From: "Deborah.Ensor@dot.gov" <Deborah.Ensor@dot.gov>
To: "youngje@consultant.wsdot.wa.gov" <youngje@consultant.wsdot.wa.gov>
Subject: WSDOT SR520 Comments

Jenifer,

Please see the attached comment letter for the SR520 project. The hard copy will follow via mail. Please contact John Witmer at 206-220-7964 if you have any questions. We look forward to continued coordination on the SR520 project.

Thank you and have a great day.

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Rebecca Reyes-Alicea
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U.S. Department
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**Federal Transit
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April 15, 2010

Jenifer Young, Environmental Manager
SR 520 Project Office
600 Stewart Street, Suite 520
Seattle, WA 98101

Re: Comments on Supplemental Draft EIS for the SR 520 Bridge Replacement and HOV Program, January 20, 2010

Dear Jenifer:

F-001-001 Thank you for the opportunity to review the Supplemental Draft Environmental Impact Statement (EIS), January 20, 2010 for the SR 520, I-5 to Medina: Bridge Replacement and HOV Project. The Supplemental Draft EIS analyzes a 6-Lane Alternative with three design options for the Montlake interchange area. The 6-Lane Alternative would add continuous HOV lanes and include three landscaped lids over SR 520 to reconnect neighborhoods.

The Federal Transit Administration (FTA) would like to offer the following comments on the Supplemental Draft EIS.

1. The document discusses the SR 520 High-Capacity Transit (HCT) Plan that outlines a strategy for incremental implementation of bus rapid transit service (BRT) on SR 520 and the development of a multimodal center at the University Link light rail station. However, the document does not clearly indicate how each of the design options would accommodate BRT or transit bus access to the light rail or multimodal station.

F-001-002 2. The multimodal station is referenced in several locations (for example, pages 1-17 and 5-28), but it does not appear to be included as part of this project. If the multimodal station is not part of this project, can it be included at a later date? This would seem to be a prime location and opportune time for an intermodal connection.

F-001-003 3. In order to be effective, the BRT service would require direct access to the light rail station. It is not clear how each of the design options vary in their ability to deliver BRT service to the light rail or multimodal station. FTA encourages that future bus or BRT transit intermodal connectivity be given strong consideration in the design for this project, including direct HOV access to a multimodal center.

F-001-004

4. The project would eliminate the Montlake Freeway transit stop. The document indicates that this is a highly used station and that it is overcapacity in terms of bicycle usage. A qualitative assessment on the effects of the removal of this station begins on page 5-22. Based on this assessment, it is our understanding that transit service would benefit from the improved traffic flow and by riders transferring to the light rail station. However, the analysis leaves room for doubt due to the lack of a quantitative assessment of changes in travel times, transit ridership, and mode of transit access.

F-001-005

5. FTA would support any design option that would strongly enhance the pedestrian environment in this highly congested location by providing safer and easier access to the Husky Stadium light rail (or multimodal) station, such as the proposal to include a lid over Montlake Boulevard at Husky Stadium.

F-001-006

6. Sound Transit and the University of Washington are currently developing a light rail station design option that includes a mid-block pedestrian crossing of Montlake Boulevard. To what extent do the three SR 520 options work with the mid-block crossing and Rainier Vista plan? If you were to extend the length of the lid a little further north, it could serve as a grade-separated pedestrian crossing to the light rail station.

F-001-007

7. FTA would support any design option that would encourage additional transit ridership though improving access to transit stations by the use of bike trail enhancements like those included in the pedestrian lid over SR 520 at Montlake Boulevard. Please also ensure that pedestrians and bicyclists can safely cross the Montlake Cut.

F-001-008

8. We did not find a discussion of the cumulative construction impacts with future light rail extensions and the University Vista projects. FTA previously commented on this issue in our DEIS comment letter, dated October 31, 2006. Since Sound Transit now has the funding to construct light rail north from Husky Stadium under their ST2 Program, the inclusion of this cumulative impacts analysis regarding future projects that have programmed funding has greater importance.

Again, thank you for the opportunity to comment. Please contact John Witmer at (206) 220-7964 if you have any questions.

Sincerely,

Rebecca Reyes-Alicea
Director of Planning and Program Development

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northwest Fisheries Science Center
2725 Montlake Boulevard East
Seattle, WA 98112-2097

April 15, 2010

Paula Hammond
Secretary of Transportation
Washington State Department of Transportation
P.O. Box 47316
Olympia, WA 98504-7316

Dear Secretary Hammond:

The Northwest Fisheries Science Center has carefully considered the proposed WSDOT and US Department of Transportation Supplemental EIS Supplemental EIS SR-5290, I-5 to Medina: Bridge replacement and HOV Project and has the following input: a Cover Letter and an Appendix of Detailed Comments to the Supplemental EIS SR-5290, I-5 to Medina: Bridge replacement and HOV Project. They should be read together and considered as a single response.

COVER LETTER:

F-002-001 The Northwest Fisheries Science Center ("NWFSC" or "Center") is deeply concerned that the Supplemental Draft EIS does not reflect the significance of the impacts to the Center's Montlake campus from the proposed SR 520 expansion project. These potential impacts are substantial. There are profound adverse impacts on the Center and its operations from all of the Proposed Alternatives: A, K and L. These will come most directly from site preparation, deconstruction and construction of the Portage Bay Bridge, Montlake Blvd additions and deconstruction and reconstruction of the Montlake/SR-520 interchange. Additional and ongoing impacts from increased traffic on SR-520 and Montlake Blvd are also expected to adversely affect NWFSC operations.

Our concern is not just that certain facts have been overlooked in the document. Our concern is that this omission may reflect a lack of understanding by Washington Department of Transportation (WSDOT), at least at the time the SDEIS was drafted, regarding the extent of the effects on the Center. We believe that this lack of understanding will lead to substantial delays in the project and significantly increase costs to both the SR 520 project and the Center, as well as to citizens of the Northwest and the nation.

F-002-001

The purpose of this letter is to clearly communicate our concerns to WSDOT for the record, and encourage and urge you to greatly accelerate the urgency and purpose of meetings between WSDOT and the NWFSC, to assure that there is a clearly documented and mutual understanding of the potential impacts of the project and necessary mitigation. It is our intent to work with WSDOT to help resolve these concerns while keeping the SR 520 expansion as close to schedule as possible. We appreciate, at the time of this writing, that WSDOT has begun meeting with us to discuss these impacts and possible mitigation for them, and that the level of mutual understanding is increasing.

As currently written, the SDEIS gives us the impression that WSDOT believes that the total impact on the Center of Option A is the removal of a few relatively insignificant peripheral buildings from the south side of the Center's property, and that the loss of these buildings would not seriously impact the Center, or alternatively, could be readily mitigated elsewhere. If this is WSDOT's operating assumption, it is incorrect. The facilities proposed for removal provide essential supporting functions for the Center. Unless there is a timely and carefully developed and executed solution for replacement and mitigation, the removal of these buildings will temporarily cripple the operations of the Center and have a profound long-term impact on our research.

The SDEIS also gives us the impression that WSDOT believes that for all of the proposed options that the construction and deconstruction impacts over 6.5 years will either be so minor as to be insignificant or alternatively will be able to be mitigated to the point where they will have no discernable impact on the productivity of the NWFSC work place, the quality of the science and research, or to the occupational health and safety of the 400 staff and additional visitors on the site. If this is the impression WSDOT is presenting then we strongly disagree. All options place the NWFSC property, staff and visitors either adjacent to, or potentially inside one of the State's most expensive, prolonged and impact-generating construction sites. While there may be measures that can be taken to reduce the degree of impact on the Center there is no doubt that there will be remaining impacts that cannot be mitigated and that the cumulative impacts will cause a significant decrease or even cessation of science at the NWFSC site. In some cases the proposed project will reduce the scientific certainty that we can place on the work that is produced.

Our over-arching points, the ones we most want WSDOT to understand and take to heart, are as follows.

F-002-002

1. The on-going research at the Center is Federally mandated and is vital to the Northwest.

The SDEIS fails to give any consideration to the value and impact that the research conducted by the Northwest Fisheries Science Center has upon the Northwest, including the area of the proposed SR 520 expansion project. The Center is one of the world's foremost research institutions for salmon recovery – particularly endangered species – an expertise that deeply affects the environment, the culture, and the economy of the Puget Sound area and much of the remainder of the Northwest. The Center has a leading role in the protection and rebuilding of

F-002-002 Puget Sound's other threatened or endangered fish species, and the charismatic local killer whale populations, also listed under the Endangered Species Act. And, the Center provides much of the fundamental scientific advice that underlies decisions about the allowable catch for the commercial and recreational ground fish fishery along the entire West Coast. These activities are supported by or defined in statue.

The SDEIS goes to considerable lengths, as it ought, to describe the immediate impact of the proposed project on threatened and endangered salmon populations and the cultural and economic consequences to those, especially the area's Indian nations, who rely upon salmon for harvest. In addition to providing for protection of the environment and functional equivalency for the NWFSC we believe it is also important to recognize the potential impact on the science and research activities that support the protection and recovery of those same salmon populations, as well as other ESA-listed, and non-listed salmon stocks throughout the Northwest.

F-002-003 **2. Even if the SR 520 expansion does not take right of way from the Montlake facility, the construction and the completed expansion will have a significant adverse impact.**

Regardless of which option is selected for the SR 520 expansion, a major construction project will be taking place immediately adjacent to and in part on the Montlake facility for at least 6.5 years. The detailed comments on the SDEIS accompanying this letter go into greater detail on these impacts; this section is intended to highlight some of these concerns.

The preliminary plans call for extensive pile driving and for a lay-down area for construction materials and equipment immediately adjacent to, or on, the Montlake property. There is the potential for significant vibration impacts, which may disrupt certain sensitive and carefully calibrated instruments such as electron microscopes and genetic sequencers. The construction noise, vibration, dust and equipment fumes are likely to disrupt the biological experiments underway in the fish-rearing facilities. Even if there is no removal of the fish-rearing facilities, the lack of normalized, controlled conditions will cause the validity of those biological experiments to be called into question.

The EIS simply does not adequately document and address the extent of impacts to the NWFSC site. For example the total extent of background sampling for noise reported in the EIS for the NWFSC site is for only two sample sites (one of which is undocumented). The total extent of sampling is: 15 minutes for one site and 46 hrs for the other (undocumented site). We are not confident that these sites represents actual locations where staff typically work or that this low level of sampling adequately represents the existing sound environment at the NWFSC and we cannot discern where the data for development of the noise model was actually collected with respect to the NWFSC site.

F-002-004 The cumulative impact discussion is particularly troubling. For example, at Chapter 7, discusses "Indirect and Cumulative Impacts" and identifies some categories of impacts, for example "Visual Quality and Aesthetics", "Cultural Resources", "Noise", "Air Quality". There is no apparent effort to identify the cumulative impact across these categories. What is the cumulative

F-002-004 impact of all these factors to the NWFSC site? The DEIS should make this clear. There is no discussion at all of the cumulative impact of vibration.

F-002-005 In addition there is no reasonable discussion of the cumulative impact of any single impact factor. Take noise for example. The DEIS suggests that maximum noise impact from the proposal can be characterized by describing the maximum individual noise from any one piece of construction equipment operating independently. We know that multiple construction equipment will be operating on the site at the same time and the resultant impact will be a product of all of that production, plus the noise of the existing SR 520. The EIS does not provide for consideration of this cumulative impact and therefore an unrealistic and unreasonable account of the noise that will result, at the NWFSC, from actual construction and deconstruction work. Similar arguments can be made with respect to the lack of cumulative impacts from the other factors, individually and collectively.

F-002-006 We expect that there will be substantial adverse impacts on the attractiveness of and productivity from the Montlake facility from the perspective of the people who work there. The main NWFSC buildings were designed about the same time as the current SR 520 was built, without special provisions for noise control, that might happen if the buildings were designed today to be adjacent to a freeway or even a construction site. The construction impacts, including the pile driving and other equipment, will create an acoustic environment that is inconsistent with the requirements of careful scientific research and undistracted thinking. In addition, the likely increase in dust and traffic from construction trucks, as well as the potential loss of parking places, will make the Montlake facility a much less attractive place to work. It is important to understand that, because of the design of the facility, it is essential for staff to go outside in order to move between buildings and that this is necessary on a daily basis for most employees. The impacts therefore will be much more severe than a situation where all activities are located in a single building.

The NWFSC depends in large part on the productivity, and skills of the workforce. It recruits across the United States and has in the past been successful in attracting some of the best scientists in the nation. The quality and environment of the work place is a critical factor in attracting and retaining staff. We consider that all of the proposed alternatives will negatively impact our ability to attract and retain a highly trained and exceptionally qualified staff.

F-002-007 An additional issue affects the safety and welfare of all of the nearly 400 people working at the Center. As portrayed in the SDEIS, the changes proposed to Montlake Blvd do not provide for continued access to the Center. More critically, Montlake Blvd provides the route for fire and safety purposes. A major scientific facility, where hundreds of people work each day, cannot rely on limited access.

F-002-008 At the conclusion of construction, the noise and visual impacts are likely to continue. The elevated roadway, the height of which we have not been able to determine and we understand is still under review, will not only dominate the view southward from the Center, but the increased future traffic associated with the expansion, are likely to result in a noticeably higher noise level throughout the complex and in the occupied offices. While there may be measures that can be

F-002-008 taken to reduce or mitigate for some of these impacts, the SDEIS gives no indication about how such measures might be applied to the Montlake facility. We note that all of the proposals include a lid on the East side of the Montlake SR 520 Interchange but do not provide for, or discuss, the provision of a lid on the West side. We consider that a lid on the West side, adjacent to the NWFSC property would also help to mitigate impacts from the SR-520 operations and will need to be considered as a mitigation option.

F-002-009 **3. The NWFSC Montlake property operates as a unitary facility.**

The Northwest Fisheries Science Center is a major national fisheries research facility employing approximately 400 people. In the same way that a microbiology laboratory needs to be co-located with facilities for culturing bacteria and viruses, and an agricultural research center needs to be located where there is room to grow plants, a fisheries laboratory needs to have ready access to facilities for rearing and culturing fish and other ocean-dwelling organisms. Although not every scientist will be using those facilities every day, the capability for on-site monitoring of on-going experiments and ability to take fresh samples into the analytical laboratories when needed is at the core of much of the Center's work.

The fish-rearing and wet-lab facilities, as well as a number of staff offices, are located on the south side of the Montlake property. Scientists with offices and laboratories in the building on the north side of the property use the buildings on the south side of the property as an integrated part of their research projects. A number of them visit the fish-rearing facilities and wet-labs daily or several times a day to oversee tests and bring fresh samples to the laboratories. The south side also contains a new and sizable office building with about 115 staff. Scientists with offices on the south side of the property interact throughout the day with their colleagues in the buildings on the north side of the property and vice versa.

F-002-010 **4. The project design under all Options will require major changes in the operation of the entire facility.**

The Center does not believe it is feasible to relocate the activities on the south side of the Montlake property to another place on the Montlake property. The total area of the Montlake property is relatively small, about 6 acres, and virtually all of the usable space on that property is now being used. Based on the limited information that we have from the SDEIS it appears that the unused space remaining on the property is not sufficient to allow rebuilding on the same site and that all SR 520 options essentially preclude any reasonable future expansion on the property, for NWFSC needs.

The Land Use, Economics and Relocation Discipline Report included as part of Attachment 7 to the SDEIS recognizes a relationship among the activities taking place in the buildings on the south side of the property, but fails to give any consideration to the relationship of those activities to the scientists working in the north side of the property. It merely states: "To accommodate the wider highway footprint, Option A would remove 9 of the 11 South Campus buildings (location shown in Exhibit 25). The functions of the two buildings that would not be

F-002-010 removed are tied to the functions of the nine buildings that would be removed. Therefore, the functions of these two buildings would need to be relocated." [Page 104]

Neither the SDEIS nor WSDOT seems to fully understand the major impact on the Center from the fact that the south side activities are interconnected with and essential to the functions of the remainder of the property. Removing the south side activities to some other location will cause the property to become less functional and efficient as a fisheries research center, and will require changing the way the Center conducts its research activities, as well as the relocation of at least some of the staff who are most involved with the south side activities. At a minimum the proposed right of way for Alternative A would require restructuring major research programs, and the establishment of a new facility with ocean access for vessels, fish-rearing capability, wet-labs, and office space for key personnel and those research scientists needing frequent and immediate access to the rearing facilities.

In short - if the right-of-way is taken for the SR 520 expansion proposed under Option A, the remaining property will not support a "functional equivalent" to the current facility. As you know, providing a functional equivalent is the minimum requirement for taking a federal property for right-of-way. Whether or not the right-of-way is taken under Option A, we expect significant adverse construction and deconstruction impacts and increases in adverse impact from SR 520 operations after construction that cannot be adequately mitigated and which, when considered cumulatively, will require the provision of functional equivalence.

F-002-011 We note that WSDOT characterizes the proposed duration of the 6.5 years of deconstruction and construction activity as only "temporary". We disagree with this characterization and view it instead for what it is: a 6.5 year period where the NWFSC will not be able to conduct its mandated work in a normal and customary way. Even the period of project proposals leading up to this point has been disruptive to our work, with little certainty about what will happen to this site and inadequate assurance that adverse impacts will be fully mitigated.

F-002-012 **5. Relocating the Center, in whole or in part, will be costly and time-consuming.**

The Center would prefer to remain at its current location, where it has been located since 1931. If, however, there is a compelling public need for the current property, and a functionally equivalent replacement facility or combination of facilities is made available, the Center would be willing to consider relocating all or part of its current Montlake activities. However, such relocation of a scientific laboratory will be much more complex, and costly, than simply moving a certain number of people and their equipment to new offices. And, it is important to note that such relocation would require concurrence from other elements of the National Oceanic and Atmospheric Administration (NOAA), of which the Center is a part.

Importance of Location and Connection to UW
As a major national scientific research center with extensive laboratory and fish-rearing facilities, replacing the Center would be complex and expensive regardless of where those functions are located. However, location is critical. The Center relies upon, and interacts closely with, the faculty and students of the University of Washington (UW). In fact, the

F-002-012

Center was relocated to its present location adjacent to the UW in 1931 specifically to take advantage of collaboration opportunities with the University. This need remains today.

Many Center research programs are cooperatively undertaken with UW faculty and scientists daily travel back and forth between the UW campus and the Center. Dozens of the Center's researchers are students (usually graduate students) at UW and also need to be within walking distance of the campus. These connections are very well established and important to Center's national and regional science enterprise. In support of this collaborative research, the Center also requires easily accessible docking space for its mid-size research vessel, the Harold W. Streeter, which is used for critical research in Puget Sound, including science support for the newly formed Puget Sound Partnership.

There are very few properties, if any, available in the Seattle area that can meet all of the above requirements for Center operations. The Center has, however, begun discussions with the UW to explore the possibility of co-locating with the University on some part of the campus. The University is being extremely helpful and collaborative and is using its best efforts to find a way to make this possible. Nonetheless, the task is difficult, campus space is limited, and the outcome is not assured. While the Center's preference is to continue to be entirely co-located with the UW (apart from the field stations), and if no suitable facilities are available adjacent to the campus, the Center might be forced to relocate part or all of the activities currently at the Montlake property to another site outside the UW campus area, and possibly outside the Seattle area. This possibility has not been given consideration in the SDEIS.

Moving research equipment and ongoing studies is costly and time consuming
The "office move" would itself be exceptionally challenging and expensive. Unlike ordinary offices, the Centers work revolves around a substantial investment in laboratories that include a significant number of extremely sensitive instruments such as electron microscopes and genetic sequencers. Moving this kind of instrumentation requires extensive recalibration and adjustment, which is not only costly, but prevents them from being used for research until the recalibration is complete and the instrument is stabilized in its new environment. This requirement will likely add noticeably to the basic costs of the move, and, more importantly, would increase the time before any new facility can become fully functional. Laboratories are simply not specified or built to the same standards as "office" buildings.

In addition, and more challenging, is the problem of relocating the fish-rearing facilities located on the south side of the Center's property. While the fish-rearing facilities currently at the Center may look simple, or even crude, their successful operation involves a delicate balance of water chemistry, temperature, oxygenation, water flow, lighting (or darkness), filtering and purification. It has taken years of careful experimentation and adjustment to fine-tune the operations of the current facility, and it would likely take many months to test and adjust the replacement facilities so that they provide the optimum aquatic environmental conditions needed for long-term fish rearing and replicable research results.

Perhaps the most difficult challenge of this proposed relocation is the impact on biological experiments that are already underway, such as fish already being reared at the Center. There is

F-002-012 no easy way to "park" the experimental populations while the move is being conducted. And, unless conditions at the new location are properly optimized, the shock of the move can cause enough mortality to the experimental population to invalidate the experiment.

For all of the reasons indicated above, a relocation of the Center, if required, would need very careful planning and a staged approach that would take considerable time.

F-002-013 **6. Substantial lead time, careful planning and commitments are needed before the Center can relocate.**

The lead-time needed to build a new facility would be at least several years. For example, if the Center were to reach an agreement in concept with the UW or others regarding construction of a new facilities and re-use of the buildings remaining at the current facility, a full array of federal procedures and documentation, such as an Environmental Impact Statement or Environmental Assessment, would be required, possibly adding a year or more before the Center's parent agency, NOAA, could complete a decision to proceed and enter into an agreement with the University, or others for construction of the facility.

Once a firm date for occupancy of a new facility is established, careful sequencing of the relocation process will be necessary to ensure continuation of nationally significant research projects. For example, the new fish-rearing facilities would need to be completed, tested, and fine-tuned well before the existing facilities are shut off. Ideally, with enough notice and appropriate timing, biological experiments at the existing facility would be completed and new biological experiments initiated at the new facility prior to the move, so that there would be minimal relocation of experimental populations. This would require a phase-in period of months or even of annual research cycles, not just a few days of equipment relocation.

It is difficult to see how a major relocation of the Center or a significant part of its current projects can be completed within with the proposed SR 520 construction schedule.

F-002-014 **Conclusion**

We have no desire to impede the construction of the SR 520 expansion and fully support its timely completion. The Center is not herein taking a position as to which option should be chosen. Those are decisions appropriately left to others. However, before making that decision, and developing a schedule and cost estimate to implement it, we believe WSDOT needs to more fully appreciate the effect of that decision on the Center, on its work, and on the mitigation that will be required. Given long lead times and extensive procedural steps necessary for both of our agencies to take action, it is very difficult to see how the impacts on the Center and its work can be addressed in a manner consistent with the schedule for SR 520 completion currently proposed by WSDOT.

The Center understands that, as a government agency, it is important to take a broad view on initiatives that are important to the community as a whole. Our request here is simply that WSDOT engages with us immediately to better understand the potential impacts of the SR 520

F-002-014 expansion on the Center's Montlake facility, and to jointly develop a cost effective solution, including any needed mitigation that will allow the NWFSC to provide mandated services to the region and the State to advance transportation needs.

In all future discussions, time is of the essence. While the SR 520 proposal has been decades in the making, under the current proposal site work for all options is scheduled to begin on the NWFSC property within 2 years. WSDOT needs to clearly understand that the NWFSC has not received assurance, from the Supplemental EIS or any other source, that the impacts will be mitigated and its operations will be able to continue under any of the options. Without this assurance and a plan and a firm commitment from WSDOT, the NWFSC cannot simultaneously fulfill its mandated trust obligations to the Nation and the region and therefore cannot provide support for any of the options proposed in the Supplemental EIS.

Sincerely,

Usha Varanasi

Usha Varanasi, Ph.D.
Science and Research Director
Northwest Fisheries Science Center

APPENDIX OF DETAILED COMMENTS

F-002-015

NWFSC Detailed Comments on Supplemental EIS SR-5290, I-5 to Medina: Bridge replacement and HOV Project. To be read in conjunction with Draft NWFSC Cover Letter on Supplemental EIS SR-5290, I-5 to Medina: Bridge replacement and HOV Project.

Background:

The Northwest Fisheries Science Center (NWFSC) is a major national scientific laboratory for the National Marine Fisheries Service, a part of the National Oceanic and Atmospheric Administration within the United States Department of Commerce.

The Pacific North West Region of the National Marine Fisheries Service includes Washington, Oregon and Idaho. The NWFSC is the head office for 5 other research stations located in the Pacific Northwest: at Mukilteo, Manchester and Pasco in Washington State; and, at Newport and Port Adams in Oregon.

The laboratories provide scientific research necessary to support mandatory regulatory and management decisions under various Federal mandates including the Magnusson Stevens Fishery Management and Protection Act, the Endangered Species Act and the Marine Mammals Protection Act. Current work includes research to support the recovery of endangered Salmon, and Killer Whales, to understand the impacts of climate change and ocean acidification on species of concern and to understand the causes and impacts of freshwater or oceanic events the affect human health.

Recovery of endangered Salmon and Killer Whales and protection of human health is a priority for the United States Congress, the Governor of the State of Washington and Tribes.

The NWFSC has an annual budget approaching $80M. About 400 employees work from the Montlake site that has been continuously occupied as a National Research laboratory since 1931.

Comments:

In summary – there are significant adverse impacts for the Center's operations from all the options and the NWFSC is not convinced that the proposed mitigation is sufficient to offset the impacts. None of the options will allow the NWFSC to provide continuity of mandatory research work at the site.

F-002-016

We are concerned that WSDOT description and understanding and consideration of probable adverse impacts and necessary mitigation and compensation at the NWFSC site as a scientific laboratory is seriously flawed and deficient. Moreover the timing and location of proposed work exacerbates impacts at the NWFSC site: through decisions by WSDOT to demolish essential research structures on the NWFSC site, by using the NWFSC site as an access way for construction equipment, by scheduling maximum construction work to coincide with the daily work schedule of the NWFSC and by the immediate proximity of construction and

F-002-016

deconstruction. These factors together with the aggressive time line that the WSDOTR has adopted for starting demolition and construction, has put the NWFSC into an extremely difficult position.

Given the current construction schedule there is insufficient time for the NWFSC to relocate to an alternative site, yet current research cannot continue without relocation and the EIS does not adequately describe the probable adverse impact of the proposed SR 520 replacement on the operations and responsibilities of the NWFSC or planned mitigation measures.

F-002-017

We relied on the paper Supplemental SEIS to fully inform us on the project and impacts. In a few cases we looked to the 5000 pages of "disciplinary reports" to try to understand some information, however it is our assumption that the purpose of the electronic disciplinary reports is only to support conclusions drawn by WSDOT and that every conclusion and finding is fully communicated in the paper SEIS.

The following comments relate to specific sections of the DEIS (or in a couple of cases disciplinary reports) – that are identified in **bold.**

F-002-018

Disciplinary Report - Cultural_VI DR p.140

The Disciplinary report includes the following:

…."However, removal of the South Campus property, which houses the fisheries research facilities, would significantly impair the ability of the NOAA Northwest Fisheries Science Center to operate. The historic buildings hold administrative functions for the NOAA Northwest Fisheries Science Center campus. If the research facilities were removed, there would no longer be a need for administration buildings. This could cause the remaining NOAA Northwest Fisheries Science Center site, including the historic buildings, to be vacated. Not only would this result in abandonment of the buildings, but it would cause a change in the character of the property's use that contributes to its historic significance. The 1931 building was specifically built to serve as the offices for the NOAA Northwest Fisheries Science Center, the first federal fisheries building constructed on the West Coast, and has fulfilled that purpose since its construction. All three historic buildings important research that is significant locally, regionally, and nationally, so a change in use that would not be associated with this research would be considered an adverse effect. In addition, the 1931 building is significant under Criterion C for its architectural design that incorporates marine motifs to visually demonstrate its association with marine research. The loss of that association would diminish the characteristics that qualify the property for the NRHP to the point where it would no longer convey its significance. Therefore, Option A would result in an adverse effect on the historic NOAA Northwest Fisheries Science Center buildings."

The NWFSC concurs with the WSDOT conclusion above that "removal of the South Campus property, which houses the fisheries research facilities, would significantly impair the ability of the NOAA Northwest Fisheries Science Center to operate". The NWFSC notes that the WSDOT

F-002-018 needs to understand that the level of impairment of project will effectively prevent the NWFSC from operating at the site – because the essential physical connection of south campus property to other laboratories and administrative buildings will be lost and because of the ongoing and insufficiently mitigated impacts to the remainder of the NWFSC site. The Center also notes that Construction and Deconstruction impacts from options K and L will have a similar impact – effectively preventing the use of the South campus regardless of the need for building destruction.

F-002-019 **2-2 Scope of the project for Portage Bay Bridge.** While WSDOT characterizes the project as a "6 lane alternative" as approved by the Washington State Legislature, for the Portage Bay Bridge it appears to be a 7 lane alternative because it includes an "auxiliary" lane and exhibit 1-7 Option A specifies 7 lanes.

F-002-020 **2-11 Actual permanent needed use of the NWFSC.** The EIS shows a current width significantly in excess of 110' (total width of the Option A) in Exhibit 2-6. The actual width of the new 6 lane options immediately adjacent to the NWFSC site is not shown, however it is substantially in excess of 110' with the majority of the additional width located to the North and within the current NWFSC property.

The NWFSC has repeatedly requested the provision of detailed GIS information from the WSDOT on the exact extent of the proposed SR520 replacement options, including any permanent, construction or other types of easements that will be needed. This data is needed to more fully understand the expected direct physical intrusion and ongoing impacts of the project on the NWFSC facility. At the time of responding to the EIS this information has not been provided to the NWFSC. Our comments are subject to change once this detailed information and other information that we have requested is made available.

F-002-021 **Discipline Report - Cultural VI p. 174.** We have only been able to locate one definitive measurement of the physical proximity of the proposed option A to the NWFSC.

"The existing Portage Bay Bridge is 280 feet from the closest corner of the NOAA Northwest Fisheries Science Center West Wing building. The new Option A Portage Bay bridge would be seven lanes wide, with an overall width of at least 108 feet. This would be 35 feet wider than the existing bridge. The bridge would curve north at the east end to align with new improvements in the Montlake vicinity. The new Option A Portage Bay bridge would be 169 feet from the southwest corner of the NOAA Northwest Fisheries Science Center West Wing building. Therefore, the new seven-lane Portage Bay bridge would operate 111 feet closer to the NOAA Northwest Fisheries Science Center historic buildings than the current bridge. Although this would have a visual effect to the setting and feeling of the historic buildings, it would not be considered adverse. The current sound level at the NOAA Northwest Fisheries Science Center property is between 66 and 69 dBA. Under Option A with no sound walls, it would decrease to between 64 and 67dBA. With sound walls, it would decrease to 55 dBA, which would be beneficial to the property."

With respect to the above we strongly disagree as follows: We consider that the visual effect of a

F-002-021 freeway will cause an adverse visual impact – with or without sound walls.

F-002-022 We note that 169' is not, in any event, the closest point of the planned 7 lane alternative in relation to the NWFSC research buildings because the proposal does not account for the South Buildings which are located closer to the existing freeway than the historic buildings, and because the measurements do not appear to provide for additional intrusion onto the NWFSC property for proposed relocation of the Bill Dawson trail.

F-002-023 We also do not agree that either the data collection or the modeling of the sound data is representative of the current or future conditions at the NWFSC site and do not agree that the proposal will be "beneficial" to the NWFSC property from a noise impact perspective under any of the options.

F-002-024 **3-2** The proposed construction impacts for 6 years for the Portage Bay Bridge, and for 5-6 yrs for the Montlake interchange will have direct adverse impacts on all of the NWFSC property. We consider that both the construction and ongoing operation of all the options will cause adverse impacts to the NWFSC property that cannot be adequately mitigated.

3-4 We are concerned that WSDOT intends to provide a construction ramp directly into the construction zone from the SR 520 westbound Montlake off ramp. See also Exhibit 7 at 3-15. While we have not yet seen a detailed map in the DEIS showing this construction ramp we understand that it will pass through existing NWFSC property.

F-002-025 **3-9** The DEIS does not adequately mitigate for impacts from the demolition (or construction) phases. We expect unacceptable levels of noise, dust, fumes and vibration from what WSDOT describes as demolition: "major breaking, crushing and cutting of existing structures for eventual disposal" and removal, defined as "…vibrating pulling and dismantling existing structures…"

F-002-026 **3-14** Of concern is that for demolition and construction of Portage Bay area alone WSDOT estimates an average of 10 trucks per day (with a peak of 50 trucks) – with an undefined number planned for routing through NWFSC property. This is over and above existing use of SR 520. Over the 6 years of operation this will amount to 21,600 truck trips (during peak work hours for the NWFSC). It is our understanding that this number does not account for other vehicle trips such as pick-up and utility vehicles and large specialized vehicles such as cranes which will need to be staged and will also contribute to noise, dust fumes and vibration.

F-002-027 **3-15** The Exhibit 3-7 appears to show an otherwise undefined retaining wall on existing NWFSC property. The impact, size and purpose is not described.

F-002-028 **3-15** The NWFSC notes with concern that all pile driving (and all other work) is scheduled to be during the day (as opposed to at night) and mostly during the week – which coincides with the regular core work times at the NWFSC and guarantees maximum impact of the proposal on the NWFSC. There is no discussion in the EIS concerning the impact of this decision on the NWFSC scientific and other operations.

F-002-029

3-21 While Exhibit 3-9 shows proposed demolition of NOAA facilities, the NWFSC is not aware of and has not seen any plans that propose to compensate NOAA for the loss of these resources or for managing any other collateral impacts that the proposal will cause to the NWFSC operations. Similarly we have not seen mitigation plans for options that do not involve loss of NWFSC buildings.

There is conflicting information on the WSDOT web site and in the DEIS with respect to removal of NWFSC property. The WSDOT developed and widely distributed video, viewable on u-tube at http://www.youtube.com/watch?v=QvMhyY3cRE4&feature=related shows all the NWFSC facilities as in place and intact after the SR520 rebuild is complete. Other graphics show these facilities as demolished

F-002-030

3-21 The diagram appears to show a loss of direct access from the NWFSC to the SR-520 on-ramp. This access currently benefits the NWFSC property by providing NWFSC staff and visitors with direct and valuable access to SR 520 West and to Montlake Blvd south. Without this access (even temporarily) all NWFSC visitors and staff will need to transit through the Montlake neighborhood streets causing increased traffic in those locations and adding travel time to work assignments and commutes.

F-002-031

4-36 While the DEIS places the NWFSC in the Montlake landscape unit, the Portage Bay Landscape Unit is the primary and originally designed viewscape from the NWFSC. The view of Portage Bay is an important part of the amenity value of the NWFSC property and contributes to the attractiveness of the site to staff and visitors. The view will be diminished by the project during and after completion and this will diminish the value of the NWFSC property.

F-002-032

4-37 The description of the "large multi-story buildings at NOAA" does not come close to adequately describing their function or capabilities. A more accurate description is that they are large multi-story purpose-built laboratory and research buildings with dependent support facilities and fresh and saltwater access.

4-45 The description of the NOAA Fisheries Center as being made up of only "buildings" is insufficient. The Center is a national research laboratory with significant infrastructure committed specifically to that purpose.

The NWFSC property is secured to federal standards. It is guarded 24/7 and is fenced. Federal law requires that this security is maintained at all times and provision of security will be made more difficult and expensive as a consequence of the proposed activity.

F-002-033

4-52 We are concerned about the adequacy of data collection for the sound monitoring and subsequent modeling for the NWFSC site. The "Noise Disciplinary Report" at Exhibit 13 states that data was collected at two sites for the NWFSC as follows:

"M18 NOAA NWFSC Building—North End Long-Term 46 hours 67
M19 NOAA NWFSC Building—South End by Docks Short-Term 15 minutes 67"

F-002-033 However, Exhibit 10 only shows a location for M-19. We do not have enough information to be able independently determine if the sites WSDOT monitored at the NWFSC are representative of the noise we currently experience at the NWFSC.

We are further concerned about the limited nature of the data collected. 15 minutes for M-19 and 46 hrs for the undocumented site. Was all of the short-time data from all of the multiple sites collected simultaneously and during the same time period? Was all of the (so-called) long-term data collected during the same time period? What were the actual dates and time of the data collection? Where exactly on the NWFSC site was the data collected from?

At the NWFSC differences in sound from the existing SR 520 are evident on the site depending on weather conditions and season, for example when vehicles are using snow tires and depending on the direction and speed of wind. How did you account for these factors? We are also concerned that, depending on the actual location, your sites M-18 and M-19 may have been partly shielded by buildings or trees and do not in any event represent the sound environment at the site.

F-002-034 **4-76** The EIS lists the NWFSC as a "low to moderate impact" Hazardous Material Site. We could not find data or documentation in the EIS to support this listing, or indicate why this might be relevant to the proposed action. The Center does have Hazardous Materials on site and some of these are housed in a building that is proposed for demolition by WSDOT. The EIS should properly identify the significance of the proposal with respect to actual hazardous materials.

F-002-035 A comment states that the 1931building (this is the West Building) is a contributing element to the Montlake Historic District – however elsewhere in the EIS the entire NWFSC property is recognized as a part of the Montlake Historic District as shown on Exhibit 4.6-1. How does WSDOT reconcile this information?

F-002-036 **4-79** The EIS states that NOAA currently docks vessel on Lake Union and has some provisions stored at its Sandpoint facility. With respect to NWFSC vessels this is only partly correct. The 60' NWFSC research vessel "Harold W Streeter" is normally docked at Montlake. Most provisioning of the vessel is completed at the NWFSC dock. In addition the NWFSC stores and operates 6 smaller trailer-able research vessels from the Montlake Facility. Routine maintenance and staging is completed at the NWFSC site (within the area affected for use by WSDOT) before and after research trips. An area proposed for use by WSDOT as a construction is currently used to store these vessels. The personal communication "NOAA, Seattle, Washington January 2009" may be correct with respect to NOAA vessels located at or using NOAA Sandpoint or Lake Union but it is not correct for the NWFSC. The NWFSC is also planning for increased use of the Montlake site for operation and maintenance of vessels.

F-002-037 **5-1** The proposal is deficient in failing to document the impact of the proposal on the approximately 400 staff who travel to the NWFSC site on a daily basis, especially during the construction phases. We consider that the construction phases will add considerably to the commute time for staff, visitors and other workers and this will make the NWFSC a less attractive work location.

F-002-038 **5-31** The NWFSC does not agree with the WSDOT parking impact data in Table 5.1-2: the claimed utilization rate of 78% is not supportable: in part because some of the existing NWFSC parking is actually under the current 520 Bridge and aerial photographs (used by WSDOT) would not show this parking; because the number of parking spaces that will be affected during construction is estimated by a NWFSC count of parking spaces to be 110, not 12; and because there is no actual support by WSDOT for its claim that removal of part of the NWFSC facility will mean that the NWFSC needs 12 fewer spaces so there would "be no net loss".

F-002-039 **5-32** Land Use and Economic Activity. Figure 5.2-5 "Montlake Area" is out-of-date and does not represent current facilities. It does not show the most recent NOAA building at the NWFSC: the 11,400 s.f. "South Building" commissioned in July 2007 which houses about 110 staff. The EIS does not account for the loss of this building.

F-002-040 **5-38** While this section of the EIS states that the 9 of these buildings would be "removed", 3-21 Exhibit 3-9 states that they will be "demolished". There is an important difference between removal and demolition. If they will be removed – where will they be removed to and when? More importantly, there has been insufficient consultation with the NWFSC on future of these buildings, the overall impact of removal of these buildings on the NWFSC operations, or any indication about how WSDOT plans to compensate the NWFSC for loss of functional equivalency.

F-002-041 **5-39** The EIS claims that the "north campus, which consists of offices laboratories a library and a 150 seat auditorium would not be affected". The NWFSC disagrees with this conclusion and considers that the project is likely to cause adverse impacts so severe that current and planned use of this site for ongoing scientific research will not be able to continue.

(Please note: that there is no "North Campus". There is a South Campus, a Library/Auditorium, a West Building and an East Building.)

The EIS states "that WSDOT is working with NOAA to identify how research activities on the South Campus would be affected by removal of these buildings and how their functions could be relocated elsewhere." While there has been some preliminary discussion with WSDOT arrangements and agreements on actual impact and necessary mitigation have not been developed.

F-002-042 **5-40** The impact or the proposal on economic activity is devoted to consideration of the benefits to the broad community from the anticipated decrease in traffic delays and increase in road capacity. Possible negative economic impacts to the NWFSC, or the City of Seattle, or the region because of direct and indirect impacts to the Center have not been identified.

The NWFSC currently contributes about $80M of funding in direct expenditures in labor, contracts and other purchases to the region with 400 staff working from the NWFSC at Montlake and living within commuting distance. Economists typically use a multiplier to identify the total economic impact derived from direct expenditures of a given activity so the actual contribution

F-002-042 of the NWFSC to the economy of the region is likely to be significantly higher than this base figure. Note – at page 6-25 the WSDOT uses a similar argument to support the economic benefits to the region from the 6 lane alternative. The WSDOT should apply a similar argument to consider the economic consequences of the possible loss of the economic activity generated by the NWFSC.

The worst-case and most likely impact for the NWFSC is that it will not be able to continue to conduct its work on the site. If the worse case is realized the NWFSC will need to move and the economic activity (and tax-base) that that it currently generates will move with it.

Any plans or activities that will require the relocation of the NWFSC, or impact it, must provide for continuity of service. At this time those plans are not in place and without them the NWFSC cannot, reasonably support any of the options for the WSDOT SR-520 project.

F-002-043 **5-41** We disagree with your conclusions about the extent of parking removal – see previous comment.

F-002-044 **5-45** The exhibit graphics are out of date with respect to the NWFSC – as mentioned above.

F-002-045 **5-65** None of the "visualization locations" characterize views from the NWFSC which directly faces west to the Portage Bay Bridge and which is one of the most significant users of this view. The original designers for the NWFSC oriented the buildings to take advantage of this view. There is no analysis to support the WSDOT contention that the visual impact on the NWFSC will not be adverse.

F-002-046 **5-66** While the EIS states that the "East end of the Bridge would be farther north, which could have a positive effect for the Montlake Playfield views" it should also acknowledge that this would also have a direct negative impact on the NWFSC which is located directly to the North of the Montlake Playfield.

F-002-047 **5-84** The NWFSC considers that the Northwest Fisheries Science Center will experience an adverse effect under all options.

F-002-048 **5-85** The NWFSC considers that all options will have an adverse affect on the entire NWFSC Center property, including property that is not directly impacted by the property proposed to be subject to easements that the WSDOT will seek from the Federal Government. While the property has been subject to changes since 1931 (including land previously granted to WSDOT for the current SR 520 easements) it has been a site for continuous scientific research prior to 1931. The NWFSC views the entire property (land, buildings and equipment) as a complete entity and considers that removing portions will adversely and significantly affect continuity and quality of research and operations. The Center also considers that the 6 lane alternative will prevent the NWFSC from any practical further development on this site to meet future needs of the Center, Region and Nation.

F-002-049

5-86 The EIS is not clear about the height of the proposed freeway adjacent to the NWFSC. Will it be increased or decreased or the same height? At 5-105 the EIS states, "If sensitive receivers are located above the roadway grade, the overall effectiveness of the noise wall can be considerably reduced unless the wall is placed at the same level as the receiver. Thus, walls in locations where the roadway is below the receivers are generally higher." The NWFSC will need to see a more complete description of the locations and size of the freeway and noise walls adjacent to the Center and more extensive sound survey and monitoring.

The Center considers that it is likely to be physically difficult if not impossible to effectively reduce traffic noise at the NWFSC site through the use of noise walls on the proposed Portage Bay Bridge. This is because the proposed alignment of the new Portage Bay Bridge is directly towards the NWFSC property. A lid to the west of the Montlake Blvd/SR 520 interchange should also be considered as an option for mitigation of ongoing noise impact.

F-002-050

5-102 We are concerned with the levels of expected noise during deconstruction and construction and do not agree that these can be adequately mitigated. We expect significant adverse impacts for a period of at least 6 plus years during construction, and beyond, this from highway operation.

F-002-051

5-103 We do understand how your Exhibit 5.7.1 (for the red data point closest to the NWFSC East Building) can show a noise level for 2030 no build in excess of the noise abatement criteria (66-80dB) while under Option A in 2030 without noise walls for the same location you predict no noticeable change. We don't see how this is consistent with your proposal.

F-002-052

Noise Disciplinary Report. We are concerned that Exhibit 26, Potential Pile driving noise shows pile driving noise of at least 87db in the proximity of most of the main occupied research buildings at the NWFSC with some of the buildings (and the new South Campus building) showing an impact of 93dB. We understand that these noise levels are close to or above levels where the wearing of hearing protection is advised by the State of Washington's own Department of Labor and Industries.

F-002-053

5-112
The proposed 520 construction, deconstruction and operation on the revised SR-520 must not contribute to extant fine particle (PM2.5) and inhalable coarse particle (PM10) pollution within the boundaries of the Northwest Fisheries Science Center (NWFSC), above the U.S. Environmental Protection Agency's primary national air quality standards of 35 ug/m3 and 150 ug/m3 respectively in a 24-hour period. The 24-hour concentrations of PM2.5 and PM10 should be collected on the NWFSC Montlake campus prior to construction, to establish a baseline for these particle pollutants. This concern relates to the health of Northwest Fisheries Science Center staff who may be sensitive to particle pollution.

F-002-054

6-7 As mentioned above are concerned about direct intrusion into the NWFSC property from the "construction access ramp into the construction zone from the SR 520 Westbound Montlake ramp" and from related noise, fumes, dust and vibration impacts.

F-002-055 **6-10** The loss of the Freeway Transit Station will negatively affect existing employees travelling to and from work and employees using buses to take a more cost effective and fuel efficient mode of travel to work meetings.

F-002-056 **6-12** The temporary loss of the Bill Dawson trail will impact some employees using the trail for commuting and for employees using if for access to the Montlake recreation area.

F-002-057 **6-12** Access. It should be obvious that the Montlake Boulevard is the only point of access to the NWFSC. Therefore all project impacts negatively affecting Montlake Blvd to: buses, bicycles, cars, service and delivery trucks, safety services and pedestrian use will impact the Center and this impact is most likely to be negative.

F-002-058 **Exhibit 6.2-2** "Property Affected by Construction in the Portage Bay Area" is illegible and unacceptable for the purposes of evaluating the extent of impact on property.

Exhibit 6.2-3 "Property Affected by Construction in the Montlake Area" is illegible and unacceptable for the purposes of evaluating the extent of impact on property.

F-002-059 **6-23** We expect construction/demolition impacts on the NWFSC to adversely impact mandatory work at the Center and that these impacts will not be able to be mitigated to the extent necessary to complete the work.

F-002-060 **6-23** The SEIS is deficient in not acknowledging that the options would change access for 400 employees, visitors and contractors at the NWFSC.

F-002-061 **6-26** The SEIS in the section "How could the project minimize negative effects during construction" fails to identify any coordination that is planned with the NWFSC that would potentially minimize impacts to the NWFSC during construction. This is an unfortunate oversight and deficiency in the SEIS since the proposal involves the planned reduction of size of the NWFSC campus, the loss of buildings, the use of part of the site as a construction site, the effective prevention of further development by the NWFSC for the site, the use of the property as a construction access road and the fact that the NWFSC's work will be adversely impacted.

F-002-062 **6-27** While the SEIS acknowledges the likelihood of increased travel time to various identified locations it does not state that this is likely to affect the NWFSC.

F-002-063 **6-28** The map incorrectly names the "NOAA Northwest Marine Fisheries Science Center. It is the NOAA, National Marine Fisheries Service, Northwest Fisheries Science Center. In any event is not possible from the Exhibit 6.3-1 map to determine exactly how the limits of construction and construction staging areas actually relate to the Northwest Fisheries Science Center property except to see that they are significantly and adversely impacted. The maps are deficient.

F-002-064 **6-35** We are concerned about probable delays in fire/emergency service to the NWFSC. WSDOT must assure the Center that there will be NO increase in the time of service due to the

F-002-064 construction. We do not think that an acceptable alternative is to "minimize negative affects" to these essential services.

F-002-065 **6-35** We are concerned about the expected temporary power (or other utility including telecommunication and fiber optic) outages that are expected or could occur. While the Center has a significant emergency power generating capacity on site it is sized to provide for emergency equipment, to allow computer servers to run and to maintain preservation of valuable specimen collections. Any loss of regular power supplies, or other utilities to the Center would stop work.

F-002-066 **6-51** The NWFSC site users would also be "most affected by these changes" to the Portage Bay landscape Unit. The primary outlook from the Center and it's planned landscape orientation is to the west looking directly at Portage Bay or to the south looking over the freeway to Capital Hill.

F-002-067 **6-52** The NWFSC notes the WSDOT concern in the EIS - that boaters in the Montlake cut and SR520 commuters will be most sensitive to changes in visual quality during construction. We consider that there will also be sensitivity to change in visual quality for NWFSC staff who work at the NWFSC site.

F-002-068 **6-57** The NWFSC does not view the proposed re-vegetation work - where WSDOT will replace vegetation removed as a part of the construction activity as an action that will minimize negative effects during construction. This is restoration.

F-002-069 **6-59** WSDOT notes that 'historic properties in the Montlake area would be affected by noise, fugitive dust, glare from lights for nighttime construction and possibly vibration from noise and construction". We agree that historic properties including the NWFSC will be affected but disagree that vibration is only a "possibility". It will occur and it will negatively affect the work of the NWFSC and its staff. We consider the area to the WEST of Montlake Blvd would also be "Particularly affected by construction". The severity of impacts to the NWFSC property and the scientific work must be specifically identified in the EIS and mitigated for.

F-002-070 **6-59** WSDOT states that Option A…would have an overall adverse impact on the historic district. We concur but we consider that the impact will be severe and adverse (not just adverse) and we do not agree with you that the effect would result primarily only from property acquisitions and changes in the historic setting. We consider that there will be severe impacts on the NWFSC property both during construction and from ongoing freeway impacts when construction is complete from all Options.

F-002-071 **6-62** The NWFSC is an historic property. WSDOT states that it will "Maintain pedestrian and vehicular access to historic properties, except for unavoidable short periods during construction". The loss of access to the NWFSC except for State or National emergency declarations is unacceptable to the NWFSC.

F-002-072

6-66 The NWFSC is concerned about the impact of noise from impact, non-impact, demolition and pile driving on the work of the Center from all options. The Center considers that the noise associated with this project will have significant adverse impact on the work of 400 employees at the Center.

F-002-073

6-69 The EIS lists the use of floating electron microscopes in its work and notes that this activity can be affected by vibrations. The NWFSC does not have a "floating electron microscope" however it is providing a partial list of equipment at the Center that is sensitive to vibration as follows:

Scanning Electron Microscope
Zeiss Epifluorescence/light Transmission Microscope.
Mettler and other Balances (for weighing chemicals to as little as 1ug.)
Nikon Eclipse E400 Microscope
ABI Prism 7700 Sequence Detector
Nano Drop ND-1000 Spectrophotometer
Bio Rad icycler Thermal Cycler
Bio Rad C1000 Thermal Cycler
Mettler UM3 Microbalance
Luminex 100 Plate Reader
Packard Cobra II Gamma Counter
Packard Tricarb 1600TR Liquid Ccintillation Counter
Molecular Devices Versamax Microplate Reader
Perkin Elmer 1420 Multi Label Counter Victor 3
Two ABI 3100 Genetic analyzers (DNA sequencing and genotyping). These are capillary electrophoresis machines with a laser-based detection system.
An ABI 7900 Real-time genetic analyzer. Another laser-based genetic analysis system.

The NWFSC is not satisfied with the solution for vibration impacts provided by the WSDOT: essentially that it will "ensure that researchers are aware of potential vibration –producing activities near the facility". Some of the work of the NWFSC is pre-programmed where samples are collected on specific schedules and analysis is needed within a specific time-window. We do not have the flexibility to adjust all work schedules to meet, for example, intermittent impacts from vibration. At other times samples are analyzed on an emergency/high priority basis for example related to deaths of species of concern and preventing impacts to human health.

F-002-074

6-70 The detail on the paper maps is poor and generally insufficient to determine exact impacts on the NWFSC however the maps appear to show noise impacts from pile driving of greater than 99dB for part of the NWSFC site and greater than 87dB for other parts of the site. We do not understand why the WSDOT noise model shows a greater level of pile driving noise to the south of the freeway near Montlake when the new freeway is projected to be wider by more than 111' on the North side of the freeway.

F-002-075 **7-11** The Seattle Land Use map omits to identify the NWFSC site as a Scientific Laboratory. The NWFSC is involved in formal federal planning for the use of the site.

F-002-076 **7-19** We do not concur with the statement that "no indirect effects on land use patterns would occur". Any of the Options could force a relocation of the NWFSC.

F-002-077 **7-20** The statement that the 6-lane alternative would not indirectly affect the regional economy (except through expected beneficial affect of improved transportation efficiency) is not correct. In the event that the NWFSC was forced to move from the region and was not replaced there would be a negative affect on regional economic activity.

F-002-078 **7-21** We do not agree that there will be a benefit to community cohesion and that there will be no long-term adverse effect on public service providers. The NWFSC is a public service provider. The project will result in long term adverse increases in noise, pollution and visual impacts to the site and less cohesion with the Montlake neighborhood. In addition the proposed activity essentially eliminates any prospects for substantive capital investments or other improvements to the NWFSC site.

F-002-079 **7-25** We consider the 6 lane alternative will adversely affect visual quality and aesthetics to the NWFSC. It will likely be closer to the NWFSC site and it will also be larger and more imposing. The EIS is not clear on proposed use of sound barriers however we expect that they would add to visual impact at the site.

F-002-080 **7-26** We are not persuaded by the WSDOT proposals to mitigate the effect on visual quality and aesthetics. We looked for, but could find, any substantive descriptions of planned mitigation.

F-002-081 **7-28** We are not persuaded by the WSDOT contention than the 6 lane alternative "will have noise levels equal to or slightly less than current levels" at the NWFSC site. The EIS does not commit to sound wall installation. We also dispute the ability of sound walls to effectively control noise at this site because of the physical alignment of the replacement bridge with respect to the NWFSC property.

F-002-082 8-1 We agree that the Montlake neighborhood would experience especially severe impacts under the phased implementation scenario and note that the impacts to the NWFSC will be amongst the most extreme within the Montlake area. While the EIS provides a 6 to 7 year estimate for the duration of construction, we cannot tell what the WSDOT assumptions for this estimate are. Is this the most optimistic time of construction that assumes everything going perfectly and to schedule? This is a critical issue for the NWFSC because the NWFSC must have a full disclosure as to the period of impact as well as the magnitude of impact. While we appreciate that there may still be uncertainty about design elements of the project we are concerned that WSDOT is not yet confident about the time-line of this project because the EIS makes the following statement: "with at least two distinct periods of intense construction activity – **perhaps** separated by years – directly affecting the community" (Our emphasis). We agree that most of the impacts of construction from the project cannot reasonably be mitigated on the NWFSC site.

F-002-083 **8.4** There is an urgent need to complete formal consultation and commit to mitigation arrangements with the NWFSC. Without this consultation the matter may cause controversy. The NWFSC has previously written, on more than one occasion, to the WA State Secretary of Transportation to make its position clear, as early as May 2005.

F-002-084 At the December 8, 2009 meeting of the legislative workgroup the WSDOT provided information related to possible costs of various options and sub-options. The NWFSC does not understand why information related to possible costs of mitigation for the NWFSC were not included. By way of comparison the December 8 "Detailed Option 'A Plus Hybrid' estimate: I-5 to Floating Bridge" option included cost for items for the project at the $8 million level. The cost to mitigate impacts at the NWFSC is considered to be higher than $8M and should have been included as a part of the evaluation of options.

F-002-085 **A4-1** A minor issue - the correct name of "NOAA Northwest Fisheries" is the Northwest Fisheries Science Center.

F-002-086 **Draft Section 4 (f) Evaluation:**

The NWFSC previously provided comments on the Evaluation. These comments are in addition to those previously provided.

Exhibit A does not adequately show the impact of option A, K or L on the NWFSC site. A large portion of the site is omitted (the map cuts right through the middle of the Center). We note that "Sound walls" are identified only as potential.

F-002-087 **Exhibits 10a and 10c**. We note and concur that the entire NWFSC site appears to be an Historic Property with a Section 4 (f) use.

p.29 The EIS is confusing. At page 29 it lists the NWFSC as a property that will experience a use defined by Section 4 (f) and then at page 30 states that FHWA and WSDOT are expecting to make a de-minimus determination with respect to the NWFSC. This issue needs to be discussed further before WSDOT makes a final determination.

F-002-088 **p.33** The NWFSC must be included in direct discussion with respect to any future use of the NWFSC property for the Bill Dawson Trail. The EIS is proposing that the Bill Dawson trail be moved northward to occupy land that the NWFSC currently owns and uses for research and where WSDOT proposes to demolish existing research buildings and infrastructure.

F-002-089 **Draft Parks Mitigation Technical Memorandum. p.25**

The NWFSC is concerned that a parcel of the NOAA (Department of Commerce) campus in the Montlake District can be considered as a mitigation site when the entire NOAA property has already been identified as an impacted 4(f) property – see Exhibit 10a. Detail of Properties with a Section 4(f) use. Is the WSDOT saying that the proposal is to use part of the NWFSC property for a permanent easement, another additional part of the property for a temporary construction

F-002-089 easement and another (undefined parcel) for a mitigation site? We need a clear and unambiguous explanation of what exactly the WSDOT is planning.

F-002-090 **Attachment 2 Agency Correspondence** does not include copies of letters sent to the WDOT from the NWFSC.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
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OFFICE OF
ECOSYSTEMS, TRIBAL AND
PUBLIC AFFAIRS

April 15, 2010

Mr. Randolph L. Everett, Seattle Major Projects Oversight Manager
Federal Highway Administration
711 S. Capitol Way, Suite 501
Olympia, Washington 98501

Ms. Jennifer Young, Environmental Manager
SR 520 Project Office
600 Stewart Street, Suite 520
Seattle, Washington 98101

Re: SR 520, I-5 to Medina Bridge Replacement and HOV Project Supplemental Draft Environmental Impact Statement Region 10 Project Number: 00-013-FHW

Dear Mr. Everett and Ms. Young:

F-003-001

The U.S. Environmental Protection Agency (EPA) has reviewed the SR 520, I-5 to Medina Bridge Replacement and HOV Project Supplemental Draft Environmental Impact Statement (SDEIS). We are submitting comments in accordance with our responsibilities under the National Environmental Policy act (NEPA) and Section 309 of the Clean Air Act.

As a result of the mediation process, the proposed project alternative has changed since the Draft EIS was issued and the previously analyzed alternatives are no longer being considered. We appreciate this because the design changes respond to our previous concerns at the Draft EIS stage regarding the Pacific Street Interchange Option. The project termini have also changed. As currently defined in the SDEIS the project spans 5.2 miles from Evergreen Point Road in Medina to I-5 in Seattle. The proposed action is to replace the existing 4 lane SR 520 Bridge, which includes the Evergreen Point Floating Bridge, its east and west bridge approaches, the Portage Bay Bridge, the Montlake interchange, and Lake Washington Boulevard access ramps, with a new 6 lane bridge (4 general purpose and 2 HOV lanes).

The one action alternative, a 6 lane bridge, has 3 design options: A, K, and L. The design options present 3 different configurations for the Montlake interchange and bridge spanning the Montlake Cut. Option A most resembles the current configuration with a second parallel bascule bridge over the Montlake Cut. Option K would have a lowered profile with a single-point urban interchange (SPUI) that tunnels under the Montlake Cut near the west shore of Union Bay. Option L would be aligned similar to Option K but the SPUI would be an elevated structure rising above the SR 520 mainline and crossing the Montlake Cut on a new bascule bridge. The 6-lane Alternative also includes: landscaped lids over the highway, a bike and pedestrian path,

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F-003-001 stormwater treatment and automated tolling. We anticipate it will also include some form of noise reduction, but the nature, extent, and location of these measures will likely remain unclear until final design.

F-003-002 Based on our review of the DSEIS, we have assigned a rating of EC-2 (Environmental Concerns, Insufficient Information), based on the following concerns: the need for additional analysis, disclosure, and mitigation of air quality impacts from project operation and construction; impacts associated with a potential phased construction scenario; the need to provide updated information regarding mitigation for disproportionately high and adverse project impacts on the Muckleshoot Indian Tribe and on low income bridge users; the need to reduce shading impacts and to develop suitable compensatory mitigation for unavoidable impacts to aquatic resources; and the absence of and need for mitigation for upland wildlife habitat impacts. An explanation of this rating is enclosed. Several requests for additional information are also included. Our detailed comments are provided in the enclosure that follows.

Thank you for the opportunity to review and comment on this important project. If you have questions or would like to discuss these comments, please contact Elaine Somers at (206) 553-2966 or me at (206) 553-1601.

Sincerely,

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

Enclosures

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U.S. Environmental Protection Agency
Detailed Comments on the
SR 520, I-5 to Medina Bridge Replacement and HOV Project
Supplemental Draft EIS

F-003-003

Air Quality, Mobile Source Air Toxics

Operational impacts: Because FHWA guidance uses an average daily traffic volume (AADT) of 140,000 or more as a threshold for quantitative evaluation of mobile source air toxics (MSATs), and because the SR 520 project AADT is estimated to reach 133,750, the SDEIS evaluates air quality with respect to MSATs only qualitatively (p. 5-114). Whether or not the threshold is exceeded, we think a project of this magnitude warrants quantitative analysis of emissions, near roadway effects, disclosure of associated health impacts, and identification of sensitive receptors. Examples of sensitive receptor locations in the project area would include the University of Washington Medical Center, the various project area parks and outdoor recreation areas, daycare facilities, senior centers, and several schools.

This issue is of concern because air toxics emissions, particularly diesel exhaust, are known or suspected to cause cancer or other serious health effects, such as respiratory, neurological, reproductive, and developmental effects. Pursuant to Washington State Senate Bill 6099 (May 2007), a Health Impact Assessment (HIA) was done for the SR 520 project (*SR 520 Health Impact Assessment -- A bridge to a healthier community*, September 2008) with the goals of calculating the project's impact on air quality, carbon emissions, and other public health issues, and making recommendations to enhance the positive impacts and to remove or minimize any negative impacts on health. We commend the project proponents for incorporating positive design features to enhance health, such as vegetated lids and bike/pedestrian trails, which were recommended in the HIA. We also think that the SEIS should incorporate the information on air quality, existing and potential health effects, and sensitive receptors from the HIA.

Recommendations:

- In the Final Supplemental EIS, provide quantitative analysis of MSATs. Include information regarding near roadway effects, health related impacts, and identify sensitive receptors. Much of this information can be obtained from the SR 520 Health Impact Assessment.
- Include the complete SR 520 HIA as an Appendix to the SEIS.

F-003-004

Construction impacts: We are concerned about the potential underestimation of construction air quality impacts that were designated "temporary" in the SDEIS. The duration of the construction period is approximately 7 ½ years (p. 6-128). This is significant as it represents nearly one-fifth of the age of the current bridge, and it could be substantially longer under a phased construction scenario. The significance of 7 ½ years is underscored 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.

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F-003-005

The Portland Air Toxics Assessment identified construction activities as a significant source of air toxics in the urban area. In the case of the SR 520 project, construction of new roadways, lids, retaining walls, sound walls, bridge foundations, temporary work and detour bridges, bridge pontoons, bridge removal, and operations in staging areas all individually or cumulatively can be significant sources of regulated pollutants and air toxics. The magnitude of these construction emissions needs to be disclosed and the air quality impacts to sensitive receptors in the area, such as, the University of Washington Medical Center, need to be evaluated.

F-003-006

To determine the magnitude of emissions, the NEPA document should indicate how the construction emissions in tons/day of CO, VOC, and NOx compare to the operations emissions estimated in the SDEIS Exhibit 12, page 20, Air Quality Discipline Report. Construction emissions can be estimated as they are frequently done for General Conformity analyses. Some examples of measures of construction activity that can be converted into emissions are: cubic yards of concrete, hours per year of non-road equipment, miles per year for construction employee commuting, and miles per year for delivery and concrete trucks. The construction of the I-90 floating bridge and approaches provide a source of construction activity data that could be used for this estimate. Construction impacts may be of sufficient magnitude that diesel retrofits and other air quality construction mitigation measures should be required 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.

Recommendations:

- Quantitatively estimate construction-related emissions of regulated air pollutants and air toxics.
- Require retrofitting of construction equipment in construction contracts.
- 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.
- Commit to a full suite of air quality construction mitigation measures, including those identified in the SR 520 HIA, to avoid and minimize construction-related emissions to the extent possible.

F-003-007

Phased Implementation Scenario

We commend the project proponents for including in the DSEIS an analysis of impacts for the Phased Implementation Scenario. We appreciate the information that it provides, yet we are concerned that perhaps the analysis does not go quite far enough. The Phased Scenario should acknowledge that, at some point, "temporary" impacts should be considered long term or permanent impacts depending on the nature and duration of effects. As stated above, 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 noise, water quality, habitat, species, and so on should be examined.

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F-003-007

Long term social, economic, and environmental impacts should be acknowledged and appropriately mitigated. For example, local businesses served by Delmar Drive East, 24th Avenue East, and the Lake Washington Boulevard ramps (p. 6-130) would be affected by reduced access and road closures for an indefinite period of time under the Phased Scenario. At some point, these businesses may no longer be viable due to these impacts, yet there is no mitigation proposed for them. At some point, it may be appropriate to consider them as displacements or closures due to the effects of prolonged project construction. This may also become a factor with respect to Tribal fish resources and fishing access, and other affected natural and community resources.

While the precise timing and amounts of funding for a "mega-project" such as SR 520 may be uncertain, we are concerned that the duration of the phased scenario is indefinite. According to the SDEIS, Phases 1 and 2, the bridge/highway structures, would be built first. If the phased construction period lasts too long, it is possible that, based on the life expectancy of the new bridge, escalating project costs together with a changing cost/benefit ratio could lead to a point of diminishing returns for completing construction of the "Phase 3" components of the project – namely the landscaped lids, bike/pedestrian trail connections, and other community livability features. This potential threshold or point of diminishing returns should be analyzed and disclosed in order to identify at what point it might no longer be cost effective to complete the Phase 3 project components because it would soon be time to replace the bridge again. Inability to complete the project would also have the outcome of emitting higher levels of greenhouse gases (GHGs) because the GHG emissions of the phased scenario exceed those of the No Build alternative due to striping to only 4 lanes for the Portage Bay and west approach bridges (p. 5-153).

Recommendations:

- Acknowledge and propose mitigation for potential long term/permanent social, economic, and/or environmental effects due to phased implementation.
- In the Final SEIS, expand the analysis and disclosure of impacts for a Phased Implementation Scenario to include a potential temporal point of diminishing returns or changing cost/benefit ratios over time for completing full project build out.

F-003-008

Environmental Justice

The SDEIS is clear that the Muckleshoot Indian Tribe would suffer disproportionately high and adverse impacts to natural resources (fish resources, fish habitat, and fishing access) and potentially to cultural resources (Foster Island Traditional Cultural Property) due to the proposed project. The SDEIS also states that there will be continued efforts to work with the Tribe to mitigate these impacts. The Final SEIS should disclose whether or not these issues are satisfactorily resolved according to the Tribe.

Recommendation: Work cooperatively and in consultation with the Muckleshoot Tribe to adequately mitigate impacts to tribal resources and report on the progress in the Final SEIS.

F-003-009

We support the proposed mitigation to offset the burden of tolls for low income bridge users. In particular, the ability to use Electronic Benefit Transfer (EBT) cards appears helpful.

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F-003-009 Even this, however, would require a percentage of the available resources of low income residents that is needed for food and other essentials, for use as tolls. Additional mitigation should be considered, such as, issuance of free transponders and reduced fare transit passes.

Recommendation: Consider additional mitigation for low income bridge users that would offset or decrease the added expense of tolls, such as, free transponders and/or reduced fare transit passes.

Aquatic Resources

F-003-010 Wetlands: The SDEIS does a good job of quantitatively (in acres) evaluating the shading impacts to wetlands and wetland buffers from both project construction and operation phases and the various project design options. It is important to minimize these impacts to the extent practicable. Incorporating the "constant-slope" bridge profile (such as is feasible in design Options A or L), as opposed to a lower bridge profile, would help in this respect as well as to facilitate stormwater flow to treatment facilities without the need for and costs of pumping. We support design options that would serve both needs and maintain context sensitivity to the extent practicable, yet it is important to convey that visual preference should not be considered as justification for increasing wetland impacts.

Recommendation: Design bridge height to be at a level that reduces shading to the extent practicable.

F-003-011 Mitigation: We appreciate that a technical work group has been convened to discuss suitable compensatory mitigation for unavoidable impacts to aquatic resources. We plan to participate in this work group.

Recommendation: Include and involve EPA, the Corps, USFWS, NOAA Fisheries, WDFW, Ecology, the Muckleshoot Tribe and all other interested and affected resource agencies and organizations to develop mitigation plans to protect and restore ecological functions in this important watershed.

F-003-012 Pile driving and fish impacts: The SDEIS (p. 6-85) indicates that bubble curtains appear to be effective mitigation to reduce the severe noise impacts to fish and other aquatic biota from pile driving. On page 6-71 the SDEIS lists other methods considered as potential but less effective mitigation.

Recommendation: The search for effective noise mitigation for pile driving is ongoing. We urge that bubble curtains be used together with any and all other means of mitigation deemed effective, in consultation with the Services and in accord with their recommendations, to lessen the noise impacts from the installation of the thousands of bridge piles needed for work bridges and project bridge supports.

F-003-013

Wildlife Habitat Impacts

The SDEIS (p. 6-124, Table 6.16-1) indicates there will be no mitigation for impacts to wildlife habitat/upland vegetation losses. The SDEIS does not indicate what will happen to sites such as these that are disturbed by project construction but not used as project paved area. Wildlife habitat quality is less than optimal in the project area, but is much needed and used by resident species due to its scarcity. Some form of mitigation and restoration, such as, planting of native plant species, should be included in project commitments.

Recommendation: Provide suitable mitigation for impacts to upland wildlife habitat.

F-003-014

Tolls

For analysis purposes in the SDEIS, the No Build Alternative was not modeled with tolls (p. 5-117). This is unfortunate because tolling will soon be implemented on SR 520 in its current state as a 4 lane facility. State law now directs that tolls will be placed on all SR 520 through-lanes between I-5 and I-405 to generate revenue for investment in the SR 520 corridor (RCW 47.56.820). As a result, the comparison of alternatives in the SDEIS with respect to traffic analyses, air pollutant emissions, travel time, and overall system performance do not accurately reflect how the No Build Alternative would perform.

Recommendation: For the Final SEIS, analyze the No Build Alternative with tolls.

F-003-015

While the subject of tolls is covered in more detail in a separate Environmental Assessment (*SR 520 Variable Tolling Project*, April 2009), the SDEIS should clarify:

- Whether or not bicycle and pedestrian bridge users would be exempt from paying tolls similar to transit and 3-person HOV users (p. 2-5), and
- How vehicles with 1 or 2 vs. 3 occupants would be accurately determined using transponders for charging tolls.

Recommendation: Include the above information in the Final SEIS and highlight it as new information.

F-003-016

Design Option Features

Based on the analysis of impacts in the SDEIS, Design Option A appears the least damaging to the environment overall. However, it would help to clarify whether the impacts of Design Option A could be further reduced by potentially eliminating the auxiliary lane from the Portage Bay Bridge and construct a narrower roadway. In regard to the function of Option A, it would also be helpful to provide a rationale for removing the Montlake transit flyer stop, which is a convenient and efficient transit point, and the potential for including it in the project design. Both features affect roadway width and have associated impacts and benefits, but the SDEIS does not evaluate these as design options.

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F-003-016

Recommendation: In the Final SEIS, include the above information regarding these two design features.

F-003-017

Construction – general

Fate of excavation material: The SDEIS indicates (p. 6-124) that Option A would require excavation of 340,000 cubic yards of material, and would use 86,000 cubic yards of fill. Excavation amounts would be even higher for Design Options L and K. There is no information in the SDEIS regarding the use or disposal location of the excess excavated material.

Recommendation: In the Final SEIS, provide an explanation about what will be done with the excavated material from project construction.

F-003-018

Ensuring seamless performance: The SDEIS indicates there would be monitoring to ensure the use of best management practices (BMPs), such as, for erosion control. To document means for compliance, it would be helpful to include in the Final SEIS an explanation of how a project of this magnitude ensures that the mitigation commitments, permit conditions, and all applicable BMPs are implemented as intended/stated in the NEPA documents and permits.

Recommendation: In the Final SEIS, include information regarding mechanisms during project construction and operation/maintenance that ensure seamless performance. As the project progresses, we also recommend visiting the EPA Region 3 Green Highways website at http://www.greenhighways.org/ for ideas and methods that benefit transportation, the ecosystem, urban areas, public health, and surrounding communities.

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