

# Chapter 1 Introduction to the Project

---

*This chapter describes the proposed SR 520 Pontoon Construction Project, its purpose and need, and project-specific information, such as where WSDOT proposes to build the pontoons and how long it would take to build them. This chapter also describes public, government agency, and tribal outreach and involvement in the project planning process.*

---

## What is the SR 520 Pontoon Construction Project?

The proposed State Route (SR) 520 Pontoon Construction Project involves building 33 pontoons to replace the SR 520 Evergreen Point Bridge in its current configuration if the bridge should ever fail. To accomplish this, the Washington State Department of Transportation (WSDOT) and its co-lead agency, the Federal Highway Administration (FHWA), are considering two sites on Grays Harbor, Washington, on which to build a new facility for constructing the pontoons. WSDOT is also considering the use of a smaller, existing facility in Tacoma, Washington, to supplement pontoon construction while the new facility is being built. The project also includes storing the 33 pontoons until they are needed.

The proposed SR 520 Pontoon Construction Project is one of four projects in the SR 520 Bridge Replacement and High-Occupancy Vehicle (HOV) Program (SR 520 Program), which is a collection of roadway improvements designed to improve mobility and enhance safety throughout the Puget Sound region (see sidebar).

## What is the purpose of the project?

The following is the purpose of the proposed SR 520 Pontoon Construction Project: (1) expedite construction of the pontoons needed to replace the existing traffic capacity of the Evergreen Point Bridge if a catastrophic failure occurs, and (2) store these pontoons in case they are needed for catastrophic failure response or until they

---

### What is the SR 520 Pontoon Construction Project's relationship to the SR 520 Bridge Replacement and HOV Program?

The SR 520 Pontoon Construction Project is one of four projects in the SR 520 Bridge Replacement and HOV Program. Listed below are the other three projects:

- **SR 520, I-5 to Medina: Bridge Replacement and HOV Project.** Improvements to SR 520 from I-5 to Medina, including replacing Portage Bay and Evergreen Point bridges.
  - **SR 520, Medina to SR 202: Eastside Transit and HOV Project.** Improvements to SR 520 from Medina to SR 202 in Redmond.
  - **SR 520 Variable Tolling Project.** Installation of variable tolling on SR 520 across Lake Washington.
- 



In 2006, a windstorm led to the closure of the Evergreen Point Bridge during the peak afternoon traffic period.

are incorporated into the proposed SR 520, I-5 to Medina: Bridge Replacement and HOV Project.

To achieve this purpose, WSDOT is proposing to build a new casting basin facility that could accommodate simultaneous construction of multiple pontoons. WSDOT would retain ownership of the facility at least until it is determined whether the facility would be needed to construct the additional pontoons needed for the proposed SR 520, I-5 to Medina: Bridge Replacement and HOV Project. A secondary purpose of the SR 520 Pontoon Construction Project is to ensure access to the proposed facility if it were needed to build pontoons for unforeseen WSDOT floating bridge repairs or replacements.

## Why is the project needed now, and what would happen if pontoons were not built?

The proposed SR 520 Pontoon Construction Project is needed now to shorten the time required to replace the Evergreen Point Bridge if it were ever damaged beyond repair in a major windstorm. If pontoons were not built and ready for emergency bridge replacement, WSDOT would need 5 years to reconstruct the floating bridge. With this SR 520 Pontoon Construction Project, WSDOT could replace the bridge in just 1.5 years.

In 2006, when WSDOT began planning for a possible failure of the floating portion of the Evergreen Point Bridge before its planned replacement, they identified what measures might expedite replacing the floating bridge should a catastrophic failure occur. WSDOT determined that building new pontoons would require the longest lead time of any single activity related to bridge replacement.

The Evergreen Point Bridge is a critical component of the Puget Sound region's transportation infrastructure and carries one of two highways that span Lake Washington to link Seattle with the Eastside and beyond. Currently, about 115,000 vehicles cross the Evergreen Point Bridge each day. Long-term bridge closure would impair moving goods (such as merchandise to stock retail stores) and people (such as employees traveling to work) across Lake Washington. Travel times, miles traveled, and travel costs would increase as cars, trucks, and buses switch to alternate routes, thereby causing a domino effect of increased congestion on other roads across and around the lake.

The pontoons supporting the existing Evergreen Point Bridge have approximately 6,000 linear feet of cracks, which decrease the



WSDOT has discovered cracks in the Evergreen Point Bridge pontoons.

---

### What is a 20-year windstorm?

Based on historical data, a 20-year windstorm is an event that has a 5 percent chance, on average, of occurring in any year—not a wind event that occurs once every 20 years. The 20-year windstorm event is characterized by 77-mile-per-hour winds. Past records indicate that wind velocities of 77 miles per hour were exceeded at the bridge seven times in the 20-year period between 1982 and 2002. Winds exceeding 77 miles per hour threaten the bridge with catastrophic failure.

---

bridge's structural integrity. Any windstorm could further decrease the bridge's structural integrity and life expectancy, and storms exceeding the 20-year windstorm level could cause catastrophic failure of the bridge (WSDOT 2002). (Seismic events would not cause catastrophic failure of the floating portion of the bridge supported by pontoons, although such an event could damage other parts of the SR 520 corridor between I-5 and Medina.)

Although WSDOT repaired the floating portion of the bridge between 1993 and 1999, it remains at risk of failure. Repairs made to the bridge during that time included installing water-tight doors in pontoon cells, a pontoon bilge pumping system, and post-tensioning cables. The repairs strengthened the bridge to handle up to a 20-year windstorm event (characterized by 77-mile-per-hour winds), but the life and strength of the repairs are limited by the capacity of the original pontoons, inadequate pontoon floatation, and cumulative storm damage sustained by the bridge since it opened in 1963. The repairs have added weight to the bridge, causing it to float about 1 foot lower in the water than designed, thereby preventing further repair opportunities, which would add even more weight.



Tugboats would guide the pontoons as they are floated out of the casting basin.

## Why would WSDOT build a new pontoon construction facility?

Building a new casting basin would allow WSDOT to construct multiple large pontoons simultaneously. Currently, no marine facilities are available in the Pacific Northwest where the number of pontoons needed to replace the Evergreen Point Bridge could be built in less than 12 years. Although some military facilities in the region would be large enough to accommodate pontoon construction, the military does not allow nonmilitary work in their facilities if it could be otherwise completed at a private facility. Also, with the exception of a facility in Tacoma, all of the pontoon construction facilities that WSDOT has used in the past have been filled in and converted to other uses.

As mentioned above, there is a commercial pontoon construction facility in Tacoma that WSDOT could use for this project—the Concrete Technology Corporation, Inc. (CTC) facility. WSDOT previously used the CTC facility on the Blair Waterway for constructing pontoons for the SR 104 Hood Canal Bridge Project. Pontoons required for that project, however, were smaller in size and quantity than those needed for the SR 520 Pontoon Construction Project. The CTC facility is too small to accommodate the timely construction of multiple pontoons of

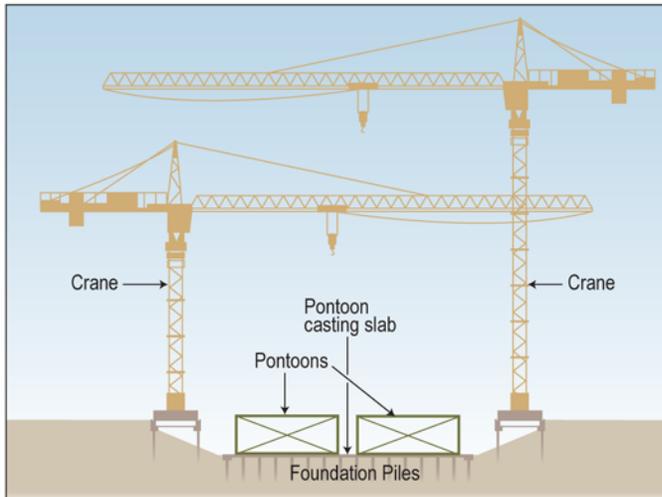
the sizes needed for this project. In fact, only one large Evergreen Point Bridge pontoon could be built at the CTC site during each 6-month construction cycle. At that rate, it would take more than 12 years to construct all of the large pontoons needed to replace the floating bridge if they were built only at the CTC facility. Spending 12 or more years building pontoons to replace the Evergreen Point Bridge fails to meet the purpose of this project.

## What is a casting basin?

A casting basin is a construction facility consisting of a concrete slab built partially or entirely below ground level. The proposed casting basin would be situated next to a navigable waterway and provide a flat, dry space where up to six pontoons could be constructed side by side at the same time. To give readers a general idea of what the proposed casting basin could look like, Exhibit 1-1 depicts a cross-section of a conceptual casting basin with pontoons, and Exhibit 1-2 shows a three-dimensional overview.

### EXHIBIT 1-1

Casting Basin with Pontoons Conceptual Cross-Section Design



When pontoons are cast, cured, and ready, the casting basin would be gradually flooded until the pontoons float. Next, a gate separating the casting basin from the waterway would be opened and the pontoons towed from the basin into navigable waters (such as Grays Harbor). Because concrete bridge pontoons are specially designed for water tightness, their construction requires a higher level of quality control than typical concrete construction. WSDOT has extensive experience constructing pontoons in a casting basin; they have used this proven method for building other floating bridge pontoons

EXHIBIT 1-2  
Casting Basin Three-Dimensional Overview

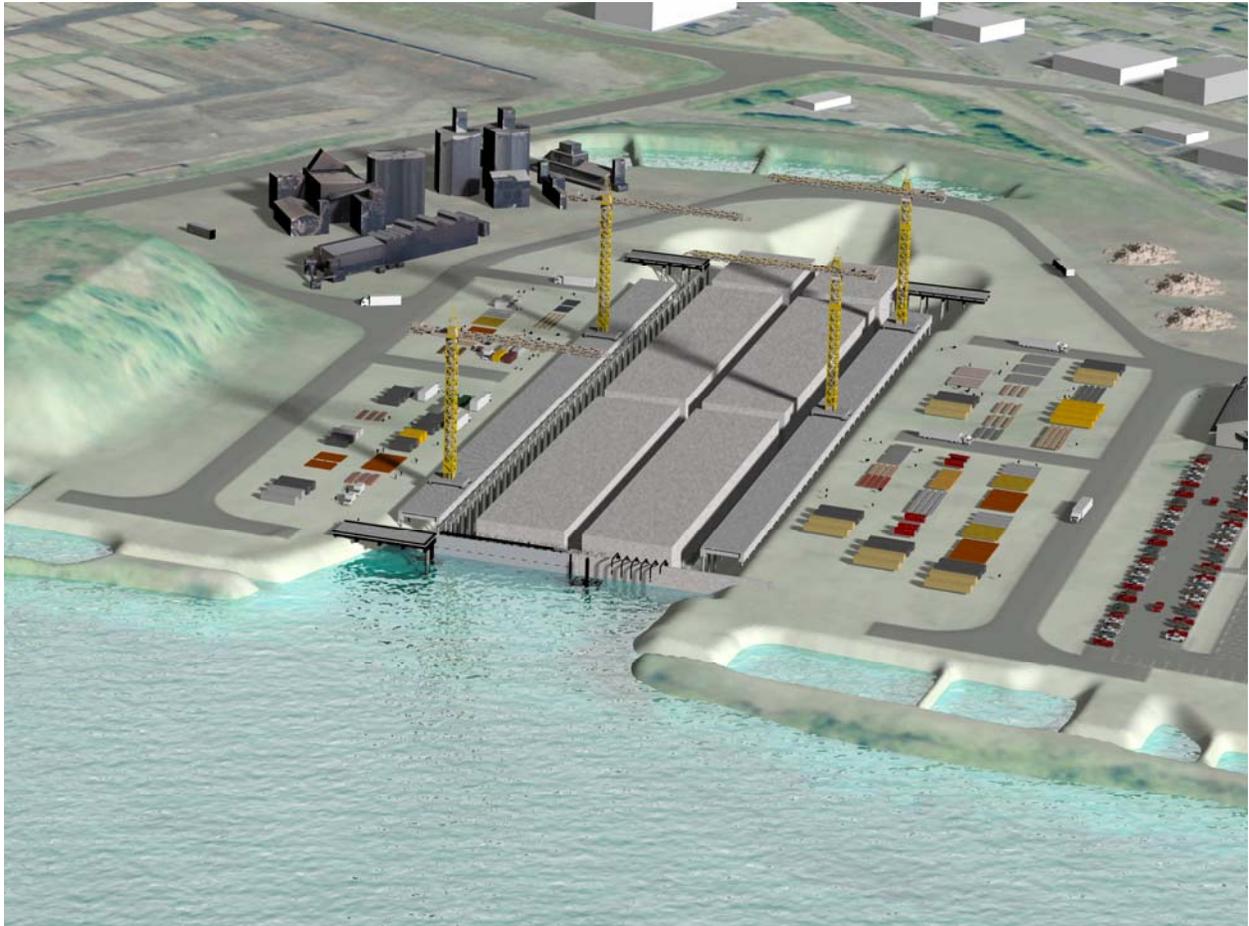


EXHIBIT 1-3  
Proposed Pontoon Construction Facility Sites

WSDOT engineers have a high level of confidence that building pontoons in a casting basin would proceed efficiently, with a low risk of delays and unforeseen costs. For more information on construction methods that were considered but dismissed in favor of the casting basin, see Chapter 2, Project Alternatives.

### Where would WSDOT build the pontoons?

WSDOT would build the pontoons at one of the two proposed new facility sites in Grays Harbor (see Exhibit 1-3). WSDOT considered the option of using the CTC facility in Tacoma; however, this option is not part of either build alternative (see Chapter 2, Project Alternatives). Details about this option are discussed in

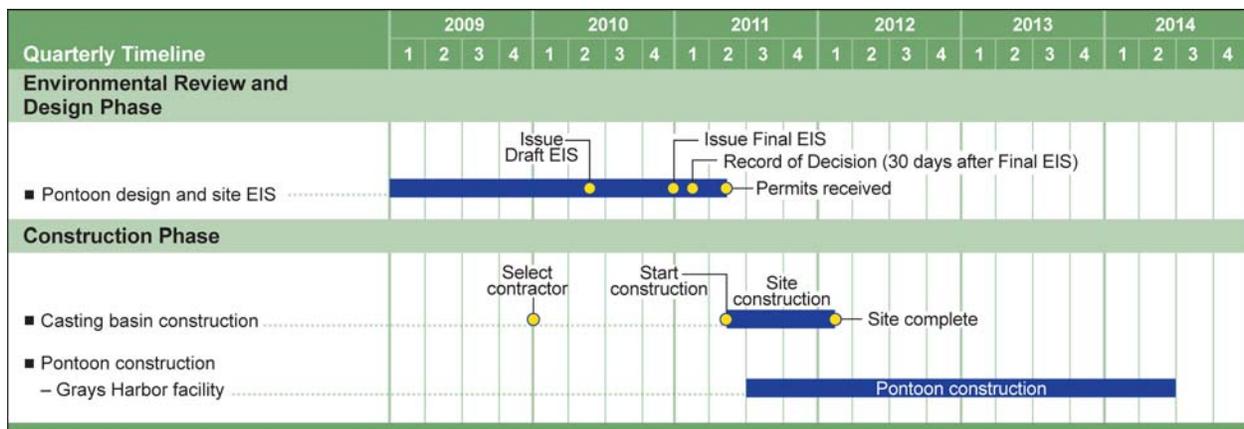


Chapter 2. WSDOT would not alter the existing CTC facility to accommodate the proposed SR 520 Pontoon Construction Project. If WSDOT uses the existing CTC facility, then they would also lease about 17 additional acres of Port of Tacoma property near the casting basin to stage and store materials needed for the project.

## When would WSDOT begin construction, and how long would the project last?

The first steps in pontoon construction, such as making the rebar used to form the pontoons, is anticipated to begin in summer of 2011 at a proposed new casting basin facility in Grays Harbor. The current project schedule shows that WSDOT could finish building all 33 pontoons for this project in 2014. Exhibit 1-4 shows the proposed project construction schedule.

EXHIBIT 1-4  
Proposed SR 520 Pontoon Construction Project Schedule



## What is the design-build process for the project?

The traditional process for building highway or highway-related projects is called the design-bid-build process: WSDOT designs its project, and then advertises for construction bids to build the project as designed. With the design-build process that WSDOT is implementing for the SR 520 Pontoon Construction Project, WSDOT has contracted with a design-builder to complete preliminary and final design and then build the project. WSDOT chose to award the design-build contract earlier than usual to expedite the project and encourage design innovation as early as possible in the project.

Before August 2007, design-build contracts could not be awarded until after the National Environmental Policy Act (NEPA) process was completed and the Record of Decision issued. As mandated by Section 1053 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), FHWA revised their regulation on design-build contracting (Code of Federal Regulations, Title 23, Section 636 [23 CFR 636]). Under the revised regulation, agencies have more flexibility; they can now issue the Request for Proposal and award a design-build contract before the NEPA process is completed.

With this process, the design-builder cannot proceed beyond preliminary design until FHWA and WSDOT have issued the NEPA Record of Decision. Further, the design-builder cannot be involved in nor bias the NEPA process. (See *Why did WSDOT prepare this Final EIS, and how is it different from the Draft EIS?* section later in this chapter for a discussion of the NEPA process.)

In late June 2009, WSDOT published a Request for Qualifications for a single contract to both design and construct the project. In August 2009, three teams were selected to submit proposals for the project. WSDOT subsequently awarded a design-build contract in January 2010.

FHWA and WSDOT will remain fully responsible for this project's NEPA process, documentation, and Record of Decision; FHWA's design-build rule precludes the design-builder from preparing any NEPA documents. WSDOT activities carried out by the design-builder must not affect the objective consideration of alternatives in the NEPA review. In addition, the design-build contract contains termination provisions in the event that the No Build Alternative is selected.

## What would happen to the casting basin facility when the project is completed?

WSDOT has identified two potential points in time when it is reasonable to assume that a decision about the future use of the casting basin facility could be made: (1) when the Pontoon Construction Project is completed, and (2) if and when the decision is made to use the facility to build pontoons for the proposed I-5 to Medina: Bridge Replacement and HOV Project, at the end of pontoon construction for that project.

As noted above, after building all pontoons planned for this project, the casting basin facility could be used for constructing the additional pontoons needed as part of the SR 520 Program's I-5 to Medina: Bridge Replacement and HOV Project, which would require more pontoons than the SR 520 Pontoon Construction Project. When the facility is no longer needed for this project, WSDOT would assess the benefit and

---

### What is SAFETEA-LU Section 6002?

Section 6002 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users—commonly known as SAFETEA-LU—was codified in 2005 and prescribed changes to existing FHWA NEPA procedures. Section 6002 describes the roles of the project sponsor and the lead, participating, and cooperating agencies; sets new requirements for coordinating and scheduling agency and public reviews; and specifies a process for resolving interagency disagreements (23 USC 136 and 23 CFR 771).

---



---

### What environmental regulations would apply to the proposed casting basin facility?

The proposed casting basin is subject to the Endangered Species Act, the National and State Environmental Policy Acts, Section 404 of the Clean Water Act, Section 106 of the National Historic Preservation Act, and many other regulations that are listed on the Fact Sheet at the front of this Final EIS.

---

cost of maintaining the facility against the cost and risk of decommissioning it.

Further use or decommissioning of the site would be a separate action that would require its own environmental process, permits, approvals, and consultation with agencies and interested tribes. Issues that WSDOT would likely consider include the condition of other WSDOT floating bridges, potential interest in other uses for the facility, and city and/or Port of Grays Harbor plans that might include the project site.

If WSDOT were to sell the site with its improvements, then any party proposing actions on the property would need to reinitiate all applicable environmental regulatory and permitting processes as appropriate, including consultation with appropriate agencies and interested tribes. If WSDOT were to retain ownership of the facility, all applicable environmental regulatory and permitting processes, including consultation with appropriate agencies and interested tribes, would be reinitiated for actions not analyzed during this environmental impact statement (EIS) process.

## **How would WSDOT use the pontoons if the Evergreen Point Bridge did not fail?**

If the floating section of the Evergreen Point Bridge did not fail due to a catastrophic event, then all pontoons built during the proposed SR 520 Pontoon Construction Project could be used for the SR 520, I-5 to Medina: Bridge Replacement and HOV Project. The design of the pontoons constructed for this project would not predetermine or preclude alternatives for the I-5 to Medina: Bridge Replacement and HOV Project because pontoons would simply provide buoyancy and structural strength for the roadway foundation and could be used with any proposed lane configuration.

## **Why did WSDOT prepare this Final EIS, and how is it different from the Draft EIS?**

WSDOT prepared this Final Environmental Impact Statement (Final EIS) to comply with both State Environmental Policy Act (SEPA) and NEPA requirements.

This Final EIS analyzes the same three alternatives that were analyzed in the Draft EIS, as described in Chapter 2, Project Alternatives. FHWA's and WSDOT's final identified Preferred Alternative is the same Preferred Alternative that was identified in the Draft EIS, except that it now reflects the most current design modifications. The effects analysis in this report has been revised to incorporate these design

---

### **What are the SEPA and NEPA requirements?**

WSDOT developed this Draft EIS to comply with SEPA, which requires preparing an EIS (the detailed statement required by the RCW 43.21C.030[2][c]) for proposals to perform major actions having probable significant, adverse environmental effects. Also, NEPA requires states and federal agencies to prepare an EIS for "major federal actions significantly affecting the quality of the human environment." NEPA defines an EIS as a detailed written statement on the project's environmental impact, adverse effects that cannot be avoided, alternatives to the proposed action, short-term use of the environment, maintenance and enhancement of long-term productivity, and irreversible and irretrievable commitments of resources (42 USC 4331).

---

modifications. This Final EIS also identifies and discusses the environmentally preferable alternative.

Public and agency comments on the Draft EIS and WSDOT's responses to the comments are summarized in Chapter 7, Public and Agency Comments on the Draft EIS, and presented in Appendix T, Draft EIS Comments and Responses. WSDOT considered all comments and, where necessary, wrote this Final EIS to address or clarify issues raised during the 45-day review period (May 28 through July 12, 2010).

## How has WSDOT involved the public in the environmental process?

Public involvement activities are a critical component of the NEPA/SEPA environmental process. They provide information on project progress and offer interested individuals and groups the opportunity to ask questions and offer input as the project develops. WSDOT developed and implemented a comprehensive, ongoing public involvement program in 2007 at the onset of the decision-making and environmental analysis process for this project. This program has a twofold approach to public involvement: (1) host meetings that the public can attend, and (2) engage the public through existing community groups and events to broaden involvement beyond those who come to public meetings. Specifically, this approach has included holding public meetings,

attending local government meetings, briefing different community groups and local business organizations, and hosting informational booths at community events. Project Website updates and media outreach support these efforts.

WSDOT's public involvement program also identified specific goals and activities for outreach to minority and low-income populations. For example, project materials were translated into Spanish—the most prevalent second language in the Grays Harbor area—at key milestones. Most activities of the public outreach program usually were tied to the release of technical project information and were essential to making the project open, accessible, and transparent to the broader public and for ensuring that lead agencies considered public comments before making final decisions.

Throughout the public involvement process, WSDOT has incorporated the public's comments and concerns into the overall project comment database for documentation and response. As previously noted, the Draft EIS was published on May 28, 2010, at which time WSDOT initiated a



WSDOT staff presented project information, answered questions, and accepted comments on the Draft EIS at the public open house in Aberdeen on June 24, 2010.

---

### What is a cooperating agency?

A cooperating agency is any federal agency—other than the lead agency—that has jurisdiction by law or special expertise with respect to any environmental effect involved in a proposed project or project alternative. A state or local agency of similar qualifications or a Native American tribe might, by agreement with the lead agencies, also become a cooperating agency. Accepting designation as a cooperating agency does not indicate project support.

### What is a participating agency?

A participating agency is any agency with an interest in the project. Accepting the designation as a participating agency does not indicate project support and does not provide an agency with increased oversight or approval authority beyond its statutory limits, if applicable.

---

45-day comment period. During the comment period, the public, agencies, and interested tribes provided formal comments on the document. WSDOT also held a public hearing on June 24, 2010, during the comment period. At the public hearing, attendees were able to discuss the environmental findings presented in the Draft EIS with project staff and provide oral comments to court reports and/or written comments on comment forms. WSDOT reviewed and prepared responses to all comments received during the 45-day comment period. These comments are summarized in Chapter 7 and presented in their entirety in Appendix T, Draft EIS Comments and Responses.

Public involvement is an ongoing effort that will continue through the life of the project. Appendix A, Agency Coordination and Public Involvement Discipline Report, includes more detailed information on the public involvement and agency coordination program.

## **How has WSDOT included agencies and tribes in the environmental process?**

### **Agency Involvement**

Although FHWA and WSDOT are the co-lead agencies for this project and EIS process, many federal, state, and local agencies and interested tribes provide input throughout the environmental process. In accordance with the SAFETEA-LU Section 6002 (see sidebar earlier in this chapter), agencies and tribes with a potential interest in the project were invited to serve as cooperating and/or participating agencies throughout the environmental review process.

In December 2007, FHWA and WSDOT held a project kickoff meeting for agencies and interested tribes. Since then, the cooperating and participating agencies were actively involved as members of the SR 520 Pontoon Construction Project Agency Coordination Team (PCPACT) and met numerous times through August 2010, after the Draft EIS was released. (Appendix A, Agency Coordination and Public Involvement Discipline Report, lists the participating agencies and tribes on the PCPACT.) FHWA and WSDOT created the PCPACT as a forum for agency and tribal coordination. In preparing the Draft EIS, this group met regularly to consider the project's purpose and need, the range of alternatives, and the analysis methodology. The PCPACT was also apprised of the types of comments received on the Draft EIS before the Final EIS was issued.

WSDOT assembled technical working groups within the PCPACT to consider and address specific technical issues of agency or tribal concerns. These groups comprised appropriate project, agency, and tribal staff to address issues such as ecosystems, effects and mitigation,

pontoon moorage, water resources, and the built environment. WSDOT scheduled additional briefings with individual agencies and interested tribes as requested to discuss specific topics, such as permit coordination and effects on tribal fishing activities. All agencies and interested tribes had the opportunity to provide formal comments on the Draft EIS during the 45-day public comment period and at the public hearing held on June 24, 2010.

### **Tribal-Specific Outreach**

WSDOT is committed to building and maintaining cooperative government-to-government relationships with the tribes in the Grays Harbor area. For the SR 520 Pontoon Construction Project, WSDOT is complying with several federal, state, and tribal consultation requirements. While each law and policy has distinct requirements, WSDOT is conducting the tribal consultation process to address natural and cultural resources issues with the tribes who have an interest in the project. The following tribes were invited to be participating agencies for the environmental review process:

- The Confederated Tribes of the Chehalis Reservation
- Hoh Tribe
- Quileute Nation
- Quinault Indian Nation
- Shoalwater Bay Tribe
- Squaxin Island Tribe
- Skokomish Tribal Nation



Members of the Quinault Indian Nation visited the Anderson & Middleton site in Hoquiam with WSDOT.

The Quinault Indian Nation formally accepted participating agency status in January 2008. WSDOT also initiated consultation with the Puyallup Tribe regarding the possible use of the CTC casting basin facility in Tacoma. In December 2007, the Squaxin Island Tribe declined participating agency status and informed FHWA that they would require no further consultation on this project. In August 2009, the Quileute Nation also declined further project consultation, and WSDOT closed consultation with the Hoh Tribe on this project in September 2010. The Confederated Tribes of the Chehalis Reservation continue to work with WSDOT on cultural resources issues. The other tribes listed above did not provide formal correspondence declining or accepting participation.

The proposed SR 520 Pontoon Construction Project casting basin facility at either proposed build alternative site (see Chapter 2, Project Alternatives) would be located within the Quinault Indian Nation's hunting, fishing, and gathering areas. Since the project was formally

initiated in November 2007, WSDOT has held several tribal coordination meetings, with additional communications by mail, electronic mail (e-mail), and telephone.

WSDOT encouraged the tribes to participate in the PCPACT and technical working group meetings and provided them with all meeting materials; representatives from the Quinault Indian Nation and the Confederated Tribes of the Chehalis Reservation have attended these meetings. WSDOT also invited tribes to observe cultural resources field work for the project. The tribes have expressed particular interest in potential cultural resources discovery, fisheries and habitat impacts, wetland loss, mitigation opportunities, and employment opportunities. As previously mentioned, interested tribes had the opportunity to review and provide formal comments on the Draft EIS. See Chapter 7, Public and Agency Comments on the Draft EIS, for a summary of comments from the tribes.

WSDOT intends to continue government-to-government consultation with affected tribes in support of this project. This consultation will address tribal interests, such as project employment opportunities; potential adverse effects on tribal resources and rights; and measures to avoid, minimize, and mitigate such adverse effects. WSDOT will continue to keep tribes informed of project activities through coordination and regular updates and distribution of materials.

## **What future public involvement opportunities is WSDOT planning for the project?**

WSDOT will maintain the project Website and hotline to provide the public with easy access to the most current project information. Interested individuals can find the current project status at <http://www.wsdot.wa.gov/Projects/SR520/Pontoons.htm>. Individuals can sign up on the Website for email updates, and the public can continue to submit comments and questions to WSDOT via the project hotline, e-mail, or mail. WSDOT will continue to respond to public questions, concerns, and information requests for the duration of the project. Responses will be translated into Spanish or other languages as needed.

If one of the build alternatives is selected in the Record of Decision, then WSDOT will continue its outreach to inform the public about employment opportunities and construction activities.



**WSDOT staff discussed the proposed project with Quinault Indian Nation members at the Aberdeen Log Yard site in Aberdeen.**

---

### **Contacting WSDOT**

To contact WSDOT regarding the project, write to WSDOT directly in care of Margaret Kurcharski at the SR 520 Program Office:  
SR 520 Pontoon Construction Project  
600 Stewart Street, Suite 520  
Seattle, WA 98101

Access the Final EIS online at  
[www.wsdot.wa.gov/projects/sr520/pontoons/](http://www.wsdot.wa.gov/projects/sr520/pontoons/).

To listen to a recording of the latest project information or to submit a question, please call the project hotline at 1-888-520-6397.

---