

**DRAFT ENVIRONMENTAL IMPACT STATEMENT
SR 520 BRIDGE REPLACEMENT AND HOV PROGRAM**

MAY 2010

SR 520 Pontoon Construction Project

Public Services and Utilities Technical Memorandum



THE INFORMATION IN THIS REPORT IS ACCURATE; HOWEVER, THE PONTOON CONSTRUCTION PROJECT DRAFT ENVIRONMENTAL IMPACT STATEMENT IS THE SOURCE OF THE MOST CURRENT PROJECT INFORMATION AND ANALYSIS.

SR 520 Pontoon Construction Project Draft Environmental Impact Statement

Public Services and Utilities Technical Memorandum

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Abbreviations and Acronyms

BPA	Bonneville Power Administration
CNG	Cascade Natural Gas
CTC	Concrete Technology Corporation
EIS	Environmental Impact Statement
EMT	emergency medical technician
GIS	geographic information system
N/A	not applicable
NEPA	National Environmental Policy Act
PUD	Public Utility District
SEPA	State Environmental Policy Act
WSDOT	Washington State Department of Transportation

1. Introduction

Why are public services and utilities considered in an EIS?

Local governments, utility districts, and private companies provide public services and utilities to the residents and businesses within their service boundaries. Public services consist of fire and police protection, and emergency medical service, including hospitals. Utilities include electricity, natural gas, water, wastewater and stormwater collection, and telecommunications. If a project has the potential to affect public services and utilities by, for example, increasing demand beyond the capability of service providers or by disrupting service, both the National Environmental Policy Act (NEPA) and the State Environmental Policy Act (SEPA) require the environmental documentation to consider public services and utilities. Project construction, for example, could affect the response and travel times of police, fire, and emergency service vehicles, or could require relocation or adjustment of utility lines or facilities.

What are the key points of this technical memorandum?

The Washington State Department of Transportation (WSDOT) proposes building a casting basin facility at one of two alternative sites in the Grays Harbor area to manufacture large, concrete floating bridge pontoons. These pontoons would be built to replace the floating portion of the Evergreen Point Bridge in the event of a catastrophic failure or to support the planned replacement of the bridge. The Concrete Technology Corporation (CTC) casting basin in Tacoma would be used primarily to build smaller pontoons while the Grays Harbor casting basin is being built. The completed pontoons would be moored at approved locations in Grays Harbor and in Puget Sound until needed.

The project would have the following effects on public services and utilities:

- There would be no major differences in the effects of the build alternatives on public services and utilities. Because the Anderson & Middleton Alternative in Hoquiam would have longer haul routes through the cities of Aberdeen and Hoquiam, it would have a slightly greater chance for accidents, and the need for police and emergency medical services, in comparison with the Aberdeen Log Yard Alternative in Aberdeen.
- Use of the CTC facility would not result in construction, operational, or long-term effects because the facility has been used to construct pontoons and would not require modification to produce additional pontoons.
- Construction effects associated with any of the alternative sites at Grays Harbor might require interruption of utility service to utility customers for short periods. While all the utilities have close access to the build alternatives, some utility infrastructure improvements might be needed to provide sufficient capacity.

- During construction and operation of either build alternative, there would be a slight increase in demand for police and emergency medical services typical of an industrial work site, but this should not result in the need for additional staffing.
- The transport of materials to and from the selected Grays Harbor project site during construction and operation would result in additional truck and car traffic; however, these increases are not expected to affect response or travel times of public service vehicles and public service providers. For a detailed discussion of traffic-related effects, see the Transportation Technical Memorandum (WSDOT 2009a), included as Appendix R to the Draft Environmental Impact Statement (Draft EIS).

What are the project alternatives?

The Pontoon Construction Project Draft EIS evaluates two build alternatives that would involve constructing a new casting basin in Grays Harbor and one No Build Alternative. Two waterfront sites in the Grays Harbor area are being evaluated for the new casting basin facility:

- Anderson & Middleton property in Hoquiam
- Aberdeen Log Yard property in Aberdeen

The new Grays Harbor casting basin facility could produce all 33 pontoons needed for this project: 21 longitudinal pontoons (360 feet long by 75 feet wide), 10 supplemental stability pontoons (98 feet long by 60 feet wide), and 2 cross pontoons (240 feet long by 75 feet wide). To expedite pontoon construction, however, each build alternative could include using the existing CTC casting basin facility in Tacoma to build pontoons while the new casting basin facility at Grays Harbor is being constructed. If used, the CTC facility, which has a limited operations area, could build up to three longitudinal pontoons and up to ten supplemental stability pontoons.

What is a casting basin facility?

Pontoons for this project would be built at a casting basin facility. The facility would consist of a casting basin (a large chamber in which pontoons are constructed, see the next text box for a more thorough description) and several supporting facilities, such as a batch plant to produce concrete, access roads, storage and laydown areas, office space for workers, and water treatment facilities.

WSDOT would float most of the completed pontoons built at the new casting basin facility out of the casting basin and tow them to a moorage location in the Grays Harbor area. The last pontoons built would be stored in the casting basin until needed. Any pontoons constructed at the CTC facility would be moored at existing marine berths in Puget Sound.

After the project is completed, the new casting basin would be available to produce additional pontoons needed for the planned Evergreen Point Bridge replacement, a component of the I-5 to Medina: Bridge Replacement and High-Occupancy Vehicle (HOV) Project. Pontoons for other WSDOT bridge replacement projects in the future could also be produced at this facility.

Each alternative is described below. For more details, see the Description of Alternatives and Construction Techniques Discipline Report (WSDOT 2009b), included as Appendix B to the Draft EIS.

Site Descriptions

Anderson & Middleton Alternative

The 105-acre Anderson & Middleton Alternative site is on the north shore of Grays Harbor in Hoquiam, Washington (Exhibit 1). This generally flat property is privately owned and is zoned for industrial use. The site is surrounded by industrial maintenance shop buildings to the west, railroad tracks to the north, and vacant industrial property to the east; a rock berm borders the shoreline. The Anderson & Middleton site has no structures on it except for an existing small office building on the northern edge of the property. The site also has some gravel roads and an asphalt pad remaining from its former use as a log sorting yard. WSDOT would purchase 95 acres of this site for the project, and the casting basin and support facilities would occupy the eastern half of the site, amounting to approximately 55 acres.

Historically this site has been used for lumber industry activities. In the early twentieth century there was a sawmill and other related facilities, such as machine shops and burners, west of what was then an extension of 8th Street. Over the next several decades, fill from harbor dredging and refuse accumulation increased the land area of the site. By the late 1960s, the former mill structures were all gone. Since then, the site has been used for timber storage.

Aberdeen Log Yard Alternative

The 51-acre Aberdeen Log Yard Alternative site lies on the north shore of Grays Harbor in Aberdeen, Washington, near the mouth of the Chehalis River (Exhibit 1). This generally flat site is zoned industrial and is currently owned and used for log storage by Weyerhaeuser Corporation. There are no structures on the site now but there is a system of unpaved access roads connecting to East Terminal Road to the west and State Street to the northeast. Immediately west of the site is paved Port of Grays Harbor industrially zoned property, the City of Aberdeen wastewater treatment plant borders the eastern boundary, and the Puget Sound & Pacific Railroad mainline and siding run along the northern boundary of the site. WSDOT would purchase all 51 acres, and the casting basin and support facilities would occupy the entire site.

Two sawmills operated on the site in the last century, but since 1971, the site has been used mostly for log storage. All former sawmill-related structures have been demolished. Between 1971 and 1981, the shoreline was extended to the south through backfilling with sediments dredged from the Chehalis River, accumulated wood waste, and other fill material.

No Build Alternative

For the Pontoon Construction Project, the No Build Alternative is continued existing conditions and uses at all proposed alternative sites. Specifically, this means that WSDOT would not construct or store any pontoons—either at a new Grays Harbor facility or at the existing Tacoma CTC facility—needed to respond to a catastrophic failure of the Evergreen Point Bridge. As a result, any environmental effects resulting from the proposed project activities would not occur.

For this Draft EIS, WSDOT assumes that, if unused by this project, the alternative site properties would continue to be used as they are today: the Aberdeen Log Yard would remain an active log yard, the Anderson & Middleton site would remain largely inactive, and the CTC site would be used as a casting basin for other projects and clients. While either Grays Harbor site could be developed for new uses should this project not occur, the use of these properties has remained unchanged since the 1990s. Potential future uses for these two properties, other than our proposed project, are speculative and therefore not considered under the No Build Alternative.

Key Components of Both Build Alternatives

Both build alternatives would carry out the proposed action by constructing a casting basin in the Grays Harbor area. Use of the existing CTC facility in Tacoma to produce pontoons while the new casting basin is constructed could also occur.

Potential Use of the Existing CTC Casting Basin Facility

The existing CTC facility is adjacent to the Blair Waterway on the eastern edge of Commencement Bay in Tacoma (Exhibit 1). This casting basin is too small to accommodate the timely construction of the pontoons required for the Pontoon Construction Project, but WSDOT could use this facility to supplement pontoon construction at the larger casting basin proposed in the Grays Harbor area. The pontoons manufactured at the CTC facility would most likely be the smaller supplemental stability pontoons.

WSDOT would moor the pontoons built at the CTC facility at existing marine berths in Puget Sound, subject to availability.

What is a casting basin?

A casting basin is a construction facility built next to a navigable waterway that consists of a concrete slab built deep below ground level and surrounded by high concrete walls. The interior area of the casting basin provides a flat dry space where several pontoons can be constructed side by side at the same time. After the pontoons are completed, the basin is flooded. The basin walls contain the flood water, allowing the pontoons to float. When the pontoons are floating, a gate is opened and the pontoons are towed from the casting basin into navigable waters.

Proposed Grays Harbor Casting Basin

The design of the proposed Grays Harbor casting basin would be basically the same at both build alternative sites, with variations depending on site-specific features. (See the Description of Alternatives and Construction Techniques Discipline Report [WSDOT 2009b] for information on the casting basin conceptual design.) The casting basin would be positioned a few hundred feet from the shoreline and partitioned into two separate work areas—called chambers—connected to the water by a single launch channel. The launch channel would consist of an onshore portion excavated between the casting basin and shoreline, a breach in the shoreline berm, and a dredged channel extending offshore to the federal navigation channel in Grays Harbor.

Up to four concrete pontoons could be cast and cured in each of the two chambers of the partitioned casting basin, allowing pontoon construction to be phased for efficiency. That is, while the second chamber is under construction, pontoon construction could be initiated in the first partitioned chamber as soon it was completed. Two reinforced floating concrete gates

leading to each chamber would allow each to be independently flooded and drained, as well as control access to the launch channel.

Constructing a casting basin facility at either Grays Harbor build alternative site would require heavy construction activities to transform the vacant land into an industrial facility. Such activities include, but would not be limited to, the following:

- Grading (leveling) the site and excavating the casting basin
- Pile-driving to install support piles for the casting basin floor
- Paving onsite access roads
- Making multiple truck trips for hauling materials to and from the site
- Dewatering the soils during casting basin construction

All stormwater, process water, and groundwater collected onsite would be handled and treated in accordance with state water quality requirements and discharged to Grays Harbor. Project engineers are designing a water supply, distribution, and treatment system for each site to meet state standards.

Dewatering

WSDOT would install two different dewatering systems to remove groundwater from the casting basin work area at either build alternative site. Before and during casting basin construction, a temporary construction dewatering system would operate at the site. During pontoon-building operations and after the Pontoon Construction Project is completed (but while the site is still maintained by WSDOT), a permanent operation dewatering system would operate.

Operational Support Facilities

To support the use of the casting basin, each build alternative would include onsite operational support facilities such as an access road, a concrete batch plant, large laydown areas, water handling and treatment areas, office space, a rail spur, and a designated parking area for workers.

Pontoon Towing and Moorage

If WSDOT uses the existing CTC facility in Tacoma, it would moor the pontoons built there at existing marine berths in Puget Sound. Using these berths would be subject to availability, but there are several locations in the Puget Sound region that could accommodate this project's needs. The first two cycles of eight pontoons manufactured at the new Grays Harbor casting basin facility would be towed from the casting basin and moored in the Grays Harbor area outside of navigation channels. The last construction cycle of pontoons could be stored in the dry casting basin behind the closed gate.

For the pontoons to be moored in the Grays Harbor area, there are several existing berths that WSDOT could lease for pontoon moorage, if available when needed. In addition, WSDOT has identified another potential moorage location—open water moorage in Grays Harbor.

Please see the Description of Alternatives and Construction Techniques Discipline Report (WSDOT 2009b) for more information on these potential moorage locations.

The constructed pontoons would be stored together until they are needed to replace the Evergreen Point Bridge in the event of a catastrophic failure, and they would be identified with navigation lighting in compliance with U.S. Coast Guard requirements.

Construction Schedule

If WSDOT uses the existing CTC facility, pontoon construction would take 2 years there to complete. WSDOT would start site development for the new Grays Harbor casting basin facility about the same time pontoon construction begins at the CTC facility. For the Grays Harbor facility, casting basin construction would take 2 years, as would pontoon construction. In total, overall pontoon project construction would span 4 years.

WSDOT anticipates that it would take approximately 6 to 9 months to complete a pontoon construction cycle at either the existing Tacoma facility or at the new Grays Harbor facility. The new Grays Harbor facility could produce eight pontoons during one cycle; as a result, two and a half pontoon construction cycles would be required to produce 20 pontoons. At the existing CTC facility, five supplemental stability pontoons could be constructed during each pontoon construction cycle, and one longitudinal pontoon could be constructed during a cycle. As a result, three construction cycles would be needed to produce ten supplemental stability pontoons and one longitudinal pontoon.

2. Affected Environment

The proposed Grays Harbor project sites for the Pontoon Construction Project are located within the city limits of Hoquiam and Aberdeen, respectively, in Grays Harbor County. The CTC casting basin facility, which could be used in association with the selected Grays Harbor site, is located in Tacoma in Pierce County. The public services and utilities discipline team identified public services providers or utility companies that provide service to the study area or have facilities that could be affected by construction and/or operation of the proposed project. Public services consist of fire protection; emergency medical services including hospitals; police protection; solid waste collection; and recycling. Public and private utilities include electricity, natural gas, water, wastewater, stormwater, and telecommunications. For information on government and social resources; recreation facilities; and pedestrian, bicyclist, and transit facilities, please refer to the Social Elements Technical Memorandum (WSDOT 2009c), which is Appendix Q to the Draft EIS.

What is a study area?

The area specifically evaluated for environmental effects. The study area may vary for different elements of the built and natural environments.

The study areas designated for the alternatives include the public service and utility providers within an approximately one-quarter-mile radius of the proposed build alternative project sites. The project sites include the CTC facility in Tacoma, the alternative sites at Grays

Harbor and their proposed construction haul routes, and the proposed pontoon moorage locations in Puget Sound and Grays Harbor.

How did WSDOT collect information on public services and utilities?

The discipline team reviewed the comprehensive plans of the jurisdictions where pontoon construction would occur to identify the current providers of public services and utilities. The discipline team also used geographic information system (GIS) mapping to locate facilities such as fire stations and police stations. Many public service providers and utility providers have Web sites that provided useful information. For specific data, the discipline team contacted the public service and utility providers directly and interviewed them by phone.

What are the existing public services in the study area?

This section describes the public service providers that are located and/or provide services within the study area of the CTC site in Tacoma and the two alternative sites at Grays Harbor.

CTC Facility

The CTC facility is located within an approximately 3-square-mile area of land zoned as an industrial center on the Blair Waterway in Tacoma in Pierce County. The CTC site is a fully constructed facility and is routinely used for industrial purposes, including the building of pontoons. Exhibit 1 shows the location of the CTC facility.

Fire and Emergency Medical Service

The Tacoma Fire Department responds to all fire and emergency medical service calls in Tacoma and Fife. Station 12, located at 2015 54th Avenue East in Fife, responds to calls at the CTC site. The average response time for emergency calls to the fire department is 2 minutes and 34 seconds. The department also maintains a fire boat for responding to incidents in the surrounding waters of Puget Sound. The Tacoma Fire Department Training Division, located at 2124 Marshall Avenue, is within the study area (Exhibit 2) but does not respond to calls for services.

The St. Joseph Medical Center, a 320-bed regional medical center located at 1717 South J Street, is the closest hospital to the study area. The hospital is located outside of the study area and just west of downtown Tacoma.

What is average response time?

Average response time is calculated from the time the department receives the call to the time the fire department personnel arrive.

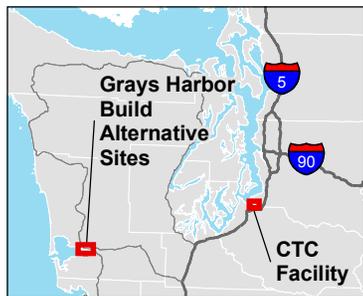
Law Enforcement Agencies

Tacoma Police Department

The Tacoma Police Department protects and serves the population within the Tacoma city limits. Police headquarters is located at 3701 Pine Street. The Tacoma Police Department divides the city into four sectors, with at least one subdivision station within each sector. The CTC facility is located within Sector 1, and there are two subdivision stations in the sector:



Source: Grays Harbor County (2007) GIS Data (Points of Interest, Street, and City Limits), Grays Harbor County (2006) GIS Data (Waterbody). Horizontal datum for all layers is State Plane Washington South NAD 83; vertical datum for layers is NAVD88.



- City pump station (water and sewer)
- Fire department
- Hospital
- Police station
- Electrical substation
- Wastewater treatment facility
- Proposed truck haul route: Aberdeen Log Yard
- Proposed truck haul route: Anderson & Middleton
- Proposed truck haul route common to all project sites
- Build Alternative Site
- CTC facility
- Dock
- City Limits

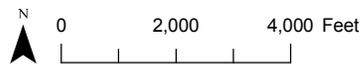


Exhibit 2. Locations of Public Services and Utilities and Proposed Truck Haul Routes in the Grays Harbor and Tacoma Areas

Pontoon Construction Project



the Central Substation is located at 1524 Martin Luther King Way near the downtown core, and the Northeast Substation is located at 4731 Norpoint Way NE, north of the CTC facility.

Washington State Patrol

In addition to the Tacoma Police Department, the Washington State Patrol District 1 Headquarters, located at 2502 112th Street East in Tacoma, patrols and responds to calls along all interstate and state routes, including I-5 and SR 509, which might be used as haul routes to transport materials to the site.

Law Enforcement for Puget Sound Pontoon Moorage

Distinct from the onshore services described previously, the U.S. Coast Guard, a division of the U.S. Department of Homeland Security, would respond to calls related to pontoon moorage in the waters of Puget Sound. The U.S. Coast Guard Sector Seattle patrols the water of the entire Puget Sound and is responsible for search and rescue, maritime law enforcement, recreational boating safety, and aids to navigation.

Solid Waste and Recycling

Tacoma Solid Waste Management, a division of Tacoma Public Works Environmental Services, provides garbage and recycling collection within the CTC facility study area. No waste management facilities are located near the CTC facility.

Anderson & Middleton Alternative

Exhibit 2 shows the locations of the public service providers for the Anderson & Middleton site.

Fire and Emergency Medical Service

The Hoquiam Fire Department responds to all fire and emergency medical service calls in Hoquiam and provides emergency medical service to surrounding unincorporated Grays Harbor County from two stations (Exhibit 2). The Headquarters Station, located at 625 8th Street, is the primary responding station for the proposed Hoquiam project site, and the Eastside Station, located at 517 Ontario Street, on the east side of Hoquiam, would also respond if required. Average response times to calls for the fire department are 2 minutes within Hoquiam and 4 minutes outside of Hoquiam (Ray Pumphrey, Fire Chief, Hoquiam Fire Department, Hoquiam, Washington. February 1, 2008. Personal communication). The Hoquiam Fire Department employs 23 firefighters—13 are paramedics and the other 10 are emergency medical technicians (EMTs). Paramedics respond to advanced life support calls, and EMTs respond to basic life support calls.

When assistance is required for industrial and commercial properties, the Aberdeen Fire Department would also respond, in accordance with an agreement between the Hoquiam and Aberdeen fire departments.

The closest hospital to the alternative site is Grays Harbor Community Hospital, a 140-bed facility located at 915 Anderson Drive in Aberdeen, approximately 2.5 miles east of the Anderson & Middleton Alternative (Exhibit 2).

Law Enforcement Agencies

Hoquiam Police Department

The Hoquiam Police Department, located at 215 10th Street, provides law enforcement and responds to 911 emergency calls within the Hoquiam city limits (Exhibit 2).

Washington State Patrol

While the Washington State Patrol maintains a detachment within the Hoquiam city limits at 3111 Pacific Avenue (Exhibit 2), its primary area of responsibility is traffic enforcement on state highways in unincorporated parts of Grays Harbor County.

Solid Waste and Recycling

Hometown Sanitation, LLC, provides solid waste disposal and recycling services to the City of Hoquiam. The closest transfer station is located in Aberdeen. All solid waste is processed at the transfer station, trucked to Centralia, and then loaded onto a train to Klickitat County in eastern Washington, where the waste is buried at the Roosevelt Regional Landfill.

Aberdeen Log Yard Alternative

Fire and Emergency Medical Service

The Aberdeen Fire Department provides fire and emergency medical services within the Aberdeen city limits and also provides emergency medical service to an approximately 100-square-mile area outside the city limits.

There are two fire stations in Aberdeen. The fire department employs 35 firefighters, 16 of whom are also paramedics. Station 1, Headquarters, is located at 700 West Market Street and would be the first responder to an incident at the Aberdeen Log Yard site. Station 2, South Aberdeen, is located at 700 West Curtis Street on the south side of the Chehalis River. In 2007, the average response time for fire-related calls within the Aberdeen city limits was 4 minutes and 46 seconds, and for emergency medical service the average response time was just over 4 minutes (Aberdeen Fire Department 2008).

When assistance is required for industrial and commercial properties, the Hoquiam Fire Department would also respond, in accordance with an agreement between the Hoquiam and Aberdeen fire departments.

The nearest hospital is Grays Harbor Community Hospital, approximately 1.5 miles north of the Aberdeen Log Yard Alternative (Exhibit 2).

Law Enforcement Agencies

The Aberdeen Police Department, located at 210 East Market Street, provides law enforcement and responds to 911 emergency calls within the Aberdeen city limits (Exhibit 2).

See the descriptions above under the Anderson & Middleton site for information on Washington State Patrol, which could respond to calls in Aberdeen as well as Hoquiam.

Solid Waste and Recycling

LeMay, Inc., provides solid waste disposal and recycling services to the city of Aberdeen and operates the Central Transfer Station, located at 4201 Olympic Highway, outside of the study area. Waste from the transfer station is transported to the Roosevelt Regional Landfill in Klickitat County for disposal.

Law Enforcement for Grays Harbor Pontoon Moorage

Distinct from the onshore services described above under the Anderson & Middleton and Aberdeen Log Yard alternatives, the following law enforcement agencies would respond to calls related to pontoon moorage in the waters of Grays Harbor.

Grays Harbor County Sheriff

The Grays Harbor County Sheriff's office, located at 100 West Broadway in Montesano, operates a Marine Safety Program that provides police protection in the waters of Grays Harbor. The Marine Services Unit consists of five deputies who are fully trained to use watercraft for marine law enforcement and search and rescue functions.

United States Coast Guard

The U.S. Coast Guard operates the Grays Harbor Coast Guard Station, located in Westport at the entrance to Grays Harbor. The mission of the station includes search and rescue, law enforcement, marine environmental protection, and recreational boating safety. Emergency services in the waters of Grays Harbor are provided by marine vessels and helicopters (Jamie Scott, Petty Officer, U.S. Coast Guard, Westport, Washington. February 1, 2008. Personal communication).

What are the existing utility providers in the study area?

This section discusses the utilities that would provide service to the alternative project site. Because the haul routes and the pontoon storage areas should not result in any effects on utilities, they are not discussed in this section.

CTC Facility

Exhibit 3 describes the utility providers with service boundaries and/or facilities within the CTC facility study area.

In addition to the utility providers described in Exhibit 3, a number of cellular telephone providers in the region use cellular towers to transmit their signals; however, there are no cellular towers in the study area.

Anderson & Middleton Alternative

Exhibit 4 describes utilities with service boundaries that include the Anderson & Middleton site.

In addition to the utility providers described in Exhibit 4, a number of cellular telephone providers in the region use cellular towers to transmit their signals; however, there are no cellular towers in the study area.

EXHIBIT 3
CTC Facility Utility Providers

Utility Provider	Service Provided	Description
Tacoma Power	Electricity	City-owned electric utility and one of the three operating divisions of Tacoma Public Utilities. Generating facilities are hydroelectric; Puget Sound Energy provides additional electrical supply.
Puget Sound Energy	Natural Gas	Supplier of natural gas to the residents and businesses of Tacoma.
Qwest	Communications	Primary provider of local land-line telephone service in Tacoma. Also provides Internet service.
Tacoma Power Click Network	Communications	Provider of Internet and cable television service.
Comcast	Communications	Provider of Internet and cable television service.
Tacoma Water	Water	Supplies water to residents and businesses in Tacoma. Majority of the water supply comes from Green River watershed. There are also 24 groundwater wells located throughout the city.
Tacoma Public Works	Wastewater	All wastewater from Tacoma is collected and treated at one of two wastewater treatment plants. The Central Wastewater Treatment Plant is located west of the CTC site along the Puyallup River.
Tacoma Public Works	Stormwater	Operates the stormwater management facilities, including over 440 miles of stormwater pipe and 21 stormwater ponds.

Sources: City of Tacoma (2007) and Puget Sound Energy (2008).

Aberdeen Log Yard Alternative

Exhibit 5 describes the utility providers for the Aberdeen Log Yard project site. Natural gas and communication providers are the same as those described in Exhibit 4. In addition to the utility providers described in Exhibit 5, there are a number of cellular telephone providers in the region that use cellular towers to transmit their signals; however, there are no cellular towers in the study area.

3. Potential Effects of the Project

This section discusses environmental effects on public services and utilities that would occur during project construction (building the Grays Harbor casting basin facility), project operation (manufacturing the pontoons at the CTC and Grays Harbor facilities and towing them to their respective mooring locations), and over the long term (pontoon moorage). Effects on public services could include potential demands placed on fire services, emergency medical services, police services, and solid waste facilities and services. Effects on utilities could include project design elements that could affect capacity, disrupt service, or impair access and maintenance functions.

EXHIBIT 4

Anderson & Middleton Alternative Utility Providers

Utility Provider	Service Provided	Description
Grays Harbor Public Utility District	Electricity	Owns a biomass generator at the Grays Harbor Paper Plant, which supplies some of the electric power in the project vicinity. The PUD receives 60 percent of its electric power from the Bonneville Power Administration; the remaining power comes from a variety of sources, including wind farms and natural gas-fired combustion turbines. Power lines run along the north boundaries of the site.
CNG Corporation	Natural Gas	The Western Operational Region of CNG Corporation provides natural gas service to Hoquiam. There are no natural gas lines near the site.
Qwest Century Tel Verizon	Communications	Local providers of telephone service and Internet services. Grays Harbor PUD offers wholesale telecommunications services to local communication providers through a partnering arrangement with NoaNet, a nonprofit company that has licensed public purpose fiberoptic cables from the BPA and has run their fiberoptic network parallel to BPA's transmission lines. No telecommunication lines are located near the site.
Comcast	Communications	Provides cable, high-speed Internet, and digital telephone service. There are no cable facilities in the study area.
City of Hoquiam	Water	Provides water service within its city limits, as well as in some outlying areas of unincorporated Grays Harbor County. Water supply comes primarily from a small dam on Davis Creek north of the city and another dam on the West Fork of the Hoquiam River.
Hoquiam Public Works Department	Wastewater	Provider of wastewater service and sewage treatment services within Hoquiam city limits. A pump station is located on the neighboring Port of Grays Harbor property. Wastewater is gravity-fed to the pump station, which conveys effluent directly to the local treatment plant approximately 2 miles west of the Anderson & Middleton Alternative.
Hoquiam Public Works Department	Stormwater	Stormwater from the surrounding area is gravity-fed to a pump station on the project site. Stormwater is routed through ditches and culverts before being discharged into the Hoquiam River.

BPA = Bonneville Power Administration; CNG = Cascades Natural Gas; PUD = public utility district
 Source: City of Hoquiam (2007).

How did WSDOT evaluate project effects on public services and utilities?

To analyze the effects of the alternatives, the public services and utilities discipline team reviewed existing conditions and the project designs and haul routes to identify areas of concern. Using information from the project design team and from the public service and utility providers, the discipline team determined whether any public service would be affected or if any utility would have to be relocated or modified.

EXHIBIT 5

Aberdeen Log Yard Alternative Utility Providers

Utility Provider	Service Provided	Description
Grays Harbor Public Utility District	Electricity	Provider of electricity to Aberdeen; there is a substation located just west of the site (Exhibit 2).
Aberdeen Public Works Department	Water	Provides residential and industrial grade water service within Aberdeen city limits, as well as in Cosmopolis and some areas of unincorporated Grays Harbor County. A water main for residential water service is located just west of the site. The Wynoochee River is the source of the industrial grade water and a pipeline is located just north of the proposed project site.
Aberdeen Public Works Department	Wastewater	Provider of wastewater service and treatment within the Aberdeen city limits. Wastewater is collected via a collection system consisting of 16 lift stations and 82 miles of sanitary sewer. Wastewater is treated at the treatment plant located immediately east of the proposed project site.
Aberdeen Public Works Department	Stormwater	Operates and maintains the stormwater facilities, which consist of approximately 21 miles of open ditches, 8 miles of culverts, 5 miles of flood dikes, and 17 stormwater pump stations. A pump station is located just east of the proposed project site. Drainage eventually flows into Grays Harbor.

Sources: Grays Harbor PUD (2008) and City of Aberdeen (2008).

How would construction of the casting basin affect public services and utilities?

CTC Facility

There would be no construction effects on the CTC facility study area because the facility is already fully operational.

Grays Harbor Build Alternatives

During construction of the casting basin facility at the Grays Harbor alternative sites, due to the potential for onsite accidents there would be an increased need for emergency medical aid from the fire departments to respond to calls. A health and safety plan would be developed and in place to minimize onsite accidents. Increased police security could also be needed during construction to deter theft, vandalism, or trespass. To provide utility service to the project site, there might be a need to connect to utility lines and/or cables. This could result in one or more brief outages for some customers over a temporary period at construction startup.

Truck haul routes have been established for the delivery and removal of materials to and from the Grays Harbor project sites. These routes, shown in Exhibit 2, would follow

What are construction, operational, and long-term project effects and how are they measured?

Effects describe how the project would directly affect the built or natural environment.

Construction effects are effects that would occur while the new casting basin, ancillary and pontoon moorage facilities, and any mitigation features are built.

Operational effects are effects that would occur when the pontoons are being built at the new casting basin facility in Grays Harbor County and at the CTC facility in Tacoma.

Long-term effects are effects that would remain after pontoon production is complete, effects of mooring pontoons over an indefinite period of time, and effects associated with mitigation features expected to remain after completion of the project.

principal arterials to and from Hoquiam and Aberdeen. Within the cities, access routes to the sites would be in predominantly industrial areas. Truck operators would not be allowed to detour from these routes and would be required to obey all traffic regulations. Although there would be an increase in construction traffic along the haul routes, the increase is not anticipated to result in additional need for public services or result in any negative effects on response and travel times of public service vehicles. The effects on response and travel times is a qualitative assessment and based on information in the Transportation Technical Memorandum (WSDOT 2009a), which indicates that transportation operations (that is, level of service) should remain similar to what it is today along the haul routes.

No Build Alternative

Under the No Build Alternative, there would be no construction-related effects on any of the public services and utilities in the study area because no action would be undertaken.

How would pontoon-building operations affect public services and utilities?

CTC Facility

There would be no operational effects on public services or utilities because using the CTC casting basin for pontoon fabrication would not alter its present industrial use or increase demand on any public service or utility. Because the utilities have sufficient capacity to support pontoon manufacture, their service would not be disrupted. Although there would be a temporary increase in truck traffic along the haul routes used for delivering materials required to manufacture the pontoons, the increase would not result in additional need for public services or otherwise affect public service providers because the study area already sustains similar variations in traffic loads.

Grays Harbor Build Alternatives

Operation of the build alternatives in the Grays Harbor area could result in a slight increase in demand for police and emergency medical services typical of an industrial work site; however, this effect would not result in the need for any additional staffing beyond current levels. In addition, public service providers may be required to respond to calls at the project site as a result of trespass or vandalism, but this should not result in the need for additional staffing.

Water, sewer, power, phone, and possibly fiberoptic cables would be extended to the selected project site and provided by local utilities. Although the utilities all have local access to the build alternatives, there might be a need for site-specific utility infrastructure improvements to provide sufficient capacity. No substantial effects on public services and utilities are expected.

No Build Alternative

Under the No Build Alternative, there would be no operation-related effects on any of the public services and utilities in the Grays Harbor study area because no action would be undertaken.

How would the project affect public services and utilities in the long term?

Grays Harbor Build Alternatives

There would be no long-term effects on public services and utilities as a result of the project. Public service providers may be required to respond to calls at the project site as a result of trespass or vandalism during periods of time when the project is not in operation, but this would not result in the need for additional staffing. Utility providers would still be able to provide service to the site. However, because the casting basin would not remain in active use, there would be no long-term effects. If required, utility providers could provide maintenance-level service to the site (for example, Grays Harbor PUD could provide electric power) until the site were needed again.

Pontoon moorage in Grays Harbor is not expected to result in any effects on public services because the pontoons would be stored outside of the navigation channel and identified with navigation lighting to ensure the pontoons are visible to marine traffic and avoid accidents.

The pontoons built at the CTC casting basin would be moored at existing marine berths in Puget Sound, so no long-term effects related to moorage and public services are anticipated. The pontoons would be identified with navigation lighting to ensure their visibility to marine traffic and avoid accidents.

No Build Alternative

There would be no long-term effects on public services and utilities if the project were not built because no action would be taken.

How would the alternatives compare in their effects on public services and utilities?

There would be no major differences in the effects of the build alternatives on public services and utilities. However, because the Anderson & Middleton Alternative would have longer haul routes through the cities of Aberdeen and Hoquiam, it would have a slightly greater chance for accidents and the need for police and emergency medical services, in comparison with the Aberdeen Log Yard Alternative.

4. Mitigation

What measures would WSDOT propose to reduce negative effects on public services and utilities?

If the proposed action is undertaken, effects on public services and utilities are likely to be minimal. During project design, construction, and operation, WSDOT would coordinate with public service and utility providers on a continuing basis to ensure that the effects of building and operating the project are understood in advance, planned for, and kept to a minimum.

Construction

Mitigation by WSDOT to avoid or minimize adverse construction effects could include the following measures:

- Coordinating closely with utility providers to minimize service interruptions.
- In the event of temporary waterline shutdowns, notifying and coordinating with the appropriate fire department and public works department.
- In the event of temporary utility service interruptions, notifying area businesses and residents and providing a schedule of construction activities in the affected areas.
- Coordinating with public service providers and providing them with construction schedules to minimize the effects of utility relocations on public services.
- Coordinating with law enforcement agencies to keep them fully informed about the project construction schedule, activities, locations, and haul routes.

Operation

Operational effects on public services and utilities would relate primarily to transporting materials required for pontoon manufacture to the CTC facility and Grays Harbor alternatives. WSDOT would coordinate with public service providers, including law enforcement agencies, to keep them fully informed about the project operation schedule and use of the haul routes.

How could the project compensate for unavoidable negative project effects?

No compensatory mitigation would be required during or after construction and operation of the proposed project because it would have no unavoidable negative effects on public services or utilities.

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