

Chapter 14 Public Services and Utilities

1 What are the existing public services and facilities in the region?

This chapter discusses existing public services and facilities in the central Puget Sound region, and what effects the elements of the regional transportation plan will have on these facilities. The following public services and facilities are discussed:

- Solid waste
- Sanitary sewer
- Water supply
- Fire protection and police services
- Health and emergency services (including hospitals)
- Schools

Public services not discussed here are covered in other chapters. Stormwater is discussed in Chapter 9: Water Quality and Hydrology, parks and recreation facilities are discussed in Chapter 15: Parks and Recreation, and energy and electrical utilities are discussed in Chapter 11: Energy.

Solid Waste

Each of the four counties in the region has a solid waste division to implement its Solid Waste Management Plan. This plan covers all aspects of waste management from curbside collection to long-term monitoring of landfills. County public health departments enforce solid waste rules, issue operating permits for local solid waste facilities and collection vehicles, monitor historical landfills, and screen waste for any special handling needs. County construction and land development

Which elements of Washington Administrative Code (WAC) 197-11-444 are addressed in this chapter?

This chapter addresses:

- Section (2)(d)(i) Fire
- Section (2)(d)(ii) Police
- Section (2)(d)(iii) Schools
- Section (2)(d)(v) Maintenance
- Section (2)(d)(vi) Communications
- Section (2)(d)(vii) Water/storm water
- Section (2)(d)(viii) Sewer/solid waste
- Section (2)(d)(ix) Other governmental services or utilities

What is the purpose of a Solid Waste Management Plan?

The plan provides a decision-making framework for managing solid waste. More specifically, it provides a mechanism for determining individual actions to take that support overall program objectives and goals. The plan also provides the tools for both budgeting and sequencing tasks in a logical order, allowing programs to focus on specific objectives without losing sight of greater goals.

departments issue land use and building permits for solid waste facilities.

Sanitary Sewer

Sanitary sewer service in the Puget Sound region is provided by cities, counties, special purpose districts, and tribal nations. Gravity sewer systems are the preferred method of conveying wastewater. In areas where the topography reduces the viability of this method, a sewage pump station is required. Most collection systems are within roadway rights of way, connecting to major treatment plants located throughout the region.

Water Supply

Water in the four-county region is supplied by a variety of sources that are classified as either public or private. Public water sources include municipalities and water districts. Private water systems are usually located in non-urbanized areas. Water sources in the four-county region include surface water and groundwater. Many of the major water supply distribution lines, particularly in urban communities, are located in roadway rights of way.

Fire Protection and Police Services

Emergency services include fire, safety, and police services, which are provided by cities, counties, and special purpose districts throughout the four-county region, and by the State Highway Patrol. Individual jurisdictions may have their own police and fire departments or may contract with other jurisdictions, such as adjacent cities or their county, to provide the services.

Health and Emergency Medical Services (including hospitals)

There are more than 40 major hospitals in the central Puget Sound region, with the highest concentrations found within the major metropolitan cities of Seattle, Bellevue, Tacoma, Everett, and Bremerton.

Each county in the region also provides a variety of non-hospital social services and health care facilities as follows:

What is the purpose of a sanitary sewer system?

It moves wastewater from its source to a treatment facility, where it is treated to meet federal and state water quality standards.



Pump stations collect and pump raw sewage to treatment plants.

Source: Parametrix, Inc.



Improved transportation networks could improve response times for emergency services.

Source: www.publicdomainpictures.com

For more information on emergency medical services regulations refer to:

<http://www.doh.wa.gov/hsqa/emstrauma/rcwindex.htm>

- **King County** – King County Department of Community and Human Services provides community services; mental health care, chemical abuse, and dependency services; and services related to developmental disabilities.
- **Kitsap County** – Kitsap County Health Department's Office of Community Health provides clinical services, a parent and child health program, HIV/AIDS programs, health promotion, and jail and juvenile detention programs.
- **Pierce County** – The Pierce County Department of Community Services and the Department of Human Services provide aging care services, developmental disabilities services, chemical dependency treatment and prevention services, mental health services, housing services, and a variety of other services.
- **Snohomish County** – Snohomish County Department of Human Services provides mental health services, long-term care and aging services, homeless services, alcohol and chemical dependency services, and other community-based services.

Schools

Public schools and school districts within the region provide primary and secondary education from grades K-12. Districts range in geographic coverage from large districts encompassing several cities or areas of counties to districts that occur largely within a single city. Many school districts use a combination of transportation services for their students, operating school bus fleets on designated routes typically for grade school children. In areas where public transit is not available, school bus routes also serve higher grade levels.

2 What common effects will the new regional transportation plan alternatives have on public services and utilities?

Given the minor land use differences among the alternatives (as discussed in Chapter 3: Plan Alternatives), few land use-related effects are expected on public services and utilities from the alternatives. These effects could include solid waste generation, sanitary sewer generation, water supply usage, and

school enrollments. There could be differences among the alternatives in terms of safety, access, and mobility for fire, police, and health services, as well as safety, access, and mobility to schools.

Most public service providers would experience relatively few long-term adverse effects from the alternatives. In most cases, public services would benefit from improved transportation services and facilities, although at different levels among the transportation alternatives. Longer-term costs for the improvement and replacement of utilities, particularly water and sewer conveyance systems, can also be reduced if they are combined with transportation improvement projects.

On a project-level basis, access routes for public service facilities could be altered or relocated. New or expanded transportation facilities could also create physical or perceived barriers, reducing the ease of access to some public facilities. It is also possible that public service facilities may be relocated with specific projects; however, this is rare and can usually be avoided.

Positive effects could include the following:

- Increased mobility and accessibility within the region, including medical, educational, and community services
- Improved travel times and reduced delay for emergency service providers and other public services

Negative effects could include the following:

- Travel costs could increase due to time delays, imposition of tolls, or other financing tools.
- Exclusive or partially exclusive rights of way, such as for light rail, streetcar, or bus, could impede access and circulation, potentially increasing travel times or delays for public service providers.
- The development or expansion of park-and-ride lots, transit stations, ferry terminals, and other passenger facilities could increase localized traffic and the potential need for



Public utilities can be installed during construction of transportation projects.

Source: Parametrix, Inc.

public services related to safety, security, and emergency response.

- Differences in the amount of regionwide travel, and the related changes in the amount of air pollution (refer to Chapter 6: Air Quality and Climate Change) could affect public health and therefore the use of health services.

Construction Effects

Effects on public services and utilities during construction may be unavoidable, but would be temporary. Public services could be affected in the following ways:

- Access to public services near construction sites may be impeded by traffic restriction, displacement of parking or loading areas, road closures for project construction and utility relocation, or other factors.
- Public and community services could be affected by disruption of utility services related to planned or accidental outages.
- Below-ground construction may also disrupt water, electrical, communications, or other utility services. These disruptions are typically minimized through coordination with service providers, and effects would likely be short-term temporary inconveniences.
- Emergency vehicles may be temporarily impeded along or across roadways directly involved in project construction, or on adjacent roadways due to increased congestion.
- Additional police support may be required to direct and control pedestrian movements during construction in high-traffic areas.
- Construction would generate substantial amounts of construction, demolition, and land-clearing waste, which would affect solid waste disposal services. The magnitude of these effects would depend on the amount of construction for each project.
- Construction effects could require substantial relocation of existing utilities, which may disrupt services temporarily.



Construction of transportation projects may cause temporary utility interruptions.

Source: Parametrix, Inc.

3 What effects are specific to individual alternatives?

Effects due to Delay

As shown in Exhibit 14-1, under the Baseline Alternative, long-term effects would include an increase in congestion on surface streets and freeways, which would in turn affect the provision of public services. General public service vehicles such as school buses, mail delivery vehicles, and solid waste collection trucks would experience delays due to traffic congestion. Emergency service vehicles could also experience increased delays, and response calls could potentially increase as congestion contributes to additional accidents.

Exhibit 14-1¹
Hours of Delay by Alternative

Vehicle Delay Hours	Base Year 2006	Baseline Alt	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Preferred Alt (Constrained)
Freeway	281,000	513,000	469,000	458,000	224,000	215,000	136,000	190,000
Arterial	560,000	932,000	884,000	884,000	943,000	1,011,000	897,000	866,000
Total delay	841,000	1,445,000	1,353,000	1,342,000	1,167,000	1,226,000	1,033,000	1,055,000
Delay per capita (minutes)	14.3	17.4	16.3	16.1	14.0	14.7	12.4	12.7

All of the action alternatives are estimated to have less delay than the Baseline Alternative. Among the action alternatives, Alternative 1 is estimated to result in the most delay and Alternative 5 is estimated to result in the least delay. Therefore, Alternative 1 would likely result in the most negative effect to the provision of public services. Alternative 5, which is estimated to reduce delay below the 2006 base year in addition to the 2040 Baseline Alternative, would likely result in the most positive effects to the provision of public services.

The Preferred Alternative is estimated to have the second-least delay of the action alternatives. Therefore, the Preferred Alternative would likely result in the second most positive effects to the provision of public services. While the full

¹ This exhibit has changed since the DEIS.

Preferred Alternative is estimated to have less delay, the constrained portion of the Preferred Alternative is noted here because, as explained in Chapter 3: Plan Alternatives, chapters in this FEIS will address either the full or constrained plan, whichever would have the greater effect upon the environment.

Even though total hours of delay in each action alternative are lower than in the Baseline Alternative, the hours of arterial delay in Alternatives 3 and 4 are greater than in the Baseline Alternative. Because the provision of many public services relies on use of arterials, these alternatives could result in greater negative effects on the provision of public services than would result from the Baseline Alternative.

Effects due to Factors Discussed Elsewhere in this FEIS

The provision of public services could be affected by several factors discussed elsewhere in this FEIS.

Access to and among regional centers would be altered under each alternative, which could affect provision of public services. Please refer to Chapter 3: Plan Alternatives for information about the potential future transportation networks.

The total amount of travel (measured by regional vehicle miles traveled or VMT) throughout the region would vary in each alternative. Alternatives with higher VMT could increase the need for certain public services, such as roadway maintenance and emergency services. Please refer to Chapter 4: Transportation for information about VMT.

On tolled roads, some public service providers could face increased costs for transportation. This could affect access to health services, and possibly access to schools, if mitigating actions are not implemented or adopted. Please refer to Chapter 4: Transportation for information about tolling.

Effects due to Construction of New Infrastructure

The types of effects described in the response to Question 2 could occur under any of the proposed Transportation 2040 alternatives, including the Baseline Alternative. This question does not seek to identify specific effects to public services and utilities. Instead, it uses the amount of new transportation

Why does this FEIS not list the specific environmental effects caused by each alternative?

Each of the Transportation 2040 alternatives contains hundreds of individual projects. If constructed in the future, these projects could affect the region's built and natural environments.

For some environmental disciplines, such as transportation or air quality, these projects could affect the environment in the vicinity of the project and also could collectively affect the regional environment. For these disciplines, this FEIS contains an analysis to evaluate the potential regional effects of these projects. The localized effects for these environmental disciplines will be identified in a future project-level environmental review.

For other environmental disciplines, such as public services and utilities, individual projects could affect the public services and utilities in their vicinity, but would not affect public services and utilities elsewhere in the region. Therefore, this FEIS does not contain a regionwide analysis for these disciplines. Future project-level environmental review will identify the specific localized effects on these environmental areas.

infrastructure contained in each alternative to compare the possible total effect to public services and utilities in the region.

As noted in the sidebar, this plan-level FEIS will not list the specific individual effects that could result from all of the projects contained in each Transportation 2040 alternative. In addition, it is not practicable to conduct a regionwide evaluation of the collective effect on the region's public services and utilities from all projects. Therefore, this plan-level FEIS does not contain a regionwide analysis of public services and utilities.

However, it is possible to provide an approximation of which alternatives could result in the greatest number of effects on public services and utilities. The Transportation 2040 alternatives contain varying levels of new transportation infrastructure (Exhibit 14-2). It is likely that the alternatives with the most new infrastructure would result in the greatest number of effects on public services and utilities.

As shown in Exhibit 14-2, all of the alternatives contain similar amounts of new infrastructure, which is measured as a percentage of the total system (3 to 9 percent). Alternative 2 contains the greatest number of new miles of road and rail, while the Baseline Alternative contains the fewest. Of the action alternatives, Alternative 1 contains the fewest new miles of roads and rail. Therefore, Alternative 2 would likely result in the highest number of effects on public services and utilities and the Baseline Alternative would likely result in the lowest number. Among the action alternatives, Alternative 1 would likely result in the fewest effects on public services and utilities. The number of effects resulting from Alternatives 3, 4, and 5 would likely fall between the overall number of effects expected for Alternatives 1 and 2.

Exhibit 14-2²**Miles of New Infrastructure Included in Each Alternative**

Facility Type	Base Year 2006	Baseline Alt	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Preferred Alt
Systemwide freeway and arterial lane miles	12,806	13,153	13,352	14,013	13,540	13,489	13,329	13,764
New freeway and arterial lane miles	-	348	546	1,208	735	683	523	958
Portion of new lane miles in new corridors	-	30	40	240	218	159	40	248
Light rail miles	2	55	55	82	55	82	82	86
New light rail miles		53	53	80	53	80	80	84
Commuter rail miles	74	82	82	82	82	82	128	128
New commuter rail miles	-	8	8	8	8	8	54	54
Total new miles of road and rail	-	409	607	1296	796	771	657	1096
Percent increase from 2006	-	3%	4%	9%	6%	5%	4%	7%
Nonmotorized facility miles	570	600	747	745	740	745	1058	1123
New nonmotorized facility miles	-	30	177	175	170	175	488	553

The Preferred Alternative includes the second-greatest number of new miles of roads and rail. Therefore, the Preferred Alternative would likely result in the second-greatest number of effects on public services and utilities.

The comparisons presented here are intended to approximate the number of effects expected from each alternative and do not identify specific effects to public services and utilities. Future project-level environmental review will identify these effects.

4 What cumulative effects will the plan have on public services and utilities?

As the population in the region grows, the demand for public services and utilities will increase. The cumulative impacts of the plan's alternatives would generally be beneficial, providing a greater array of transportation choices and improved transportation services. If financial and access impacts are

What are cumulative effects?

Cumulative effects address the impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

² This exhibit has changed since the Draft EIS (DEIS).

mitigated, the plan alternatives would result in an overall benefit to users of public services, and potentially lower costs for public service providers due to improved travel times and reduced delays.

Future cumulative effects on public services and utilities could be affected by other regional plans and actions. Local jurisdictions throughout the region may revise their existing land use plans to be consistent with VISION 2040 and complement the Transportation 2040 Preferred Alternative. New development resulting from these plans could have both positive and negative effects on the environment.

PSRC has performed an analysis of the development pattern changes that could result from the transportation alternatives (refer to Chapter 5: Land Use, Population, Employment, and Housing) and has concluded that none of the Transportation 2040 alternatives would induce future land use and development pattern changes that are substantively different than the Baseline Alternative. In addition, all of the Transportation 2040 alternatives are consistent with the adopted VISION 2040 Regional Growth Strategy. Therefore, none of the Transportation 2040 alternatives would result in additional cumulative effects on public services and utilities.

5 What are the potential mitigation measures that can be employed?

Although project-level environmental review of specific projects would identify and evaluate specific public service facility impacts for which suitable avoidance or mitigation measures would be identified, different mitigation approaches may be necessary for the different transportation alternatives. For construction impacts, street closures, detours, or other permanent or temporary street-capacity restrictions, these impacts would be reviewed by local jurisdictions and affected emergency services to ensure maintenance of adequate service levels. Permanent emergency service access changes could be implemented to preserve the minimum standard of service set by appropriate agencies.

Potential mitigation measures for impacts on solid waste services could include minimizing waste generation; promoting recycling at transit stations and park-and-ride lots; recycling and disposing of construction, demolition, and land-clearing waste generated by projects; and using recycled materials and products during project construction as appropriate.

Site-sensitive environmental design at commuter rail and light rail stations, bus stop areas, and park-and-ride lots could be implemented to minimize security issues. Facilities, equipment, and operations could be planned to minimize the likelihood of emergency incidents or need for special security services. Emergency communication systems could also be provided, along with plans for evacuation and emergency access.

Construction would be closely coordinated with affected utilities, and a plan could be developed for preventing or offsetting unexpected or emergency shutdowns. Applicable code requirements would be followed for construction of new structures and relocation of existing utilities. Policies regarding notification of changes in utility operation and level of service would be followed. Project design and construction will comply with all federal, state, and local standards and would be coordinated with emergency service providers as appropriate.

6 Are there any significant unavoidable adverse effects?

No significant unavoidable adverse impacts to public services or utilities are expected with the Baseline Alternative or the action alternatives. Specific impacts to public services and utilities would be evaluated and potential mitigation measures would be identified during project-level environmental review.

What is site-sensitive environmental design?

It is an approach to design that puts transportation needs, community values, and environmental goals on an equal footing in determining the final project design.
