere in between those extremes, and can present that decision, the analysis of its impacts and a proposed mitigation plan to the public in a final EIS. The legal and policy problems with such an approach to transportation and environmental planning are undermine the validity of the DEIS process.

O-035-030 The NEPA DEIS/FEIS process is not meant to be a hollow exercise that allows decision-makers to essentially hide the ball from the public and thereby avoid meaningful public scrutiny of their decisions. To the contrary, NEPA's implementing regulations and binding case law make clear that meaningful public involvement is mandatory and that public officials are required to consider and disclose the environmental impacts of their proposals before they make a decision.[56] To that end, the DEIS must contain a range of reasonable alternatives, those alternatives must include the alternatives the decision maker will consider, the alternatives must

[56] See, e.g. 40 CFR § 1500.1(c), 1502.1, 1502.14.

to alternatives with a more balanced investment in the highway and transit infrastructure (Alternatives 2 and 3).

O-035-030

See responses to comments 035-028 and 035-057.

O-035-030 be sharply defined and provide a clear basis for choice, the environmental impacts of those alternatives must be evaluated and disclosed, and measures to mitigate impacts must be

O-035-031 described and considered.[57] Any replacement bridge option that includes fewer, or even no, new traffic lanes, would involve environmental trade-offs and consequences that clearly are not evaluated in the current DEIS. NEPA requires that such a new alternative and its impacts be disclosed to the public and made available for meaningful public comment before any actual decision has been made. That must occur in a supplemental DEIS.[58]

NEPA regulations do in fact allow for the identification of a preferred alternative in either the DEIS or FEIS.[59] What they do not allow, however, is for the FEIS to include and analyze for the first time a significantly different preferred alterative that has not been subject to public comment and scrutiny. Such an approach would undercut NEPA's basic premise and approach to encourage good, publicly scrutinized, informed environmental decision-making.

O-035-032

III. Chapter 1: A HIDDEN PURPOSE RESULTED IN A FALSE CHOICE BETWEEN TOO FEW OPTIONS.

The DEIS narrowly restricts the purpose and need statement of the CRC project to justify a very specific action—the construction of a new $4 billion I-5 replacement bridge with multiple, additional traffic lanes. NEPA requires that an Environmental Impact Statement include a purpose and need statement to explain and justify why an agency action is necessary.[60] The purpose and need statement is crucial to the DEIS because only a sufficiently broad statement will

[57] 40 CFR § 1500.2(c), 1502.1, 1502.9(a), 1502.14.
[58] See 40 CFR § 1502.9(c).
[59] 40 CFR § 1502.14 (e).
[60] 40 C.F.R. § 1502.13.

O-035-031

Alternatives 4 and 5 included a supplemental crossing, rather than a replacement crossing, and they illustrated scenarios with less investment in highway improvements and greater emphasis on transit and demand management.

The locally preferred alternative evaluated in the FEIS is similar to Alternative 3 in the DEIS.

O-035-032

The Purpose and Need is based on extensive analysis of the existing and projected transportation problems in the I-5 corridor, and reflects extensive feedback from the public and stakeholder groups. The Purpose and Need focuses largely on performance rather than specifying solutions. On-going analysis has demonstrated that the multi-faceted purpose and need is best met by a multi-modal alternative that improves highway, transit, and bicycle and pedestrian facilities, and adds tolling to the highway river crossing.

Regarding the Step A screening process, the phrasing of questions asked of each component was deliberate. Rather than simply require components to increase vehicular capacity in order to advance for further consideration, this early screening process also included provision for components to decrease vehicular demand. However, early evaluation revealed that alternative corridors or increasing transit without making improvements to I-5 would not decrease vehicular demand enough to meet the project's need to address growing travel demand and congestion in the I-5 corridor. Distant crossing locations were ruled out early in the screening process when it became clear that while these other locations might provide some benefits, they would do very little to address the needs identified in the I-5 corridor.

O-035-032

allow full development of an adequate range of project alternatives.[61] The early elimination of viable crossing alternatives geographically removed from the I-5 area occurred when the DEIS narrowly drafted the purpose of the action to be within the Bridge Influence Area (BIA).[62] The DEIS's presentation of alternatives with expanded car and truck capacity suggest that increased car and truck capacity was an *unspoken* project requirement that dictated the development of alternatives.[63] This narrow project focus on a new $4 billion I-5 replacement bridge prevented the use of the purpose and need of the project to identify a range of reasonable alternatives that address the real underlying problem—inadequate transportation *options* between Portland and Vancouver. The narrow statement and interpretation of the project's purpose and need prevent the DEIS from offering a wide-range of reasonable alternatives that reflect the region's visionary leadership away from outdated and out-moded highway projects and towards sustainable transportation solutions.

The underlying but unspoken purpose of the project is evident in the dismissal of project alternatives that do not increase car capacity. Several early crossing components were eliminated because they did not increase car capacity, indicating that this was a hidden need of the project.[64] The initial screening of potential project components included several crossing options evaluated upon their applicability to the project's purpose and need statement.[65] Yet, these findings detailed in Screening Report A, indicate that crossing components that did not increase vehicle capacity were eliminated using the first question: "Does the proposed

[61] See, eg. *Simmons v. U.S. Army Corps*, 120 F.3d 664 (7th Cir. 1997). *Davis v. Mineta*, 302 F.3d 1104, 1118 (10th Cir. 2002).
[62] See DEIS at 1-3 and Attached Exhibit H: CRC document, "Draft Components Step A Screening Report," March 22, 2006. (See, alternatives RC-14, RC-16, RC-18, RC-19, RC-21, and RC-22.)
[63] DEIS at 2-5.
[64] DEIS at 2-47.
[65] *Id.*

O-035-032 component decrease vehicular demand or increase vehicular capacity?"[66] Components that decreased vehicular demand but did not increase vehicular capacity were eliminated from further study.[67] For example, the New Western Highway was not advanced because it did not increase capacity within the Bridge Influence Area. The report then stated that increased travel demands were likely and that, "without added [car] capacity in the BIA increased congestion will result."[68] The CRC project team had predetermined that the project's purpose and central need was to increase vehicular capacity on the I-5 bridge. Yet, this need was not explicitly disclosed to the public in the purpose and need statement.[69] NEPA requires a transparent process yet the public was not informed of this controversial *need*.

O-035-033 The very existence of increased car capacity will inevitably lead to increased demand in car travel. As the courts have noted, "[h]ighways create demand for travel and expansion by their very existence."[70] By increasing demand for car travel, increased car capacity will discourage use of new transit options while ultimately leading to more car trips, more pollution, and an overall increase in vehicle miles traveled (VMT). With the project's sights narrowly

O-035-034 focused upon increased car capacity, other alternatives that could accomplish many or all of the other project needs without expanding car capacity were excluded from consideration. As NEDC's later comments on the Alternatives section demonstrate, sustainable options that expand transit, bicycle, and pedestrian options without increasing car capacity have the potential to meet many or all of the stated needs of the project without many of the Replacement Bridge

[66] Attached as Exhibit H: CRC document, Draft Components Step A Screening Report, March 22, 2006. p. 3-1.
[67] *Id.*
[68] *Id.* at 5-7.
[69] DEIS at 1-4.
[70] *Sierra Club v. US Dept. of Trans*. 962 F. Supp. 1037, 1043 (N.D. Ill, 1997) citing *Swain v. Brinegar* 517 F. 2d 766, 777 (7th Cir. 1975).

O-035-033

Traffic modeling presented in the DEIS revealed that despite reducing congestion and expanding the highway capacity at and around the river crossing, CRC would slightly reduce the number of future vehicles crossing on I-5. This is due primarily to two factors: 1) the toll included with each of the alternatives would encourage travelers to reduce their trips and/or to use alternative modes, and 2) introduction of high capacity transit through Vancouver would shift some trips from cars to transit.

Traffic forecasts reported in the DEIS and used to inform decisions on a locally preferred alternative were derived from state-of-the-art modeling and evaluation conducted by Metro, RTC and the project team, and reviewed by all project sponsor agencies as well as FTA and FHWA. In addition, an independent panel of traffic modeling experts was convened in October 2008 to review the modeling methods and findings. These experts concluded that the project's approach to estimating future travel demand was reasonable and that it relied on accepted practices employed in metropolitan regions throughout the country (see http://www.columbiarivercrossing.org/FileLibrary/TechnicalReports/TravelDemandModelReview_PanelReport.pdf). This independent review confirmed the approach CRC modeling used to address multiple variables that can affect travel demand, including gasoline prices, tolling, travel demand measures and induced development.

O-035-034

See response to O-035-029.

O-035-034 Alternative's adverse impacts. Yet by narrowly focusing the project's purpose and needs on expanded car capacity, the public will never know how sustainable alternatives would compare.

O-035-035 The project's purpose to increase car and truck capacity was also based upon unrealistically high projections of future travel demand. The purpose and need statement projects a "growing travel demand," specifically a 40% increase in car and truck traffic by 2030.[71] This projected increase in traffic is unrealistic and does not take into account present trends in decreased car travel[72] present trends in gasoline prices, or government polices to reduce VMT.[73] By ignoring the decreasing demand for car capacity and overstating future travel needs, the purpose and need statement necessitates project alternatives that did not increase car capacity (and overstated the adverse impacts of the no-action alternative). This inflated travel demand prevented the consideration of alternatives that decreased car capacity and addressed any increased demand in ways other than expanded car lanes. While the DEIS does not explicitly

[71] DEIS at 1-4.

[72] Attached as Exhibit 1. According to records kept by the Oregon and Washington Departments of Transportation, traffic levels on I-5 bridges were down 0.5% in 2006, down 1.2% in 2007, and down 3% over the past twelve calendar months. Sherwood, C. May 7, 2008. "More cross-river commuters leave cars home." *The Columbian*. Vancouver, WA. Available at http://www.columbian.com/news/localNews/2008/05/05072008_More-crossriver-commuters-leave-cars-home.cfm.

[73] The Revised Code of Washington, Chapter 80.80.020, provides:

> "(1) The following greenhouse gases emissions reduction and clean energy economy goals are established for Washington state:
>
> (a) By 2020, reduce overall greenhouse gases emissions in the state to 1990 levels;
>
> (b) By 2035, reduce overall greenhouse gases emissions in the state to twenty-five percent below 1990 levels;
>
> (c) By 2050, the state will do its part to reach global climate stabilization levels by reducing overall emissions to fifty percent below 1990 levels, or seventy percent below the state's expected emissions that year . . ."

O-035-035

Traffic forecasts reported in the DEIS were derived from the region's adopted population projections, state-of-the-art modeling and evaluation conducted by Metro, RTC and the project team, and reviewed by all project sponsor agencies as well as FTA and FHWA. In addition, an independent panel of travel demand modeling experts was convened in October 2008 to review the modeling methods and findings. These experts concluded that the project's approach to estimating future travel demand was reasonable and that it relied on accepted practices employed in metropolitan regions throughout the country. This independent review confirmed the approach CRC used to address multiple variables that can affect travel demand, including gasoline prices, tolling, travel demand measures and induced development. Even if population and travel demand grow more slowly than projected, that does not change the need for these kinds of improvements. The analysis is based on projected growth over the next 20+ years, but the bridge would be built to last at least 100 years. Even if it takes 50% longer to reach those projections (i.e., in 30 rather than 20 years) there would still be substantial need for and benefit from the CRC improvements immediately upon completion and for many years to come.

O-035-035 state increased car capacity as a need of the project, the early elimination of project alternatives indicates that this was the veiled primary purpose of the project.

O-035-036 The DEIS circumvents NEPA requirements by hiding the project's purpose to increase car capacity from the public. Without an upfront presentation of this need, the public is misled by the project's vision of "supporting a healthy community" as well as "recognizing the history of the community surrounding the I-5 bridge influence area, [and] supporting improved community cohesion…"[74] Rather, the real purpose of the project, to increase car capacity, conflicts with the regional community's goals toward sustainable development by preventing sprawl, decreasing vehicle miles traveled, and decreasing greenhouse gas emissions. Revealing the perceived need to increase car capacity was crucial to the public awareness that the project's increased car capacity conflicts with regional planning goals calling for reductions in greenhouse gas emissions. A fair debate regarding alternatives cannot occur unless the real needs underlying this DEIS are fully disclosed.

[74] DEIS at 1-7

O-035-036

See response to 035-032.

O-035-037

A. The DEIS failed to present a broad purpose and need statement that aligns with the region's commitment to sustainable development.

In light of our regional commitment to reduce greenhouse gas emissions[75], the project should have identified a reduction in VMT and greenhouse gases as a crucial need of the project. Oregon Governor Ted Kulongoski's recent climate change integration group called for immediate action toward the most effective way to curb these impacts: reducing vehicle miles traveled which currently accounts for 34 % of Oregon's carbon emissions.[76] Yet, the DEIS fails to include reductions in VMT and greenhouse gas emissions as goals of the project. By excluding these needs, the project alternatives allow for significant increases in car capacity, which will inevitably lead to significant increases in greenhouse gas emissions. The DEIS claims that the project's action alternatives will result in lower green house gas emissions.[77] However, as is explained below, *reductions* only means reduced[78] in comparison to the projected

[75] The Oregon Revised Statute 468A.205(1) sets goals of reducing greenhouse gas emissions by 10 percent from 1990 levels by 2010, and by 75 percent from 1990 levels by 2050.

The Revised Code of Washington, Chapter 80.80.020, provides:

> "(1) The following greenhouse gases emissions reduction and clean energy economy goals are established for Washington state:
>
> (a) By 2020, reduce overall greenhouse gases emissions in the state to 1990 levels;
>
> (b) By 2035, reduce overall greenhouse gases emissions in the state to twenty-five percent below 1990 levels;
>
> (c) By 2050, the state will do its part to reach global climate stabilization levels by reducing overall emissions to fifty percent below 1990 levels, or seventy percent below the state's expected emissions that year . . ."

[76] Attached as Exhibit J. Nigel Jaquiss. May 21, 2008. "Bridge Over The Water, Why?" *Willamette Wee*. Available at http://wweek.com/editorial/3428/11009/.

[77] DEIS at 3-433.

[78] NEDC comments, GHG Section

O-035-037

The CRC project embodies nearly all of the Governor's Climate Change Integration Group's recommendations for planning transportation projects to reduce greenhouse gas emissions. These recommendations include highway tolling, relieving chronic highway bottlenecks, increasing transit, and increasing pedestrian and bicycle facilities. Meeting the legislative goal to reduce future statewide emissions below 1990 levels will require numerous actions in all sectors. There is no requirement or expectation in law or policy, that any single action by itself should or can have the effect of reducing future emissions below existing emissions. Such broad reductions can only result from a wide variety of actions. As stated in the DEIS, the preferred alternative by itself would reduce greenhouse gas emissions compared to No-Build. This helps move greenhouse gas emissions in the right direction, and when combined with other actions, can play an integral role in helping the state meet its overall greenhouse gas reduction goals.

See the response below to comment 035-142 regarding climate change and the project purpose and need.

O-035-037 increases under the no action alternative.[79] In fact all alternatives offered in the DEIS would result in significant *increases* in greenhouse gas emissions. Such increases do not reflect the regional commitment to reductions in greenhouse gases nor fulfill the leadership role that the Portland area takes on sustainability. In fact, they are a flagrant violation of CEQ regulations which require, "the EIS demonstrate consistency with adopted State and local statues and plans..."[80] At a minimum, the DEIS should have offered at least one alternative that truly reduces greenhouse gas emissions. The DEIS should have taken a pro-active stance to shape the transportation habits and demand of the area, not cater to unsustainable growth of single-occupant car trips.

O-035-038

B. The DEIS fails to use the proper broad purpose of the project—a need to address the inadequate transportation problem between Portland and Vancouver.

Here, the purpose and need in the DEIS fails to identify the real underlying problem—the inadequate transportation options between Portland and Vancouver. Without the proper identification of the underlying problem, the range of action alternatives presented is too narrowly focused on building an expanded I-5 bridge. The purpose of the project was stated so narrowly that only the construction of a new I-5 bridge could satisfy the project's purpose. NEDC recognizes the severity of the complex transportation problem in the I-5 corridor and the need for

[79] VMT and congestion analysis should include direct comparisons between build alternatives and current levels, not just inflated projected No Build levels, since adopted policies are based on reductions from current or even past levels.
[80] 40 C.F.R. § 1506.2 (d)

O-035-038

On the contrary, the Project Purpose and Need statement does identify the need for better transportation options. The Purpose and Need is based on extensive analysis of the existing transportation problems in the I-5 corridor, and reflects extensive feedback from the public and stakeholder groups. Planning studies preceding the CRC project identified the need to address specific transportation problems in and around the I-5 Columbia River Crossing. The Purpose and Need focuses largely on performance, rather than specifying solutions. On-going analysis has demonstrated that the Purpose and Need is best met by a multimodal alternative that improves highway, transit, and bicycle and pedestrian facilities, and adds tolling to the highway river crossing.

See also response to 035-032.

O-035-038 a project to address this issue (and other related issues) with an appropriate solution. Yet, the DEIS fails to implement innovative solutions that go beyond the traditional highway project mentality. Focusing only on the I-5 bridge area and alternatives with expanded vehicular lanes to address the bi-state travel problem will not solve the transportation problem between the two cities. Instead, the project threatens to exhaust significant resources to apply a temporary band-aid to the hemorrhaging transportation issue. The public deserves a creative solution to meet diverse future travel needs that does not worsen the problems associated with so many outdated highway projects.

The DEIS states that, "The purpose of the proposed action is to improve Interstate 5 corridor mobility by addressing present and future travel demand and mobility needs *in the Columbia River Crossing Bridge Influence Area (BIA)*."[81] This statement draws the project's purpose too narrowly by limiting the project's focus to the Bridge Influence Area (BIA) surrounding the I-5 corridor. In other words, the focus is put on replacing a bridge that carries car and truck traffic. Yet, I-5 mobility could be addressing travel demand outside the BIA. The travel demand is not limited to the BIA but rather is a result of the inadequate transportation options between Vancouver and Portland. The I-5 corridor is not the only potential suitable location for transportation between the cities. Building outside the BIA and away from the current crossing could solve many of the identified needs of the project—traffic congestion, freight mobility, alternative transportation improvement—while tackling unidentified yet pressing needs. The CRC project could actually reduce the environmental impacts on the already overburdened communities and ecosystems along the I-5 corridor. By immediately

[81] (emphasis added). DEIS at 1-3.

O-035-038 limiting the project's scope to such a small action area, the DEIS failed to explore a true range of project alternatives that provide the least environmental impacts and economic costs.

The DEIS did not provide any documentation or justification for narrowly defining the purpose of the project to the BIA. Courts have found fault with agencies that unnecessarily limit or interpret their purpose and thereby place unnecessary limits on the range of reasonable alternatives.[82] The DEIS should include a broader statement of purposes that identify the underlying problems regarding the I-5 bridge—the lack of adequate transportation options between Portland and Vancouver.

O-035-039 **C. The DEIS states project needs that extend beyond the narrowly defined Bridge Influence area.**

The DEIS had the obligation to explore a broader project purpose because the needs of the project could be satisfied by improving transportation needs outside the BIA. The growing travel demand between Portland and Vancouver and congestion on I-5 could be addressed by opening up an additional artery for transportation outside of the BIA. The DEIS shows that 24-38% of daily traffic enter and exit within the BIA.[83] Re-routing this large amount of local commuter traffic to an alternative crossing location with transit options could open up I-5 for the

[82] *Davis v. Mineta,*, 302 F.3d 633, 638 (10th Cir. 2002); *Simmons v. US Army Corps*, 120 F. 3d 664 (7th Cir. 1997), *Van Abbema v. Fornell,* 807 F.2d 633, 638 (7th Cir. 1986), *see also 'Ilio'ulaokalani Coalition v. Rumsfeld*, 464 F.3d 1083 (9th Cir. 2006).
[83] Traffic Technical Report at 82, exhibit 5-6.

O-035-039

The data you reference from the Traffic technical report indicates the strong demand of vehicles using the I-5 corridor to stay in this corridor. In fact, there are a substantial number of trips that would have a shorter route on I-5 but choose I-205 instead because it has less congestion and is more reliable. The evaluation of potential alternatives during the screening processes that preceded the DEIS confirmed the need for making improvements in the BIA. During screening, options for third corridors crossing the Columbia River in the Portland-Vancouver metropolitan region were evaluated, such as a new arterial crossing in the vicinity of the I-5 crossing or a river crossing west of I-5. None of the alternative corridors alleviated enough demand for the I-5 crossing to substantially improve safety, congestion, and mobility in the BIA. As discussed in the DEIS, traffic volumes are just one factor affecting the number of crashes on I-5. Other factors include short ramps, short sight distances, other sub-standard design features, and the bridge lifts.

O-035-039 requisite local and regional freight transportation.[84] Developing a transit crossing outside the BIA would improve limited public transportation operation, connectivity, and reliability within the key transit areas of "Portland Central City and the City of Vancouver."[85] Limiting transit options to the already cramped BIA is not necessary for travel between the vast key transit markets and may not be the best option for the public. The crashes and unsafe conditions stem from the traffic congestion on the I-5 bridge. So safety and vulnerability to accidents may be reduced by diverting travel trips away from the current I-5 bridge.[86] The DEIS acknowledges that to avoid congestion "many trips take the longer, alternative I-205 route across the river" indicating travelers are willing to redirect their routes to avoid congestion.[87] Yet, the DEIS fails to consider this factor in exploring a broad project purpose. Many local commuters might be willing to redirect their trips off I-5 to avoid the current problems if they were offered viable alternatives.

O-035-040 Furthermore, the DEIS interprets this need too narrowly by asserting that breakdown lanes and shoulders are the only way to address the safety issues on the I-5 bridge. Safety concerns may be addressed through options beyond additional breakdown lanes and shoulders—such as reduced design speeds and reducing car travel through an aggressive push to utilize public transit and reduce driving, especially during congested conditions. Reducing the set design speed of 70 mph to a more appropriate speed for a congested urban bridge could go a long

[84] CRC Project Team, without clear justification, yanked a supplementary local bridge option (Option A+) from further discussion by the special Supplementary Bridge Alternative committee in 2007.

[85] DEIS at 1-4.
[86] DEIS at 1-5.
[87] DEIS at 1-4.

O-035-040

The DEIS does not suggest that breakdown lanes or shoulders are the only way to address safety issues for users in the 5-mile project area. In addition to providing standard width safety shoulders, the project will improve safety by increasing horizontal and vertical stopping sight distances, eliminating bridge lifts, increasing ramp lengths for acceleration and deceleration distances, improving seismic stability of the bridge structures, improving marine navigation and providing new and improved bicycle and pedestrian facilities. Simply reducing the number of car trips through the project area does not address the non-standard geometric features concentrated at the river crossing and approaches.

The design speed used for this project was set with guidance provided by WSDOT and ODOT, and meets AASHTO standards. Since the DEIS was published, the design speed has changed. The design speed is 70 mph starting at the south end of the project and changes to 60 mph at the river crossing bridge. It continues to be 60 mph design speed to the end of the project in Washington. As mentioned in Lynn Rust's email correspondence, design speed is different than posted speed, which is currently 50 mph across the river crossing and is the maximum speed at which motorists are to travel when conditions allow. Future posted speeds for this corridor will be set to ensure the safety and mobility of all users of this stretch of I-5. High speeds are not the current primary safety concern, as most crashes actually occur during the more congested periods when traffic is traveling below not only design speeds but also the posted speed limits.

O-035-040 way towards providing slower, safer conditions for cars.[88] These design speed reductions would also assist in the reduction of greenhouse gas emissions from cars.[89] A more aggressive plan to divert car travelers to new public transit options also would significantly reduce the congestion causing the safety problem. Yet, CRC drafted this need so narrowly that only multiple breakdown lanes and wide shoulders that in fact appear also to serve as hidden, additional lane capacity are the "appropriate solution" to address the safety issues.[90] These narrow interpretations of the project's needs do not allow for a true evaluation of alternatives to address a broad project purpose.

O-035-041 The DEIS also included needs not unique to the I-5 bridge to justify action in the BIA. Substandard bicycle and pedestrian facilities and seismic vulnerability are issues that plague many of the bridges throughout Portland. Such improvements are needed on many bridges and are not novel to this project. Certainly there need to be significant, additional bicycle and pedestrian options between Portland and Vancouver and the current bridge's seismic vulnerabilities need to be corrected.[91] But these very real, unmet needs cannot be used as an excuse to solve the Portland-Vancouver transportation problems only by building 3 more bridges in the I-5 corridor. All these issues deserve to be addressed by considering true alternatives that offer sustainable solutions to all the various aspects of the transportation problem. Putting some

[88] CRC Project Staff Member, Lynn Rust, indicated the design speeds were listed as 70 mph. *See* Attached Exhibit K: Email from Lynn Rust, June 23, 2008.
[89] Driving at speeds greater than 55 mph results in increased carbon emissions. See, attached Exhibit L: Ang-Olson, J. and W. Schroeer. August 13, 2003. "Energy Efficient Strategies for Freight Trucking: Potential Impact on Fuel Use and Greenhouse Gas Emissions." Available at http://www.ccap.org/pdf/2003-Aug-13--CT-CCSD--Transp--EE_for_Freight_Trucking.pdf.
[90] DEIS at 1-5.

O-035-041

Some of the needs in the I-5 BIA are similar to needs in other parts of the I-5 corridor, as well as other corridors. That does not lessen the need for the project action. Certainly, the breadth of needs in the BIA, and the severity of some of those needs, are unique to the CRC project. The Purpose and Need is based on extensive analysis of the existing transportation problems in the I-5 CRC corridor, and reflects extensive feedback from the public and stakeholder groups. The Purpose and Need focuses largely on metrics that do not inherently require substantial, or exclusive, increases in highway capacity. On-going analysis has demonstrated that the Purpose and Need is best met by a multimodal alternative that improves highway, transit, and bicycle and pedestrian facilities, and adds tolling to the highway river crossing. The CRC project is a comprehensive and sustainable solution. For example, the project results in fewer vehicular trips over the I-5 bridges than the No-Build Alternative, extends light rail transit into Vancouver, and improves surface water quality in the project area.

O-035-041 sustainable bicycle makeup on an unsustainable monster-bridge is not the proper way to approach this regions transportation issues.

O-035-042

D. The DEIS utilized the narrow purpose and need statement to justify dismissal of reasonable alternatives.

The narrow definition and interpretation of the Purpose and Need statement resulted in the early dismissal of concrete, reasonable alternatives before a rigorous public evaluation in the DEIS. The narrow purpose and need statement prevented the development of a sustainable alternative that aggressively combats greenhouse gas emissions with no expansion of car lanes or an alternative creating a local commuter crossing outside of the Bride Influence Area. These narrowly construed needs caused the early dismissal of several reasonable components and prevented the DEIS from meeting its legal obligation to explore a wide-range of reasonable alternatives. Rather, The Purpose and Need Statement was manipulated to fit only the predetermined project outcome—a new I-5 bridge with expanded highway lanes. The DEIS thus unlawfully only considered alternatives that offer a false choice between two extreme options—do nothing or build a $4 billion bridge.

O-035-042

Evaluation of the five alternatives in the DEIS was preceded by screening of a wide array of possible solutions to the CRC project's Purpose and Need. Chapter 2 of the DEIS (Section 2.5) explains how the project's Sponsoring Agencies solicited the public, stakeholders, other agencies, tribes and other experts for ideas on how to meet the Purpose and Need. This effort produced a long list of potential solutions, such as new transportation corridors across the Columbia River, various transit modes, tolling, other demand management measures, and techniques for operating the existing highway system more efficiently. After identifying this wide array of options, the project evaluated whether and how they met the project's Purpose and Need, and found that alternatives that do not include improvements to the existing I-5 facility generally do little or nothing to address some of the identified needs, including reducing traffic congestion, improving the safety problems and reducing crashes on I-5. Traffic modeling showed that even significant investment in improving transit options in the I-5 corridor or building a third highway corridor, would not substantially reduce future traffic demand or address identified safety hazards. It is important to note that components were not eliminated simply because they did not expand highway capacity. Components that helped reduce travel demand without increasing capacity were also advanced for further evaluation. For example, bus rapid transit, light rail transit and tolling all help to decrease auto demand without expanding highway capacity. See Appendix C of the DEIS for an explanation and the results from early screening processes.

The DEIS analyzed the full range of reasonable alternatives, which included the four build alternatives, and variations on each based on their individual components and various options. The range varied from No-Build, to alternatives that provided varying levels of highway improvements, different high capacity transit modes, different transit alignments and termini, and different tolling options. Many other

O-035-042

IV. Chapter 2: A FALSE CHOICE BETWEEN EXTREMES INSTEAD OF A BROAD RANGE OF SUSTAINABLE TRANSPORTATION ALTERNATIVES

A. The DEIS did not fulfill CEQ regulations to "rigorously explore and objectively evaluate all reasonable alternatives."[92]

The public was presented with a false choice between doing nothing or building a $ 4 billion bridge because the DEIS did not offer and analyze in detail a wide range of reasonable alternatives in the DEIS . NEPA requires an Environmental Impact Statement to provide the public with a rigorous evaluation of alternative actions to the proposed project.[93] Yet, the DEIS fails to provide evidence of a rigorous evaluation of a reasonable range of alternatives presented in the DEIS or even serious consideration of such alternatives earlier in the NEPA process. The DEIS's presentation of four similar action alternatives does not reflect the wide range of possible reasonable, sustainable alternatives to the bi-state transportation problem. The CEQ regulations state that the "alternatives analysis is the heart of the Environmental Impact Statement" yet the alternatives provided in the DEIS are in dire need of quadruple bypass surgery.[94]

[92] 40 CFR § 1502.14 (a)
[93] 40 CFR § 1502.14 (a).
[94] 40 CFR § 1502.14.

components and combinations were evaluated prior to beginning the DEIS, but were dropped when analyses and input indicated that they would not adequately meet the purpose and need.

The Western arterial bridge was evaluated during the screening process used to develop the range of alternatives but was dropped prior to the DEIS because it was insufficient at meeting the project's need to improve safety and reduce congestion at and around the I-5 crossing. The arterial bridge was evaluated in the final round of screening that preceded the DEIS in which 12 packages of components were developed to test their performance and impacts; the arterial bridge was included in package 3. Similar to other options without capital investments in I-5, the arterial bridge did not reduce travel demand on I-5 enough to relieve congestion or fix the substandard design features that lead to safety problems.

Regarding additional issues in this comment, see responses to comment 035-142 (purpose and need) and 035-143 (greenhouse gas emissions and independent review of the GHG analysis), 035-066 (induced growth), and 035- 085 (reduced air emissions).

B. The DEIS presents four similar alternatives that leave the public with one extreme choice—take no action or spend $4 billion on a replacement or supplemental bridge.

O-035-042

The DEIS misleads the public into believing there are five project alternatives to choose from when there is actually one real choice—do nothing or build a new bridge that significantly increases car and truck capacity. The DEIS presented a single transportation concept, a new I-5 bridge with expanded car capacity and a transit option as four very similar action alternatives. The DEIS distills these four almost indistinguishable action alternatives by slightly rearranging and changing minor components. Offering the public two extremes and nothing in between is not the kind of alternatives analysis required by NEPA.

The incorporation of the current I-5 bridge structure into the supplemental bridge design does not distinguish it enough from the replacement bridge to render it a truly separate alternative or choice. Rather, this option is simply a structural design choice similar to the future choice between a 3-bridge design or a stacked transit/highway bridge. Further packaging these alternatives with the option of bus rapid transit or light rail does not make them any more distinguishable as separate alternatives. The language of the DEIS acknowledges the similarities between the replacement bridge options and the supplemental bridge options because they differ only in the transit mode. "Alternative 3 is similar to Alternative 2 except that light rail would be used instead of bus rapid transit."[95] "Alternative 5 is similar to Alternative 4 except that light rail would be used instead of bus rapid transit."[96] The public should not be expected to accept these as distinguishable alternatives when the DEIS fails to distinguish them as dissimilar alternatives. The DEIS attempts to fool the public into believing a choice in transit mode magically doubles

[95] DEIS at 2-10.
[96] DEIS at 2-14.

O-035-042 the presented alternatives to four. NEDC and the public will not be fooled into believing that the similarities of these action alternatives reflect the plethora of reasonable action alternatives that exist.

In between the two extremes presented in the DEIS, a wide range of reasonable alternatives exist including: sustainable alternatives that do not increase car capacity but instead rely upon other ways to reduce congestion; an alternative crossing location to serve local commuter traffic; and incremental approaches to prevent a nose-dive into a massive public works undertaking. In comparison to these innovative and divergent alternatives, both the replacement and supplemental bridge options are virtually indistinguishable as they represent the same outdated 1950s highway thinking that simply increases car capacity as the only way to "improve" transportation. Indeed that is especially true when the estimated costs are included. Assuming those estimates are accurate (which we doubt), the public has simply been offered the choice of doing nothing or spending $ 4 billion on a new bridge.

Presentation of virtually indistinguishable extreme alternatives in an EIS does not fulfill the NEPA requirement to provide a reasonable *range* of alternatives to a proposed project. Recently, the 9th circuit found that the National Park Service did not provide a reasonable range of action alternatives presented in a supplemental EIS because they were based off the same management framework for a Yosemite visitor management plan.[97] Simply adding a different component to the 2nd and 3rd alternatives made the action alternatives "virtually indistinguishable", and they were therefore not varied enough to allow for a real, informed choice."[98] Similarly, the CRC DEIS presents a single bridge crossing with minor structural and transit options as four virtually indistinguishable alternatives. The 9th circuit also struck down a

[97] *Friends of Yosemite Valley v. Kempthorne* 520 F.3d 1024 at 1038, 1039, (9th Cir. 2008).
[98] *Id.*

O-035-042 similar EIS that had a predetermined outcome and an impermissibly narrow range of alternatives.[99]

The DEIS's presentation of extremes does not reflect the wide range of alternatives dictated by the scope of the project and the underlying problem. The underlying transportation problem between Portland and Vancouver coupled with the controversial nature of the project dictate the need for a wide range of alternatives that are not presented in the DEIS. The 9th circuit has held failure to provide this *range* of alternatives is a violation of NEPA: "[w]hen the proposed action is an integral part of a coordinated plan to deal with a broad problem, the range of alternatives that must be evaluated is broadened."[100] The failure of the CRC DEIS to present a reasonable range of alternatives is also a violation of NEPA.

C. The DEIS does not present a reasonable range of alternatives.

The DEIS presents only the extreme possibilities as project alternatives—the legally-mandated no-action alternative and a massive, $4 billion bridge. In between these two extremes there remain reasonable, concrete alternatives presented by the public that did not obtain the requisite rigorous evaluation under NEPA.[101] The 9th circuit has found that the "existence of a viable but unexamined alternative renders an environmental impact statement inadequate."[102] Here, the DEIS fails to rigorously evaluate several promising alternatives that were summarily

[99] *California v. Block*, 690 F. 2d at 767-768
[100] See *'Ilio'ulaokalani Coalition v. Rumsfeld*, 464 F.3d 1083, 1098 (9th Cir. 2006).citing *City of Alexandria v. Slater*, 198 F.3d 862, 868 (D.C.Cir.1999) (quoting *Natural Res. Defense Council v. Morton*, 458 F.2d 827, 835 (D.C.Cir.1972))
[101] 40 CFR § 1502.14 (a).
[102] *Res. Ltd. V. Robertson*, 35 F. 3d 1300, 1307 (9th Cir. 1994); *Alaska Wilderness Recreation & Tourism v. Morrison*, 67 F.3d 723, 729 (9th Cir. 1995).

O-035-042 dismissed or completely ignored. The DEIS fails to provide alternatives that address one or more of these concepts:

- reduce sprawl and growth
- actively reduce greenhouse gas emissions by targeting reductions in VMT
- reflect the regional vision for sustainable growth
- actively reduce emissions of other air pollutants
- substantially increase transit use by combing light rail AND bus rapid transit
- place alternative transit options on equal footing with vehicle capacity
- utilize incremental project phases such as major transit expansion and tolling to reduce congestion before determining construction of a new highway bridge is necessary
- alternatives that do not increase car capacity
- alternatives that increase car capacity by far less than the current replacement bridge option

Furthermore, there are reasonable alternatives consisting of combinations of components that passed the initial screening processes that were not evaluated in the DEIS. For example, a replacement bridge that puts pedestrian, bike, and transit options on equally footing with cars by limiting any new bridge to the current number of car lanes. Another viable alternative that was not rigorously evaluated was the Western Arterial bridge. There is no documentation that this alternative, supported by much of the public, was given a proper evaluation before exclusion from the DEIS. Most importantly, the DEIS did not examine an alternative that does not increase car capacity. The DEIS has not provided clear information why an alternative that does

O-035-042 not increase highway capacity was not rigorously evaluated. These viable alternatives left unevaluated render the DEIS inadequate.

O-035-043 **D. The DEIS lacks a sustainable alternative that minimizes environmental impacts.**

NEPA requires an EIS "to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment."[103] Yet the DEIS provides no alternative that avoids or minimizes the adverse effects of the preferred alternative—expanded car capacity. The DEIS must consider an alternative beyond the requisite no-build alternative that offers lower environmental impacts. Although the CRC attempted to package it as such, the supplemental bridge is not an *alternative* that minimizes adverse environmental effects but rather would impose significant adverse environmental impacts that could be avoided or mitigated by other reasonable, more sustainable alternatives. The DEIS has failed to meet its obligation under NEPA to identify and present alternatives to the proposed replacement bridge that could minimize or mitigate the environmental impacts of the project.

Ninth Circuit case law makes it clear that it is not NEDC's job to detail a sustainable alternative in the absence of the DEIS's failure to provide an option to the public that responds to a larger vision and agenda for a more environmentally and economically sustainable future.[104]

O-035-044 Nevertheless it is not hard to imagine a reasonable sustainable alternative that would include: a replacement bridge that addresses seismic concerns and has a maximum of 3 vehicle lanes plus one shoulder lane total in either direction; tolling to reduce congestion; a combined transit

[103] 40 CFR §1500.12 (e).
[104] See, e.g., *Davis v. Coleman*, 521 F. 2d 661, 671 (9th Cir. 1975)

O-035-043

Alternatives that included no highway capacity improvements were evaluated in early screening. They could not address some of the fundamental needs of the project. See response to comment 035-042.

O-035-044

See response to comment 035-004.

O-035-044 component that includes light rail and/or bus rapid transit with more frequent service to further address congestion and aggressively lower air emissions; a lower "design speed" for the highway portion to allow for less "overbuilding" ,enhanced safety (with lower speeds) and lower air emissions; a 24 foot wide multiuse bike commuter and regional trail on the west side and an 8 foot wide walking and cycling sidewalk on the east side; and a commitment to sustainability and quality urban design and landscaping for all aspects of the project (such as using designs that minimize the amount of new impermeable surfaces created). This type of sustainable alternative would seek to maximize the utilization of alternative transportation options to meet demand (rather than just offering those options with even more highway capacity) and reflects the regional commitment to sustainability, at a likely far lower cost than the alternatives actually preferred by and presented in the DEIS.

This sort of more sustainable alternative would maintain car lanes at their current capacity while aggressively pushing transit and other non-automobile options for commuters. This could reduce congestion, reduce regional sprawl, decrease commuter trip length and VMT, and might actually decrease greenhouse gas emissions and emissions of other air and water pollutants. Certainly it would offer significant environmental and health benefits that are not

O-035-045 offered by the alternatives actually evaluated in the DEIS. The replacement bridge options in the DEIS clearly would increase car capacity thereby encouraging commuters to rely on their cars rather that utilizing the new limited transit options. This would likely encourage dispersed land use development, encourage longer distance commuting, increased greenhouse gas emissions, higher VMT, and increase auto dependency.

The DEIS thus would have us believe that the only reasonable way to address current and future transit demand is by building more highway lanes for cars. That is not the approach to

O-035-045

See response to comment 035-029.

O-035-045 future transit needs that the public deserves and that NEPA requires. The CRC authors of the DEIS may in fact believe that a new bridge with lots of new car lanes is in fact the best option. That however is no excuse for denying the public a detailed comparison of the environmental and transit benefits and impacts of a wide range of reasonable alternatives, including reasonable alternatives that focus on reducing car commuting and greenhouse gases. Instead the only comparison offered is between a no action alternative whose future adverse impacts are exaggerated and action alternatives whose adverse impacts are grossly understated by refusing to model for induced growth. The public deserves a supplemental DEIS documenting a rigorous evaluation of a sustainable alternative and comparison to the big-highway alternatives already set forth in the DEIS.

In the face of objections to limited action alternatives that all add car travel lanes, CRC Project Staff have suggested that the number of lanes is somehow a minor "design" issue that can be addressed (and analyzed) at some later point. The number of vehicle lanes however is a crucial issue in any new highway proposal, and DEISs for such projects often provide and analyze alternatives with different numbers and configurations of vehicle lanes. The public deserved to see a detailed analysis in the DEIS that analyzed how alternatives with fewer lanes performed at meeting project needs and with regard to environmental impacts in comparison to the $4 billion super-bridge that is offered as the only viable option.

O-035-046

E. The DEIS failed to provide an alternative that did not increase highway capacity.

The DEIS provides that the replacement or supplemental bridge options would substantially increase highway capacity to at least 12 and at least 8 lanes respectively.[105] The public has noted that this is a major step backwards for our region known for progressive thinking and leadership in sustainable growth because expanding car capacity will induce travel demand and increase greenhouse gas emissions. These results conflict with our regional commitment to reduce automobile travel in light of the climate change crisis. Both the states of Oregon and Washington have adopted legislation that calls for a reduction in greenhouse gas emissions while the region is a leader in advocating for reducing our reliance on automobile travel.[106] The controversial claims in the DEIS that the alternatives will *reduce* greenhouse gas emissions are misleading and incorrect.[107] Any *reduction* is only in comparison to projected increases under the no action alternative. All five alternatives in the DEIS in fact would lead to significant increases in green house gas emissions.[108] The action alternatives all will induce highway demand and increase greenhouse gas emissions over the years and continue our reliance on automobile travel. The proposed alternatives in the DEIS do not take the leadership role characteristic of the region and necessary at this crucial time. We are at the point in the global

[105] DEIS at 2-8, 2-4. The inclusion of multiple, very-wide "breakdown lanes' in all the action alternatives strongly suggests that the actual car capacity is in fact much greater than is admitted in the DEIS.

[106] The state of Oregon adopted Oregon House Bill 3543 in 2007 targeting a reduction in greenhouse gas emissions to at least 75 percent below 1990 levels. The State of Washington adopted Washington Senate Bill 600 in 2007 targeting a reduction by 2050 of overall emissions to fifty percent below 1990 levels, or seventy percent below the state's expected emissions that year.

[107] DEIS at 3-433.

[108] See NEDC Comments on Cumulative Effects, Greenhouse Gas Section

O-035-046

See the response to comment 035-042.

O-035-046 climate change crisis where our elected officials and agencies must help shape travel demand rather than fostering the continuation of outdated 20th century highway models. As Metro Council Representative said, "Oregon can decide to begin addressing that goal now or can postpone action."[109] By providing additional highway capacity, the CRC project will not support the region's commitment toward alternative transportation and smart growth as articulated in the recently updated Regional Transportation Plan but rather frustrates those options by continuing down the familiar road of simply building more lanes for cars.

In light of these regional goals, the DEIS should have provided an alternative that rigorously explored alternative transportation options without additional highway capacity. As a leader in sustainability, transportation planners in the Pacific Northwest should at least take a hard-look at putting the brakes on highway expansion. The public deserves to know how an action alternative with no new highway capacity but significant non-automobile transit options,

O-035-047 would fare in comparison to a monstrous 12-lane bridge. A supplemental DEIS must evaluate at least one action alternative that does not increase car capacity and includes a crossing with improved bicycle, pedestrian, and transit options in conjunction with the requisite safety improvements to the current I-5 bridge.[110] This is a reasonable, concrete alternative that requires a proper evaluation and presentation to the public under NEPA requirements. The only alternatives that agencies are not required to evaluate are those which are unreasonable or

[109] Attached as Exhibit M: Jeffery Mize. (May 28, 2008). "Bridge Plans Face Threat" *The Columbian*. http://www.columbian.com/news/localNews/2008/05/05282008_Bridge-plans-face-threat.cfm.

[110] Only I-5 freeway capacity was considered – other parallel capacity, such as for local traffic, passenger rail and freight rail within the I-5 corridor, was dismissed as irrelevant. Careful reading of the DEIS show that some of the auxiliary lanes that are proposed for adding capacity are clearly for providing local connections between adjacent interchanges and provide no through trip function.

O-035-047

See response to comment O-035-029.

O-035-047 speculative.[111] Yet the DEIS provides no evidence that an alternative without expanded highway capacity is unreasonable or speculative. All the DEIS provides is proof that this alternative was not properly evaluated, in violation of NEPA's requirements.

O-035-048 **F. The DEIS has failed to consider an alternative that includes phased project solutions.**

The DEIS calls for a single nose dive into a massive public works project without considering an alternative that provides for smaller, incremental steps. Before embarking upon an environmentally and economically taxing bridge, a combination of tolling, high occupancy vehicle lanes, transportation demand management, improved transit and other preliminary actions could be applied. This smart, conservative approach could go a long way toward meeting the goals of the project such as reducing congestion, improving safety, and facilitating freight movement without spending billions of dollars and investing in irreversible infrastructure. Variable priced tolling combined with changes in driving behavior caused by currently escalating gasoline prices, peak oil concerns, climate change awareness, and regional greenhouse gas emissions goals will likely reduce the vehicle miles traveled across the bridge. After an initial phase such as this, the travel demand could be re-assessed to determine if an entirely new bridge with expanded highway capacity is actually needed. Members of the Metro Council advocated for an alternative like this that provided incremental steps that begin with tolling the I-5 bridge to

[111] *Utahns For Better Transportation v. U.S. DOT*, 305 F. 3d 1152, 1171 (10th Cir. 2002).

O-035-048

See response to comment O-035-029. It should be noted that a minority, not the majority, of the Metro Councilors advocated for an alternative with no highway improvements.

O-035-048 generate revenue for seismic upgrades while reducing congestion.[112] The Councilors further suggested that light rail or further road improvements could then be made with the tolling revenue to fund these improvements.[113] Thus the public deserves to see how an alternative that includes phased solutions compares to the alternatives provided in the DEIS in terms of economic costs, community impacts, and environmental impacts, not simply congestion reduction. Yet, the DEIS fails to include a phased alternative that could avoid the construction of an unneeded bridge with crippling environmental, community, and economic costs.

O-035-049 **G. The public deserves a more thorough consideration and presentation of viable alternatives because of the controversial and vital nature of this project.**

The Columbia River Crossing is the largest public highway project in the history of the region with estimated costs of over $4 billion. The dozens of involved agencies and millions of affected citizens deserve more options than the action alternatives proposed. The controversy surrounding this project is evident in the public outcry and media attention involved thus far. Yet, the DEIS does not present a range of alternatives wide enough to represent the nature and scope of the project sufficient to meet NEPA requirements. The 9th circuit has reiterated that, "The agency must look at *every* reasonable alternative within the range dictated by the nature and scope of the proposal."[114] Three of the seven Metro Councilors, Liberty, Collette and Hosticka, expressed dissatisfaction with the narrow range of alternatives available for debate by

[112] Attached as Exhibit M. Jeffery Mize. May 28, 2008. "Bridge Plans Face Threat" *The Columbian*. http://www.columbian.com/news/localNews/2008/05/05282008_Bridge-plans-face-threat.cfm.
[113] *Id.*
[114] *'Ilio'ulaokalani Coalition v. Rumsfeld*, 464 F.3d 1083, 1095 (9th Cir. 2006). [emphasis added].

O-035-049

Public interest and concern about the CRC project helped inform a robust scoping effort, during which many different options for addressing the Purpose and Need were identified and evaluated in a year-long screening process prior to the narrowing and development of the alternatives in the DEIS. The project staff received input from the public and stakeholder groups, and developed and evaluated designs based on that input. Options eliminated through the screening process included a new corridor crossing over the Columbia River (outside the existing I-5 and I-205 corridors), an arterial crossing between Hayden Island and downtown Vancouver, a tunnel under the Columbia River, and various modes of transit other than light rail and bus rapid transit. Section 2.5 of the DEIS explains why a third corridor, arterial crossing, and several transit modes evaluated in screening were dropped from further consideration because they did not meet the Purpose and Need. The project team has also considered options proposed since the DEIS, including suggestions from the Metro Councilors and others. See updated discussion in Chapter 2 of the FEIS.

See also the response to comment O-035-029.

O-035-049 proposing a solution with phases and lower costs.[115] Over twenty community organizations and businesses have proposed a "climate smart" Columbia River Crossing. This concept aims to reduce the growth of driving in the future so that we stabilize vehicle miles traveled at or below levels close to those in the region today.[116] With so many interested groups, agencies, and governing bodies staked out on all sides of this issue, CRC should have provided a broader range of alternatives to the preferred alternative. The public deserves to know if there exist less expensive or less environmentally damaging alternatives to the proposed action. The public has indicated their unhappiness with the current alternatives on the table and urges CRC to develop more alternatives in a supplemental DEIS.

O-035-050 **II. The DEIS does not provide evidence of a rigorous evaluation of the alternatives that it undertook in preparation for the DEIS.**

The DEIS cannot claim that the early screening of components or their apparent evaluation of 12 alternatives constitutes the legally mandated requirement to *rigorously evaluate* all reasonable alternatives.[117] The DEIS fails to provide evidence that alternatives not presented were rigorously evaluated by an early component screening and secondary evaluation of those12

[115] Dylan Riveria, "Charge tolls first, then maybe build a bridge, Metro councilors say." *The Oregonian*. (May 28, 2008). Attached as Exhibit N. Also available at http://www.oregonlive.com/politics/oregonian/index.ssf?/base/news/1211954106178540.xml&coll=7&thispage=2.
[116] Coalition for a Livable Future, Attached as Exhibit O. Also available at http://www.clfuture.org/projects/ShiftTheBalance/Columbia%20River%20Crossing/Resolution.
[117] 40 CFR § 1502.14 (a).

O-035-050

The screening of alternatives that preceded the DEIS was a stepped process that did not simply evaluate components individually. Early screening processes, such as the one included in Appendix C did look at components by themselves to screen out transit options and river crossing types that clearly would not meet the requisite elements of the Purpose and Need (e.g. Maglev would not improve transit performance in the BIA). This process did not require individual components to meet every element of the Purpose and Need. For example, transit components were not required to improve freight mobility. This is explained on page C-1 of Appendix C of the DEIS.

After initial screening, the remaining components were combined to form 12 alternative packages for more detailed analysis. This is described in section 2.5.4 of the DEIS.

O-035-050

alternatives. These early evaluations included conclusory descriptions and incomprehensive summaries that do not meet NEPA requirements for a rigorous evaluation of alternatives.[118]

The initial screening of viable components was not a rigorous evaluation of alternatives because the individual components were not yet packaged together as complete alternatives.[119] Appendix C of the DEIS explicitly shows that the initial screening of components was in preparation for the future composition of alternatives, not an actual evaluation of alternatives.[120] This initial screening process eliminated project components if they failed to meet all six questions designed to meet the project's narrowly crafted purpose and needs. But many of these individual components were not supposed to stand alone as project alternatives and could have met the purpose and need if they were packaged together as real alternatives. For instance, the Bi-state industrial corridor crossing was eliminated in part because it did not improve transit service or bike and pedestrian connections.[121] Yet, this crossing component had not yet been packaged with the transit and bicycle option making it impossible that the crossing option alone could meet the transit and bicycle needs. Similarly, when the replacement and supplemental bridge alternatives presented in the DEIS are segmented into individual components (bridge crossing, transit options, bicycle/pedestrian facilities, and tolling) they too, cannot meet the project's purpose and needs alone. However, the components necessary for these bridge options magically survived the screening process with little explanation. The DEIS strategically eliminated certain project components that were not part of the predetermined bridge

[118] See *Simmons v. U.S. Army Corps*, 120 F.3d 664 (7th Cir. 1997).
[119] Evidence of this screening process is not available in the DEIS itself but is rather located in the CRC document, Draft Components Step A Screening Report, March 22, 2006. Please view Exhibit H for the response to NEDC's request for this document.
[120] DEIS at C-1.
[121] *Id.* at. 5-15.

O-035-050 alternative.[122] This prevented promising components from incorporation into real alternatives and their requisite rigorous evaluation.

O-035-051 Alternative crossing locations were a viable component eliminated during the early screening process preventing their ability to undergo a rigorous evaluation. The narrowly drawn purpose to develop within the Bridge Influence Area immediately eliminated crossing options up or downstream from the I-5 bridge. These alternative crossing locations offered promising alternatives that could have reduced the environmental impacts on the already overburdened communities living along the I-5 corridor. An alternative crossing location with extensive public transit could have significantly reduced congestion by pulling local commuters off of the I-5 bridge making room for long-distance travelers and increased freight movement. NEPA requires these options to undergo a rigorous evaluation to allow the public to compare the environmental impacts of alternatives to the proposed action.[123] Yet, the public will never know how the environmental impacts of an alternative crossing location would fare in comparison to the DEIS's alternatives. The rejection of alternative crossings and other viable components without a comprehensive analysis was unlawful as it violated NEPA's requirement to "rigorously explore and objectively evaluate all reasonable alternatives."[124]

O-035-052 After the cursory dismissal of viable components, the DEIS falsely claims it prepared and evaluated 12 alternatives in preparation for the DEIS.[125] The description of these alternatives

[122] Alternatives that involved retention of the existing bridges were faulted because they did not address seismic concerns about those bridges. Originally, staff maintained the bridges could not be cost-effectively upgraded. Yet the DEIS Supplemental Bridge alternatives show that cost-effective seismic upgrades are possible, based on later expert analysis. Once it was shown that such upgrades were possible, CRC should have gone back and re-evaluated all alternatives previously rejected on the basis of seismic issues.
[123] 40 CFR § 1502.14 (a).
[124] 40 CFR § 1502.14 (a).
[125] DEIS at 2-50.

O-035-051

As described in the DEIS Chapter 1, The Purpose and Need was based in part on the transportation deficiencies identified in preceding studies such as the Transportation and Trade Partnership. These studies found that I-5 is a critical regional transportation corridor and in need of a variety of improvements to meet growing freight and commuter demand for this facility. Alternative corridors were screened out during the initial screening effort because they would do little to address the purpose and need.

O-035-052

The Development of the Range of Alternatives memo contains detailed information about the evaluation of alternatives packages. The body of the memo explains the process for developing the range of alternatives, including the latter stage of screening which evaluated the 12 alternative packages. The findings from this evaluation of the 12 alternative packages are included in Attachment G of that memo. See also Appendix D and Chapter 2 of the FEIS.

O-035-052 and proof of their rigorous evaluation is not provided in the text of the DEIS nor in an attached supporting document, an appendix or a technical report. The DEIS states that "a more detailed description of the process of developing this range of alternatives is given in the Development of the Range of Alternatives memo prepared in June, 2007."[126] However, the document only serves to highlight the DEIS's legal deficiency that the development of alternatives does not constitute the requisite rigorous and objective evaluation of alternatives.[127] The 12 alternatives that were apparently considered in preparation for the DEIS are merely mentioned in this document without a discussion of their components or explanation of the findings from their rigorous evaluation.[128] In the absence of this evidence, the DEIS has not fulfilled the legal obligation under NEPA to "rigorously explore and objectively evaluate all reasonable alternatives."[129]

NEDC believes that the absence of proof of a rigorous evaluation of alternatives means that the DEIS did not rigorously evaluate other alternatives before selecting the replacement bridge as their preferred option or is hiding this screening process from the public. Both of these actions violate the spirit of NEPA and the legally-binding CEQ regulations that state a reasonable range of alternatives must be rigorously evaluated and explained to the public.

[126] DEIS at 2-51. NEDC was unable to locate this document in the DEIS or the online library and so proceeded to submit a document request on June 10, 2008. CRC project member Tonja Gleason claims that the document was buried in "CRC project files." Email communication between Elizabeth Zultoski and Tonja Gleason, (June 12, 2008). Attached as Exhibit P.
[127] 40 CFR § 1502.14 (a).
[128] CRC Memo, Development of the Range of Alternatives, p. 3. Attached as Exhibit E.
[129] 40 CFR § 1502.14 (a)

O-035-053

I. The DEIS does not provide the requisite answers for why certain alternatives recommended by the Task Force were eliminated from study.

The public and task force presented several reasonable alternatives that were eliminated from consideration without the requisite explanation in the DEIS. CEQ regulations state for "alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated."[130] These regulations are supposed to give the public answers as to why certain alternatives were not included in the EIS yet here the DEIS leaves the public more questions than answers. The DEIS's discussion of their reasons for eliminating *alternatives* from a more detailed study is incomprehensible and vague at best. The explanation of the component evaluation and dismissal was not actually included in the DEIS or attached supporting documents but rather was buried in the Step A and B screening reports located on the library website.[131] The further evaluation of *alternatives* listed in the document, "Development of the Range of Alternatives," provides only a cryptic chart comparing how the 12 alternatives compared.[132] This does not provide explicit reasoning for the elimination of these components sufficient for the requisite brief *discussion* of their elimination. While the regulations require the explanation be brief, the brevity of a summary chart is not an actual discussion. Therefore, the DEIS fails to meet the requirement that eliminated alternatives be described in the DEIS.[133]

[130] 40 CFR § 1502.14 (a).
[131] CRC document, Draft Components Step A Screening Report, March 22, 2006, Attached as Exhibit H; Step B Screening Report, June 9, 2006, Attached as Exhibit Q.
[132] CRC Memo, Development of the Range of Alternatives, p. 3. Attached as Exhibit E.
[133] 40 CFR § 1502.14.

O-035-053

Detailed findings from each step in the screening process are provided in the "Development of Alternatives" memo referenced in Chapter 2 of the DEIS. This memo has been available by request and through the project website. See also response to comment 035-052.

O-035-054

J. The post-hoc addition of the supplemental bridge option does not fulfill the NEPA requirements.

The CRC Project Staff initially presented the CRC Task Force with only one action alternative to the requisite no build option—the replacement bridge with either light rail or bus rapid service.[134] The Task Force recommendation for additional alternatives highlights the deficiencies in the presentation of these *virtually indistinguishable.*[135] But the CRC Project Team's construction of a second *alternative*, the supplemental bridge, gave the public a false impression that this presented a meaningfully distinguishable alternative to chose from. The supplemental bridge option was an unsuccessful attempt to package two new alternatives from the same framework—an expanded I-5 bridge. Simply reutilizing the current I-5 bridge and providing a different transit option does not equate to two new distinguishable action alternatives.[136] Furthermore, this post-hoc reaction to the Task Force's recommendation does not represent the critical reasoning that NEPA calls for an agency to conduct when considering and presenting alternatives to the public. Proper compliance with NEPA requires thorough investigation of all reasonable alternatives that exist.[137] This reactive presentation of the supplemental bridge does not reflect an appropriate process of evaluation for the plethora of concrete reasonable alternatives that exist.

[134] DEIS at 2-51.
[135] *Id.*
[136] *Id.*
[137] 40 C.F.R. 1502.14 (a).

O-035-054

Alternatives 4 and 5 included several important differences from Alternatives 2 and 3, one of which was the supplemental (rather than replacement) crossing. The supplemental crossing was designed with less highway capacity for the Columbia River bridges - 4 lanes in each direction compared with the 6 lanes evaluated with the replacement crossing. In addition, Alternatives 4 and 5 included more frequent high capacity transit service and higher toll rates. These important differences were packaged with Alternatives 4 and 5 to evaluate the performance and impacts of a reduced investment in the highway coupled with greater capacity in the transit system and more demand management.

Alternatives 4 and 5 were developed in cooperation with stakeholder representatives on the Task Force in response to their requests and the requests of others to further explore using the existing bridges and investing less in highways and more in transit. This response to public and stakeholder interests follows the principles of meaningful public involvement that underpin NEPA.

O-035-055

K. A good faith effort by the CRC staff to comply with the NEPA process would have provided *real* alternatives in the DEIS for the public and agencies to compare.

CRC owes the public a presentation of an alternative that offers substantially lower environmental and economic impacts than those presented in the DEIS. These alternatives exist and therefore CRC had the legal obligation to evaluate them in the DEIS rather than dismissing them upon a cursory inspection or no inspection at all. An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes. Yet there is no record that the alternatives mentioned above were not practicable based upon these factors. Some of the early components and 12 CRC alternatives were not unreasonable or speculative but rather promising, concrete solutions that met the project's purpose and need. Therefore, the DEIS had a legal duty to "rigorously evaluate" these alternatives without summarily dismissing them without a reasoned explanation.

O-035-055

See the response to comment 035-042.

V. Chapter 3: Greenwashing Environmental Impacts with Delayed Analysis, Unsupported Assertions and Technical Reports that Cite No Technical Information

O-035-056

A. The DEIS does not disclose all environmental impacts by delaying crucial design decisions and analyses until the FEIS.

The DEIS does not disclose many crucial environmental impacts because many important decisions about bridge designs and analyses are delayed until the FEIS. Some of these decisions and analyses include: tolling levels, mitigation plans, the number of car lanes, water quality impacts, modeling of induced sprawl, and the location of a staging area. The failure to disclose these environmental impacts prevents anyone from fully understanding the repercussions of each of the alternatives. Without a detailed knowledge of each alternatives' environmental impacts, elected officials, government agencies, citizens, and the CRC project team will make uninformed decisions when choosing their preferred alternatives. NEPA requires disclosure of the environmental impacts of each project alternative so that the public can make meaningful, informed decisions.[138] These disclosures are not to be put off until the FEIS. A DEIS is not just an outline of what will come in the FEIS. The CEQ regulations clearly state that a DEIS must fulfill the requirements of the FEIS to the "fullest extent possible."[139] When an FEIS is prepared, a preferred alternative has been identified and the opportunities for meaningful public comment have been substantially reduced or eliminated.

[138] 40 CFR §. 1502.1.
[139] 40 C.F.R. §. 1502.9 (a).

O-035-056

See the responses to comments 035-028 and 035-057.

O-035-057 The CRC DEIS does not reflect an attempt, to the "fullest extent possible," to disclose the project's environmental impacts.[140] Rather, the DEIS attempts to hide many of these impacts by delaying decisions and analyses until the FEIS. The lack of complete knowledge of the environmental impacts prevents the public from completing their own comprehensive analysis and understanding the full impact of each project alternative. The public cannot meaningfully comment on the proposed alternatives if the DEIS does not include a full analysis of environmental impacts. The CEQ regulations further provide that a new DEIS must be issued if the DEIS is "so inadequate to preclude meaningful analysis." *Id*. Therefore, a supplemental DEIS should be released disclosing the full range of environmental impacts, rather than only including them in the FEIS. NEDC will provide some of the examples of decisions and impacts that are not disclosed in the DEIS. This list is not exclusive and NEDC reserves the right to provide further examples as time permits:

O-035-058 The DEIS fails to disclose the environmental impacts on the water quality standards of the Columbia River and the Columbia Slough by delaying these crucial analyses until the FEIS.[141] These are major impacts that will result in violations of the water quality standards established pursuant to the Clean Water Act. These water quality impacts will likely threaten endangered fish species in the waterways implicating ESA consultation. Even worse, the DEIS also delays the ESA consultation under a later date despite CEQ regulations that encourage the preparation of the ESA analysis in conjunction with the DEIS.[142]

[140] 40 C.F.R. §. 1502.9 (a).
[141] DEIS at 3-388.
[142] 40 CFR §. 1502.25.

O-035-057

CEQ NEPA regulations (40 CFR 1502.9(c)) do not require agencies to prepare a supplemental draft EIS just because a final EIS includes refined alternatives and additional information. Such changes are typical and expected in the planning process, and are consistent with CEQ and FHWA NEPA regulations. Changes between the draft and the final EIS are evidence that the project has implemented the public involvement aspects of NEPA which encourage consideration and incorporation of public and agency input into the alternatives and the findings. They are evidence that the project is using the EIS as CEQ regulations envisioned – to assess impacts and solicit meaningful input rather than merely justify decisions already made (40 CFR 1502.2(g)). Public and agency comments received before, during and since the DEIS comment period have influenced many of the revisions and refinements in the FEIS. A supplemental draft is required if changes to alternatives after the draft are substantial and/ or if there are new significant impacts not previously discussed in the draft. The DEIS identified potential mitigation measures for all potentially significant as well as many non-significant impacts, and the FEIS further analyzes and develops mitigation measures and plans to a higher level of detail and refinement. The DEIS discussed the relevant aspects of the project, including those mentioned in comment 035-056 (tolling, number of lanes and construction) and analyzed the impacts noted as missing in comment 035-056 (induced sprawl, water quality, and ecosystems). In most cases, the refinement of alternatives and development of more detailed mitigation has reduced impacts relative to those disclosed in the DEIS, and no new significant impacts have been identified. These kinds of changes do not require a supplemental DEIS. In addition, the primary intent of a supplemental draft would be to provide opportunity for public and agency input on any new significant information prior to making final decisions. While changes since the DEIS have not resulted in any new significant impacts, the project has nevertheless been coordinating revisions in the alternatives, refinement in impact analysis, and refinement to mitigation,

O-035-059

As NEDC already detailed in earlier portions of these comments, the DEIS postpones a proposed mitigation plan until the FEIS.[143] This delay in disclosure of mitigation plans violates CEQ regulation 1502.16 (h) requiring disclosure environmental consequences including: "measures to mitigate adverse impacts." The public is unable to analyze the true result of a stated environmental impact if they do not know the corresponding mitigation plan, if any. Thus, the full scope of the environmental impacts requires a more specific consideration of mitigation efforts in the DEIS for meaningful public comment. The following examples are some of the decisions and environmental analysis delayed until the FEIS:

O-035-060

1. The number of car lanes will largely determine the traffic and transit projections required for accurate estimates of the environmental impacts. Yet, the CRC Task Force indicated that the number of car lanes was still undecided and could be modified at a later date.[144] This is yet another example of a delayed decision that results in the failure of full disclosure of corresponding environmental impacts. If the number of car lanes in the replacement bridge alternative changes in the FEIS, the public would have no information about the significant environmental impacts stemming from those lanes. Indeed, because the DEIS suggests that only additional lanes can combat congestion, any reduction of lanes in the FEIS would require an analysis to determine just what impact fewer lanes would cause.

[143] S-35.
[144] Dylan Rivera. June 25, 2008. "Task force backs new I-5 bridge, light rail over Columbia." *The Oregonian*. Attached as Exhibit D. Also available at http://blog.oregonlive.com/breakingnews/2008/06/task_force_votes_to_recommend.html.

with relevant permitting and participating agencies, and provided numerous opportunities for the public to provide input since the DEIS through additional open houses, surveys, email updates, website updates, neighborhood meetings, working group meetings, and community fairs and events. In response to your comment about staging areas in the DEIS, see the response to comment 035-019. See response to comment 035-009 regarding your statement that you may have additional comments following the close of the DEIS comment period.

O-035-058

All permits and approvals for water quality and ESA would be obtained prior to construction and operation of the proposed project. Water quality would be improved due to increases in stormwater treatment. Stormwater treatment will meet or exceed the requirements of state and local regulatory agencies. There is no evidence that complying with these treatment standards will result in a violation of standards under the Clean Water Act. Analysis of stormwater treatment is included in the biological assessment for the project that has undergone consultation with NOAA Fisheries and the USFWS, and is summarized in Section 3.14 and 3.16 of the FEIS and the Water Quality and Hydrology and the Ecosystems Technical Reports.

Construction activities are also regulated under Oregon DEQ and Washington DOE water quality permits. These permits set thresholds for turbidity and other water quality parameters. While meeting standards for these parameters is achievable during construction activities, the DEIS and FEIS address potential impacts to water quality if required protective measures fail.

The project met regularly with NMFS, USFWS, Oregon DEQ, Washington DOE, EPA, and many other agencies since 2006 to discuss the project and potential impacts. Both NMFSand USFWS concurred

O-035-061

2. The DEIS also fails to disclose impacts from the alternatives' contribution to urban sprawl. The DEIS states that the modeling for sprawl effects will be put off until the FEIS: "Prior to completion of the Final EIS, the project team will review access and land use controls near proposed interchanges to ensure that the transportation investments would be adequately protected from unintended or unplanned development."[145] Furthermore, the DEIS ignores a relevant study on land use impacts of the project that was completed by the study that preceded the CRC, the I-5 Trade and Transportation Partnership.[146]

O-035-062

3. The decision about the location of a staging site was delayed until the FEIS so the corresponding environmental impacts are not disclosed in the DEIS.[147] The DEIS states that "the location of potential staging sites will be identified and potential environmental impacts analyzed in the Final EIS."[148] Based upon the DEIS's treatment of other project aspects, this staging site is likely to require property acquisition and have significant environmental impacts. The DEIS admits that the staging site may increase stormwater runoff and pollutant loading but fails to choose the staging site and disclose these environmental impacts in spite of NEPA requirements.[149]

[145] DEIS 3-135.
[146] Rivera, Dylan. June 22, 2008, "Columbia River bridge plans ignore effects of growth" *The Oregonian*. Attached as Exhibit R. Also available at file:///C:/Documents%20and%20Settings/nedc/Desktop/CRC%20Supporting%20Documents/Oregonian%20June%2022nd.htm.
[147] DEIS at 3-97.
[148] DEIS at 3-97.
[149] DEIS at 3-392.

with coordinating through the DEIS and then initiating formal consultation after the DEIS. Submittal of a biological assessment occurred in July 2010, with the project receiving a letter of concurrence from USFWS in November 2010 and biological opinion from NMFS in January 2011. Information from these documents was included in the FEIS to provide the most updated analysis available.

O-035-059

See the response to comment 035-057 and responses to comments below.

O-035-060

The alternatives evaluated in the DEIS include a range of options for the number of auxiliary lanes, from a low of 8 to a high of 12. If the final decision for the CRC project is to build something outside this range of alternatives, then we will need to, at a minimum, conduct enough analysis to determine if the impacts would be substantially different from the alternatives previously evaluated.

O-035-061

See response to comment 035-018.

The assessment of induced growth is located in Section 3.4 of the DEIS and FEIS. This included an evaluation of the previous study on land use effects performed as part of the I-5 Trade and Transportation Partnership Study. More discussion of this evaluation is in the Indirect Effects Technical Report.

O-035-062

See response to comment 035-019.

O-035-063

4. The DEIS has also postponed the harm minimization analysis required under Section 4 (f) of the Transportation Act until after the LPA is chosen,[150] "[b]ecause the CRC project is currently in the conceptual design phase, it is not possible to draw conclusions about the reasonableness of all potential measures to minimize harm."[151] The 4(f) section also fails to include adverse impacts on 218 historic resources, as relevant state agencies "are in the process of reviewing the preliminary findings of effect, with concurrence expected by late spring of 2008."[152]

O-035-064

5. The DEIS fails to disclose the full range of property acquisitions required for the bicycle and pedestrian facilities.[153] The lack of certainty about property acquisitions is unnerving at this stage in the project. To the scope of the project, the extra taking of a few houses or another wetland may seem minor, but to a person or a community the impacts could be devastating. Citizens and communities may not be deprived their right to involvement in the decision-making process under NEPA; delayed certainty on acquisitions violates this mandate.

O-035-065

6. The DEIS fails to clearly disclose the impacts of the demolition and removal of the existing I-5 bridges under the replacement bridge scenario. This demolition will result in an extremely large amount of waste including concrete, metal, and other construction debris. This will require significant landfill space, will likely have large water quality impacts during removal, and expend large amount of fossil fuel resources. Yet, the DEIS failed to incorporate this into their conclusion that the replacement bridge will have fewer

[150] DEIS 5-76.
[151] *Id.*
[152] DEIS at 5-4.

[153] DEIS at 3-104.

O-035-063

Please see the above response to comment 035-020 regarding preliminary findings of effect for historic resources, and the response below to comment 035-161 regarding minimization measures.

O-035-064

The DEIS describes the full range of property impacts expected from each of the alternatives. Page 3-104 of the DEIS explains that the property impacts associated with the bicycle and pedestrian facilities were included in the river crossing element of the project. While the bicycle and pedestrian facilities had not been fully designed at the time of publishing the DEIS, the DEIS explained that every effort would made to use existing right-of-way or land otherwise acquired by the project to accommodate the new bicycle and pedestrian pathways. The FEIS identifies impacts from the newer and more detailed designs of the bicycle and pedestrian facilities.

O-035-065

Construction/demolition impacts were estimated and discussed to the extent they could be described and anticipated during the DEIS stage of project development. With a higher level of design available for the FEIS, the potential approach to construction and demolition can also be taken to a higher level of detail, and this has allowed a more detailed analysis of construction impacts for the FEIS. This allows for a greater level of detail regarding impacts and mitigation, but it does not change the basic findings and conclusions that were reported in the DEIS.

Regarding specific concerns raised:

- Some of the waste materials generated from construction and demolition will be transferred to landfills. However, the majority of the waste metal and concrete generated will be either reused or recycled, not disposed.

O-035-065

impacts on the natural environmental than the supplemental bridge. The continued use of the current I-5 bridges in the supplemental bridge option will actually avoid these unknown impacts on the natural environment. Furthermore, the DEIS fails to disclose the impacts of utilizing a significantly larger amount of concrete and materials for the replacement bridge option. The larger amount of concrete—again, unknown—necessary for the replacement bridge option will result in increased gravel mining and emissions from concrete plants. Yet the DEIS does not consider the environmental impacts of increased use of materials under the replacement bridge option. Finally, the DEIS does not account for the greenhouse gas emissions associated with demolition and construction, as well as manufacture and transport of raw materials. With passage of Oregon and Washington state laws targeting dramatic reductions in greenhouse gas emissions from all sectors, including transportation, the DEIS should account for *all* green house gas emissions associated with every project action. The DEIS needs to disclose these impacts to the public in order to allow a true comparison between the no action, supplemental and replacement bridge options.

B. The DEIS Essentially Ignores Land Use Effects and Sprawl

O-035-066

NEPA regulations define the "effects" a DEIS must consider as including "growth inducing effects and other effects related to induced changes in the pattern of use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems."[154] This requirement should ensure that a DEIS will consider and disclose indirect effects on land use, such as urban sprawl. Courts have recognized that highway projects induce

[154] 40 CFR § 1508.8(b).

- Water quality impacts from bridge demolition were a concern identified in the DEIS, and they are described in greater detail, along with mitigation measures, in Chapter 3.14 of the FEIS as well as the Biological Assessment.
- Energy use associated with construction and demolition was estimated in the DEIS. The DEIS also estimated the greenhouse gas emissions associated with project construction activities.
- The impacts from construction and demolition (such as higher energy use, and temporary water quality impacts), as well as the long term impacts (such as reduced barriers to fish passage, and cleaner storm water runoff) were incorporated into the findings in the DEIS.

O-035-066

Section 3.4 of the DEIS includes a comprehensive analysis of the potential induced growth effects that could be expected from the CRC alternatives. The CRC project team reviewed national research and case studies about indirect land use effects that can arise from added highway capacity and from new transit infrastructure; this literature review was described in detail in Appendix A of the Land Use Technical Report that accompanied the DEIS. The project team then applied the findings from this research to CRC's travel demand modeling, results from Metro's 2001 evaluation using an integrated land use / real estate / transportation model, and a review of local and regional growth management policies. This evaluation concludes that the likelihood of substantial induced sprawl from the CRC project is very low. In fact, because of its location in an already urbanized area, the introduction of a toll to manage demand, the inclusion of high capacity transit, and active growth management in the region, the CRC project will likely further the region's goals of concentrating development in regional centers, reinforcing existing corridors, and promoting transit and pedestrian friendly development and land use patterns.

O-035-066

sprawl "by their very existence," creating demand for additional housing and jobs.[155] The CRC DEIS acknowledges the potential for induced sprawl, but then cursorily dismisses the effect as unlikely. Modeling assumptions of future population and traffic demand adopted by the CRC Project Staff fail to satisfy NEPA, by creating a "self-fulfilling prophecy that makes a reasoned analysis of how different alternatives satisfy future needs impossible."[156]

1. Modeling assumptions ignore induced growth

The DEIS establishes a goal of catering to induced demand, stating "any acceptable project alternative must directly accommodate travel arising from additional residents and jobs near the project."[157] Though this acknowledges the potential for induced traffic, it assumes all growth will be urban transit-oriented development ("TOD"), and ignores effects further from the project itself. Courts have determined that similar "dismissive treatment of relocated growth pressures" further from the project location is "inconsistent with a hard look" at induced growth.[158] By thus focusing on beneficial growth, rather than sprawl, the DEIS attempts to cover the bases required by NEPA without fully assessing indirect, likely adverse impacts.

The DEIS does go through the motions, acknowledging "additional highway capacity could increase pressure on local jurisdictions to allow higher intensity land uses outside urban centers, encouraging employers and residential development to locate further from the urban core.[159] However, its less-than-one-page induced growth analysis fails to fully disclose

[155] *Swain v. Brinegar*, 517 F.2d 766, 777 (7th Cir. 1975).
[156] *Sierra Club v. U.S. Dep't of Transp.*, 962 F.Supp. 1037, 1043 (N.D. Ill. 1997).
[157] DEIS, 3-121.
[158] *Senville v. Peters*, 327 F.Supp.2d 335 at 368 (D.Vt. 2004).
[159] DEIS, 3-134.

The assessment of induced growth has been updated in Section 3.4 of the FEIS and the Indirect Effects Technical Report. Metro also ran the MetroScope model in 2010, which confirmed the assessment that the CRC project would not induce sprawl.

O-035-066 assumptions made when modeling future traffic demand – assumptions that marginalize this possibility.[160]

O-035-067 As recently reported in the Oregonian, CRC staff instructed traffic forecasters for the project to assume that different bridge alternatives would "have no influence on development patterns" and that the twelve lane replacement option "would not trigger any more growth" than maintaining current bridge capacity.[161] The CRC made these simplifying assumptions to avoid the "complex forces driving growth," yet travel experts point out this defies the purpose of modeling, which is to allow detailed, project-specific predictions.[162] As a consequence, the models lead to inaccurate air quality and climate assumptions, because "more traffic will add to pollution and greenhouse gas emissions," despite the CRC Task Force's claims.[163] Courts have also established that NEPA does not allow a DEIS to rely on a single socioeconomic forecast of future needs, because "information about the growth inducing impact of tollroad construction is crucial to a reasoned conclusion as to alternatives."[164]

O-035-068 The DEIS modeling also fails to demonstrate tolling and transit will sufficiently offset induced growth effects of increased capacity; instead, the DEIS simply assumes this relationship. The DEIS states, but does not cite, that tolling will reduce auto trips;[165] it does not demonstrate

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[160] The DEIS does not fully address the moving of congestion to downstream portions of I-5 as the result of essentially doubling the capacity of I-5 through most of the BIA. Nor does it address the likely ensuing political pressure to widen I-5 through those downstream points that will see increasing congestion as a result of the project.

[161] The Oregonian, "Columbia River bridge plans ignore effects of growth" (June 22, 2008), http://www.oregonlive.com/news/oregonian/index.ssf?/base/news/1214029515244280.xml&coll=7. Attached as Exhibit R.
[162] *Id.*
[163] *Id.*
[164] *Sierra Club v. U.S. DOT* at 1043.
[165] DEIS 3.135

O-035-067

The DEIS was supported by multiple types of modeling analysis. The transportation demand modeling held future housing and employment patterns steady. This is common practice for travel demand models and is required by the Federal Transit Administration when comparing and contrasting the ridership forecasts and other performance metrics for various alternatives.

However, the DEIS analysis of indirect (or induced) effects did not assume future development patterns would be the same regardless of whether or how the project was built. The project team's analysis of induced growth included modeling by Metro of potential induced growth. In this evaluation, Metro used Metroscope, an integrated land use and transportation model that tests how transportation investments affect future travel behavior and then in turn affect future land use patterns. Metroscope is designed to predict how changes in transportation infrastructure could influence the future distribution of employment and housing in the region. This is described in detail in Appendix A of the DEIS Land Use Technical Report and in the FEIS Indirect Effects Technical Report.

O-035-068

As described in Section 3.1 of the DEIS, travel demand modeling assessed the effect that a toll on the I-5 crossing would have on the number of trips over the river, as well as the effect of other project elements. The analysis methodology was reviewed by an independent panel of travel demand experts in October 2008. This panel unanimously concluded that the methodology and findings in the DEIS were valid and reasonable.

The evaluation of induced growth assessed several factors, some of which were results from the travel demand modeling that identified various transportation metrics. For example, an important result from the

O-035-068 this effect will outweigh induced growth effects or provide any numerical analysis.[166] NEPA requires a reasoned explanation for this conclusion. Moreover, the DEIS relies on inapplicable

O-035-069 and outdated models in concluding transit will offset sprawl effects. The DEIS references a 2001 model of "similar" highway projects, which found induced sprawl effects would be insubstantial.[167] The DEIS does not cite Appendix A's discussion of this model. However, a look at Appendix A shows the 2001 model did *not* address "similar" projects; this model forecasted sprawl for a highway with improved transit but only one additional lane of capacity in each direction.[168] The CRC replacement alternative will add at least two or three lanes in each direction, yet the Technical Report dismisses this hugely significant variable, asserting with no rationale that "the findings are still applicable."[169]

O-035-070 The DEIS also fails to include induced sprawl in its summaries of land use and economic effects.[170] These summaries supposedly chart expected long-term effects from the project alternatives, including: direct land use effects, direct economic effects, regional economic impacts, consistency with land use plans, and induced growth both as sprawl and as transit-oriented development. In fact, however, these summaries project each of these effects *except potential for sprawl*. The charts include induced growth potential in terms of increased transit-oriented development only.[171] This serves to take negative growth potential completely out of the equation, and presents the public with a skewed and incomplete picture of long-term effects.

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[166] *Id.*
[167] DEIS, 3-135.
[168] Land Use Technical Report Appendix A: Induced Growth ("Appendix A" or "Induced Growth report"), A-8.
[169] *Id.*
[170] DEIS, Exhibits 3.4-5 – 3.4-8.
[171] DEIS, 3-128 – 3-130.

travel demand model that supported the conclusions in the DEIS about induced growth was that the project, with high capacity transit and a toll, would reduce daily trips over the river compared to No Build.

O-035-069

The scenario evaluated with the Metroscope model in 2001 had important similarities with the CRC project, but represented a conservative estimate of land use effects for the CRC project. In other words, this 2001 scenario would likely have similar types of land use effects, but of a higher magnitude. The important similarities between the scenario evaluated with the Metroscope model and the CRC project are the improvements to I-5 around the river crossing and the extension of light rail to Clark College. The land use changes from the Metroscope analysis were deemed conservative (i.e. of a higher magnitude) compared to the CRC project because the 2001 scenario included a larger increase in highway capacity with a 4th through-lane between Going Street in Portland to 134th in Vancouver. This is a significantly longer segment of I-5 than the CRC project would improve, with 22 new lane miles - twice that of the 6-lane replacement crossing evaluated in the DEIS. While the CRC project design has five lanes in each direction on the Columbia River bridges, these lanes quickly drop off north and south of the river, and drop to just three through-lanes at each end of the project area. The 2001 Metroscope analysis also did not include a toll on the I-5 crossing, which is an important element of the CRC project that curbs induced demand. Metroscope modeling conducted in 2010 confirmed the findings from the DEIS (see Section 3.4 of the FEIS).

O-035-070

The cited summaries present the most substantial effects from the alternatives on land use and economics. Because the potential for sprawl effects was found to be small, it was not included in these summaries. However, the assessment of whether the project could induce sprawl is discussed a few pages later on page 3-134 of the DEIS.

O-035-070 Indeed, excluding such information clearly shows how the DEIS has avoided a true comparison between the alternatives presented, and not presented, in the DEIS.

2. The DEIS relies on generalizations and on research that focuses on transit-oriented development rather than sprawl

O-035-071 The DEIS summarizes induced growth research in one sentence, claiming the CRC's "comprehensive literature review" indicates the highway project will not likely have substantial indirect land use effects.[172] Here, as throughout the DEIS, there is no cite to Appendix A, the Technical Report, or further information about this research. However, a closer look at the literature review, as well as research not considered, belies this claim of consensus. The literature review in Appendix A provides summaries of each study considered, and the references section provides weblinks to certain ones. From the limited information provided, it seems the significant majority of studies applied focus on beneficial transit-oriented development from light rail projects, not on the impacts of increased car capacity.[173]

But the biggest problem with this review may be the Induced Growth report's failure to explain why these and not other studies were examined, and why these studies' conclusions apply to a project of the CRC bridge's nature and scope.[174] No information provided allows the public to discern whether these studies addressed increased capacity or whether they studied projects similar to the CRC alternatives. Further, some studies cited *do* acknowledge induced

[172] DEIS, 3-135.
[173] Appendix A, A-35 – A-37.
[174] Appendix A, A-2.

O-035-071

The DEIS provides an evaluation of induced growth in Chapter 3.4, and page 3-138 directs readers interested in more information on the topic to the Land Use Technical Report. Appendix A of this technical report (which is the Indirect Effects Technical Report for the FEIS) provides a description of each document included in the literature review. The literature review included studies on the effect of highway expansion on land use. These studies identified a variety of factors that influence whether and how highway projects induce greater travel demand and sprawl. The project did assess the 2001 modeling of induced growth that was done for the I-5 Transportation and Trade Partnership. Refer to the responses to comments 035-067 and 035-069 for more on this topic.

Chapter 3.4 of the FEIS provides an updated discussion of induced growth, with more information included in the supporting Indirect Effects Technical Report.

O-035-071 sprawl.[175] but the DEIS itself does not reflect this diversity of research outcomes. In fact, the review notably does not include a 2001 report by regional planners finding the CRC alternatives will induce sprawl in Clark County.[176] The CRC Task Force had access to this report while drafting the DEIS,[177] yet only addresses Clark County-specific sprawl by saying, without citation or support, that effects are "likely quite small."[178] This over-generalization and selection of research in the DEIS calls into question the conclusions' applicability to the CRC project.

3. The DEIS overstates the alternatives' conformity with local planning goals.

O-035-072 The DEIS states that the CRC build alternatives "generally" support Oregon's, Washington's, and Vancouver's land use goals and policies.[179] However, it provides no citations to, context from, or direct quotes from these plans. The information provided makes it impossible to say even whether these plans support or oppose increased highway capacity. The DEIS does not allege conformity with Portland's planning goals, but also fails to disclose any discrepancies.[180]

The Land Use Technical Report indicates the DEIS may overstate the CRC alternatives' conformity with planning goals. Portland's Comprehensive Plan includes lessening dependence on cars,[181] which the build alternatives would fail to do by increasing car capacity and inducing

[175] Appendix A, A-4.
[176] The Oregonian, "Columbia River bridge plans ignore effects of growth" (June 22, 2008), http://www.oregonlive.com/news/oregonian/index.ssf?/base/news/1214029515244280.xml&coll=7, attached as Exhibit R. I-5 Land Use Findings Study attached as Exhibit S.
[177] *Id.*
[178] DEIS, 3-135.
[179] DEIS, 3-133 – 3-134.
[180] DEIS 3-134.
[181] Land Use Technical Report, 4-29.

O-035-072

The DEIS includes the Technical Reports incorporated by reference, which includes the review of plan and policy consistency, in the Land Use Techncial Report. The report describes applicable plans at state, regional, and local levels. As you have noted, there are plan policies with which the alternatives may not be found to be perfectly consistent. It is also true that some policies are not wholly consistent with each other. The Portland/Vancouver area has a robust system of land use and transportation planning that has to be comprehensively considered. When policies speak to improving the transportation system, we do not suggest that just *any* road widening is consistent with plans. Alternately, when plan policies call for reduced vehicle travel, we do not find all transportation system improvements to be inconsistent with the plans. Rather, all of the policies together must be considered. When this is done, it is easier to understand the CRC's high level of plan consistency. On the one hand, the project adds to the transportation system, alleviates safety troubles, relieves congestion, etc. At the same time, the project promotes transit and reduces overall vehicle trips.

Your last point is in regards to "sprawl that the DEIS fails to consider." The Land Use Technical Report includes an extensive analysis of potential induced growth impacts.

O-035-072 traffic. Vancouver's Comprehensive Plan similarly aims to reduce single occupancy vehicle miles traveled,[182] and goes on to say "[f]urther analysis will be needed to determine whether increased vehicular capacity on I-5 will encourage urban sprawl and vehicle miles traveled." *Id.* Neither the DEIS nor the Technical Report address this request for further study, but rather claim conformity with Vancouver's plan. This likely induced sprawl that the DEIS fails to consider will undermine planning goals at the city, county and state levels.[183]

O-035-073 The DEIS also fails to adequately address mitigation, by placing responsibility for managing sprawl effects entirely on local decision-makers.[184] The DEIS must provide a better sprawl mitigation plan than hypothesizing that a "broad intergovernmental agreement" "could" help manage land to reduce sprawl after the fact – and after the CRC fails to conform with planning goals by inducing unwanted growth.[185] The DEIS' assertion that increased vehicle

O-035-074 capacity is not the sole cause of induced sprawl, as land use planning decisions also have impacts,[186] does not undermine findings that increased capacity *does* contribute to sprawl. Moreover, the Ecosystems Technical Report contradicts itself on the issue of induced sprawl, first saying highway capacity plays a role in sprawl, but then saying no induced sprawl from increased highway capacity is expected at all.[187]

O-035-075 Regional planners, transportation research, and courts all recognize that projects that increase car capacity, as the CRC every proposed build alternative does, will induce environmentally destructive urban sprawl. The CRC's conscious choice to assume away this negative impact violates NEPA's requirements to consider sprawl effects and to fully disclose

[182] Land Use Technical Report, 4-36.
[183] Land Use Technical Report, 4-14 – 4-44.
[184] DEIS, 3-134.
[185] DEIS, 3-147.
[186] Ecosystems Technical Report, 5-24.
[187] *Id.*

O-035-073

The analysis of induced growth concluded that there was a small potential for induced growth at the urban edge and much greater potential for consistent development. This is because of the tolls, high capacity transit, modest highway travel time savings, location in an already existing urbanized transportation corridor, and other factors. Therefore, it is not necessary for the CRC project to mitigate "sprawl" when the project already supports greater concentration of development. However, growth management controls are important to achieving regional and local goals, and the previous Bi-State Governors' group studying the I-5 problem concluded that improved regional coordination on land use issues would be beneficial for maintaining transportation capacity in the region. Ongoing bi-state land use coordination will help to build a better jobs and housing balance, and minimize unbalanced growth. These factors will help to maintain the capacity produced by this project, and reduce future needs for additional capacity.

O-035-074

As the DEIS and the technical reports acknowledge, increasing highway capacity can induce sprawl. But sprawl is not always inevitable with a highway expansion, and highway expansion is not the only action with the potential to cause sprawl. The literature review described in Appendix A of the Land Use technical report identified factors that influence whether and how projects that increase highway capacity are or are not associated with induced sprawl. It also evaluates the factors associated with transit projects that are or are not associated with promoting transit oriented development. Chapter 3 (Section 3.4) of the FEIS also discusses these factors.

While the CRC project will add highway capacity, it will do so for a segment of Interstate 5 that is in an established urban area, with strong growth management regulations. Furthermore, the CRC project will

O-035-076 likely environmental impacts. The DEIS' emphasis on transit-oriented development, and marginalization of potential sprawl, is not supported by modeling or research, and skews the analyses for many other aspects of the DEIS, including air quality, ecosystem impacts, and greenhouse gas projections. To remedy this major analytical error, the CRC should issue a Supplemental DEIS that either models each proposed alternative with its likely growth impacts, or offers an explanation why this is not feasible.

C. The DEIS fails to disclose and analyze the disproportionate health impacts borne by Environmental Justice (EJ) populations.

O-035-077 The DEIS does not describe the input or perspective provided by the Community and Environmental Justice Group (CEJG), or detail outreach efforts taken by this group to ensure that EJ populations were afforded "meaningful involvement." Nor are the members of the CEJG identified. The DEIS should list public comments and indicate their source.

O-035-078 There is also no mention in the report of an indirect impact on air quality and attendant asthma rates, nor is there mention of any community health conditions disproportionately borne by EJ populations.[188] Communities in the Secondary Area of Potential Impacts (API) in Oregon presently have substantially higher asthma rates than both the national and regional average, and as such, are more susceptible to adverse air quality impacts.[189] Further, there is no mention of deleterious impacts caused by increased exposure to fine particulate matter at the neighborhood level.[190]

[188] DEIS Exhibits 3.5-6 – 3.5-9.
[189] Podobnik, B. "Portland Neighborhood Survey: Report on Asthma Rates in NE, SW, and W Portland." May 23, 2002. Attached as Exhibit T.
[190] DEIS Exhibits 3.5-6 – 3.5-9.

introduce high capacity transit service across the river, and will introduce a significant new travel demand tool: a toll on the I-5 crossing. This toll, coupled with the introduction of high capacity transit to Vancouver, is projected to reduce automobile demand and increase transit mode share compared to No-build. The modeling conducted for the project and the literature review suggest that this combination of factors is likely to largely offset the potential for induced sprawl.

O-035-075

The DEIS and FEIS and related technical reports contain a robust analysis of indirect or induced effects. Refer to the responses to comments 035-066 and 035-074.

O-035-076

See responses to comments 035-066 and 035-074.

O-035-077

It is not practical to provide written responses to every comment provided on the project throughout its planning phases. However, the FEIS provides the comments and responses from all public testimony which was part of the DEIS public comment period. Also, the FEIS has a more complete record of public involvement on Environmental Justice issues. Please refer to the Environmental Justice Technical Report, Section 2.

The members of many of the project's stakeholder working groups are listed on the CRC web page. The members of CEJG are listed there as well.

1. The inadequate time for public comment disproportionately affects EJ populations

O-035-079 A sixty-day comment period is particularly inadequate for EJ populations to review and process the 5,000 page DEIS. This is a significant concern for people who may require technical support, such as community based organizations, tribes, people of color, low-income people, and non-English or low-proficiency English speakers who will be impacted by the CRC project and wish to review the document.

2. The DEIS' failure to consider baseline conditions of EJ populations skews its health and cumulative impact assessments.

O-035-080 To ensure environmental injustices are not perpetuated or exacerbated by any of the five CRC project alternatives, the DEIS must clearly identify disproportionate impacts and mitigation plans. This includes identifying to the extent possible:

a. Existing conditions of impacted communities
b. Neighborhoods exceeding FHWA's traffic noise impacts criteria
c. Neighborhoods exceeding air quality standards
d. Neighborhoods exceeding other environmental quality standards
e. Long-term plans for environmental monitoring at the community level
f. Plans to bring non-compliance areas into compliance

O-035-078

See response to comment O-035-083 regarding asthma.

The indirect effects of the project are discussed in the response to comment 035-066 and 035-074. Because the induced growth effect of the project is likely to include less dispersed development patterns, less auto travel and congestion and greater use of transit, biking and walking, the indirect effect on air quality is likely to be beneficial.

Construction related effects to air quality are discussed in the DEIS, and were updated in the FEIS, in Chapter 3 (Section 3.10).

O-035-079

There were many months of targeted outreach prior to the publication of the DEIS, and months more following the release of the DEIS. The project team has specifically worked with EJ populations, low-income service providers, tribal representatives, and others. These parties have had much more direct access to the project staff and information than simply responding to the DEIS. For more information on such outreach, please refer to Chapter 2 of the Environmental Justice and Historic Built Environment Technical Reports and Chapter 1 and 2 of the Archaeological Technical Report.

O-035-080

Information on existing neighborhoods, noise conditions, air quality, and other environmental conditions can be found within the respective technical reports, which are appendices to the DEIS and FEIS. That information is summarized in both the DEIS and FEIS. The project would not have adverse impacts to air quality so no mitigation, other than during construction, is proposed. The analysis also indicates that emissions in general from I-5 will be substantially lower in the future than they are today. Regarding the cumulative effect of air quality on health, see the discussion of the PATA/PATS study in the Air Quality Technical

O-035-080 The EJ populations assessed in the DEIS, particularly those within Oregon's secondary API, presently face worse pollution than areas further from the I-5 corridor.[191] The DEIS should delineate present conditions and their cumulative health impacts, in its assessment of cumulative impacts from the proposed build alternatives. While this project itself *may* not disproportionately impact EJ populations, the DEIS should consider whether the project will perpetuate existing environmental injustice.

3. The DEIS fails to address transportation equity issues for EJ populations.

O-035-081 The DEIS assumes without support that EJ populations will benefit from increased mass transit options included in the proposal. However, the DEIS does not even analyze whether EJ populations in the Oregon secondary API would utilize northbound mass transit; anticipated benefits are purely speculative.[192] Additionally, there is no analysis of whether the increased traffic flow, and therefore increased air emissions, would offset any anticipated benefit derived from reduced congestion.[193]

[191] Podobnik, B. "Portland Neighborhood Survey: Report on Asthma Rates in NE, SW, and W Portland." May 23, 2002. Attached as Exhibit T.
[192] DEIS 3-170.
[193] DEIS Exhibits 3.5-6 – 3.5-9.

Report, DEIS, and FEIS.

The project would result in additional noise impacts to adjacent residences, but with proposed mitigation, there will be fewer noise impacts than under either No-Build conditions or existing conditions. Not all noise impacts can be mitigated with noise walls. This is discussed in the Environmental Justice Technical Report.

Where impacts have been identified, the EJ analysis considers whether these project impacts would result in high and disproportionate impacts to EJ populations. This includes consideration of cumulative impacts.

O-035-081

The ridership of the system is more than speculative. It has been the subject of advanced computer modeling, extensive studies, and independent expert review. The DEIS cited national studies which point to substantially higher transit usage among low income households. Local transit-user surveys from Tri-Met point to the same.

Low income and minority individuals and populations reside throughout the corridor, both in Washington and in Oregon. The LRT extension will benefit residents who use transit to travel either south or north, and even those in Oregon who may never cross the river. The CRC project would double the frequency of LRT service on the existing yellow line, in addition to extending it to Vancouver.

Regarding air quality, the analysis incorporated both increased traffic volumes and reduced congestion.

4. A Supplemental EIS should address the following EJ deficiencies

O-035-082

There are deficiencies in the study area and data collection methods described in Section 2 of the EJ technical report. The study areas section lacks data necessary to assess the impacts on people in the secondary API. There should not have been such reliance on secondary data to evaluate the likelihood of indirect project impacts.[194] The data collection should include more pertinent information in order to evaluate the adequacy of non-Census data collection methods. "Field visits" and outreach via community and stakeholder groups are non-descriptive and undefined. The Technical Report provides no data on attendance at community meetings and events, making it impossible for readers to assess the effectiveness of this outreach.[195] Section 3: Coordination, 3.1 Community and Environmental Justice Group must identify the members of the CEJG,[196] and identify the data provided by the CEJG, including any input regarding the LPA.[197]

O-035-083

Any discussion of existing air quality conditions is incomplete without an analysis of current asthma rates. The DEIS ignores baseline conditions in the Secondary API in Oregon, namely that the asthma rate in this area is twice the national average (14% versus 7%) and nearly three times the rate in more affluent and less diverse neighborhoods such as Southwest Portland (14% versus 5%).[198] The DEIS should also consider potential sensitive noise receptors within the secondary API. The report discusses noise impacts in the primary API only, and fails to define mitigation efforts.[199]

[194] EJ Technical Report 2-1.
[195] *Id.* at 2-3.
[196] *Id.* at 2-9.
[197] *Id.* at 3-0.
[198] Podobnik, B. "Portland Neighborhood Survey: Report on Asthma Rates in NE, SW, and W Portland." May 23, 2002. Attached as Exhibit T.
[199] EJ Technical Report, 4-10.

O-035-082

The project team collected more data than was required, and collected additional data for specific issues. The Census data was supplemented by analyses of other data, including school lunch programs, public housing, and income ranges within certain job types. The project has conducted hundreds of public meetings, with dozens of meetings specific to EJ communities and impacts. The technical report and FEIS have been expanded to provide more information on this analyses.

See also response to comment 035-077.

O-035-083

The DEIS did not include information on current asthma rates. The Air Quality Technical Report that was incorporated by reference in the DEIS included information on the connection between asthma and air quality (in particular, ozone and particulate matter) as well as a discussion of relevant standards and regulatory compliance. Many of these details were not included in the DEIS because the project area has been in compliance with relevant standards for well over a decade, ozone and particulate matter levels are continuing to decrease, and no future violations are projected with or without the project.

Regarding noise levels outside the area of potential impact, it is not evident how this would be relevant to the EIS or the project decisions.

O-035-084 The Portland Neighborhood Profiles section must provide neighborhood profiles for all areas within the secondary API that contain significant percentages of minority and/or low-income populations.[200] The report includes profiles of Hayden Island, Jantzen Beach, Bridgeton and Kenton, but should also include profiles on Boise, King, Humboldt, Piedmont, Eliot, Irvington and Woodlawn.[201] Vancouver neighborhood profiles are considered in more depth than Portland neighborhoods, even though the report clearly shows that Portland neighborhoods contain more substantial EJ populations.[202] The report must also provide profiles of low-income housing contained within the secondary API in Oregon. These low-income residents will be indirectly impacted by the project.[203]

O-035-085 Section 5, Long Term Effects, does not include any discussion of the projected increase in traffic through the secondary API caused by any of the build alternatives.[204] This skews the report's air quality analysis by underestimating future emissions that may contribute to existing pollution hotspots. The conclusion that air quality will improve through improvements to auto emissions does not consider the cumulative increase in air emissions due to likely induced traffic. There is no analysis of whether the decreased congestion promised by the build alternatives will offset pollution from this induced traffic.[205] There is no discussion of the impact on asthma triggers.[206] These deficiencies must be addressed in a supplemental EIS to fully disclose the impacts on EJ populations.

[200] EJ Technical Report, 4-14.
[201] *Id.*
[202] *Id* at 4-13.
[203] *Id* Exhibit 4-9 and 4-14.
[204] *Id* at 5-36.
[205] *Id.*
[206] *Id.*

O-035-084

There is no potential for high and adverse effects in the neighborhoods you have mentioned. The project would not require construction there, cut-through traffic in neighborhoods would generally be lower with the project than without it, air quality would generally be improved, access and mobility would be improved or unaffected.

Additional information was provided for some of the Washington neighborhoods because of the specific EJ-related facilities and services that could have been directly impacted by the construction of some of the light rail transit options in Vancouver.

O-035-085

The travel demand modeling and induced growth analysis done for the DEIS indicates that the project is not likely to induce more auto travel or more emissions. In fact, the DEIS analysis showed that the project's introduction of high capacity transit between Vancouver and Portland, coupled with a toll on the I-5 crossing, would lower the number of vehicles crossing the river each day (see Section 3.1 of the DEIS). Furthermore, the vehicles using the I-5 crossing would be able to travel more efficiently because CRC would reduce congestion in the project corridor. The air quality modeling presented in the DEIS indicates that these fewer trips, combined with less congestion, would reduce pollutant emissions from vehicles using the I-5 crossing (see Section 3.10 of the DEIS).

See the response to comment 035-083 regarding asthma.

O-035-086 A Supplemental DEIS must provide analysis of the economic impact of tolling on EJ communities and their mobility for each of the build alternatives. The EJ technical report's brief mention that tolling would impact EJ populations, specifically off of I-205,[207] is insufficient. The DEIS must analyze *what the adverse impact will be*, for each build alternative and likely tolling scheme, to fully disclose impacts as NEPA requires.

D. Air Quality

O-035-087 The CRC has the potential to significantly affect air quality in and around the I-5 corridor, but the DEIS does not adequately address all important air quality impacts. The DEIS relies on unrealistic projections of future traffic volume by underestimating induced traffic, and therefore underestimates future air pollution emissions in the I-5 corridor. See Traffic and Climate Change comments. As a result, the proposed build alternatives will likely increase localized air pollution to the detriment of public health, particularly relative to the no-build alternative and alternatives that would not increase highway capacity. NEPA's requirement to

O-035-088 evaluate significant impacts to the human environment encompasses human health effects; the CEQ regulations state the analysis must consider effects including "…health, whether direct, indirect, or cumulative."[208] Under this rule, an adequate DEIS must account for the health risks of air pollution "hotspots;" areas with higher pollution levels than average in the surrounding community. Hotspots can develop due to proximity to pollution sources, such as a neighborhood next to I-5.

[207] *Id* at 5-36.
[208] 40 CFR § 1508.8.

O-035-086

As discussed in Chapter 3.5 of the DEIS, the potential for the project, including tolling, to cause high and adverse effects on EJ populations was analyzed. The analysis considered adverse effects, benefits, and potential mitigation. The adverse economic impacts would vary little among the different build alternatives and tolling structures contemplated. A supplemental DEIS to further cover this issue is not warranted. See Chapter 3.5 of the FEIS, and its supporting Environmental Justice Technical Report, for an updated discussion of tolling's effects on EJ populations.

O-035-087

The validity of the traffic modeling is addressed under 035-068 and the induced growth analysis is addressed under 035-066. The modeling indicated that fewer trips would cross the river and the duration of congestion would be substantially lower with the project. The air quality modeling presented indicates that fewer trips combined with less congestion, would reduce pollutant emissions relative to the no-build. The induced growth analysis indicated that the project would be very unlikely to result in induced sprawl.

O-035-088

The FEIS includes modeled concentrations from the 2005 Portland Air Toxics Solutions (PATS), as well air toxics monitoring data from an elementary school next to I-5. Model results from PATS indicate there are elevated concentration levels along freeway corridors. However, this does not mean that CRC would be a cause of higher than average levels of pollutants, as the CRC project does not cause I-5. I-5 is an existing condition and will continue to operate whether the CRC project is built or not. Thus, hotspots along I-5 are a consequence of I-5 and not of the CRC project. The analysis in the DEIS showed, and the FEIS agrees, that criteria pollutants and MSAT emissions from I-5 through north Portland will be substantially lower in the future with or without the

O-035-088 Rather than transparently disclose the possible environmental and health impacts of the alternatives' air emissions, however, the DEIS avoids air quality analysis by: relying on predicted improvements in automobile emissions standards to downplay the possible differences in pollution levels between the bridge alternatives; assuming that compliance with other statutes satisfies NEPA's requirement to analyze and disclose all impacts; and relying on models

O-035-089 incapable of assessing hotspot-type health risks. The DEIS also fails to consider the health effects of exposure to multiple criteria air pollutants and air toxics, and their possible synergistic

O-035-090 effects. The analysis does not consider visibility impacts, though critical in the region's many scenic and pristine places. Finally, the DEIS air quality section lacks citations to corresponding

O-035-091 analysis in the Air Quality Technical Report, which in turn lacks citations to information sources, making it difficult for readers to discover what the conclusions are based on and how they were reached.

1. The DEIS relies on projected emissions decreases unrelated to the CRC to avoid air quality analysis

O-035-092 The DEIS repeatedly emphasizes predicted decreases in vehicle emissions, unrelated to the project, finding a less than 1% variation in pollution between the build and no-build alternatives.[209] But while these emissions standards improvements will eventually benefit public health, they do not eliminate the need for legitimate air quality comparisons between the proposed alternatives, or for a legitimate range of alternatives. An acceptable range of alternatives would include proposals with significant air quality *benefits* compared with the no-build option, regardless of unrelated emissions decreases. This would result in additional public

[209] DEIS, 3-277.

project. It also shows that future emissions in north Portland will be further lowered, slightly, with the CRC project as traffic flow is improved.

O-035-089

The DEIS did consider these issues. Pages 3-275 through 3-277 and Section 3.10.2 explain, and the Air Quality Technical Report (sections 4.2.2 and 5.2) further details, the relevance of such air-quality-related health risks to the project, including the known limitations and uncertainties of current science and methodologies, the information, findings and relevance of the Portland Air Toxics Assessment study, and the approach the project developed and implemented in coordination with regulatory agencies to address these concerns. Please see Chapter 3 (Section 3.10) of the FEIS and the accompanying Air Quality Technical Report for an updated discussion of these issues.

O-035-090

As discussed in Chapter 3.10 of the DEIS, VOCs and nitrogen dioxide contribute to the creation of ozone, and each alternative, including the No-Build Alternative, is anticipated to reduce contributions to regional VOC and nitrogen dioxide levels. Updated air quality analysis is included in the FEIS. As discussed in Chapter 3.10, with the LPA, compared to existing conditions, future regional emissions are expected to decline by about 75 percent for nitrogen dioxide and 55 percent for VOCs.

O-035-091

For information on references used for the Air Quality section (Section 3.10) of the DEIS, please see Chapter 10 of its supporting Air Quality Technical Report.

O-035-093 health benefits, whatever denominator the DEIS adopts. Perhaps if the purpose and need statement adequately prioritized public health protection, rather than failing to address pollution and health altogether,[210] the range of alternatives would offer some project-based air pollution reductions.

O-035-094 Contrasting the DEIS' air quality analysis with its climate change analysis shows how the DEIS cherry-picks data from future pollution estimates. The DEIS climate change section cites uncertainty in future fuel efficiency standards, and how they will phase in, to avoid specific greenhouse gas calculations.[211] Regarding air quality, however, the DEIS treats future emissions standards with a great deal of certainty; it does not even acknowledge uncertainties as to future emissions standards, when they will take effect, or how long the phase-in of cleaner cars will take, instead conclusively predicting tremendous emissions reductions across the board by 2030.[212] Neither the DEIS nor the Air Quality Technical Report provide citations for these emissions estimates or a rationale for this certainty.[213] *Id.* Therefore, it is inappropriate for the DEIS to rely on predicted decreases.

[210] DEIS, 1-3 – 1-5.
[211] DEIS, 3-431.
[212] DEIS, 3-277.
[213] Emissions reductions as a result of "clean car" standards are far from certain. In December 2007, Congress passed the first increase in fuel economy standards since Congress first passed the fuel economy standard in 1975. This legislation mandates a 40% increase in fuel economy in new cars by 2020. The federal government has failed to pass any sort of end-of-tailpipe emissions standard for cars, however, and the US EPA has worked to block every attempt by the States to impose their own standards. 73 Fed. Reg. 12156, 12156-12169. End-of-pipe standards like those adopted by many other states, representing about 45% of the new car market, would provide twice the greenhouse gas reductions by 2020 as the federal fuel economy standards. California Air Resources Board, *Comparison of Greenhouse Gas Reductions for the United States and Canada Under U.S. CAFÉ Standards and California Air Resources Board Greenhouse Gas Regulations,* Feb. 25, 2008. (Attached as Exhibit U.) Unfortunately, the U.S. EPA continues to block these emissions standards. *See* December 19, 2007, letter to Governor Schwarzenegger from EPA Administrator Steve Johnson. (Attached as Exhibit V.) Assuming

O-035-092

Please see the response to comment O-035-093.

O-035-093

CRC is first and foremost a transportation project, but one that must meet all environmental regulations. This project must comply with State and Federal air quality regulations and standards intended to protect human health. Likewise, jurisdictions and the public in the Portland-Vancouver region have made it clear that CRC should seek methods for improving air quality. So, while the foundation of the project - the Purpose and Need - is to address transportation problems, the evaluation in the DEIS and ongoing design of the project have considered how CRC will affect air quality and how it can reduce vehicle emissions.

The air quality evaluation presented in the DEIS assessed how the project would affect emissions of pollutants regulated by state and federal standards. Oregon and Washington, as well as the federal government, have ambient air quality standards. These standards are based on human health. This evaluation included an analysis to demonstrate this project would allow the region to retain conformity with state and federal air quality standards for Carbon Monoxide (CO). The CO analysis analyzed potential CO impacts at intersections where traffic volumes would be affected by the project. See the Air Quality Technical Report for a detailed explanation of the state and federal regulations concerning air quality and the evaluation of how this project would affect compliance with these regulations.

The evaluation in the DEIS found "that future (no-build or build) emissions of all pollutants would be substantially lower than existing emissions for the region and the subareas" (page 3-277). The DEIS explains that these reductions in emissions are largely the result of on-going reductions in vehicle emissions that will occur with or without the

O-035-095 In another contradiction, the greenhouse gas analysis contrasts the build alternatives with the no-build alternative. By failing to compare all alternatives with the status quo, the greenhouse gas analysis obscures the fact that the build alternatives will dramatically increase emissions compared with the status quo.[214] In this way, the greenhouse gas analysis is skewed to present the build alternatives as better choices. The air quality section is similarly skewed to

O-035-096 favor the build options. The air quality section compares status quo air pollution levels to the entire set of alternatives. By failing to compare the build alternatives with the no build alternative, the air quality analysis obscures the fact that none of the build alternatives provide an air pollution benefit over the no-build option, and that likely increases in vehicle miles traveled will actually increase build alternative emissions over the no-build option. This approach capitalizes on future benefits unrelated to the project.[215]

2. Criteria Pollutants

O-035-097 Clean Air Act criteria pollutants are pollutants that EPA has determined "cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare."[216] As of this date, EPA has made "endangerment findings" for six pollutants – particle pollution (PM, PM10, and PM2.5), ground-level ozone (0_3), sulfur dioxide (SO_2), nitrogen oxides (NOx), lead (Pb), and carbon monoxide (CO). Once EPA makes an endangerment

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that clean car standards will be implemented in the future, how quickly and to what extent they are integrated in to the fleet of American vehicles is also uncertain.

[214] DEIS, 3-433.
[215] DEIS, 3-277.
[216] 42 U.S.C. § 7408.

project, and are based on relatively standard assumptions regarding future vehicles and fuel. The anticipated vehicle emission reductions are based largely on regulated improvements in fleet fuel efficiency standards, and regulated improvements related to cleaner gasoline and diesel fuels. Any extraordinary improvements in fuel efficiency or fuels would result in even greater emission reductions.
Projected reductions in vehicle fleet emissions would result in a 25% to 90% reduction in criteria pollutants over existing conditions, even with the anticipated growth in population, employment and VMT. In addition, the build alternatives would generally provide further reductions in vehicle emissions at the regional level and for some of the sub-areas along I-5. See also the responses to comments 035-083 and 035-089.

O-035-094
The DEIS calculates greenhouse gas estimates so the assertion that it avoids calculations is perplexing. See Section 3.19.8 of the DEIS and Chapter 3 (Section 3.19.10) of the FEIS.

Regarding uncertaintly, there is, of course, uncertainty in any forecasts or projections about the future. This is a given. The uncertainty associated with climate change and greenhouse gas emission futures, however, is greater and potentially more consequential than that associated with the forecasts of the other air pollutants. For example, criteria air pollutants have been regulated at the federal and state levels, and modelled at the regional and local levels, for decades. Legislation that affects these emissions was first passed over 30 years ago. The models for estimating future emissions have been continually refined and have long been approved by EPA. It is a broadly accepted and understood process. Further, the analysis indicates that future emissions of these pollutants will be well within compliance standards. There is little reason to expect that there is any unique and substantial uncertaintly in these forecasts that would result in dramatically different conclusions.

O-035-097

finding, it must develop "air quality criteria" for that pollutant.[217] The criteria is intended to accurately reflect the latest scientific knowledge about effects on public health and welfare that can be expected from various levels of that pollutant in the ambient air.[218] Once the criteria are established, EPA must set National Ambient Air Quality Standards (NAAQS) to protect human health and welfare.[219]

The Clean Air Act requires that EPA establish an independent scientific review board (the Clean Air Scientific Advisory Committee or CASAC).[220] Every five years, the EPA and CASAC must review the criteria and the NAAQS to ensure that they continue to protect public health and welfare based on the latest science.[221] If warranted by the scientific review, EPA must make revisions to criteria and promulgate new standards, for each listed pollutant.[222] EPA is also required to involve the public in the criteria development and NAAQS review process by publishing notice in the federal register and reviewing public comments.[223]

Despite these mandates, criteria pollutants often pose significant health threats at ambient concentrations at or below the national standards for three primary reasons. First, EPA does not comply with its duty to review the criteria and NAAQS every five years.[224] Therefore, the

[217] *Id.*
[218] *Id.*
[219] 42 U.S.C. § 7409.
[220] 42 U.S.C. § 7409(d)(2)(A).
[221] 42 U.S.C. § 7409(d)(1) & (2)(A).
[222] 42 U.S.C. § 7409(d).
[223] 42 U.S.C. § 7607(d).
[224] *See American Lung Association v. Reilly*, 962 F.2d 258, 263 (2d Cir. 1992) (failure to review NAAQS for ozone); *Environmental Defense Fund v. Thomas*, 870 F.2d 892, 900 (2d Cir. 1989) (failure to review NAAQS for sulfur dioxide), *cert denied sub nom.* American Lung Association v. Browner, 884 F. Supp. 345, 346 (D. Ariz. 1994) (failure to review NAAQS for PM); *Center for Biological Diversity v. Johnson*, Civ. No. 05-1814 (D.D.C. filed 2005) (failure to review NAAQS for nitrogen oxides and sulfur dioxide); *Communities for a Better Environment v. EPA*, Civ. No. C 07-03678 JSW (N.D. Cal, May 5, 2008) (failure to review NAAQS for carbon monoxide).

The situation is quite different for greenhouse gas (GHG) emissions from vehicles. GHG emissions from vehicles were not previously, and still are not regulated. The only real regulation that indirectly affects greenhouse gas emissions from automobiles is the federal fuel efficiency (CAFE) standards. As the DEIS was being prepared, GHGs and climate change were growing as topics of wide public concern, and the potential for broad new legislation, for new vehicle technologies, and for new fuel sources that could dramatically reduce GHG emissions, was just beginning. Our estimates of GHG emissions in the DEIS assumed that there would be no extraordinary changes in legislation, vehicles or fuels to dramatically reduce GHG emissions. Given this, it was appropriate for the DEIS to acknowledge the unique uncertainty associated with forecasting GHG emissions at this point in time. In addition, the DEIS noted other factors regarding the unique uncertainty associated with estimating future GHG emissions. Also see the discussion of GHG emissions and climate change in Chapter 3 (Section 3.19) of the FEIS.

O-035-095

The projected emissions associated with Existing Conditions, the No-Build alternative, and each of the Build alternatives are enumerated in the DEIS, Exhibit 3.19-4, page 3-435.

"Existing conditions" are not presented as a choice and do not reflect what will happen if the proposed action is not built. Existing conditions are presented as a basis for understanding how the future conditions are expected to change compared to today, both without the proposed action (No-Build alternative) and with the proposed action (the Build alternatives).

O-035-096

The Air Quality Technical Report included with the DEIS provides a detailed comparison of emissions for all alternatives at the regional and

O-035-097

criteria and NAAQS are not based on the latest scientific knowledge about the pollutants. Second, EPA has on at least two occasions rejected the NAAQS levels that CASAC has recommended as requisite to protect public health and welfare.[225] A May 20, 2008 report by the U.S. House Committee on Oversight and Government Reform reveals the political nature of the "science based" NAAQS setting process in the case of ozone.[226] Third, for some criteria pollutants, there is no level under which the population will experience "no impacts." That is, the more pollution present in the ambient air, the more death and disease associated with the exposure, even if the NAAQS are satisfied. For example, the most recent review of the NAAQS for fine particulate matter found that there is no level of particulate matter pollution at which no human health effects occur. According to EPA, fine particulate matter pollution causes a variety of adverse health effects, including premature death, heart attacks, strokes, birth defects, and asthma attacks.[227] In reviewing the fine particulate matter health based ambient air quality standard, EPA was unable to discern a threshold level of pollution under which the death and disease associated with fine particulate matter would not occur. Studies reviewed by EPA revealed a linear or almost linear relationship between diseases like cancer and the amount of fine particulate matter in the ambient air.[228] Consequently, compliance with NAAQS does not necessarily equal protection of human health from adverse effects, since the NAAQS thresholds

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[225] *See New York v. EPA* (D.C. Cir) (states challenge EPA's 2008 revised ozone standards as inadequate to protect human health and welfare and because EPA disregarded recommendations of CASAC); *American Farm Bureau Fed. V. EPA* (D.C. Cir) (challenging EPA's 2006 PM2.5 standards for the same reasons).
[226] *See* May 20, 2008 Memorandum from the Committee on Oversight and Government Reform, Majority Staff, to Members of the Committee, Re: Supplemental Information on the Ozone NAAQS. Attached as Exhibit W.
[227] 71 Fed. Reg. 2620 (Jan. 17, 2006).
[228] *Id*. at 2635.

sub area levels. Traffic and emission estimates have been updated for the LPA and No-Build Alternative and are available in the Air Quality Technical Report included with the FEIS.

O-035-097

Since publication of the DEIS, the EPA adopted revised standards for lead, SO2 and NOx. New NAAQS for PM have also been implemented since 2006.

Conformity rules state that the project must not cause or contribute to a violation of the national ambient air quality standard (NAAQS). Thus, the NAAQS are the standard by which the project is measured. The project cannot arbitrarily set its own "standards" under the current regulatory environment. Thus, until the States or EPA promulgates a new standard, the current levels are appropriate for evaluation purposes. The DEIS and FEIS report emissions of CO, NO2, and PM. SO2 and lead emissions were not reported in the DEIS or FEIS as their monitored levels are low compared to the standards. The primary SO2 sources are power production and industrial processes, which account for about 90% of the SO2 emissions. The transportation sector is currently not the primary contributor to SO2 emissions in the state. With the removal of lead from gasoline, lead concentrations have dropped considerably, and are many orders of magnitude lower than the standard. Because of the above reasons, SO2 and lead were not included in the DEIS.

The specific NAAQS used in the FEIS analysis are reported in Exhibit 2-1 of the Air Quality Technical Report.

O-035-097 for particulate matter allow for some particulate matter contamination, and any particulate matter contamination has adverse health effects.[229]

As described above, there are six criteria pollutants that EPA has found are reasonably likely to endanger health and welfare. As will be explained below, the DEIS fails to provide the requisite "hard look" at the impacts of these pollutants. Indeed the DEIS gives only cursory consideration to these pollutants, failing to assess risks from five of the six pollutants altogether. The DEIS also improperly uses presumed attainment of the NAAQS to conclude that there will be no significant impacts from air pollution from criteria pollutants.

3. The DEIS Must Assess Risks from All Criteria Pollutants

O-035-098 The DEIS analyzes carbon monoxide more rigorously than any other transportation-related air pollutant, based on the airshed's past violations of the CO NAAQS and current Maintenance status. Neither the DEIS nor the Air Quality Technical Report offer a basis for the decision to limit criteria pollutant discussion to CO.[230] Instead, because Portland and Vancouver are closer to violating CO standards than those of any other criteria pollutants, the DEIS baldly asserts it is "the only pollutant of concern" for the CRC project. This determination likely comes from a Federal Highway Administration guidance document from 1987, directing the agency not to address project-level contributions to NO_x, ozone, or hydrocarbons, and to limit CO analysis of projects with CO impacts that will not cause NAAQS violations.[231] The guidance document

[229] *Id.*
[230] DEIS, 3-273; Air Quality Technical Report, 1-5.
[231] Department of Transportation, FHWA, *Guidance for Preparing and Processing Environmental and Section 4(f) Documents* (Oct. 30, 1987) at 15, http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm. Attached as Exhibit X.

O-035-098

The DEIS covers the regulatory need for the CO analysis. The project must comply with the Portland-Vancouver CO maintenance plans and these plans require verifying that planned transportation projects will not cause or contribute to a violation of the federal standards for CO. This verification process is referred to as demonstrating conformity. Demonstrating conformity consists of two different analyses:

- A regional analysis – the project must be included in a conforming regional transportation plan and transportation improvement plan.
- A local analysis - the project must analyze the most congested intersections and demonstrate that CO levels, including the project, will be below the CO standards.

For ozone, an analysis of project ozone precursors (NOx, VOC) emissions is also required.

The Portland-Vancouver area is in attainment for the other criteria pollutants, so that more robust analyses are not generally required, especially if the project shows a decrease in emissions from the existing conditions.

O-035-098 also fails to cite authority or provide a rationale for limiting air quality impacts assessment in this way.[232] Neither NEPA, nor the regulations implementing NEPA, limit consideration of air impacts to a sub-set of pollutants. Rather, the DEIS must consider the impacts on air quality that occur as a result of the action along with other reasonably foreseeable effects.[233]

4. The DEIS Cannot Equate Compliance with the NAAQS with a Legally Sufficient Air Quality Analysis

O-035-099 The DEIS' limited criteria pollutant review is inadequate on its face. Restricting criteria pollutant review to CO based on past violations of the NAAQS ignores the very real health impacts of other criteria pollutants. And even the CO analysis stops upon concluding none of the proposed alternatives will cause future CO NAAQS violations. In this way, the DEIS essentially equates compliance with the NAAQS with a sufficient analysis of the air quality impacts of the project. By thus equating Clean Air Act compliance with a sufficient NEPA analysis, the DEIS violates NEPA's requirement to disclose all of the project's impacts on the human environment.

The NAAQS are intended to establish compliance standards for the Clean Air Act, not to serve as a benchmark for NEPA impact assessments. The 9th Circuit has held "the fact that [an] area will remain with compliance with the NAAQS is not particularly meaningful" in a NEPA impacts evaluation, if the area's air quality exceeds the NAAQS standards. The "more relevant measure" is "the degree to which [the federal action] contributes to the degradation of air quality."[234] Thus the region's current high air quality cannot be used to determine the CRC

[232] *Id.*
[233] 40 C.F.R. §§ 1508.8 & 1508.25.
[234] *Edwardsen v. U.S. Dep't of the Interior*, 268 F.3d 781 at 789 (9th Cir. 2001).

O-035-099

The DEIS and Air Quality Technical report indicate that regional pollutant emissions from vehicles will continue to decrease in the future even though VMT increases, suggesting air quality will improve in the future. This is supported by air quality monitoring conducted by the state air quality agencies that shows most pollutant levels have decreased over the last ten years.

The authors cite that "the degree to which [the federal action] contributes to the degradation of air quality" should be the measure for evaluation. The DEIS and FEIS demonstrate that air quality is improving from current conditions (no degrading) and that the CRC project will slightly lower future emissions in the project area over the No-Build Alternative as traffic flow is improved.

O-035-099 alternatives will not adversely affect human health. Moreover, NEPA regulations instruct agencies to consider "whether the action threatens a violation of Federal, state, or local law or requirements imposed for the protection of the environment," as just one of ten factors indicative of the severity of impacts.[235] The DEIS depends entirely upon this one factor to show that impacts are not significant, and thus do not require disclosure and analysis. Further, the inadequacy of EPA's current NAAQS demonstrates the poor logic of assuming no environmental or health impact simply because an area is meeting federal standards.

5. Carbon Monoxide

O-035-100 The DEIS' analysis of carbon monoxide pollution under the different CRC alternatives fails to accurately present human health and environmental risks of CO by equating compliance with the NAAQS with a finding of no health impact, illegitimately using CO as a proxy for other criteria pollutants, and ignoring its role as a greenhouse gas. Though EPA has a non-discretionary duty under the Clean Air Act to review and update the NAAQS every five years,[236] EPA has not revised the CO NAAQS and reported its decision in the Federal Register since 1994.[237] As a result, environmental groups took action last year to compel EPA to update the existing CO NAAQS and ensure it protects public health; the District Court for the Northern District of California granted summary judgment for the plaintiffs and directed EPA to submit a

[235] 40 C.F.R. § 1508.8(b).
[236] 42 U.S.C. § 7409(d)(1)
[237] 59 Fed. Reg. 38906 (Aug. 1, 1994).

O-035-100

Conformity rules state that the project must not cause or contribute to a violation of the National Ambient Air Quality Standards (NAAQS). The project cannot unilaterally set its own "standards" under the current regulatory environment. Thus, until the States or EPA promulgates a new standard, the current state and Federal standards are appropriate for evaluation purposes.

Even so, it is worth noting that the future CO concentrations at the most impacted intersections would be well below the relevant NAAQS, as discussed on page 3-281 of the DEIS. The highest modeled one-hour concentration was 5.2 parts per million, or about 38 percent lower than existing conditions and 85 percent below the NAAQS. The highest modeled eight-hour concentration was 4.7 ppm, or about 34 percent lower than existing conditions and 48 percent below the standard.

You have suggested that the CRC analysis should compare projected CO concentrations to more protective standards than the NAAQS, and you name the World Health Organization's (WHO) 26.1 ppm 1-hour CO standard. For comparison, the highest projected future 1-hour CO concentration (5.2 ppm) with the project would be about 80 percent below the WHO standard.

The project fully recognizes the potential health effects of CO. However, the analysis indicates that there will be large future reductions in CO emissions and concentrations, and that they will be substantially below even the most protective standards that have been established to protect human health. Although the air quality analysis has been updated for the FEIS, the analysis supports the conclusion reached in the DEIS.

O-035-100

schedule for its CO NAAQS revision by July 7, 2008, and to complete its NAAQS revision by May 13, 2011.[238]

CO is deadly to humans and other animals at high levels. At lower levels, CO has serious adverse effects on human health and welfare. CO causes serious health risks, including cardiovascular problems and central nervous system problems, and has been linked to developmental toxicity effects.[239] These effects are generally related to reduced levels of oxygen in the blood caused by CO's reaction with hemoglobin. These reduced oxygen levels result in tissue hypoxia.[240]

Exposure to CO has been linked to adverse effects on the cardiovascular and nervous systems of both adults and developing children, including exacerbation of heart disease, contributing to low birth weight, and increasing the daily frequency of respiratory illness.[241] Effects are most prevalent in the elderly, small children, fetuses, pregnant women, and people with anemia or pulmonary and heart disease.[242] Considering that about 20% of the United States' population has some type of cardiovascular disease, and that heart disease is the leading cause of death in this country, the impacts on this subset of the population are particularly important.[243]

Since EPA published its criteria document for CO in 2000, significant new information about CO's impacts on fetuses has been published. For example, in 2000 EPA claimed a non-conclusive "suggestion" that exposure to ambient CO may be

[238] *Communities for a Better Environment v. EPA*, N.D. Cal, No. C 07-03678 JSW (May 5, 2008). Attached as Exhibit Y.
[239] EPA, *Air Quality Criteria for Carbon Monoxide*, EPA 600/P-99/001F, 6-1 (2000) (hereinafter CO 2000 AQCD). Attached as Exhibit Z.
[240] *Id*. at 5-22.
[241] *Id*. at 6-1.
[242] *Id*. at 4-3.
[243] *Id*. at 6-2 & 6-6.

O-035-100

associated with low birth weight.[244] Since then, at least three studies have confirmed that suggestion. One study of children in the urban northeastern United States indicated a correlation between low birth weight and elevated ambient CO during each trimester.[245] This study identified an increased risk of low birth weight at ambient CO levels greater than 1.46 ppm, a threshold level significantly lower than studies identified by EPA in the 2000 CO air quality criteria review and significantly lower than the current CO NAAQS.[246]

Another study of children born in California during 1975-1987 noted a correlation between decreased birth weight and CO exposure in the first trimester.[247] That study noted that a correlation between low birth weight and exposure to CO is plausible because of the effect of CO on maternal hemoglobin (reducing oxygen available to fetal circulation) and direct effects on fetal hemoglobin - which has a greater affinity for binding CO than adult hemoglobin.[248] The study also described a correlation between low birth weight and CO exposure at ambient levels greater than 1.4 ppm.[249]

A study of air pollution impacts on fetuses in Seoul, South Korea, found an increase of carbon monoxide concentrations during the first trimester was a risk factor for low birth weight in full term infants.[250] These studies indicate the current NAAQS of 9 ppm over 8 hours and 35 ppm over 1 hour does not protect pregnant mothers and fetuses from these adverse effects.

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[244] CO 2000 AQCD at E-6 & 6-7.
[245] Mildred Maisonet, *et al.*, "Relation Between Ambient Air Pollution and Low Birth Weight in the Northeastern United States," Environmental Health Perspectives Vol. 109, Supp. 3, pp. 351-356, 353 (June 2001).
[246] *Id.* at 355.
[247] Muhammad T. Salam, *et al.*, "Birth Outcomes and Prenatal Exposure to Ozone, Carbon Monoxide and Particulate Matter: Results from the Children's Health Study," 113 Environmental Health Perspectives 1638, 1641 (Nov. 2005).
[248] *Id.* at 1642
[249] *Id.* at 1643.
[250] Eun-Hee Ha, *et al.*, "Is Air Pollution a Risk Factor for Low Birth Weight in Seoul?" Epidemiology at 643-48 (Nov. 2001).

O-035-100

Low birth weight in children has a number of serious effects over the lifetime of the individual. Low birth weight has been associated with disruptive behavioral problems, reduced IQ and an increased susceptibility to depression.[251] Several epidemiologic studies have shown associations between low birth weight and a number of other problems as adults, including obesity, insulin resistance, type 2 diabetes mellitus, and cardiovascular disease.[252] Obesity and diabetes are major public health problems facing the nation. One study concluded that the risk of death from coronary heart disease increased by 14% for each unit (kg/m3) of decrease in ponderal index at birth (birth weight in kilograms/ length in cubic meters).[253]

Ignoring all of the impacts described above, the DEIS concludes maintenance with the CO NAAQS adequately protects public health. The DEIS also ignores that the CO NAAQS was recently held outdated and unjustified by a federal court and is currently under court-ordered review.[254] Moreover, the DEIS ignores that other regulatory agencies have chosen more protective standards than the CO NAAQS. For example, World Health Organization (WHO) standards include a lower 1 hour standard, 30 mg/m3 (26.1 ppm), and additional short term exposure protections including a 30 minute limit of 60 mg/m3 (52.3 ppm) and a 15 minute limit of 100 mg/m3 (87.1 ppm)[255]. Given EPA's failure to timely revise its public health standards or

[251] Frances Rice, *et al.*, "The Effect of Birth- Weight with Genetic Susceptibility on Depressive Symptoms in Childhood and Adolescence," European Child & Adolescent Psychiatry at 383 (Oct. 2006).
[252] See Matthew W. Gillman, M.D., "Developmental Origins of Health and Disease," New England Journal of Medicine at 1849 (Oct. 2005).
[253] J.G. Eriksson, *et al.* "Catch-up Growth in Childhood and Death from Coronary Heart Disease: Longitudinal Study," British Medical Journal at 427 (Feb. 13 1999).
[254] *Communities for a Better Environment v. EPA*, N.D. Cal, No. C 07-03678 JSW (May 5, 2008). Attached as Exhibit Y.
[255] The formula to convert a mg/m3 standard to a ppm standard is: 24.45 (volume (liters) of a mole (gram molecular weight) of a gas or vapor when the pressure is at 1 atmosphere (760 torr or 760 mm Hg) and at 25°C) x (limit in mg/m3) / 28.011 (gram molecular weight of carbon monoxide). World Health Organization, Air Quality Guidelines for Europe, 2d ed. (WHO

O-035-100 provide evidence that the current standard protects human health, the evidence available in scientific literature that demonstrates the standard is not protective of public health, and the existence of more protective standards that other regulatory agencies have found necessary to protect public health, it is absurd for the DEIS to assert that compliance with the current CO standard eliminates the responsibility to assess and disclose the CRC's public health implications.

O-035-101 Moreover, the DEIS' CO hotspot analysis also fails to satisfy NEPA or provide the public with an accurate and complete picture of the bridge alternatives' localized impacts. This analysis projected 2030 CO levels at six high-traffic intersections, but as with the rest of the air quality analysis, fails to account for induced traffic. The hotspot monitoring also fails to project CO levels for interim dates between now and 2030, and consequently does not satisfy the Clean Air Act's conformity requirements. The Air Quality Technical Report states this complete analysis will be done for the Final EIS, but gives no reason why it was not done for the DEIS.[256] As a result, the public will not have the opportunity to comment on the bridge impact on CO conformity or complete hotspot data.

O-035-102 Regardless of whether conformity with the CO NAAQS currently protects public health, the DEIS' attempt to skirt legitimate air quality analysis by using CO as a proxy for all transportation pollution also fails under NEPA, because these pollutants cause different health impacts, their emissions may disperse differently with the bridge alternative chosen, and the NAAQS for the other criteria pollutants also may not adequately protect public health. See PM, NO_x and SO_2 discussions below. This reliance on CO as an indicator for all air pollution risks has no basis in law or science; NEPA requires assessment of all health and environmental risks,

regional publications, European series, No. 91, 2000) at Ch. 3, p. 2.
[256] Air Quality Technical Report, 2-5.

O-035-101

The interim year traffic analyses were not available for the DEIS because of the large number of alternatives. The interim year analysis has been completed for the FEIS (see Air Quality Technical Report updated for the FEIS).

See comment O-035-066 on induced traffic issue.

O-035-102

See responses to comments O-035-097 through O-035-100.

O-035-102 40 CFR 1508.8, which should include those from particulates, nitrogen oxides, volatile organic compounds, sulfur dioxide, and hazardous air pollutants as well as their cumulative health impacts.

O-035-103 Finally, the DEIS ignores CO's role as a climate change agent, and goes so far as to state CO is "not a greenhouse gas."[257] The Energy report estimates 1 percent of carbon in gasoline remains un-oxidized, forming CO rather than CO_2.[258] However, CO plays two significant roles related to climate change, both of which the DEIS ignores. First, CO interacts with hydroxyls and interferes with their ability to mitigate the effects of greenhouse gases.[259] Second, CO in the atmosphere eventually oxidizes to form CO_2, thereby directly contributing to climate change.[260]

6. Particulate Matter

O-035-104 The DEIS does not address the CRC alternatives' health or environmental impacts from PM. Though the I-5 corridor currently complies with the PM NAAQS, using this as a benchmark for a no significant impact finding does not ensure "no significant impacts," because PM pollution is non-threshold-based and therefore has adverse health impacts at any level.[261] Because even low levels of PM can cause low birth weights, damage lung function, and increase risks of heart attack and premature death, the DEIS should include hotspot analysis of current

[257] Energy Technical Report, 2-15.
[258] *Id.*
[259] EPA, *Greenhouse Gases and Global Warming Potential Values: Excerpt from the Inventory of U.S. Greenhouse Emissions and Sinks: 1990-2000*, EPA 430-R-02-003, at 4 (April 2002).
[260] *Id.* at 6.
[261] 71 Fed. Reg. 2620 (Jan. 17, 2006); *see also* EPA, Particulate Matter Research, http://www.epa.gov/pmresearch/. Attached as Exhibit AA.

O-035-103

The statement that CO is not a greenhouse gas stands corrected. However, this doesn't affect the calculation of greenhouse gas emissions. The analysis in the DEIS is based on the six primary greenhouse gases identified by the United Nations Framework Convention on Climate Change: Carbon Dioxide (CO2), methane (CH4), Nitrous oxide (N2O), hydroflourocarbons (HFCs), fluorocarbon's (PFCs), and sulfur hexafluoride. These GHGs are converted into Carbon Dioxide equivalents (CO2e) using an approach developed by EPA.

O-035-104

Other than CO, impact analyses are not required for other pollutants. Since the area is currently in attainment for all pollutants and project emissions are projected to decrease, air quality in all neighborhoods should continue to improve in future years regardless of which alternative is selected. Furthermore, the DEIS and FEIS considered emissions in sub-area bases, indicating that the difference between future options are much improved from existing conditions, with the difference between alternatives being small to insignificant. Thus, the future contribution to PM2.5 concentrations by the CRC project are shown to be small to insignificant compared with the overall operation of I-5.

O-035-104 and projected PM levels.[262] Regional compliance with the NAAQS does not ensure the CRC alternatives will have no significant impact on the health of every Portland and Vancouver neighborhood. Therefore, the DEIS must include an analysis of the impacts.

O-035-105 The DEIS also specifically fails to address projected growth in diesel fuel-based traffic.[263] The DEIS projects a 77 percent increase in truck traffic on I-5 by 2030, versus a 37 percent increase in car traffic;[264] this will result in a disproportionate increase in diesel particulates relative to other vehicle emissions. Yet the DEIS predicts a 90 percent decrease in diesel particulates without expressly addressing whether this accounts for increased freight, or simply applies the expected improvements in car emissions to all traffic.[265] Neither the DEIS nor the Air Quality Technical Report address whether truck emissions will improve by the leaps and bounds anticipated for cars.[266]

O-035-106 Moreover, the DEIS does not provide relevant $PM_{2.5}$ monitoring data. The DEIS emphasizes the fact that Portland has only monitored $PM_{2.5}$ since 1999, which it says is not long enough to show a trend, and thus withholds the data from the documentation.[267] However, the report does not even address the current monitoring results, including whether $PM_{2.5}$ levels detected are cause for concern or whether certain areas have significantly higher $PM_{2.5}$ levels than others. Regardless whether the data can show a statistically significant trend, the DEIS must disclose current $PM_{2.5}$ risks, and should provide monitoring data similar to that provided for other criteria pollutants.

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[262] EPA, Health and Environment, Particulate Matter, http://www.epa.gov/air/particlepollution/health.html. Attached as Exhibit AB.
[263] DEIS 3-277.
[264] DEIS, 3-19.
[265] *Id.*
[266] *Id*, Air Quality Technical Report, 1-6.
[267]

O-035-105

The DEIS accounts for increased diesel-based trucks in the projected traffic volumes. Current regulations on diesel emissions are expected to drop diesel impacts by 95 percent. The emission reductions in the DEIS reflect changes in the emission factors for vehicles and diesel vehicles.

O-035-106

The PM2.5 monitoring data, as well as the other pollutants, have been updated for the FEIS (see Air Quality Technical Report updated for the FEIS).

O-035-107

Finally, the DEIS PM data presented and the method in which it is presented have questionable significance. Though the DEIS acknowledges PM levels peak in the Winter in the project area,[268] the ambient pollution estimates only show Summer levels. Without showing that seasonal high PM concentrations in Winter will not exceed health standards under the CRC alternatives, the DEIS cannot legitimately make a finding of no significant impact. The DEIS also presents its Summer pollutant data in an unusable form. The tables provided list pollutant volumes per day, in pounds for subareas and tons for the region.[269] This effectively hides the meaning of the data, by disconnecting it from health impacts properly expressed by ambient concentration, not total volume emitted.

7. Nitrogen Oxides

O-035-108

EPA has missed its statutory deadline to review and revise the NO_2 NAAQS. The NO_2 standard has not been updated since 1993, and has not been reviewed at all since 1996.[270] Thus, equating compliance with this NAAQS with a lack of any impact from NO_x pollution suffers the same flaws as relying on the CO standard.

Nitrogen oxides ("NOx") are highly reactive gases emitted primarily from the combustion of fossil fuels in mobile and stationary sources.[271] NOx can cause respiratory problems such as asthma attacks, respiratory tract symptoms, bronchitis, and decreased lung

[268] Air Quality Technical Report, 4-1.
[269] Air Quality Technical Report, 5-2 – 5-8.
[270] 61 Fed. Reg. 52,852 (Oct. 8, 1996).
[271] *Prevention of Significant Deterioration for Nitrogen Oxides*, 70 Fed. Reg. 8880, 8888 (Feb. 23, 2005).

O-035-107

The tables in the DEIS show the change in overall emissions for the various alternatives. Since all alternatives show decreases in emissions from current conditions, resultant concentrations will likely decrease in the future as well.

The difference between summer and winter PM emission rates is only about 4 percent. So regardless if summer or winter emission rates were used, the results would show the same trends. The tables in the FEIS were revised to be more consistent.

O-035-108

In relation to the adequacy of the NAAQS in providing air quality standards by which the project is measured, please see response to O-035-97. The EPA issued a final rule effective January 22, 2010, updating the NO2 standard. This rule established that the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitoring location within an area must not exceed 100 parts per billion (ppb). The EPA also proposes to establish requirements for an NO2 monitoring network that will include monitors within 50 meters of major roadways. EPA is proposing to require monitors to be placed by January 2013. In addition, the EPA is currently proposing secondary standards for NO2 identical to the primary standards to provide requisite protection for the direct effects on vegetation resulting from exposure to gaseous oxides of nitrogen in ambient air. Final rulemaking on the secondary standards will occur no later than March 20, 2012.

The commenter cites high hourly NO2 concentrations from a station in Anacortes, WA. This station is downwind of a large refinery and is not located in an urban environment near a roadway. Regardless, the project fully recognizes the potential health effects of NO2 from roadways. Monitoring data from the ODEQ SE Lafayette station indicate that annual NO2 concentrations are well below the Federal standard.

O-035-108

function.[272] NOx emissions result in nitrogen deposition, which may cause "significant adverse changes" in terrestrial ecosystems such as soil acidification, increases in soil and plant susceptibility to natural stresses, and alteration of natural plant species balances.[273] Nitrogen deposition can also adversely affect aquatic ecosystems through acidification or eutrophication, both of which cause a reduction of water quality can leave the water body unfit for many aquatic organisms and/or human consumption.[274] In addition, NOx emissions contribute to visibility impairment, global warming, acid rain, formation of ground-level ozone and formation of toxic chemicals.[275] NOx is also a precursor chemical to fine particulate matter.[276] The DEIS does not describe or in any other way analyze potential impacts from increased NOx pollution.

The Columbia River Gorge National Scenic Area is particularly impaired by NOx and SOx pollution (discussed below). The Columbia River Gorge National Scenic Area ranked 6th in the country for poorest visibility for Scenic Areas. Gorge air quality has been monitored for the last seventeen years. The Forest Service has documented that visibility impairment occurs on at least 95% of the days that have been monitored. Metals, sulfur and nitrogen concentrations in lichen tissue found in the Gorge are comparable to that found in lichen tissue sampled in urban areas. The Gorge now stands among the most polluted places in the country, including Pittsburgh and Los Angeles. Nitrogen deposition rates in the Gorge are comparable to the most polluted areas in U.S. The DEIS completely fails to address how increased car and truck emissions due to induced or otherwise increased traffic may impact the Gorge.

Instead of an analysis, the DEIS relies on its predictions of future compliance with the

[272] Committee on Environmental Health, American Academy of Pediatrics, *Ambient Air Pollution: Health Hazards to Children*, 114 PEDIATRICS 1699, 1701 (Dec. 2004).
[273] 70 Fed. Reg. at 8892–93.
[274] *Id.* at 8893.
[275] *Id.* at 8888–89.
[276] 70 Fed. Reg. 25162, 25162 (May 12, 2005).

Hourly data from the ODEQ Lafayette [1] station show the fourth highest NO2 concentrations are about 53 ppb, indicating that the regional airshed will likely have impacts less than the new standard. However, monitoring next to a major highway has not been undertaken. Studies have shown that NO2 concentrations in vehicles and on or near major roads are appreciably higher than those measured at monitors in the current network. In-vehicle concentrations can be 2-3 times higher than measured at nearby community-wide monitors. Near-roadway concentrations have been measured to be approximately 30 to 100% higher than away from major roads. The concentrations fall off exponentially with distance from the roadway, reaching regional values by about 200 meters. In 2008, a rough estimate of NOx roadway concentrations was made by scaling the CO hot-spot concentrations using the ratio of CO-to-NOx MOBILE 6.2 emission rates. When this was done, a maximum concentration of approximately 260 ppb was calculated. Using the DEQ hourly NO2/NOx ratio from the DEQ data, the NO2 concentration would be approximately 53 ppb. Although roadway concentrations are high, these impacts would occur whether the CRC project is built or not. By lowering volumes in the I-5 corridor, local effects should be reduced relative to the No-Build Alternative.

This comment cites various impacts due to "increased NOx pollution". However, the DEIS and technical report shows decreased regional NOx emissions for all alternatives from current conditions, with little difference between the alternatives (i.e., insignificant). With future projected decreases in NOx emissions, impacts on health, visibility impairment, acid deposition and lichen will not worsen and would likely improve.

[1] Oregon Department of Environmental Quality. 2010 Oregon Air Quality Data Summaries. Available http://www.deq.state.or.us/aq/forms/2010annualReport.pdf. Accessed 9/6/11.

O-035-108 NOx NAAQS under all scenarios. Just as with particulate pollution and CO, relying on the NOx NAAQS as a proxy for a proper NEPA analysis must fail. Compliance with the NAAQS does not demonstrate that there will be no significant adverse health impacts. First, the NAAQS of 0.053 ppm as an annual arithmetic mean does not protect the public from acute effects of short-term exposures to dangerous levels of NOx. For example, citing two studies completed after the 1993 air quality criteria document, the American Academy of Pediatrics reports that "controlled-exposure studies of people with asthma have found that short-term exposures (30 minutes) to nitrogen dioxide at concentrations as low as 0.26 ppm can enhance the allergic response after subsequent challenge with allergens."[277] These findings are important because some communities that are in compliance with the NO_2 NAAQS nonetheless may experience short-term NO_2 levels in excess of 0.25 ppm. Id. For example, in 2007 and 2008, Anacortes, Washington recorded one-hour peak NO_2 concentrations above 0.25 ppm (0.265 and 0.374 ppm respectively)[278]. Other areas have experienced similar peak concentrations.[279] Despite these high readings, these areas meet the current NO_2 NAAQS. Therefore, the DEIS's conclusion that the area around the project will continue to meet the NOx NAAQS fails to provide the information necessary to determine if residents around the project will experience dangerous

[277] Committee on Environmental Health, American Academy of Pediatrics, "Ambient Air Pollution: Health Hazards to Children," Pediatrics 2004: 114: 1699-1707, at 1701.

[278] Data available at http://iaspub.epa.gov/airsdata/ADAQS.monvals?geotype=us&geocode=USA&geoinfo=us%7EUSA%7EUnited+States&pol=NO2&year=2008+2007+2006+2005&exc=0&fld=monid&fld=siteid&fld=address&fld=city&fld=county&fld=stabbr&fld=regn&rpp=100&page=1&sort=d2&fmt=

[279] In 2004, Miami, Florida recorded a one-hour peak NO_2 concentration of 0.417 ppm, while Sublette County, Wyoming reached 0.267 ppm during a similar span.. This data is available at: http://oaspub.epa.gov/airsdata/adaqs.monvals?geotype=st&geocode=FL+WY&geoinfo=%3Fst%7EFL+WY%7EFlorida%2C+Wyoming&pol=NO2&year=2004&fld=monid&fld=siteid&fld=address&fld=city&fld=county&fld=stabbr&fld=regn&rpp=25. Attached as Exhibit AC.

O-035-108 short term impacts.

Second, EPA has missed its statutory deadline to review and revise the NO_2 NAAQS. The NO_2 standard has not been updated since 1993, and has not been reviewed at all since 1996.[280] Because the NOx NAAQS[281] has not been reviewed and updated as required by the Clean Air Act, it cannot be used as a surrogate for ensuring adequate protection of public health and welfare. It has been nearly twelve years since EPA last completed such a review to update the air quality criteria for NO_x and NAAQS for NO_2.[282] During this time, no review of the NO_x criteria or NO_2 NAAQS has been completed, nor has there been any decision on revision of such criteria or NAAQS or promulgation of new NAAQS pursuant to such a review. EPA's action clearly violates Congress' intent that the NAAQS and criteria be reviewed and updated to include the best available science every five years. The DEIS compounds the impacts of EPA's failure on residents near the project area by using the outdated and inadequate NAAQS to demonstrate that no real analysis of air quality impacts is required.

In fact, since the last NAAQS review, extensive scientific evidence has emerged concerning the health and welfare effects of NO_x. This recent evidence indicates that NO_2 is causing adverse effects to human health and welfare at levels allowed by the current NO_2 NAAQS. For example, research completed since the last NO_2 NAAQS update has established that there is a correlation between elevated levels of NO_2 and incidence of Sudden Infant Death

[280] 61 Fed. Reg. 52,852 (Oct. 8, 1996).
[281] In fact, the NAAQS for NOx is actually a measure of NO_2 because EPA claims that NO_2 accounts for the vast majority of NO_x in the atmosphere, and has used this claim as a justification to use NO_2 as a surrogate for NO_x since first promulgating the NAAQS for NO_2 in 1971. *See* 36 Fed. Reg. 8186.

[282] See 61 Fed. Reg. 52,852 (Oct. 8, 1996) (the last such update).

O-035-108

Syndrome ("SIDS").[283] Other recent studies have expanded the base of knowledge on the links between NO_2 and asthma attacks, respiratory tract symptoms, bronchitis, and decreased lung function.[284]

Moreover, since the last review of the air quality criteria for NO_x and NAAQS for NO_2, research into the public welfare impacts of NO_2 emissions has solidified the link between NO_2 emissions and the harmful effects of nitrogen deposition. For example, one 2003 study found a linear relationship between NO_x emissions and nitrogen deposition.[285] Meanwhile, a 2001 report linked elevated soil nitrogen levels caused by deposition with the accelerated acidification of soils through the leaching of minerals which neutralize acid deposition.[286] Soil acidification is known to inhibit tree growth and can also result in the dissolution of harmful levels of aluminum into aquatic ecosystems.[287] Recent studies have also raised awareness of the role of nitrogen deposition in the eutrophication of water bodies. Thus, a 1998 survey estimated the percentage of the total nitrate load in the Chesapeake Bay attributable to nitrogen deposition to be between 10% and 45%.[288] The increasing evidence regarding the adverse effects of NO_2 pollution has prompted the state of California to enact ambient NO_2 limitations stricter than the federal NAAQS. The annual California standard is 0.03 ppm, as compared with the Federal NAAQS of 0.053 ppm. California regulations also provide for a one-hour NO_2 concentration limit of 0.18 ppm.[289]

EPA has commenced, but has not completed, a review of the NOx NAAQS in response

[283] See Dales, Robert, et al., "Air Pollution and Sudden Infant Death Syndrome," Pediatrics, 2004: 113: 628-31, at 629.
[284] Committee on Environmental Health at 1701.
[285] 70 Fed. Reg. 8892 (Feb. 23, 2005).
[286] *Id*. at 8893.
[287] *Id*. at 8892-93.
[288] *Id*. at 8894.
[289] Cal. Code. Regs. tit. 17, § 70200.

O-035-108 to litigation.[290] EPA's review is proceeding, and will hopefully address some of the concerns raised above. According to the schedule in the Consent Decree, EPA must complete the review of the primary NOx NAAQS by December 18, 2009. EPA must complete the review of the secondary NOx NAAQS by October 19, 2010. In completing these reviews, EPA has developed a number of science and policy based documents. None of the information collected by EPA on impacts due to ambient NOx levels has been disclosed or analyzed in the DEIS.

Because the NOx NAAQS is an inappropriate surrogate for a NEPA disclosure and analysis of impacts, the DEIS must analyze NO_x emissions under the CRC alternatives, including hotspot analysis for at-risk populations along the I-5 corridor, as well as likely environmental and aesthetic risks (including increased impacts on the Columbia Gorge), before concluding NO_x will have no significant impact under NEPA. However, the DEIS gives NO_x pollution even briefer treatment than the other criteria pollutants; it does not provide NO_x emissions trends along with those for PM, CO and ozone,[291] and does not discuss or even acknowledge NO_x health and welfare effects.[292]

8. Sulfur Dioxide

O-035-109 Again, as with CO and NOx, EPA has missed its statutory deadline to review and revise the SO_2 NAAQS. The NO_2 standard has not been updated since 1993, and has not been

[290] See 70 Fed. Reg. 73,236 (Dec. 9, 2005) (announcing that EPA is undertaking a review of the NOx air quality criteria); *Center for Biological Diversity v. Johnson*, Civ. No. 05-1814 (D.D.C.) November 19.
[291] Air Quality Technical Report, 4-4 – 4-5
[292] Air Quality Technical Report, 4-1.

O-035-109

On June 2, 2010, EPA issued a final rule establishing the primary SO2 standard at 75 ppb measured over 1 hour. To attain this standard, the 3-year average of the 99th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 75 ppb. The Agency is currently proposing secondary standards for SO2 identical to the primary standards to provide requisite protection for the direct effects on vegetation resulting from exposure to gaseous oxides of sulfur in the ambient air. Final rulemaking on the secondary standards will occur no later than March 20, 2012.

The primary SO2 sources are power production and industrial processes, which account for about 90% of the SO2 emissions. The transportation sector is currently not the primary contributor to SO2 emissions in the state.

Oregon DEQ monitors SO2 at the SE Lafayette station. In 2008, the maximum 3-hour SO2 concentration was 7 ppb, well less than the new 75 pbb 1-hour standard. The annual average SO2 concentration in 2011 was 1.4 ppb. This value is well below the threshold cited by the commenter and should not pose a threat to human health.

O-035-109

reviewed at all since 1996.[293] Thus, equating compliance with this NAAQS with a lack of any impact from SO_x pollution suffers the same flaws as relying on the CO standard. The DEIS completely fails to consider impacts from sulfur dioxide pollution caused by the project.

Sulfur Oxides ("SO_x") such as SO_2 are a group of gases formed primarily from the combustion of fuel containing sulfur, such as gasoline and diesel. SO_x emissions have a variety of negative effects on both human health and the environment. SO_x pollution contributes to respiratory problems, particularly for children and the elderly, and aggravates existing heart and lung diseases. High levels of SO_x emitted over a short period can be harmful to asthmatics. SO_x also contribute to the formation of acid rain, which damages trees, crops, historic buildings, and monuments and alters the acidity of both soils and water bodies. In addition, because SO_x emissions may be transmitted long distances, they contribute to visibility impairment problems in many scenic areas, including Mount Hood, the Wallowa-Whitman and Eagle Cap Wilderness, the Columbia River Gorge National Scenic Area, and other federally protected parks and wilderness areas in Oregon and Washington.[294]

SO_2 is the Sulfur Oxide that EPA has used as a surrogate parameter for regulation of all SO_x emissions since first promulgating NAAQS for SO_2 in 1971.[295] The current NAAQS for SO_2 have remained unchanged since 1971. The primary NAAQS for SO_2 limit ambient concentrations to an annual arithmetic mean of 0.03 parts per million (ppm) and also impose a

[293] 61 Fed. Reg. 52,852 (Oct. 8, 1996).
[294] See EPA, Office of Air Quality Planning and Standards, "SO_2 – How Sulfur Dioxide Affects the Way We Live & Breathe" (Nov. 2000), available at http://www.epa.gov/air/urbanair/so2/index.html; *See* Regional Haze Rule 64 Fed. Reg. 35,715 (July 1, 1999).
[295] See 36 Fed. Reg. 8186.

O-035-109

24-hour limit of 0.14 ppm.[296] Meanwhile, the secondary NAAQS limits SO_2 levels to 0.5 ppm over a three-hour averaging period.[297] EPA's last review of the air quality criteria document for SO_x was combined with a review of the air quality criteria document for particulate matter, a process which concluded with the issuance of the new criteria document for both pollutants in 1984.[298] Although EPA has supplemented this criteria document over the years as new studies on the effects of SO_x pollution have been published, it does not appear that EPA has done so since issuing a supplement to the second addendum to the document in 1994.

EPA's most recent consideration of the efficacy of the existing NAAQS for SO_2 proceeded in two stages. In 1993, EPA elected to retain the existing secondary SO_2 NAAQS, and in 1996 EPA came to the same conclusion regarding the existing primary NAAQS.[299] EPA's 1996 decision to retain the existing primary NAAQS for SO_2 provoked a lawsuit challenging that decision, and upon concluding that EPA had not adequately explained its rationale for retaining the existing primary SO_2 NAAQS the District of Columbia Circuit remanded the case to EPA for further elucidation.[300] Although it has now been over ten years since this remand, EPA still has neither provided a new justification for its 1996 decision to retain the existing primary SO_2 NAAQS nor completed a new cycle of review of those standards.

Much of the controversy surrounding the current SO_2 NAAQS stems from increasing scientific understanding of the problems posed by elevated short-term SO_2 concentrations, especially among sensitive populations. Thus, for example, California's air quality standards for SO_2 impose a more stringent short-term concentration limit than the NAAQS. California

[296] 40 C.F.R. § 50.4.
[297] 40 C.F.R. § 50.5.
[298] 58 Fed. Reg. 21,351, 21,353 (Apr. 21, 1993).
[299] See 58 Fed. Reg. 21,351 (Apr. 21, 1993) (retaining existing secondary SO_2 NAAQS); 61 Fed. Reg. 25,566 (May 22, 1996) (retaining existing primary SO_2 NAAQS).
[300] *American Lung Assn. v. EPA*, 134 F.3d 388 (D.C. Cir. 1998).

O-035-109 regulations limit the hourly concentration of SO_2 to 0.25 ppm (half the amount that the existing NAAQS allow to persist for three hours of 0.5 ppm).[301] California also has a 24- hour standard of 0.04 ppm, as compared to the federal standard of 0.14 ppm over 24-hours.[302] Yet, a survey of research on the adverse health effects of SO_2 conducted for the California Air Resources Board in 2000 concluded that even this 0.25 ppm hourly standard was not sufficient to protect all California residents.[303]

As to the secondary SO_2 NAAQS, research has shown for decades that SO_2 has adverse impacts on vegetation, including important agricultural crops at levels below the current SO_2 NAAQS. For example, a 1974 study by the Tennessee Valley Authority (TVA) found that SO_2 impacts from one of TVA's coal-fired power plants which created SO_2 levels of between 0.21 – 0.30 ppm over a 3-hour average damaged trees.[304] EPA itself has admitted that sensitive vegetation suffers adverse effects from SO_2 at 0.30 ppm over a 3-hour average and all levels of vegetation suffers adverse effects from SO_2 at 0.007 ppm over an annual average.[305] Moreover, EPA admits that these levels are below the current NAAQS.[306]

[301] Cal. Code. Regs. tit. 17, § 70200.
[302] *Id.*
[303] See Jane Q Koenig & Therese F Mar, Sulfur Dioxide: Evaluation of Current California Air Quality Standards with Respect to Protection of Children at 22-23 (2000), available at http://www.oehha.ca.gov/air/pdf/oehhaso2.pdf. Attached as Exhibit AD.
[304] S.B. McLaughlin and N.T. Lee, "Botanical Studies in the Vicinity of Widows Creek Steam Plant; Review of Air Pollution Effects Studies, 1952-1972 and Results of 1973 Surveys," (1974) at F-1.
[305] EPA, "A Screening Procedure for the Impacts of Air Pollution Sources on Plants, Soils and Animals: Final Report," EPA 450/2-81-078 (Dec. 12, 1980) at page 11, Table 3.1.
[306] *Id.* at 14, Table 3.2.

O-035-109

EPA has commenced, but has not completed, a review of the SOx primary and secondary NAAQS in response to litigation.[307] EPA's review is proceeding, and will hopefully address some of the concerns raised above. According to the schedule in the Consent Decree, EPA must complete the review of the primary SOx NAAQS by March 2, 2010. EPA must complete the review of the secondary SOx NAAQS by October 19, 2010. In completing these reviews, EPA has developed a number of science and policy based documents. None of the information collected by EPA on impacts due to ambient SOx levels has been disclosed or analyzed in the DEIS.

Because the SOx NAAQS is an inappropriate surrogate for a NEPA disclosure and analysis of impacts, the DEIS must analyze SO_x emissions under the CRC alternatives, including hotspot analysis for at-risk populations along the I-5 corridor, as well as likely environmental and aesthetic risks (including increased impacts on vegetation, acid rain, visibility, etc.), before concluding SO_x will have no significant impact under NEPA. However, the DEIS fails to address SOx pollution at all.[308]

9. Mobile Source Air Toxics

O-035-110

The DEIS considers risks from six MSATs, based on Portland Area Toxics Assessment (PATA) modeling of 1999 Air Toxics Inventory data. Though limitations on modeling hazardous air pollution risks render virtually all of the DEIS' conclusions uncertain, only the Air Quality Technical Report, and not the main DEIS document, discloses the poor fit between the

[307] See 71 Fed. Reg. 28,023 (May 15, 2006) (announcing that EPA is undertaking a review of the SO_x air quality criteria); *Center for Biological Diversity v. Johnson*, Civ. No. 05-1814 (D.D.C.) November 19.
[308] *See* Air Quality Technical Report, Section 4.

O-035-110

The discussion of MSATs was expanded in the FEIS. In addition to the emission estimates from the PATS modeling, modeled concentrations from the PATS modeling and actual monitoring data from the EPA School Air Toxics (SAT) monitoring program located at Harriet Tubman elementary school was included in the FEIS Air Quality Technical Report. The initial SAT results did not find any air toxic over EPA's short-term levels of concern. EPA scientists warn against drawing conclusions at this point since the project is designed to show if long-term, not short-term, exposure poses health risks to school children and staff. Once monitoring is complete, the full set of results from all of the schools will be evaluated for potential health concerns from long-term exposure to these pollutants. EPA will post this analysis to the Web once it is complete.

Since the difference in the no-build and build configuration are small, it is not clear what benefits a detailed dispersion modeling and hot-spots analysis would provide given the inherent uncertainties in emission estimates and models.

O-035-110 modeling used and the nature of hazardous air emissions. Neither EPA modeling nor the PATA modeling are capable of hotspot analysis or project-level risk evaluation for these pollutants.[309] Yet the DEIS itself does not even allude to the broad inability to evaluate the CRC's impact on exposure to hazardous air pollutants, stating only that the science is uncertain, but emissions are expected to decline by 2030.[310] By downplaying the potential for pollution hotspots, particularly with regard to carcinogens and toxic pollutants like benzene present in great quantities in diesel fuel, the DEIS violates NEPA's requirement of full and honest disclosure. The public should not have to read the technical report to realize the DEIS' no impact finding was assumed, and not the result of emissions modeling.

Results from the monitoring conducted for the CRC, as well as other studies, do indicate the need for pollution hotspot research. Modeling showed greater variation in pollutant concentrations at the subarea level than at the regional level.[311] Additionally, PATA modeling and other reports show correlations between higher MSAT concentrations and highway corridors.[312] Though the Technical Report acknowledges "[h]igher risks for some pollutants…appeared to align to some degree with major highway corridors,"[313] this realization did not result in neighborhood-level modeling or other estimates that would more fully disclose localized risks to public health.

As a result, the DEIS generally undermines the PATA report's conclusion that "PATA shows the importance of diesel, motor vehicles and burning as sources of air toxics in Portland" and "confirms national estimates that individuals are exposed to various air toxics above levels

[309] Air Quality Technical Report, 2-6 – 2-7.
[310] DEIS, 3-275.
[311] Air Quality Technical Report, 2-9, 5-3.
[312] Air Quality Technical Report, 2-9; PATA, Conclusions and Recommendations, http://www.deq.state.or.us/aq/toxics/docs/pataconclude.pdf. Attached as Exhibit AE.
[313] *Id* at 4-6

O-035-110 of concern."[314] Because studies indicate greater variability even at the subarea level, and Portland residents are already exposed to MSATs above levels of concern, a Supplemental EIS should prioritize dispersion modeling and hotspot analysis for both criteria and MSAT pollutants, before concluding the CRC will not cause adverse air pollution impacts. To protect public health, this assessment should also consider effects from short-term and cumulative exposure to multiple air toxics. The DEIS and Air Quality Technical Report do not even address multiple pollutants or the potential for combined effects. See Cumulative Effects comments.

10. Visibility Impacts

O-035-111 Automobile pollutants including NO_x, SO_x, and PM react in the atmosphere to cause regional haze, scattering light and decreasing visibility.[315] NEPA requires the DEIS to consider and address "…aesthetic, historic, [and] cultural" impacts.[316] However, the DEIS fails to address the build alternatives' likely air pollution-related visibility impacts in regional areas of significance, including Class I areas like Mount Hood, Mount Adams, and Mount Rainier, as well as National Scenic Areas like the Columbia Gorge. These scenic areas have been nationally recognized for their recreational and aesthetic value.

In addition to the plain mandate of the NEPA regulations to disclose and consider aesthetic impacts, courts have held that an EIS should address visibility impacts in Class I areas.[317] As previously discussed, the build alternatives will likely lead to induced traffic and

[314] PATA, Conclusions and Recommendations. Attached as Exhibit AE.
[315] 64 Fed. Reg. 35,715, 35,715 (July 1, 1999).
[316] 40 CFR 1508.8.
[317] *See Methow Valley Citizens Council v. Regional Forester*, 833 F.2d 810 at 818 (9th Cir. 1987).

O-035-111

There are clear indications that emissions from I-5 will decrease substantially between now and 2030 such that future emissions - including those responsible for haze - will be much lower in the future than they are today. This is due to laws requiring cleaner-burning engines, cleaner fuels, higher standards, and the incorporation into this project of the use of tolls, congestion pricing and transit. Therefore, it is highly unlikely that there will be increased impacts to visibility resulting from worsening air quality.

As discussed in relation to other comments above, the project will not induce higher traffic volumes or higher emissions.

O-035-111 therefore higher NO_x, SO_x, and PM emissions than considered in the DEIS. At best, the build alternatives will fail to achieve emissions benefits compared with a do-nothing approach.[318] The DEIS must address the proposed alternatives' failure to decrease future emissions by decreasing vehicle miles traveled, and their resulting contribution to visibility-impairing pollution.

O-035-112 The DEIS Air Quality section suffers from a general lack of disclosure and analysis and fails to consider the health and environmental impacts of most criteria pollutants and all MSAT pollutants. By relying on flawed traffic projections that ignore induced growth and on uncertain future emissions standards, and by hiding behind compliance with outdated and under-protective NAAQS, the DEIS presents a best-case scenario, rather than the complete disclosure of likely impacts required by NEPA. Columbia River Crossing should draft a Supplemental DEIS that remedies these problems and assumptions, and that offers an air pollution mitigation plan for long-term effects.

E. Ecosystems—A Lot of Nothing

O-035-113 The NEPA documents set out their "analysis" of impacts to ecosystems is an Executive Summary, which mostly contains conclusions set out in a chart,[319] in 30 pages of the DEIS itself, Section 3.14, and in the 200+ page Ecosystems Technical Report. Logically one would expect the DEIS to offer cogent explanations for the conclusions in the summary and the Technical Report to offer more detailed discussions and specific scientific information and analysis to back up the DEIS's explanations. Unfortunately, such explanations and detail are almost wholly

[318] DEIS, 3-277.
[319] S-31

O-035-112

See comment O-035-066 on induced traffic issue. The FEIS has been expanded to include more information from the PATS analysis and from the EPA SAT monitoring study. Note that VMT growth is included in the emissions estimates and the issues of induced growth is addressed under O-035-066.

O-035-113

The DEIS evaluation of impacts to ecosystems considered a variety of environmental factors including aquatic and terrestrial species and their habitats. This analysis was based on the level of design available during the DEIS, and it focused on comparison between the alternatives for the same goals the commenter listed - providing information to allow the public and decision-makers to make informed comments and decisions about the best manner for this project to proceed (or not proceed). Overall, the analysis of ecosystem impacts (and other analyses in the DEIS) disclosed the type and magnitude of impacts from the alternatives and highlighted where there were differences in these effects between the alternatives. Where mitigation measures discussed in the DEIS applied to all of the build alternatives, they did not provide meaningful distinction between the build alternatives or the decision about which alternative to choose. This was the case with endangered species where the impacts of primary concern, and the mitigation associated with them, were similar in type and magnitude for all of the build alternatives.

As the commenter noted, a Biological Assessment is not required to publish a DEIS. For major transportation projects, a BA is not typically prepared until after the DEIS has been completed and a preferred alternative selected. It is typical in projects like this to wait for a preferred alternative to be selected and design further developed before initiating the formal consultation (i.e. submitting a Biological Assessment). The evaluation in the DEIS was used to solicit public

O-035-113

absent from both the DEIS and the Ecosystems Technical Report. Both are written so generally, and with almost no supporting scientific citations, that they offer very little in the way of useful information regarding the actual direct and indirect impacts of the five DEIS alternatives. More importantly they completely fail in their most important purpose--offering the public and the ultimate decision-makers quantifiable information regarding the environmental trade-offs and, based on that specific information, a clear basis for making an informed choice from among the 5 offered alternatives.[320]

This lack of specific analysis is partly explained, but not legally justified, by the decision to put off the analysis required under the federal Endangered Species Act until some unspecified time in the future when "project details are further refined."[321] There really can be no serious dispute that any of the proposed build alternatives will have adverse impacts on a number of endangered salmonoid species and their critical habitat, or that the actual construction of any supplemental or replacement bridge will likely result in take of those species.[322] Nevertheless, the CRC Project Staff has not initiated consultation under the ESA and has not prepared the required Biological Assessment regarding those likely adverse impacts on multiple, federally endangered species.[323] Both the ESA and NEPA encourage federal agencies to satisfy the procedures and prepare the analysis required by these two statutes concurrently,[324] but such coordination and efficiency are not mandatory. However, the fact that the CRC Task Force has elected to put off complying with the ESA does not in any way excuse them from including , in the DEIS, as is legally required by NEPA a complete, thorough and documented analysis of the

[320] See 40 CFR Sec. 1502.14.
[321] See, e.g., Eco. Tech. Report at 2-3.
[322] See, Ecosystems Technical Report at 6-3.
[323] See, DEIS at 3-331.
[324] 40 CFR § 1500.2 (c); 16 USC § 1536 (c) (1)

feedback about the project's future direction and to inform local decision-makers' selection of a locally preferred alternative. After the LPA was selected, the project advanced its design in order to support preparation of the BA. Submittal of a BA occurred in July 2010, with the project receiving a letter of concurrence from USFWS in November 2010 and biological opinion from NMFS in January 2011. Information from these documents was included in the FEIS to provide the most updated analysis available, including more specificity about the type and severity of impacts to ecosystems and the efficacy of proposed mitigation measures.

O-035-113 impacts of their alternatives on endangered species. Put another way, their intended, future compliance with the ESA does not in anyway allow them to present the public with a less detailed and informative analysis of endangered species impacts in the DEIS.[325] In fact the required DEIS analysis is the only opportunity the public will ever have to review and comment on the likely impacts of this proposed project on endangered species. The public had every legal right to expect that the DEIS would fully evaluate the impacts of the five alternatives on the areas multiple endangered species. The fact that the DEIS does not do so is just one more reason to prepare a Supplemental DEIS.

The DEIS and Technical Reports similarly deprive the public of any quantifiable information regarding mitigation, in violation of CEQ regulations.[326] As the DEIS Summary announces, a specific mitigation plan will not be prepared until some unspecified date in the future when the public will not have a meaningful opportunity to offer comments. Even if putting off the preparation of a detailed plan were legal, it still would not excuse the CRC Project Staff from offering useful, quantifiable information in the DEIS or accompanying technical reports regarding specific mitigation measures and their efficacy. For example, the report notes that in-water construction would have adverse impacts on listed fish species and then offers a laundry list of possible mitigation measures.[327] The report offers no information whatsoever regarding how severe those impacts might be or how effective the listed mitigation measures might be at avoiding or reducing such impacts. There are in fact reputable scientific studies available that address the severity of such impacts and the effectiveness of mitigation measures. Some of these studies are in fact listed at the end of the technical report. But those studies are not specifically

[325] See, e.g., *Portland Audubon Society v. Lujan*, 795 Supp. 1489, 1509 (D.Or.1992) (ESA compliance is not a substitute for compliance with NEPA)
[326] See, e.g., 40 CR Sec. 1502.14, 1502.16.
[327] Eco. Tec. Rpt at 8-1.

O-035-113 cited or discussed in the DEIS or technical support. How is the public supposed to determine, short of reading every listed source, what studies support which conclusions and assertions? Clarifying such issues is precisely why technical reports are prepared, but this report provides no such clarity.

Of course, this cursory treatment of mitigation measures is consistent with the DEIS's overall treatment and discussion of ecosystem impacts. The potential for many adverse impacts is noted, but again all the reader is really left with is a laundry list of such impacts. Almost no quantifiable information is offered, even in the Technical Report, that would allow the reader to determine whether the overall impacts from one alternative clearly would be lower than those of another. The DEIS's treatment of impacts to aquatic ecosystems and the fish that live in those ecosystems offers a good example of this problem.

O-035-114 The DEIS Summary concludes that the Replacement bridge alternatives would offer the "greatest improvements in water quality".[328] But we are at a loss as to how the DEIS authors reached that conclusion based on the analysis in the DEIS and its Technical Report. The DEIS tells us that current, untreated storm water run-off from the existing bridge would no longer flow into the Columbia River if the Replacement Bridge were built. But the DEIS also admits that run-off from the Replacement Bridge would be partially treated and diverted into the Columbia Slough, which the analysis admits may be more sensitive to water quality changes. Even that partially treated water would contain harmful pollutants such as copper and these discharges would result in higher levels of dissolved copper in the Slough. Endangered salmon species are found in both the Columbia River and the Columbia Slough. Moreover, buried in the Ecol. Technical report is the fact that the Replacement Bridge option would result in the creation of

[328] Summary at S-31.

O-035-114

As noted on pages 3-386 through 3-389 of the DEIS, the build alternatives then analyzed would have increased the amount of treated impervious surface area from near zero to over 124 acres within the project area, not an insubstantial amount of treatment. Also noted was that stormwater treatment will meet local, state, and federal regulations which are designed to be protective of human health and the environment. Bridge and interchange designs have been refined since the release of the DEIS, and the build alternative no longer transfers stormwater from the Hayden Island area to the Columbia Slough watershed.

One clarification to make is that fish listed as endangered rarely use the Columbia Slough, although those listed as threatened do make use of it more often. These impacts are addressed in the biological assessment and biological opinion.

With regards to burying of data related to an increase in new impervious surface area, these values are discussed on pages 3-386 through 3-389 of the DEIS, and are even commented on by this commenter on page 102 of their comment letter.

O-035-114 more than 40 additional acres of impermeable surfaces, which would also lead to polluted runoff into nearby water bodies. Will the beneficial impacts to Columbia River water quality from the Replacement Bridge benefit endangered fish species more than those species are harmed by the reduced water quality in the Slough? The DEIS offers no basis for making such a judgment.

O-035-115 The DEIS also explains that juvenile salmon can be harmed by piers and bridge decks that create shaded areas in the river that attract predatory fish. (This is one of the very rare places in the DEIS where a specific scientific source is offered, DEIS at 3-333.) The Replacement Bridge will have fewer piers than the existing bridge, but the bridge deck area will be significantly larger. So are salmon better off under one alternative? Again the DEIS offers no basis for making such a judgment.

O-035-116 Finally the DEIS admits that salmon could be harmed by the temporary impacts from bridge construction under the action alternatives. It also seems to admit that those in water activities will also result in "take" of endangered species, although that legal term is never actually used.[329] The no-action alternative of course avoids all such harms. But again the reader has no basis for evaluating whether these temporary adverse impacts to currently endangered species are serious or can be significantly mitigated.

O-035-117 So after reviewing the DEIS Summary, the DEIS itself and the Ecol. Technical Report, a reader who is concerned about endangered salmon is left with only a laundry list of possible adverse impacts and benefits to water quality and other threats created by one or more of the alternatives. Nowhere is the reader offered information that evaluates the degree of harm or benefit or that would allow the reader to quantify the risks and benefits from the offered

[329] See DEIS at 3-351, Tech. Rpt at 6-3.

O-035-115

Data on shading related to wide bridges relatively far above water surfaces is not available to discern the differences between the wide proposed structures that are up to 90 feet above the water surface and the narrower existing structures that are closer to the water surface. During coordination with NMFS, USFWS, ODFW, and WDFW, this lack of information was concurred with. Detailed discussion on shading impacts is included in the Ecosystems Technical Report.

O-035-116

The DEIS analysis of potential impacts to threatened and endangered species was coordinated with the federal agencies that implement the Endangered Species Act – the National Marine Fisheries Service (NMFS) and the US Fish and Wildlife Service (USFWS), The analysis was also coordinated with the Washington and Oregon state departments of fish and wildlife.

Submittal of a biological assessment occurred in July 2010, with the project receiving a letter of concurrence from USFWS in November 2010 and biological opinion from NMFS in January 2011. Information from these documents was included in Section 3.14 and 3.16 of the FEIS to provide the most updated analysis available, including hydroacoustic impacts and stormwater treatment and other potential impacts to species listed under the Endangered Species Act.

O-035-117

The EIS evaluation of impacts to ecosystems considers a variety of environmental factors, including aquatic and terrestrial species, as well as these species' habitats. The evaluation in the DEIS was focused on comparison between the alternatives for the same goals you list - providing information to allow the public and decision-makers to make informed comments and decisions about the best manner for this project to proceed (or not). Overall, the analysis of ecosystem impacts in the

O-035-117 alternatives.[330] Of course if NEPA were just about disclosing impacts, this sort of "analysis' might be sufficient. But the CEQ regulations make clear that mere disclosure is insufficient. The EIS is supposed to offer information that allows for making choices among reasonable alternatives.[331] The DEIS's ecosystems discussion does not even come close to meeting that legal standard. The DEIS then compounds its analytical problems regarding ecosystems by refusing to admit and consider that reduced growth from the action alternatives would have additional, long term impacts on ecosystems generally and endangered salmon species in particular.[332]

The DEIS Ecosystems report must also address the following deficiencies:

O-035-118
- The draft EIS does not provide sufficient mapping detail to determine exactly where habitat impacts would occur. The Build Option would impact 291.7 acres of designated habitat. There should be maps and tables identifying these impacts sites with a high level of detail. Instead the report provides only broad area descriptions that contain multiple parcels. There is insufficient detail in the Ecosystems Technical report that makes it impossible to truly evaluate the impacts or the quality of the analysis (other than to say it is "woefully insufficient."

O-035-119
- The Replacement Bridge would impact 291.7 acres of identified significant habitat. This can hardly be described as "minimal" on an already highly fragmented and degraded landscape. At a time when the Metro Region has just passed a bond measure for 227.4

[330] These comments use the water quality/aquatic habitats analysis only as an example of the defects in the DEIS. Its analysis of terrestrial habitats and other ecosystem impacts is equally cursory, uninformative and legally insufficient under NEPA.
[331] See. 40 CFR Sec. 1502.1, 1502.14.
[332] Ecosystems Technical Report at 5-211.

DEIS emphasized disclosing the type and magnitude of impacts from the alternatives and highlighting where there were differences in these effects between the alternatives. Mitigation measures described in the DEIS were often not exclusive to one alternative because they would apply to many or all of the build alternatives. As indicated in the DEIS analysis, the types of impacts to threatened and endangered salmon, and the mitigation, would be very similar for all of the build alternatives. The level of detail you are requesting, such as specific take assessments for endangered species, and specific habitat mitigation sites, are developed through the Biological Assessment and Biological Opinion which occur after publication of the DEIS.

To clarify, completing a Biological Assessment is required by Section 7 of the Endangered Species Act. It is not required that a BA be completed prior to publishing a draft EIS. The level of design refinement needed to complete a BA is typically much more advanced than what is appropriate at the draft EIS stage. The DEIS evaluates and seeks public input on a range of alternatives. A BA typically evaluates just one alternative. Although the project has been coordinating with the National Marine Fisheries Service and US Fish and Wildlife Service since 2005, formal consultation under the Endangered Species Act was not formally initiated until after the DEIS was published, a preferred alternative was adopted, and a BA was proposed. The evaluation in the DEIS was used to solicit public feedback about the project's future direction and to inform local decision-makers' selection of a locally preferred alternative. Since then, the LPA has been further refined and defined through on-going analyses and extensive input. This has helped to inform the Biological Assessment that was reviewed by NMFS. A summary of the evaluation and findings for ESA compliance is included in the FEIS, including more specificity about the type and severity of impacts to ecosystems and the efficacy and details of mitigation and conservation measures.

See the response to comment 035-066 regarding your comment on

O-035-119 million to protect and acquire natural areas and when the City of Portland just raised Park System Development Charge Rates to ensure continued access to parks and natural areas, the loss of 291.7 acres represents a highly significant step backwards.

O-035-120 • The quality of the avian surveys is questionable as the authors note that they observed no peregrines even though peregrines are one of the easiest species to spot on the existing bridge at anytime of the year. They also note that they found no bird nests in segment B of the primary API (page 4-45 of the ecosystems technical report.)

O-035-121 • The report fails to mention Oregon state designated "sensitive" species. These are species which are not yet listed but are of concern. In discussing peregrine falcons the report does note that this species is listed in sensitive in Washington but fails to mention that it is also listed as sensitive in Oregon. I would question whether they were even aware of the list based upon the way the report was written. The report does mention "species of interest" but this is not a recognized status.

O-035-122 • The report fails to mention any avian Watchlists that identify species with long term downward populations trends.

O-035-123 • The report fails entirely to focus on herptile species other that western pond and western painted turtles. The report also fails to analyze potential impacts on invertebrate species.

O-035-124 • The Botanical Resources sections are woefully insufficient, repeatedly dismissing this issue with a single line ("The Build Alternatives are not anticipated to have long term impacts on botanical resources," page 5-8, Ecosystems technical Report). The report seems to predicate this lack of concern on a lack of rare or listed plant species. However it fails to account for the fact that even the loss of common species in urban ecosystems can have significant environmental impacts. For example, black cottonwood habitat,

induced growth, and the discussion of induced growth in Section 3.4 of the FEIS. The analysis indicates that the indirect impacts of the project are likely to result in an overall benefit to threatened and endangered salmon.

O-035-118

Section 3.16 of the FEIS, and the Ecosystems Technical Report, provide information on areas with local habitat designations (Priority Habitats, Critical Areas, Title 13, and E-zone) by alternative. Many of these habitats overlap in whole or in part with each other. Because their designations are not parcel-specific, based mainly on aerial photo interpretation and distances from stream centerlines, staff could not reasonably analyze impacts at a finer-scale. Exhibits in the Ecosystems Technical Report provide detailed views of potential impacts near Burnt Bridge Creek and SR 500. Other sites near and over the Columbia River and Marine Drive did not have the same need for detail due to the large areas of the designated habitats combined with generally straightforward impacts to them.

O-035-119

The project would not impact 291.7 acres of significant habitat. State and local agencies have developed overlay designations covering broad areas of land in the project area. However, that does not mean that all that land is actual functioning habitat. Nearly all of the land that would be within the CRC's project footprint is already paved or otherwise developed. Section 3.16 of the FEIS and the Ecosystems Technical Report provide greater detail on the overlay designations versus actual uses.

O-035-120

Peregrines were not specifically surveyed for as their presence and location is known, and ODOT tracks their status regularly. Because of

O-035-124 often perceived as common and even "junk trees" is of the most rapidly disappearing habitats along the Columbia Corridor. According to the Portland of Portland, 45 of the remaining intact cottonwood habitat between rivermile 12 and the Bonneville Dam occurs on West Hayden Island. The loss of mature tress can have serious consequences for local wildlife populations, connectivity and can undermine the integrity and functionality of proximal natural areas. It also directly undermines local green stormwater strategies and tree canopy targets.

O-035-125 • The report fails to discuss locations and impacts from staging for the project. West Hayden Island has repeatedly been suggested as one possible staging area. West Hayden island has been identified through the Metro Goal 5 Process as high value riparian and upland habitat and it a priority site for permanent protection for local conservation organizations. Staging for the CRC on West Hayden Island which is currently not accessible to the general public would have both short and long term consequences for the environment. Habitat loss (short and long term, introduction of invasive species, increased human use of area, potential introduction of contaminants, road building, wildlife displacement…)

O-035-126 • The report fails to provide sufficient detail on impacts to Vanport Wetlands. Vanport is a high value wetland for avian species and is the product of years of restoration work. The report should contain site specific analysis of the impacts on this site

O-035-127 • The report fails to identify specific mitigation sites for habitat impacts.

O-035-128 • The report fails to address the issue of human-wild conflicts. Certain types of bridge design can attract unwanted species such as starlings and pigeons that then require control operations that can have non target impacts on native wildlife.

their sensitive listing, further information is not given in public reports. Other nest surveys were limited to those habitat elements likely to be used by birds protected under the Migratory Bird Treaty Act, and that would likely be directly impacted by the proposed project. In segment B, these elements were limited to overcrossings.

O-035-120

Peregrines were not specifically surveyed for as their presence and location is known, and ODOT tracks their status regularly. Because of their sensitive listing, further information is not given in public reports. Other nest surveys were limited to those habitat elements likely to be used by birds protected under the Migratory Bird Treaty Act, and that would likely be directly impacted by the proposed project. In segment B, these elements were limited to overcrossings.

O-035-121

Please see section 3.6.1 of the Ecosystems Technical Report for a description of species of interest. These species include those species protected under federal and state laws, as well as others that are rare but have not been placed on sensitive or candidate lists. Table 3-18 presents a sample of these species of interest, including their federal and state status under ESA or sensitive species regulations. The term "species of interest" was used because of the multiple jurisdictions involved in the project and the effort to assess impacts to all ecosystem resources, not just those with regulatory protection.

Peregrine falcons were delisted from the Oregon Endangered Species Act on April 13, 2007. The Oregon Sensitive Species List was officially updated and adopted in 2008. Nevertheless, they were and are protected under the federal Migratory Bird Treaty Act, the Washington sensitive species regulations, and an agreement on a management plan between ODOT and ODFW.

F. Hydrology and Water Quality

1. The DEIS does not disclose why stormwater runoff will be diverted from the Columbia River to the Columbia Slough.

O-035-129

The Columbia Slough, a smaller, more sensitive, and more highly-degraded water body than the Columbia River, is receiving a disproportionate impact from this project. The DEIS acknowledges that "because the Columbia Slough is a much smaller waterway than the Columbia River, this could contribute to a more noticeable effect on water quality."[333] The DEIS acknowledges that the Columbia Slough does not meet Oregon State water quality standards for temperature, iron and manganese, and that a TMDL has been established for several parameters including dissolved oxygen.[334] The DEIS goes on to admit that typical highway runoff includes iron, manganese, and deicing materials that contribute to low levels of dissolved oxygen.[335] Then, the DEIS acknowledges the likelihood that the runoff may further exacerbate water quality problems in the Columbia Slough. Yet, the DEIS fails to provide an explanation for why the project will divert stormwater discharges to the Columbia Slough in spite of the adverse effect this diversion will have on the water quality of the Columbia Slough. This failure to explain the choice to divert stormwater violates CEQ regulations which require that the DEIS provides a "clear basis for choice among options by the decision-maker and the public."[336] Rather than taking the requisite steps to avoid significant environmental impacts, the DEIS has made decisions that increase the net environmental impacts of the project in

[333] DEIS at 3-393.
[334] DEIS at 3-381.
[335] DEIS at 3-381.
[336] 40 CFR 1502.14.

O-035-122

Avian watchlists from non-governmental organizations are not generally consulted when state and federal listings and information from government agency biologists are available.

O-035-123

Western pond turtle and western painted turtle are the only reptile species listed as sensitive within the project area. No amphibians listed as sensitive are located in the project area. While other non-listed reptiles or amphibians may be present in the area, their habitat and life history requirements are not as distinct as the more rare native turtles mentioned.

Sensitive invertebrates are also not known to occur in the project area. Aquatic invertebrates likely occur in the waters in and near the project area, but no detailed information on the species composition and interactions with other fauna is available. A brief discussion of invertebrates is included in the Ecosystems Technical Report.

O-035-124

Vegetative communities were analyzed for connectivity and habitat for wildlife. While removal of trees, without proper revegetation, may lead to not meeting "strategies" (rather than requirements) for urban tree canopies, it does not necessarily lead to non-compliance with stormwater treatment, as other vegetation types, mechanical means, or a combination of both may lead to better overall stormwater management in many situations. Please note that the DEIS did not refer to black cottonwoods as "junk trees" nor as unimportant habitat, and note that the project would not remove any of the referenced black cottonwoods on West Hayden Island.

O-035-129 contravention of federal regulations.[337] A DEIS is not intended to be merely a disclosure document. It should be used to explain, justify and support decisions.[338] The decision to significantly increase the environmental impacts on the Columbia Slough appears to have already been made absent requisite explanation, justification or support..

2. The DEIS fails to properly evaluate base level runoff from the I-5 bridge.

O-035-130 The DEIS does not include an actual analysis of the runoff from I-5 but rather used general EPA guidance on "typical" highway runoff.[339] The DEIS then concludes that this guidance indicates the pollutants "typically associated" with highway runoff will not impact the parameters for which the Columbia River is currently water quality limited. (temperature, PCBs, PAHs, DDE, arsenic, dioxin, and total dissolved gas).[340] This is factually incorrect. Each of these pollutant parameters, but perhaps most notably PAH levels, are affected directly and indirectly by run-off from roadways. Investigations to date have demonstrated that the developing fish heart is vulnerable to a variety of impacts from multiple members of the PAH family, and some PAH derivations are known to be highly toxic to fish.[341] The increase in the number of motor vehicles over the last decade has resulted in a corresponding increase in the loading of PAHs to aquatic habitats.[342] Studies have shown that storm events can raise PAH levels in waterways dramatically, thereby contributing significantly to the levels of PAHs in

[337] 40 CFR 1502.1.
[338] *Id.*
[339] DEIS at 3-381.
[340] DEIS at 3-382.
[341] McCarthy, S.G. et al. "Coastal Storms, Toxic Runoff, and the Sustainable Conservation of Fish and Fisheries". American Fisheries Society Symposium 64 (2008): 000-000.
[342] *Id.*

O-035-125

See response to comment 035-019 for explanation about the description in the DEIS of impacts from potential staging sites.

O-035-126

Please refer to the Wetlands and Jurisdictional Waters Technical Report which provides detailed information on the Vanport Wetlands complex.

O-035-127

The DEIS included a wide range of alternatives and options, but the impacts on habitat did not vary significantly. As such, the magnitude and character of mitigation would also not vary significantly among the alternatives. For the DEIS, the main purpose of the mitigation discussion was to identify whether or not impacts that could not be avoided or minimized, could be mitigated. It was not necessary to identify all of the specific sites or develop detailed mitigation designs at that stage. Since then, an LPA has been selected, and the project team has refined designs, coordinated further with the regulatory agencies overseeing the jurisdictional resources, and have investigated and evaluated specific sites. These activities have all confirmed that there are ample opportunities to mitigate habitat impacts that cannot be avoided or minimized. See the FEIS and Ecosystems Technical Report for a more comprehensive discussion of mitigation/restoration/enhancement strategy.

O-035-128

The steel trusses over the decks of the existing Columbia River bridges provide habitat for European starling and rock dove. ODOT implements control actions to deter these species from the bridge. The bridges also provide habitat for Peregrine falcon. At the DEIS phase, the preliminary design of the proposed new bridges over the Columbia

O-035-130 estuaries and other nearshore areas, particularly in sediments.[343] The DEIS wholly fails to address the critical connection between potential increased loadings of PAHs and other pollutants commonly associated with roadway run-off, and the effects those pollutant loadings may have on sensitive Columbia River aquatic species.

O-035-131 This baseline analysis of the water quality under the no-build alternative is inadequate and so the water quality impacts under the build alternatives are not accurate. The DEIS must properly analyze the current pollutants in runoff from the I-5 bridge to accurately determine the environmental impact the build alternatives will have on discharges to receiving water bodies. The DEIS discloses the location of current discharges through road-side grates, so obtaining samples from these locations would not be difficult.[344] NEDC is able to sample similar discharges with relative ease at relatively minimal cost. CRC project staff had the funds and the ability to sample and properly analyze these stormwater discharges yet chose not to complete these crucial analyses. These analyses should be conducted to determine with specificity the type and concentration of pollutants that are present in the current stormwater discharges, in order to accurately estimate the content of pollutant discharges under the action alternatives.

O-035-132 The DEIS discloses that both action alternatives will significantly increase the amount of impervious surfaces (replacement bridge will result in 43 additional acres of impervious surfaces while the supplemental bridge will result in 28 additional acres.[345] Yet, the DEIS fails to link the increased impervious surface area with a corresponding increase in stormwater runoff from these surfaces. The DEIS fails to note the impacts of stormwater discharges from highways as the

[343] Hwang, H. M., and G. D. Foster. "Characterization of polycyclic aromatic hydrocarbons in urban stormwater runoff flowing into the tidal Anacostia River, Washington, DC, USA". Environmental Pollution 140-3 (2006): 416-426.
[344] DEIS at 3-382.
[345] DEIS at 3-388.

River and North Portland Harbor did not anticipate any such truss work over the decks. The LPA also does not contain any lattice work like that on the existing bridge, and is therefore not discussed in the FEIS or Ecosystems Technical Report.

O-035-129

The reason for the diversion of stormwater from the Columbia River watershed to the Columbia Slough was not addressed in this portion of the DEIS, but it involved sloping of ramps and bridges between Marine Drive and Hayden Island. Bridge and interchange designs have been refined since the release of the DEIS, and the build alternative no longer transfers stormwater from the Hayden Island area to the Columbia Slough watershed. This new design is addressed in the FEIS and biological assessment and biological opinion.

O-035-130

The DEIS and the associated Water Quality and Hydrology Technical Report used the WSDOT/FHWA method for evaluating highway runoff. The EPA reference supports that typical highway runoff includes those pollutants listed on 3-381 of the DEIS. The project team notes a reasonable connection between DDE, PCBs, arsenic, and dioxin highway runoff. However, there may be some indirect connection between temperature and total dissolved gas and highway runoff. There is a connection between PAHs in the forms of oils and greases and highway runoff under some situations. The proposed stormwater treatment facilities would treat for pollutants such as these. Water quality analysis has been updated for the FEIS, and is included in Chapter 3 (Section 3.14). As discussed in the FEIS, although the total amount of pollutant generating impervious surface would slightly increase for the LPA, the amount of untreated impervious surface would drop dramatically compared to existing conditions and the No-Build Alternative. As a result, the LPA is expected to improve water quality in the Columbia River relative to the No-Build Alternative. Further

O-035-132 major source of non-point source pollution.[346] This pollution often leads to significant harm to endangered species, violations of state water quality standards, and negative impacts on human health.[347] The failure to clearly indicate the increased volume of stormwater discharges from these surfaces may leave the public unclear or misled about the true impacts of stormwater discharges—both treated and untreated.

3. The DEIS fails to properly analyze the impacts of the project alternatives on water quality standards and the TMDL for the Columbia Slough and other receiving water bodies.

O-035-133 The DEIS indicates current stormwater discharges into the Columbia River will be diverted to the Columbia Slough. However, the DEIS does not include an analysis of the specific pollutants in the current stormwater discharges, so the composition of re-diverted stormwater discharges is unknown. Therefore, the DEIS cannot accurately gauge the pollutant concentrations of potential stormwater discharges, even after treatment. There is no way the DEIS can accurately conclude that the discharge of unknown pollutants into the Columbia Slough will comply with water quality standards or the Slough's TMDL. The DEIS further admits that Burnt Bridge Creek could have increases in certain pollutants compared to current conditions.[348] Yet, the DEIS does not indicate whether these increases in pollutants will comply with water quality standards for all receiving water bodies. The DEIS must specifically address

[346] Kayhanian, M., et. al. "Toxicity of urban highway runoff with respect to storm duration." *Science of the Total Environment*. 389.2-3 (2008): 386-406. Attached as Exhibit AF.
[347] Gaffield, S. J., et. al. "Public Health Effects of Inadequately Managed Stormwater Runoff." *American Journal of Public Health*. 93.9 (2003): 1527-1533. Attached as Exhibit AG.
[348] DEIS at 3-385.

discussion of PAHs are included in the Water Quality and Hydrology Technical Report supporting the FEIS.

O-035-131

The analysis referred to in the comment is not required under current local, state, or federal regulations. Also, although collecting and analyzing stormwater runoff from the I-5 bridge may have resulted in some site-specific and storm-specific data, this data is generally limited unless it is done over many, many sampling periods under different meteorological and traffic conditions. Updated stormwater modeling has been completed and is discussed in Section 3.14 of the FEIS and in the Water Quality and Hydrology Technical Report.

O-035-132

All four of the DEIS build alternatives would result in increased impervious area. Also mentioned in the DEIS, one sentence after the sentence cited in the comment, is that the amount of impervious area that would be treated would increase from near zero to over 124 acres for each build alternative. All developed impervious surface areas within and outside the project result in changes to natural flow regimes.

Stormwater treatment proposed as part of the build alternatives would meet the requirements for water quantity and quality mandated under local, state, and federal regulations designed to protect the natural environment and human health. The DEIS presented an analysis of several pollutants of concern identified during coordination with regulatory agencies, while the Water Quality and Hydrology Technical Report supporting the DEIS discussed all standard pollutants. Effects on endangered species (and other organisms) are addressed in detail in the Ecosystems Technical Report.

Water quality analysis has been updated for the FEIS, and is included in Chapter 3 (Section 3.14). As discussed in the FEIS, although the total

O-035-133 whether the project alternatives will violate water quality standards and what steps the project will take to comply with state water quality standards.

O-035-134 The DEIS also fails to disclose the water quality impacts from stormwater discharges off the 35-38 acres of untreated impervious surface under each of the build alternatives.[349] Untreated stormwater discharges will have a significant impact on the water quality of the receiving bodies of water yet the DEIS is silent on the issue. Untreated stormwater is laden with pollutants such as oil, grease, copper, and zinc and is the major source of non-point source pollution to receiving waters.[350] These pollutants have significant adverse impacts on water quality and fish species, most notably the danger of dissolved copper to the survival of ESA-protected salmon species.[351] At high concentrations, copper is acutely lethal to fish. Recent NOAA research has focused on the salmon olfactory nervous system as a target for dissolved copper. The potential for olfactory neurotoxicity raises several important concerns for anadromous salmonids, as these species rely on chemical signals in the aquatic environment to imprint on their natal streams, detect and avoid predators, navigate during adult migrations, and synchronize their spawning.[352] Dissolved copper is a potent inhibitor of olfactory function in juvenile coho salmon.[353] Therefore, the DEIS must disclose the quantities of specific pollutants

[349] DEIS at 3-384.

[350] Kayhanian, M., et. al. "Toxicity of urban highway runoff with respect to storm duration." *Science of the Total Environment*. 389.2-3 (2008): 386-406. Attached as Exhibit AF.

[351] Sandahl, J.F., et. al. "A Sensory System at the Interface between Urban Stormwater Runoff and Salmon Survival." *Environment Science & Technology* 41 (2007): 2998-3004.
[352] McCarthy, S.G. et al. "Coastal Storms, Toxic Runoff, and the Sustainable Conservation of Fish and Fisheries" American Fisheries Society Symposium 64 (2008): 000-000.

[353] Baldwin, D.H., et al. Sublethal effects of copper on coho salmon: impacts on onoverlapping receptor pathways in the peripheral olfactory nervous system. Environmental Toxicology and Chemistry 22 (2003): 2266-2274.

amount of pollutant generating impervious surface would slightly increase for the LPA, the amount of untreated impervious surface would drop dramatically (from 219 acres to 0 acres) compared to existing conditions and the No-Build Alternative. As a result, the LPA is expected to improve water quality in the Columbia River relative to the No-Build Alternative. Effects on ESA-listed species (and other organisms) are addressed in detail in Section 3.16 of the FEIS and in the Ecosystems Technical Report.

O-035-133

Project designs have been refined so that stormwater is no longer diverted from the Hayden Island area to the Columbia Slough watershed. Furthermore, stormwater treatment will need to comply with local, state, and federal regulations which are meant to be protective of the environment. When approved, stormwater runoff would not exceed water quality standards. Please see Chapter 3 (Section 3.14) for updated analysis of stormwater management.

O-035-134

Pages 3-385 through 3-389 of the DEIS discussed pollutant loading, including impacts from untreated areas. On page 3-385, the difference between the no-build and the build alternatives was discussed - "Any of the build alternatives would decrease the area contributing untreated runoff to waterways by more than 120 acres." The proposed stormwater treatment system resulted in treating between 330 and 390 percent of the net new impervious surface area. Water quality analysis has been updated for the FEIS, and is included in Chapter 3 (Section 3.14). As discussed in the FEIS, although the total amount of pollutant generating impervious surface would slightly increase for the LPA, the amount of untreated impervious surface would drop dramatically compared to existing conditions and the No-Build Alternative. As a result, the LPA is expected to improve water quality in the Columbia River relative to the No-Build Alternative.

O-035-134 present in the untreated runoff into receiving bodies of water so their impacts on water quality and sensitive species can be understood.

O-035-135 The DEIS's analysis of impacts on water quality are uncertain and speculative at best. The conceptual stormwater collection and treatment system has not been finalized so the analysis of impacts cannot be accurately reported to the public. In fact, the DEIS indicates that the stormwater collection and treatment system may completely change and divert runoff to another body of water.[354] This alteration in the project design and impacts on water quality is major. Therefore, a Supplemental DEIS would be required. Any FEIS must ensure that the conceptual stormwater design chosen for the project ensures that all stormwater runoff meets water quality standards for all receiving waterbodies. The DEIS also fails to disclose the water quality impacts of a bridge assembly/casting yard. Because the site for the bridge assembly/casting yard is unknown, the DEIS does not know or cite the full impacts of the project.[355]

O-035-136 The DEIS also improperly delays the analysis of pollutant loading and all other impacts to the water quality of all natural waters until the FEIS. The DEIS states that the "effects on water quality and ultimate concentration of pollutants in natural waters will be quantified after designs for infrastructure and treatment elements are advanced."[356] However, these numbers and water quality impacts need to be quantified and revealed in the DEIS to meet NEPA requirements. The purpose of NEPA is to reveal the environmental impacts of project alternatives to provide the public an opportunity to comment on the impact. If the real impacts on water quality are not revealed until the FEIS, the public will not know the true impact of the

[354] DEIS at 3-393.
[355] DEIS at 3-392.
[356] DEIS at 3-388.

O-035-135

The level of design for alternatives evaluated in the DEIS was conceptual, but provided an understanding of whether and how stormwater could be retained and treated to current standards for each of the alternatives. While the exact location and type of treatment facilities were not finalized prior to the DEIS, the effect on local waterbodies was identified for each of the alternatives. Advancements in design have changed the amount of runoff that would flow into some local watersheds, but this has not significantly changed the impact of this project on water quality and has not affected the ability of the project to meet existing water quality standards. Water quality analysis has been updated for the FEIS, and is included in Chapter 3 (Section 3.14). See response to comment O-035-019 for an explanation of the description of possible impacts from potential staging sites.

O-035-136

The DEIS and DEIS Water Quality and Hydrology Technical Report diddisclose the appropriate level of pollutant loading analysis for the alternatives (see Exhibits 3.16-6 through 3.16-9 in the DEIS and Exhibit 5-3 of the Technical Report). Water quality analysis has been updated for the FEIS, and is included in Chapter 3 (Section 3.14).

O-035-136 project alternatives. At that point, it will be too late for the public comments to affect the decision-making process. The DEIS improperly hid the real water quality impacts of the project to the public by delaying a proper analysis. These undisclosed impacts, incomplete analyses, and delayed decisions fail to meet the CEQ regulations that require the DEIS to "fulfill and satisfy to the fullest extent possible the requirements for the FEIS."[357]

4. The DEIS fails to adequately analyze the effects of project construction on the water quality standards for the receiving bodies of water.

O-035-137 The DEIS admits the increased soil erosion could increase sediment in waterways but does not properly analyze these effects on water temperature and in-column water quality. The Columbia River is already water quality limited for temperature, and bridge construction is likely to further exacerbate the problem. Furthermore, the DEIS indicates construction will release pollutants into the Columbia River.[358] These pollutants may cause further violations of the water quality standards for which the Columbia River is already water quality limited (temperature, PCBs, PAHs, DDE, arsenic, dioxin, and total dissolved gas). Therefore, bridge construction will likely result in violations of state water quality standards yet no mention of this is provided in the DEIS.

[357] 40 CFR 1502.9 (a).
[358] DEIS at 392.

O-035-137

Please refer to Chapter 3 (Sections 3.15 and 3.18) of the FEIS for the mitigation measures developed to avoid and minimize the impacts listed. Impacts that cannot be avoided must be minimized. The existence of potential impacts related to sediments and contaminants do not automatically mean that water quality standards would be exceeded if such impacts are not measurable. Construction activities will require the approval of Ecology and DEQ through a water quality certification and NPDES 1200-CA permit, limiting water quality impacts and imposing appropriate impact avoidance and minimization measures.

5. The section concerning potential mitigation measures for adverse effects to water quality is wholly inadequate.

O-035-138

The discussion of potential mitigation measures related to hydrology and water quality in the DEIS lacks requisite detail, and fails to provide the public with details necessary to determine whether the adverse environmental effects of any of the project alternatives will be adequately offset. Reliance on conclusory and non-substantive statements such as "the project will use best management practices" and "a stormwater collection and treatment system will be developed" simply fails to satisfy legal requirements.[359] The perfunctory description of mitigation measures in the DEIS is inconsistent with the "hard look" the CRC project staff are required to render under NEPA. Mitigation must 'be discussed in sufficient detail to ensure that environmental consequences have been fairly evaluated.'[360] A mere listing of mitigation measures is insufficient to qualify as the reasoned discussion required by NEPA.[361] The DEIS fails to meet these standards.

[359] DEIS at 3-392.
[360] *Carmel-By-the-Sea v. U.S. Dep't of Transp.*, 123 F.3d 1142, 1154 (9th Cir.1997) (quoting *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 353 (1989)).
[361] *Northwest Indian Cemetery Protective Ass'n. v. Peterson*, 795 F.2d 688, 697 (9th Cir.1986), *rev'd on other grounds*, 485 U.S. 439 (1988).

O-035-138

Water quality analysis and discussion has been updated since the DEIS, and is included in Chapter 3 (Section 3.14) of the FEIS and in the Water Quality and Hydrology Technical Report. The term "best management practice" is the industry term for stormwater treatment facilities. The development of stormwater treatment systems that meet the standards of local and state jurisdictions, plus those of WSDOT and ODOT, includes rigorous review by those agencies and others. Inclusion of the details of these standards within the body of the DEIS and FEIS would not serve the general reader, and the technical reader is given the appropriate reference to the technical document.

G. The cumulative effects section is an inadequate analysis of the prior, concurrent, and potential actions that could exacerbate the impacts of the I-5 crossing.

1. The DEIS's failure to describe the effects of past actions prevents an adequate analysis of the cumulative effects of the CRC project.

O-035-139

The DEIS merely lists some of the past actions without describing their impacts on the environment. The 9th Cir. has held that in order for an EIS to be valid, it must describe the effects of past actions that have a cumulative impact on the proposed action; merely listing past actions of cumulative significance without describing their effects is insufficient.[362] Yet, the DEIS merely lists some recent projects that have effected development trends in the area without providing any description of the projects' effects.[363] Without a description or evaluation of these past actions, the cumulative effects of the project cannot be adequately analyzed.

Indeed, both the DEIS staff and its supporting Cumulative Effects Technical Report are hopelessly vague and completely lack supporting citations to scientific studies, surveys or other more detailed information. For example, the DEIS and the Technical Report contain an almost identical one page analysis of cumulative effects on ecosystems.[364] This type of cursory consideration does not even come close to what NEPA requires.[365]

[362] *NWEA v. NMFS*, 460 F.3d 1125. (9th Cir. 2006); *Great Basin Mine Watch v. Hankins* 456 F.3d 955 (9th Cir. 2006).
[363] DEIS at 3-423.
[364] Compare DEIS at 3-442 with Cumulative Technical Report at 3-2.
[365] See, e.g., *The Lands Council v. U.S. Forest Service*, 395 F.3d 1019 (9th Cir. 2005).

O-035-139

The cumulative effects analysis in the DEIS does list past and reasonably foreseeable future actions, but then also assesses the impacts of these actions in relation to the CRC project's impacts. The beginning of the section in the DEIS (3.19) describes relevant past and planned actions. Subsequent sections evaluate the general type and magnitude of impacts from these actions, with a focus on how they relate to the effects of the CRC alternatives. For example, 3.19.5 evaluates cumulative effects related to environmental justice. This section describes how the construction of I-5 in the early 1960s affected low-income and minority populations that lived in communities that were divided by the freeway, and how recent and planned projects, including CRC, create slightly widened roadway profiles along I-5 and that new features such as transit improvements can provide a benefit to low-income populations.

2. The DEIS improperly limits its cumulative impacts analysis to projects in the immediate project area.

O-035-140

Generally, projects occurring in a watershed that will impact that watershed must include a cumulative impacts analysis regarding that watershed.[366] Here however the DEIS improperly limits its analysis to the project area. There are many examples of projects within the Columbia River Watershed that the DEIS ignores. A proposed LNG terminal threatens to have serious impacts on the Columbia River that the DEIS cannot ignore in an adequate cumulative effects analysis. The proposed LNG terminal in Bradwood, Oregon would dredge 700,000 cubic feet of sediment and remove one billion gallons of water from the Columbia River.[367] If the terminal is constructed, these impacts on the Columbia River would significantly multiple the effects of the CRC project. The LNG terminal would seriously degrade the Columbia River's important role as critical salmon habitat. With the Columbia River habitat in such a fragile state, the construction and long term impacts of the CRC project may provide the final blow to the habitat. The disclosed environmental impacts of the CRC project to the Columbia River include serious water quality issues from construction debris, increased turbidity, and discharged pollutants—just to name a few. These impacts combined with those from the LNG terminal seriously threaten the ability of the Columbia River to support salmon migration, rearing, and survival.

[366] See, e.g. *Lands Council*, 395 F. 3d at 1027.
[367] Columbia Riverkeeper, "Proposed Liquefied Natural Gas(LNG) and Coal Plants Threaten Columbia Estuary! Accessed June 30, 2008. Available at http://www.columbiariverkeeper.org/lngmega1.htm. Attached as Exhibit AH.

O-035-140

The cumulative effects analysis was not artificially constrained to projects only in the immediate area of CRC, but projects in a close proximity can be more relevant. Thus, projects near the CRC alternatives comprise the majority of the focus of the cumulative effects analysis in the DEIS.

At the time of publishing the DEIS, the proposed LNG terminal had neither a Record of Decision nor a Biological Opinion, making it speculative to consider it "reasonably foreseeable". However, the cumulative effects analysis in the FEIS was amended to include consideration of this proposed project because it received approval from FERC in 2008.

To clarify, the DEIS did not find any of the build alternatives would incur "serious water quality issues from construction debris, increased turbidity, and discharged pollutants". In fact, the build alternatives would generally improve water quality long-term due to adding stormwater treatment to clean runoff that currently flows off I-5 untreated into local receiving waters. Construction impacts to water quality could generally be minimized by developing plans to control construction-related risks from erosion, sedimentation, or accidental spills.

O-035-140 The DEIS must consider the effects of the LNG terminal when calculating the cumulative effects of the CRC project on the Columbia River Basin and the species that use the river.[368]

3. Climate Change

O-035-141 It is a sign of progress that the CRC DEIS considers the project's climate change impacts; the DEIS acknowledges the tremendous challenge posed by anthropogenic climate change, the devastating environmental impacts global warming will likely have without serious action to reduce greenhouse gas emissions, and the dominant role transportation plays emitting greenhouse gases in Oregon and Washington. In fact, while transportation comprises 27 percent of national greenhouse gas emissions, it accounts for 38 percent of emissions in Oregon and 45 percent in Washington.[369] Transportation in this region clearly has a significant effect on its greenhouse gas contribution, and must play a central role in any effort to mitigate climate change. Unfortunately, however, the DEIS' two and a half page global warming analysis fails to satisfy NEPA's requirements on several accounts, and fails to come to terms with the actual environmental impacts of building a bridge that increases highway capacity for greenhouse gas-emitting cars and trucks.

[368] DEIS at 3-426.
[369] DEIS Cumulative Effects, 3-430 – 3-431.

O-035-141

Comment noted. See responses to other specific comments regarding climate change, such as 035-094, 035-095, 035-103, 035-142, 035-143, and 035-144.

4. The DEIS purpose and need failed to prioritize climate change impacts

O-035-142

As established, the DEIS' purpose and need statement fails to consider some of Oregon's and Washington's most pressing needs, including sustainable growth, reduced pollution, and emphasis on alternative transportation. The narrow purpose and need was applied to exclude excellent alternatives that would reduce bridge congestion, promote alternative transportation, achieve environmental and safety benefits, without increasing car capacity and promoting massive traffic increases. This project will impact the development and character of Portland and Vancouver for many decades to come; identification and consideration of these cities' unique needs is essential. Portland in particular has set the national standard for commitment to sustainable growth; part of this commitment involves goals to reduce greenhouse gas emissions below 1990 levels. Yet the DEIS purpose and need statement ignores local commitments to climate stewardship and responsible growth.

5. The DEIS misleadingly represents the CRC's impact on greenhouse gas emissions.

O-035-143

The DEIS disingenuously claims "*reductions*" in greenhouse gas emissions in the project area under the build alternatives.[370] However, these so-called reductions occur only when considered relative to projected increases for the no-build alternative, rather than compared to either current emissions or to alternatives that would not increase car capacity. In actuality, the build alternatives will each lead to significant increases in project area greenhouse gas emissions,

[370] DEIS Cumulative Effects, 3-433.

O-035-142

It would be inappropriate and unproductive to list or cite in the purpose and need statement, all of the laws, regulations, plans and policies that could be relevant to the proposed action. This would be a very long list and it would obfuscate the reason for developing a purpose and need statement. Reducing greenhouse gas emissions is an important goal locally and globally, but climate change is not one of the driving needs behind the proposed action and therefore is not part of the purpose and need statement. That said, this does not mean that greenhouse gas emissions are ignored. On the contrary, the EIS has evaluated impacts on greenhouse gas emissions and climate change, just as it has evaluated all other potentially significant impacts on social, natural and cultural resources. The CRC DEIS was one of the first transportation EISs in the country to provide an analysis of impacts to GHG emissions and climate change, and that analysis has been used to help inform the public and decision makers about the impacts, benefits and trade-offs of the various alternatives under consideration. The analysis has shown that the project would reduce GHG emissions compared to a future without the project (see the response to comment 035-143). The DEIS further described various other actions, outside the control of the project or the project sponsors, that could result in further reductions in GHG emissions.

O-035-143

It is unclear what you believe the DEIS failed to disclose regarding GHG and climate change impacts. The DEIS disclosed that with the forecasted growth in regional population and employment, GHG emissions will increase over existing conditions, whether the project is built or not. It disclosed the emission estimates for each future alternative, and showed the potential for lower emissions with some of the build alternatives compared to the No-build alternative. It described the individual elements of the build alternatives that most influence GHG emissions. It also disclosed the uncertainty associated with estimating

O-035-143 and the difference in increase between the no-build, replacement, and supplemental bridge options is slight. While the DEIS projects an approximately 35 percent increase in emissions under the no-build alternative, the Alternative Three replacement bridge with light rail will result in a 32 percent increase.[371] The DEIS documentation reaffirms this, finding Alternative Three will result in only 2.4 percent lower daily CO_2 equivalent emissions than projected emissions under the no-build alternative. Energy Technical Report, 5-5. NEPA requires a "full and fair discussion of significant environmental impacts,"[372] which in this case means honest disclosure that the CRC as proposed will exacerbate, not lessen, global warming concerns in Oregon and Washington by failing to curb projected emissions increases.

6. The CRC alternatives will violate Oregon's and Washington's climate change obligations.

O-035-144 The range of alternatives proposed in the DEIS, even given its flawed assumptions about future transportation demand, will inevitably lead to increases in greenhouse gas emissions through the I-5 corridor. These projections are irreconcilable with Oregon and Washington's ambitious goals to reduce greenhouse gas emissions far below 1990 levels. Oregon has committed to reducing greenhouse gas emissions to 75 percent below 1990 levels by 2050. Similarly, Washington has committed to achieving emissions 50 percent below 1990 levels by 2050. The CRC is a test of these new goals, and whether Oregon and Washington will meet them seriously as a statutory obligation, or instead make them much more difficult to achieve. The DEIS' repeated assertion that these statutes do not yet require "specific actions" to

[371] DEIS Cumulative Impacts, 3-435.
[372] 40 CFR 1502.1.

future GHG emissions, and indicated that there are elements of the proposed action that, although not reflected in the model estimates, would be expected to further reduce emissions relative to No-build. The DEIS also identified other actions, outside the control of this project or the project sponsors, that could result in further reductions in future GHG emissions with or without the project (for example, changes in federal legislation regarding fuel efficiency and/or GHG emissions or substantial changes and adoption of new vehicle technologies and new fuels).

O-035-144

Please refer to the response to comment 035-142 regarding why reducing greenhouse gas emissions is not, and does not need to be, part of the purpose and need statement, and why it is not necessary to forward an alternative that by itself will reduce future greenhouse gas emissions below 1990 levels. The projected increase in GHG emissions is due to projected population growth; it is not due to the CRC project. This is also discussed in the response to comment 035-037.

Your comment that high capacity transit and bicycle and pedestrian access should be "put on an equal footing" with highway is generally consistent with the direction of the CRC project and accurately describes the preferred alternative. Each of these modes is reflected in the project's purpose and need statement, and each is a significant element of the preferred alternative. While the project would increase throughput capacity and safety for people in cars and trucks, it also represents one of the region's largest single investments in high capacity transit, and the region's largest, by far, investment in pedestrian and bicycle facility improvements. To provide further support for transit, biking and walking, the project proposes a toll for the river crossing that would be paid only be highway users, not by transit riders, pedestrians or bicyclists.

O-035-144 "quantifiably" limit emissions cannot be used as an excuse to move backwards.[373] Other states have recognized the critical need to "start making land use decisions that help reduce GHGs now," to meet long-term emissions goals.[374]

The CRC, which will dramatically impact automobile and freight emissions in one of the region's most significant transportation corridors for many decades, must lead to emissions *reductions* for Oregon and Washington to achieve their statutory goals. However, each proposed alternative will significantly increase I-5 CO_2 emissions from current levels. As a result, the CRC threatens to move these states far in the wrong direction. Investing in a four billion dollar project that will hinder, rather than help, global warming emissions goals simply makes no sense. It also fails under NEPA. As we have emphasized, to comply with NEPA, the DEIS must consider all reasonable alternatives; it defies common sense to claim that only alternatives that contravene global warming goals and increase greenhouse gas emissions are reasonable. The DEIS must provide alternatives that at a minimum put high capacity transit, including bicycle and pedestrian access, on equal footing with automobiles. Only a proposal to reduce greenhouse gas emissions below today's levels can adequately address this project's climate change implications and conform with regional emissions obligations. At least one alternative that does this had to be included in the DEIS.

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[373] Cumulative Effects Technical Report, 5-4, Energy Technical Report, 2-11.
[374] California Draft LUSCAT Submission to CARB Scoping Plan on Local Government, Land Use and Transportation, May 5, 2008 at 9-10, *available at* http://climatechange.ca.gov/luscat/documents/2008-05-14_meeting/DRAFT_LUSCAT_Submission_to_CARB.pdf. Attached as Exhibit AI.

7. The DEIS relies on misleading analysis and flawed assumptions.

O-035-145

Though the Alternative Three replacement bridge will dramatically increase car capacity by expanding I-5 to at least twelve lanes, the DEIS remarkably and counter-intuitively concludes it will result in the smallest greenhouse gas emissions increase of the proposed alternatives. Flaws in the DEIS undermine both the significance of this finding and its accuracy. First, the DEIS misleads the public into believing added capacity will not lead to increased traffic and emissions, by focusing solely on congestion and traffic demand, rather than vehicle miles traveled and overall greenhouse gas emissions. Even if the replacement bridge alternatives would produce lower emissions than the no-build alternative, the "benefit" is insignificant. Second, the DEIS bases its greenhouse gas estimates on arbitrary and unsupported estimates of future traffic volume, by largely ignoring induced traffic. Thus the build alternatives likely would have far higher greenhouse gas emissions than the DEIS indicates.

The primary asserted advantage to the replacement bridge and other build alternatives lies in the estimated reductions in I-5 congestion. Congestion certainly is a major obstacle to reducing greenhouse gas and other air pollution emissions, and any successful CRC proposal must mitigate congestion by decreasing travel times and vehicle miles traveled. However, the DEIS attributes the reduced congestion estimated under the proposed alternatives to "additional bridge crossing *capacity*" rather than from an improved, modern design and improved alternative transit options.[375] The DEIS provides no rationale or data for causally linking reduced congestion to increased capacity. Specifically, the DEIS clearly fails to establish that increased capacity is

[375] Cumulative Effects Technical Report 5-6, emphasis added.

O-035-145

While there was no regulatory threshold or standardized methodology for estimating greenhouse gas emissions when the DEIS was being developed, the project team worked with federal and state agencies to develop an appropriate analysis methodology that would allow disclosure of impacts and a comparison of alternatives. The DEIS, Chapter 3, Section 3.19.8, summarized the results of GHG emissions and climate change analysis conducted for the DEIS alternatives. Further detail was included in the Energy Technical Report that was released along with the DEIS.

Following the public comment period on the DEIS, the CRC project team was requested by the Metro Council and Portland City Council to secure independent review of the GHG evaluation conducted for the DEIS. The "Columbia River Crossing Greenhouse Gas Emission Analysis Expert Review Panel Report" (January 8, 2009) describes the activities and findings of the independent review panel. The panel concluded that the GHG evaluation methods and the findings in the DEIS were valid and reasonable. They also found that the findings were likely conservative, and that the LPA would likely reduce GHG emissions even more than estimated in the DEIS. The GHG and climate change analysis in Chapter 3 (Section 3.19.10) of the FEIS updates the analysis that was in the DEIS, but the basic conclusion that the LPA would have lower emissions than No-Build, remains unchanged.

The reasons that the project would reduce GHG emissions compared to No-build were described in the DEIS, and are included in the report mentioned above as well as the FEIS. The highway improvements decrease congestion which reduces the amount and duration of idling and slow-moving traffic. The extension of high capacity transit increases transit mode share and reduces the number of autos crossing the river at I-5. The new highway toll further reduces auto trips and increases the transit mode share. The reductions in auto travel and the reductions in

O-035-145 the only, best, or primary way to reduce congestion. By removing all alternatives that do not increase car capacity from consideration, without first demonstrating they cannot achieve similar congestion benefits, the DEIS misses a crucial opportunity to meet the project's stated purpose and need without impeding progress addressing greenhouse gas emissions. NEPA requires consideration of these reasonable alternatives, or an explanation why they are not reasonable.

Contrary to the DEIS' assertion, adequate consideration of greenhouse gas emissions requires more than reductions in daily hours of congestion; vehicle miles traveled must also decline. All CRC proposed alternatives project huge increases in vehicle miles traveled, despite the fact that increased vehicle miles traveled "directly correlates to an increase in petroleum use and GHG production."[376] Notably, the variation in vehicle miles traveled estimated for the proposed alternatives is "miniscule."[377] The DEIS projects vehicle trips under Alternative Three will increase by approximately 32 percent from today, only five percent less growth in driving than the no-build alternative.[378] The range of alternatives presented does not include a single option that will significantly reduce driving or emissions – *even relative to the no-build option* – because benefits achieved through high capacity transit and bicycle/pedestrian access will be offset by additional car capacity. Because vehicle miles traveled will not vary significantly between the no-build and build alternatives, greenhouse gas emissions will continue to increase despite any possible short-term congestion relief.

[376] California Draft LUSCAT Submission to CARB, 13. Attached as Exhibit AI.
[377] Energy Technical Report, 2-12.
[378] DEIS Transportation, 3-19 and 3-32.

congestion result in lower GHG emissions from I-5 traffic. The electric power generation for the extended light rail transit system increases transit-related GHG emissions, but these increases are offset by the reduction in GHG emissions from I-5 traffic. Other elements of the project, including eliminating bridge lifts and reducing crashes, would further reduce traffic back ups and idling, which will further reduce GHG emissions beyond that estimated in the model. While reducing VMT or other metrics for auto use can help reduce GHG emissions, travel speeds are also a significant determinant. Traffic idling or moving slowly on the interstate highway generates significantly more GHG emissions than the same amount of traffic that is not impeded by significant durations of congestion, major bottlenecks, bridge lifts or traffic incidents.

The DEIS also evaluated alternatives (4 and 5) with much smaller improvements to highway capacity, more high capacity transit service, and higher tolls on the highway crossing, than proposed in the preferred alternative. These alternatives provided a test of how an alternative with greater emphasis on transit service and less emphasis on highway improvements would affect, among other things, GHG emissions. Modeling predicted that these alternatives would result in a slightly higher transit mode share and further reductions in autos crossing I-5, but they would not provide further meaningful improvements in GHG emissions. This is because they would result in much greater congestion on I-5 and greater traffic diversion to I-205 (because of the higher toll and greater congestion on I-5), and substantially more emissions from electrical generation used to power twice the train service. Transit use is already projected to be very high with the preferred alternative, and doubling the number of trains running would not result in a proportional reduction in auto use.

The DEIS did not ignore the potential for induced growth. In fact it included a robust analysis of induced growth effects, according to an independent panel of experts that reviewed the project's travel demand modeling and induced growth analysis (Travel Demand Model

O-035-145

However, the DEIS obscures the CRC alternatives' failures to reduce actual miles traveled by discussing automobile energy use in terms of travel demand – essentially a metric for congestion – rather than vehicle miles traveled. The Energy Technical Report, which provides the only technical support for the DEIS' climate change analysis, explicitly states the travel demand method is "not intended to be representative of the total…CO2 emitted by the project."[379] This measure is irrelevant to the climate change impact of the project, and in no way supports the DEIS' climate change statements. Consequently, neither the DEIS nor its supporting documents contain a legitimate greenhouse gas analysis for the CRC alternatives. Moreover, manipulating the energy analysis in this way, so as to obscure the CRC's impact on future traffic volume and greenhouse gas emissions, undermines NEPA's requirement of full disclosure of environmental impacts. It also begs the question, once again, why the DEIS fails to consider alternatives that provide alternative transportation but do not increase car capacity.

The DEIS also fails to accurately consider the effect of additional highway capacity on induced traffic, thereby overestimating the climate benefit of short-term congestion relief and underestimating future greenhouse gas emissions under the build alternatives. The DEIS' information on induced growth largely ignores the build alternatives' huge increase in car capacity. Instead, the DEIS focuses on the anti-sprawl benefits of high-capacity transit and mass transit's conformity with the cities' land use planning goals. Yet this land use analysis focuses on sprawl; it does not directly address induced traffic at all.[380] The induced growth report implicitly assumes that because sprawl is projected to be "minimal," increased car capacity will not generate more traffic. However, research demonstrates that adding highway lanes does, in

[379] Energy Technical Report, 2-12.
[380] *See* Land Use Technical Report Appendix A: Indirect Effects: Induced Growth.

Review Panel Report, November 25, 2008, available at www.columbiarivercrossing.org). Your assertion that "research has shown that additional highway capacity results in additional VMT" ignores the fundamental details of the national body of high quality research that has been conducted on induced growth. As described in Chapter 3, Section 3.4 of the DEIS and in Appendix A: Indirect Effects: Induced Growth of the CRC Land Use Technical Report (2008), highway capacity improvements and access improvements can induce development in suburban and rural areas that were not previously served, or were greatly underserved, by highway access, but induced growth is not inevitable with every highway improvement. The DEIS outlines a comprehensive analysis of the potential induced growth effects that could be expected from the CRC project. A review of national research on induced growth indicates that there are six factors that tend to be associated with highway projects that induce sprawl. These are discussed in Chapter 3 (Section 3.4) of the FEIS and in the Land Use, Economics and Indirect Effects Technical Reports. Based on the CRC project team's comparison of those national research findings to CRC's travel demand modeling, Metro's land use / transportation modeling, and a review of Clark County, City of Vancouver, City of Portland and Metro land use planning and growth management regulations, the DEIS and the FEIS conclude that the likelihood of substantial induced sprawl, and induced traffic, from the CRC project is very low. In fact, because of its location in an already urbanized area, the inclusion of new tolls that help to manage demand, the inclusion of new light rail, and the active regulation of growth management in the region, the CRC project will likely reinforce the region's goals of concentrating development in regional centers, reinforcing existing corridors, and promoting transit and pedestrian friendly development and development patterns. These are factors that over the long-term will tend to result in reducing VMT.

Please see Chapter 3 (Section 3.4) of the FEIS regarding induced growth and induced traffic.

O-035-145 fact, generate additional vehicle miles traveled. The greenhouse gas emissions from this additional driving soon outweigh short-term congestion benefits.[381] The Induced Growth report also manipulates modeling results to find minimal sprawl effects. The report relies on a 2001 Metroscope modeling study that predicted one additional lane in each direction would not lead to sprawl, simply stating "the findings are still applicable," though the replacement alternative will add at least two lanes in each direction.[382]

O-035-146 The DEIS celebrates a set of "alternatives" that share virtually identical predicted increases in emissions and vehicle miles traveled. It fails to provide a legitimate climate change distinction between the build and no-build alternatives or a rationale for excluding alternatives that would move Washington and Oregon towards their climate change goals. The DEIS also fails to account for inevitable induced traffic from added highway capacity, which casts doubt on the validity of the entire energy analysis. These significant shortcomings in the DEIS' climate and energy analyses warrant the filing of a Supplemental EIS, providing either reasonable alternatives that reduce congestion but do not add car capacity, or information sufficient to show those alternatives are unreasonable. The CRC has the potential to help shape future highway demand and promote sustainable transportation choices, and must not serve instead to accommodate unsustainable growth and push our global warming goals out of reach.

[381] Sightline, "Increases in greenhouse-gas emissions from highway-widening projects," Oct. 2007, 1, *available at* http://www.sightline.org/research/energy/res_pubs/analysis-ghg-roads. Attached as Exhibit AJ.
[382] Induced Growth, A-8.

O-035-146

This comment repeats some of the same issues addressed in your comments above. Please see responses to comments 035-142, 035-143 and 035-145.

8. Cumulative Air Toxics Effects

O-035-147

The DEIS does not adequately address cumulative air quality effects. The Cumulative Effects Technical Report devotes less than one page to air toxics, concluding that, on a regional basis, future differences between alternatives are insignificant for "all pollutants."[383] This statement has several flaws. Neither the DEIS nor the Technical Report consider "all pollutants" of concern for air quality or public health, and the DEIS and Technical Report do not consider synergistic health effects of simultaneous exposure to multiple criteria pollutants or air toxics. The analysis of cumulative effects also fails to consider the health impacts of exposures beyond 2030.

The DEIS addresses numerous pollutants, but only cursorily addresses most and completely fails to address some air toxics with significance to public health. The criteria pollutant discussion not only fails to adequately address the individual health effects of CO, NO_x, SO_2, and particulate matter (see Air Quality section of these comments), it also fails to adequately consider the combined health effects of criteria pollutants by focusing solely on whether the region will continue to meet the NAAQS for the individual pollutants. The NAAQS levels do not take cumulative effects of multiple air toxics into account.[384] As a result, the DEIS does not provide necessary information on the future combined effects of several criteria pollutants, each of which contribute to related respiratory and cardiovascular health problems. To adequately disclose public health effects of the CRC build alternatives, the DEIS should assess the combined health effects of all relevant air pollutants at future projected levels. The

[383] Cumulative Effects Technical Report, 2-1.
[384] 42 USC 7408-7409.

O-035-147

CRC is first and foremost a transportation project. VMT is projected to grow because population and employment are projected to grow. The VMT growth is not due to the proposed project. The DEIS demonstrates that, in spite of population growth, future emissions from I-5 will be lower than today, due to the current regulations on vehicle emissions and fuels, resulting in better air quality for the region and local areas, regardless of the alternative selected. Although the difference in current-to-future year emissions is large, the differences in emissions between build and no build are so small that they are essentially insignificant. Although some stakeholders in the Portland-Vancouver region have requested that CRC should seek methods for improving air quality, the magnitude of the benefits between alternatives would likely be minor compared to the overall benefit in vehicle emission reduction. Given this, a quantitative cumulative analysis would also show minimal differences between alternatives, and would not provide the public with new, useful information, beyond that which has already been provided.

O-035-147 DEIS should provide this information at the neighborhood level, to assess future risks for neighborhoods along the I-5 corridor.

O-035-148 Similarly, the DEIS and Air Quality Technical Report address the build alternatives' impacts on future emissions of six Mobile Source Air Toxics, but fail to consider cumulative effects of these and other toxic automobile pollutants.[385] According to the Multnomah County Health Department, this analysis fails to consider several air toxics of concern, which may increase with new emissions standards.[386] Notably, the DEIS fails to consider air toxics that will likely increase as a result of the very emissions control technology the document lauds. The Health Effects Institute report Multnomah County cites also indicates a potential increase in particulate matter, which directly contradicts the DEIS' projections.[387]

O-035-149 Moreover, the Portland Air Toxics Assessment considered the health effects of twelve MSATs, finding current levels of concern for ten of these.[388] The PATA report also addresses the importance of cumulative exposures, concluding "simultaneous exposure to multiple air toxics, even at median exposure levels, creates the potential for adverse health outcomes, including cancer."[389] Cumulative impacts assessment is particularly important, because as several criteria pollutants have overlapping and similar health impacts, numerous MSATs are identified

[385] Cumulative Effects Technical Report, 2-2.
[386] Multnomah County Health Department response to the CRC DEIS, 1. Attached as Exhibit AK.
[387] DEIS, 3-277.
[388] Oregon DEQ Air Toxics, PATA, http://www.deq.state.or.us/aq/toxics/pata.htm. Attached as Exhibit AL.
[389] PATA Conclusions and Recommendations, http://www.deq.state.or.us/aq/toxics/docs/pataconclude.pdf. Attached as Exhibit AE.

O-035-148

See above comments on cumulative impacts.

Care should be exercised when interpreting the HEI report. The report suggests that by switching to alternative fuels, emissions from some MSATs could increase based on studies in Brazil and Mexico where more alternative fuels are used. Under their key conclusions for acetaldehyde, HEI states:

"Urban concentrations of acetaldehyde measured in Brazil, where ethanol is widely used in motor vehicles as an alternative to conventional fuels, suggest that acetaldehyde concentrations elsewhere might increase in the future if the use of alcohols in fuels increases." (emphasis added)

The report later states:

"Indeed, the widespread introduction of ethanol and compressed natural gas as vehicle fuels in some regions of the world that has less advanced engine and emission control technologies than the U.S. has already led to increases in ambient concentrations of aldehydes in these regions. Whether or not the same increases will be seen in the U.S. as alternative-fuel use increases is unknown."

Thus, to conclude that U.S. MSAT emissions will increase due to alternative fuels is premature. Since the current emission models predict future emission reductions in aldehydes, it is not clear that phased-in implementation of alternative fuels will automatically result in future increases of aldehydes emissions as inferred by HEI.

The HEI report also concludes:
"There is no evidence to suggest that current ambient concentrations of

O-035-149 carcinogens with potential synergistic effects.[390] The DEIS does not explain why it considers only six of the twelve PATA pollutants, when additional air toxics have demonstrated health impacts in the project area.[391] By limiting its analysis to six MSATs, the DEIS avoids a cumulative health assessment of pollutants that will likely increase due to traffic increases and changes in emissions technology.

O-035-150 The DEIS must also consider the cumulative health impacts of the CRC alternatives' in combination with other existing and foreseeable future pollution sources in the area.[392] This should include a cumulative health impacts analysis of existing and future industrial and airport emissions, until *and beyond* 2030.[393] By failing to address foreseeable continuing increases in traffic and eventual congestion beyond 2030 for each bridge alternative, the DEIS fails to account for the project's cumulative health impacts. These future traffic and emissions increases are foreseeable, and arbitrarily ending the health impacts analysis when the bridge has decades of remaining use undermines the purpose of NEPA's requirement to disclose cumulative impacts.

[390] *Id.*
[391] DEIS, 3-275.
[392] 40 CFR § 1508.7.
[393] *See* Multnomah County Health Department response, 6. Attached as Exhibit AK.

acetaldehyde adversely affect human health."

Similar conclusions were cited for formaldehyde and naphthalene.

The evaluation of potential impact from different mixtures of alternative fuels in the future is beyond the scope of the CRC project. Regardless of the fuel mixtures used, the difference between alternatives is expected to be minimal as discussed above.

O-035-149
See above comments on cumulative impacts.

FHWA Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA Documents identified seven compounds to consider. These compounds are acrolein, benzene, 1,3-butadiene, diesel particulate matter plus diesel exhaust organic gases (diesel PM), formaldehyde, naphthalene, and polycyclic organic matter (POM). EPA identified these compounds as significant mobile source contributors that were among the national and regional-scale cancer risk drivers from their 1999 National Air Toxics Assessment (NATA) (http://www.epa.gov/ttn/atw/nata1999/). PATA evaluated 12 air toxics of concern, based on the 1996 NATA national-scale assessment for the Portland area. Several of the PATA toxics (e.g., chloroform, nickel, and perchloroethylene) are not generally associated with mobile emissions. Thus, there were six common toxics designated in the two available sets which then were evaluated in the DEIS.

O-035-150
See comments on cumulative analysis above.

The typical long range planning horizon is 20 to 25 years, in part because evaluating impacts beyond that time frame begins to get increasingly speculative. That said, as population and employment

9. The DEIS falsely concludes that the cumulative effects of the project will not have a disproportionately high impact on Environmental Justice communities.[394]

O-035-151

The low income and minority populations located along the I-5 corridor already bear a disproportionately large burden of the adverse impacts from the past projects located near the I-5 corridor.[395] Surrounding the NE I-5 corridor, the asthma rate is twice the national average (14% versus 7%) and nearly three times the rate in more affluent and less diverse neighborhoods such as Southwest Portland (14% versus 5%).[396] The CRC project will further degrade air quality surrounding the I-5 corridor threatening increased asthma triggers and other air-related health problems. These impacts combined with the significant adverse noise impacts, economic impacts associated with construction and delays will further increase the burden on EJ communities. Yet, these impacts are ignored in the analysis of the cumulative effects on EJ populations which resulted in the false finding that these populations will not have a disproportionately high impact.

[394] Cumulative Effects Technical Report at 2-12
[395] EJ Technical Report at 42.
[396] Podobnik, B. "Portland Neighborhood Survey: Report on Asthma Rates in NE, SW, and W Portland." May 23, 2002. Available at http://www.lclark.edu/~podobnik/asthma02.pdf. Attached as Exhibit T.

increase, it is reasonable to assume that traffic volumes are likely to increase, even if VMT per capita continues to decrease. The DEIS analysis has shown that the project is much more effective at reducing congestion and increasing transit mode share than the No-Build Alternative, and this trend would be likely to continue beyond 2030. The indirect effects analysis further indicates that the project would effectively help the region manage sprawl. There is no indication that these benefits would be reversed over a longer period of time. On the contrary, because the project focuses improvements in an existing, urbanized corridor, would promote future development around light rail stations, and would improve biking and walking facilities, it is likely that the congestion management and growth management benefits of the project would grow over time. Further, most evidence and trends suggest that the prevailing trend in lower emissions from vehicles would be likely to continue well beyond 2030.

O-035-151

The DEIS described an evaluation of regional, sub-area and intersection level air quality impacts. The analysis showed that with or without the CRC project, future levels of all air pollutants will be significantly lower than today and would be well under federal and state thresholds developed to protect human health (Section 3.10). These large reductions in future emissions are due primarily to improvements in vehicle technologies and fuels - changes due to legislation that is separate from this project. This evaluation also found that the CRC project, compared to No-build, would provide additional small reductions in emissions of all pollutants in most areas along the project, except around the I-5/ SR14 interchange in Vancouver where it would result in slightly higher than No-Build levels of CO and NOx (still well under thresholds developed to protect human health). Regarding noise, the DEIS described an evaluation of potential noise impacts from the project's alternatives. This evaluation found that with anticipated mitigation (e.g. new or rebuilt noise walls), there would be substantially

10. The DEIS provides no support for the conclusion that the impacts from the build alternatives are small and will actually improve parts of local ecosystems.[397]

O-035-152 Considering the serious adverse impacts noted throughout the DEIS and the number of undisclosed environmental impacts, there is no way the DEIS can accurately draw this conclusion. The DEIS indicates that project will destroy peregrine falcon habitat and adversely impact habitat for fish species—hardly small impacts.[398] For instance, the combination of water quality impacts from bridge construction, stormwater runoff, and other proposed projects do not cumulatively equate to a small impact on aquatic ecosystems.

11. Other deficiencies in the cumulative effects analysis include that:

O-035-153 • The DEIS fails to accurately analyze the impacts of water quality and climate change on endangered species such as salmon.

O-035-154 • The DEIS improperly concludes that the cumulative effects of the CRC project, regulations, and other foreseeable actions will result in water quality improvements.[399]

O-035-155 • The DEIS falsely concludes that the localization of construction impacts will prevent cumulative impacts from being a serious concern for the natural environment.[400] In fact, construction will have significant impacts on the water and air quality which cumulatively threaten the health of ecosystems and human communities.

[397] Cumulative Effects Technical Report at 52
[398] DEIS at 52.
[399] DEIS at 3-443.
[400] DEIS at 3-445.

fewer noise impacts to nearby residents and businesses than without the project, and fewer than today (Section 3.11). Economic impacts due to project construction are an important consideration for this project's construction phasing and sequencing. Section 3.4.4 of the DEIS described how this project's construction could impact local businesses and Section 3.4.5 identified potential mitigation measures for these impacts. While construction-related detours and delay would be unavoidable, developing a construction plan with local businesses, property owners and residents will play an important role in minimizing these adverse effects.

O-035-152

In the context of the cumulative effects of 150+ years of development in the region, project impacts are relatively small, and the project continues to work with regulatory agencies to minimize and offset impacts where possible. So far no offsets to peregrine falcons has been identified during agency meetings. Impacts to fish habitat have been minimized and offsets to those impacts have been developed. Stormwater from the project will be treated under the LPA. Currently, very little of the runoff in the project area receives stormwater treatment. This treatment will be a benefit of the project. Other in-water construction activities may result in temporary and localized increased turbidity levels. The existing substrate consists mainly of fine- to coarse-grained sand, a substrate that is not easily resuspended and which settles relatively quickly when disturbed. All construction activities will need to comply with DEQ and Ecology water quality certifications that limit turbidity levels and require monitoring.

O-035-153

This comment only states that the analysis provided is not accurate; it does not provide any suggestion about what those inaccuracies might be, or what an accurate analysis would need to include. This comment does not provide enough information to allow a specific response. The

VI. Section 4(f) Lands

O-035-156

Section 4(f) of the Transportation Act prohibits the Department of Transportation from using public land of significance unless it demonstrates there is no "feasible and prudent alternative," or that the impact is *de minimis*. If the property use meets one of these standards, the Department of Transportation may only approve the use if the project will adopt the least harm alternative.[401] The CRC build alternatives, and particularly the replacement alternatives – with their larger footprint of impacted land – will result in the use of many Washington parcels of historic and park land protected under section 4(f).[402]

The Transportation Act imposes a stringent test for using 4(f) property. For more than three decades, courts have understood the 4(f) mandate to impose a "plain and explicit bar to the use of federal funds for construction of highways through parks-only the most unusual situations are exempted."[403] The DEIS acknowledges the many pieces of 4(f)-eligible land the project will potentially "use," DEIS, Exhibits 5.3-1 and 5.3-2, but it fails to provide key information, does not adequately support its claim that there are no feasible or prudent alternatives, nor does it establish these uses are *de minimis*.

[401] 49 USC 303.
[402] DEIS, 5-4 and 5-7.
[403] *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402 at 411 (S.Ct. 1971).

cumulative impacts analysis in the FEIS includes more information on cumulative impacts to salmon (see FEIS Chapter 3 Section 3.19). While this information does not result in any changes in conclusions, it does provide additional detail not available at the DEIS phase.

O-035-154

The DEIS summarized how historic development trends and actions in the water shed have degraded water quality compared to predevelopment conditions, and how more recent regulations and actions have improved water quality in recent years. Page 3-443 of the DEIS provided a clear and succinct explanation for the conclusion that the stormwater treatment associated with the CRC project, combined with other reasonably foreseeable actions that will be subject to more stringent water quality regulations than in the past, will likely result in overall water quality improvements compared to existing conditions.

O-035-155

The DEIS identifies a number of potentially serious impacts associated with project construction, and potentially serious cumulative effects. The specific text you are referencing is referring to the impacts that could result from multiple, simultaneous construction projects, not to the cumulative effect of all past, present and reasonably foreseeable actions. This has been revised in the FEIS for better clarity. Because the BA has been completed since the DEIS was published, there is also additional detail regarding water quality and salmon impacts and mitigation.

O-035-156

This comment states that there was not adequate documentation regarding analysis of prudent and feasible alternatives, or regarding de minimis impacts in the Draft Section 4(f) Evaluation. However, the comment does not provide any specific suggestions for what more

A. The DEIS lacks required information

O-035-157

Overall, the 4(f) section of the DEIS lacks the information necessary to elicit valuable and informed public comment. First, it contains no information to justify its finding that there are no prudent and feasible alternatives. Second, the 4(f) section of the DEIS lists 218 possibly protected historic areas that the build alternatives will impact, but does not include final determinations on whether they are subject to 4(f) provisions. State agencies will not make these determinations until the Final EIS.[404] Third, the Project Staff intends to wait until the Final EIS to make official *de minimis* findings for those areas that are definitely subject to 4(f), and by doing so limited the information in the DEIS to its "inten[t] to pursue making" the findings.[405] This delay denies the public its statutorily required opportunity to comment on the substance and basis for such findings.

B. The DEIS does not demonstrate a lack of prudent and feasible alternatives.

O-035-158

The DEIS asserts without support that no satisfactory alternatives could reduce the need to adversely affect public spaces.[406] Considering Section 4(f) "requires the problems encountered by proposed alternatives to be 'truly unusual' or [to] 'reach extraordinary magnitudes' if parkland is taken,"[407] the DEIS should at least attempt to disclose what unusual circumstances require the exact proposed placement of the build alternatives.

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[404] DEIS, 5-4.
[405] DEIS, 5-43.
[406] DEIS, 5-51.
[407] *Comm. to Preserve Boomer Lake Park v. U.S. Dep't of Transp.*, 4 F.3d 1543 at 1550 (10th Cir. 1993).

should have been included. Given that, we direct you to the Draft Section 4(f) Evaluation where you will find that it analyzed potential avoidance alternatives, documented that there was no prudent and feasible alternative that could avoid all 4(f) properties, identified and evaluated potential measures to minimize harm, identified preliminary de minimis impacts, and provided a preliminary conclusion regarding the least harm alternative. The document also provided the rationale for each of the findings. Also see updated Section 4(f) Evaluation in Chapter 5 of the FEIS.

See responses to comments O-035-158 and -160 below regarding prudent and feasible alternatives and minimization measures. See the response to comment O-035-159 below regarding de minimis impact findings.

O-035-157

See the response to comment 035-020 regarding alternatives analysis and preliminary findings of effect on historic resources; comment 035-158 regarding prudent and feasible criteria; and, comment 035-159 regarding de minimis impact findings.

Because it was a draft, the Draft 4(f) Evaluation included preliminary, rather than final, findings regarding de minimis impacts, minimization measures and the least harm alternative. A primary function of the draft is to seek additional comment from the public and other stakeholders prior to making final conclusions. The fact that the findings were labeled as preliminary or draft does not confound the ability of the public to make comments. Additional public and agency input on the findings, and on-going design refinement and analysis, inform the final findings and conclusions in the Final Section 4(f) Evaluation included with the FEIS.

O-035-158

Under Section 4(f), the "prudent and feasible test" applies only to

O-035-158

The DEIS does not adequately assess whether there are feasible and prudent alternatives to the current proposed set of public land uses. By grouping together every potential 4(f) use, the DEIS easily concludes that no prudent and feasible alternative "can simultaneously meet the project's Purpose and Need while also avoiding all Section 4(f) resources."[408] However, the DEIS does not examine alternatives that may meet the purpose and need – and therefore might be prudent and feasible – while impacting *fewer* public park and historic resources.[409] Section 4(f) requires analysis of these less-harm alternatives, however, because "the protection of parkland is of paramount importance."[410]

Relying on the current purpose and need and range of alternatives also improperly limits the consideration of alternatives. As these comments emphasize, the current purpose and need statement fails to include environmental, climate change, or public health concerns, and the current range of alternatives does not offer real choices that promote transit but that will not create more traffic. As a result, alternatives that may meet needs the DEIS does not identify, and which minimize harm to Section 4(f) resources, should be adequately addressed in a Supplemental DEIS.

[408] DEIS, 5-51.
[409] *Id.*
[410] *Boomer Lake*, 4 F.3d 1543 at 1550.

avoidance alternatives (see 23 CFR part 774.17(4)). An avoidance alternative is not just an alternative with lower 4(f) impacts, it is an alternative that avoids all 4(f) impacts (or has only de minimis impacts). When there are no prudent and feasible alternatives that can avoid Section 4(f) resources, the next step is to consider all reasonable measures to minimize harm. Under 4(f), minimization measures are subject to the "reasonableness" test not the "prudent and feasible test". The Draft Section 4(f) Evaluation evaluated alternatives to determine if any could avoid all 4(f) uses (avoidance alternatives) as well as alternatives that would have lower impacts to 4(f) uses (minimization measures). As described in the Draft Section 4(f) Evaluation, there are no avoidance alternatives that are feasible. Some of the minimization measures are not reasonable, but many of them were determined to be reasonable or at least potentially reasonable. This evaluation of minimization measures has been updated and finalized for the Final Section 4(f) Evaluation (FEIS Chapter 5).

The purpose and need statement for CRC was based on input from multiple stakeholders, analyses and data. Since it was adopted, there has been no reasonable rationale provided to-date to revise the purpose and need. You suggest that the purpose and need should include climate change, environmental impacts and public health concerns, and that the range of alternatives should include alternatives that improve transit but do not increase traffic. The purpose and need for the proposed project is transportation-related. It's purpose is not to address climate change, public health or the environment. However, such goals are part of the stated values that the project is striving to achieve, and the analysis shows that the preferred alternative would have an overall reduction in greenhouse gas emissions, beneficial environmental impacts, beneficial impacts to public health, and reduced auto use.

C. Proposed 4(f) uses will not be *de minimis*.

O-035-159

The DEIS attempts to dodge application of the rigorous no prudent and feasible alternative standard for allowing Section 4(f) use, by declaring many of its proposed 4(f) uses *de minimis*.[411] But this claim requires meeting another high standard. Under the Transportation Act regulations, *de minimis* impact for historic sites means "the Administration has determined…that no historic property is affected by the project or that the project will have "no adverse effect" on the historic property in question."[412] For park and recreational areas, a *de minimis* impact "will not adversely affect the features, attributes, or activities qualifying the property for protection under Section 4(f)."[413] While the DEIS claims to have met this standard, it provides no supporting information; indeed it cannot, as the Project Staff has yet to even make official *de minimis* findings.[414]

Once made, however, these findings will likely fail to meet the legal standard for *de minimis* impact. "*De minimis*" park land uses for the build alternatives include relocating 180 feet of the Waterfront Renaissance Trail.[415] Because the current starting point for the trail will move under the build alternatives, and the DEIS provides no detail as to where it will "relocate" to, if at all, many downtown residents will likely have to change their commutes, recreation, and routines.[416] This clearly qualifies as an adverse effect on the activities that qualify the land for 4(f) protection, and thus it does not qualify as *de minimis*. Similarly, plans to pursue a *de*

[411] DEIS, 5-43 – 5-51.
[412] 23 C.F.R. § 774.17.
[413] *Id*.
[414] DEIS, 5-43.
[415] DEIS, 5-47.
[416] DEIS, 5-47.

O-035-159

In this case, because there are no prudent and feasible alternatives that can avoid all 4(f) resources, the impacts to individual resources are not subject to the "prudent and feasible test". See response above to comment 035-158 regarding the application of the Section 4(f) "prudent and feasible test" to avoidance alternatives, not minimization measures.

We appreciate your comments on the proposed de minimis impact findings. The Draft Section 4(f) Evaluation referred to these impacts as "proposed" de minimis findings, precisely because of the desire and requirement that such findings, as they relate to parklands, cannot be finalized before affording opportunity for public review and comment and gaining concurrence from the officials with jurisdiction over the property (see 23 CFR 774.5(b)(2)). We have provided information on these impacts at public meetings and open houses during and since the DEIS comment period, to provide ample opportunities for comment. We have also coordinated with the administrators of these parklands at the City of Vancouver, Vancouver Public Schools, Clark College, City of Portland and Metro to elicit any concerns they may have regarding the impacts or proposed de minimis findings. Based on the input we have received, we have made some design refinements and reached final conclusions, supported by the officials with jurisdiction, regarding de minimis impact findings, as described in the Final Section 4(f) Evaluation (Chapter 5 of the FEIS).

De minimis impact findings for historic resources do not require specific public input but we appreciate and have considered your comments. For historic resources, project designs have been revised and mitigation developed in part based on comments received.

See Chapter 5 of the FEIS for the final conclusions regarding de minimis impact findings.

O-035-159 *minimis* finding for relocation of a trail in Kiggins Bowl, again with no supporting rationale,[417] appears inadequate under the *de minimis* standard.

Most of the "potential" historical site uses also clearly fail the *de minimis* standard. The DEIS anticipates use of many of these historic sites will have an adverse impact[418]; this by definition precludes a *de minimis* finding.[419] Because the uses are not *de minimis*, they must meet the strict "no prudent or feasible alternatives" test. Again, though, the DEIS provides no information about how planning will mitigate these impacts or why these uses meet the "truly unusual" standard for non-*de minimis* impacts. Presumably this will also be resolved at the Final EIS stage, when the public can no longer meaningfully comment.

D. The DEIS does not consider alternatives to minimize harm.

O-035-160 Even if there were no prudent and feasible alternative for the proposed build alternatives that would not use 4(f) land, the Department of Transportation cannot approve the project without planning to minimize its adverse impact on protected places.[420] Courts have established that the test for the least harm alternative "requires a simple balancing process which totals the harm caused by each alternate route to Section 4(f) areas and selects the option which does the

[417] DEIS, 5-50.
[418] DEIS, 5-8 – 5-11.
[419] 3 C.F.R. § 774.17.
[420] 49 UCS 303.

O-035-160

The Draft Section 4(f) Evaluation considered multiple alternatives in the analysis of potential avoidance alternatives. Those that did not meet purpose and need or could not be revised to meet the purpose and need, were not advanced for additional analysis beyond that point. Minimization measures, including the Supplemental Bridge crossing, were then evaluated in order to identify "reasonable" (see definition in 23 CFR part 774.17(3)) design changes or other measures that could reduce the overall impact on 4(f) resources. Such measures were not summarily dismissed in the Draft Evaluation. On the contrary, those measures that passed the "reasonable" test, and there were many, were advanced for further analysis and incorporation into the proposed project. They have helped to define the least harm alternative. Also, see the response above to comment 035-158 for more information on the "prudent and feasible" test versus the "reasonableness test".

O-035-160 least harm."[421] Whether an alternative meets the prudent and feasible standard is irrelevant to this analysis. *Id.*

However, to properly conduct this balancing, there must be a legitimate range of alternatives with varying adverse impact to compare. In *Davis v. Mineta*, the Tenth Circuit rejected a 4(f) analysis that examined only two alternatives and "summarily rejected…secondary avoidance alternatives such as "minor alignment shifts…"[422] Similarly, the DEIS 4(f) section summarily dismisses changes that would lessen the build alternatives' impact, by assuming none would meet the purpose and need, and essentially considers only two build alternatives - a replacement and a supplemental bridge.[423]

O-035-161 The Section 4(f) analysis in the DEIS provides little information with which to judge the ultimate project impact on public parks and historic places. Because of the need for public input on adverse use of these protected places, the Project Staff must issue a Supplemental EIS with use determinations, justifications for *de minimis* findings, and legitimate analysis of least harm alternatives that would meet the asserted – or hopefully amended – project purpose and need.

[421] *Concerned Citizens Alliance, Inc. v. Slater*, 176 F.3d 686, 694 (3rd Cir. 1999), *citing Druid Hills Civic Ass'n v. Federal Highway Admin.*, 772 F.2d 700, 716 (11th Cir.1985).
[422] *Davis v. Mineta*, 302 F.3d 1104, 1114 (10th Cir. 2002).
[423] DEIS, 5-51.

O-035-161

These comments are repeated from above. See responses to comments 035-157, 035-158, 035-159 and 035-160.

VII. Conclusion

O-035-162

For all the reasons set forth above, NEDC and its joint commentators respectfully request that the CRC Task Force withdraw the CRC DEIS and issue a corrected Supplemental DEIS for public comment.

Respectfully submitted,

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O-035-162

See above for responses to specific points regarding request for a supplemental DEIS.