

# SR 520, I-5 to Medina: Bridge Replacement and HOV Project NEPA/SEPA Environmental Reevaluation: Temporary Westside Over-water Staging Area

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23 CFR §771.129

Washington State Department of Transportation/Federal Highway Administration

REGION/MODE	SR	PROJECT PROGRAM#	FEDERAL AID #	PROJECT#
ESO Mega Projects	520	852004B	0520.050	U52004B

PROJECT TITLE, ENVIRONMENTAL DOCUMENT TYPE & DATE APPROVED:

- 1) SR 520, I-5 to Medina: Bridge Replacement and HOV Project Final Environmental Impact Statement (EIS), approved by FHWA and WSDOT on May 26, 2011.
- 2) SR 520, I-5 to Medina: Bridge Replacement and HOV Project Record of Decision (ROD), approved by FHWA and WSDOT on August 4, 2011.
- 3) SR 520, I-5 to Medina: Bridge Replacement and HOV Project SEPA Addendum (Public Place Designation), approved by WSDOT on October 3, 2011.
- 4) SR 520, I-5 to Medina: Bridge Replacement and HOV Project SEPA Addendum (Floating Bridge and Landings), approved by WSDOT on November 18, 2011.
- 5) SR 520, I-5 to Medina: Bridge Replacement and HOV Project NEPA/SEPA Environmental Reevaluation (Kenmore Yard), approved by FHWA and WSDOT on December 8, 2011.
- 6) SR 520, I-5 to Medina: Bridge Replacement and HOV Project NEPA Environmental Reevaluation (Floating Bridge and Landings), approved by FHWA and WSDOT on January 25, 2012.
- 7) SR 520, I-5 to Medina: Bridge Replacement and HOV Project NEPA/SEPA Environmental Reevaluation (Kenmore Yard Update), approved by FHWA and WSDOT on July 16, 2012.
- 8) SR 520, I-5 to Medina: Bridge Replacement and HOV Project NEPA/SEPA Environmental Reevaluation (Floating Bridge and Landings Proposed Final Design Features), approved by FHWA and WSDOT on October 22, 2012.

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REASON FOR CONSULTATION:

Construction of the Floating Bridge and Landings phase of the SR 520, I-5 to Medina: Bridge Replacement and HOV Project began in April, 2012. Project construction is occurring along the length of the existing floating bridge, and is supported by barges and other floating equipment, as well as over-water staging areas. Over-water staging areas have been identified as integral components of floating bridge construction. These staging areas allow for pontoon outfitting and assembly of bridge elements to occur in close proximity to the final bridge alignment, and provide space for moorage of pontoons as they arrive on the lake.

In this reevaluation, FHWA and WSDOT are evaluating the proposed construction and operation of a staging area located on the west side of Lake Washington. This temporary over-water staging area will further expedite floating bridge construction by providing sufficient staging space for supplemental and longitudinal pontoons.

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DESCRIPTION OF CHANGED CONDITIONS: (See Attachment 1 for more detailed description).

Changes in baseline information include:

- 1) Installation of a temporary over-water staging area on the west side of Lake Washington.

HAVE ANY NEW OR REVISED LAWS OR REGULATIONS BEEN ISSUED SINCE APPROVAL OF THE LAST ENVIRONMENTAL DOCUMENT THAT AFFECT THIS PROJECT? YES ( ) NO ( x ) (If yes explain, use additional sheets if necessary)

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WILL THE CHANGED CONDITIONS AFFECT THE FOLLOWING DIFFERENTLY THAN DESCRIBED IN THE ORIGINAL ENVIRONMENTAL DOCUMENT? (If yes, attach a detailed summary addressing the impacts and mitigation)

	YES	NO		YES	NO
1) THREATENED or ENDANGERED SPECIES	( )	(x)	5) HAZARDOUS WASTE SITES	( )	(x)
2) PRIME and UNIQUE FARMLAND	( )	(x)	6) HISTORIC or ARCHAEOLOGICAL SITES	( )	(x)
3) WETLANDS	( )	(x)	7) 4 (f) LANDS	( )	(x)
4) FLOODPLAINS	( )	(x)	8) 6 (f) LANDS	( )	(x)

1) Threatened or Endangered Species: WSDOT reinitiated Endangered Species Act consultation with National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS) regarding the installation of a temporary westside over-water staging area. NMFS and USFWS have modified the ESA Section 7 consultation associated with this project to recognize the described work, and have changed the extent of take; however, their conclusions remain unchanged resulting in a "no jeopardy" determination.

WILL THESE CHANGES RESULT IN ANY CONTROVERSY? YES ( ) NO (x) (If yes explain)

WILL THESE CHANGES CAUSE ADVERSE IMPACTS IN THE FOLLOWING AREAS: (If yes, address comments below)

	YES	NO		YES	NO
1) AIR QUALITY	( )	(x)	7) WATER QUALITY	( )	(x)
2) NOISE	( )	(x)	8) VISUAL QUALITY	( )	(x)
3) LAND USE	( )	(x)	9) NATURAL RESOURCES and ENERGY	( )	(x)
4) TRAFFIC or TRANSPORTATION	( )	(x)	10) PUBLIC SERVICES and UTILITIES	( )	(x)
5) DISPLACEMENT (business or residence)	( )	(x)	11) VEGETATION and WILDLIFE	( )	(x)
6) ECONOMIC GROWTH and DEVELOPMENT	( )	(x)	12) RECREATION	( )	(x)
			13) SOCIAL IMPACTS	( )	(x)

COMMENTS:

This reevaluation does not change the overall impacts that were discussed in the previously prepared project documents listed at the top of this form.

CONCLUSIONS and/ or RECOMMENDATIONS:

Changes as noted above and described in Attachment 1 would not result in new or significant adverse effects. The SR 520, I-5 to Medina: Bridge Replacement and HOV Project remains compliant with current federal, state, local, and departmental regulations and directives with regard to National Environmental Policy Act (NEPA) and State Environmental Policy Act (SEPA) processes. This reevaluation document, along with supporting information, demonstrates that there would be no new or significant adverse effects resulting from these changes since the Final EIS was approved in May 2011 and the ROD was approved in August 2011.

I concur with the conclusions and recommendations above

Region / Mode Official

FHWA Official

*M. K. MITCHELL* 2/1/13

*[Signature]*

Date

Date

2/1/13



## Attachment 1 Description of Changed Conditions and Effects

### Environmental Reevaluation/Consultation Form for SR 520, I-5 to Medina: Bridge Replacement and HOV Project

Final Environmental Impact Statement, approved May 26, 2011;

Record of Decision, approved August 4, 2011;

SEPA Addendum: Public Place Designation, approved October 3, 2011;

SEPA Addendum: Floating Bridge and Landings, approved November 18, 2011;

NEPA/SEPA Environmental Reevaluation: Kenmore Yard, approved December 8, 2011;

NEPA Environmental Reevaluation: Floating Bridge and Landings, approved January 25, 2012;

NEPA/SEPA Environmental Reevaluation: Kenmore Yard Update, approved July 16, 2012;

NEPA/SEPA Environmental Reevaluation: Floating Bridge and Landings Proposed Final Design  
Features, approved October 22, 2012;

#### **Description of changed conditions and effects from those described and evaluated in the Final Environmental Impact Statement, Record of Decision, and subsequent Environmental Reevaluations:**

The Washington State Department of Transportation (WSDOT) and the Federal Highway Administration (FHWA) have prepared this National Environmental Policy Act (NEPA) and State Environmental Policy Act (SEPA) Environmental Reevaluation for the SR 520, I-5 to Medina: Bridge Replacement and High-Occupancy Vehicle (HOV) Project to evaluate the construction and operation of a temporary over-water staging area located on the west side of Lake Washington. This temporary over-water staging area would ensure that sufficient space was available for staging activities, including pontoon moorage and outfitting, and allow construction of the floating bridge and landings to proceed without schedule delays that could otherwise occur if space were unavailable for these activities.

As described in previous environmental documentation, construction along SR 520 would be staged from both land and water. The Final EIS noted that over-water construction activities would occur from barges, which would be used for accessing the pontoons being assembled in their final alignment. In the January 2012 NEPA Environmental Reevaluation, WSDOT identified a temporary over-water staging area located near the east approach (eastside staging area). The eastside staging area was incorporated into the project as a revised construction technique that would allow pontoon outfitting and the assembly of bridge elements to occur on the lake, in close proximity to the final bridge alignment. Ultimately, the eastside staging area includes two berths which were constructed in May and September 2012. Each berth accommodates one longitudinal pontoon and allows for the joining of four supplemental pontoons. Over-water staging areas have become an integral component of floating bridge construction, and aid in the timely delivery of a project to replace a structure that is vulnerable to catastrophic failure. WSDOT has now identified the need for an additional staging area on the west side of Lake Washington. The

construction of a staging area on the west side of the lake would not result in new or significant adverse environmental effects. A description of the proposed change and supporting analysis is provided herein.

### **Temporary Westside Over-water Staging Area**

The proposed temporary westside over-water staging area (staging area) would include two rafts supported by eight piles. Each raft would be supported by four 72-inch diameter steel pipe piles. The piles would be installed using a vibratory pile driver; no impact pile driving is proposed. Each raft could provide staging for up to two longitudinal pontoons (one on each side of the raft), or up to eight supplemental stability pontoons (four on each side). Thus, the proposed staging area could accommodate any combination of up to four longitudinal pontoons or up to 16 stability pontoons. The maximum amount of over-water coverage from the staging of any combination of longitudinal or stability pontoons at the proposed staging area would be approximately 2.23 acres. The proposed staging area would be constructed in early 2013 and would be removed following the active construction period (approximately 24 months).

The proposed staging area has been designed primarily for the temporary moorage of supplemental and longitudinal pontoons. In addition, minor outfitting activities could occur on the top surface and interior of the pontoons. These outfitting activities could include activities such as hanging interior walkways, installing electrical conduit, ballasting operations, or minor work on the exterior of the pontoons such as installation of safety railing or staging of materials for pontoon joining. No exterior concrete work or joining of pontoons would occur at the proposed staging area. Should minor outfitting activities occur, best management practices would be implemented to ensure that no material or debris is released to the waters of Lake Washington.

If the proposed staging area is not at full capacity with pontoons, the additional space could be used for temporary moorage of equipment barges. Additionally, during major storm events, barges carrying construction equipment could also be moored at this location for safety reasons. If the proposed staging area were used to store equipment or moor barges, the total maximum of over-water coverage at the staging area would not exceed the 2.23 acres described above.

The proposed staging area would be located north of the existing and replacement bridge alignments (Exhibit 1). The staging area would be located entirely within the limits of construction, which were defined in the Final EIS. The alignment of the proposed staging area has been influenced by a variety of factors, and minimizes potential effects to both the natural and built environment. The location was selected to avoid a primary migratory corridor used by juvenile salmonids, which generally consists of water depths of 27 feet or less that occur to the west and south of its planned location. Water depths increase significantly to the east of the proposed staging area, restricting its placement further to the east.

The proposed staging area would be located approximately 800 feet north of the Madison Park neighborhood, and approximately 1,100 feet south of the Laurelhurst neighborhood. The staging area would be located within WSDOT right of way, approximately 500 feet south of the marked entrance to the ship canal, and would not block boaters' access to or from the ship canal. The existing and interim navigation channels beneath the existing bridge are approximately 800 feet southeast of the proposed staging area location, and would not be blocked by work occurring in this location.

To ensure the safety of passing vessels, navigation lighting would be installed on the pontoons and associated equipment. No additional construction lighting is planned for the proposed staging area.

## **Discipline Specific Analyses of Changed Conditions and Effects**

The sections below discuss how the proposed changes would affect the natural and built environment, and whether those effects differ from the effects described in the Final EIS, ROD, and subsequent environmental reevaluations. For this environmental reevaluation, FHWA and WSDOT determined which disciplines had the potential to be affected by the changes described above. The identified disciplines are addressed below, and include ecosystems, environmental justice, navigable waterways, and visual quality. Other disciplines, including air quality, cultural resources, energy, geology and soils, hazardous materials, indirect and cumulative effects, land use, economics, and relocations, noise, recreation, social elements, transportation, and water resources were discussed in the Final EIS but are not discussed below; WSDOT and FHWA concluded that there would be no potential for changes in effects on those resources as a result of the changed conditions.

### ***Ecosystems***

The proposed staging area has the potential to affect fish and aquatic resources through placement of over-water and in-water structures, benthic disturbance, underwater noise, and turbidity. Each of these types of effects was discussed in the Final EIS and the scope of the effects from the proposed staging area would not result in a significant increase from what was described in the Final EIS.

The Final EIS include the assumption that pontoons would be moved into their final alignment upon entering the lake. The use of the proposed staging area would have the effect of concentrating these activities in one location; however, the total over-water coverage associated with the pontoons would be roughly the same as what was described in the Final EIS. In addition, the proposed staging area would be located in water depths greater than 27 feet in order to minimize potential impacts to depth ranges identified as a primary fish migration corridor. Therefore, the small potential increases in shading and in-water structures associated with the proposed staging area are not likely to negatively affect fish, including federal and state listed species.

The additional eight piles used to support the proposed staging area would result in a temporary loss of 226 square feet of benthic habitat. This effect would be relatively minor when compared to the overall construction activities ongoing in the area. In addition, the benthic habitat in the location of the proposed staging area is of lesser value to fish than that of habitat found in shallower water. Due to the temporary nature of the effects and the location of the proposed staging area in lower quality benthic habitat and outside of the primary fish migration corridor, the staging area would not result in a significant new adverse effect to fish or aquatic habitat compared to effects described in the Final EIS.

Effects from underwater noise and turbidity would result primarily from the installation and removal of the additional piles. These piles would be installed using a vibratory pile driver; no impact pile-driving is proposed. The piles are of a similar size and location as the piles that would be used to construct the bridge support columns in this area, and construction effects would be similar to the effects described in the Final EIS. The construction effects associated with the additional eight piles would be temporary and would represent a minor change when compared to overall construction activities ongoing in the area. The proposed staging area would be constructed and removed during WDFW-approved in-water work windows, when fish are not as likely to be migrating through this general area; in addition, the location of the proposed staging area outside of the primary migration corridor would minimize construction-related effects to fish species. Thus, installation and removal of the additional piles would not result in a significant new adverse effect to fish or aquatic habitat compared to effects described in the Final EIS.

No night-time construction activities would be conducted at the proposed staging area thereby eliminating the need for construction lighting and the potential for attracting or otherwise changing the behavior of fish species.

Potential outfitting activities at the proposed staging area would be minimal; thus the potential for construction-related effects to water quality in Lake Washington that could affect fish or aquatic habitat would be low. All activities at the proposed staging area would be conducted in compliance with permit conditions and best management practices protecting water quality including spill prevention and containment.

### ***Environmental Justice***

The proposed staging area would be located within the Muckleshoot Indian Tribe's usual and accustomed fishing areas. The staging area would be located within the previously identified limits of construction, which were referenced in the Memorandum of Agreement among WSDOT, FHWA, and the Muckleshoot Indian Tribe. The types of effects associated with the proposed staging area were anticipated to occur within the limits of construction as described in the Final EIS. As described above in the analysis of ecosystems effects, the staging area would be located outside of the primary migration corridor used by juvenile salmonids, which minimizes potential effects to tribal fisheries.

FHWA and WSDOT do not anticipate additional impacts to tribal fisheries beyond those described in the Final EIS. FHWA and WSDOT will continue to coordinate with the Muckleshoot Indian Tribe. This commitment regarding continued coordination is documented in the Final EIS, and has been maintained throughout government-to-government consultation. There are no other changes that would affect low-income, minority, or limited-English proficient populations. Based on this information, the environmental justice determination as described in the Final EIS would not change.

### ***Navigable Waterways***

The proposed staging area would not affect designated navigation channels or general vessel traffic beyond what was described in the Final EIS. The staging area would be located within WSDOT right of way, approximately 500 feet south of the marked entrance to the ship canal, and would not block boaters' access to or from the ship canal. The staging area would be located approximately 800 feet away from the existing and interim navigation channels beneath the existing bridge, and would not interfere with its use or increase the duration of blockages from what was described in the Final EIS. Navigation lighting would be installed on the staging area piles and any moored pontoons or equipment, under authority of the U.S. Coast Guard, to ensure the safety of any passing vessels. While the Final EIS did not identify specific over-water staging areas, it did identify that barges, equipment and pontoons would be moored at various locations within the limits of construction, thereby affecting general vessel traffic. Because the proposed staging area is located within the limits of construction and would not interfere with the use of navigation channels, it does not represent a significant increase in the obstruction of general vessel traffic from what was identified in the Final EIS.

### ***Visual Quality***

The proposed staging area would be located within the limits of construction that were identified in the Final EIS. The Final EIS described changes to visual quality in this area during construction, including the presence of construction equipment, barges, and tall cranes, and from construction of work bridges, and stated that the combination of the large interim structures and the existing and new bridges would result in a substantial degradation of visual quality for viewers on or near the structures. The Final EIS

also described the temporary effects of barges and boats serving as construction platforms that would be part of the near-distance views toward the lake for many homes.

The proposed staging area would stand out in many views as an isolated feature because of its size and location at the mouth of Union Bay. However, the proposed staging area would be located near other construction equipment including barges, cranes, and ancillary equipment that are currently being used for construction of the floating bridge. As such, the proposed staging area would likely be perceived by viewers as part of the overall construction effect. No nighttime work is expected at the proposed staging area; the only lighting proposed would be for navigational safety purposes. Due to the temporary nature of the proposed staging area and its location within the construction limits and adjacent to other construction activities, FHWA and WSDOT do not expect any additional impacts to visual quality beyond those previously described in the Final EIS and subsequent environmental reevaluations.

## **Conclusion**

WSDOT analyzed the potential impacts to ecosystems, environmental justice, navigable waterways, and visual quality from the construction of the proposed staging area.

As described above, WSDOT and FHWA do not expect the proposed westside staging area to result in additional effects to fish or aquatic habitat beyond those described in the Final EIS. A WSDOT Biologist has reviewed the proposed changes described herein. WSDOT reinitiated Endangered Species Act consultation with National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS) regarding the installation of the proposed staging area. NMFS and USFWS have modified the ESA Section 7 consultation associated with this project to recognize the described work, and have changed the extent of take due to pile driving; however, their conclusions remain unchanged resulting in a “no jeopardy” determination.

WSDOT and FHWA do not expect any additional impacts to tribal fishing or on low-income, minority or limited-English proficient populations that were not previously identified in existing environmental documents. FHWA and WSDOT will continue to coordinate with the Muckleshoot Indian Tribe.

A WSDOT Cultural Resources Specialist has reviewed the proposed changes and has considered the potential effects to cultural resources. The proposed staging area is located within the limits of construction, and would not introduce additional visual impacts to adjacent historic properties; therefore, the Cultural Resources Specialist has determined that no additional analysis or consultation is necessary for Section 106 or 4(f) compliance.

The proposed staging area is not expected to result in effects to navigable waterways or visual quality beyond those described in the Final EIS or subsequent reevaluations.

Based on the above changes and analysis, no new or significant adverse effects are expected to result from the proposed temporary westside over-water staging area. As documented above, the project remains compliant with current federal, state, local and department regulations and directives with regard to NEPA/SEPA processes, the Endangered Species Act, Section 106 and 4(f).

# Exhibit 1: Westside Staging Area

