

Whatcom County 20-Year Capital Facilities Plan

Whatcom County Comprehensive Plan – Appendix E ■ July 26, 2016
Draft

This Appendix E entirely replaces
the former Appendix E and,
therefore, only contains new text.
For ease of reading, underlines
have been omitted

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Chapter 1 - Introduction

Capital facilities, such as parks & recreation facilities, County buildings, law enforcement & criminal justice facilities, transportation, stormwater, water, sewer, school, and fire protection facilities are important because they support the growth envisioned in the Whatcom County Comprehensive Plan. Capital facilities generally have very long useful lives, significant costs, and are not mobile.

The focus of this 20-Year Capital Facilities Plan (CFP) is supporting the County's review of urban growth areas and planning needed public facilities for the County's population. County facility plans, city plans, special district plans, population, adopted level of service (LOS) standards and other demand indicators are the principal factors considered in the CFP. This CFP addresses both the six year period from 2017-2022 and, more generally, the seven to twenty year planning period from 2023-2036.

Growth Management Act

Growth Management Act (GMA) Planning Goal # 12 is to:

Ensure that those public facilities and services necessary to support development shall be adequate to serve the development at the time the development is available for occupancy and use without decreasing current service levels below locally established minimum standards (RCW 36.70A.020(12)).

The CFP is required by the GMA under RCW 36.70A.070. The GMA requires the CFP to identify facilities, include a realistic financing plan, and make adjustment to the plan if funding is inadequate. Specifically, RCW 36.70A.070(3) requires the capital facilities plan to include:

- (a) An inventory of existing capital facilities owned by public entities, showing the locations and capacities of the capital facilities;
- (b) a forecast of the future needs for such capital facilities;
- (c) the proposed locations and capacities of expanded or new capital facilities;
- (d) at least a six-year plan that will finance such capital facilities within projected funding capacities and clearly identifies sources of public money for such purposes; and
- (e) a requirement to reassess the land use element if probable funding falls short of meeting existing needs and to ensure that the land use element, capital facilities plan element, and financing plan within the capital facilities plan element are coordinated and consistent.

CFP Purpose

In 2016, the County completed the required urban growth area (UGA) review in which the County considered growth forecasts and allocations, urban growth boundaries, and comprehensive plan designations. Projected population and employment growth to 2036 is a key assumption of this CFP. The purpose of the CFP is to plan adequate public facilities consistent with the Comprehensive Plan's land use element, including UGA planning.

CFP Assumptions

This CFP is based on the following sources of information and assumptions:

- **County Facility Plans:** The County updates the *Six-Year Capital Improvement Program for Whatcom County Facilities* every other year and this six-year plan informs the 20-Year CFP. The County updates this 20-Year CFP, which also includes information relating to capital improvements in years 7-20, at least every eight years at the state-required periodic update of the Comprehensive Plan.
- **Service Provider Plans:** The capital plans of cities, special purpose districts, and other service providers, particularly those serving UGAs, were collected and reviewed including inventories, forecast of future needs, planned facilities, growth forecasts, and potential funding.
- **Growth Forecasts:** Forecasts of population and job growth were allocated to each UGA and the rural areas. The 2013 population and employment and the 2036 growth for each capital facility service provider were then estimated by special district boundary.
- **Revenue Forecasts:** Forecasts of revenues for County facilities were prepared out to the 2036 horizon year (Chapter 16). The revenue sources for city and special district service providers are summarized from available plans.

Special Purpose District Plans

Special purpose districts provide a number of facilities addressed by this CFP, including water, sewer, schools, and fire protection. Some of these special districts have prepared their own capital plans that provide information for these facilities. Specifically, with regard to special purpose district plans, Washington Administrative Code 365-196-415(4) indicates that the County should:

- (a) Summarize the information within the capital facilities element;
- (b) Synthesize the information from the various providers to show that the actions, taken together, provide adequate public facilities; and
- (c) Conclude that the capital facilities element shows how the area will be provided with adequate public facilities.

Special districts play an important role in supporting the County’s land use plans. Information from special district plans, when available, has been summarized in this CFP.

CFP Organization

The CFP contains the inventory of existing facilities and presents a summary of capital improvement projects and financing to pay for these projects.

Each type of public facility is presented in a separate chapter, which generally follows the format shown below.

- **Inventory of Current Facilities:** A summary of existing capital facilities.
- **Forecast of Future Needs:** A forecast of future capital facility needs, which may include review of the County or service provider level of service (LOS) or design standards if applicable, is presented for each type of public facility.
- **Capital Projects and Funding:** A summary of capital improvements proposed through the planning period. A more detailed plan for County facilities is provided in the *Six-Year Capital Improvement Program for Whatcom County Facilities 2017-2022*, while generalized County capital improvements and funding for the remainder of the planning period (2023-2036) are identified in this 20-year CFP. For non-County providers, capital projects identified in the service providers’ most recent plans are summarized.

Chapter 2 – Parks, Trails and Activity Centers

The Whatcom County Parks and Recreation Department mission statement is to enrich the quality of life for the community and preserve the natural and cultural heritage of the County through provision of outstanding parks and trails, open space and natural areas, as well as recreational activities and senior services. Whatcom County government accomplishes this mission by providing a variety of recreational facilities, services and programs to residents and visitors.

In addition, there are three special parks districts that include land in unincorporated portions of the County. These parks and recreation districts are presented after County facilities.

Inventory of Current Facilities – County Facilities

County Parks, Trails and Activity Centers

The 2016 inventory of Whatcom County recreation facilities includes approximately 14,700 acres of park and open space area, 65 miles of trails, and 13 activity centers, as shown in more detail in the *Six-Year Capital Improvement Program for Whatcom County Facilities*.

Future Needs – County Facilities

Whatcom County Comprehensive Plan Policy 4F-1 (in Chapter 4) establishes level of service standards for developed parks and trails, as shown below.

Parks and Trail Level of Service (LOS) Standards

Category	LOS Standard
Developed Parks	9.6 acres per 1,000 population
Trails	0.60 of a mile per 1,000 population

Developed Parks - Forecast of Future Needs

A level of service of 9.6 acres of developed parkland for every 1,000 people in the County was adopted in the Whatcom County Comprehensive Plan. With a projected county-wide population of 275,450 in the year 2036, the County’s existing parks will meet the adopted level of service over the 20-year planning period. However, the County is proposing park improvement projects to increase quality of existing park facilities and develop the Birch Bay Community Park to meet the longer term needs of a growing population.

Trails - Forecast of Future Needs

A level of service of 0.60 miles of trails for every 1,000 people in the County was adopted in the Whatcom County Comprehensive Plan. With a projected county-wide population of 275,450 in

the year 2036, almost 100 additional miles of trails would be needed over the 20-year planning period to serve the people of Whatcom County.

Activity Center - Forecast of Future Needs

The Whatcom County Comprehensive Plan does not contain a level of service standard for activity centers. Rather, the Comprehensive Plan Policy 4F-5 states:

Continue to provide and support activity centers, including senior centers, to serve the growing population of Whatcom County by the following methods, as needed, which are listed in priority order: (1) implementing programming changes, (2) adding space to existing centers, and/or (3) establishing new centers.

Capital Projects and Funding – County Facilities

Developed Parks

Park projects anticipated in the six-year planning period include approximately \$2.2 million in improvements. These projects, and their associated funding sources, are shown in the *Six-Year Capital Improvement Program for Whatcom County Facilities*. It is anticipated that approximately \$500,000 would be spent annually on various park projects throughout the 7 to 20 year planning period. These costs would be paid from Real Estate Excise Tax (REET), grants, and foundation funds. The County will also monitor the adequacy of County park facilities throughout the planning period and consider other capital improvements and maintenance projects if warranted in the future.

Trail Improvements

Trail projects anticipated in the six-year planning period include approximately \$3.5 million in improvements. These projects, and their associated funding sources, are shown in the *Six-Year Capital Improvement Program for Whatcom County Facilities*. It is anticipated that approximately \$326,000 would be spent annually on various trail projects throughout the 7 to 20 year planning period. These costs would be paid from REET and grant funds. The County will also monitor the adequacy of County trail facilities throughout the planning period and consider other capital improvements and maintenance projects if warranted in the future.

Activity Centers

Activity Center projects anticipated in the six-year planning period include approximately \$125,000 in improvements. These projects, and their associated funding sources, are shown in the *Six-Year Capital Improvement Program for Whatcom County Facilities*. It is anticipated that approximately \$23,000 would be spent annually on various activity center projects throughout the 7 to 20 year planning period. These costs would be paid from REET and grant funds. The County will also monitor the adequacy of activity centers throughout the planning period and consider other capital improvements and maintenance projects if warranted in the future.

Regional Parks Districts

There are three regional park districts that include land area in unincorporated Whatcom County:

- Point Roberts Park & Recreation District 1;
- Blaine-Birch Bay Park & Recreation District 2; and
- Lynden Regional Parks & Recreation District 3.

Point Roberts Park & Recreation District 1

The Point Roberts Park and Recreation District does not have a capital facilities plan or master plan. However, the voters of the District approved a proposition on November 5, 2013 for Community Center Capital Improvements General Obligation Bonds in the amount of \$250,000. This proposition authorized the District to replace the roof and HVAC systems of the community center, improve drainage on the site, and make other capital improvements to maintain and improve the safety and structural soundness of the center. The proposition authorized the District to issue \$250,000 of general obligation bonds maturing within a maximum 10 years and to levy property taxes annually, in addition to regular tax levies, to repay the bonds.

Blaine-Birch Bay Park & Recreation District 2

The *Blaine-Birch Bay Park & Recreation District 2 Master Plan Document* was adopted by the Blaine-Birch Bay Park and Recreation District 2 Commissioners on February 9, 2016 (Resolution # 2016-1). The *Master Plan* states:

. . . The Blaine-Birch Park and Recreation District 2 (Formerly Northwest Park and Recreation District 2) has been in existence since 1979. From the time of the original inception of the District, the area has gone through significant change and growth. New homes, businesses and residents have come to the area over the past twenty years. Residents with a wide range of ages and interests now live in the District. Park, recreation and trail needs are becoming very important to the livability of the region. . . (p. 18).

The *Master Plan* contains a facility inventory identifying park and recreation facilities within the District (pp. 24-34), recommended LOS standards (pp. 20-21), funding options and methods (p. 35), and a six-year capital improvement program that includes \$1.5 million in trail connection improvement projects in 2016-2017 (pp. 36-37).

The voters of the District approved a proposition on November 5, 2013 to assess a regular property tax levy for a four year period (2014-17) of \$0.10 per \$1,000.00 of assessed valuation to fund staffing, operations, maintenance, and capital improvements to improve recreation and leisure time activities and opportunities for people of all ages in the greater Blaine-Birch Bay area.

Lynden Regional Parks and Recreation District 3

The Lynden Regional Parks and Recreation District is currently in the process of updating their master plan. The voters of the District did not approve a proposition on November 6, 2012 that would have authorized the District to purchase an indoor recreation facility, to issue \$9,500,000 of general obligation bonds maturing within a maximum term of 30 years to finance acquisition of such facility, and to levy property taxes annually in excess of regular property tax levies to repay such bonds.

Chapter 3 – Maintenance & Operations

Inventory of Current Facilities

The 2016 inventory of County maintenance and operations/facilities management space is 44,411 square feet located at 901 W. Smith Rd. (the Central Shop), 316 Lottie St. and 2030 Division Street, as shown in more detail in the *Six-Year Capital Improvement Program for Whatcom County Facilities*.

Future Needs

Chapter 4 of the Whatcom County Comprehensive Plan does not contain LOS standards for maintenance and operations facilities. Rather, it contains goals and policies supportive of providing adequate County facilities.

Capital Projects and Funding

The following capital improvement projects are anticipated in the six-year planning period: A new vector truck garage and the Central Shop exhaust system. These improvements will cost approximately \$400,000, which will be paid with the funding sources shown in the *Six-Year Capital Improvement Program for Whatcom County Facilities*.

There are no capital improvement projects currently identified that would add maintenance and operations space within the 7 to 20 year planning period. However, the County will monitor the adequacy of maintenance and operation facilities throughout the planning period and consider capital improvements if warranted in the future. Maintenance projects will be undertaken as needed.

Chapter 4 – General Government Office Buildings and Sites

Inventory of Current Facilities

The 2016 inventory of County general government office buildings and sites is 306,691 square feet at eight locations, as shown in more detail in the *Six-Year Capital Improvement Program for Whatcom County Facilities*.

Future Needs

Chapter 4 of the Whatcom County Comprehensive Plan does not contain LOS standards for maintenance and operations facilities. Rather, it contains goals and policies supportive of providing adequate County facilities. Specifically, Comprehensive Plan Policy 4A-1 is to “Plan appropriate county facilities commensurate with the ability of the county to fund them.”

Capital Projects and Funding

Capital improvement projects anticipated in the six-year planning period include improvements to the Whatcom County Courthouse (311 Grand Ave.), 509 Girard St., 1500 N. State St., the Civic Center (322 North Commercial), Northwest Annex (5280 Northwest Dr.) and multiple other locations. Additionally, a new mental health triage center is planned. These improvements will cost approximately \$23.2 million, which will be paid with the funding sources shown in the *Six-Year Capital Improvement Program for Whatcom County Facilities*.

Capital improvement projects in the 7 to 20 year planning period include a \$34 million dollar Courthouse exterior project, which would be paid with bond proceeds that would be repaid from the General Fund, Real Estate Excise Tax (REET I) and/or Economic Development Initiative (EDI) program funds. Additionally, approximately \$700,000 to \$1,000,000 would be spent annually on various general maintenance projects. These costs would be paid from REET I and/or EDI funds.

The County will also monitor the adequacy of County buildings throughout the planning period and consider capital improvements and maintenance projects if warranted in the future.

Chapter 5 – Sheriff’s Office

Inventory of Current Facilities

The 2016 inventory of Sheriff’s Office space is 23,326 square feet at six locations, as shown in more detail in the Six-Year Capital Improvement Program for Whatcom County Facilities.

Future Needs

Chapter 4 of the Whatcom County Comprehensive Plan does not contain LOS standards for Sheriff’s Office space. Rather, it contains goals and policies supportive of providing adequate Sheriff’s Office facilities. Specifically, Comprehensive Plan Policy 4D-2 is to:

Maintain Sheriff’s Office adult corrections facilities and headquarters to provide a safe environment for the community, staff and inmates. . . Existing facilities may be expanded, remodeled, and/or new facilities developed in response to changing need.

Most Sheriff’s Office functions are currently based in the Public Safety Building adjacent to the Courthouse and are remote from the majority of Sheriff’s Office Bureau of Law Enforcement and Investigative Services functions that take place in unincorporated Whatcom County. This results in inefficiencies and delays. Space and design factors in current facilities preclude consolidating various functions performed throughout the agency (reception, finance, etc.) and result in redundancies. Because of these issues, existing Sheriff’s Office facilities and associated functions will be consolidated (except for “Resident Deputy” program facilities) and may be co-located with the jail.

Capital Projects and Funding

A new, expanded, or remodeled Sheriff’s Headquarters facility is proposed within the six-year planning period. A new Sheriff’s Headquarters facility would cost approximately \$19 million, paid with bond proceeds that would be repaid from the General Fund.

There are no capital improvement projects currently identified that would add Sheriff’s Office space within the 7 to 20 year planning period. However, the County will monitor the adequacy of Sheriff’s Office facilities throughout the planning period and consider capital improvements if warranted in the future. Maintenance projects will be undertaken as needed.

Chapter 6 – Emergency Management

Inventory of Current Facilities

The 2016 inventory of Sheriff’s Office, Division of Emergency Management space is 24,000 square feet, located at the Whatcom Unified Emergency Coordination Center (WUECC). Rented by and shared between both Whatcom County and the City of Bellingham, the WUECC is comprised of 2,000 square feet of office space and an additional 22,000 square feet of support facilities (used for meetings, training, exercises, and during emergencies). The WUECC serves as the Emergency Operations Center for both the County and the City.

Future Needs

Chapter 4 of the Whatcom County Comprehensive Plan does not contain LOS standards for emergency management space. Rather, it contains goals and policies supportive of providing adequate emergency management facilities. Specifically, Comprehensive Plan Policy 4D-4 is to:

Maintain adequate facilities for daily emergency management activities and, during an emergency or disaster, for the emergency operations center. The facilities will provide sufficient space for activities relating to emergency/disaster planning, mitigation, response and recovery. Existing facilities may be expanded, remodeled, and/or new facilities developed in response to changing need.

Capital Projects and Funding

There are no capital improvement projects currently identified that would add usable emergency management space within the 20 year planning period. However, the County will monitor the adequacy of emergency management facilities throughout the planning period and consider capital improvements if warranted in the future. Maintenance projects will be undertaken as needed.

Chapter 7 – Adult Corrections

Inventory of Current Facilities

The County's Main Jail was designed for 148 beds, although it currently has 283 beds due to double bunking, internal remodeling and use of temporary beds. Additionally, the jail is currently not in compliance with the Building/Fire Codes for double bunking, although a plan has been approved to bring it into compliance. Whatcom County completed construction of a 150 bed minimum security correction facility on Division St. in 2006. The Main Jail is located in the Public Safety Building next to the County Courthouse in downtown Bellingham and the Minimum Security Correction Facility is located in the Bakerview Rd. industrial area.

Future Needs

Chapter 4 of the Whatcom County Comprehensive Plan does not contain LOS standards for adult corrections facilities. Rather, it contains goals and policies supportive of providing adequate corrections facilities. Specifically, Comprehensive Plan Policy 4D-2 is to:

Maintain Sheriff's Office adult corrections facilities and headquarters to provide a safe environment for the community, staff and inmates. The number of jail beds in adult corrections facilities will be determined after review of multiple factors, including projected population growth, State sentencing laws, alternative programs, treatment diversion programs, early release programs, the need to separate violent inmates, the need to separate inmates by gender, the need to separate inmates by other classification considerations, average length of stay, peak inmate populations and available funding. Existing facilities may be expanded, remodeled, and/ or new facilities developed in response to changing need.

There are serious concerns among law and justice officials relating to jail facility needs in the community. This need has been documented by recommendations from the *Whatcom County Law and Justice Plan Phase II Report* (June 2000), in a report entitled *Operational Review of the Whatcom County, Washington Jail* (March 2004), in the Whatcom County Jail Planning Task Force Recommendations (Dec. 2011 and March 2012), and in the *Whatcom County Adult Corrections Facilities & Sheriff's Headquarters Pre-Design Report* (Sept. 2013).

Capital Projects and Funding

In an effort to meet the community need, the County plans to construct a new, expanded, and/or remodeled Adult Corrections Facility within the six-year planning period. The cost of the facility

is approximately \$112,000,000, which has been proposed to be paid for with bond proceeds that would be repaid with new sales tax.

As an interim measure, existing correction facility improvements are planned so that these buildings can continue to function until the new or remodeled jail is completed. The cost of the improvements to the existing jail facilities is approximately \$3,000,000, which would be paid from the Jail Improvement Fund and the General Fund.

There are no capital improvement projects currently identified that would add jail facilities within the 7 to 20 year planning period. However, the County will monitor the adequacy of jail facilities throughout the planning period and consider capital improvements if warranted in the future. Maintenance projects will be undertaken as needed.

Chapter 8 – Juvenile Detention

Inventory of Current Facilities

The 2016 inventory of County juvenile detention facilities includes 32 beds serving the county-wide population. The juvenile detention facility is located on the sixth floor of the County Courthouse at 311 Grand Avenue.

Future Needs

Chapter 4 of the Whatcom County Comprehensive Plan does not contain LOS standards for juvenile detention. Rather, it contains goals and policies supportive of providing adequate juvenile facilities. Specifically, Comprehensive Plan Policy 4D-3 is to:

Maintain juvenile detention facilities and alternative corrections programs to provide safe and secure methods to provide accountability and support for minors who break the law. Existing facilities may be expanded, remodeled, and/or new facilities developed in response to changing need.

Capital Projects and Funding

There are no capital improvement projects currently identified that would add juvenile detention space within the 20 year planning period. However, the County will monitor the adequacy of juvenile detention facilities and alternative correction methods throughout the planning period and consider capital improvements if warranted in the future. Maintenance projects will be undertaken as needed.

Chapter 9 – Transportation

Transportation (Countywide)

Overview

Whatcom County’s roadway network is principally made up of County roads as well as state highways, such as I-5 and SR-9, which provide intercity and interstate connections. In addition to the roadway network, Whatcom County also operates a daily ferry service between Gooseberry Point and Lummi Island.

Inventory of Current Facilities

The 2014 inventory of County transportation facilities shows a total of 939 miles of County roads (approximately 358 miles are classified as an arterial or collector roadways). Table 9-1 shows the existing miles of countywide arterial roadways by federal functional classification.

Table 9-1. Inventory of County Roadways by Functional Classification

Functional Classification	Total Miles of Roadway (centerline miles)	Percent of Total
Rural Major Collector	134.1	14%
Rural Minor Collector	154.2	16%
Rural Local Access	455.8	49%
Urban Principal Arterial	0.3	0%
Urban Minor Arterial	25.5	3%
Urban Collector	37.8	4%
Urban Minor Collector	6.4	1%
Urban Local Access	125.5	13%
Subtotal	939.5	100%

Source: Whatcom County Public Works Road Log, (Dec. 31, 2014)

In addition to the roadway network discussed above, the County owns one ferry vessel which it uses to provide its Lummi Island ferry service.

Future Needs

County LOS Standards

The Whatcom County Comprehensive Plan’s Chapter Six establishes LOS standards for transportation facilities. Motor vehicle LOS for roadway segments is based on a volume/capacity (V/C) ratio, the estimated peak-hour volume of a roadway segment divided by the estimated hourly capacity of that segment, as categorized in Table 9-2.

Table 9-2. Level of Service Designations by Volume/Capacity

LOS Designation	V/C Range
A	0-0.59
B	0.60-0.69
C	0.70-0.79
D	0.80-0.89
E	0.90-0.99
F	>1.00

Whatcom County’s adopted transportation LOS standards for roadway segments are set in Comprehensive Plan Policies 6A-1 through 6A-4. For county arterials and major collectors located outside of urban growth areas during weekday p.m.-peak hours, the adopted LOS is C or better, except for specified primary routes as shown on Map 6-2, which have a LOS of D or better. The LOS standard for county arterials and major collectors within urban growth areas during weekday p.m. peak hours is D or better.

LOS Analysis

The Transportation LOS analysis is taken from an analysis prepared for the *Final EIS Whatcom County 2016 Comprehensive Plan and Development Regulations Update and Urban Growth Areas Review* (November 2015). Using the Whatcom Council of Governments regional model, the projected population and employment growth was used to estimate the number of trips that will be generated in 2036. These trips were then distributed among transportation analysis zones and assigned to the street network. The result is a model of projected future traffic conditions based on the land use assumptions for each of the studied alternatives. The future transportation network reflects future improvement projects for which funding has been committed.

After the future 2036 traffic volume on each analysis road segment was projected, it was divided by the road’s capacity to calculate the volume to capacity (V/C) ratio. For any segments on which projected V/C would exceed the adopted LOS standard for that road a potential adverse impact was identified, and mitigation identified that would lower V/C to a level within adopted standards.

Table 9-3 lists the county roads with projected 2036 V/C ratios that exceed LOS standards under the Final EIS preferred alternative. A total of 1.64 miles of County roadways are projected to be deficient, or about 0.5% of the total 358 miles of County arterial and collector roads.

Table 9-3. Roadways with Deficient Segments by 2036

Analysis ID	Road Name	Location	Length (mi.)	LOS Standard V/C	Projected 2036 LOS V/C
162	Hannegan Rd	Van Wyck Rd to Kelly Rd	1.01	0.9 (LOS D)	0.93 (LOS E)
243	Lakeway Dr	Bellingham City Limits to Lowe Ave	0.42	0.9 (LOS D)	1.10 (LOS F)
244	Lakeway Dr	Lowe Ave to Terrace Ave	0.21	0.9 (LOS D)	0.97 (LOS E)
Total Deficient Roadway Segments			1.64		

Source: *Final EIS Whatcom County 2016 Comprehensive Plan and Development Regulations Update and Urban Growth Areas Review* (November 2015) Tables 3.9-1 and 3.9-2

Capital Projects and Funding

Table 9-4 identifies the roadway locations that have been identified for improvement over the next 20 years, with planning-level cost estimates. Based on this list and a review of current safety and system preservation needs, the County annually prepares and adopts a Six-Year Transportation Improvement Program (TIP), which programs the implementation of needed improvements over the next six years. Funding sources for transportation improvement projects are identified in Chapter 16.

Projects to increase capacity on roadway segments that are projected to fall below adopted LOS (listed in Table 9-3) are included in the 20-year plan. If sufficient capacity cannot be achieved through these projects, or funding is insufficient to implement the needed capacity increase, the County can consider adjusting the adopted LOS.

Only a few new roadway alignments are included among the 20-year projects: Lincoln Road between Shintaffer Road and Blaine Road, Horton Road between Northwest Drive and Aldrich Road, and Slater Road between Northwest Drive and Hannegan. These projects are intended to provide additional east-west connectivity north of Birch Bay and northwest of Bellingham.

Total capital costs for replacement of the Lummi Island ferry vessel and any necessary improvements to the docks can be estimated only after a revised ferry LOS is adopted and the size of the new vessel can be determined. A portion of the preliminary engineering costs for those projects are shown in the six-year TIP and the 14-year Ferry Capital Program, providing a mechanism to obtain funding until total cost estimates are available.

Table 9-4. Whatcom County Transportation Improvement Projects, 2016-2036

Portion of project in 6-Year Plan	Project Name	Location/ Project Limits	Proposed Improvement	Estimated Project Cost
X	Birch Bay-Lynden Road/ Harborview Road	Intersection	Construct intersection improvements to include turn lanes and install traffic signal when warranted	\$3,000,000
X	Lincoln Road Extension and Improvement	Harborview Road to Blaine Road (SR 548)	Reconstruct existing road and construct 2-lane urban arterial to Blaine Road with non-motorized enhancement including construction of roundabouts at intersections with Blaine Road and Harborview Road.	\$4,500,000
X	Birch Bay-Lynden Road/Blaine Road (SR-548)	Intersection	Construct intersection improvements to include roundabout or install turn lanes and traffic signal, when warranted	\$3,000,000
	Grandview Road (SR 548)/ Vista Drive	Intersection	Construct intersection improvements to include roundabout or install turn lanes and traffic signal when warranted	\$3,000,000
	Hannegan Road	Bellingham City Limits - Van Wyck Road	Add left-turn lanes at intersections and driveways and widen the road to meet the urban minor arterial standard. ¹	\$3,868,000
	Hannegan Road	Van Wyck Road - SR 544	Add left-turn lanes at intersections and driveways and widen the road meet the rural major collector standard. ¹	\$9,673,000
	Lake Louise Rd.	Sudden Valley Gate 13 to Austin St.	Reconstruct to Major Collector standards including non-motorized facilities	\$8,000,000
	Lake Louise Rd.	Sudden Valley Gate to Whatcom Blvd.	Reconstruct to Major Collector standards including non-motorized facilities	\$8,000,000
X	Marine Drive	McAlpine Road to BNSFRR Overpass.	Reconstruct to Urban Minor Arterial standards with non-motorized facilities	\$1,400,000
	Slater Rd.	Hannegan Rd. to Northwest Dr.	Construct 2-lane extension road to Kelly Rd. at Collector standards with non-motorized facilities	\$4,000,000

Portion of project in 6-Year Plan	Project Name	Location/ Project Limits	Proposed Improvement	Estimated Project Cost
X	Slater Road/Ferndale Road	Intersection	Install traffic signal when warranted	\$3,000,000
	Birch Bay-Lynden Road/ Kickerville Rd.	Intersection	Construct intersection improvements to include roundabout or install turn lanes and traffic signal, when warranted	\$3,000,000
	Birch Bay Drive/ Harborview Rd	Intersection	Improve/ redesign the intersection with turn lanes, and install traffic signal, when warranted	\$3,000,000
	Harborview Road	Birch Bay Drive to Birch Bay-Lynden Road	Improve roadway to urban principal arterial standards including non-motorized facilities	\$200,000
	Harborview Road	Birch Bay-Lynden Road to Drayton Harbor Rd	Improve roadway to major collector standards including non-motorized facilities	\$200,000
X	Birch Bay Drive	Alderson Road to Shintaffer Road	Improve roadway to urban minor arterial standards including non-motorized facilities	\$1,000,000
X	Birch Bay Drive	Alderson Road to Point Whitehorn Road	Improve to urban minor arterial standards including non-motorized facilities	\$1,800,000
	Portal Way	Birch Bay – Lynden Road to Loomis Trail Road	Reconstruct to rural collector standards including paved shoulders for non-motorized travel.	\$1,200,000
	Jackson Road	Birch Bay Drive to Grandview Road	Reconstruct to rural collector standards including paved shoulders for non-motorized facilities	\$1,200,000
	Blaine Road (SR 548)/ Drayton Harbor Road	Intersection	Improve / redesign the intersection with turn lanes and install traffic signal when warranted	\$2,000,000
	Blaine Road (SR 548) / Loomis Trail Road	Intersection	Improve/redesign the intersection with turn lanes and install traffic signal when warranted	\$2,000,000
X	North Shore Rd.	Bellingham City limits to Y Rd.	Reconstruct to Minor Arterial standards with non-motorized facilities enhancement (bike lane), clear zones	\$8,000,000
X	Siper Rd.	SR 9 (Nooksack Rd.) to Hopewell Rd.	Reconstruct to Collector Standards including drainage system and non-motorized facilities	\$5,000,000

Portion of project in 6-Year Plan	Project Name	Location/ Project Limits	Proposed Improvement	Estimated Project Cost
	Slater Rd. (along Kelly)	Hannegan to SR 542 (Mt. Baker Highway)	Upgrade from Local to Collector class and reconstruct at Collector standards including drainage system and nonmotorized facilities	\$10,000,000
	Drayton Harbor Road	Harborview Road to Blaine Road	Improve to rural collector standards with shoulders for non-motorized travel.	\$1,800,000
	Birch Point Road	Semiahmoo Drive to Shintaffer Road	Reconstruct to urban minor arterial standards including non-motorized facilities	\$3,000,000
	Loomis Trail Road	Blaine Road to Portal Way	Reconstruct to rural collector standards including paved shoulders for non-motorized travel.	\$1,200,000
	Semiahmoo Drive	Blaine city limits to Birch Point Road	Reconstruct to rural collector standards including paved shoulders for non-motorized travel.	\$2,000,000
	Shintaffer Road	Lincoln Road to Birch Bay Dr.	Reconstruct to rural collector standards including paved shoulders for non-motorized travel.	\$600,000
	Vista Drive	Bay Road to Grandview Road	Reconstruct to rural collector standards including paved shoulders for non-motorized travel.	\$1,500,000
	Bay Road	Blaine Road to Vista Road	Reconstruct to rural collector standards including paved shoulders for non-motorized travel.	\$2,600,000
	Alderson Road	Birch Bay Drive to Blaine Road	Reconstruct to rural collector standards including paved shoulders for non-motorized travel.	\$600,000
	Bakerview Rd.	E Bakerview to Aldrich Rd	Reconstruct to urban arterial, standards including non-motorized facilities	\$3,000,000
	San Juan Blvd.	40th St. to 48th St.	Construction and extension of new Urban Arterial (2 phases) with non-motorized facilities	\$7,700,000

Portion of project in 6-Year Plan	Project Name	Location/ Project Limits	Proposed Improvement	Estimated Project Cost
X	Lakeway Drive/ Terrace Avenue N/ Cable Street	Bellingham City Limits - Lake Whatcom Boulevard	Widen to 4 lanes at urban minor arterial standards; add left turn lanes.	\$12,402,000
	Everson Goshen Road	SR 542 - SR 544	Add left-turn lanes at rural major collector standards.	\$7,993,000
	Marine Drive	Lummi Shore Drive (North of Cagey Road) - Country Lane	Add left-turn lanes at rural major collector standards.	\$1,833,000
	Marine Drive	Bancroft Road - Alderwood Avenue	Add left-turn lanes at urban minor arterial standards.	\$3,157,000
	W. Smith Road/ Northwest Drive	Intersection	Construct roundabout when warranted	\$4,000,000
	E. Smith Road/ Hannegan Road	Intersection	Improve/redesign intersection or build roundabout when warranted	\$3,000,000
	Northwest Drive	Bellingham City Limits - Smith Road W	Add left-turn lanes at rural minor arterial standards.	\$5,526,000
	Slater Road	Lake Terrell Road - 0.70 mile west of Haxton Way (1.8 miles)	Add left-turn lanes at rural major collector standards.	\$2,140,000
	Total			\$154,092,000

Transit

Overview

Whatcom Transportation Authority (WTA) is the primary provider of public transportation services in Whatcom County. WTA provides fixed-route bus service in Bellingham and throughout Whatcom County. Complementary paratransit service is offered in conjunction with broader senior and disabled service under the Specialized Transportation program. WTA also offers vanpool leasing, ride matching and commuter van service from selected markets.

Inventory of Current Facilities

The WTA operates 30 fixed routes with 59 transit coaches (primarily 35- and 40-foot Gillig buses). Paratransit service is provided by 34 mini-buses with a capacity to carry 16 passengers each. WTA owns and manages a fleet of 39 vans for its two commuter van services. Table 9-5 below summarizes the park & ride facilities that WTA serves along with routes that serve them.

Table 9-5. Whatcom Transportation Authority Park & Ride Facilities

Park & Ride	Location	Served by Routes	Number of Parking Stalls
Cordata Station	4170 Cordata Parkway	3,4,15,24,25X,26,27 48,55,71X,232,331	70
Chuckanut	999 N. Burlington Rd.	80X	369
Alger	Lake Samish Rd.	80X	54
Ferndale Station	1671 Main Street	27, 70X, 55	131
South Bellingham East	I-5 and Old Fairhaven Parkway (Exit 250 East side)	105	29
South Bellingham West	I-5 and Old Fairhaven Parkway (Exit 250 West side)	105	24
Lynden Station	1945 Front Street	26, 25X	89
Northwest Avenue	East of Northwest on McLeod Rd.	232	(Not listed)
Birch Bay Square	8115 Birch Bay Square St.	70X, 55	10
Blaine Library	3rd and G Street	70X, 55	10
Lincoln Creek	Lincoln Street, north of I-5 on-ramp	80X, 90A&B, 190	530
Fairhaven Park & Ride	Harris and 4 th	(Not listed)	237
Blaine Library	3 rd and G Street	(Not listed)	10

Source: Whatcom Transportation Authority website (accessed February 6, 2009), and WSDOT Choices website: <http://www.wsdot.wa.gov/Choices/ParkRide.cfm#Whatcom>; accessed on March 4, 2009.

Future Needs

Public transit providers typically provide LOS standards difficult to relate to capital facility needs with respect to changes in population over time. For example, Whatcom Transportation Authority (WTA) provides one capital facility standard of a shelter at each transit stop that has 25 boardings or more (WTA Strategic Plan, page 2-43, September 2004).

Capital Projects and Funding

Capital Project Funding

According to WSDOT's 2014 Summary of Public Transportation, WTA is expected to receive \$2.8 million annually from 2016-2021 from Federal Section 5307 Grants. These are the only funds reserved for capital, as other revenue sources such as fare box revenues and sales tax may also be used for operating expenses.

Capital Projects

The WTA breaks down capital outlays under categories that include Vehicles, Public Facilities, Strategic Partnerships, Street Side Improvements, and Technology Projects. The WTA's 2016-2021 approved Transportation Improvement Program identified the following projects that will occur during the County CFP planning period.

Table 9-6. Transit Capital Projects

Project Costs/Revenue (thousands \$)	2016	2017	2018	2019	2020	2021	2022-2041	Total
Whatcom Transportation Authority								
Vehicle Purchases								
Cost	6,290	477	7,259	5,461	4,035	4,166		27,688
Technology Projects								
Cost	4,150							4,150
Facilities Improvements								
Cost	1,850	100						1,950

Source: WTA 2016-2021 Approved Transportation Improvement Program.

Chapter 10 – Stormwater Facilities

Inventory of Current Facilities

The Public Works Department is responsible for design, engineering, and construction of county-owned stormwater facilities. Many stormwater facilities are road-related stormwater conveyance systems such as culverts and ditches on and adjacent to county roads. Others are off right-of-way facilities that control storm flows and improve water quality.

In response to increasing federal and state mandates to manage stormwater and the public’s desire to improve stewardship of sensitive watersheds, Whatcom County established a Stormwater group in the Surface Water Division of the Public Works Department in 2005. The Stormwater group is responsible for planning, designing, engineering, and construction of stormwater facilities. Inventories of existing stormwater facilities are maintained by the Public Works Department. The Engineering Services Division maintains an inventory of all road-related facilities. The Stormwater group maintains an inventory of public and private stormwater facilities in the area covered by the County’s NPDES Phase II permit for Municipal Separate Storm Sewer Systems. This inventory includes ditches, culverts, catch basins, vaults, ponds, and swales. Completed stormwater construction projects since the Public Works-Stormwater group was created in 2005 are listed below.

Table 10.1 Completed Stormwater Projects

1	Lake Whatcom	Geneva Stormw ater Retrofits								2006
2	Lake Whatcom	Cable Street Reconstruction & Stormw ater Improvements								2007
3	Lake Whatcom	Lahti Drive Stormw ater Improvements								2010
4	Lake Whatcom	Silver Beach Creek Improvements - Brow nsville Drive to E. 16th Place								2011
5	Lake Whatcom	Silver Beach Creek Improvements - West Tributary								2012
6	Lake Whatcom	Coronado-Fremont Stormw ater Improvements								2014

Future Needs

An increasing emphasis on the protection of sensitive watersheds has resulted in the adoption of comprehensive stormwater plans, including plans for Lake Whatcom and Birch Bay. The adopted plans identify work towards planning, design, engineering, and construction of capital projects intended to address stormwater issues.

In addition, the County has adopted a Stormwater Management Program in accordance with the NPDES Phase II permit. This program applies to about 15,000 acres of unincorporated lands including the Birch Bay UGA, Ferndale UGA, Bellingham UGA and other lands along the south shore of Lake Whatcom. Goals of the Stormwater Management Program include detecting and eliminating illicit discharges to surface waters, controlling runoff from new development, redevelopment, and new construction, pollution prevention and operation and maintenance for

municipal operations, educating the public, monitoring stormwater monitoring, and collecting and reporting data on the Program.

Capital Projects and Funding

Stormwater improvement projects anticipated in the six-year planning period include the following:

- Lake Whatcom Watershed – Water quality improvements, drainage system upgrades, outfall retrofits, channel restoration, and stormwater improvements.
- Birch Bay Watershed - Drainage improvements and an inlet upgrade.

These improvements will cost a total of approximately \$7.2 million, which will be paid with the funding sources shown in the *Six-Year Capital Improvement Program for Whatcom County Facilities*.

It is anticipated that approximately \$1.4 million will be spent annually on various stormwater improvement projects in the 7 to 20 year planning period. These costs would be paid from the Flood Fund, REET, state grants and Birch Bay Watershed and Aquatic Resource Management (BBWARM) District funds. The County will also monitor the adequacy of County stormwater facilities throughout the planning period and consider additional capital improvements and/or maintenance projects if warranted in the future.

Chapter 11 – Water Systems

Water Systems

Planning relating to public water systems is carried out in the *Whatcom County Coordinated Water System Plan* (CWSP), individual water system plans, and this Capital Facilities Plan. An introduction to the CWSP is presented below. For purposes of this Capital Facilities Plan, water systems are divided into major systems that serve urban growth areas (urban water systems) and other systems that have 50 or more connections. This chapter addresses urban water systems, including information summarized from the individual water system plans. Information about other systems with 50 or more connections is included in the *Coordinated Water System Plan*.

Coordinated Water System Plan

The CWSP (2016) is a plan for public water systems that identifies the present and future needs of the systems and sets forth means of meeting those needs in the most efficient manner possible. The Whatcom County Council established the planning area, called the Critical Water Supply Service Area (CWSSA), for the original CWSP effort in 1993, and retained the same area for the 2000 CWSP update and the 2016 CWSP update. The CWSSA includes all of Whatcom County west of the Mount Baker-Snoqualmie National Forest Boundary excluding certain portions of the Lummi and Nooksack Indian reservations.

The CWSP was prepared under the direction of the Water Utility Coordinating Committee (WUCC). The WUCC included representatives of individual water utilities located in the CWSSA with more than 50 connections that chose to participate, as well as representatives of the Washington State Department of Health, Whatcom County Health Department, Whatcom County Planning & Development Services, Whatcom County Public Works, and the Whatcom County Council. The CWSP review was conducted with the primary objective of supporting the public drinking water supply needs of the County and achieving coordination between water services, the Growth Management Act, and the *Whatcom County Comprehensive Plan*.

The CWSP addresses a number of topics, including population, water demand, existing water systems, water utility service areas, minimum design standards, utility service review procedures, receivership of failing systems, issues with potential implications for public water systems, and plan implementation.

The CWSP contains a water rights capacity analysis to compare water system's existing water rights, and/or existing intertie agreements, against current and anticipated future demands in an effort to determine whether systems are projected to meet their future requirements, have surplus water, or have insufficient future water rights. Based on the results of the water rights analysis

(which take into account existing intertie agreements), the existing and projected population, and the historic and projected water demand, a water rights status for each Group A community public water system is assigned. Analyses prepared in the individual water system plans will be more accurate and should be utilized if available (CWSP, p. 3-5 and Appendix 1).

Urban Water Systems

Inventory of Current Facilities

This section of the Capital Facilities Plan inventories the 14 primary water systems that provide water service to Whatcom County's UGAs. The table below provides information relating to existing connections, water rights, contracts for water, supply, storage and water sources.

Table 11.1 Water Supply Inventory by Service Provider

Service Provider	Connections		Water Rights		Contracted Water		Available Supply		Storage Capacity (mg)	Primary Water Source
	Existing	Approved	Annual	Instantaneous	Annual	Instantaneous	Annual	Instantaneous		
Birch Bay Water and Sewer District (1)	5,184	unspecified	Allocated to Blaine Supply		2.35	3.73	2.35	3.73	3.13	City of Blaine
City of Bellingham	25,011	unspecified	162.82	162.87	(2.30)	(2.30)	160.52	160.57	25.27	Lake Whatcom
City of Blaine (2)	2,465	unspecified	5.41	7.78	(3.78)	(3.82)	1.63	3.96	4.59	Wells
City of Everson	733	unspecified	0.54	1.15			0.54	1.15	0.48	Wells
City of Ferndale	5,498	unspecified	1.91	4.22			1.91	4.22	2.95	Wells
City of Lynden (3)	5,070	unspecified	5.83	13.92			5.83	13.92	8.58	Nooksack River
City of Nooksack	523	unspecified	0.00	0.00	0.18	0.34	0.18	0.34	0.7	City of Sumas
City of Sumas	500	unspecified	3.34	5.63	(2.74)	(4.32)	0.60	1.31	1	Wells
Columbia Valley Water District	1,564	unspecified	0.38	0.58			0.38	0.58	0.76	Wells
Lake Whatcom Water and Sewer District	3,916	4,076	2.05	2.80			2.05	2.80	2.56	Lake Whatcom
PUD 1	N/A	N/A	38.87	53.64	0.00	0.00	38.87	53.64	0.05	Nooksack River
Water District 2 (4)	566	unspecified	0.00	0.00	1.58	1.58	1.58	1.58	N/A	City of Bellingham
Water District 7	665	1,145	0.00	0.00	0.72	0.72	0.72	0.72	0.39	City of Bellingham
Water District 13	366	1,338	0.41	1.30			0.41	1.30	0.30	Wells

Source: *Draft EIS Whatcom County 2016 Comprehensive Plan and Development Regulations Update and Urban Growth Area Review* (March 2015, p. 4-227), *City of Bellingham Water System Plan* (June 2009), *Second Amendment to Agreement to Supply Water between Nooksack and Sumas* (August 2009), Lake Whatcom Water and Sewer District e-mail of April 28, 2016, *Lake Whatcom Water and Sewer District Water System Comprehensive Plan* (October 2010), the Washington Department of Health Office of Drinking Water Sentry Internet Home page (accessed April and May 2016), Rodney Langer (CHS Engineers) e-mail of May 3, 2016, City of Lynden e-mail of May 10, 2016, City of Ferndale e-mail of May 16, 2016, and City of Blaine e-mail of May 16, 2016.

Notes:

- All water quantity metrics expressed in millions of gallons per day (mgd), except storage capacity which is million gallons (mg).
- Available supply is the sum of water rights and contracts. It represents the total supply available to serve a provider's own customers.
- Contracted water numbers in parentheses indicate contracts to provide water to other systems. Such contracts are subtracted from the provider's water rights to calculate available supply.
- This table does not provide a full accounting of all contracts to provide water to other systems. Rather it notes all contracts discovered when analyzing available water supply for these larger providers.

1. BBWSD has two water rights which are shared in a single system with City of Blaine. Therefore these rights are counted under City of Blaine's water rights and available supply.

2. See note #1 regarding BBWSD water rights.

3. Water rights in this table are based on City of Lynden's interpretation which differs from the Department of Ecology's interpretation.

4. The City of Bellingham provides both water and storage capacity to Water District 2.

Future Needs

Water system plans provide a design standard, generally expressed as water consumption in gallons/day per equivalent residential unit (ERU). When applying this standard to growth projections, and comparing to the water source capacity, a water system provider can obtain a sense for how planned growth will affect water service into the future.

Water service providers prepare water system plans including a program of capital improvements that address the system’s anticipated needs within their designated water service area, consistent with local land use plans. The table below identifies the purveyor’s design standards.

Table 11.2 Design Standards

Service Provider	Design Standards	
Birch Bay Water and Sewer District	116-135	gallons/day per ERU
City of Bellingham	199	gallons/day per ERU
City of Blaine	165	gallons/day per ERU
City of Everson	250	gallons/day per ERU
City of Ferndale	175	gallons/day per ERU
City of Lynden	216	gallons/day per ERU
City of Nooksack	175	gallons/day per ERU
City of Sumas	282	gallons/day per ERU
Columbia Valley Water District	215	gallons/day per ERU
Lake Whatcom Water and Sewer District	150-250	gallons/day per ERU
PUD No. 1	N/A ¹	
Water District 2	170	gallons/day per ERU
Water District 7	214	gallons/day per ERU
Water District 13	239	gallons/day per ERU

1 PUD No. 1 serves industrial and commercial properties.

Population

The table below provides an overview of the planning horizon year and horizon year population for the latest water system plans in comparison to Whatcom County Comprehensive Plan’s population projections for the year 2036. As can be seen by a review of the table, most urban water systems plan conservatively for drinking water needs, particularly given the time it takes to seek new water supplies to serve growth.

Table 11.3 Population Comparison: Water Plans and 2036 Population Projection

Service Provider	Horizon year of Capital Plan	Capital Plan Population	County's 2036 Population Projection
Birch Bay Water/ Sewer	2036	14,565	14,414
City of Bellingham	2032	122,672 ¹	123,710
City of Blaine	2036	10,500 ²	9,585
City of Everson	2036	4,046	3,907
City of Ferndale	2036	20,072	19,591
City of Lynden	2036	19,575	19,275
City of Nooksack	2036	2,425	2,425
City of Sumas ³	2036	2,323	2,323
Columbia Valley Water District	2030	N/A ⁴	2,886
PUD 1	N/A ⁵	N/A ⁵	N/A ⁵
Lake Whatcom Water and Sewer District	2027	10,855 ⁶	12,204
W.C. Water District 2	2029	1,905 ⁷	1,533
W.C. Water District 7	2027	2,123 ⁸	2,118
W.C. Water District 13	2031	1,170 ⁹	1,786

N/A = Not Available

- 1 The *City of Bellingham Water System Plan* (June 2009) contains a population projection of 122,672 for the year 2028. The *City of Bellingham Water System Plan Update* (October 2013) extends the horizon year to 2032, but does not include an updated population projection.
- 2 Projected service area population per draft City 2016 Comprehensive Water System Plan.
- 3 Information regarding the Sumas water system is from the *Capital Facilities Element of the Sumas Comprehensive Plan* (June 2016).
- 4 The *Columbia Valley Water District 2013 Water System Plan Update* does not include a specific 20-year population projection. However, the Water System Plan projects that it will serve 1,242 equivalent residential units (ERUs) in 2030 (pp. 36 and 37).
- 5 Since PUD1 provides retail water service only to areas characterized by and designated for industrial and commercial uses, the district's 2004 WSP does not provide population projections or a horizon year. PUD 1 also owns and operates the Grandview potable water supply system – retail.
- 6 The *Lake Whatcom Water and Sewer District Water System Comprehensive Plan* anticipates 4,125 ERUs in 2027 (Appendix A, Exhibit 2), which equates to a population of about 10,855 using average household sizes described in the *Water System Comprehensive Plan* (p. 17).
- 7 Water District 2 projects future connections rather than population. The district plans to serve 797 connections by 2029. Applying the Bellingham average household size of 2.49 and occupancy rate of 96% results in approximately 1,905 people served by the 797 connections in 2029.
- 8 Water District 7 projects future connections rather than population. The district plans to serve 888 connections by 2027. Applying the Bellingham average household size of 2.49 and occupancy rate of 96% results in approximately 2,123 people served by the 888 connections in 2027. However, Water District 7 is approved to serve up to 1,145 residential service connections (State Department of Health letter from Richard Rodriguez and John Thielemann to James Trowbridge dated January 5, 2009). Therefore the District could serve a population of about 2,700, which is greater than the projected population of the District in 2036.
- 9 Water District 13 could potentially serve a total of 1,338 residential connections (*Whatcom County Water District # 13 Small Water System Plan*, p. 14).

Capital Projects and Funding

Water services and capital improvements are funded primarily by the users of the system through water rates and general facilities charges. Water rates can be adjusted to match the funding required for capital and operational needs. Connection fees are usually charged to developers when a development necessitates expansion of the district's capacity. There are also governmental funding programs. These include the Public Works Trust Fund, a revolving loan fund designed to help local entities through low-interest loans, and the Drinking Water State Revolving Fund, which involves low-interest federally funded loans.

Birch Bay Water and Sewer District

The Birch Bay Water and Sewer District provides service within and adjacent to the Birch Bay Urban Growth Area. The District obtains its water supply from the City of Blaine (well field). The District's facilities include over 3.1 million gallons of storage in three reservoirs, four booster pump stations and nearly 80 miles of water transmission and distribution piping. The system includes multiple interties with the City of Blaine system and an emergency intertie with the Bell Bay Jackson Water Association system. The District's *Comprehensive Water System Plan* (2009) and *Comprehensive Water System Plan Amendment No. 1* (2010) indicate that existing water supply is sufficient through 2030 at the forecast demand (page ES-3, as amended). The District's plan states that additional water supply, including use of surplus storage, and/or conservation will be necessary to meet the demand beyond that time. The District's 2009 Comprehensive Water Plan, as amended, includes several new supply and distribution projects expected to address supply deficiencies. Besides its residential and commercial customers, the District provides water supply to the BP Cherry Point Refinery. At the time of completion of the 2009 plan, the District provided this service through a wholesale agreement with PUD 1 (see below). The 2010 amendment to the plan was developed based on an amendment to the City of Blaine water supply contract confirming additional supply, and confirming retail water supply to the Refinery by the District. The District's draft 2016 Comprehensive Water Plan is based on service to 14,565 persons by year 2036. The draft plan update is based on an annual water demand increasing from 116 gpd/ERU in 2015 to 135 gpd/ERU in 2036 as seasonal homes transition into full time residences. With service to the forecast population and service to district commercial and other non-residential customers, the year 2036 maximum day demand is forecast to be 3.58 million gallons per day. The District has a contract with the City of Blaine to provide a maximum supply of 3.73 million gallons per day in 2036. Birch Bay's Comprehensive Water Plan indicates that it will extend future service areas to areas within the district boundaries and provides future connection policies.

City of Bellingham

The *City of Bellingham Water System Plan* (June 2009) and the *City of Bellingham Water System Plan Update* (October 2013) indicate that the City maintains a water system consisting an intake from Lake Whatcom, water treatment plant, pump stations, 13 water reservoirs with over 25 million gallons of storage capacity, and almost 400 miles of water lines (2009 *Water System Plan*, pp. 3-3, 3-5, 3-7, 3-19, 3-21, and 3-32). The Bellingham water system has interties with Water District 2, Water District 7, the Lake Whatcom Water and Sewer District, and five other systems (2009 *Water System Plan*, p. 1-8). The projected average daily demand for the water system is 12.2 million gallons per day in 2032 and the projected maximum daily demand is 20 million gallons per day in 2032 (2013 *Water System Plan Update*, p. 2-4). The City of Bellingham has adequate water rights to meet projected demand over the planning period (2013 *Water System Plan Update*, p. 2-5). The *City of Bellingham Water System Plan Update* contains a capital improvement program with approximately \$50 million in capital projects (2016-2018). These projects include a dissolved air flotation pretreatment system, disinfection improvements, metering, water main replacements, property acquisitions in the Lake Whatcom Watershed, water quality projects in the Lake Whatcom Watershed, and Nooksack River dam and pipeline improvements (2013 *Water System Plan Update*, p. 5-3). Revenue sources for system improvements include water rates, grants, loans, utility local improvement districts, and revenue bonds (2009 *Water System Plan*, pp. ES-5 and 1-13). The City's financing program is adequate to cover planned capital improvements (2013 *Water System Plan Update*, p. 6-1 and 6-2).

City of Blaine

The City of Blaine is updating their *Comprehensive Water System Plan* and anticipates completion in mid-2016. The *City of Blaine Comprehensive Water System Plan* (2009) indicates that the City maintains a water system consisting of wells, a water treatment plant, booster pumps, five water reservoirs with a storage capacity of 4.59 million gallons, and approximately 95 miles of water lines up to 18 inches in diameter (City GIS data). The Blaine water system serves city residents and provides water, per terms of wholesale supply agreements, to both the Birch Bay Water and Sewer District and the Bell Bay Jackson Water Association. The City provides service throughout the current City Limits, with the exception of a few parcels that are presently served directly by the Birch Bay Water and Sewer District. The City also serves the Pipeline Road UGA, but service to the Shipyard UGA is by Birch Bay Water and Sewer District. The City also serves an area of unincorporated Whatcom County southeast of the City. This service area was declared in 2010 and is anticipated to remain unchanged as a result of the City's work on its 2016 *Comprehensive Water System Plan*.

The projected average daily demand for the Blaine water system is approximately 2.7 million gallons per day in 2036 and the projected maximum daily demand is approximately 5.4 million gallons per day in 2036 (2016 Plan, work in progress). This preliminary forecast is significantly lower than as presented in the 2009 *Comprehensive Water System Plan* due to lower residential growth rate forecasts in the City's UGA, and lower water use per single family equivalent, in both the City and Birch Bay Water and Sewer District systems. The *City of Blaine Comprehensive Water System Plan* (2009) documents water rights in the form of a claim, permits and certificates

in the amount of 4.28 million gallons per day (instantaneous). Subsequent efforts have increased the City's water rights in the form of a claim, permits and certificates in the amount of 7.776 million gallons per day (instantaneous). Those efforts included securing a portion of the water rights held by Birch Bay Water and Sewer District, by amendment to the water supply agreement. The additional rights are reflected in Water Rights No. G1-26820, G1-28481, G1-26821 and G128046. Comparison of the year 2036 forecast demand to current water rights indicates that the city has adequate water supply to meet the needs of population growth over the 20 year period.

The *City of Blaine Comprehensive Water System Plan (2009)* contains a capital improvement program with approximately \$22 million in capital projects over the 20 year planning period (2009 - 2029). Several of those projects have been completed since 2009. The *City of Blaine Comprehensive Water System Plan (2016 – work in progress)* will include the remaining projects, subject to updated analysis in the context of the revised demand forecast. Some additional projects may be identified where opportunity or strategy arises to address a water system need more efficiently, or in phases, or to meet additional City objectives. Projects are identified and planned to maintain adequate capacity for all elements of the system, from supply through treatment, storage, transmission and distribution, as well as capital needs for operation and management of the system. Anticipated revenue sources for capital improvements include grants, loans, connection fees, water rates and developer constructed facility contracts (2009 Plan, p. 9-3). The City's financing plan has and will project adequate revenues to cover expenses over the 20-year planning period (2009 Plan, p. 9-1).

City of Everson

The *City of Everson Water System Comprehensive Plan (2013)* and the *City of Everson Water System Comprehensive Plan Amendment No. 1 (2015)* indicate that the City of Everson maintains a water system consisting of a well field with three wells, booster pumps, three 160,000 gallon water reservoirs, and over 13 miles of water lines (pp. 3 and 10-12). The Everson water system also has an intertie with the City of Nooksack Water System for use during maintenance or an emergency (pp. 3 and 17). The projected average daily demand for the water system is 483,500 gallons per day in 2036 and the projected maximum daily demand is 908,980 gallons per day in 2036 (p. 11). The City of Everson's water system has source capacity to meet the projected need over the 20-year planning period (pp. 10-11). The *City of Everson Water System Comprehensive Plan Amendment No. 1* contains a capital improvement program with approximately \$3.3 million in capital projects over the next 20 years (2016 - 2036). These projects include water line improvements, an additional deep well (to replace two existing shallow wells), water treatment facilities, and an additional 160,000 gallon storage reservoir (pp. 39-42). Anticipated revenue sources for system improvements include grants, loans, connection fees, water rates and developer constructed facility contracts (p. 43). The City's financing plan projects adequate revenues to cover expenses over the 20-year planning period (Appendix D).

City of Ferndale

The *City of Ferndale Water System Plan* (2016) indicates that the City maintains a water system consisting of wells, a water treatment plant, three water reservoirs with a storage capacity of almost three million gallons, two pump stations, one pressure booster station and 73 miles of water lines. In December 2011, Ferndale converted to a groundwater supply with greensand filtration for its drinking water. Previous to this, it purchased industrial grade water from PUD No.1 and treated the water at its own surface water treatment plant. In October 2014, Ferndale added a reverse osmosis system to treat its groundwater supply to reduce hardness. The City no longer purchases water from PUD No. 1. The Ferndale water system has interties for emergency use only with Mountain View Water Association, Northwest Water Association, Thornton Water Association and North Star Water Association (p. 2-18). The projected average daily demand for the Ferndale water system is 2.27 million gallons per day in 2036 and the projected maximum daily demand is 3.96 million gallons per day in 2036 (p. 2-15). The *City of Ferndale Water System Plan* indicates that the city has adequate water rights to meet the needs of population growth over the 20 year period (p. 1-12). The *City of Ferndale Water System Plan* contains a capital improvement program with approximately \$20 million in capital projects over the next 20 years (2016 - 2036). These projects include water main upgrades and replacements, increasing well production and redundancy, and constructing additional storage (p. 3-16). Anticipated revenue sources for capital improvements include grants, loans, bonds, connection fees, water rates and developer constructed facility contracts. If applicable, the City may also utilize the utility local improvement district process (Ch. 9). The City has maintained budgetary controls over the water system. Rates and connection fees will continue to be set at levels required to finance operation, maintenance, and capital improvements (Ch. 9).

City of Lynden

The *City of Lynden Water System Plan* (2009) and the RH2 Technical Memorandum (June 21, 2016) indicate that the City of Lynden maintains a water system consisting of a Nooksack River water intake structure, water treatment plant, booster pumps, two water reservoirs with a storage capacity of approximately 8.58 million gallons, and 82 miles of water lines. The City's new 8 million gallon per day Water Treatment Plant went online September 23, 2015. The new plant doubles treatment capacity and includes grit removal and sedimentation basins equipped with plate settlers to handle the heavy sediment load from the Nooksack River. The facility also features high rate deep bed gravity filters, and a combination of UV disinfection and chlorine to disinfect the water. The Lynden water system provides wholesale water supply to two water association systems. The projected average daily demand for the Lynden water system is 2.48 million gallons per day in 2036 and the projected maximum daily demand is 6.45 million gallons per day in 2036. The RH2 Technical Memorandum (June 21, 2016) indicates that the City believes it has adequate water supply to meet the needs of population growth over the 20 year period. However, the City of Lynden and Ecology have an existing disagreement over the City's water rights. The City has entered into a memorandum of agreement (MOA) with Ecology to address long-standing water right issues between the City and Ecology. Resolution of water supply issues for the City of Lynden is important for future planning in the City's water service

area. The City of Lynden's updated capital improvement program set forth in the RH2 Technical Memorandum (June 21, 2016) includes an industrial condensate line, adjustments to booster pump stations to improve pressure in the distribution system, and various water main improvements to increase distribution capacity and replace aging infrastructure. Anticipated revenue sources for capital improvements include grants, loans, connection fees, water rates and developer constructed facility contracts. The City's financing plan projects adequate revenues to cover expenses over the 20-year planning period (KI&A Memo dated June 27, 2016).

City of Nooksack

The *City of Nooksack Water System Plan* (2012) and the *City of Nooksack Water System Plan Update* (2016) indicate that the City of Nooksack obtains all its water from the City of Sumas (*Water System Plan Update*, p. 9). Nooksack maintains a water system consisting of booster pumps, water reservoirs shared with the Nooksack Valley Water Association with a capacity of 700,000 gallons (one-half of which is owned by Nooksack), and over 8 miles of water lines (*Water System Plan*, pp. 10 and 31). The Nooksack water system has interties with the Nooksack Valley Water Association and, for emergency purposes, with the Everson water system (*Water System Plan*, pp. 14 and 43). The projected average daily demand for the water system is 165,550 gallons per day in 2036 (derived from *Water System Plan Update*, Table D-2). The City of Nooksack's water system has capacity to meet the projected demand over the 20-year planning period (*Water System Plan Update*, Tables D-2 and D-3). The *City of Nooksack Water System Plan Update* contains a capital improvement program with over \$1 million in capital projects over the next 20 years (2016 - 2036). These projects include water line, standpipe and hydrant improvements (*Water System Plan Update*, p. 12). Anticipated revenue sources include water rates, connection fees, utility taxes, interest, reserves, grants, and loans. The City's financing plan projects adequate revenues to cover expenses over the six-year planning period (*Water System Plan Update*, pp. 13-15).

City of Sumas

The *City of Sumas Water System Comprehensive Plan* (2011 Revision) indicates that the City of Sumas maintains a water system consisting of two well fields with seven wells, booster pumps, a 500,000 gallon water reservoir (which is directly adjacent to, and tied into, a 500,000 gallon water association reservoir), and almost 18 miles of water lines (pp. 1-5 and 3-21). The City of Sumas sells water wholesale to the Sumas Rural Water Association, the Nooksack Valley Water Association, and the City of Nooksack (p. 1-15). In addition, the Capital Facilities Element of the Sumas Comprehensive Plan (June 2016) indicates that, based on a 2015 water supply agreement, Sumas also sells water wholesale to the Meadowbrook Water Association (p. 4-5). As presented in the City's water system plan, the projected average daily demand for the City of Sumas is 371,958 gallons per day in 2030 and the projected maximum daily demand is 743,916 gallons per day in 2030 (p. 3-24). The City of Sumas' water system has source capacity to meet the annual projected need over the 20-year planning period through the year 2030 (pp. 4-3 and 4-8). According to the Capital Facilities Element of the 2016 update of the Sumas Comprehensive Plan, in the year 2036 the total system demand, including the city and all wholesale customers,

will equal 3,569 gallons per minute and 3,383 acre-feet per year. These flow rates are below the maximum volumes established in the city's water rights, therefore the city will have sufficient source capacity to accommodate projected growth through 2036 (p. 4-6 and Table 4-2 on p. 4-7). The Capital Facilities Element also indicates that, based on the configuration of the city wholesale distribution system and construction of an additional 500,000 gallon storage tank by the Sumas Rural Water Association, Sumas has sufficient storage capacity to support planned growth through 2036 (p. 4-7). The 2016 update of the Capital Facilities Element of the Sumas Comprehensive Plan includes a 20-year capital improvement program (2016-2036) that identifies over \$900,000 in capital projects to be funded through a combination of monthly rates and charges, connection charges, and developer contracts (Table 4-3 on p. 4-8). The Capital Facilities Element also includes a six-year financial analysis (2016-2021) indicating that the city water system will have sufficient revenues to cover anticipated expenditures, including capital improvement costs, through 2021 (p. 4-25). The *City of Sumas Water System Comprehensive Plan* "Service Area Policies and Conditions" requires that facilities necessitated by new development will be funded by the developer, except when the City requires oversizing (p. 1-14).

Columbia Valley Water District

The *Columbia Valley Water District 2013 Water System Plan Update* (2013) indicates that the Columbia Valley Water District maintains a water system consisting of three wells, booster pumps, four reservoirs with a total storage capacity of 762,000 gallons, and approximately 20 miles of water lines (pp. 8, 9 and 11). The District has explored an emergency intertie with Water District 13 (p. 22). The projected average daily demand for the water system is 279,450 gallons per day in 2030 and the projected maximum daily demand is 536,600 gallons per day in 2030 (pp. 45-47). The District has source capacity to meet the projected need over the 20-year planning period through the year 2030 (pp. 45-47). The *Columbia Valley Water District 2013 Water System Plan Update* contains a capital improvement program with almost \$7.9 million in capital projects (2016 - 2022). These projects include water line improvements, fire hydrant replacements, pump replacements, and a potential intertie (Figure 8-2). Potential revenue sources for system improvements include cash reserves, general facilities charges, water sales revenue, local facilities charges, developer participation, utility local improvement district financing, bond financing, grants, and loans (pp. 77-82).

PUD 1

PUD 1 provides water service to both the Grandview industrial/commercial service area north of Ferndale, as well the Cherry Point UGA (an industrial area). PUD 1's *Comprehensive Water Plan* (2004) does not measure water demand in population as most other WSPs do. The majority of the district's water service customers are industrial and commercial customers. The PUD's *Comprehensive Water Plan* indicates that it has sufficient water supply to meet the district's needs to the end of the district plan's 20-year planning period (2024). The plan includes a series of capital improvements including the acquisition of other potable water system treatment plants and water distribution and storage improvements. Although the district's plan does not include

maps showing future water service extensions, portions of the narrative on future water service indicate the district's future water service plans to serve its entire district.

Lake Whatcom Water and Sewer District

The *Lake Whatcom Water and Sewer District Water System Comprehensive Plan* (2010) indicates that the District maintains a water system consisting of a water intake system, water treatment plant, booster pumps, water reservoirs with a combined storage capacity of almost 2.56 million gallons, and approximately 67 miles of water lines (pp. 8-10). The District's water system has interties with the City of Bellingham water system, both for purchased water supply and for emergency use (pp. 47-48). The projected average daily demand for the water system is 909,596 gallons per day in 2027 and the projected maximum daily demand is 1,617,880 gallons per day in 2027 (Appendix A, Exhibit 2). The Lake Whatcom Water and Sewer District water system has source capacity to meet the projected demand through 2027 and for full build-out (Appendix A, Exhibit 2). The *Lake Whatcom Water and Sewer District Comprehensive Sewer Plan* (2014) contains a capital improvement program for both sewer and water projects. This plan contains over \$2.2 million in water system capital projects (2016 - 2019). These projects include security upgrades, an overflow drain, water system rehabilitation and replacement projects, treatment plant improvements, water line replacements, and reservoir maintenance (*Comprehensive Sewer Plan*, Exhibit K). Anticipated financing methods for system improvements include connection fees, water rates, utility local improvement districts, developer extension agreements, loans and bonds (*Water System Comprehensive Plan*, p. 63).

Water District 2

The *Whatcom County Water District # 2 Water System Plan* (2009) indicates that the District obtains all its water from the City of Bellingham, through an intertie with the City (p. 1-2). Water District 2 maintains a water system consisting of approximately 15 miles of water lines. The District does not have storage reservoirs or pumps, but relies on the City of Bellingham for storage and pressure (p. 1-2). The projected average daily demand for the water system is approximately 163,325 gallons per day in 2029 (derived from the *Water System Plan*, p. 2-10). The District has a contract in place with the City of Bellingham that will provide adequate water to meet this demand over the planning period.

The District's Certified Operator stated, in an e-mail of May 9, 2016, that all of the District financed projects in the Water System Plan's "Capital Improvement Schedule" have been completed (p. 8-2). The most recent capital improvements included approximately 5,150 of old water main completed in 2014 financed by a loan from the Drinking Water State Revolving Fund and repaid from general revenue. The Water System Plan is scheduled for update over the next couple of years during which time the capital improvement plan will be reviewed for the next 10 – 20 year period. Revenue sources for future capital projects include water rates and connection fees to repay loans (p. 9-1).

Water District 7

The *Whatcom County Water District # 7 Water System Plan* (2008) indicates that the District obtains all its water from the City of Bellingham, through an intertie with the City (p. 1-3). Water District 7 maintains a water system consisting of booster pumps, water reservoirs with a capacity of 485,000 gallons, and over 12 miles of water lines. The projected average daily demand for the water system is approximately 190,000 gallons per day in 2027 (derived from the *Water System Plan*, pp. 2-5 and 3-1). Water District 7 is approved to serve up to 1,145 residential connections (p. 1-3), which is more than the projected number of dwelling units in the District in the year 2036. The District's Certified Operator stated, in e-mails of April 10, 12, and 14 2016, that all of the "Recommended 6 Year Capital Improvements" identified in the 2008 Water System Plan have been completed as of 2015. The "Recommended 20 Year Capital Improvements" identified in the 2008 Water System Plan focus on replacement of existing water mains with similar size pipe, at a total cost of approximately \$750,000 (p. 8-4). Revenue sources will be water rate increases as necessary to repay loans likely from the United States Department of Agriculture, Drinking Water State Revolving Fund, or Public Works Trust Fund.

Water District 13

The *Whatcom County Water District # 13 Small Water System Plan* (2012) indicates that Water District # 13 maintains a water system consisting of two wells, two reservoirs with a total storage capacity of 300,000 gallons, and associated water lines (pp. 26-27). The projected average daily demand for the water system is almost 127,000 gallons per day in 2031 and the projected maximum daily demand is estimated at over 253,000 gallons per day in 2031 (pp. 15). The District has source capacity to meet the projected need over the 20-year planning period through the year 2031 (p. 32). The *Whatcom County Water District # 13 Small Water System Plan* contains a capital improvement program with approximately \$353,000 in capital projects. These projects include backup power at well sites, storage tank piping modifications, replacing/adding valves, and water line improvements (p. 31).

Chapter 12 – Sewer Systems

Sanitary Sewer

There are a total of 10 wastewater collection systems and seven wastewater treatment plant (WWTP) facilities that serve UGAs in Whatcom County. Most of the facilities provide services within city limits with plans for future service to areas designated as UGAs. However, some systems provide service to unincorporated UGAs (Birch Bay Water & Sewer District and Water District 13).

Inventory of Current Facilities

The following cities and sewer districts (in alphabetical order) provide sanitary sewer service to UGAs in the County:

- **City of Bellingham** maintains a wastewater collection system within its city limits and sewer service zones within the UGA. The City operates a wastewater treatment plant that is also used by Lake Whatcom Water and Sewer District. The city plans future service within its UGA.
- **Birch Bay Water & Sewer District** owns and operates a wastewater collection and treatment system that serves the Birch Bay UGA, a portion Cherry Point UGA, and a parcel within the Blaine UGA.
- **City of Blaine** provides a collection and a wastewater treatment system for property within the city limits. The City also provides contract service to the Harbor Shores Sewer Association in the City's southern UGA area. Blaine's wastewater treatment is handled by the Lighthouse Point Water Reclamation Facility, constructed in 2010. The facility, which generates Class A reclaimed water, was a full replacement of the City's prior treatment plant. The city plans future sewer service to areas within its UGA, and has adequate expansion capacity in the Lighthouse Point facility.
- The **City of Everson** maintains a collection system to serve property within the city limits. The city's sewer system also provides wastewater treatment for the City of Nooksack. Both cities provide funding for operation and maintenance of the treatment facility. The city plans future sewer service to areas within its UGA.
- The **City of Ferndale** provides sewer collection and treatment facilities for property within the city limits and plans future collection and treatment to the city's UGA. The City also serves two areas outside the UGA, east of the City, but has no plans to expand service in these areas.
- **Lake Whatcom Water & Sewer District** maintains a sanitary sewer collection system that serves the Geneva UGA, east of the city limits, and other areas around Lake Whatcom. The district relies upon the City of Bellingham wastewater system for treatment.
- The **City of Lynden** provides sewer collection and treatment facilities for property within the city limits and plans future collection and treatment to the city's UGA upon annexation. The City also operates permitted composting facilities for beneficial use of biosolids.

- **City of Nooksack** constructed a wastewater collection system for property within the city limits in 1987. The city has plans to provide future service to unserved properties within its city limits and to properties within its associated UGA. By agreement with the City of Everson, Nooksack pumps its sewage for treatment at the Everson Wastewater Treatment Plant. Nooksack also provides funding for the operation and maintenance of the Everson Wastewater Treatment Plant.
- The **City of Sumas** provides a wastewater collection system for property within the city limits. Since 1999, the city has had wastewater treatment provided at a large regional treatment facility in Abbotsford, BC owned and operated by Fraser Valley Regional District. The city plans to extend sewer service to UGA property upon annexation.
- **Whatcom County Water District 13** provides wastewater collection and treatment to a portion of the Columbia Valley UGA in unincorporated Whatcom County.

An inventory of existing wastewater facilities located in the County is presented in the table on the following pages. The table summarizes wastewater volume treated per day, total treatment capacity, and surpluses or deficits for the wastewater treatment systems expressed in million gallons per day (mgd). Existing population is also noted.

Table 12.1 Wastewater System Inventory¹

Year of Plan	Service Provider	Miles of Pipe	Collection System	Treatment			Service Area	Notes
			Collection System Existing Conditions	Existing Average Annual Flow (mgd)	Design Flow (mgd)	Surplus/Deficit (mgd)	2013 Population Estimate	
2009	Birch Bay Water and Sewer District (BBWSD)	56	The collection system is composed of approximately 56 miles of gravity and pressure sewer lines and 11 pump stations.	0.97	1.44 ²	0.47	8,639	The WWTP discharges to the Strait of Georgia.
2009	City of Bellingham	324	Bellingham's sewer service area covers approximately 30 sq. miles. The City operates and maintains approximately 318 miles of sewer mains and 6 miles of force mains. There are 27 pump stations in the system.	19.5 ³	34.3	14.8	89,629	The WWTP discharges to the Bellingham Bay.
2004	City of Blaine	40	The existing service area for the Blaine sewage treatment system is in the Blaine city limits. In July 2010, the Lighthouse Point Water Reclamation Facility came on-line with capacity to treat 1.54 MGD. The City of Blaine wastewater collection system consists of gravity sewers, force mains, and eight pumping stations.	0.5	1.54	1.04	4,778	The WWTP discharges to Semiahmoo Bay.
2012	City of Everson ⁴	10	The collection system has over 10 miles of gravity and force main pipe and 8 wastewater pump stations within city limits. The Everson WWTP treats wastewater from both Everson and Nooksack.	0.28	0.44	0.16	2,510	The WWTP discharges to the Nooksack River.
2016	City of Ferndale ⁵	58	Ferndale's collection system has 58 miles of gravity and force main piping and 17 pump stations.	1.62	6.37	4.75	12,558	The WWTP discharges to the Nooksack River.
2016	City of Lynden	62	There are approximately 62 miles of pipe and 14 operating wastewater pump stations within the City of Lynden sewage collection system. The Lynden WWTP is an extended aeration secondary treatment plant that uses oxidation ditches and UV disinfection to treat effluent prior to discharge in the Nooksack River.	1.11	2.18	1.07	12,707	The WWTP discharges to the Nooksack River.
2012 (Amended in 2016)	City of Nooksack ⁶	8	The collection system consists of almost 8 miles of gravity and force main pipe, 4 wastewater pump stations, and 2 grinder pumps. The City's sewage is treated at the Everson WWTP.	0.14	0.22	0.08	1,400	
2009	City of Sumas	10	The City of Sumas contracts with the City of Abbotsford, Canada for sewer service. Sumas sewage flows account for less than 2% of the volume received by the JAMES Treatment Plant in Abbotsford. The City contract allows for a	0.227	0.400	0.173	1,448	Plan date listed is the date of the agreement with the City of Abbotsford, British Columbia which goes through 2028. Approximately 0.110 mgd of the existing flow is generated by a single

Year of Plan	Service Provider	Miles of Pipe	Collection System	Treatment			Service Area	Notes
			Collection System Existing Conditions	Existing Average Annual Flow (mgd)	Design Flow (mgd)	Surplus/Deficit (mgd)	2013 Population Estimate	
			maximum treatment of 0.4 mgd.					industrial user, the PSE cogeneration plant.
2014	Lake Whatcom Water and Sewer District	82	The District does not have a sewage treatment plant. The District contracts with the City of Bellingham to treat and dispose of domestic sewage. The District operates and maintains gravity and pressure sewer lines and 27 sewage pump stations.	0.828	1.382 ⁷	0.544	10,389	The 2014 agreement between the District and the City of Bellingham is for maximum peak instantaneous flows of up to 2,400 gallons per minute.
2012	Water District 13	4	Water District 13 owns, operates, and maintains a domestic wastewater collection system consisting of two pump stations, approximately 4 miles of pipe, a wastewater treatment plant, and a force main that transfers flows from the treatment plant to the drainfield.	0.062	0.125	0.063	790	

1. The information in this table is from the *Draft EIS Whatcom County 2016 Comprehensive Plan and Development Regulations Update and Urban Growth Area Review* (March 2015, p. 4-241), the *Final EIS Whatcom County 2016 Comprehensive Plan and Development Regulations Update and Urban Growth Area Review* (November 2015, Appendix E), and individual sewer plans.
2. Permitted capacity subject to completion of treatment plant upgrades (in progress 2016).
3. City of Bellingham e-mail of May 12, 2016.
4. Design flow figure is the planned upgrade capacity for the Everson WWTP (two-thirds of the planned capacity is for the City of Everson). Construction activities on the Everson WWTP upgrade commenced in 2015 and are scheduled to be completed by the end of 2016.
5. Design flow figure is the City of Ferndale's WWTP capacity following Phase III construction in 2019.
6. Design flow figure is the planned upgrade capacity for the Everson WWTP (one-third of the planned capacity is for the City of Nooksack). Construction activities on the Everson WWTP upgrade commenced in 2015 and are scheduled to be completed by the end of 2016.
7. Design flow is determined by dividing the peak contract capacity by a peaking factor of 2.5.

Future Needs

Sewer provider design standards are provided below, which are based on the estimated wastewater usage (gallons/day for each person or equivalent residential unit).

Table 12.2 Design Standards

<u>Service Provider</u>	<u>Design Standards</u>	
Birch Bay Water and Sewer District	70	gallons/capita/day
City of Bellingham	102	gallons/capita/day
City of Blaine	184	gallons/ERU/day
City of Everson	96	gallons/capita/day
City of Ferndale	145	gallons/capita/day
City of Lynden	100	gallons/capita/day
City of Nooksack	89	gallons/capita/day
City of Sumas	80	gallons/capita/day
Lake Whatcom Water and Sewer District	100	gallons/capita/day
Water District 13	67	gallons/capita/day

Source: Derived from individual sewer plans. Blaine figure is from City of Blaine in an e-mail of May 12, 2016. Sumas figure is from the Sumas City Planner in an e-mail of March 7, 2016.

The table below identifies projected treatment capacity in 2022 for each sewer provider that serves a UGA, given planned growth for these areas.

Table 12.3 Sewer Treatment Capacity 2022

Service Provider	Current Treatment Capacity (MGD)	2022 Treatment Capacity Surplus (Deficit) expressed in MGD
Bellingham	34.300	10.6
Birch Bay Water & Sewer	1.44	0.00 ¹
Blaine	1.54	0.75
Everson	0.441 ²	0.124
Ferndale	6.37 ³	3.36
Lynden	2.18	0.48
Nooksack	0.220 ²	0.062
Sumas	0.400	0.150
Lake Whatcom Water & Sewer District	1.382	0.444
WC Water District 13	0.125	0.039

- 1 Per forecast of future flows in *Engineering Report for Wastewater Treatment Plant Improvements*, Birch Bay Water and Sewer District, 2012. The next facility upgrade is planned for completion by 2022 for capacity through year 2032, per the flow and loading forecast in the referenced report.
- 2 The City of Everson anticipates completing a wastewater treatment plant upgrade in 2016, which will increase the current peak month treatment capacity to 0.441 MGD for Everson and to 0.220 MGD for Nooksack.
- 3 Treatment capacity with planned improvements to the wastewater treatment plant.

The table below identifies projected treatment capacity in 2036 for each sewer provider that serves a UGA, given planned growth for these areas.

Table 12.4 Sewer Treatment Capacity 2036

Service Provider	Current Treatment Capacity (MGD)	2036 Treatment Capacity Surplus (Deficit) expressed in MGD
Bellingham	34.300	.800
Birch Bay Water & Sewer	1.44	(0.50) ¹
Blaine	1.54	0.39
Everson	0.441 ²	0.000
Ferndale	6.37 ³	2.27
Lynden	2.18	0.13
Nooksack	0.220 ²	0.000
Sumas	0.400	0.105
Lake Whatcom Water & Sewer District	1.382	0.265
WC Water District 13	0.125	0.006

- 1 The *Engineering Report for Wastewater Treatment Plant Improvements*, Birch Bay Water and Sewer District, 2012, forecasts flow in year 2032 as 1.80 MGD, resulting in an apparent deficit of 0.36 MGD at that time. The forecast flow in 2032 is extrapolated to 2036 for the analysis above. The 2012 report recommends capacity upgrade by 2022 to maintain adequate capacity. The 2012 report will be updated prior to that upgrade to assure the upgrade is implemented for then-current flow and loading forecasts, including provision of adequate capacity for year 2036
- 2 The City of Everson anticipates completing a wastewater treatment plant upgrade in 2016, which will increase the current peak month treatment capacity to 0.441 MGD for Everson and to 0.220 MGD for Nooksack.
- 3 Treatment capacity with planned improvements to the wastewater treatment plant.

Population and Capital Projects

Population

The table below identifies each sewer provider’s latest sewer plan horizon year and population, as well as the County’s 2036 population projection. This table serves to provide an order of magnitude check with respect to the population that each service provider is planning on serving in comparison to the population projections for the 2036 Whatcom County Comprehensive Plan.

Table 12.5 Population Comparison: Sewer Plans and 2036 Population Projection

Service Provider	Horizon year of Capital Plan	Capital Plan Population	County's 2036 Population Projection
Bellingham	2026	122,007	123,710
Birch Bay Water and Sewer	2036	13,578	13,046
Blaine	2025	10,871	9,585
Everson	2036	4,044	3,907
Ferndale	2036	19,591	19,591
Lynden	2036	19,275	19,275
Nooksack	2036	2,470	2,425
Sumas	2036	2,323 ¹	2,323
Lake Whatcom Water and Sewer District	2032	10,556	12,380 ²
Water District 13	2029	1,595	1,773

1 From the City of Sumas Comprehensive Plan.

2 The boundaries of the District are larger than the area served by sewer.

Capital Facility Projects

Sewer services and capital facilities are funded primarily by the users of the system through service charges and connection fees. These rates are adjusted as needed to fund capital and operational needs. Some grant programs exist for the construction of sewer facilities and upgrades, but, like many grant programs, they are generally very competitive.

City of Bellingham

The *City of Bellingham Comprehensive Sewer Plan* (2009) indicates that the City maintains a wastewater collection and conveyance system comprised of gravity sewers, pump stations, and force mains (p. 5-1). The City of Bellingham operates a wastewater treatment plant, which is also utilized by the Lake Whatcom Water and Sewer District (pp. 2-1 and 8-1). The *City of Bellingham Comprehensive Sewer Plan* contains a capital improvement program with approximately \$54.2 million in capital projects (2016 - 2026). These projects include collection system improvements and wastewater treatment plant improvements (p. 12-6). The financial plan indicates that system development charges, rates, cash reserves, and revenue bonds are funding sources to implement the plan and that projected funds will be adequate for planned capital projects (p. 12-7).

Birch Bay Water and Sewer District

The *Birch Bay Water and Sewer District Comprehensive Sewer Plan* was adopted by the District in 2009. The District is completing an updated plan in 2016. Birch Bay Water and Sewer

District provides sewer collection and treatment services for the area within and some areas adjacent to the Birch Bay UGA. The system includes a wastewater treatment plant, 11 pump stations and over 56 miles of collection and conveyance piping. The wastewater treatment plant was evaluated in 2012. The headworks facility was replaced in 2014 and aeration upgrades are in progress in 2016. Following completion of the aeration upgrades, the facility will be permitted for 1.44 million gallons per day, maximum month average daily flow. The District's 2009 plan indicates where current sewer service exists and establishes a future service area that consists of portions of then-current Birch Bay, Blaine, and Cherry Point UGAs. The plan identifies future trunk lines and lift station and force main upgrades or additions. The system serves development throughout the UGA, including all developed areas along the Birch Bay shoreline and existing urban-density development inland. The County has since removed significant areas from the Birch Bay and Blaine UGAs, particularly areas at Birch Point and north of Lincoln Road. The sewer service area addressed in the 2016 plan update includes all of the Birch Bay UGA, and parcels and plats with existing sewer service. The most recent District sewer planning document is its *Engineering Report for Wastewater Treatment Plant Improvements* (2012). The report includes an updated forecast of growth in population, flow and loadings. The report recommended improvements for immediate implementation (the work to be completed in 2016) and an upgrade to be completed by year 2022. With the revised population forecast for this plan, the next plant upgrade will potentially be necessary prior to 2022. The 2016 plan update will refine the timing of the next plant upgrade and future updates to the 2012 report will address capacity needs for year 2036 population and corresponding flow and loading. The 2009 plan includes a capital improvement plan for adequate capacity and extension or upgrade of collection system facilities to service the designated area. Several of those projects have been completed. The 2016 plan will revise that capital plan to exclude service to areas no longer in the UGA or service area and update the list of projects anticipated for service within the UGA and adjacent existing service area.

City of Blaine

The *City of Blaine General Sewer Plan* (2004, revised 2005) and associated Technical Memorandum (2016) indicate that the City of Blaine maintains a wastewater collection and conveyance system comprised of gravity sewers, pump stations, and force mains. The City of Blaine operates a bio-membrane wastewater treatment plant that discharges to Semiahmoo Bay. The plant is called the Lighthouse Point Water Reclamation Facility and uses advanced membrane bio-reactors to purify wastewater to meet Class A water reuse standards, such as irrigation of parks and golf courses. Lighthouse Point replaced the city's former facility which has since been decommissioned. Lighthouse Point generates reclaimed water suitable for industrial and agricultural uses, and the city is currently contracted with Resort Semiahmoo to supply reclaimed water for golf course irrigation, and a private user for service of a landscape water feature.

The plant has a design capacity of 3.1 million gallons per day (mgd) for purification, and has the current capacity to treat an annual average of 1.54 mgd. The City of Blaine General Sewer Plan contains a capital improvement program with approximately \$33.5 million in capital projects over

its 20-year planning period. A significant portion of that has already been invested in developing Lighthouse Point and the flow attenuation tanks; a total of \$26.0 million was estimated in the Plan for those two facilities. In the next 20 years (2016 - 2036), the City forecasts line extensions and installation of pumping facilities to serve new development, as well as phased expansion of the Lighthouse Point facility. However, these are only necessary if development occurs and will be paid primarily through general facility fees. These projects include sewer trunk line extensions, and associated pump stations, into the East Blaine planning area as development in that area generates the need. They also include development of sewer trunk line extensions, and associated pump stations, in the West Blaine planning area as development also creates the need there. The vast majority of these facilities will be developer installed. The City's financing plan projects adequate revenues to cover expenses over the 20-year planning period only if the City continually assesses the rate structure and general facility fees as time progresses. The City has accomplished the greatest goal outlined in the plan (building the new treatment facility), and is well-staged to expand the delivery system as demand increases due to expanding population.

City of Everson

The *City of Everson General Sewer Plan* (2012) indicates that the City of Everson maintains a wastewater collection and conveyance system comprised of gravity sewers, pump stations, and force mains. The City of Everson operates a wastewater treatment plant, which is also utilized by the City of Nooksack (pp. 3-1 and 3-3). The Everson Wastewater Treatment Plant is being upgraded in 2016 to increase capacity to accommodate projected growth over the 20-year planning period (*City of Nooksack 2012 General Sewer Plan Elements Amendment*, January 2016, p. 3-2). The *Everson General Sewer Plan* contains a capital improvement program with approximately \$4.5 million in capital projects over the next 20 years (2016 - 2036). These projects include pump station, collection system and wastewater treatment plant improvements (pp. 11-3 through 11-8). The financing plan indicates there are fiscal challenges, but also includes strategies for addressing projected funding gaps (pp. 11-8 through 11-10).

City of Ferndale

The *City of Ferndale Comprehensive Sewer Plan* (2016) indicates that the City of Ferndale maintains a wastewater collection and conveyance system comprised of gravity sewers, pump stations, and force mains. The City of Ferndale also operates a wastewater treatment plant (pp. 15). The City plans to increase the capacity of the wastewater treatment plan from 3.23 MGD to 6.37 MGD (p. 16). The existing lagoon system will be converted to an extended aeration activated sludge treatment plant. The *Ferndale Comprehensive Sewer Plan* contains a capital improvement program in the range of \$52,000,000 to \$60,000,000 million in capital projects over the next 20 years (2016 - 2036). These projects include pump stations, collection system, and wastewater treatment plant improvements and inflow/infiltration reduction projects. The City's financing plan projects adequate revenues to cover expenses over the 20-year planning period (p. 32).

City of Lynden

The *City of Lynden General Sewer Plan (2007)* and the BHC Consultants Technical Memorandum (June 22, 2016) indicate that the City of Lynden maintains a wastewater collection and conveyance system comprised of gravity sewers, pump stations, and force mains. The City of Lynden also operates a wastewater treatment plant that include an influent pump station, headworks with screens and grit removal, three anoxic selector tanks, two oxidation ditches, two secondary clarifiers, effluent cloth disc filters, UV disinfection system, effluent Parshall flume, effluent pump station, sludge thickening and digestion, sludge dewatering, and composting facilities. The City of Lynden's updated capital improvement program set forth in the BHC Consultants Technical Memorandum (June 22, 2016) contains collection & conveyance system and wastewater treatment plant capital projects over the next 20 years from 2016 - 2036. The City's financing plan projects adequate revenues to cover expenses over the 20-year planning period (KI&A Memo dated June 27, 2016).

City of Nooksack

The *City of Nooksack 2012 General Sewer Plan Elements Amendment* (January 2016) indicates that the City of Nooksack maintains a wastewater collection and conveyance system comprised of gravity sewers, pump stations, and force mains. The City of Nooksack does not operate a wastewater treatment plant. Wastewater from Nooksack is treated at the Everson Wastewater Treatment Plant (pp. 3-1 and 3-3). The Everson Wastewater Treatment Plant is being upgraded in 2016 to increase capacity to accommodate projected growth over the 20-year planning period (*City of Nooksack 2012 General Sewer Plan Elements Amendment*, January 2016, p. 3-2). The Plan also contains a capital improvement program with over \$2.5 million in capital projects over the next 20 years (2016-2036). These projects include pump station, collection system and wastewater treatment plant improvements (pp. 11-2 through 11-5). The six-year and 20-year financing plans indicate there are fiscal challenges based upon existing fee structures, but also includes strategies for addressing projected funding gaps (pp. 11-6 through 11-9).

City of Sumas

The City of Sumas does not have a comprehensive sewer plan. The Sumas sewer system was addressed in the 2016 update of the Sumas Comprehensive Plan. The Sumas Comprehensive Plan addresses the 20-year period through 2036 including a 2036 population of 2,323.

The City of Sumas owns and maintains a sewage collection and transmission system that includes gravity sewer lines and a small number of sewer lift stations. The Sumas system directs sewage to a discharge into the City of Abbotsford system in British Columbia, Canada.

The City has an ongoing contract with the City of Abbotsford to receive and treat sewage collected in Sumas. This contract provides for the receipt and treatment of a maximum volume of 400,000 gallons per day through December 31, 2028. Discharges from the Sumas system are metered on a daily basis. A review of City records from January through December 2015 indicates that typical maximum effluent levels are approximately 227,000 gallons per day total. Approximately 110,000 gallons of the City's total maximum daily discharge is generated by a

single industrial customer. Using the conversion factor of 300 gallons per day per equivalent residential unit (ERU), the total contract amount equates to 1,333 ERUs. The available capacity of 173,000 gallons per day is equivalent to approximately 577 ERUs. Excluding the one large industrial customer, which generates the equivalent of 367 ERUs, leaves an available capacity of 966 ERUs for the remainder of the City. This available capacity equals a 248% increase over the current City typical maximum daily volume of 117,000 gallons per day or 390 ERUs (e.g., maximum daily volume without considering the single large industrial use). This CFP assumes a population increase from 1,468 in 2015 to 2,323 in 2036 along with a comparable level of employment, representing a 58% increase through 2036. On this basis, it appears that Sumas has sufficient sewer service capacity to meet its needs through 2036.

The Sumas Comprehensive Plan shows the locations of sewer main extensions necessary to serve new development in the Sumas UGA. All system extensions necessary to serve new development will be provided by developers. The City completed a sewer lift station that was designed to be deep enough to receive gravity flows from all areas within the Sumas unincorporated UGA and UGA Reserve. The Capital Facilities Element of the Sumas Comprehensive Plan (2016) includes a 20-year capital improvement program (2016-2036) that identifies over \$480,000 in capital projects to be funded through a combination of monthly rates and charges, connection charges, and developer contracts (Table 4-1 on p. 4-4). The Capital Facilities Element of the Sumas Comprehensive Plan also includes a six-year financial analysis (2016-2021) indicating that the city sewer system will have sufficient revenues to cover anticipated expenditures, including capital improvement costs, through 2021 (p. 4-25).

Lake Whatcom Water and Sewer District

The *Lake Whatcom Water and Sewer District Comprehensive Sewer Plan 2014 Update* (2014) indicates that the District maintains a wastewater collection and conveyance system comprised of gravity sewers, pump stations, and force mains. The District sends wastewater to the City of Bellingham for treatment and disposal (pp. 4-16). The District and the City of Bellingham have a contract for wastewater treatment and disposal through the year 2034. The *Lake Whatcom Water and Sewer District Comprehensive Sewer Plan 2014 Update* contains a capital improvement program with approximately \$3.4 million in capital projects over the next several years (2016 - 2019). These projects include pump station replacements, sewer line replacements, and manhole rehabilitation (pp. 24-25 and Exhibit K). The District engages in revenue planning and reviews sewer rate structures to address future costs to the District (pp. 19-21 and 24).

Water District 13

Water District 13 provides sewer service to a portion of the Columbia Valley UGA. The *Whatcom County Water District No. 13 Comprehensive Sewer Plan* (2012) indicates that Water District 13 maintains a wastewater system comprised of pressure and gravity sewer pipes, pump stations, a wastewater treatment plant, and a force main that transfers flows from the treatment plant to the drainfield (p. 5-1). The *Whatcom County Water District No. 13 Comprehensive Sewer Plan* contains a capital improvement program with approximately \$11.7 million in capital projects from 2017 to 2029. These projects include re-lining lagoons in the wastewater treatment

plant, replacing a pump station force main, upgrading the wastewater treatment plant by installing a membrane bioreactor, refurbishing chlorination equipment, and installing new pipe (p. 7-11). The financing plan indicates that the District could issue bonds and utilize general facilities charges, developer extension charges, and monthly service charges to pay for capital facility improvements (pp. 7-7, 7-8, 7-14 and Figure 7.2).

Chapter 13 – Schools

Schools

This section evaluates the seven public school districts that serve Whatcom County and provides:

- An inventory of current facilities, showing the existing enrollment capacity at the elementary, middle school and high school levels;
- A forecast of future needs, indicating whether existing school facilities can accommodate future student enrollment projections; and
- Capital projects and funding, summarizing the facility improvements proposed by the districts to provide additional classroom space for future students.

Inventory of Current Facilities

Inventories of the school districts' existing facilities located in Whatcom County are presented in this section. Each inventory includes the number of students that the school district can accommodate (enrollment capacity) for the elementary, middle school and high school grades.

Bellingham School District

The Bellingham School District serves the majority of the City of Bellingham and surrounding areas. The school district's current enrollment capacity is shown below.

Table 13.1 Bellingham School District Current Enrollment Capacity

School	Total Enrollment Capacity
Elementary	4,815
Middle School	2,700

School	Total Enrollment Capacity
High School	3,350
Total K-12	10,865

Source: Bellingham School District No. 501 Capital Facilities Plan 2015-2021 (August 2015, Table 2-A). This capacity reflects permanent and portable capacity at each grade level.

Blaine School District

The Blaine School District serves the City of Blaine and its UGA, most of the Birch Bay UGA, and surrounding rural areas. The school district's current enrollment capacity is shown below.

Table 13.2 Current Enrollment Capacity

School	Total Enrollment Capacity
Elementary	1,120
Middle School	540
High School	740
Total K-12	2,400

Source: Blaine School District Capital Facilities Plan (December 2015, p. 6).

Ferndale School District

The Ferndale School District serves the City of Ferndale and its UGA, and rural areas including the Lummi Reservation and Lummi Island. The school district's current enrollment capacity is shown below.

Table 13.3 Current Enrollment Capacity

School	Total Enrollment Capacity
Elementary	2,975
Middle School	1,300
High School	1,925
Total K-12	6,200

Source: Ferndale Schools Capital Facilities Plan and School Impact Fee Ordinance (April 2013, p. 3).

Lynden School District

The Lynden School District serves the City of Lynden and its UGA, and surrounding agricultural and rural areas. The school district's current enrollment capacity is shown below.

Table 13.4 Current Enrollment Capacity

School	Total Enrollment Capacity
Elementary	1,350
Middle School	600
High School	700
Total K-12	2,650

Source: Lynden School District Capital Facilities Plan (Feb. 2016, p. 5)

Meridian School District

The Meridian School District serves mostly rural areas, although the City of Bellingham extends into the southern portion of the District. The school district's current enrollment capacity is shown below.

Table 13.5 Current Enrollment Capacity

School	Total Enrollment Capacity
Elementary	888 ¹
Middle School	494
High School	870
Total K-12	2,252

Source: Meridian School District No. 505 Capital Facilities Plan 2015-2021 (June 2015, p. 5).

¹ Capacity includes Irene Reither Elementary School and Ten Mile Creek Elementary School (which currently provides space for the Parent Partnership Program).

Mount Baker School District

The Mount Baker School District serves the Columbia Valley UGA and rural areas in eastern Whatcom County. The school district's current enrollment capacity is shown below.

Table 13.6 Current Enrollment Capacity

School	Total Enrollment Capacity
Elementary	1,255
Middle School	428
High School	944
Total K-12	2,627

Source: Mount Baker School District Capital Facilities Plan (May 2013, p. 6).

Nooksack Valley School District

The Nooksack Valley School District serves the cities of Everson, Nooksack, Sumas and their associated UGAs, and surrounding agricultural and rural areas. The school district's current enrollment capacity is shown below.

Table 13.7 Current Enrollment Capacity

School	Total Enrollment Capacity
Elementary	1,180
Middle School	650
High School	1,320
Total K-12	3,150

Source: Everson/Nooksack/Sumas City Planner e-mail of March 7, 2016.

Future Needs

The forecast of future needs shows whether a school district’s existing capacity will be able to accommodate projected student enrollment increases over the 20-year planning period, or whether the districts will need plans for additional school facilities to meet future needs. Several school districts have developed 20-year student enrollment projections in association with their capital facility plans (CFPs). School district projections are used in the analysis, when available. When 20-year projections are not available from the school district CFPs, consultant projections developed for the *Final EIS Whatcom County 2016 Comprehensive Plan and Development Regulations Update and Urban Growth Areas Review* (November 2015) are utilized.

Future enrollment is affected by demographic trends (such as an aging population) and trends in alternative school methods including home schooling, Running Start program, and online schooling. Therefore, school districts routinely monitor enrollment growth trends and may adjust their plans accordingly. The table below shows whether existing classroom capacity will be adequate to serve the projected student enrollment in 2036. As can be seen by this analysis, deficits are experienced in four school districts by 2036. School districts can address future deficits by constructing additional classrooms, installing portables, and/or increasing the number of students accommodated in existing classrooms.

Table 13.8 Whatcom County School District – Forecast of Future Needs 2036

School District	Existing Student Capacity	2036 Enrollment Projection	2036 School Surplus (Deficit) Capacity
Bellingham	10,865	12,331 ¹	(1,466)
Blaine	2,400	2,456 ²	(56)
Ferndale	6,200	6,521 ³	(321)
Lynden	2,650	3,432 ⁴	(782)
Meridian	2,252	1,529 ⁵	723
Mount Baker	2,627	2,128 ⁶	499
Nooksack Valley	3,150	2,012 ⁷	1,138

- 1 The *Bellingham School District No. 501 Capital Facilities Plan 2015-2021* (August 2015) shows enrollment in the 2034-35 school year at 12,141 students (Table 1-B). The County has extrapolated this enrollment projection to the year 2036.
- 2 *Blaine School District Capital Facilities Plan* (December 2015, p. 10).
- 3 Projected enrollment is from the background information prepared for the *Final EIS Whatcom County 2016 Comprehensive Plan and Development Regulations Update and Urban Growth Areas Review* (November 2015), contained in an e-mail from BERK Consulting (March 1, 2016).
- 4 *Lynden School District Capital Facilities Plan* (February 2016, p. 9).
- 5 Projected enrollment is from the background information prepared for the *Final EIS Whatcom County 2016 Comprehensive Plan and Development Regulations Update and Urban Growth Areas Review* (November 2015), contained in an e-mail from BERK Consulting (March 1, 2016). The projected enrollment does not include students in the Meridian Parent Partnership Program (MP3). MP3 currently serves approximately 150 students on campus that live all over Whatcom County and another 130 students via on-line methods from around the state. It is anticipated that MP3 enrollment will continue to increase throughout the 20-year planning period.
- 6 *Mount Baker School District Capital Facilities Plan* (May 2013, p. 11).
- 7 Projected enrollment is from the background information prepared for the *Final EIS Whatcom County 2016 Comprehensive Plan and Development Regulations Update and Urban Growth Areas Review* (November 2015), contained in an e-mail from BERK Consulting (March 1, 2016).

Capital Projects and Funding

Most school districts in Whatcom County have capital facility plans that inventory existing school facilities, project future enrollment levels, and identify capital projects needed to support student enrollment growth in their respective districts.

Capital Project Funding

School Districts in Washington State fund capital improvements with both State and local dollars. Local capital financing is usually achieved through two primary mechanisms. The first is the property tax, in which residents of the school district vote to finance a capital bond with an increase in property taxes. The annual bond cost is spread over the life of the bond. Therefore, if property values increase over time the levy rate necessarily declines to generate the same annual revenue.

The second potential financing tool is a school impact fee, which is designed to recover costs from new development for the facility improvements necessary to serve development. This fee is usually charged to new residential development based on the number and type of units constructed.

Bellingham School District

The future needs analysis above indicates that the Bellingham School District's projected enrollment in 2036 will exceed the current school capacity by 1,466 students. The *Bellingham School District No. 501 Capital Facilities Plan 2015-2021* (Aug. 2015) indicates that permanent capacity will increase by 652 over the six-year planning period (Table 3). The projects that will increase permanent capacity are the Lowell Elementary School renovation/addition, the Happy Valley Elementary School replacement, a new Options High School, and the Sehome High School replacement/addition (Table 3). Installing portables and purchasing additional property are also planned in the next six years (Table 3). These projects are being funded by a \$160 million bond measure passed by the voters in November 2013, state matching funds, and impact fees.

While the District's CFP is a six-year plan, rather than a 20-year plan, it does state that "The District will closely monitor population growth and incorporate planned projects to meet actual student needs in future updates to this Plan" (p. 3).

Blaine School District

The future needs analysis above indicates that the Blaine School District's projected enrollment in 2036 will exceed the current school capacity by 56 students. The *Blaine School District Capital Facilities Plan* (Dec. 2015) indicates that permanent capacity will increase by at least 60 more students over the six-year planning period, with flexibility built into the plan to accommodate up to a total of 184 more students (p. 11). Projects in the six-year planning period include improvements to the Blaine Primary School, Blaine Elementary School and Blaine High School (p. 11). These projects are being funded by a \$45 million bond measure passed by the voters in February 2015. The CFP also indicates that the District plans to identify a site that could accommodate a school in the Birch Bay area, although this project is not currently funded (p. 12).

Ferndale School District

The future needs analysis above indicates that the Ferndale School District's projected enrollment in 2036 will exceed the current school capacity by 321 students. The *Ferndale Schools Capital Facilities Plan and School Impact Fee Ordinance* (April 2013) indicates that the District is looking at replacing two elementary schools and one high school in the six-year planning period at the cost of about \$140 million (p. 5). The proposed funding source would primarily be voter approved bonds and state matching funds (p. 6).

Lynden School District

The future needs analysis above indicates that the Lynden School District's projected enrollment in 2036 will exceed the current school capacity by 782 students. The *Lynden School District Capital Facilities Plan* (Feb. 2016) indicates that permanent capacity will increase by 250 more students over the six-year planning period and by a total of 1,050 over the 20-year planning period (pp. 5, 10 and 11). Projects in the six-year planning period that will add capacity are construction of a new Fisher Elementary School and construction of a new Lynden Middle School (p. 10). These projects are being funded by a \$48 million bond measure passed by the voters in April 2015 and state matching funds. The CFP also indicates that the District plans to make necessary additions to address the high school facility needs and elementary school facility needs within the 20-year planning period. The District would seek voter approval of bond measures in the future for these projects (pp. 10 and 11).

Meridian School District

The future needs analysis above indicates that the Meridian School District's projected enrollment in 2036 can be accommodated by the current school facilities. The *Meridian School District No. 505 Capital Facilities Plan 2015-2021* (June 2015) indicates that the District recently completed capacity and improvement projects at Irene Reither Elementary School and Meridian High School (p. 8). The District's CFP states that "The District plans to monitor capacity and enrollment growth and, as necessary, will update this Plan to reflect capacity needs and related planned projects" (p. 8). In fact, the Meridian School District Superintendent indicated, in a letter of February 23, 2016, that the District is currently experiencing considerable growth at the elementary level. Therefore, the Meridian Parent Partnership Program (MP3), which currently occupies the Ten Mile Creek Elementary School, will be re-located to a new campus west of the District Office on Laurel Rd. This new campus will consist of portable buildings, parking and lawn area. The Ten Mile Creek Elementary School will be utilized for kindergarten and 1st grade classrooms at the beginning of the 2017-2018 school year.

Mount Baker School District

The future needs analysis above indicates that the Mount Baker School District's projected enrollment in 2036 can be accommodated by the current school facilities. The *Mount Baker School District Capital Facilities Plan* (May 2013) indicates that the District has adequate classroom space to serve projected student enrollment through the entire 20-year planning period (p.12). While the District does not plan to add classroom space, it does plans to invest in facility improvements, maintenance and energy upgrades (p. 12).

Nooksack Valley School District

The future needs analysis above indicates that the Nooksack Valley School District's projected enrollment in 2036 can be accommodated by the current school facilities. Projects in the six-year planning period include replacing the Nooksack Valley Middle School (except the covered play area), expanding the Nooksack Elementary School (adding one kindergarten, three general classrooms and enclosing a covered play area), and replacing the Nooksack Valley High School. These projects are being funded by almost \$28 million bond measure passed by the voters in February 2015 and state matching funds. The District also plans improvements to roofs, HVAC controls, gym floors and floor coverings over the six-year planning period.

Chapter 14 – Fire Protection

Fire Protection

The County is served by 15 different fire departments or districts, 13 of which serve unincorporated portions of the County:

- City of Bellingham
- City of Lynden
- Fire District 1
- Fire District 4
- Fire District 5
- Fire District 7
- Fire District 8
- Fire District 11
- Fire District 14
- Fire District 16
- Fire District 17
- Fire District 18
- Glacier Fire District 19
- North Whatcom Fire and Rescue
- South Whatcom Fire Authority

The cities of Bellingham and Lynden have their own fire departments. There are urban growth areas (UGAs) within the boundaries of seven fire districts in the County. These seven districts serve the UGAs along with surrounding rural areas. Fire District 1 serves the cities of Everson and Nooksack. Fire District 7 serves the City of Ferndale and the Cherry Point UGA. Fire District 8 serves portions of the Bellingham UGA. Fire District 14 serves the City of Sumas and the Columbia Valley UGA. North Whatcom Fire and Rescue, which also provides service within the boundaries of Fire District 4, serves the City of Blaine, the Birch Bay UGA, the Lynden UGA (outside city limits) and portions of the Bellingham UGA. South Whatcom Fire Authority serves portions of the Bellingham UGA. Six fire districts serve rural areas and do not contain UGAs within their boundaries. These are Fire Districts 5, 11, 16, 17, 18 and 19.

Each city and fire protection district is assigned a numeric fire protection rating (a Class 1 rating is considered best) by the Washington Surveying and Rating Bureau. Insurance companies fund the Bureau to perform on-site inspections of fire districts to determine the rating. The Bureau analyzes five areas: average response time, water supply, communication network, schedule of fire inspections, and existing conditions of fire stations. Fire station evaluations focus on the age of vehicles, amount of personnel training, and whether the facilities are staffed or not. Insurance companies use the fire protection rating to help determine insurance rates on all fire insurance policies. Quality of fire service can have a significant impact on fire insurance rates with the greatest impact experienced by commercial occupancies.

In addition to fire protection services, the agencies listed here provide responses to medical emergencies. In fact, EMS calls account for the majority of the responses by most fire protection agencies.

The City of Bellingham and Whatcom County operate the 911 emergency telephone system, called What-Comm. The initial call receiving site is located in Bellingham, and is responsible for dispatching most law enforcement agencies in Whatcom County. All fire and medical related calls are forwarded to the Fire Dispatch Center located at Bellingham Fire Department’s Broadway Street Station. The Fire Dispatch Center is responsible for dispatching all municipal fire departments and fire districts in Whatcom County. The Bellingham Police Department operates the What-Comm center and the Bellingham Fire Department operates the Fire Dispatch Center.

Inventory of Current Facilities

The table below summarizes the capital facilities for each fire district. It also includes each district’s fire rating, service population and whether the District serves an urban growth area (UGA).

Table 14.1 Fire Facilities Inventory

Fire Protection Provider	Number of Stations	Fire Rating ¹	Service Area Population (2013)	Serves UGA (Y/N)
City of Bellingham	7 ²	3	82,203	Y
City of Lynden	1	5	12,726	Y
Fire District 1	2	7/8	10,796	Y
Fire District 5	1	5	1,452	N
Fire District 7	6	6/5 ³	22,447	Y
Fire District 8	2	5	7,779	Y
Fire District 11	1	7	989	N
Fire District 14	3	5-9 ⁴	7,855	Y
Fire District 16	3	8	1,616	N
Fire District 17	2	5	1,364	N
Fire District 18	2	6	2,132	N
Glacier Fire District 19	1	7	425	N
North Whatcom Fire & Rescue and Fire District 4	11	4/5	40,750	Y
South Whatcom Fire Authority	5	5	12,782	Y

¹ Fire rating is based upon the Washington Surveying and Rating Bureau (WSRB).

- 2 One of the 7 stations is a medic station that serves unincorporated areas of the County.
- 3 Fire rating for Cherry Point is 6 and fire rating for Ferndale is 5.
- 4 The WSRB ratings vary within Fire District 14 from 5 (in Sumas) to 9 (in outlying areas), depending on location and type of structure.

Future Needs

Whatcom County adopted a level of service (LOS) standard tied to response time and fire ratings in the Comprehensive Plan in 2011. The Whatcom County Comprehensive Plan contains the following LOS standards:

Urban levels of service for fire protection shall be a response time of 8 minutes 80% of the time when the department covering the urban area has staffed the fire station. When the fire station is not staffed the response time shall be 10 minutes 80% of the time, or a WSRB Rating of a 6.

Rural levels of service for fire protection shall be a response time of 12 minutes 80% of the time when the department covering the rural area has staffed the fire station. When the fire station is not staffed the response time shall be 14 minutes 80% of the time, or a WSRB Rating of an 8.

Staffed stations shall be a fire station that is staffed 24 hours a day 7 days a week 365 days a year. Staff may be paid, volunteer, or combination of the two.

Fire district capital facility plans submitted in 2011 or later will be reviewed against the new county-wide LOS standards. Whatcom County will consider incorporating information from fire district capital facility plans into the Whatcom County Comprehensive Plan, as they are approved by the districts.

Table 14.2 LOS Analysis – Fire Departments and Fire Districts Serving UGAs¹

Fire District	WSRB Rating Standard	Response Time Standard	Meets Adopted LOS?
City of Bellingham Fire Department		8 minutes 80% of the time for the Bellingham UGA	Yes ²
City of Lynden Fire Department		8 minutes 80% of the time for the Lynden UGA	Yes ³
Fire District 1	6 for the Everson and Nooksack UGAs 8 for rural areas	10 minutes 80% of the time for the Everson and Nooksack UGAs 14 minutes 80% of the time for rural areas	Yes ⁴
Fire District 7		8 minutes 80% of the time for the Ferndale UGA and Cherry Point UGA 12 minutes 80% of the time for rural areas	Yes ⁵
Fire District 8		8 minutes 80% of the time for the Bellingham UGA 12 minutes 80% of the time for rural areas	No ⁶
Fire District 14	6 for the Columbia Valley & Sumas UGAs 8 for rural areas	10 minutes 80% of the time for the Columbia Valley & Sumas UGAs 14 minutes 80% of the time for rural areas	Yes ⁷
North Whatcom Fire and Rescue and Fire District 4	8 for rural areas (unstaffed stations)	8 minutes 80% of the time for the stations serving the UGAs (outside city limits) 12 or 14 minutes 80% of the time for rural areas (depending on whether the station is staffed or not)	Yes ⁸
South Whatcom Fire Authority	8 for rural areas (unstaffed stations)	8 minutes 80% of the time for the Bellingham UGA 12 or 14 minutes 80% of the time for rural areas (depending on whether the station is staffed or not)	Yes ⁹

- 1 The Fire Districts also serve rural areas located outside UGAs.
- 2 *Final EIS Whatcom County 2016 Comprehensive Plan and Development Regulations Update and Urban Growth Areas Review* (November 2015, p. 3-17).
- 3 *Final EIS Whatcom County 2016 Comprehensive Plan and Development Regulations Update and Urban Growth Areas Review* (November 2015, p. 3-17).
- 4 *Whatcom County Fire District # 1 Capital Facilities Plan* (August 2015).
- 5 *Whatcom County Fire District No. 7 Capital Facility Plan 2016-2036* (February 2016).
- 6 Current responses times to portions of the Bellingham UGA are not within the LOS standards. However, the LOS will be met with planned improvements set forth in the *Whatcom County Fire District #8 Capital Facilities Plan* (June 2013).
- 7 *Whatcom County Fire District #14 Capital Facilities Plan* (August 2015).
- 8 *North Whatcom County Fire & Rescue and Fire District # 4 Capital Facilities Plan* (May 2016).
- 9 *Final EIS Whatcom County 2016 Comprehensive Plan and Development Regulations Update and Urban Growth Areas Review* (November 2015, p. 3-19).

Table 14.3 LOS Analysis – Fire Districts Serving Rural Areas

Fire District	WSRB Rating Standard	Response Time Standard	Meets Adopted LOS?
Fire District 5	8	14 minutes 80% of the time	Yes ¹
Fire District 11	8	14 minutes 80% of the time	Yes ¹
Fire District 16	8	14 minutes 80% of the time	Yes ¹
Fire District 17	8	14 minutes 80% of the time	Yes ¹
Fire District 18	8	14 minutes 80% of the time	Yes ¹
Glacier Fire District 19	8	14 minutes 80% of the time	Yes ¹

¹ Final EIS Whatcom County 2016 Comprehensive Plan and Development Regulations Update and Urban Growth Areas Review (November 2015, pp. 3-18 and 3-19).

Capital Projects and Funding

Capital Project Funding

Fire Districts usually fund needed capital improvements through a combination of revenue sources. These can include property tax levies, cash reserves, capital bond proceeds, mitigation fees, fire impact fees and other sources.

The State of Washington authorizes fire districts to levy both “regular” and “special” property taxes to support their operational and capital needs. As part of the regular property tax levy, a fire service provider is authorized to levy a property tax at a total maximum rate of \$1.50 per \$1,000 of assessed value. However, the total maximum aggregate “regular” property tax levy by local taxing agencies in an area may not exceed \$5.90. Occasionally, all local levies will total more than this limit. In this case, “junior” taxing districts, including fire districts, must follow state statute to lower their levy rate so that the total aggregate rate does not exceed the statutory limit. Fire districts may also pass “special” property tax levies for short-term periods without a statutory maximum levy limit. Fire impact fees may be collected on new residential and commercial development to fund facility improvements, provided that the County and/or city governments adopt ordinances authorizing such impact fees.

Capital Projects

A summary of the capital projects for the fire departments and districts serving UGAs are provided below.

City of Bellingham Fire Department

The City of Bellingham Fire Department serves area within the city limits and will serve the UGA upon annexation. Currently, the Bellingham Fire Department assists in providing service to the City's UGA through mutual aid response agreements with Fire Districts. The Draft *Bellingham Comprehensive Plan Capital Facilities and Utilities Chapter* (2016) contains \$495,997 in Fire Department capital improvement projects over the six-year planning period (2017-2022). These projects include replacing medic units and equipment. These costs will be paid from the Medic One fund. There are also a number of unfunded projects including the fire boathouse, Fire Station 1 remodel, fire training center, new fire station, and replacing fire engines, a ladder truck, medic units and support vehicles.

City of Lynden Fire Department

The City of Lynden Fire Department serves area within the city limits and will serve the UGA. Currently, the City of Lynden Fire Department assists in providing service to the City's UGA through mutual aid and automatic aid agreements with North Whatcom Fire and Rescue. The *City of Lynden Fire Department Capital Facilities Plan* (2016) contains over \$7.4 million in capital improvement projects over the 20-year planning period. These projects include a new fire station/training facility, replacing a ladder truck, adding a third ambulance and a variety of apparatus and vehicle replacement purchases. Capital facility funding sources include property tax, sales tax, ambulance utility fees, transport fees, and impact fees.

Fire District # 1

Fire District # 1 serves the Everson UGA, Nooksack UGA and surrounding areas. The *Whatcom County Fire District # 1 Capital Facilities Plan* (August 2015) contains approximately \$9.5 million in capital improvement projects over the 20-year planning period (pp. 14 and 15). These projects include Station 81 replacement (Everson), Station 82 remodel and storage building (Lawrence Rd.), and a variety of apparatus and vehicle purchases. Capital facility funding sources include property tax revenues, a bond measure, other district revenues and grants (pp. 12 and 13).

Fire District # 7

Fire District # 7 serves the Ferndale UGA, Cherry Point UGA and surrounding areas. The *Whatcom County Fire District No. 7 Capital Facility Plan* (February 2016) contains approximately \$19.2 million in capital improvement projects over the 20-year planning period (pp. 22-24). These projects include station improvements, a Department Training Center, and a variety of apparatus and vehicle purchases. Capital facility funding sources include property tax revenues, bonds, grants, reserves and potentially mitigation fees (pp. 24-26).

Fire District # 8

Fire District # 8 serves a portion of the Bellingham UGA and surrounding areas. The *Whatcom County Fire District # 8 Capital Facilities Plan* (June 2013) contains approximately \$9.8 million in capital improvement projects over the 20-year planning period (pp. 17-18). These projects include Station 31 replacement (Marine Dr.), Station 34 improvements (McKenzie Rd.), a new station (Kwina Rd.), and a variety of apparatus and vehicle purchases. Capital facility funding sources include District revenues such as property taxes, bonds, property sales, mitigation fees, funds from the Lummi Nation, funds from the City of Bellingham, and grants (pp. 13-15).

Fire District # 14

Fire District # 14 serves the Sumas UGA, Columbia Valley UGA and surrounding areas. The *Whatcom County Fire District # 14 Capital Facilities Plan* (August 2015) contains approximately \$6 million in capital improvement projects over the 20-year planning period (pp. 17-18). These projects include station improvements, land purchase, and a variety of apparatus and vehicle purchases. Capital facility funding sources include annual revenues such as property taxes, reserves, mitigation fees and grants (pp. 13-15).

North Whatcom Fire & Rescue / Fire District 4

In 2011, North Whatcom Fire and Rescue (also known as Fire District 21) completed a functional consolidation with Whatcom County Fire District 4 whereby NWFR provides management and all operation services through a contract with District 4. North Whatcom Fire & Rescue now provides service to the Blaine UGA, Birch Bay UGA, Lynden UGA (outside of city limits), and a portion of the Bellingham UGA. A single capital facilities plan has been developed for the two Districts. The *North Whatcom Fire & Rescue and Fire District # 4 Capital Facilities Plan* (May 2016) contains approximately \$59.6 million in capital improvement projects over the 20-year planning period (pp. 9 and 10). These projects include a new station, upgrading/remodeling existing stations, and a variety of apparatus and vehicle purchases. Capital facility funding will primarily come from capital bond proceeds (p. 13).

South Whatcom Fire Authority

The South Whatcom Fire Authority was formed in 2009 after voters approved a consolidation of four smaller fire districts. South Whatcom Fire Authority serves portions of the Bellingham UGA and surrounding areas. The District has five existing station and five fire engines. In 2016, the District is asking voters to approve a \$1.96 million bond to replace three of the District's five fire engines.

Chapter 15 – Solid Waste

Solid Waste (County)

State law requires each county within the state, in cooperation with the various cities located within the county, to prepare a coordinated, comprehensive solid waste management plan. The purpose is to plan for solid waste reduction, collection, handling, management and programs designed to meet the needs of the county and cities (RCW 70.95.080).

The Whatcom County Health Department is the lead planning agency for solid waste management in the County. The Health Department's Solid Waste Division is responsible for several program areas encompassing waste prevention, economically efficient recycling and disposal systems, litter control, hazardous waste education and disposal opportunities, monitoring the county's closed landfills, comprehensive planning, and providing support for the Whatcom County Solid Waste Advisory Committee.

The County prepared a *Draft 2016 Whatcom County Comprehensive Solid and Hazardous Waste Management Plan* (Jan. 2016) which serves as the basis for the solid waste component of the Capital Facilities Plan.

Inventory of Current Facilities

The County's solid waste system is a combination of private and public entities. Solid waste handling facilities in Whatcom County currently include two primary transfer stations, five drop box collection stations, one public-use and one private moderate-risk waste fixed facility (for small business and household hazardous waste collection), one vector waste transfer station, and approximately 13 composting and recycling facilities (both permitted and non-permitted). Additionally, there are three anaerobic digesters (one of which requires a permit), three biosolids land application facilities, three private industrial landfills, and six landfills in post-closure status.

The two primary transfer stations are located within the City of Ferndale. Municipal solid waste transported to these transfer stations, by either self-haulers or one of two local certificated haulers, is transported to landfills located outside of Whatcom County. While exempt from the need to obtain permits, recycling facilities are important to the system in Whatcom County, particularly, Northwest Recycling, Inc., which is presently one of the largest facilities offering residential and commercial recycling. The table below lists solid waste facilities in the County that are part of the solid waste permit system.

Table 15.1 Exiting Solid Waste Facilities with Permits

Facility	Operator	Location
Primary Transfer Stations		
RDS Transfer Station	Recycling & Disposal Services, Inc.	4916 LaBounty Pl, Ferndale, WA 98248
RDC Transfer Station	Regional Disposal Co.	1524 Slater Rd, Ferndale, WA 98248
Drop Box Collection Stations		
SSC Birch Bay-Lynden Drop Box Facility	Sanitary Service	4297 Birch Bay Lynden Rd, Blaine, WA 98230
SSC Cedarville Drop Box Facility	Sanitary Service	Cedarville Rd, Bellingham, WA 98226
SSC Roeder Ave Drop Box Facility	Sanitary Service	1001 Roeder Ave, Bellingham, WA 98225
Nooksack Valley Disposal Drop Box Facility	Nooksack Valley Disposal, Inc.	250 Birch Bay-Lynden Rd, Lynden, WA 98264
Cando Recycling Transfer Station		2005 Johnson Rd, Point Roberts, WA 98281
Moderate-Risk Waste (MRW) Facility, Public Use		
Whatcom County MRW Facility	Whatcom County Health Department	3505 Airport Dr, Bellingham, WA 98226
Moderate-Risk Waste (MRW) Facility, Private Use		
Seattle City Light MRW Facility	Seattle City Light	500 Newhalem St, Rockport, WA 98283
Vactor Waste Transfer Station		
City of Bellingham Vactor Waste Transfer Station	City Of Bellingham Public Works	2140 Division St, Bellingham, WA 98226
Composting Facility (permitted)		
Green Earth Technology Composting Facility	Alsand Enterprises	774 Meadowlark Ln, Lynden, WA 98264
Anaerobic Digester (permitted)		
Edaleen Cow Power, LLC	Edaleen Cow Power, LLC	9593 Guide Meridian, Lynden, WA 98264
Biosolids Land Application Facilities		
Tjoelker Enterprises Biosolids Facility	Tjoelker Enterprises	1530 Burk Rd, Blaine, WA 98230
Shannon Tjoelker Biosolids Facility		1687 Burk Rd, Blaine, WA 98230
Lil John Biosolids Facility		9497 Hill Rd, Sumas, WA 98295

Source: *Draft EIS Whatcom County 2016 Comprehensive Plan and Development Regulations Update and Urban Growth Areas Review* (March 2015, pp. 4-255 and 4-256)

Future Needs

The forecast of municipal solid waste (MSW) generation is based upon the solid waste generation projections in the *Draft 2016 Whatcom County Comprehensive Solid and Hazardous Waste Management Plan* (Section 2.3.8, pp. 23-26).

The table below shows projected total MSW generated, the amount of this waste anticipated to be disposed, and the amount anticipated to be recycled.

Table 15.2 Solid Waste Generation Forecast

Year	Total MSW Generated (tons)	Total MSW Disposed (tons)	Total MSW Recycled (tons)
2013	249,189	135,134	114,055
2022	305,000	160,000	145,000
2036	405,000	203,000	202,000

Source: The solid waste that was deposited in landfills and recycled for 2013 is from the *Draft Whatcom County Comprehensive Solid and Hazardous Waste Management Plan* (2016, page 24). The projections for 2022 and 2036 are contained in an e-mail from Jeff Hegedus, Environmental Health Supervisor with the Whatcom County Health Department (March 10, 2016).

The County uses waste generation forecasting as a vital element of solid waste management planning. The County uses this data to help address waste prevention, recycling and special waste issues. The County updates its waste generation models periodically and uses them in conjunction with program and facility planning and evaluation.

Capital Projects and Funding

Currently, the only County capital facility is the Whatcom County Moderate-Risk Waste Facility on Airport Dr. Whatcom County Solid Waste Division has no capital projects for County facilities. However, the *Draft 2016 Whatcom County Comprehensive Solid and Hazardous Waste Management Plan* states “. . . The County will continue to work with the private solid waste service providers to ensure that facility capacity is constructed in advance of need . . .” (Section 2.3.8, p. 25).

Chapter 16 – County Revenue Projections

Whatcom County Capital Facilities Revenue Analysis

This section discusses Whatcom County’s Capital Facilities Revenue for County-provided facilities and services. It assumes the County continues to be responsible for Birch Bay and Columbia Valley.

Introduction

The purpose of this financial analysis is to support the financing plan for the Capital Facilities Plan (CFP) that is required by RCW 36.70A.070(3). These revenue estimates have been developed to assist in project prioritization and planning, and represent realistic, but not exact, estimates of revenue available for the CFP.¹

Estimated future revenues have been projected for the Plan’s 2017-2036 time period, in year of expenditure dollars². These revenues have been grouped according to the following categories:

- Undedicated Transportation Revenues – are composed of Road Fund revenues from the following sources: county road property tax levy, motor vehicle fuel tax allocations, and other undedicated transportation revenues including state timber sales, County Arterial Preservation Grant, Federal Forest Title I entitlement payments, forest excise tax, and minor miscellaneous sources.
- Dedicated Capital Transportation Revenues – these revenues are required by law to be used for specific types of capital expenditures.
- Other Capital Revenues – these revenues must be used for capital, but they are not transportation specific. They include Real Estate Excise Tax (REET), Rural Counties Public Facilities Tax, Conservation Futures, Parks State Grants, Stormwater State and Federal Grants.
- Potential Policy Options – these policy options may make additional capital revenues available to the County via policy changes.

Some of the funds discussed in this analysis may be used to fund the maintenance and operations of existing capital facilities or to construct new ones. However, if maintenance and operations costs of existing facilities increase faster than the revenues that support them, jurisdictions are confronted with difficult decisions regarding whether to fund these costs, at the expense of building new capital projects, or to adjust Level of Service (LOS) standards. Those decisions will be made by the County Council and executive leadership of the County according to the County’s needs and opportunities.

¹ The revenue estimates are not intended to be precise forecasts. Exact funding levels are difficult to predict given the uncertainties of funding sources. The estimates discussed in this section are to be used for planning purposes; actual revenues are highly sensitive to local, state, and federal policy decisions; personal choices of residents; economic cycles and other market forces.

² Year of expenditure dollars have been inflated to the year in which they are expected to be received.

Assumptions

The revenue projections included in this analysis are based on the assumption that all city UGAs in Whatcom County will be annexed by their respective cities by the end of the study period, and that Birch Bay, Cherry Point and Columbia Valley will remain unincorporated for the duration. To the extent that a city's UGA represents land that is needed to accommodate the next 20 years of projected growth, and that actual patterns of growth are in line with the patterns envisioned in the Comprehensive Plan, one would expect that most or all of these areas will be annexed during the study period. The schedule at which annexations will occur is unknown; therefore, for purposes of this study they are assumed to occur in equal increments each year. Assuming complete annexation also gives this analysis the most conservative estimate of future revenues. A discussion of the implications of more scaled-back levels of annexation follows the base revenue projections.

Undedicated Transportation Revenues

Undedicated transportation revenues are unrestricted Road Fund revenues. These revenues are used to fund administration, engineering, road maintenance & operations, ferry operations and construction. About 19% of unrestricted road revenues are available for construction activities. A discussion of the major sources of these revenues follows:

County Road Property Tax Levy

This property tax is collected by Whatcom County specifically for transportation funding and accounts for a large portion of the County's transportation funds. Since the passage of Initiative 747 in 2001, property tax increases are restricted to 1.0% of the previous year's revenues plus new construction. In inflation-adjusted terms, revenues from property tax are actually declining, since the 1.0% allowed increase does not keep pace with inflation (which has averaged 2.53% for the period 1990 - 2015).

If a jurisdiction does not adjust the Property Tax levy rate annually to collect the full 1.0% allowed increase in revenues, the difference between the collected value and the legally-allowed 1.0% increase becomes "banked capacity" which may be collected in future years. Currently Whatcom County has banked capacity of approximately \$1.8 million. For this portion of the analysis we have assumed that the County will *not* increase the levy rate to collect this banked capacity, nor will they collect the allowed 1.0% increase, but will continue to collect funds at a level equal to the previous year's revenues, plus new construction. By not taking the maximum allowed annual revenue increase, the County's banked capacity will increase each year.

State Motor Vehicle Fuel Tax

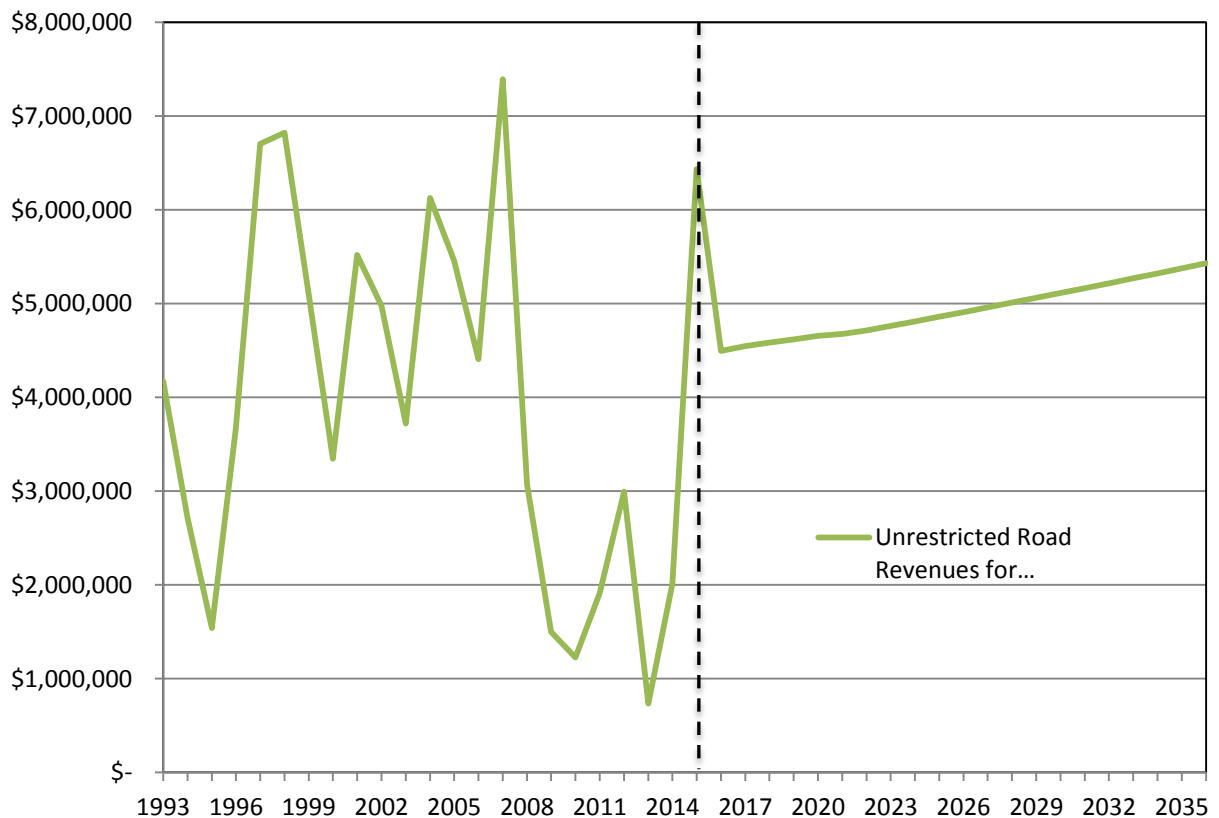
Counties and cities receive a portion of the State Motor Vehicle Fuel Tax (MVF) based on a complex reimbursement formula that includes population, road maintenance and reconstruction costs, and annual needs. The State of Washington increased fuel taxes each year during the period of 2005-2008 but most revenues went to state projects while funding to the County has only increased marginally since 2006 from \$3.7 million to \$3.9 million. The Legislature

increased gas taxes again in 2015, with another increase taking effect in 2016, these increases are also not expected to significantly impact County revenues. Revenues from this funding source are forecast to increase modestly at 1.89% per year.

Other Undedicated Transportation Revenues

The State Legislature increased the County Arterial Preservation funding to Whatcom County from \$420,000 per year to \$515,000 in 2012. This funding source has increased in small increments to \$577,822 in 2015. It is forecast to increase in line with the Motor Vehicle Fuel Tax at 1.89% per year. Federal Forest – Title I revenue has been decreasing in recent years and is expected to be phased out by the federal government within a few years. Forest excise tax (previously known as private harvest tax) and state timber sale revenues fluctuate based on market conditions. Other undedicated sources include delinquent property taxes, leasehold excise tax, and minor miscellaneous amounts. For purposes of this study, forest excise tax, timber sales and other undedicated sources have been combined and projected based on the average of the amounts received in the last six years from these sources.

Figure 16-1. Whatcom County Undedicated Transportation Revenues 1993-2036*



*1993 – 2015 data represents actual undedicated transportation revenues used for construction and 2016 -2036 projected amounts of undedicated revenues available for construction activities. This study assumes Public Works will utilize 19% of its undedicated transportation revenues for capital projects. Federal and state grants were heavily utilized in the period of 2008 - 2014;

therefore, less local funding was consumed. Excess revenues have been reserved in the Road fund balance.

Table 16-1 shows anticipated total Undedicated Transportation Revenues available for capital construction the next six years and the remaining 14 years of the planning period.

Table 16-1. Projected Future Whatcom County Undedicated Transportation Revenues 2017-2036

Undedicated Transp.	2017	2018	2019	2020	2021	2022	Total 2023-2036	Total 2017-2036
Estimated Future Revenues	\$ 4,546,789	\$ 4,582,777	\$ 4,619,091	\$ 4,655,737	\$ 4,676,762	\$ 4,713,789	\$ 71,252,334	\$ 99,047,279

Dedicated Capital Transportation Revenues

Motor Vehicle Fuel Tax – Paths & Trails Revenues

Beginning in 1997, one percent of the Motor Vehicle Fuel Tax is required by state law to go toward establishing and maintaining paths and trails for pedestrians, equestrians, and bicyclists. Based on average growth rate since inception, we have forecast revenues at an annual increase of 1.5% over the prior year.

Figure 16-2 shows 1.0% of the historical MVF Tax revenue to the left of the dotted line, and projected revenues available for paths and trails capital to the right.

Figure 16-2. Whatcom County MVF Tax Revenue 1993-2036 (Allocated for Capital Projects)

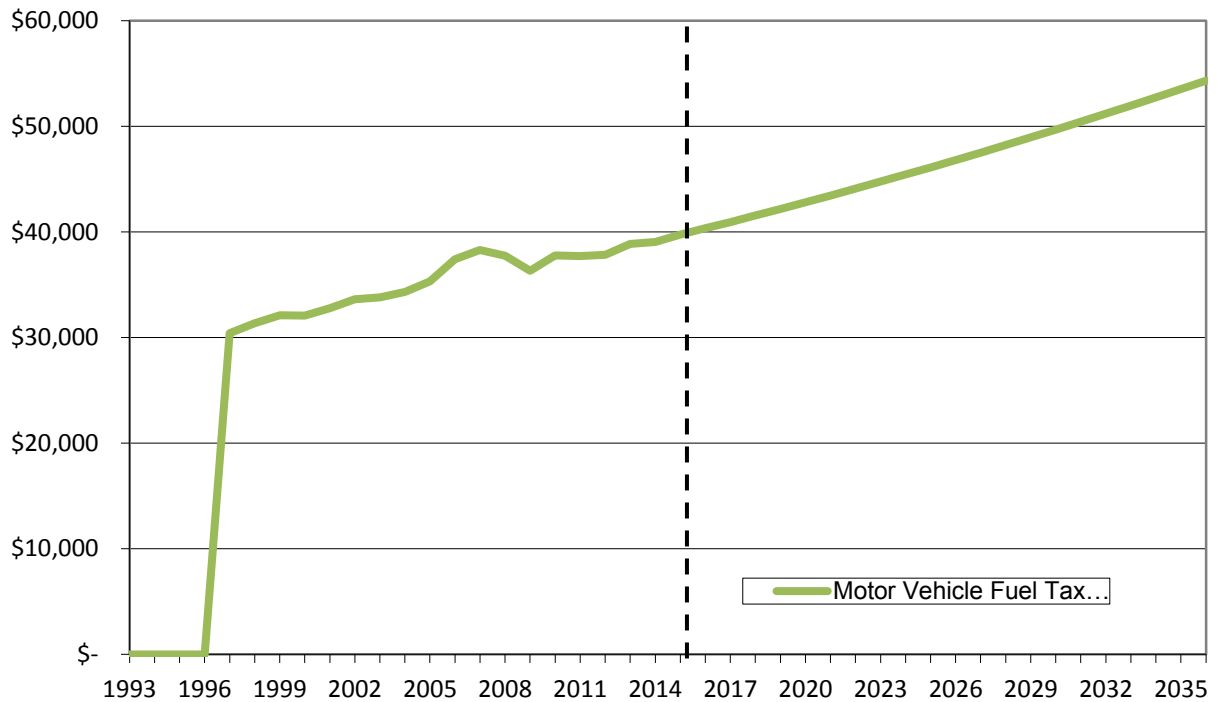


Table 16- 2 shows anticipated total Motor Vehicle Fuel Tax revenues available for path and trail capital projects for the next six years and the remaining 14 years of the planning period.

Table 16-2. Projected Future Whatcom County Motor Vehicle Fuel Tax – Paths & Trails Revenues 2017-2036

State Fuel Tax - P&T	2017	2018	2019	2020	2021	2022	Total 2023-2036	Total 2017-2036
Estimated Future Revenues	\$ 40,942	\$ 41,556	\$ 42,179	\$ 42,812	\$ 43,454	\$ 44,106	\$ 691,671	\$ 946,718

Grants

State Transportation Grants

Grants are an important funding source for transportation capital projects; however, these funds are distributed in a competitive process making it difficult to project future grant funding levels. State grants are primarily funded with the state-levied portion of the MVF Tax.

There have, in recent years, been increases in the State MVF Tax rate. However, many of these additional funds were earmarked for specific large projects, although there was some allocation to local jurisdictions. The Transportation Partnership Act of 2005 provided some additional funds to the Transportation Improvement Board and the County Road Administration Board, for a total of \$80 million to be disbursed to local jurisdictions as grants over a 16-year period. However, these increases in funds are very small relative to demand, with requests to the Transportation Improvement Board overreaching available funds. For this analysis, recent historical grant revenue trends were considered.

Assumptions: These revenues have been estimated on a per capita basis on the assumption that over time a jurisdiction will generally receive its “fair share” of available grant revenues. Since 1993 Whatcom County has averaged \$6.72 per capita in grant revenues per year. However, this number has been lower in recent years averaging \$5.60 per capita since 2006. This analysis assumes \$5.60 per capita in the future with no annual increase. Total revenues are therefore expected to change on pace with changes in population.

For this analysis average annual dollars are assumed in each year. However, in reality these dollars will vary greatly from year to year since they are awarded on a project-specific basis.

Figure 16- 3 shows historical state grant revenues to the left of the dotted line, and projected revenues to the right.

Figure 16-3. Whatcom County State Transportation Grant Revenues 1993-2036 (Allocated for Capital Projects)

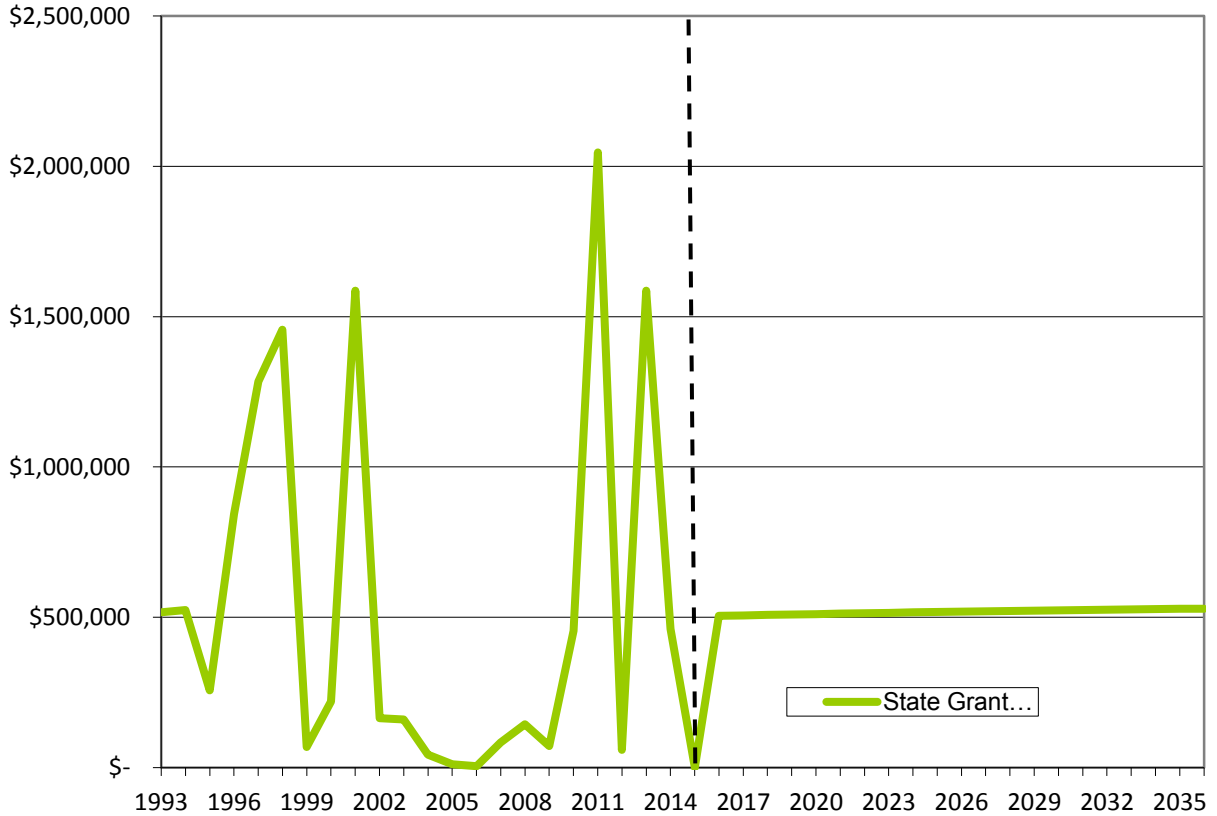


Table 16- 3 shows estimated total state grant revenues for the next six years and the remaining 14 years of the planning period.

Table 16-3. Projected Future Whatcom County State Transportation Grant Revenues 2017-2036 (Allocated for Capital Projects)

State Grants	2017	2018	2019	2020	2021	2022	Total 2023-2036	Total 2017-2036
Estimated Future Revenues	\$ 506,053	\$ 507,598	\$ 509,105	\$ 510,583	\$ 512,020	\$ 513,419	\$ 7,311,347	\$ 10,370,126

Federal Transportation Grants

Federal transportation grants are funded through the federal portion of the fuel excise tax. The federal gas tax rate has fluctuated between \$0.183 and \$0.184 per gallon since 1993. The majority of these funds are deposited into the Highway Trust Fund and disbursed to the states through the Highway and Mass Transit Accounts.

As with state grants, these funds are distributed in a competitive process making it difficult to determine future grant funding levels.

Assumptions: Since 1993 Whatcom County has received an annual average of \$26.07 per capita of federal grant funding. Lacking an increase in the federal gas tax rate, future average annual per

capita federal grant dollars are estimated to remain at that rate with no annual increase. As with state grant dollars, changes in total revenues are expected to occur at the rate of change in the population. In addition, average annual dollars are assumed in each year while in reality these dollars will vary greatly from year to year since they are awarded on a project-specific basis.

Figure 16- 4 shows historical federal grant revenues to the left of the dotted line, and projected revenues to the right.

Figure 16-4. Whatcom County Federal Transportation Grant Revenues 1993-2036 (Allocated for Capital Projects)

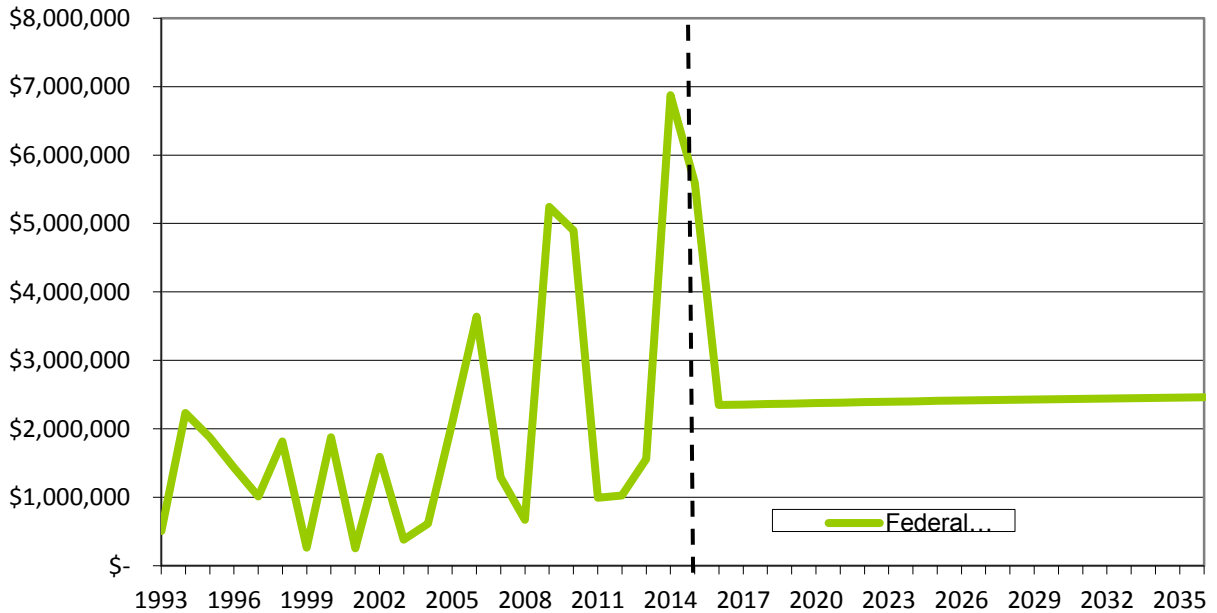


Table 16- 4 shows anticipated total federal grant revenues for the next six years and the remaining 14 years of the planning period.

Table 16-4. Projected Future Whatcom County Federal Transportation Grant Revenues 2017-2036 (Allocated for Capital Projects)

Federal Grants	2017	2018	2019	2020	2021	2022	Total 2023-2036	Total 2017-2036
Estimated Future Revenues	\$ 2,355,857	\$ 2,363,052	\$ 2,370,067	\$ 2,376,949	\$ 2,383,636	\$ 2,390,149	\$ 34,036,932	\$ 48,276,642

Table 16-5 shows total projected transportation revenues for Whatcom County.

Table 16-5. Projected Total Transportation Revenues 2017-2036 (Allocated for Capital Projects)

Transportation Revenues	2017	2018	2019	2020	2021	2022	Total 2023-2036	Total 2017-2036
Estimated Future Revenues	\$ 7,449,641	\$ 7,494,983	\$ 7,540,443	\$ 7,586,081	\$ 7,615,872	\$ 7,661,463	\$ 113,292,284	\$ 158,640,766

Other Capital Revenues

Real Estate Excise Tax

Real Estate Excise Tax (REET) revenues are levied in two portions and must be expended on capital projects. Since the REET is based on the total value of real estate transactions in a given year, the amount of REET revenues a county receives can vary substantially from year to year based on the normal fluctuations in the real estate market. During years when the real estate market is active, revenues are high, and during softer real estate markets revenues are lower.

REET is levied in two parts, REET I (the first 0.25%), and REET II (the second 0.25%), for a total tax of 0.5% of total assessed value. REET I and REET II revenues must be spent on capital projects that are listed in a county's current capital facilities plan. The definition of capital facilities, according to RCW 82.46.010, for REET I funding is:

those public works projects of a local government for planning, acquisition, construction, reconstruction, repair, replacement, rehabilitation, or improvement of streets; roads; highways; sidewalks; street and road lighting systems; traffic signals; bridges; domestic water systems; storm and sanitary sewer systems; parks; recreational facilities; law enforcement facilities; fire protection facilities; trails; libraries; administrative and judicial facilities...

REET II generally follows the above guidelines, but is more restricted, as it may not be spent on recreational facilities, law enforcement facilities, fire protection facilities, trails not associated with parks, libraries, administrative facilities, or judicial facilities (RCW 82.46.035).

Assumptions: This analysis assumes an average annual rate of turn-over of existing property at 6% in 2016. This rate increases at 0.5% per year until the normal turnover rate of 7.0% is reached in 2018. Normal turnover rate is based upon the average actual rate of turnover from the period of 1993 – 2015.

REET revenues generally must be used for capital projects; however, modifications to RCW 82.46.010 and 82.46.035 allow counties to transfer up to \$1 million per year for operations and maintenance of existing capital projects through 2016. Whatcom County has opted to transfer \$1 million per year to the Parks Department under this provision. For purposes of this study, the \$1 million in 2016 is assumed to be withdrawn from the REET II fund balance and will not affect revenue projections. This analysis assumes all REET revenues are available for the capital projects discussed in this plan.

Figure 16- 5 shows historical Real Estate Excise Tax revenue to the left of the dotted line, and projected revenues to the right.

Figure 16-5. Whatcom County Real Estate Excise Tax Revenues 1993-2036

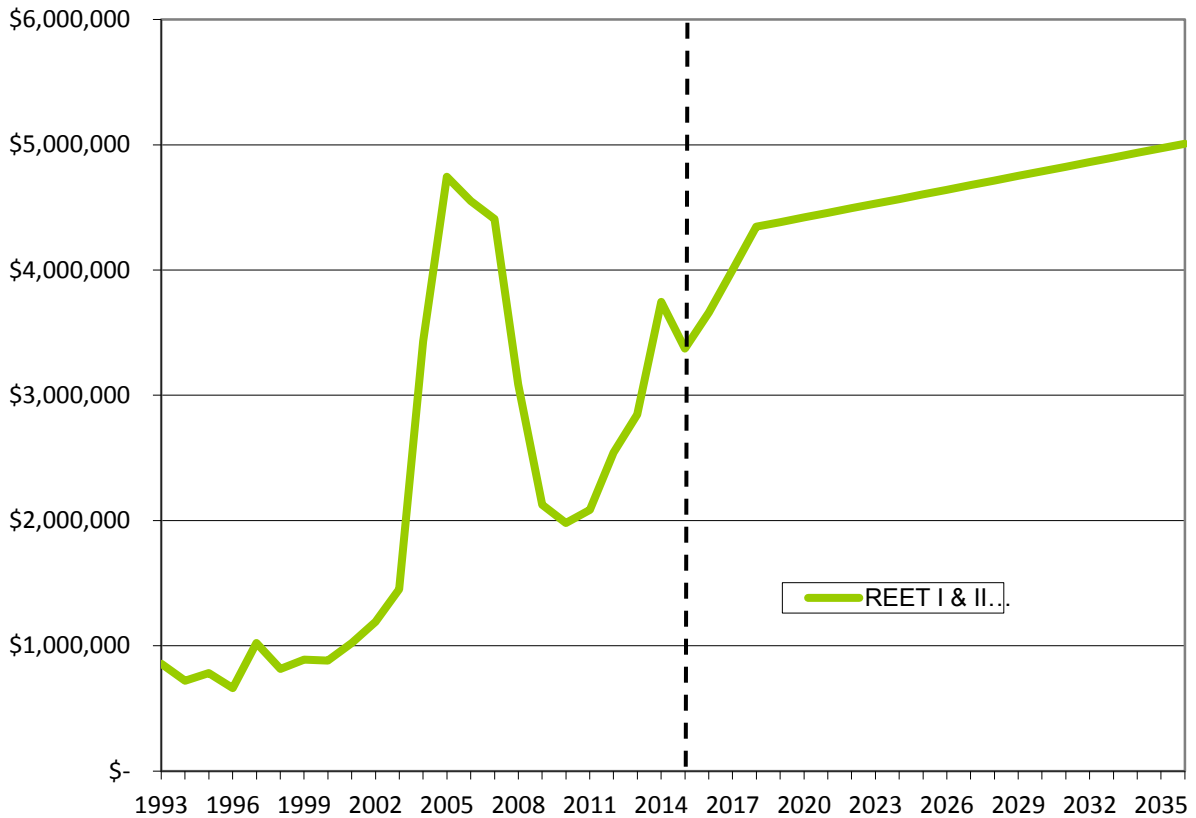


Table 16-6 shows anticipated total Real Estate Excise Tax revenues for the next six years and the remaining 14 years of the planning period.

Table 16-6. Projected Future Whatcom County Real Estate Excise Tax Revenues 2017-2036

Real Estate Excise Tax	2017	2018	2019	2020	2021	2022	Total 2023-2036	Total 2017-2036
Estimated Future Revenues	\$ 4,001,421	\$ 4,346,068	\$ 4,382,913	\$ 4,419,759	\$ 4,456,604	\$ 4,493,450	\$ 66,777,064	\$ 92,877,278

Rural Counties Public Facilities Tax (Rural Sales Tax)

Washington State allows rural counties to impose a local sales tax to fund capital projects that have an economic development purpose and finance personnel positions in economic development offices. This tax, which is deposited in the County’s Public Utilities Improvement Fund, is not an additional sales tax for residents, but rather is given to the jurisdiction in the form of a tax credit against the 6.5% state sales tax. Whatcom County began collecting the tax during 1999. It is currently levied at 0.09% in Whatcom County and is collected countywide. The law (RCW 82.14.370) states “For counties imposing the tax at the rate of .09 percent before August 1, 2009, the tax expires on the date that is twenty-five years after the date that the .09 percent tax rate was first imposed by that county.” Whatcom County’s expiration date is August 1, 2032.

Assumptions: Because this tax is collected on retail sales we have based future projections on an assumed increase of 3.3% annual growth in taxable retail sales within the County. This rate is the taxable sales growth rate for Whatcom County for the period of 1994-2015³. Revenues are assumed to be collected until August 1, 2032. Executive recommendations adopted by Council designate 30% of the proceeds of the tax revenue be used for County capital facilities. The remaining 70% is designated for economic development loans and grants to other government entities throughout the county (Economic Development Initiative – EDI).

Figure 16-6 shows historical Rural Counties Public Facilities Tax revenue for County capital facilities to the left of the dotted line, and projected revenues to the right.

Figure 16-6. Whatcom County Rural Counties Public Facilities Tax Revenues 2000-2032 (Available for County Capital Facilities)

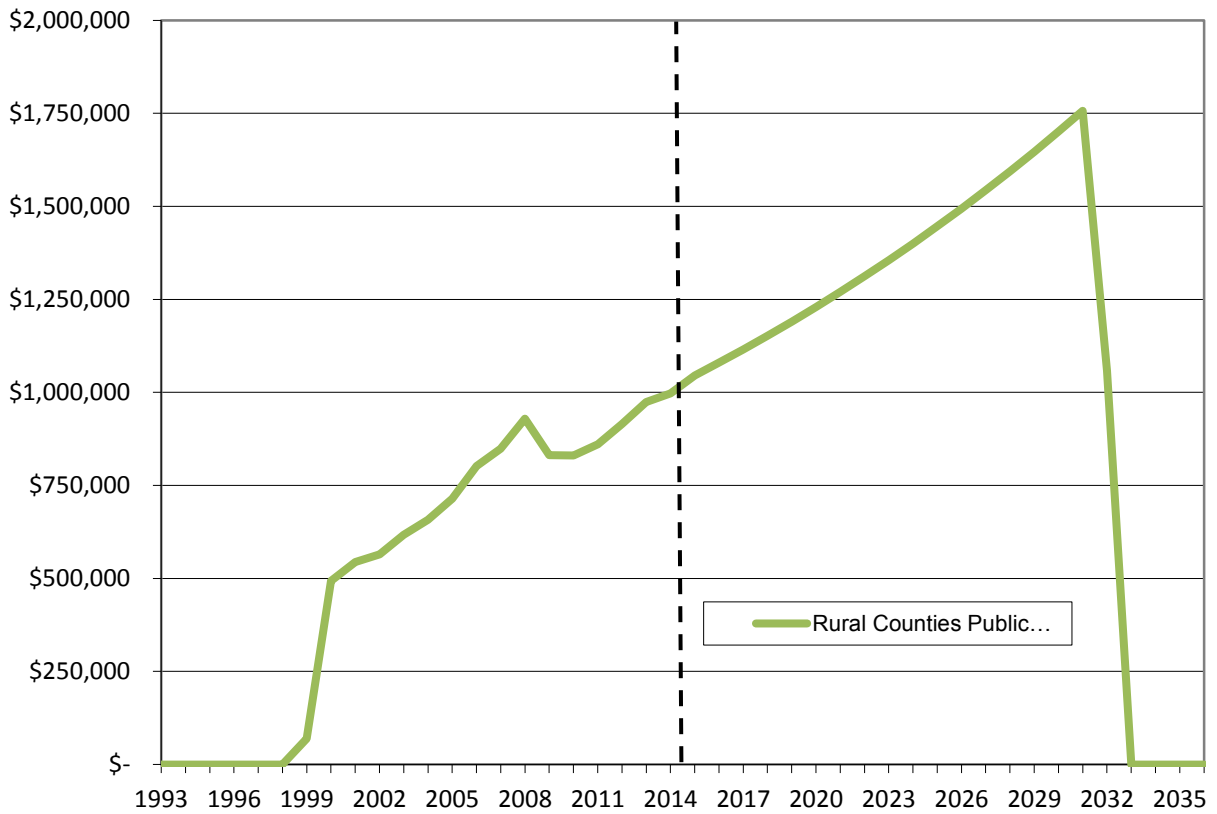


Table 16-7 shows anticipated total Rural Counties Public Facilities Tax revenues for County capital facilities for the next six years and the remaining 14 years of the planning period.

³ 1994 is the first year of taxable sales data available on the Department of Revenue website.

Table 16-7. Projected Future Whatcom County Rural Counties Public Facilities Tax Revenues 2017-2036 (Available for County Capital Facilities)

Rural Counties Sales Tax	2017	2018	2019	2020	2021	2022	Total 2023-2036	Total 2017-2036
Estimated Future Revenues	\$ 1,115,334	\$ 1,152,140	\$ 1,190,161	\$ 1,229,436	\$ 1,270,008	\$ 1,311,918	\$ 14,996,035	\$ 22,265,032

Conservation Futures Revenues for Parks

In accordance with RCW 84.34.230, the County can impose a countywide property tax levy of \$.0625 per thousand dollars assessed valuation for the purpose of purchasing open space and future development rights. The current levy rate is \$.041756 per thousand.

Assumptions: For planning purposes, the amount of the levy to be set aside for park and trail acquisitions is 5% of the current year levy after consideration is made for the purchase of a Lummi Island Heritage Trust conservation and access easement for \$400,000. Future property tax levy increases have been projected at the historical 1997 – 2015⁴ growth rate of 2.9% per annum.

Figure 16-7 shows actual usage of Conservation Futures funding for park acquisitions to the left of the dotted line, and projected usage of future revenues to the right.

Figure 16-7. Conservation Futures Revenues 1993 – 2036 (Available for Parks Capital Acquisitions)

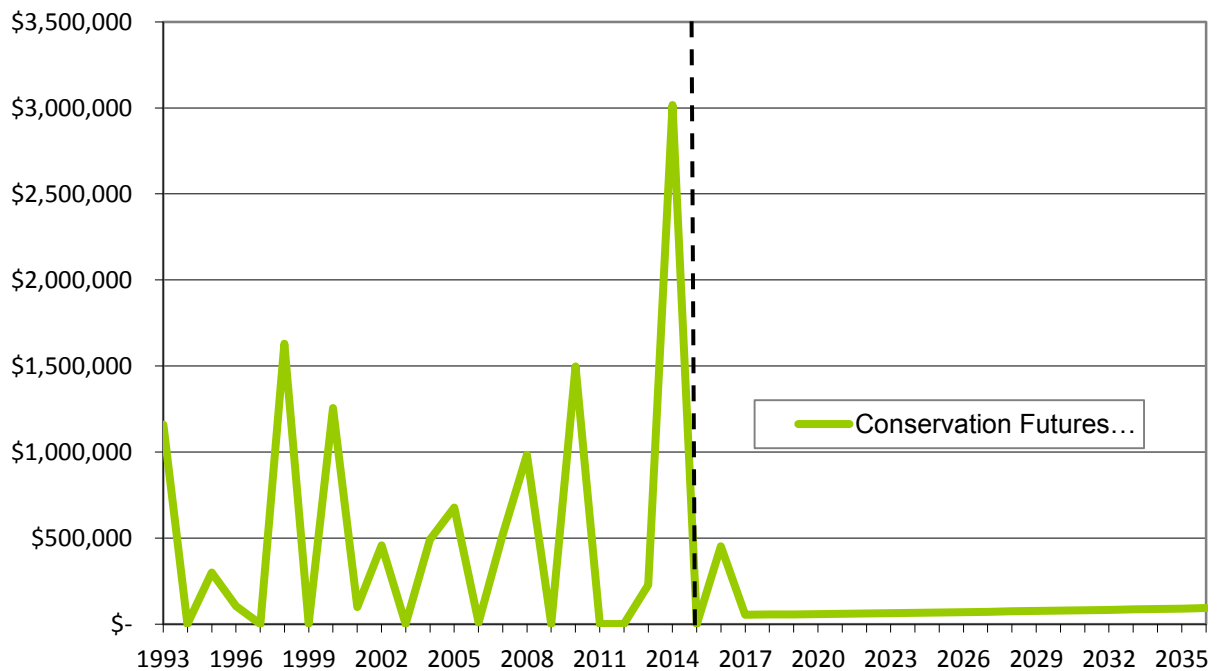


Table 16-8 shows anticipated Conservation Futures funding for Parks capital projects for the next six years and the remaining 14 years of the planning period.

⁴ Large percentage increases in 1993 – 1996 assessed valuations precluded using data from those years.

Table 16-8. Projected Future Conservation Futures Revenues 2017 – 2036 (Available for Parks Capital Projects)

Conservation Futures	2017	2018	2019	2020	2021	2022	Total 2023-2036	Total 2017-2036
Estimated Future Revenues	\$ 54,204	\$ 55,776	\$ 57,394	\$ 59,058	\$ 60,771	\$ 62,533	\$ 1,092,028	\$ 1,441,764

Parks State Grants

Parks grants are applied for through the Washington State Recreation and Conservation Office. These funds have traditionally been quite limited and are distributed in a competitive process making it difficult to determine future grant funding levels. For this analysis, historical grant revenue trends were considered.

Assumptions: These revenues have been estimated on a countywide per capita basis on the assumption that over time the County will generally receive its “fair share” of available state grant revenues. Since 1993 Whatcom County has averaged \$.16 per capita in grant revenues per year. This analysis assumes that funding level will continue in the future with no annual increase. Total revenues are therefore expected to change on pace with changes in population.

For this analysis average annual dollars are assumed in each year. However, in reality these dollars will vary greatly from year to year since they are awarded on a project-specific basis.

Figure 16- 8 shows historical state grant revenues to the left of the dotted line, and projected revenues to the right.

Figure 16-8. Parks State Grant Revenues 1993-2036 (Allocated for Capital Projects)

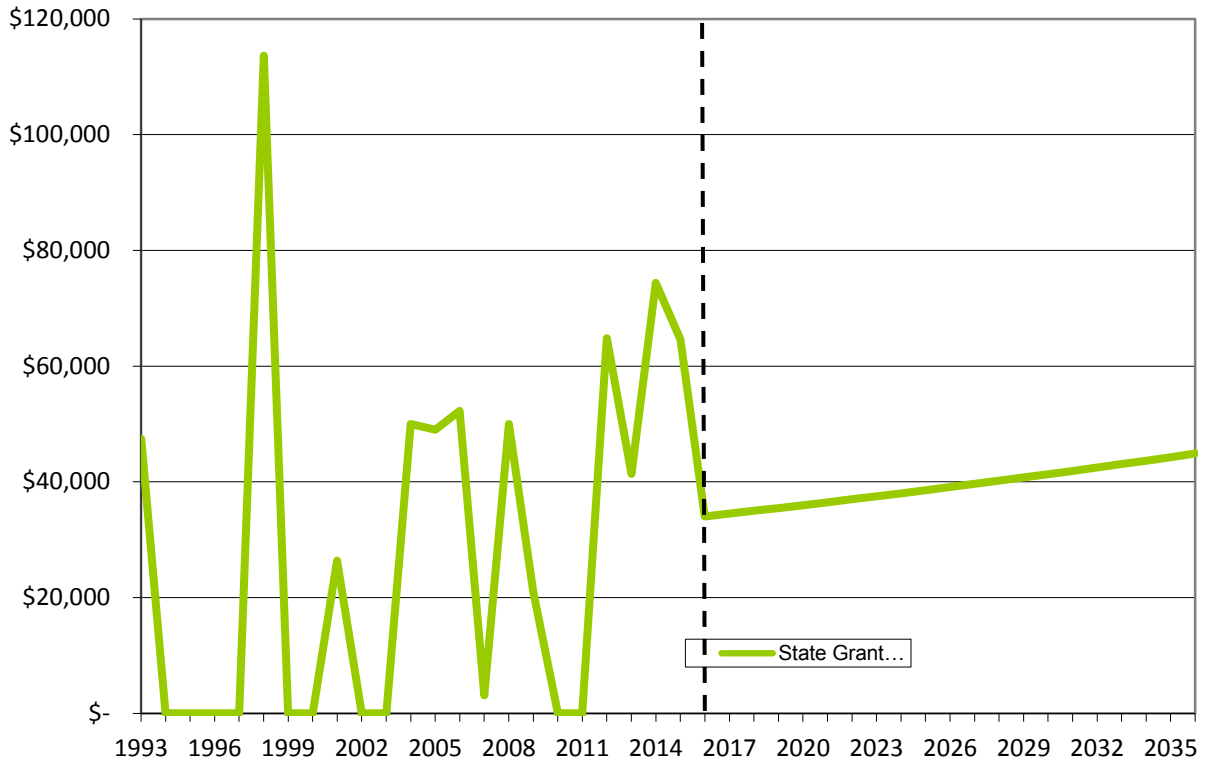


Table 16-9 shows anticipated state grant revenues for Parks capital projects for the next six years and the remaining 14 years of the planning period.

Table 16-9. Projected Future State Grant Revenues 2017 – 2036 (Available for Parks Capital Projects)

Parks State Grants	2017	2018	2019	2020	2021	2022	Total 2023-2036	Total 2017-2036
Estimated Future Revenues	\$ 34,509	\$ 34,990	\$ 35,478	\$ 35,972	\$ 36,474	\$ 36,983	\$ 575,304	\$ 789,710

Stormwater State Grants

The Whatcom County Stormwater Fund was established in 2009 to account for projects and programs which protect water resources, improve water quality, and reduce impacts from stormwater runoff in the unincorporated areas of the county. State stormwater grants are applied for through the Washington State Department of Ecology.

Assumptions: These revenues have been estimated on a per capita basis on the assumption that over time a jurisdiction will generally receive its “fair share” of available grant revenues. Since 2009 Whatcom County has averaged \$3.18 per capita in grant revenues per year. This analysis conservatively assumes that a \$3 per capita rate continues in the future with no annual increase. Total revenues are therefore only expected to change on pace with changes in population.

For this analysis average annual dollars are assumed in each year. However, in reality these dollars will vary greatly from year to year since they are awarded on a project-specific basis.

Figure 16-9 shows historical state grant revenues to the left of the dotted line, and projected revenues to the right.

Figure 16-9. Stormwater State Grant Revenues 2009-2036 (Allocated for Capital Projects)

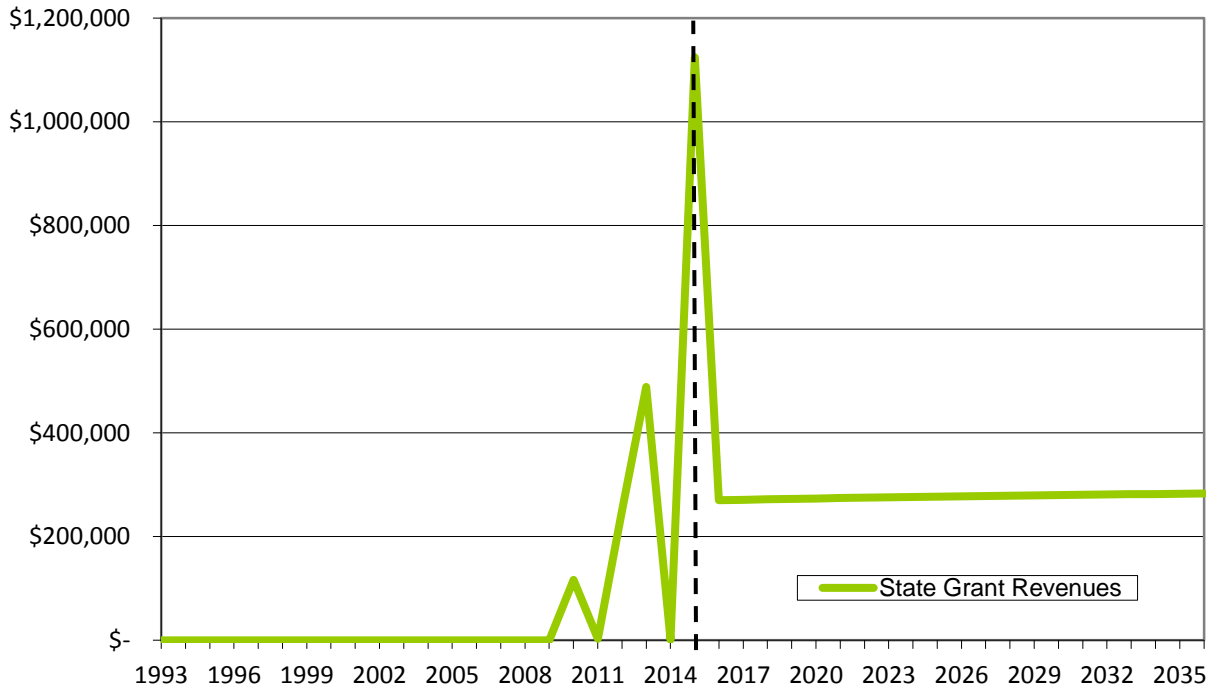


Table 16-10 shows anticipated state grant revenues for Stormwater capital projects for the next six years and the remaining 14 years of the planning period.

Table 16-10. Projected Future State Grant Revenues 2017 – 2036 (Available for Stormwater Capital Projects)

Stormwater State Grants	2017	2018	2019	2020	2021	2022	Total 2023-2036	Total 2017-2036
Estimated Future Revenues	\$ 271,100	\$ 271,928	\$ 272,735	\$ 273,527	\$ 274,296	\$ 275,046	\$ 3,916,793	\$ 5,555,425

Stormwater Federal Grants

The Whatcom County Stormwater Fund was established in 2009 to account for projects and programs which protect water resources, improve water quality, and reduce impacts from stormwater runoff in the unincorporated areas of the county. Federal stormwater grants are applied for from the Environmental Protection Agency.

Assumptions: These revenues have been estimated on a per capita basis on the assumption that over time a jurisdiction will generally receive its “fair share” of available grant revenues. Since 2009 Whatcom County has averaged \$.95 per capita in grant revenues per year; however, federal

grant funding has been more sporadic than state funding. This analysis assumes a \$.95 per capita rate that continues in the future with no annual increase. Total revenues are therefore only expected to change on pace with changes in population.

For this analysis average annual dollars are assumed in each year. However, in reality these dollars will vary greatly from year to year since they are awarded on a project-specific basis.

Figure 16-10 shows historical state grant revenues to the left of the dotted line, and projected revenues to the right.

Figure 16-10. Stormwater Federal Grant Revenues 2009-2036 (Allocated for Capital Projects)

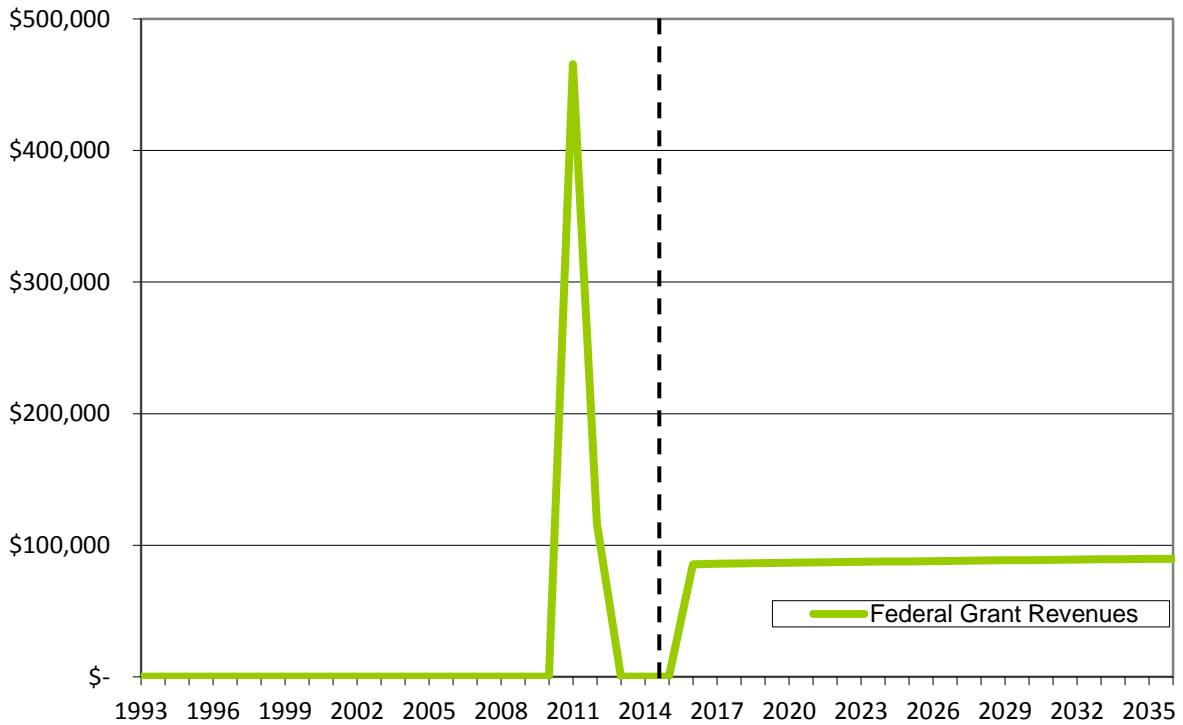


Table 16-11 shows anticipated federal grant revenues for Stormwater capital projects for the next six years and the remaining 14 years of the planning period.

Table 16-11. Projected Future Federal Grant Revenues 2017 – 2036 (Available for Stormwater Capital Projects)

Stormwater Federal Grants	2017	2018	2019	2020	2021	2022	Total 2023-2036	Total 2017-2036
Estimated Future Revenues	\$ 85,848	\$ 86,110	\$ 86,366	\$ 86,617	\$ 86,861	\$ 87,098	\$ 1,240,318	\$ 1,759,218

Total Other Capital Revenues

Table 16-12 summarizes total other capital revenues for the next six years and the remaining 14 years of the planning period.

Table 16-12. Projected Total Other Capital Revenues

Other Capital Revenues	2017	2018	2019	2020	2021	2022	Total 2023-2036	Total 2017-2036
Estimated Future Revenues	\$ 5,562,416	\$ 5,947,012	\$ 6,025,047	\$ 6,104,369	\$ 6,185,014	\$ 6,267,027	\$ 88,597,541	\$ 124,688,426

Total Capital Revenues

Table 16-13 summarizes total capital revenues (transportation and other) available for the next six years and the remaining 14 years of the planning period.

Table 16-13. Projected Total Capital Revenues

Total Capital Revenues	2017	2018	2019	2020	2021	2022	Total 2023-2036	Total 2017-2036
Estimated Future Revenues	\$ 13,012,057	\$ 13,441,996	\$ 13,565,490	\$ 13,690,449	\$ 13,800,886	\$ 13,928,490	\$ 201,889,825	\$ 283,329,192

Impact of Reduced Levels of Annexation

Based on the structures used for each revenue projection outlined above, if the UGAs in Whatcom County were not completely annexed by the end of the study period, revenues would increase from the base, 100% annexation assumption. All else being equal, Whatcom County would have more assessed value of real property in the unincorporated parts of the County, leading to higher road levy and REET revenues. It would also retain more population in the unincorporated areas of the County, leading to higher state and federal transportation grant revenues.

Potential Policy Options

Road Levy Banked Capacity

As discussed in the first section of this analysis, if a jurisdiction does not increase the Property Tax levy rate annually to collect the full 1.0% allowed increase in revenues, the difference between the collected value and the allowed 1.0% increase becomes “banked capacity” which may be collected in future years. Currently Whatcom County has banked capacity of approximately \$1.8 million, which means that the County could increase the levy rate to raise this much additional revenue annually.

If the County chooses not to take this banked capacity, it increases each year. Under this scenario, by the end of the study period (2036), total estimated banked capacity would be about \$6.7 million.

Stormwater Management Revenue

Whatcom County’s stormwater management programs address state and federal water quality mandates and localized drainage and flooding problems that affect urbanized landscapes. These

include, but are not limited to, design and construction of stormwater facilities, enhanced development standards, aggressive maintenance schedules, and regular facility inspections associated with the Lake Whatcom Total Maximum Daily Load (TMDL) and the County's National Pollutant Discharge Elimination System (NPDES) Phase II permit. Stormwater management programs are supported locally by the Road Fund, Real Estate Excise Tax Fund II, Flood Control Zone District Fund, and Birch Bay Watershed and Aquatic Resources Management District. State grants are a substantial revenue source, particularly for the capital program.

Future stormwater management services may require additional revenues between year five and the end of the 20-year planning period. At the present time, it cannot be accurately predicted what the appropriate allocation of local revenues and the availability of state and federal funds will be for that period. New revenues collected explicitly for stormwater management may be needed.

Transportation Impact Fees

Impact fees are a financing tool that requires new development to pay a portion of the costs associated with infrastructure improvements that are "reasonably related" to that development. The GMA allows agencies to develop and implement a transportation impact fee program to help fund some of the costs of transportation facilities needed to accommodate growth. State law (Chapter 82.02 RCW) requires that impact fees be related to improvements to serve new developments and not existing deficiencies; assessed proportional to the impacts of new developments; allocated for improvements that reasonably benefit new development; and spent on facilities identified in the Capital Facilities Plan.

Legally, financing for improvements that will serve the new development cannot rely solely on impact fees and must include other sources of public funds, and the fees must be structured in a manner that ensures that funds collected do not exceed a proportionate share of the costs of improvements reasonably related to new development.

The County has studied implementation of a transportation impact fee but no policy direction on this revenue source has been adopted yet. If the County were to implement this fee, revenues would vary based on the chosen fee rate and the types and amount of development that occurs.

Park Impact Fees

The same state law that authorizes transportation impact fees described above also authorizes the County to adopt impact fees for parks and recreational facilities. The same rules and conditions for transportation impact fees would apply to park impact fees.

Existing Fund Balances

Table 16-14 presents existing fund balances as of 1/1/2016 which are potentially available to support capital projects:

Table 16-14. Fund Balances Potentially Available For Capital Projects as of 1/1/2016

Fund Name	Balance	Applicable to:
General	3,000,000	Facilities
Road	16,000,000	Transportation
Chemical Depend/Mental Health	3,000,000	Facilities
Conservation Futures	2,465,082	Parks
Real Estate Excise Tax I	3,251,460	Facilities
Real Estate Excise Tax II	1,591,369	Parks & Stormwater
Rural Sales Tax	414,500	Facilities
2010 Jail Improvements	733,734	Facilities
Superior Ct 4 th Judge Courtroom	143,897	Facilities
New Jail Project	1,738,147	Facilities
Courthouse Building Envelope	250,000	Facilities
Lummi Nation Lease	1,997,378	Transportation
Birch Bay Lynden/Portal Way Signal	124,685	Transportation
Rural Rd Safety Program	38,257	Transportation
Slater Rd Intersections	388,218	Transportation
Dakota Creek Bridge No 500	359,860	Transportation
Lake Whatcom Blvd Re-surfacing	993,863	Transportation
Hannegan Rd Structural Overlay	595,240	Transportation
Academy Rd Stormwater	<u>107,107</u>	Stormwater
Totals	<u>37,192,797</u>	

Six-Year Funding Balance

Estimated revenues from transportation sources within the six-year time period (2017-2022) have been compared to capital project costs. The six year Capital Improvement Plan includes \$48,708,185 of capital costs and this study presents \$45,348,483 of potential revenues plus \$18.2 million of available transportation fund balances.

Parks and stormwater capital improvement requests over the next six years total \$10,099,000. Funding sources, including grants, REET II, and available fund balance amounts total \$17,120,521. In addition, Birch Bay Watershed and Aquatic Resources Management (BBWARM) District, which is an entity separate from Whatcom County, is requesting to use a small amount of REET II funding for their projects. Their projects over the six year period total \$3,015,000. They are requesting \$40,000 of REET II from available fund balance amounts. The District’s own funding sources will cover the other \$2,975,000.

New sheriff’s office facilities are estimated at \$19,040,000 to be financed by non-voted bonds and paid back from General Fund sources. New jail facilities are estimated at \$112,000,000 to be financed by non-voted bonds and paid back from new voter-approved sales taxes. The County’s current non-voted debt capacity is \$365 million.

Regarding other general capital facilities, sources over the 2017-2022 Capital Improvement Plan period total \$35,103,842 whereas needs total \$26,622,563.

Table 16-15. 2017 – 2022 Revenues Available to Fund the Six Year CIP

	2017	2018	2019	2020	2021	2022	Total 2017-2022	Total 2023-2036
Transportation Revenues	\$ 7,449,641	\$ 7,494,983	\$ 7,540,443	\$ 7,586,081	\$ 7,615,872	\$ 7,661,463	\$ 45,348,483	\$ 113,292,284
Real Estate Excise Tax	\$ 4,001,421	\$ 4,346,068	\$ 4,382,913	\$ 4,419,759	\$ 4,456,604	\$ 4,493,450	\$ 26,100,214	\$ 66,777,064
Rural Sales Tax	\$ 1,115,334	\$ 1,152,140	\$ 1,190,161	\$ 1,229,436	\$ 1,270,008	\$ 1,311,918	\$ 7,268,997	\$ 14,996,035
Conservation Futures	\$ 54,204	\$ 55,776	\$ 57,394	\$ 59,058	\$ 60,771	\$ 62,533	\$ 349,736	\$ 1,092,028
Parks State Grants	\$ 34,509	\$ 34,990	\$ 35,478	\$ 35,972	\$ 36,474	\$ 36,983	\$ 214,406	\$ 575,304
Stormwater Grants	\$ 356,948	\$ 358,038	\$ 359,101	\$ 360,144	\$ 361,157	\$ 362,144	\$ 2,157,532	\$ 5,157,111
Total Capital Revenues	\$13,012,057	\$13,441,996	\$13,565,490	\$13,690,449	\$13,800,886	\$13,928,490	\$ 81,439,368	\$ 201,889,825

Economic Development Planning

In addition to this CFP and the County’s Comprehensive Plan Economic Element, the County has also engaged in an economic development strategy through the Economic Development Investment (EDI) Program. The program plans for and funds infrastructure including but not limited to roads, bridges, water facilities, sanitary sewer facilities, and storm sewer facilities. Economic development planning efforts also resulted in a report entitled the Whatcom County Comprehensive Economic Development Strategy (CEDS) (March 2015) which identifies goals and strategies for growing the Whatcom County economy without sacrificing its natural assets. The CEDS identifies and prioritizes actions for achieving its goals. It also identifies projects, including their cost and potential funding sources, that are needed to help the County achieve its economic development goals. Executive recommendations adopted by the County Council

designate 70% of the Rural Counties Public Facility Tax be set aside for economic development loans and grants to governmental entities throughout the county.