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ECOSYSTEMS, TRIBAL AND
PUBLIC AFFAIRS

October 24, 2011

Mr. John McAvoy, PE, Major Projects Manager
Federal Highway Administration
Western Federal Lands Building
610 E. 5th St.
Vancouver, Washington 98661

Ms. Linda Gehrke, Deputy Regional Administrator, Region 10
Federal Transit Administration
915 Second Avenue, Suite 3142
Seattle, Washington 98174

Re: Interstate 5 Columbia River Crossing Project Final Environmental Impact Statement
EPA Project Number: 05-052-FHW

Dear Mr. McAvoy and Ms. Gehrke:

F-001-001

The U.S. Environmental Protection Agency (EPA) has reviewed the Interstate 5 Columbia River Crossing Project Final Environmental Impact Statement (FEIS) and Final Section 4(f) Evaluation. We are submitting comments in accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act.

The Columbia River Crossing (CRC) FEIS identifies the locally preferred alternative (LPA) as a refined version of Alternative 3 in the Draft EIS. The LPA includes a new river crossing over the Columbia River, improvements to seven interchanges, bicycle and pedestrian improvements, light rail transit from Portland to Clark College in Vancouver with transit stations, park and rides, bus route changes, an expanded light rail maintenance facility, tolls on motorists for project financing and as a travel demand management tool, and transportation demand and system management (TDM and TSM) measures. Depending on project funding, the LPA could be constructed fully or with phasing of several highway elements.

At the Draft EIS stage, we expressed our general support for the proposed project, particularly with respect to its multi-modal features, use of tolls and other TDM and TSM measures to reduce single occupancy vehicle travel and its associated impacts. We also raised concerns with respect to a number of environmental, human health, social, and economic issues, including potential impacts to the Troutdale Spile Source Aquifer and other project area groundwater resources; air quality; environmental justice and impacts to disadvantaged and vulnerable populations; water quality, impaired water bodies, and subsistence fishing uses; land use; and ecological connectivity. We also reviewed and commented on the project financial analysis and potential funding impacts. We would like to express our appreciation for all the good work that has transpired since the Draft EIS was issued, and to thank you for working with

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Thank you for your comments.

F-001-001 us to improve the analysis and disclosure of and mitigation for potential project impacts. Our comments regarding specific aspects of the project are provided below.

Groundwater and the Troutdale Sole Source Aquifer

F-001-002 The FEIS together with the pertinent electronic Technical Reports and Appendices (Geology and Soils, Water Quality and Hydrology, Hazardous Materials and its Appendix F, the Troutdale Sole Source Aquifer Report [mis-referenced as Appendix E in the FEIS, p. 3-334 and elsewhere]) do a good job of presenting available data, potential impacts, and description of proposed monitoring. We recommend that these groundwater-related documents, any updates to them and any new reports, be compiled and made readily visible and available to the public on an ongoing basis throughout project design, construction, and beyond.

The CRC project is currently working with the EPA at test shaft drilling sites to ensure that appropriate subsurface soil and groundwater samples are taken to determine the presence of contaminants where pile driving and shaft drilling would occur. We note the following future groundwater-related activities identified in the FEIS that would benefit from clarification and more specific commitment in the Record of Decision (ROD):

- Focused site assessments for hazardous materials (p. 3-423) would be conducted prior to construction to evaluate existing impacts to soil, sediment, and groundwater. An agency approved work plan would have goals, objectives, and procedures for each site assessment.
- An analysis of impacts to groundwater movement due to project construction of shafts, piles, retaining walls and soil stabilization structures, which are projected to be minor and localized (p. 3-409), is deferred to future evaluation as project design proceeds.
- Ongoing drinking water supply monitoring of groundwater by the City of Vancouver will help to verify that the project does not impact Vancouver's drinking water supply (p. 3-424).

Recommendations:

- Identify the specific agency that would approve the focused site assessment for hazardous materials. Identify who would be notified of any hazardous materials discoveries and the response plan chain of events.
- Indicate where the analysis of impacts to groundwater movement can be obtained or reviewed by the public.
- Disclose any other means or plans to monitor groundwater drinking water supplies that may be affected by project construction and operations.
- Compile and make readily available to the public, on an ongoing basis, all groundwater-related reports/documents as stated above.

Air Quality

F-001-003 Cumulative, Long-Term Construction Impacts: We agree with the statement in the FEIS that construction impacts to the surrounding environment are a concern for any of the build alternatives (p. 2-68). The FEIS states that the highest potential for "temporary" cumulative construction impacts, such as local traffic congestion and rerouting, noise and air pollution, is likely near the bridge landing in

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The DOTs commit to the following mitigation measures and are including them in the Record of Decision:

- Focused Environmental Assessment's (FEAs) would be reviewed and approved by the state DOT hazardous material departments within each respective state (Oregon and Washington). These FEAs will be conducted in areas not covered by Environmental Site Assessments (ESA) Phase 1 or Phase 2 assessments and will address the potential to encounter hazardous materials at specific sites, impacts of construction on hazardous materials and any hazardous materials discoveries. As part of the FEA work plan the DOT hazardous materials departments will coordinate with ODEQ, WDOE and/or EPA on any hazardous materials discoveries and implement the response plan.
- All project reports, analysis and plans are available and will continue to be available on the Columbia River Crossing website.
- The City of Vancouver presently monitors drinking water, this information can be compiled and made available to the public either through the CRC website or the City of Vancouver website. During project construction the FEA work plan will address the potential to encounter hazardous materials at specific sites, impacts of construction on hazardous materials and handling any hazardous materials discoveries. Post project construction completion stormwater infiltration facilities will be designed to provide the necessary separation between the bottom of the basin and seasonal high of the groundwater table to minimize any potential of groundwater contamination.

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Although construction will last more than 5 years, project construction activities at any one site are not expected to last more than 5 years. Thus, a CO hot-spot analysis was not conducted. If, as more information

F-001-003

Vancouver and on Hayden Island, where other large construction projects are likely and where CRC construction duration and intensity will be high (p. 3-460). Based on the substantial levels of uncertainty regarding the nature, extent, costs, and delays associated with hazardous materials sites discovery and clean up, historical/cultural/archeological discoveries, project financing, construction phasing, overlapping non-CRC activities/construction in the project vicinity (p. 3-459), and other unforeseen construction impacts and delays, we would expect project construction, and its associated array of impacts, to exceed a five year period.

With respect to air quality, this is significant when one considers the threshold used in the conformity rule. Under the transportation conformity rule, "Temporary increases are defined as those that occur only during the construction phase and last five years or less at any individual site" 40 CFR 93.123(c)(5). The conformity rule does not consider construction periods more than five years as temporary.

The Portland Air Toxics Assessment identified construction activities as a significant source of air toxics in the urban area. In the case of the CRC project, construction of new bridges, roadways, interchanges, light rail transit, bicycle/pedestrian facilities, retaining walls, sound walls, bridge removal, and operations in staging areas all individually or cumulatively can be significant sources of regulated pollutants and air toxics. The best case scenario for duration of project construction is six years, with the Hayden Island and southern Vancouver communities experiencing the most prolonged and intense construction activities. In addition, Subarea 2, which includes the southern Vancouver neighborhoods, is projected to experience higher levels of operational air pollutants (carbon monoxide and nitrogen oxide) with the Locally Preferred Alternative (LPA) than under the No Build Alternative due to greater vehicle miles traveled (p. 3-279). The long-term construction emissions and other construction-related stressors, in addition to elevated long-term or permanent operations emissions (even if lower than current emissions) point to the importance of identifying sensitive receptors, particularly those exposed to these long-term impacts, and to using additional emissions controls for construction equipment project-wide, and particularly within the core construction areas.

Recommendations:

- Identify project area sensitive receptor locations in the ROD and ensure that mitigation commitments address these areas.
- Include commitments for additional emissions controls for construction equipment in the Record of Decision (ROD). There is substantial local evaluation of emission control technologies for construction equipment. This year the City of Portland completed two EPA Diesel Emission Reduction Act grants wherein they successfully installed 156 after-treatment devices and 157 direct-fired heaters as an idle reduction strategy on public and private construction equipment. Contact Kyle Diesner, City of Portland, at 503-823-4166 for more information.
- Require retrofitting of construction equipment in construction contracts. U.S. DOT CMAQ money can be used to help fund diesel retrofits and there are many examples of construction retrofit contract language across the Country.
- See the Clean Construction USA website at <http://www.epa.gov/otaq/diesel/construction/> for many examples of construction mitigation measures, case studies, and examples of institutional arrangements for implementing this mitigation.

is known, construction at any one staging site is expected to last more than 5 years, a hot spot analysis will be completed.

Sensitive receptors were not explicitly identified in the FEIS, as CRC did not conduct modeling for the FEIS. However, results from the latest Portland Air Toxics Solutions (PATS) modeling, were incorporated into the FEIS. Concentration contours for benzene, formaldehyde and diesel PM were presented for the on-road sources and for on- and off-road mobile source categories. These contours provide the public with information about the spatial distribution of these pollutants across the region and in the project area.

As described in more detail in Chapter 3 (Section 3.10) of the FEIS, construction mitigation will focus on controlling dust and exhaust emissions from demolition and construction activities and on minimizing traffic congestion. Regarding dust, the project will comply with WAC 173-400-040 in Washington and Section 290 of ODOT's standard specifications in Oregon, regulations that limit dust emissions. The WAC includes enforcement actions and fines in cases where dust becomes a nuisance and Section 290 includes a list of precautions to be taken to avoid dust emissions.

Regarding exhaust emissions, the contractor would be required to develop a pollution control plan that includes documentation of operational measures that would be used to reduce emissions. This plan would include a requirement for the use of ultra low sulfur diesel and idling location and duration limitations. In addition, the DOTs are evaluating potential additional emission control technologies for construction equipment. The DOTs will continue to monitor and evaluate changes in technology and related regulations. Decisions regarding any additional emission controls will be made during final design.

Stationary sources such as concrete and asphalt mix plants are

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- Commit to a full suite of air quality construction mitigation measures to avoid and minimize construction-related emissions to the extent possible.
- Include in the ROD a commitment that WSDOT and ODOT will continue to work with neighborhoods and vulnerable populations to address air quality concerns and impacts as the project moves into final design and construction.

Environmental Justice – Cumulative Effects to Disadvantaged and Vulnerable Populations

F-001-004

We acknowledge and appreciate the benefits associated with the proposed project, and we appreciate the efforts to minimize impacts to disadvantaged populations in the project area through outreach and incorporation of community input. We do remain concerned that the direct and indirect environmental, human health, social, and economic project impacts would likely affect disadvantaged populations within the project area disproportionately as compared to populations that reside outside the project area. It is important to acknowledge that the same project benefits accrue to non-disadvantaged communities outside the construction zone, but without the impacts, or in the case of regressive tolls, with less impact. Also, the general approach to analyzing and mitigating individual impacts, while important and useful, may not fully illuminate and enable a response to the holistic social, cultural, economic, and human health effects that may result from cumulative impacts.

We continue to recommend that available health data be provided to help characterize baseline conditions in affected neighborhoods and to inform efforts to mitigate impacts. The CRC Office indicates that maps of asthma rates and accompanying data and explanation could be provided, but that since the project is having no adverse impact on air quality, there is little need to discuss the potential for disproportionate or adverse effects. We believe this health information should be disclosed and used in describing cumulative effects to vulnerable populations, and applied in project planning and design to reduce impacts throughout the project area, whether or not a community has voiced concern regarding air pollution or other potential project-related impacts. The cumulative effects analysis should recognize that all project-related impacts, whether social, economic, or environmental, have potential impacts to human health and well-being.

We suggest considering augmentation of the mitigation listed for CRC tolling impacts. Allowing disadvantaged people to use their electronic benefit cards (food stamp funds) to purchase transponders and pay tolls is a convenience, but is essentially a decrease in their public assistance funds. Considering the scope of current and additional impacts being borne by the affected neighborhoods and the current economic struggles, it would seem appropriate to offer low income residents free or discounted transponders and free or reduced fare transit passes.

Recommendations:

- Include baseline health data in the ROD, and use it to inform further mitigation commitments.
- To alleviate cumulative effects from past, current, and additional future impacts, consider remedies that are social, economic, and environmental in nature, result in reduced stress, and improve the quality and enjoyment of life in cumulatively affected communities.
- Consider providing free or discounted transponders and transit passes to low income residents.

generally required to obtain air permits from DEQ or SWCAA and to comply with regulations to control dust and other pollutant emissions. As a result, their operations are typically well controlled and do not require additional project-specific mitigation measures.

Strategies to minimize the occurrence and effect of roadway congestion during construction would be developed during the design phase. Alternatives would be refined, impacts to traffic analyzed, and transportation agencies and experts brought in to develop mitigation plans and solutions. Some of these strategies may include encouraging mode shifts to non-SOV trips, construction management techniques/incentives to avoid/reduce congestion, and providing information to travelers to encourage alternate route/travel times.

WSDOT and ODOT will continue to work with neighborhoods and vulnerable populations to address air quality concerns and impacts as the project moves into final design and construction.

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The project will work closely with the affected neighborhoods for the duration of construction, and beyond. As part of this outreach, and fulfilling federal and other guidance on environmental justice, the project will acknowledge and address unique vulnerabilities throughout the community. The FEIS includes mitigation to conduct outreach on tolling in multiple languages, to work closely with the State Schools for the Blind and the Deaf in Vancouver, and to actively manage construction related emissions, dust, and other impacts. The mitigation commitments have been updated to include specific work to identify and help mitigate effects that are specific to individuals with health problems or other unique circumstances. It is not possible, without an independent survey and analysis being initiated, to isolate health conditions and affects within the study area specifically. Instead the project will incorporate into its outreach and public involvement programs, a specific emphasis on

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Phased Implementation. Because the CRC project construction may be phased the EIS should acknowledge that, at some point, “temporary” impacts should be considered long term or permanent impacts depending on the nature and duration of effects. Conformity rules under the Clean Air Act identify impacts as temporary only if they last 5 years or less. The question of whether or not this finding should also apply to impacts regarding vulnerable populations, noise, water quality, threatened and endangered species, and so on should be examined.

Long term social, economic, and environmental impacts should be acknowledged and appropriately mitigated. Residents, particularly vulnerable populations, near the bridge landing in Vancouver and on Hayden Island (p. 3-460) could be affected by cumulative construction impacts for an indefinite period of time under a phased scenario. The FEIS mentions mitigation plans, traffic control and business assistance plans as mitigation, but at some point, the effects of long-term cumulative construction impacts may be unsustainable for the most vulnerable populations and businesses. It may be appropriate to consider them as displacements or closures due to the effects of prolonged project construction.

Recommendation:

- Acknowledge and propose mitigation for potential long term/permanent social, economic, and/or environmental effects due to phased implementation.

Financial Analysis

F-001-006

The Financial Plan is key to implementation of a successful, environmentally sensitive project and we appreciate its inclusion in the FEIS. We invited our Regional economist to review the Financial Analysis and would like to offer the following comments as suggestions to strengthen the analysis.

Funding Sources and Fiscal Constraint. According to recent FHWA guidance¹ (p. 5, Q&A 3 and 31, and per the definition of “Reasonably Available”, p. 2), project proponents need to demonstrate that the project “can be implemented using committed, available, or reasonably available revenue sources.” The assumptions regarding anticipated funding sources (Section 4.4.2) indicate that “procuring these funds depends on future actions by federal and state legislators and administrators.” Relevant national, regional, and state economic issues, particularly over the last two years, such as, budget related issues at national and state levels, unemployment impacts, personal income related matters, and so on, could have serious adverse impacts on prospective sources of funding from both federal and state programs. These conditions should be discussed and factored into the Financial Analysis.

Recommendation: Provide rationale for the reasonable availability of CRC funding from the sources identified.

If insufficient Federal discretionary funds are secured for the project, the Analysis indicates that construction may be phased and/or additional capital funds would be required from state sources and/or tolling. As indicated by the CRC Cost Estimate Validation Process² (CEVP), there are only two phases – “Full Build” and “nearly Full Build”, wherein some interchanges would not be fully built to their final

¹ FHWA, 2011. Supplement to January 28, 2008 “Transportation Planning Requirements and Their Relationship to NEPA Process Completion”. February 9, 2011.

² CEVP, 2011. Columbia River Crossing CEVP (Cost Estimate Validation Process). Final Report. August 2011.

human health issues. We will continue to work with the community to identify areas where human health conditions can be improved and how project impacts in these areas can be mitigated.

The project will also continue to explore means of offsetting the impact of tolls, including transponder acquisition. There are some local discounted transit passes for low-income populations, and the specifics of this program will be assessed as the project continues toward opening.

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Construction-related impacts to traffic, noise, and air quality are not expected to be so severe as to warrant displacing residents that are outside the impact area of the project and not addressed in the FEIS. The FEIS describes mitigation that would be implemented to minimize construction impacts to nearby residents. The ROD discusses the potential for additional conformity analysis should construction activities last longer than 5 years in any single location.

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Please refer to Chapter 4 of the FEIS for a description of the current scenarios for funding construction and operation of the LPA. This discussion provides an updated assessment of likely funding sources for this project, though it is not common practice to receive funding commitments prior to completion of the alternative selection process. As described in the FEIS, project funding is expected to come from a variety of local, state, and federal sources, with federal funding and tolls providing substantial revenue for the construction. Project staff will continue to work toward confirmation of the major funding sources for the project.

The detailed cash flow analyses requested will be developed as the project moves toward construction. An investment grade tolling analysis will be initiated following the ROD. Both will present financial analysis in

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proposed configuration (CEVP, ES-1 and Section 2.4). The Independent Review Panel³ (IRP) states that the difference in the cost/benefit analysis between the LPA Full Build and the Phased LPA is minor (p. 179), which does not offer much flexibility for phasing the project funding where substantial funding may not be available in accord with the project's build schedule (based on the financial, economic, social, political conditions mentioned above). The IRP made additional comments on pages 184-187 of their report that do not appear to be factored into the analysis.

The Finance Plan Scenarios for various Toll Rate Schedules (Exhibits 4.4-4 through 4.4-9) each assume that each year's project revenue exactly matches that year's capital costs. Given the numerous funding sources and the magnitude of the project, it would be useful to include some cash flow scenarios for project financing as well. The cash flow scenarios should include relevant sources of funding and project cost, including any bond/loan issuance and interest.

Toll-Related Issues. The IRP (p. 176) noted there are two areas of the Finance Plan that represent the largest risk to the project, one of which is revenues from tolls. The Financial Analysis toll rate scenarios are shown in 2006 dollars, while the capital costs are in 2011 dollars (see CEVP), hence revenue/funding should also be expressed in 2011 dollars as the base. The conversion is a straightforward exercise and would provide reviewers with more relevant figures for analysis and decision making.

Recommendation: Present financial analyses in 2011 dollars.

The Oregon State Treasury⁴ (OST) CRC Financial Plan Review suggests that "...the CRC assume that projected annual gross toll revenues will be somewhere between 15% to 25% lower than the baseline forecast assumed at the time the 2008 DEIS was adopted" (p. 10), and that "At a 25% toll revenue reduction, estimated project revenues are reduced by 31% or approximately \$407 million." (p. 12) The Impresa Economics study⁵ also raises these issues relative to traffic crossing numbers and resulting toll revenue. The Financial Analysis does not refer to either of these reports with respect to traffic forecasts and toll revenues.

Recommendation: Provide analysis of scenarios that take into account potential reduction in estimated CRC traffic due to alternative/less costly travel routes, and due to recent, current, and near future economic and social conditions, and apply relevant sensitivity analyses.

The Financial Analysis discusses prospective sources of bonds and assumed bond proceeds, but not the key assumptions for financing through a bond issuance. Toll revenues would be pledges to repay bonds and other loans, and CRC must ensure there will be sufficient net toll revenues to pay debt service.

Recommendation: Incorporate the cost of debt service into the Financial Analysis.

³ Independent Review Panel (IRP), 2010. I-5 Columbia River Crossing Project, Independent Review Panel, Final Report. July 27, 2010.

⁴ Oregon State Treasury (OST), 2011. Columbia River Crossing Financial Plan Review – presentation. Debt Management Division, Oregon State Treasury. July 20, 2011.

⁵ Impresa Economics, 2010. Financial Analysis of the Columbia River Crossing, Portland, Oregon. October 2010.

a consistent dollar year reference and will incorporate the cost of debt service.

The term "reasonably available" in the referenced guidance refers to a judgment call taking into consideration (a) evidence of review and support of the new revenue assumption by state and local officials and (b) documentation of the rationale and procedural steps to be taken with milestone dates for securing the funds. Evidence of support of the revenue assumptions includes the fact that the finance plan was thoroughly reviewed by state and local officials in both Oregon and Washington as part of receiving Board approvals from each of the participating governments to sign the FEIS. Moreover, the project has been incorporated in the financially constrained Regional Transportation Plan, which also must be based on reasonably available funds. In addition, the FEIS describes in general terms the project milestones and required approvals relating to the implementation of the finance plan.

F-001-006 Thank you for the opportunity to review the CRC Final EIS and to participate in the development of this important project. If you have questions or would like to discuss these comments, please contact me at (206) 553-1601 or by electronic mail at reichgott.christine@epa.gov, or you may contact Elaine Somers of my staff at (206) 553-2966 or by electronic mail at somers.elaine@epa.gov.

Sincerely,



Christine B. Reichgott, Manager
Environmental Review and Sediment Management Unit

cc: Ms. Heather Wills, CRC Environmental Manager