

From: Reinbold, Stewart G (DFW) [mailto:Stewart.Reinbold@dfw.wa.gov]
Sent: Monday, April 12, 2010 4:14 PM
To: SR 520 Bridge SDEIS (2)
Subject: WDFW SDEIS comments

WDFW comments attached.

Please send me a email letting me know you received this email.

Thanks
Stewart

Stewart G. Reinbold
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State of Washington
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April 12, 2010

Jennifer Young
SR520 Project Office
600 Stewart Street, Suite 520
Seattle, WA 98101

Dear Mrs. Marsha Tolon,

SUBJECT: WDFW SR 520 Supplemental DEIS Comments

First I would like to thank you for giving the Washington Department of Fish and Wildlife (WDFW) the opportunity to comment on the SR 520 Supplemental DEIS.

S-001-001 | Chapter 1 covers how the Westside Mediation A, K and L alternatives were adopted by WSDOT. What is not clearly stated is the differences between WSDOT's past A, K, and L alternatives and the adopted Westside Mediation alternatives. Bridge height and width is one clear example. The WDFW and other regulatory agencies have been and still are requesting this write-up covering the last seven years and how the alternatives have changed.

S-001-002 | To assist in the review process, please show the pile spacing and size (from an aerial view), especially in the bridge section east of Foster Island to the floating bridge section, to allow a more complete review of each alternative.

S-001-003 | A section needs to be added explaining why a cut and cover tunnel design approach will not work in the Arboretum area and why. Example: Potential to fish life, work window, etc... This area is the bottleneck for the entire Lake Washington system.

S-001-004 | On page 4-66, the diagram showing the known sockeye spawning area does not exactly represent the information provided on the WDFW lakeshore sockeye spawning maps. Also the logic in the write up is flawed. Lake Washington lakeshore sockeye areas are based upon upwelling. This wouldn't have changed so there is the potential for sockeye to spawn here every year.

S-001-005 | Potential affect to wildlife and wildlife habitat really needs to be completely reviewed.

S-001-005

Page 5-127, the relationship between height and width with shading can be defined. Page 39 of WSDOT's own light study (Summary and Minimization Section) is very clear on preferred bridge height and design features to maximize light to allow vegetation to grow. This is also part of the avoidance, minimization, then compensatory mitigation step process that WSDOT will need to show that it followed.

Chapter five covers the fish tracking study but critical information concerning the study is not given. What is the definition of hold (pause)? What is the timing information on the other third? What about coho and sockeye? Has any attempt been made to get an idea on amount of predator fish using the existing bridge as ambush? Also how the bridge height, pile size and spacing of the three alternatives might affect future juvenile out-migration and survivability? Not sure if I would agree that the Chinook are using the bridge as a shelter.

S-001-006

Page 6-85 talks about piling driving and mentions it will have relatively minor affect. Is this statement based upon the limited time windows that were agreed upon by the regulatory agencies at the sub-group work meetings? Also considering that now each year we have an annual adult salmon die off in the ship canal is adding additional stress by single or multiple pile driving really a relatively minor concern?

S-001-007

Page 6-102 Refers to ground freezing appears to be the most reasonable ground stabilization alternative. Once again what I do not see a write-up on why a cut and cover tunnel would not work.

Thank you for your time,



Stewart G. Reinbold
Habitat Program

Cc: WDFW Olympia
David Brock



UNIVERSITY OF WASHINGTON

OFFICE OF THE PRESIDENT

Mark A. Emmert, President

April 15, 2010

Ms. Jenifer Young
Environmental Manager
Washington State Department of Transportation
SR 520 Program Office
600 Stewart Street, Suite 520
Seattle, WA 98101

Via electronic mail: SR520Bridge_SDEIS@wsdot.wa.gov

Subject: University of Washington comments on the SR 520 SDEIS

Dear Ms. Young:

The University of Washington is pleased to submit the attached comments on the SDEIS for the SR 520 project. We trust that these comments can be addressed as WSDOT moves forward to define its Preferred Alternative. It is imperative that this essential infrastructure be replaced before it fails—losing this link between Seattle and the Eastside communities would be detrimental to the University of Washington as well as the region's continued prosperity.

We support the proposed corridor configuration of 4 general-purpose lanes plus 2 HOV lanes, a configuration that maintains the capacity for single-occupant vehicles while vastly improving capacity for transit and carpools. The project would also provide a new connection across Lake Washington for pedestrians and bicyclists. Improving these alternative travel modes will support the University's nationally recognized Transportation Management Plan to reduce single-occupant vehicle trips. It will also support our commitment to reduce greenhouse gases through the Seattle Climate Partnership Agreement.

We encourage the WSDOT to move forward immediately with design and construction of improvements on the west side of the corridor. The full benefit of investing in improved transit and bicycle connections across Lake Washington will not be realized until those improvements can be extended all the way to Interstate 5 and through the Montlake Boulevard corridor. As we have stated throughout the mediation process, the University of Washington can accept any of the Westside interchange options, with proper mitigation, that meet the following priorities:

- Improves transit connections to the University of Washington campus.
- Protects the University's assets, including UW Medical Center, Husky Stadium, Washington Park Arboretum, and the Waterfront Activities Center.

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S-002-001

- Does not degrade traffic operations through the Montlake Boulevard corridor.
- Maintains the campus parking supply by replacing parking lost due to construction or permanent facilities.
- Allows the University to grow in the future by retaining the building capacity of our property south of Husky Stadium.

Based on information and analysis presented in the Supplemental Draft EIS as well as the Legislative Working Group, the University of Washington currently prefers Option A+ because it meets all of the priority criteria. We would welcome additional design refinements to Option A+ that improve transit connectivity and ensure effective, efficient, and feasible coordination of bus and light rail service while further reducing the potential environmental impacts. Details about key refinements that the University of Washington supports are listed below. If Option K or L were to be selected as the Preferred Alternative, further analysis and improvements would be needed to mitigate the project's impacts on our future building capacity, parking, and assets such as Husky Stadium, the Waterfront Activities Center, and the historic Canoe House.

S-002-002

Elements to Consider for the Preferred Alternative

The University of Washington continues to work with the partner agencies to refine the alternatives and reach consensus on a Preferred Alternative to meet the legislative objectives of improving transit connectivity and bus and light rail service. Elements of Option A+ and refinements we believe add value if included in the Preferred Alternative are:

- Providing a second bascule bridge across the Ship Canal on Montlake Boulevard. The second bridge is the only way to improve the transit, bicycle, and pedestrian capacity of this primary connection to the University of Washington campus.
- Providing the westbound auxiliary lane between Montlake Boulevard and Interstate 5. This lane has been shown to have substantial traffic operational and safety benefits to both the SR 520 mainline and Montlake Boulevard. The small amount of additional width required between the on-ramp from Montlake Boulevard and the off-ramp to I-5 (estimated to be about a 10-foot widening for 405 feet in length) is worth that benefit.
- Supporting the Rainier Vista land bridge, which would enhance the pedestrian connection between the Montlake Triangle and main campus by constructing a land bridge across a lowered Pacific Place and grade-separating pedestrian movements from both Pacific Place and the Burke-Gilman Trail. Rainier Vista would also provide a link to the improved pedestrian/bicycle crossing on the Montlake Bridge, and provide much needed layover space on NE Pacific Place for buses. This project was analyzed and is supported by the three parties: Sound Transit, the UW, and the City of Seattle Department of Transportation.
- Modifying the Montlake Boulevard interchange to enhance pedestrian, bicycle, and transit connections. This could include moving the direct transit access ramps to the NE 24th Street alignment, providing some HOV lanes along Montlake Boulevard, and improving pedestrian crossings at the interchange ramps.

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S-002-003 | Washington Park Arboretum

The Washington Park Arboretum is a regional resource managed by the City of Seattle and the University of Washington. Reducing and calming through traffic in the Arboretum is of critical importance to the University. We recognize that diverting traffic out of the Arboretum would affect congestion in the 23rd/24th Avenue corridor, which would delay the local transit services that rely on this route. We support elements of a Preferred Alternative that can reduce traffic through the Arboretum while maintaining transit reliability. These could include:

- Increasing capacity at SR 520/Montlake Boulevard to reduce traffic that uses the Arboretum as a short-cut route.
- Relocating and re-orienting the Lake Washington Boulevard ramps so that they connect to the street grid further west and could be better integrated into the lid concepts near the Montlake Boulevard interchange.
- Implementing traffic calming measures such as raised crosswalks or channelization to reduce the speed of traffic through the Arboretum.
- Tolling through traffic in the Arboretum to divert traffic to other routes or other modes of transportation.

S-002-004 | Wetlands and Aquatic Habitat Mitigation

We will continue to work with WSDOT to find suitable sites for compensatory mitigation for wetland and aquatic habitat impacts. To the extent feasible, we request that the loss of wetlands and aquatic habitat in the Arboretum be first mitigated in the Arboretum through actions as described in the Initial Wetland and Aquatic Mitigation Reports. For additional impacts that cannot be mitigated in the Arboretum, the University requests that additional mitigation actions occur at the Union Bay Natural Area (UBNA), within the framework of the UBNA Master Plan.

Because of the University's standing as an educational and research institution, we request that all mitigation actions be designed in close coordination with University academic staff from the appropriate academic colleges to assure opportunity for research and teaching. The University looks forward to working with WSDOT and the resource and permitting agencies to develop an interdisciplinary approach to design, implementation, construction oversight, and monitoring of wetland and aquatic habitat mitigation—including opportunities for hands-on involvement by University faculty, staff, and students to be engaged in these processes. As a critical element in establishing this approach, the final wetland mitigation plan must be complete and available for our review prior to completion of the FEIS.

S-002-005 | Section 6(f) and 4(f) Resolution

We will continue to work with WSDOT and the City of Seattle to find suitable replacement property for all loss or use of park and recreation property, and the Arboretum Waterfront Trail. The 6(f) property replacement issues must be resolved for the UW to support

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S-002-005 | the Preferred Alternative. As 6(f) grantees, the UW and the City of Seattle Parks Department will be responsible for the adequacy of the replacement. There must be agreement among the agencies, documented in the Memorandum of Agreement between the WSDOT, the UW, and the City, that gives the UW assurance that their 6(f) responsibilities are met. We understand that additional environmental analyses will be prepared once potential replacement properties are identified. We welcome the opportunity to work with WSDOT to make sure that these analyses meet UW requirements.

S-002-006 | The University looks forward to an ongoing discussion with the WSDOT to resolve questions of impacts to 4(f) properties associated with the UW Open Space and Arboretum during construction. As an entity with jurisdiction over 4(f) lands impacted by the proposed project, the University appreciates the opportunity to coordinate with the WSDOT per 23 CFR 774. During this coordination process, we will work with WSDOT to develop appropriate mitigation for project-related, temporary adverse occupancy or constructive use of 4(f) properties.

S-002-007 | Our comments on each chapter of the SDEIS and the Discipline Reports are provided in a table attached to this letter for your convenience.

On behalf of the University of Washington, thank you for including us in this design and decision-making process. As I said in the beginning of this letter, we cannot risk losing this critical piece of infrastructure. For that reason, we stand ready to do our part to help your staff move this project forward once you have chosen the Preferred Alternative. Please do not hesitate to call upon us.

Sincerely yours,



Mark A. Emmert
President

Attachment: Table of Comments

 SR 520 Bridge Replacement and HOV Program  I-5 to Medina: Bridge Replacement and HOV Project								
Report Name and Date		SR 520: I-5 to Medina Bridge Replacement and HOV Project, SDEIS and Discipline Reports						
Name of Reviewer(s)/Disciplines Reviewed		Jan Arntz, Fred C. Hoyt, Amy Kosterlitz, University of Washington – All Disciplines						
Date of SDEIS Issue		January 22, 2010		COMMENTS DUE BY		April 15, 2010		
No.	Chapter/Section	Page	Exhibit No.	Priority	Comment	Reviewer	Note/Action Items	
S-002-008	1	All	Global		1	Update the park acquisition numbers, prior to completion of the FEIS, throughout the document including the Attachments and Discipline Reports. Refer to specific comments on the Draft Section 4(f)/6(f) Evaluation.	Fred Hoyt	
S-002-009	2	2.3	2-23		3	The new bridge structure across Union Bay in Option K is 5' above the water through the Arboretum for a width of 192 ft to 250 feet wide. With a bridge this low, water access and recreation is limited and the aquatic habitat may be compromised.	Fred Hoyt	
S-002-010	3	2.4	2-34		1	If the project is phased, how would the floating bridge transition to the land portion of Foster Island? More detail of project phasing needs to be presented in order to evaluate the potential impacts of project phasing.	Fred Hoyt.	
S-002-011	4	4.4	4-26		1	The plant collections at the Washington Park Arboretum should be noted as being in the project area. Some plant collections are of international significance. Because not all of the impacts and mitigation are fully analyzed at this point, noting these collections is important to further analysis of parks impacts.	Fred Hoyt	
S-002-012	5		4-29		1	The plant collections at the Canal Reserve Property should be noted in the document. The plants are appraised at close to \$1.5 million dollars. An impact to McCurdy Park means that the UW and UW Botanical Gardens would need to be compensated for the loss of this collection.	Fred Hoyt	
S-002-013	6		4-30		2	There is some DNR property near MOHAI and on Marsh Island that should be identified in the document.	Fred Hoyt	
S-002-014	7	4	4-32		2	This section should identify and describe the Union Bay Natural Area. http://depts.washington.edu/uwbg/research/ubna.shtml	Fred Hoyt	
S-002-015	8	4.5	4-37		3	The Union Bay Natural Area should be identified with the West Approach Landscape Unit.	Fred Hoyt	
S-002-016	9	5	5-25	5.1-14	1	The UW requests that this rendering be updated prior to publication of the FEIS. The Sound Transit Pedestrian Bridge and the Rainier Vista Land bridge are being analyzed. A final design decision should be made by the time the FEIS is ready for publication.. The rendering should be foot-noted that the Montlake Boulevard/NE Pacific Street intersection varies for each Option, and briefly remind the reader of the difference in options.	Jan Arntz	
S-002-017	10	5	5-74	5.5-7	3	The description of impacts for Option L is not similar to those of Option A, as shown in Exhibit 5.5-7. If Option L is selected, revise the description of visual impacts for Option L.	Jan Arntz	
S-002-018	11	5.7	5-105		2	The vibrations analysis presented in the Noise Discipline Report, and recommendation for monitoring should be repeated in Chapter 5. The UW requests use of the noise and vibration specifications used for the Sound Transit Link station construction at Husky Stadium. See comment on Noise Discipline Report below. Nearby land uses are research facilities that use extremely sensitive instrumentation. This should be noted in the document. (see Comment 44)	C. Hirschey	
S-002-019	12	6	6-14	Table 6.1-5	2	Include in Table 6.1-5 the WSDOT public lot west of the SR 520 off-ramp to Lake Washington Boulevard.	Fred Hoyt	

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Date of SDEIS Issue				January 22, 2010	COMMENTS DUE BY	April 15, 2010		
No.	Chapter/Section	Page	Exhibit No.	Priority	Comment	Reviewer	Note/Action Items	
S-002-020	13	7.8	7-11	7-4a	2	The figure is missing the <i>Washington Park Arboretum Master Plan</i> .	Fred Hoyt	
S-002-021	14	7	7-25		1	The UW requires more information on the bridge height through the Arboretum. A decision on the bridge height will be a balance of: minimum height to minimize negative impacts of shading to wetland fauna, minimum height to maintain recreational activities, design constraints due to drainage requirements, the affect of bridge height on noise and resulting noise wall height and length. The UW requests side views of the bridge, for the area from McCurdy Park to Foster Island looking north and south, The visual simulation should show the existing heights at the bottom of the bridge and the top of the bridge (surface and railing) in order to understand the visual simulation and height of the bridge alternative.	Fred Hoyt	
S-002-022	15					The visual analysis should include the affect of tree removal on views. The UW is particularly concerned with the views from the Arboretum because it affects the visitor experience. Are there any areas where tree removal would open up a view to the bridge that is currently blocking views of the bridge?		
S-002-023	16	4(f)/6(f) Evaluation	Global		1	The SEIS on 4f/6f impacts and mitigation must be complete and agreed to by UW and City parks before publication of the FEIS.	Amy Kosterlitz	
S-002-024	17	4(f)/6(f) Evaluation	Global		1	The 6f property replacement issues must be resolved for the UW to support the preferred alternative. As 6f grantees, the UW and City of Seattle Parks Department will be responsible for the adequacy of the replacement. The UW supports the statement in the Draft Parks Mitigation Technical Memorandum that there must be agreement among the agencies, documented in the Memorandum of Agreement between the WSDOT, the UW and the City that gives the UW assurance that the 6f responsibilities are met.	Amy Kosterlitz	
S-002-025	18	4(f)/6(f) Evaluation	Global		1	There is no recognition of “constructive use” impact based on visual, noise, or other impairment. This impact should be addressed in the 4f analysis. As stated in the report on page 58, 23 CRF, Part 774.ad[d] requires documented agreement by the official(s) with jurisdiction over the Section 4(f) property that the proposed temporary occupancy is so minimal that it does not constitute a use under Section 4(f).	Amy Kosterlitz	
S-002-026	19	4(f)/6(f) Evaluation	Global		1	The accuracy of all parks acreage must be verified. Some park properties and open space are inaccurately identified and there are discrepancies in park acreages.	Amy Kosterlitz	
S-002-027	20	4(f)/6(f) Evaluation	Global		1	We recommend that a table be prepared to identify all of the affected parks and open space properties. It should include a list of the affected parks (formal and common name), ownership, map and data sources, and affected acreage This will assist the affected agencies prepare the Memorandum of Agreement related to mitigation. Include this table in the FEIS and/or Attachment 6.	C. Hirschey	
S-002-028	21	4(f)/6(f) Evaluation	51		1	The discussion of Foster Island discloses what is known and unknown with regard to Foster Island. As stated in the document, “...the boundaries of the TCP remain undefined. Further documentation and analysis will be undertaken to identify the TCP boundaries as part of the Section 106 process, but it is assumed that all of Foster Island will be included in these boundaries. The UW requests that the missing information be provided and the document updated prior to completion of the FEIS.	Jan Arntz	

 							
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Date of SDEIS Issue		January 22, 2010		COMMENTS DUE BY		April 15, 2010	
No.	Chapter/Section	Page	Exhibit No.	Priority	Comment	Reviewer	Note/Action Items
S-002-029	22	4(f)/6(f) Evaluation		2	If option K or L are selected, then a documentation of the Canoe House structural condition should be a requirement included in the FEIS.	Jan Arntz	
S-002-030	23	4(f)/6(f) Evaluation	89	2	The cost and commitments to replacing the Waterfront Activities Center and the mitigation required to replace the current activity at the Canoe house must be clearly identified if Option K moves forward.	Jan Arntz	
S-002-031	24	4(f)/6(f) Evaluation	111	1	The removal and reconstruction of the three pedestrian overpasses is mentioned in the first paragraph at the top of the page, however this is in conflict with the statement on page 151. See comment, page 151.	Jan Arntz	
S-002-032	25	4(f)/6(f) Evaluation	133, 140	2	The Canal Reserve is unique open space property that should be called out. If it is not a 4(f) 6(f) property (Exhibit 52 acreage, and discussed in Exhibit 55) then it should be addressed in the SDEIS/FEIS	C. Hirschey	
S-002-033	26	4(f)/6(f) Evaluation	151	1	If Option L is selected, then mitigation is required for the removal of the pedestrian bridges. The removal of the bridges under Suboption L, does not meet the UW's need to safely move people at the same location.	Jan Arntz	
S-002-034	27	4(f)/6(f) Evaluation	152	3	Some mitigation measures are described as, "a commitment to work with the public agencies to determine mitigation". The UW accepts this approach yet recognizes that this work should be complete, and included in the Memorandum of Agreement, before completion of the FEIS.	C. Hirschey	
S-002-035	28	4(f)/6(f) Evaluation	154	1	The document states that WSDOT is working with the City of Seattle and the UW on identification of additional appropriate replacement land for permanently acquired park property. The expectation of UW is that we will continue to work with the City and WSDOT on mutually acceptable replacement properties and that this will occur before completion of the FEIS.	Jan Arntz	
S-002-036	29	Cultural Resource Disc. Report	31	2	The historic setting of the University of Washington should be included in this section.	Jan Arntz	
S-002-037	30	Cultural Resource Disc. Report	Global	2	The UW appreciates the time and effort of the WSDOT to review the properties on the UW campus, but we cannot agree or disagree with the listings because we have not done an independent analysis or historical survey of the campus. Should any other information become available during preparation of the FEIS we would request that the information and analysis in the document be updated.	Theresa Doherty	
S-002-038	31	Cultural Resource Disc. Report	164	1	If options K or L are selected, it would/could result in vibration impacts to the UW, certainly more than for Option A. The UW requests that an analysis of vibration impacts and Electro Magnetic Interference (EMI) levels use the same methodology as for the Sound Transit University Link project. (see Comment 44)	Jan Arntz	
S-002-039	32	Cultural Resource Disc. Report	165	3	The Opening Day crew races are an international event and an important element of Seattle's culture. This event should be included in the document.	Jan Arntz	

 								
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No.	Chapter/Section	Page	Exhibit No.	Priority	Comment	Reviewer	Note/Action Items	
S-002-040	33	Cultural Resource Disc. Report	167		3	There is no mitigation of the impacts from dust, noise and vibration to cultural resources. The UW requests that mitigation measures be identified for dust, noise, and vibration impacts to cultural resources.	Jan Arntz	
S-002-041	34	Cultural Resource Disc. Report	192		2	The discussion of Foster Island needs more detail to document the project impacts and archeological resources on Foster Island. The archeological field studies are occurring in March and April 2010. These studies, mitigation, and a response protocol during construction should be documented and reviewed by UW before completion of the FEIS.	Jan Arntz	
S-002-042	35	Ecosystem Disc Report	4-5	Exhibit 4.2		The Pacific Place Triangle/Rainier Vista should be included in the analysis as a Landscape unit.	Jan Arntz	
S-002-043	36	Ecosystem Disc Report	4-12		1	Include the Union Bay Natural Area in the analysis. If there are no impacts, then a statement should be included in the WSDOT Ecosystem Discipline Report that the area is not impacted by the project alternatives.	Jan Arntz	
S-002-044	37	Indirect/Cumulative Impacts Disc. Report	74		1	This section focuses the discussion on the Arboretum, however the project affects recreational activities at the Waterfront Activities, national and international crew races, Husky football games in terms of number of attendees and boats, and possible visitor experience at the Union Bay Natural Area. Expand the discussion and analysis to include this range of recreational activities.	Jan Arntz	
S-002-045	38	Land Use/Economics, and Relocations Disc. Report	45		1	While Exhibit 21 includes the University of Washington, there is no discussion as to the economic benefit. Page 45 includes the number of employees but it does not discuss students, the amount of research, etc. The economic benefit should support the SR 520 project decisions due to the significant state investment in the UW. The UW will soon publish an economic impacts report and will provide it to WSDOT.	Jan Arntz	
S-002-046	39	Land Use/Economics, and Relocations Disc. Report	105		3	The discussions regarding Options K and L are very light in terms of the UW and the Waterfront Activities Center. Should either of these two options or elements of them be selected as the Preferred Alternative, the UW would request more detail in these discussions.	Jan Arntz	
S-002-047	40	Land Use/Economics, and Relocations Disc. Report	Attach 1 pg 1-26		1	For the first policy listed, it has been disclosed that the removal of the unused R.H. Thomson Expressway ramps would not allow for a multiuse link path to MOHAI, and that the 6-lane Alternative would be inconsistent with this policy. It is unclear how bicycle circulation would occur with each of the alternatives.	Jan Arntz	
S-002-048	41	Noise Disc Report	99		3	The UW concurs with the noise walls included with the project, and supports the WSDOT with the need to coordinate the design and construction of noise walls with the UW and the neighborhoods to address the design, aesthetics, and possible mitigations measures need for the noise walls. The height of noise walls and potential secondary impacts created by the noise walls are of concern to the Arboretum. The UW requests design consultation with WSDOT during design of the noise walls.	Jan Arntz	

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No.	Chapter/Section	Page	Exhibit No.	Priority	Comment	Reviewer	Note/Action Items	
S-002-049	42	Noise Disc Report	Global		1	Vibration monitoring, mitigation, and notification of construction activities are extremely important to nearby research facilities. These facilities use very sensitive measuring instruments. The UW requests that WSDOT use the Sound Transit Noise and Vibration Specifications because these specifications have been developed with the input and concurrence of UW and the affected research facilities. http://www.cpo.washington.edu/DOCMAN/WEB_FTP/DOCMANFTP/U220%20Conformed%20Specifications.pdf	A. Casillas	
S-002-050	43	Noise Disc Report	60, 61		2	The vibrations analysis includes recommendation for monitoring as a possible course of action when vibration levels reach 1.27 inches per second. Delete the word "possible". Include this commitment in Chapter 5. However, the UW's preferred methodology is the Sound Transit methodology (see above).	C. Hirschey	
S-002-051	44	Noise Disc Report			1	The potential for pile driving during bridge construction is not addressed. Specifically, construction noise and vibrations of constructing the second bascule bridge should be addressed due to the proximity to the UW Medical Center.	M. Heffron	



Report Name and Date					SR 520: I-5 to Medina Bridge Replacement and HOV Project, SDEIS issued January 22, 2010 – Wetland, aquatics, fish and wildlife		
Name of Reviewer(s)					Kevin O'Brien, Otak, Inc. (for University of Washington)		
Date of SDEIS Issue					Friday, January 29, 2010	COMMENTS DUE BY	Thursday, April 15, 2010
No.	Chapter/ Section	Page	Exhibit No.	Priority ¹	Comment	Reviewer	Response/Notes
S-002-052	1	1 & 2	1-25, 2-3	2-9 & 2-10	2	A new trail is proposed in the Arboretum, as part of the 6-lane general design. However, only Option A shows this trail (pg. 2- 16), with Options K and L apparently not showing the trail. Clarification of the graphics and/or whether the trail is proposed under all options should be made. The new trail is referenced in SDEIS Chapter 1, pg. 1-25, and again on pg. 2-3.	
S-002-053	2	1	1-26		2	Pg. 1-26—no mention of the spill containment vaults on the floating bridge occurs in the stormwater treatment section. The vaults need to be included in this section, along with the explanation that the proposed design and operation of stormwater quality treatment is not a conventional enhanced or basic BMP, and will require approval by Ecology.	
S-002-054	3	3	3-7		2	Need to modify the in-water timing table. We suggest eliminating the July 16-July 31 and November 16-February 1 work window, as this pertains to Lake Washington north of Arrowhead Point. The appropriate work window from SR 520 northward to Arrowhead Point is July 16-March 15.	
S-002-055	4	4	4-64		2	Pg. 4-64—wetland habitat is rated as “moderate”. However, if wetland functions are analyzed by combining the wetlands units as a lake-fringe wetland complex, what is the resulting habitat value? The Corps and possibly Ecology need to verify delineated wetland edges, characterization, and the functional assessments of the wetland units, as this is a major factor in determining the mitigation necessary for the project. We expect to see Corps/Ecology verification of the wetland edges, units, and functions prior to issuance of the Final SEIS for the project.	
S-002-056	5	5	5-64		2	It is unclear if this section intends to present proposed mitigation for 4(f) impacts, wetland and/or buffer impacts, shoreline impacts, or simply restoration suggestions. Similar question for impacts to the Arboretum.	
S-002-057	6	5	5-69 to 5-75		2	Visual impacts call out reductions in specimen trees associated with the UW Open Space (pg. 5-69), loss of screening tree buffers associated with views from the Arboretum and UW WAC (pg. 5-70), the southeast UW campus (pg. 5-71), and Foster Island (pg. 5-72, 5-74&75). Have these impacts been factored into 6(f)/4(f) analyses? Coupled with the occupation of 4(f) lands during the multi-year construction period, these collective impacts do not seem minor and would not merit a temporary exemption, per 23 CFR 774.13(d).	



SR 520 Bridge Replacement and HOV Program

I-5 to Medina: Bridge Replacement and HOV Project



Report Name and Date					SR 520: I-5 to Medina Bridge Replacement and HOV Project, SDEIS issued January 22, 2010 – Wetland, aquatics, fish and wildlife			
Name of Reviewer(s)					Kevin O'Brien, Otak, Inc. (for University of Washington)			
Date of SDEIS Issue					Friday, January 29, 2010	COMMENTS DUE BY	Thursday, April 15, 2010	
No.	Chapter/Section	Page	Exhibit No.	Priority ¹	Comment	Reviewer	Response/Notes	
S-002-058	7	5	5-35		1-2	The "Converted to Right-of-Way" shading is difficult to understand. Is this land outside of the current right-of-way that is being converted to right-of-way under the proposed project, or is it land that is being converted to a transportation structure? Why isn't the pink area on Option K on pg. 5-35 included in the dotted line that comprises the proposed right-of-way? Is this because a subterranean feature like a tunnel doesn't have a right-of-way associated with it? This seems odd, given the comments in the Section 4(f)/6(f) report about an underground easement for the Section 4(f) use of the Open Space property for the tunnel. What about ROW acquisition issues associated with the Foster Island lid? Are there any? In addition, there are differences in the proposed right-of-way dotted line polygon on pg. 5-35, with Options K and L showing a longer extension of ROW along Pacific Ave. vs. Option A—yet there isn't any indication of a Converted color, making the distinction between existing ROW and proposed ROW unclear. It is assumed that this represents an increase in ROW along a corridor that already is considered ROW for SDOT; however, some clarification is needed.		
S-002-059	8	5	5-36		2	The SDEIS concludes that the right-of-way acquisitions represent only a small percentage of land use change in the City of Seattle—yet anywhere from 9 to 14 acres of park/open space/civic/quasi-public land will be converted to ROW under the various alternatives. Such a conclusion is questionable, because any land conversion can be minimized if the scale for comparison is large enough. A more reasonable approach would be to analyze the proportion of land conversion for the project corridor, for a more targeted approach. In addition, park and open space land in the project vicinity and associated neighborhoods is being significantly altered.		
S-002-060	9	5	5-39		1	The statement. . . "that the UW Water Activity Center will be relocated for several years" should be included and specifically addressed in the mitigation portion of the SDEIS.		
S-002-061	10	5	5-43		2	The text identifies impacts to the Arboretum recreational opportunities under Seattle's SMP and project inconsistency with that policy, but this inconsistency is not mentioned under the Arboretum Master Plan consistency. The Arboretum Master Plan specifically calls out continued non-structural recreational use as a Plan element, and thus the proposed project and its impacts to the recreational elements of the Arboretum are inconsistent with this element of the Arboretum Master Plan, as well as the other elements mentioned in the SDEIS.		

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S-002-062 11	5	5-43		1	Pg. 5-43. Specific, or even conceptual mitigation, has been deferred until a preferred alternative is identified. This may not be appropriate at this stage. The SDEIS should present more detail on mitigation, or mitigation requirements that will be met, other than reference to future mitigation planning. For example, it should bear mentioning that the City of Seattle has mitigation requirements for shoreline habitat, fish and wildlife habitat conservation areas, and shoreline habitat buffer. Identified mitigation ratios for shoreline habitat buffer, per the Seattle Municipal Code, are 1:1 for replacement of shoreline habitat/shoreline ecological function that occurs within ¼ mile of where the vegetation removal, habitat loss, or placement of new impervious surface occurred; or 3:1 where the mitigation replacement is located along the shoreline greater than ¼ mile from where the habitat loss occurred.		
S-002-063 12	5	5-51		2	The statement that the project will treat stormwater runoff from the road and this will benefit fish species needs to be investigated and verified. Increased stormwater runoff from the larger pollution-generating impervious surfaces of the proposed bridge, even if treated, may very well not represent a benefit—just a minimization measure.		
S-002-064 13	5	5-52		2	Text provides some specific mitigation measures for social justice impacts. We would like to see a similar approach, with specific mitigation measures called out, for land use mitigation, wetland mitigation, and Section 4(f) and 6(f) mitigation as components in the Final SEIS.		
S-002-065 14	5	5-57		2	All options, not just Options K and L, will affect the use of the UW open space because of new project elements and associated ROW acquisitions. No mention of the stormwater treatment facilities proposed for the UW Open Space area occurs. The conversion to ROW for a stormwater treatment facilities should be disclosed in the document.		
S-002-066 15	5	5-64		2	Mitigation for impacts is rather vaguely called out as occurring as part of an ongoing process. The UW expects a fuller treatment of proposed mitigation for loss of UW Open Space function and impacts to the Arboretum in the Final SEIS.		
S-002-067 16	5	5-68 to 5-75		2	The SDEIS suggests mitigation for the diminishment of aesthetic value on these 4(f) lands. Coupled with the occupation of 4(f) lands during the multi-year construction period, these collective impacts do not seem minor and would not merit a temporary exemption, per 23 CFR 774.13(d).		

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S-002-068	17	5	5-121	5.10-1	2	Water Resources. The section on the Lake Washington West Approach should reference the facilities on Exhibit 5.10-1. Presumably the treatment vaults associated with Option A are the vaults in Facility V, and the treatment vaults for K are presumably Facility V and Facility Y. It is unclear what treatment facility is being referenced for Option L—presumably the Facility M wetlands. Under the Union Bay basin section on the same page (5-121), there is no mention of Facility U or what impervious surfaces associated with the project will drain to Facility U. The role of Facility Z is not specified; although mention of spill containment vaults occurs as part of the stormwater treatment discussion for the floating bridge portion of SR 520, Facility Z does not appear to be associated with that part of the bridge. Under Table 5.10-2, proposed facility K is listed but not shown in Exhibit 5.10-1.		
S-002-069	18	5	5-122		2	Pg. 5-122 in SDEIS, and Water Resources Discipline Report. Comments made by this reviewer and others for the Draft Water Resources Discipline Report specifically asked for evidence regarding the efficacy of the proposed spill containment vaults and associated catchment basins and roadway sweeping—the AKART analysis by CH2M Hill. Replies to these comments indicated that the AKART analysis would be available upon publication of the SDEIS. This reviewer has been unable to locate that analysis. The AKART analysis should be made available as part of the support documentation for the SDEIS and Final SEIS.		
S-002-070	19	5		5.10-2	1	The proposed spill containment vaults in the SDEIS appear to be enclosed and not open-bottomed structures, in contrast to the Water Resources discipline report. This is an important distinction, as spill containment vaults would be expected to have a much higher localized concentration of contaminants because of stormwater discharge into a limited space, compared to a comparable volume of water elsewhere in the lake, and open-bottomed vaults could allow fish into these cells. Additionally, it is unclear from the SDEIS how the proposed treatment system is supposed to work, particularly when the statement is made that the lagoons will allow dilution of pollutants in stormwater prior to discharge beneath the bridge.	KOB	
S-002-071	20	5		5.10-3	3	It is unclear as to what the pollutant loads represent. Is it yearly pollutant loading? Pollutant loading during a particular design storm event? We assume yearly pollutant loading, but this should be explicit.		
S-002-072	21	5	5-125		2	Permanent negative effects to water quality associated with the proposed project will be minimized and not avoided, as pollutants will continue to be loaded into the waters of Lake Washington under the proposed project, even with implementation of water quality treatment BMPs.		
S-002-073	22	5	5-125		2	The statement that an increase in impervious surface associated with the proposed project will not cause a detectable change in water quality is not borne out by the analyses conducted in the Water Resources discipline report—which contains a table that predicts detectable changes in water quality in different drainage areas under different alternatives (Exhibit 30). While most of these predicted differences represent decreases in pollutant loading under proposed vs. existing conditions, there are localized predicted increases in some pollutants.		

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S-002-074	23	5	5-135		2	The statement that the Option A suboption would result in an additional 2.3 acres of shading of aquatic bed wetlands compared to Option A is inconsistent with the information on pg. 5-127, both in the text and in Table 5.11-1. If the statement is accurate and aquatic bed habitat is being shaded that is not being counted in the wetland shading impacts, these wetland impacts need to be revised to reflect shading that occurs not just to forested, scrub/shrub, and emergent wetlands, but to aquatic bed wetlands, as well.	
S-002-075	24		5-143		2	Change the following, in order to reflect the language in the Ecosystems Discipline Report and to draw a more appropriate conclusion. "This would could improve aquatic habitat conditions in some areas and offset and minimize potential negative effects in other areas."	
S-002-076	25	5	5-143		3	It is suggested that the Wetlands paragraph should be moved to pg. 5-144 as the first paragraph under the Wetlands heading, or be deleted.	
S-002-077	26	5	5-144		3	The first paragraph on this page, under the heading Fish and Aquatic Resources and Wildlife and Habitat, does not make much sense. If there are additional, specific avoidance and minimization measures associated with permanent impacts, it would make sense to list them on pg. 5-143. If the additional avoidance and minimization measures are associated with construction-related impacts, delete this section and include those measures in Chapter 6.	
S-002-078	27	5	5-146		1	No mitigation is proposed for permanent loss of wildlife habitat. Although not required under any regulatory framework, the project as a whole would benefit from an approach that seeks some compensatory mitigation for loss of this habitat.	
S-002-079	28	6	Multiple		1	Construction activities affecting parks, the Arboretum, and the UW Open Space, as identified in Chapter 6, will last for years but are called out as temporary impacts. 23 CFR 774.13(d) establishes criteria for temporary occupancy exceptions, and states that not only must the temporary impacts last for less time than the duration of the project, but that the scope of work must be minor (nature and magnitude of the disturbance is minimal). The latter criterion concerning "minor" scopes of work suggests that impacts on the order of magnitude of several years preclude being considered exceptions to the requirement for 4(f) approval; such on-going, long-standing impacts are of a temporal nature and magnitude that cannot reasonably be considered minor.	

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29	6	6-38		1	<p>This "temporary" nature of these impacts is particularly relevant for the Washington Park Arboretum, in which "temporary" impacts are not considered a 4(f) use of the property, and thus have no mitigation associated with said use. However, the "temporary" impacts are much larger than the 4(f) use acreage identified in the report, and last for so long, that a reasonable interpretation of 23 CFR 774.13(d) would suggest that these "temporary" uses do not meet the criteria to be considered exempt. For example, Option A identifies 0.9 acres of 6(f) use of the Arboretum due to permanent conversion of the land to transportation use. However, 2.4 acres of construction impacts will occur in the Arboretum, lasting up to six years. For Option K, a total of 1.4 acres of 4(f) use of the Arboretum due to permanent conversion of the land to transportation use, but 5.3 acres of construction impacts will occur and will last up to seven years. Finally, Option L identifies 0.6 acres of 6(f) use of the Arboretum due to permanent conversion of the land to transportation use, while 3.5 acres of construction impacts will occur and last approximately six years.</p> <p>In addition to the larger impacts to the Arboretum, the UW Open Space area has "temporary" construction impacts that are larger than the 4(f) use identified in the report and last for several years. Option A is identified as having 0.2 acres of 4(f) use associated with permanent acquisition of the land to transportation use, but another 1.1 acres will be impacted for 27 months due to construction easement and associated construction staging (Exhibit 3-8). Option K is identified as having 0.1 acres of 4(f) use associated with permanent conversion of the land to transportation use, but another 0.5 acres will be impacted for 45 months due to a construction easement. Option L is identified as having 0.5 acres of 4(f) use associated with permanent conversion of the land to transportation use, but another 0.9 acres will be impacted for 30 months due to a construction easement.</p> <p>The extended duration of these construction impacts, particularly those in the Arboretum, strongly indicate that such impacts cannot be considered "temporary" or "minor", and therefore should not be considered exceptions under 23 CFR 774.13(d)—and should be mitigated for accordingly.</p>		
30	6	6-79		1	<p>Increased turbidity and sediment mobilization associated with the project may not adversely affect the water quality of Lake Washington as a whole, but will certainly cause localized adverse affects to aquatic fauna that may experience the increases in turbidity. A project of this magnitude and duration will result in localized degradation of water quality and will negatively affect aquatic biota in the vicinity of the project, even with TESC and BMPs in place to limit sediment mobilization and increases in turbidity,. Additionally, if benthic sediment is mobilized as a result of project activity, there may be further water quality degradation if contaminants associated with the sediment are also mobilized.</p>		

S-002-079

S-002-080

SR 520 Bridge Replacement and HOV Program

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No.	Chapter/Section	Page	Exhibit No.	Priority ¹	Comment	Reviewer	Response/Notes
S-002-081	31	6	Multiple	1	Restoration of the "temporarily affected wetland areas," due to the length of time associated with the ongoing construction-related fill of the wetlands, may be prohibitively difficult from an ecological perspective. A severe enough disturbance for a long enough time period (i.e. "temporary" wetland fill for several years) may result in a perturbation away from functioning wetland conditions that cannot be feasibly restored. Such impacts may be considered permanent, and a more appropriate response would be compensatory mitigation (wetland creation, enhancement of existing wetlands, etc.) at an appropriate ratio.		
S-002-082	32	6	6-86	2	The UW requests a more thorough discussion of noise effects due to pile driving activities, the effects on fish, and the specifics of the 2009 pile-driving evaluations to be made available for the Final SEIS. The magnitude of pile-driving activities and the levels of underwater noise generated, per WSDOT's own ESA guidance, are likely to result in significant negative impacts to fish, including behavioral displacement, physiological stress, injury, and potentially death.		
S-002-083	33	6	6-87		Although it is true that different fish species respond differently to different light regimes, it seems appropriately conservative to conclude that negative effects to fish due to nighttime construction lighting associated with the project are likely, or at least possible. Please add language to reflect this.		
S-002-084	34	6	6-92 & 6-95	2	Construction activity and disturbance, including areas of habitat at considerable remove from the construction footprint due to pile-driving activity and associated underwater noise, would likely result in substantial negative impacts to fish species in general, and listed salmonids in particular.		
S-002-085	35	6	6-114	2	Include use of 4(f) land associated with the UW Open Space.		
	36	6	6-116	2	No mention of mitigation for use of 4(f) land associated with the UW Open Space. This needs to be included.		
S-002-086	37	6	6-99 & 6-124	1	The likely need for wetland compensatory mitigation to address long-term construction impacts should be addressed here. Although the Initial Wetland Mitigation Report indicates that mitigation ratios for long-term temporary impacts to wetlands have not yet been established, it may bear mentioning that the guidance document the Report cites—the Ecology/Corps joint <i>Wetland Mitigation in Washington State - Part 1</i> —suggests a ratio for long-term temporary impact of ¼ that of the typical ratios for permanent impacts, and even greater mitigation ratios for long-term temporary impacts lasting more than 2 years. These are relevant issues and bear some mention here.		

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S-002-087		5-146 & 5-172; 6-99 & 6-100; 6-124		1	The likely need for fish/aquatic resources and shoreline habitat compensatory mitigation to address operational and/or long-term construction impacts should be addressed here. Mitigation for impacts to fish/aquatic resources and shoreline habitat associated with the Arboretum should occur on Arboretum property as a first priority, with off-site mitigation considered as a secondary priority. Enhancement of Arboretum Creek and restoration of fish access/passage into that system is a good example of the kind of mitigation activity for impacts that is supported both by the UW and the City of Seattle. Additional habitat mitigation activities associated with mitigation on Arboretum Creek—for instance, improving shallow water lake habitat at the mouth of the creek to improve salmonid access to the creek itself—should also be considered as a high priority, site-specific mitigation approach.		
S-002-088		7-20		2	The statement that land in the project vicinity that is converted to transportation use from park/open space/civic/quasi-public land is insignificant at the City/Puget Sound/regional level may be true, but the scale of comparison may be inappropriate for determining potential indirect and cumulative effects. Rather, the indirect and cumulative effects to neighborhoods in or near the project corridor represent an alternative, potentially more appropriate scale for this analysis. This more project-specific spatial scale for such an analysis is further supported by Seattle's Ordinance 118477, which indicates that park and recreational land held by the City must be preserved or mitigated for by providing replacement "land or a facility of equivalent or better size, value, location and usefulness in the vicinity, serving the same community and the same park purposes." (Italics added).		
S-002-089	7	7-32		2	Suggest amending the sentence with the italicized phrasing here: "The improved stormwater treatment associated with the project <i>will offset the additional pollution-generating impervious surface associated with the project, and will help minimize the anticipated continued pollutant loading into Lake Washington from stormwater vectors.</i> "		
S-002-090	7	7-32 & 7-33		2	It is unclear if there really is a long-term trend towards improved surface water quality associated with transportation projects and their stormwater treatment facilities. Are there data or studies to support this assertion? If so, citation of the appropriate studies should occur here.		
S-002-091	7	7-33		1	Indirect effects on wetlands should include the consequences of long-term construction activity, and evaluate the time for impacted wetlands to recover following restoration plantings and activity after construction is complete. Such indirect effects could include the successional stages that impacted wetlands would pass through, beginning from disturbed and newly-planted habitat to a more established and mature wetland community. Wetlands impacted and then restored maybe more susceptible to aggressive colonization by non-native invasive species, which is an indirect effect that should be disclosed. Indirect effects will also include the long-term effects of increased shading of wetland habitat by the larger bridge and roadway infrastructure. At this point, given that no mitigation approach has been articulated for wetland shading effects, any effects to wetlands as a result of shading must be considered as indirect effects. Claiming that there are no project-related indirect effects to wetlands is inaccurate.		

  							
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43	7	7-36		2	The single report referenced with regard to Chinook and Northern pikeminnow behavior in the vicinity of the existing SR 520 bridge does not support a conclusion of "minor" project-related cumulative effect on fish resources. The report authors acknowledge the complexity and variability of Chinook behavior and site heterogeneity, and conclude that further study is necessary to resolve the questions and uncertainties regarding how salmonids, their predators, and bridge structures interact in this system.		

S-002-092



Report Name and Date		SR 520: I-5 to Medina Bridge Replacement and HOV Project, Transportation Discipline Report, December 2009					
Name of Reviewer(s)		University of Washington, Transportation Review Staff & Consultants (M. Heffron, C. Hirschey, P. Dewey)					
Date of SDEIS Issue		Friday, January 29, 2010			COMMENTS DUE BY		April 15, 2010
No.	Chapter/Section	Page	Exhibit No.	Priority ¹	Comment	Reviewer	/Notes
S-002-093	1	TDR	Global		1	The UW supports having HOV direct access ramps to Montlake Boulevard, and prefers that they be designated for transit plus carpool use because of the important carpool component of the UW's TDM program. The origin of both students and employees is from throughout the region, including lower density areas that are not well served by transit.	
S-002-094	2	TDR	2-6		3	The second bullet under "Montlake Interchange Area" should include the degradation in LOS with Options K and L at the Montlake Boulevard NE/NE Pacific Street intersection.	
S-002-095	3	TDR	2-13		1	Provide a summary of the discussion requested from the comment made on page 5-15.	
S-002-096	4	TDR	2-14		1	Update relative to detailed comment made for pages 8-21 though 8-23.	
S-002-097	5	TDR	2-14		1	While a summary chapter, the reference to the Montlake Freeway Transit Station being removed requires more information as to the transit rider impact and the transit facilities and increase in transit service hours needed to mitigate changes resulting from the project.	
S-002-098	6	TDR	4-13		3	Item #1 for local traffic volume forecast should clarify if the growth rates were applied to daily volumes, peak period, or peak-hour volumes.	
S-002-099	7	TDR	5-15,	5-9, 5-10	2	While it is recognized that the ramps were defined by the mediation process, the volume and type of HOV trips (carpool vs. bus) is important to assessing the need for and function of transit-only ramps near Montlake. If the HOV direct access ramps are limited to transit only, then the discussion of westbound HOV travel time should disclose the fact the westbound carpools exiting at Montlake Boulevard must weave across the general purpose lanes to reach the off-ramp. The carpool portion of the HOV travel time reported will experience additional delay compared to the bus-transit using the direct access ramps. Report the volume of carpools affected and the affect on the general-purpose lanes and travel delay to carpools. Provide a summary of results in Chapter 2.	
S-002-100	8	TDR	5-20		2	The section on "Travel Time and Speed" should disclose the affects of the westbound weave by carpools that exit at Montlake Boulevard.	
S-002-101	9	TDR	5-30		2	The text related to the Portage Bay Viaduct states, "Vehicle demand on the westbound on-ramp from Montlake Boulevard would be less with the 6-Lane Alternative than the No Build. This is because sections of SR 520 would be tolled, including the Portage Bay Bridge." The University of Washington would oppose segmental tolling on SR 520 that could divert traffic from the Portage Bay Viaduct to other arterials such as NE 45 th Street and NE 50 th Street. Further information about the tolling assumptions made for the analysis should be provided.	



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S-002-102	10	TDR	5-31	6-3, 6-4		The text in paragraphs 2 and 3 state that the SR 520 westbound mainline is "over capacity, adding to the congestion spilling back on to the local system." However, Exhibit 3 shows the intersection of the westbound ramps at Montlake Boulevard at LOS A and B in the A.M. and P.M. peak hours, respectively. Exhibit 6-4 shows this intersection and LOS A for both the A.M. and P.M. peak hours. If the design decisions are based on the impacts of queue spill-back, then the analysis, data, and text in Chapter 6 should be consistent with the results of the mainline freeway analysis.	
S-002-103	11	TDR	5-31		1	The UW would support design modifications that reduce the volume of traffic on Lake Washington Boulevard including traffic calming and tolling. However, additional improvements along Montlake Boulevard may be required to accommodate traffic diverted from Lake Washington Boulevard. The UW's primary concern with removing the ramps is congestion along Montlake Boulevard, and its affect on transit travel times and reliability.	
S-002-104	12	TDR	5-32	25	1	Analysis should be added to both westbound and eastbound mainline operations sections to show how the different direct transit and/or HOV access ramps affect mainline operations. For Option A, westbound HOV traffic would need to weave across the mainline flow to exit at Montlake Blvd (transit could use the direct access ramp) and eastbound transit and HOV would have to make the merge. Suboption A would remove the eastbound weave. The analysis would help determine the benefit or impact of various ramp choices among the options.	
S-002-105	13	TDR		6-19	3	This exhibit indicates that the westbound off-ramp to Montlake Boulevard does not include left turn channelization under Option A. This must be an error. It is difficult to interpret Option A versus A+ when combined in one figure. A unique figure should be provided for each alternative presented in the FEIS.	
S-002-106	14	TDR	6-x		2	The traffic operations analysis for the Montlake Boulevard/Pacific Street intersection must account for the approved (and recently constructed) driveway on the east side of the intersection. This driveway is now controlled by the traffic signal at that intersection. Interim conditions will be in effect through Link Light Rail construction. For year 2030 conditions, the analysis should assume that the driveway can be entered via the northbound right turn or southbound left turn movement. SDOT will require that the latter movement be served by a protected left turn phase to prevent a clearance interval trap. Traffic exiting the driveway may be restricted to right turn out only, although through movements to Pacific Street may be allowed to overlap with part of the eastbound right turn phase.	
S-002-107	15	TDR	6-44		3	At the East Roanoke Street/Harvard Avenue/SR 520 Westbound off-ramp, the No-build westbound off-ramp queue is stated as reaching beyond the split from the I-5 northbound exit lane. For Option A, the queue is 350 feet further than the No-build. Was this potential queuing onto the SR 520 mainline included in the analysis of the Portage Bay Viaduct, or would it further exacerbate the condition reported on both the mainline and local roadway system in the Montlake Boulevard area? How would the impact to mainline flow change with and without the auxiliary lane on the Portage Bay Viaduct?	

 SR 520 Bridge Replacement and HOV Program  I-5 to Medina: Bridge Replacement and HOV Project							
Report Name and Date			SR 520: I-5 to Medina Bridge Replacement and HOV Project, Transportation Discipline Report, December 2009				
Name of Reviewer(s)			University of Washington, Transportation Review Staff & Consultants (M. Heffron, C. Hirschey, P. Dewey)				
Date of SDEIS Issue			Friday, January 29, 2010		COMMENTS DUE BY		April 15, 2010
No.	Chapter/Section	Page	Exhibit No.	Priority ¹	Comment	Reviewer	/Notes
S-002-108	16	TDR	7-1		2	This chapter does not quantify the number of bicyclists expected to cross on the new SR 520 bike lane, identify their paths of travel, or evaluate the adequacy of the local bike facilities given the expected increases in volumes. We expect that there would be a significant increase in bike traffic between SR 520 and the Burke Gilman Trail. What improvements might be needed on the Montlake Bridge and in the Montlake Triangle area to accommodate that connection?	
S-002-109	17	TDR	7-5		2	The UW supports construction of the second bascule bridge because it is the best way to improve the pedestrian and bicycle conditions across the Montlake Cut. However, we remain concerned about the affects on pedestrians and bicycles if the second bascule bridge is not funded.	
S-002-110	18	TDR	7-17	18	1	Currently, there are about 100 bicyclists who park their bikes adjacent to SR 520 and transfer to SR 520 buses at the Montlake Flyer stop. The impact of removing the Montlake Freeway station means that some bicyclists will ride across the lake and some will ride their bike and transfer at the Montlake Multi-Modal Center. What is the estimated bike storage requirement at the Montlake Multi-Modal Center? The UW needs to understand how and where the bicycle lockers will be accommodated at the Montlake Multi-Modal Center before supporting the preferred alternative and mitigation measures.	
S-002-111	19	TDR	7-17			A description and/or figure is needed to show that a cohesive and safe bicycle facility will be provided connecting the new SR 520 bike trail to the Burke-Gilman Trail.	
S-002-112	20		8-13,	8-6	2	The number of boardings and alighting at existing bus stops is needed in order assess and comment on the proposed changes to bus routing and bus stops. It would be helpful to the reader to include these data on Exhibit 8-6 or in a table.	
S-002-113	21	TDR	8-19		1	There are major differences among the Montlake Area interchange options in terms of HOV direct access lanes. Some of the options have "Transit-only" access lanes, while others provide for HOV (bus + carpool). It would be useful to add a section to this chapter that describes the number of vehicles for each mode (transit versus carpool) assumed to access each ramp option. The UW would support design modifications that provide direct access for both transit and carpools since both modes are heavily used by UW students and staff and a key elements of the UW's transportation management plan.	
S-002-114	22	TDR	8-19		2	The side bar includes an explanation of the SR 520 High Capacity Plan. However there is no explanation in the text as to what elements of the plan would be implemented to restructure the transit routes given the transit facilities provided with each alternative.	
S-002-115	23	TDR	8-20		2	The text (last full paragraph) refers to "incremental strategies for meeting cross-lake travel demand." Is there a specific increment assumed in the analysis of alternatives? What increment can be implemented under the assumed transit funding levels?	



SR 520 Bridge Replacement and HOV Program



I-5 to Medina: Bridge Replacement and HOV Project

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No.	Chapter/Section	Page	Exhibit No.	Priority ¹	Comment	Reviewer	/Notes
S-002-116	24	TDR	8-22		2	The impacts to transit riders are difficult to compare across alternatives. Each alternative would have different routing for regional and local transit. Please describe the various routing choices, stop locations, and other transit operating conditions associated with the various SR 520 alternatives.	
S-002-117	25	TDR	8-21, 8-22, 8-23		1	Transit facility and service enhancements will likely be needed due to physical changes in the corridor (e.g., removal of the Montlake Flyer stop) or addition of direct access ramps as well as to accommodate additional ridership due to tolling on the SR 520 bridge. The bus route restructuring required due to removal of the Montlake Flyer stop, and due to the HOV Direct Access ramps results in more buses providing transfers, terminating or beginning a route with layovers in the vicinity of Montlake Boulevard and Pacific Avenue (Montlake Triangle). The preferred alternative should mitigate the additional transit service and facilities needed because of these project-related impacts.	
S-002-118	26	TDR	8-25	16	2	Clarify if transit service described with the alternative are within the assumed funding scenario or if funding dedicated from the (unfunded) Urban Partnership Agreement is required to meet service needs with the alternative.	
S-002-119	27	TDR	8-29, 8-30		1	The UW prefers that direct access ramps serve both HOV and transit. If HOV cannot be accommodated on the direct access ramps, then additional analysis should be performed to show the effect that HOVs would have on mainline operations if they have to weave from the center lanes to the off-ramps. The volume of affected HOV vehicles should also be disclosed.	
S-002-120	28	TDR	9-10	21	2	If Option K or L is selected, a mitigation plan related to both the temporary and permanent loss of substantial parking in the UW's lots E-11 and E-12 must be included as part of the project.	
	29	TDR	10-9	10-4	2	If Option K or L is selected, additional analysis will be needed to show how construction on the south side of Husky Stadium would be coordinated between the Sound Transit tunnel/station construction and the SR 520 cut-and-cover construction. The potential for overlapping staging areas, construction traffic, and parking impacts would need to be evaluated and mitigated.	
	30	TDR	10-34	15	2	If Option K or L are selected, more analysis and design will be needed related to the temporary grade-separated pedestrian crossing at the north end of the Montlake Bridge. Where would landings be located? How would pedestrians reach locations further north (e.g., Husky Stadium)? Would the temporary structure block views from Rainier Vista?	
S-002-121	31	TDR	10-36	New	1	If any of the alternatives would require traffic to be detoured off of Pacific Street to Pacific Place, then additional analysis and design would be required to determine the extent of improvements needed to accommodate the detoured traffic. For example, if a dual left turn lane is needed from northbound Montlake Blvd to Pacific Place, would widening be needed to the north in order to align through lanes? And would it affect the Hec Ed Bridge? Also, with substantial increases in traffic on Pacific Place, would a pedestrian signal be needed at the existing mid-block pedestrian crossings? And finally, how would use of Pacific Place affect transit routes, transit stops, and trolley operations?	

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No.	Chapter/Section	Page	Exhibit No.	Priority ¹	Comment	Reviewer	/Notes	
S-002-122	32	TDR	12-6	2	1	The parking supply provided by the University of Washington is subject to its agreement with the City of Seattle. Other major projects, such as Sound Transit's light rail station, have provided replacement parking for its temporary construction impacts. Any option that affects parking, particularly Option K or L that would substantially affect parking south of Husky Stadium, would require a detailed mitigation plan to replace or relocate the affected parking. Temporary and permanent parking impacts would need to be mitigated.		
S-002-123	33	TDR	12-8		1	Additional mitigation/design options should be identified in the FEIS and selection of the preferred alternative. See comments in Chapter 6 and Chapter 8.		

05/26/2011 13:10 PM

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STATE OF WASHINGTON

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April 14, 2010

Ms. Jenifer Young, Environmental Manager
SR 520 Project Office
600 Steward Street, Suite 520
Seattle, WA 98101

Re: Comments on the SR520 Supplemental Environmental Impact Statement

Dear Ms. Young:

The Recreation and Conservation Office (RCO) has reviewed the Supplemental Draft Environmental Impact Statement (SDEIS) for the SR 520 I-5 to Medina project and offers the following comments for your consideration. As the delegated authority for implementation of the Land and Water Conservation Fund (LWCF) in Washington State, RCO has reviewed the document for compliance with LWCF program requirements for conversion of 6(f) protected park land. Portions of the Arboretum Park are protected park under Section 6(f) of the LWCF Act through a grant awarded to the City of Seattle and University of Washington.

RCO concurs with comments submitted by the National Park Service (NPS) on the SDEIS. Since specific information regarding the Arboretum Park conversion and replacement are not yet available, a parallel environmental review process is needed in order to comply with the National Environmental Policy Act (NEPA) review requirements for the LWCF program. The Washington State Department of Transportation (WSDOT) can complete the FEIS for the SR 520 project independently of the LWCF environmental review and utilize the FEIS as reference documentation. The NPS will make its own NEPA determination for the LWCF action independent from the determination made by the Federal Highways Administration for the SR 520 project.

The LWCF environmental review must include the following:

- A description of the proposed replacement property with specific attention to the public outdoor recreation resources and opportunities it will provide.
- A detailed proposed 6(f) park boundary map for the proposed replacement property.
- A description of other approvals, permits, and other factors needed to implement acquisition and development of the proposed replacement park with a timetable for completion.
- A description of the 6(f) protected park area to be converted at the Arboretum Park including outdoor recreational facilities and opportunities.
- A description of the remaining 6(f) protected park area at the Arboretum Park and the remaining outdoor recreation facilities and opportunities.

Additional guidance on the content of the NEPA documentation required for the LWCF program can be found in the *Land and Water Conservation Fund and State Assistance Program Manual*.

Ms. Jenifer Young

April 14, 2010

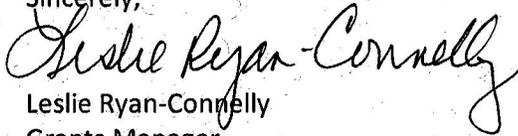
Page 2

S-003-001

The City of Seattle and the University of Washington are the project sponsors of the LWCF grant at the Arboretum Park. WSDOT's collaboration with the project sponsors is critical to the 6(f) environmental review process. We appreciate the work you have done facilitating the Parks Technical Working Group as substantial progress has been made since early 2009. WSDOT should work with Seattle and the University to determine a timeline that meets the project sponsor's needs regarding the Arboretum Park conversion and mitigation. Once a replacement property that meets both of the project sponsors' recreational needs has been identified, the LWCF environmental review process can be completed.

Thank you for the opportunity to comment. Please contact me if you have any questions. I can be reached at (360) 902-3080 or leslie.ryan-connelly@rco.wa.gov.

Sincerely,



Leslie Ryan-Connelly
Grants Manager



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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April 15, 2010

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

Dear Ms. Young:

Jenifer:

Thank you for the opportunity to review the *Supplemental Draft Environmental Impact Statement (SDEIS)* for the *SR 520, I-5 to Medina; Bridge Replacement and HOV Project*. The Department of Ecology has reviewed the SDEIS, and you will find our comments enclosed. Additionally, we are including Ecology's comments on the project's *Aquatic and Wetlands Mitigation Plans* submitted to you in January, 2010 and prepared by Joe Burcar and Caroline Corcoran.

We commend you and the SR 520 team for the high-quality of the SDEIS – it is well-written, clear, and well-organized. As we have noted in the past, the maps, graphics, and charts enable the reader to gain a clear picture and better understanding of the bridge components, statistics, and comparisons of the proposed options.

When you have a chance to review Ecology's comments, you will see that we have emphasized several: those relating to mitigation sequencing and the need for more analysis relating to the bridge-height issue in the Visual Quality and Noise Sections, particularly in Chapters 5 and 6. We cannot emphasize enough how crucial it will be for the project to properly follow the process when determining the preferred alternative and how that process plays a role in setting the appropriate bridge height. These important points are discussed in detail on page one of our comments.

As is Ecology's custom, the comment letter includes input from a variety of technical staff from Headquarters and, for this project, the Northwest Region. Thus, you may find it useful to have their names and contact information: Joe Burcar (joe.burcar@ecy.wa.gov) responded to *Visual, Noise, and Recreation Impacts*; Caroline Corcoran (caroline.corcoran@ecy.wa.gov) to *Ecosystems and Indirect and Cumulative Effects*; Bobb Nolan (robert.nolan@ecy.wa.gov) – *Water Quality*; Millie Piazza (millie.piazza@ecy.wa.gov) – *Social Elements/Environmental Justice*; Annie Szveticz (annie.szveticz@ecy.wa.gov) – *Climate Change and Greenhouse Gases*; and Mike Boyer (mike.boyer@ecy.wa.gov) – *Air Quality*.



Ms. Young, Environmental Project Manager
SR 520 Project Office
April 15, 2010
Page 2

S-004-001

Again, kudos to you those who compiled this SDEIS, and we look forward to our continued work with you and WSDOT on this important state project. Should you have questions, comments, or concerns, you can contact me at 360.407.6789 or terry.swanson@ecy.wa.gov.

Sincerely,



Therese M. Swanson
Ecology Transportation Coordinator – SR 520 project

Enclosures (3)

cc: Megan White, Director of Environmental Services, WSDOT
Scott White, Permit Lead for SR 520 project, WSDOT
Gordon White, Manager of Ecology Shorelands and Environmental Assistance Program
Jeannie Summerhays, Regional Director Ecology's NW Region

Department of Ecology Comments SR-520 Bridge Replacement and HOV Lane Project Supplemental Draft Environmental Impact Statement

APRIL 15, 2010

S-004-002

Enduring and Over-arching Concerns and Challenges

Ecology has consistently and emphatically expressed the following environmental concern throughout the past two years, including the planning and mediation processes; through comments in the pDEIS and associated Discipline Reports; and within the various committees, groups, and forums. Recognition is given to WSDOT's knowledge and expertise in the wetlands arena, yet the important SDEIS comment-phase affords Ecology, in its role as the state agency delegated authority under the federal Clean Water Act to protect wetlands, an ideal opportunity to reiterate the point about wetlands impacts and mitigation sequencing.

Ecosystems

When choosing an alternative and planning a project, the applicant must employ **Mitigation Sequencing**, which involves the following step-by-step analysis and consideration: 1) every attempt must be made first to **avoid** damaging or impairing wetlands; 2) for those activities that simply cannot avoid those impacts to wetlands in the project area, then serious measures must be adopted to **minimize** the damage to the wetlands; and, finally 3) project proponents must provide **compensatory mitigation**, which, depending on the type and function of the wetland, can include restoration, enhancement, and other methods for mitigating unavoidable damage to these important state resources.

When choosing a preferred alternative, the project proponent must consider the impacts of each alternative (i.e. option) and run it through the sequencing regimen. Thus, impacts and potential mitigation are parallel considerations when choosing an alternative. WSDOT must find ways to avoid and minimize wetland impacts to show that mitigation sequencing is being followed properly; i.e. demonstrate the sequencing process used when evaluating the options – it is not as simple as committing to mitigating away all the impacts – the sequencing process must be employed. It's clear that Option K has significantly more wetland and buffer fill impacts than do Options A and L, and thus will require **substantially more** wetland area to mitigate for those significant impacts. What is unclear is how the Option will fare through the sequencing process.

S-004-003

Noise and Visual Impacts

Another significant concern is the importance of the final bridge design, especially relating to heights and accompanying support columns. Upon review of the SDEIS, Ecology has determined that further analysis is necessary in both the Visual and Noise Impacts Sections prior to a decision being made on the final design as it relates to bridge heights.

WSDOT's response to Ecology's preliminary SDEIS comments on **Noise and Visual/Aesthetics**, which suggested consideration of higher profile bridge heights, stated that it is limited in its consideration of other design elements that are outside the scope of the three SDEIS mediation design options. Yet, the format of the SDEIS includes a section within each element titled ***What has been done to avoid or***

S-004-003 *minimize negative effects?” and “What could be done to mitigate for negative effects that cannot be avoided or minimized?”* However, the SDEIS does not specifically state that responses to both of these fundamental questions must be confined to only those elements defined within the three SDEIS design options. In fact, the report reads logically, because for each element, overall project efforts to avoid or minimize impacts are followed by description of mitigation to offset un-avoidable impacts, for which no limitations on the scope of avoidance, minimization or mitigation effort are identified. Therefore, it is not clear why the response to Ecology’s previous comments relied on being confined to the design scope of the three proffered options.

The problem with this response and position is that there is absolutely no clear justification for the lower SDEIS mediation-derived bridge/road profiles. Further, the assumption that low profiles are the only possible outcome appears to derive solely from unproven conclusions or beliefs that higher bridge/road profiles will severely affect views. These perceptions have yet to be illustrated or documented in the SDEIS Visual Impact study. Specifically, the SDEIS Visual Impact Study fails to highlight any visual concerns related to sensitive views in this area or any potential affects related to bridge height or noise wall/bridge-roadway bulk. Again, the assumption, thus far, is only that, and until there is a full discussion and analysis of the impacts to view and noise in the appropriate sections of the SDEIS, AND it can be concluded that such impacts are unavoidable except through lower bridges flanked by high concrete walls, then the threshold documentation and analysis required by SEPA and NEPA has not been met.

Essentially, the (logical) overall advantages of a higher road profile without the need for 12-16 feet- high noise walls could result in: **less visual bulk, less environmental impacts** (shading, stormwater) and **less recreational impacts** (canoe/kayak or trails on Foster Island) – benefits to the entire community and public. It is apparent that WSDOT should acknowledge and analyze these associated effects, which Ecology finds essential to completely illustrate avoidance/minimization opportunities associated with the higher bridge/roadway profiles.

Specific SDEIS Chapter and Section Comments

Recreation, Visual, and Recreation Impacts: Project Operation and Permanent Effects - Chapter 5

- S-004-004
1. Recreation
 - a. p. 5-57 - As previously commented, Option K impacts to the University of Washington – Waterfront Activities Center (UW-WAC) will be significant. Additionally, the relatively low bridge profiles for all three SDEIS options in the vicinity of Foster Island could significantly affect aquatic recreational use. The UW-WAC provides a unique aquatic recreational opportunity to thousands of students, faculty and staff. A very popular paddling route takes canoers and kayakers who start from the UW around Foster Island, and WSDOT should acknowledge the replacement bridge’s potential negative effects on this unique aquatic recreational opportunity.
 - b. p. 5-62 - Option K’s impacts to aquatic-based recreation (see paragraph 3) render this option the **most inconsistent, among the current SDEIS options, with Seattle’s Shoreline Master Program**

S-004-004

Conservancy Preservation (CP) environment designation. This point should be noted in the text.

- c. p. 5-63 - As previously commented and included above as a "concern and challenge" "cross-cutting" comment, the two sections on this page listing "*What has been done to avoid or minimize negative effects?*" should also consider raising the height of the bridge deck through the Western Approach area to avoid or minimize further effects to aquatic recreational opportunities within this area. Further, raising the profile of the bridge deck above elevations necessary to avoid or minimize recreational impacts could serve as a potential mitigation opportunity for WSDOT that might "enhance" existing park areas.

2. Visual Quality

S-004-005

- a. This Chapter is lacking adequate details and analysis – i.e. Visual and Aesthetic impacts are simply implied or perhaps noted as "potential", and details explaining whose views, and the number of views potentially affected are necessary. Additionally, there are no conclusions about the cause of a particular viewpoint being affected or the bridge element that would cause such an effect. Additional details relating to the approximate number of housing units or pedestrians at affected viewpoints must be provided to evaluate the real impact resulting from each of the three mediated options.
- b. p. 5-72 – (West Approach Landscape Unit) Table 5.5-4 provides a helpful comparison of the three options. However, the following statement needs to be clarified or otherwise deleted: "*Views would be changed from north Madison Park residences; views of the Laurelhurst hills could possibly be blocked, although more open water in Union Bay (Exhibit 5.5-7) would be revealed.*" This statement includes an incorrect reference (should be Exhibit 5.5-8), and it does not reflect this section's previous information which notes that the freeway will be located 190-feet farther from this viewpoint than the existing structure, which should offset some of the visual impact of the larger replacement freeway.
- This section lacks adequate context; e.g. a summary of the number of residences affected at this viewpoint relative to the total number of residences with the West Approach Landscape Unit.
 - The vague language (i.e. "...could possibly be blocked...") provides no useful information to the reader related to elements of the freeway design that might block this viewpoint; e.g. is it the bridge's low profile; its overall bulk and size; and is the uncertainty related to the proposed incorporation of noise walls within this section of the corridor? Unless additional information can be provided, this statement should be deleted.
 - The vague reference to a possible view blockage is inconsistent with the following avoidance/minimization statement from the **Visual/Aesthetic Discipline Report** under the section "**What has been done to avoid or minimize negative effects?**" "*...the increased spacing between bridge columns to open up views under bridge structures*" (see p. 77, last sentence-first paragraph). Therefore, logic suggests that increasing the height of bridge profiles with the added benefit of reducing the pile density support needed (WSDOT statements from RACp meetings) could actually reduce visual impacts when compared to visual impacts from the current pile-supported bridge structure.
- c. p. 5-72 – (Option A)
- The unclear references to "*...somewhat noticeable greater height of the west approach...which will make the bridge slightly more visible from distance viewpoints.*"

S-004-005

are not illustrated in either the SDEIS or Visual/Aesthetic Discipline Report and therefore are not relevant to this section.

- “Distance viewpoints” are not defined in the SDEIS, thus the reader is left with no relevant information regarding who may be affected and, more importantly, how their views might be affected by increasing existing bridge’s height.
- As previously noted in Ecology comments, in both the preliminary SDEIS and Visual/Aesthetic Discipline Reports, neither analysis adequately evaluates or provides any relevant conclusions as to the potential benefits or negative impacts associated with higher bridge profiles through the West Approach Landscape Unit.
- Finally, the last paragraph concludes that Option A’s impacts on views and aesthetics are insignificant because “long-term vegetation growth will serve to diminish any visual effects of the bridge.” This conclusion, when coupled with a recommendation in the Visual/Aesthetic Discipline Report (page 79, 1st bullet), which encourages re-vegetation^{1[1]} adjacent to the bridge; supports higher bridge profiles because they would allow for more robust vegetation to establish beneath the bridge and adequate natural light to promote vegetation growth, which could also serve to further mitigate visual impacts consistent with the referenced recommendation from the Visual/Aesthetic Discipline Report. Put simply – if vegetation reduces visual impacts, and vegetation grows and establishes more quickly and permanently beneath a higher bridge, then views will be enhanced if the bridge is higher.

S-004-006

d. p. 5-73 – (Option ‘A’ Sub-options) similar comment as stated above.

- The following statement within the second bullet does not provide enough information to inform the reader as to either the basis or significance of “...slight visual changes...”; “Changing the profile of Option A to a constant-slope profile in the west approach would result in slight visual changes compared to the effects described above...” Please clarify whether this statement is intended to imply positive or negative results from the “slight visual change.”

S-004-007

e. p. 5-79 - Under the section title; “**What has been done to avoid or minimize negative effects?**” Consistent with the previous comment, has WSDOT considered raising bridge profiles as a way to minimize visual impact? Some of the benefits have been referenced in comments above (i.e. reduced bridge support column density – opening views below the new bridge deck, increased opportunity to re-establish mature vegetation providing sound attenuation, natural habitat, and visually screening the roadway). In fact, this benefit is mentioned within the “mitigation” section on pages 5-80 & 5-81, but does not appear to be incorporated into the project design or future mitigation plans. Alternatively, if higher bridge profiles do not minimize Visual/Aesthetic impacts, then this should be clearly stated within the SDEIS in reference to the specific viewpoints (including a description) of who would be effected by higher bridge profiles than currently described for all three mediation design options.

1. Visual Aesthetic Discipline Report (page 79, 1st bullet) under the section titled: **What would be done to mitigate negative effects that could not be avoided or minimized?** “Revegetate areas where natural habitat, vegetation, or neighborhood tree screens would be removed. These areas are under Portage Bay Bridge; through Montlake, Montlake Park and the Arboretum. Mature vegetation could generally be used to revegetate parks and re-establish three screens in these areas...”

S-004-007

- f. The SDEIS should also consider the Visual/Aesthetic impacts associated with proposed noise walls along the corridor. The Visual/Aesthetic Discipline Report specifically highlights Visual/Aesthetic concerns associated with noise walls in the reports summary of "Key Points" (page 3, last bullet) and in discussion of "Avoidance and Minimization" efforts (page 77, second paragraph). Therefore, the Visual/Aesthetic Discipline Report conclusion that noise walls can significantly affect views should be carefully and thoroughly considered.
- g. Further, as concluded in the Noise section (see comments below) of the SDEIS, the height of a noise wall is determined by the relative difference in elevation between the roadway and the noise receiver (residences adjacent/above the roadway), thus lower bridge profiles will require higher noise walls to mitigate noise impacts on neighboring receivers. However, higher noise walls will increase Visual/Aesthetic impacts to surrounding views, so higher bridge profiles should be considered as an offset to both Visual/Aesthetic and Noise (lower noise wall required) impacts (while also allowing vegetation to establish and mature along the roadway).
- h. At p. 2-27, the mention of the view from the land bridge under Option K raises a question about relevance – i.e. is this considered to be mitigation for the higher bridge profile of K?

3. Noise

- a. WSDOT's somewhat narrow, constrained response to Ecology's previous comments seriously limits, for all intents and purposes, recognition and consideration of other design solutions that have been noted as potentially effective in the previous Noise Mitigation Guidance.
- b. p. 5-108; Section: "**What has been done to avoid or minimize negative effects?**" As previously commented, WSDOT has not adequately considered all potential Highway Design Measures, including raising the 520-bridge profile through the West Approach area east of Montlake. If raising the bridge profile would mitigate noise impacts, then such measures should be examined in the SDEIS. Alternatively, if WSDOT's noise analysis concludes that raising the profile would lead to significant noise reductions, then that finding should also be stated in the SDEIS. Further, related impacts or benefits from changes to bridge height such as potentially lower noise walls or increased vegetation associated with higher bridge profiles should also be referenced in this section of the SDEIS.
- c. In the "Western Approach Area" (east of Montlake) it appears that lower SDEIS bridge profiles require 12-16 feet- high noise walls along the roadway to mitigate noise impacts to adjacent neighborhoods located at higher elevations (which WSDOT confirmed). Again, the question arises why noise impacts could not be "avoided or minimized" (i.e. Mitigation Sequencing) by raising the entire bridge/road profile, thus reducing the need for such high noise walls. WSDOT has confirmed that raising the roadway could result in lower noise walls, but stated that raising the road profile was outside of scope/authority of their noise mitigation and would not be fiscally feasible to justify through noise mitigation.
- d. Further, based on the information provided in the SDEIS, it is not clear how many residents within the West Approach (east of Montlake) can actually see the bridge or how the replacement bridge will negatively affect them through noise or blighted views. While

S-004-007 | Laurelhurst, and a small portion of Madison Park, residents can see the bridge, yet reside some distance away, and therefore these areas would seem less affected from an increase in bridge/roadway height. Unfortunately, the Visual Impact Study neither confirms nor denies the potential effect of higher bridge/road profiles to these communities. Despite our repeated suggestions, WSDOT has not analyzed the potential visual effects and/or noise mitigation opportunities of higher bridge/roadway profiles through this section of the corridor.

e. Regardless, and somewhat ironically, the SDEIS low bridge/road profiles including the (estimated) 12'-16' high noise walls (required to offset noise impacts) dramatically increasing the overall visual bulk of the roadway, counter to the communities' stated visual concerns. Therefore, it seems logical that a higher bridge/road profile that did not include 12'-16' high noise walls could create less of a visual impact to the neighboring community? (We again encourage WSDOT to analyze higher bridge profiles to inform this important decision.)

S-004-008 | f. In Chapter 2 at p. 2-3 to 2-4, a description of how the final design of the bridge will be determined, but it remains unclear to the reader how this actually will be decided and what the process is.

4. Land-Use

S-004-009 | Thank you for incorporating Ecology's previously-suggested changes to the SDEIS.

Ecosystems

S-004-010 | 1. Project Operational and Permanent Effects – Chapter 5

- p. 144 - 145 Mitigation ratio assumptions are noted. Ratios provided in the Joint Guidance are based on wetland mitigation occurring concurrently with wetland impacts. Mitigation ratios may be adjusted depending on the timing of mitigation construction in relation to project wetland impacts. If mitigation is done in advance of project impacts, ratios may be lowered. If mitigation is done after project impacts, ratios may be raised.

2. Effects during Construction of the Project – Chapter 6

- p.124- Mitigation for ecosystems, including wetlands, should include compensatory wetland mitigation for long-term temporary effects; i.e. those.

S-004-011 | 3. Indirect and Cumulative Effects – Chapter 7

- a. Pages 103 and 106 The document states that, "Wetland fill from Option K would be three times more than from Option L and nine times more than from Option A." This is incorrect. Wetland fill from Option K would be five times more than from Option L and eighteen times more than from Option A. Please correct this error – it is significant and should be addressed earlier than issuance of the FEIS as decisions and opinions may be based on on the incorrect information.

S-004-011 | b. The document states that, "Option K would have the greatest shade effects from project operation, and Option A would have the least." This is incorrect. Option L would have the most shade effects from project operation and Option A would have the fewest.

S-004-012 | c. The document states that "The wetlands assessment did not identify any expected indirect effects of the proposed project on wetlands (WSDOT 2009f)." I did not see any mention of indirect effects in the Ecosystems Discipline Report. Also, Option K proposes to fill 5.4 acres of wetland buffer fill, which may have an indirect impact on wetlands.

S-004-013 | d. The document states that "Where avoidance was not possible, effects were minimized by raising bridge heights, treating stormwater, and improving water quality functions of aquatic wetlands." Bridge height should increase for all Options to further offset shading impacts.

Environmental Justice/Social Elements

1. Executive Summary

S-004-014 | ➤ The summary mentions only a tribal impact under the Environmental Justice discussion (p.41), while the SDEIS Environmental Justice (EJ) analysis also identifies an impact on low-income populations: "The environmental justice analysis concluded that the SR 520, I-5 to Medina: Bridge Replacement and HOV Project would result in a disproportionately high and adverse effect on low-income populations. The disproportionate effect would be because of tolling only and is discussed in Section 5.3 and in the Environmental Justice Discipline Report (Attachment 7)." For balance, this additional EJ impact on low-income populations should be included in the Executive Summary.

2. Public Involvement – Chapter 2

S-004-015 | ➤ p. 1-40 - This chapter would be strengthened by including mention of the EJ analysis as it relates to low-income populations and people of color. Currently only Tribal outreach is listed as relating to the environmental justice outreach for this project.

3. Social Elements – Chapter 4

S-004-016 | ➤ p. 4-23 - The SDEIS mistakenly attributes the establishment of the concept of environmental justice to "Executive Order 12898." The concept's origin should be attributed to Dr. Benjamin Chavis, the previous director of the United Church of Christ's Commission for Racial Justice.

4. Social Elements – Chapter 7

S-004-017 | ➤ p. 7-21 - The cumulative impacts of increased "heavy traffic include noise, air emissions, and lowered transportation efficiency due to idling or slow-moving vehicles" on low-income populations located in the alternate route neighborhoods should be included as an "Indirect Effect" on an environmental justice population

5. Appendix: Environmental Justice

S-004-018 |

- S-004-018
- a. The **SDEIS thoroughly addresses** Ecology's previous EJ comments on the pDEIS and Discipline Reports. The report clarifies the community involvement in the scoping process and clearly identifies the community concerns that were raised.
 - b. The potential impacts to low-income populations and people of color **are more clearly presented**.
- S-004-019
- c. The Appendix references EO12898 and USDOT's Order 5610.2 requirements for requiring federally-funded projects to address EJ in Minority and Low-Income Populations and the explicit consideration of human health and environmental effects. Given these requirements, a summary or evaluation of potential adverse health effects related to the 520 project should be included in the EJ Discipline Report (e.g., air quality impacts).
- S-004-020
- d. It would be helpful if the report clarified how the project will mitigate for the financial burden of tolling (p. 61, 88) on low-income residents. And if no mitigation is proposed, the report should clarify why mitigation options are not being pursued.
- S-004-021
- e. The definition of "variable tolling" needs to be clearly presented on p. 17. It may be misinterpreted that variable tolling refers to a sliding scale income-based tolling program. The definition of variable tolling used for this project does not appear until the "Environmental Justice Survey Final Report" in Attachment 1 at the end of the discipline report.
- S-004-022
- f. The issue of subsidized tolling for low-income drivers should be addressed in the report.

Water Resources-Discipline Report

- S-004-023
- 1. Project Operational and Permanent Effects – Chapter 5
 - Pg. 5-122:- Ecology has not yet reviewed the final AKART study nor approved WSDOT's proposed treatment strategy (i.e. high efficiency sweeping and catch basins) but will begin the process upon receipt of the AKART document. Approval should not be presumed until Ecology issues a formal approval letter. The standard for approval is based on Ecology's need to have reasonable assurance that the proposed treatment strategy will meet state water quality standards. Depending on the final Study's conclusions, which should reflect comments that Ecology made on the draft, Ecology may require WSDOT to develop a monitoring plan for specific treatment components.
- S-004-024
- 2. Effects during Construction of the Project – Chapter 6
 - Pg. 6-134:- How will the project meet water quality standards in the event of an extended time period between phased construction of the four-lane floating bridge and the final six-lane bridge configuration? Is high-efficiency sweeping planned for the four lane phase? Because the four-lane bridge requires significantly fewer supplementary stability pontoons (SSPs), most of the run-off will not will not be routed into the SSPs for dilution and spill containment. Thus, water quality standards cannot be met.

Appendix: Energy and Greenhouse Gases Discipline Report

This SDEIS could benefit from an improved assessment of impacts and discussion of reasonable alternatives for effects associated with greenhouse gas emissions and the "vulnerability" associated with the changing climate combined with the proposed project.

1. Greenhouse Gas (GHG) Emissions Evaluation

a. The analysis of Vehicle Miles Traveled (VMT) and the conclusion of reduced emissions is based on an assumption of no tolling on I-90 (and the existing SR 520 as the "no action alternative") and no light rail between Seattle and the East side. These two measures are now either funded or recommended by the Puget Sound Regional Council (PSRC), thus they are not "remote or speculative" and should be included in the analysis and comparison of alternatives and options.

b. The "operational" GHG analysis is flawed because it addresses only vehicle trips across the bridge. The real analysis of VMT emissions is absent because of a purported decrease in vehicle demand on SR 520 as a result of the proposal.

c. The disclosed increase of VMT on I-90 and SR 522 (to avoid tolling) was not included in the evaluation. Additionally, the indirect and cumulative land-use impacts associated with the proposal could result in additional emissions. The larger transportation system must be included in the analysis of VMT and anticipated GHG reductions because moving VMT from SR 520 to another road will not decrease GHGs.

d. The GHG emissions associated with construction and operational waste management should be addressed, as these could be substantial sources of emissions that could be mitigated without major changes in the options.

e. Other sources of emissions such as extraction, processing, and transportation of purchased materials (also referred to as "embodied emissions") must be evaluated and assessed for available reductions as well. WSDOT's internal "*Interim Approach for Project-Level Greenhouse Gas and Climate Change Evaluations*" (December 30, 2008) indicates that a qualitative analysis of embodied emissions is appropriate in an EIS.

2. Emissions Avoidance and Reduction

➤ Specifics appear to be lacking on if and how reduction of GHG emissions from both the operational and construction activities would occur. A more robust analysis is needed other than simply stating that they "will continue with existing statewide work to reduce transportation GHG emissions" and possibly "undertake measures to conserve energy during construction . . ."

3. Impacts of Climate Change on the Proposal

a. The SDEIS considers (very briefly with no analysis) the impacts of potential sea level rise and increased storm activity to the bridge structure. However, the cumulative impacts of both the proposal and the changing climate warrant consideration. A complete analysis includes not only

- S-004-030 | climate change implications for the state's transportation system but also the cumulative impacts associated with changes in the climate combined with the transportation project on the both the natural and built environment.
- b. For example, a more complete analysis might conclude that climate change impacts coupled with the expansion of the bridge approaches likely will result in additional impacts to wetlands and other nearshore habitat. Plus, local air pollution and air temperature changes combined with the proposal would exacerbate the impacts to human health in nearby communities.

Discipline Report: Air Quality

- S-004-031 |
- Based on the air quality analysis included in the SDEIS, this project meets all transportation conformity requirements for the federal and state Clean Air Acts and the Central Puget Sound Carbon Monoxide Maintenance Plan. WSDOT provides a clear, thorough, and easy to read description of the project along with the appropriate air quality analysis.

Other Topics and Issues

- S-004-032 |
1. Medina Bridge Maintenance Facility
 - Based on the most recent maintenance facility building and dock designs shared with Ecology at a February 4th 2010 Technical Working Group meeting, Ecology would like to acknowledge WSDOT's substantial progress in reducing nearshore/aquatic impacts from the facility by generally reducing overwater structure to the absolute minimum based on the necessary maintenance capabilities. Ecology **anticipates ongoing coordination** to continue to refine this design to minimize aquatic impacts and comply with the City of Medina Shoreline Master Program.

- S-004-033 |
2. Agency Correspondence Section
 - What category of correspondence is this section intended to include? Ecology's comments on the pDEIS, while not in "letter-form" should perhaps have been included in this section.

- S-004-034 |
3. Phasing
 - If the project is constructed in phases, with the 4-lane bridge deck taking priority, will the years w/o the HOV benefit of the built-out 6-lane be evaluated and the impacts revealed?

- S-004-035 |
4. Comparison b/t 2006 EIS alternatives and 2010 SDEIS mediation options

The table at p. 2-41 is somewhat misleading as it equates option K with the Pacific St. Interchange, but only as it relates to traffic movement issues. In other ways, options A and L are more similar to the PIE as depicted on the chart on p. 2-43.

 <h1 style="margin: 0;">SR 520 Bridge Replacement and HOV Program</h1> 							FOR INTERNAL USE ONLY		Task Order #			
Report Name and Date							Draft Corridor Initial Wetland Mitigation Plan for Cooperating Agency Review (Y-9761 CZ 3.1.1)		QA Reviewer:		Date:	
Report Author(s)							Pat Togher		Comments:			
Name of Reviewer(s)/Agency(ies)							Caroline Corcoran, Ecology					
Date of Request							Thursday, October 15, 2009		COMMENTS DUE BY		Friday, January 29, 2010	
									<input type="checkbox"/> Pass		<input type="checkbox"/> Resubmit	
No.	Page*	Line No.	Exhibit No.	Priority**	Comment	Reviewer Initials	Response	Status Code**	Responder Initials	QC Back-check	QA Check	
Opt	iii	4-7		1	This is a substantive comment about your report.	XXX	<Comment is incorporated.>	A	AAA			
1	3-2	8		1	Not all of the shaded wetlands would continue to function if there is enough shade to prevent all plant growth.	CC						
2	3-2		Table 2.	1	The table shows that mitigation wouldn't be needed for impacts that were less than 0.1 acre. If the impacts are too small to be quantified in the total, please state this.	CC						
3	3-3	6-8			Thank you for stating that the ratios only reflect one type of wetland effect and one type of activity.	CC						
4	3-3	1-5		1	Why is it anticipated that shading impacts would be mitigated on-site before using off-site	CC						

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		18			mitigation? What is the justification for this?						
S-004-041	3-4	5		3	What is footnote "c" linked to?	CC					
S-004-042	3-5	17-19			This is correct.	CC					
S-004-043	4-1			1	Did the Mitigation Team look at areas within WRIA 8 that had the greatest need for restoration, regardless if they were located on the west side of Lake Washington?	CC					
S-004-044	5-3		Figure 1.	1	Why didn't the study area include the east side of Lake Washington? I would recommend expanding the study area to at least include the Kenmore and East Lake Washington-Renton	CC					

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					areas.						
S-004-045	9	5-7	Table 4.	1	Was size of site a consideration during the paring process? Was space for wetland buffers at the mitigation site a consideration as well?	CC					
S-004-046	10	6-9	23	1	How do you expand seep areas on a hill slope? Would this be through the removal of the stormwater facility?	CC					
S-004-047	11	6-9	29-32	1	Wouldn't public access to mitigation areas in the Arboretum be another site constraint or limitation?	CC					
S-004-048	12	6-13	1-2	1	Enhancement is not a preferred mitigation activity. Also, the enhancement area already looks densely vegetated with shrubs and trees.	CC					

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		0									
S-004-048	13	6-17	1-7-32	1	Enhancement is not a preferred mitigation activity. Another constraint would include public access to mitigation areas, since this is a city park.	CC					
S-004-050	14	6-21	2-6	1	Mitigation ratios will be higher if mitigation construction doesn't begin until bridge replacement is complete.	CC					
S-004-051	15	6-25	1-5-32	1	It's good to have so much restoration potential. Wouldn't pedestrian access be a site constraint?	CC					
S-004-052	16	6-29	1-4	1	Enhancement is not a preferred mitigation activity.	CC					

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17	6-33	1-4-16		1	Enhancement is not a preferred mitigation activity.	CC					
18	6-37	1-4-16		1	Enhancement is not a preferred mitigation activity.	CC					
19	6-41	1-3		1	Enhancement area is so small that it doesn't provide a great benefit as a mitigation site.	CC					
20				1	I strongly recommend planning on having a mitigation package that has no net loss of function and area for wetland impacts. This means that re-establishment/creation should occur at a minimum of a 1:1 impact to	CC					

S-004-053

S-004-054

S-004-055

S-004-056

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					mitigation ratio (for fill and potentially for some shading impacts).						
21				1	Though certain requirements for wetland mitigation will need to be met, there is flexibility in being creative and potentially packaging wetland and aquatic mitigation together.	CC					

S-004-056

S-004-057

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Opt.	iii	4-7		1	This is a substantive comment about your report.	XXX	<Comment is incorporated.>	
	2-1 5-1	71-76 513-517		1 1	It is understood that this report is focused on off-site mitigation opportunities and project effects vary by design option. However, the report should emphasize fundamental Mitigation Sequence principles prioritizing project impact Avoidance opportunities as a first priority, followed by project impact Minimization prior to the last step in the sequence of compensatory Mitigation . If the project team intends to evaluate the first two steps (i.e. Avoidance, Minimization) in the Mitigation Sequence through a separate document, then clear reference should be included within this document. At a minimum, Ecology recommends that this document acknowledge the complete Mitigation Sequencing steps as well as describe how this documents mitigation evaluation integrates within the (overall) project effect evaluation.	ECY		
	5-1	518-539		1	The section describes potential effects providing a general distinction between permanent and temporary (construction related) effects. As discussed within Agency Coordination meetings associated with this project, temporary effects will vary from months to years. This large variation in potential temporal impact should be either acknowledged within this section or a reference/summary provided to supporting analysis provided in another project impact report	ECY		
	5-1 & 5-2	540-557	Table-2, Table-4	1	This discussion related to shading is too general and does not adequately distinguish between shading related to the bridge-deck footprint v. height. Particularly between lines 550-557 on page 5-2, the discussion of offsetting impacts of bridge height (existing v. proposed) is too general and does not correspond to the information contained in the tables. Is this discussion and conclusion that offsetting higher and lower portions of the replacement bridge-deck will result in an even trade-off in relation to aquatic shading impacts? Is this conclusion based on any relevant studies or publications? Is this conclusion consistent between all the design options? Further, table 2 is misleading in its label of "Shading Effects". Based on the footnotes below the table it <u>does not</u> appear that the areas within the table are based on shadow generated shade as a function of the bridge height, but are simply the footprint of the permanent bridge-deck regardless of the height	ECY		

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SR 520 Bridge Replacement and HOV Project
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					above the aquatic environment. Along these lines, noise wall height extending above the bridge-deck increasing the shadow and aquatic shading impact of the structure should also be considered within this section.		
	5-4	576-584	Table 4	1	The last sentence of the second paragraph on this page references the variation in bridge-deck height, but does not provide any conclusions related to aquatic resource impacts. Some general conclusions related to project effect and subsequent mitigation requirement should be added to this section.	ECY	
	5-3 & 5-4		Table 2	1	The last sentence of the last paragraph using the word "some" grossly under-emphasizes the significance of the large (tens of thousands of cubic yards) of excavation that would be required under the Option K design. Table 2 does not appear to acknowledge the "90,500 square feet (2.1 acres)" of lost (filled) shallow-water habitat as the table only lists "Area of Overwater Structure...", Table 1 does appear to account for the 2.1 acres of fill, which maybe the appropriate location to list this impact, but could be clarified to the reader. Just reviewing Table 2 would not illustrate the significant difference between these West-side design options and the subsequent mitigation requirements.		
	5-8 & 6-2	672-699 & 820-837		1	It does not appear that the project team reviewed any local Restoration Plans created by Lake Washington Jurisdictions as part of their Shoreline Master Program (SMP) Updates. Locally created Restoration Plans are based on comprehensive Shoreline Inventory and Characterization reports prepared to identify both baseline ecological functions (habitat, hydrology, shoreline vegetation) and Restoration Opportunities within a jurisdictions shoreline area. A local SMP must create regulations that ensure future development within shoreline areas will not result in a net loss of ecological function (i.e. No Net Loss). As part of this process, local jurisdictions also create Restoration Plans that based on the Shoreline Inventory/Characterization prioritize restoration opportunities (projects) to improve (raise baseline) shoreline ecological functions. The Restoration Plan is not a regulatory component of the SMP update, but is intended to serve as guidance for jurisdictions to use to prioritize the most important projects/actions to the local jurisdiction when/if an opportunity comes up. The WSDOT should review these local Restoration Plans to see if any local projects or actions align with WSDOT's mitigation goals.	ECY	
	6-3, 8-2	853-885,	Table 6 & 7	1	The Parcel Classification (vacant or unoccupied) and Parcel Size/Shoreline Length (200 linear feet of shoreline) are too limited considering the urban context of the surrounding area. As summarized in Table 7, Public Parks are	ECY	

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