XI. PUBLIC FACILITIES AND SERVICES ELEMENT

INTRODUCTION

As Marysville grows, the demand for facilities and services will increase substantially. The City of Marysville provides a wide range of public services within the City limits and occasionally to other portions of the Study Area. Other providers also serve the Urban Growth Area or the Study Area. (Please see the Glossary for definitions.) The services discussed in this section are:

- Public Services:
  - Police protection
  - Fire protection and ambulance service
  - Library
  - City Facility Goals, Policies, and Locational Criteria
- Schools
- Public Facilities
  - Water
  - Sewer
  - Storm Drainage
  - Solid Waste
  - Goals, Policies, and Locational Criteria

The Growth Management Act defines electricity, natural gas, telecommunications, and cable TV as "utilities." It defines water, storm and sanitary sewer systems, streets and associated improvements such as sidewalks, traffic signals, and street lighting systems, parks and recreation facilities, and schools separately as "public facilities." Finally police and fire protection and other governmental services are classified as "public services." As used in this Comprehensive Plan "utility" and "public facility" are not interchangeable terms. Plans for utilities are found in the Utility Element.

Streets and Parks are discussed separately in the Transportation and Parks Elements. Some of the services listed above are only provided within the City limits; others are provided to a larger area that usually does not correspond to the Urban Growth Area (UGA). In each section the area served is noted. In addition, few of the services have specific plans for serving the entire Study Area at this time.

Scattered development in unincorporated areas near Marysville can create problems in delivering services efficiently. Coordinated, planned delivery of services and facilities will be more efficient and cost effective; it will also increase long-range economic stability by assuring industries the future services they need.

Both the siting and size of public facilities and services has a significant impact on land use patterns and future growth. Careful, coordinated management is essential to provide these services in an orderly fashion and to minimize public costs. With respect to water and stomwater, reclamation can provide a valuable tool in the management of these resources. By investing in these services/facilities and scheduling their provision, Marysville residents will have a key role in implementing the policies.

The purpose of this section of the Comprehensive Plan is to:

- Provide a future vision of Public Facilities and Services in Marysville and its Urban Growth Area that is concurrent with anticipated growth;
- Identify strategic plans and actions to maintain or improve services consistent with the vision;
- Provide a framework for guiding the necessary budgetary and operational plans; and

· Provide the basis for integrating Public Facilities and Services with other elements of the Comprehensive Plan, such as Land Use, Transportation, and Capital Facilities.

A. FIRE

The Marysville Fire DistrictNo.12 provides fire suppression, life support, fire prevention, and disaster preparedness/emergency management services for approximately 55 square miles. The District encompasses the UGA as well as areas outside the UGA that include the Seven Lakes area, Quil Ceda Village, the east side of the Tulalip Indian Reservation, and some adjacent areas in unincorporated Snohomish County.

The Marysville Fire District is the result of a merger between the City Fire Department and Snohomish County Fire District No.12 that became effective in 1992. In 1998, the Marysville Fire District expanded to include the consolidation of Snohomish County Fire District 20 into Fire District 12. In 2002, Snohomish County Fire District 20 formally merged into Fire District 12.

I. Existing

The Marysville Fire District operates five fire stations and an administration building; four of these fire stations and the administration building are within the city limits of Marysville.

Administration Building. The administration building is located at 1094 Cedar Avenue and is the operational headquarters for the Marysville Fire District, and houses key personnel including the Fire Chief, Assistant Fire Chief, Division Chiefs, Fire Marshall, and administrative and clerical staff.

Station No. 61 – Public Safety is located at 1635 Grove Street at the Marysville Public Safety Building (PSB) which also houses the Marysville Police Department and jail. Station 61 includes fully staffed aid and paramedic units, a fully staffed fire engine, and the Snohomish County Communication Vehicle.

Station No. 62 – Shoultes is located at 10701 Shoultes Road near the Marysville-Pilchuck High School. Station 62 houses an on-duty Battalion Chief, a fully staffed aid car and ladder truck, and the squad with rescue trailer.

Station No. 63 – Midway is located at 14716 Smokey Point Boulevard and is staffed with an engine company crew, medic unit, and training equipment.

Station No. 65 – Lake Goodwin is located at 17500 East Lake Goodwin Road and is the oldest station in the Marysville Fire District. Station 65 houses many specialized fire apparatus including the tender which carries 3,500 gallons of water for fire suppression in non-hydranted areas, an off-road firefighting vehicle, and a boat and squad for still-water rescue incidents.

Station 66 – Sunnyside is located at 7217 40th Street NE provides initial coverage to the southern portion of the City, and secondary coverage to the downtown core. An additional station in the southeastern part of the City was identified in the 2005 Comprehensive Plan as a need for the Marysville Fire District due to rapid growth within the City and the need to lower response times for the area; this need was met with the construction of Station 66. Utilizing a "cross-staffed" system, the firefighters at this station respond in either an engine or aid unit depending on the need.

The District is overseen by a six member board of directors, three of which are Fire District 12 Commissioners and three are appointed by the Mayor of the City of Marysville to serve on the board.

The District currently (2014) staffs 105 firefighters. There are 60 plus full-time personnel and 45 part-time firefighters.

In2014, the District responded to 10,000 calls. Of these calls 70 percent were EMS based incidents, 25 percent were non-fire/non EMS based incidents, and five percent were responses to fires. The average response time was 6 minutes and 30 seconds for 911 calls from alert time to the first unit on the scene.

The Marysville Fire District has a class 3 rating in the City and in unincorporated portions of the District on a scale of one (highest) to ten (lowest) from the Washington Survey and Rating Bureau. The evaluative criteria are based on the fire-fighting capabilities of the fire district, the City water system, the enforcement of the building code, and the structural conditions of the buildings in the district. The class rating is used to determine fire insurance premiums for homeowners and businesses within the District.

The remainder of the Study Area is served by four fire districts, shown on Figure 11-1. Fire District No. 22, the Getchell Fire District, serves the eastern portion of the Study Area. Its fire station is centrally located at Getchell Road and 99th Avenue NE (8424 99th Avenue NE, Arlington). Lake Stevens Fire District No. 8 covers the southeast corner of the Study Area. The nearest fire stations are located at 9811 Chapel Hill Road in Lake Stevens.
Lake Stevens Fire District No. 8 has three fire stations which are all manned 24 hours a day 7 days a week. The District currently has 31 full-time and 27 part-time first responders (firefighters and paramedics), of which an average of 12 are on per day as of 2015. In addition, the District has a fire chief, deputy fire chief, three battalion chiefs, and six captains.

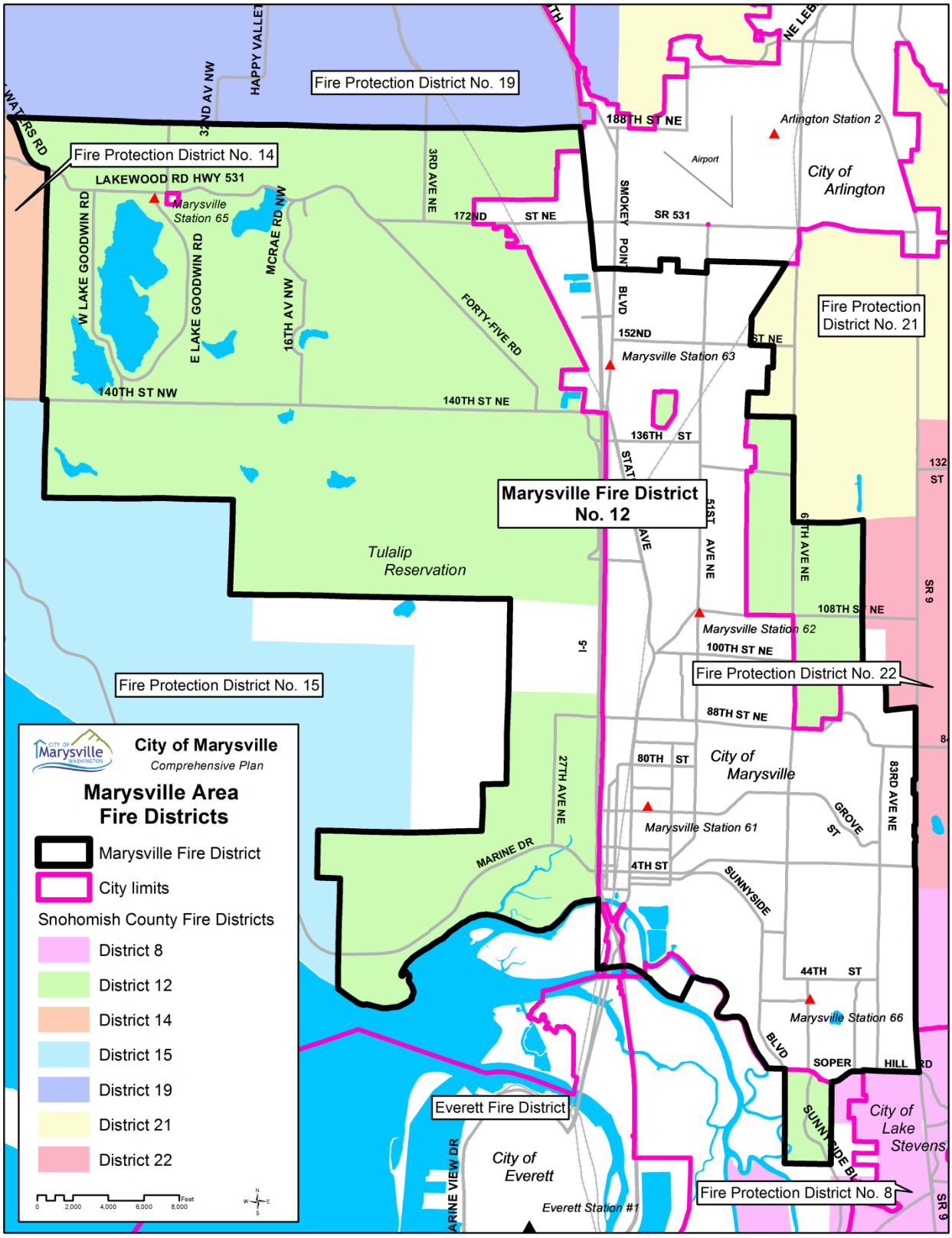
Fire District No. 21 serves the northeastern corner of the study area, and has one station at 12131 228th Street NE in Arlington Heights.

Fire Districts 21, 22, 8 and the City of Everett have signed an interlocal county-wide mutual aid agreement to provide a coordinated emergency response to the area.

II. Future Needs and Assumptions

Continued growth in the Marysville Fire District will place additional demand on the ability to provide an acceptable response time, manpower, and water flow. The Marysville Fire District anticipates needing additional personnel; upgrading of existing fire stations; continued improvement of the water system as defined within the city plans; and continued support of fire prevention programs to decrease fire loss. As the call volume increases, it is imperative that the Marysville Fire District's strategic plan continue to look at the growth and needs of the City. The strategic plan will be updated in 2015, and will provide additional direction on these needs.

Figure 11-1 Fire District Boundaries



Low and high density developments place different demands on the fire fighting capabilities of a fire department. Low density development increases average response time to a fire because of greater travel distances and the possibility of increased traffic congestion. High density development increases the fire flow and manpower needed to extinguish a fire. For example, although a fire in a downtown Marysville multiple-story building requires minimal response time, greater manpower and fire flow are needed to extinguish the fire due to the multiple stories and the surrounding high density development. Multi-family housing and businesses also generate a greater number of false alarms than single-family housing.

B. POLICE PROTECTION

I. Existing

The City of Marysville Police Department provides public safety and crime prevention services 24 hours a day, 7 days a week. In 2014, the Department received approximately 73,000 calls for service.

The Police Department is organized into three divisions: Operations, Administrative Services, and Support Services. The Police Department also operates a 90 day, 53 bed detention center. Staffing for 2015 consists of 89.5 FTE positions (88 full time positions and 3 part time positions): 61 commissioned officers, 15 custody officers, and 13.5 support staff. At least thirty staff are on duty at all times.

The Marysville Police Department services the incorporated City. Backup services and services to areas outside the city limits are provided by the Snohomish County Sheriff's Office. The Washington State Patrol and the Arlington, Lake Stevens, and Everett Police Departments are also available if required.

The Marysville Police Department provides the following services: training and recruitment of new personnel, traffic and parking enforcement, animal control services, detective services, record keeping, jail services, and crime prevention through a variety of community-based programs including the Community Service Unit, Marysville Volunteers Program, Neighborhood Watch, Business Watch, and other programs.

The City of Marysville provides 24-hourpolice service. The Police Records Department also operates 24 hours a day, seven days a week. Property crimes are the crimes most often handled by the Department. Many of these crimes are associated with commercial and retail business issues include vandalism and shoplifting. In 2014, over 10,400 case reports were generated, and, of those, one third were Part One crimes – 82 percent of which were related to theft and burglary. In nearly 40 percent of all felony arrests, controlled substances such as heroin or methamphetamine was located or associated with the suspect(s).

The Police Department is located in the Public Safety Building at 1635 Grove Street. The Marysville Municipal Court is located at 1015 State Avenue.

II. Future Needs and Assumptions

The Department will continue to provide services to the City with the County Sheriff's Office serving the remaining unincorporated UGA. Since the Central Marysville Annexation (CMA)(effective December 30, 2009), which brought approximately 20,048 new residents into the City, the demand for police services has increased. Since the

CMA, an additional 2,580 residents have been added to the City of Marysville. Continued population growth will increase the demand for police services.

Over the last five years, calls for service have increased 11 percent and case reports by 25 percent. As a result of these increases, it is necessary to add additional police staff to meet the increased demands placed on the Department. The additional volume of records related materials has a direct impact on the office operations support staff as well. In order to accommodate for the lack of sufficient staffing, the business office closes during a one hour lunch period.

The Marysville Police Department has just recently begun participating in the online reporting of cold cases which do not require police response through mycrimereport.us. The Police Department's goal is that this service may reduce some calls for service which will contribute towards the Department's efforts in reducing overtime costs. The overtime hours and funds spent in 2014 are approximately 60 percent below the 2010 costs.

Since 2010, Part One Crimes have increased by 38 percent, directly impacting the number of major cases being investigated by the Detective Division. This increase impacts the number of search warrants being served, leading to large amounts of evidence requiring storage. Due to this, the Department had to remodel and expand the evidence storage areas on the Public Safety property. This included all forms of security measures, including surveillance cameras, security alarms, and fencing.

The Marysville Police Department has recently coordinated on a multi-jurisdiction task force to address all property crimes in north Snohomish County; this partnership includes the Lake Stevens Police Department, Snohomish County Sheriff's Office, and the Stillaguamish Tribal Police. Beginning January 6, 2015, there will be five sworn detectives serving on this task force which will be located in the Marysville Police Department's Public Safety Building.

One of the greatest challenges facing the Marysville Police Department is the overpopulation in the jail/detention center. Due to the recent restrictions put in place the Snohomish County Jail, the Marysville Police Department cannot book and house all arrestees. The Marysville Police Department now has to contract out housing services with other agencies such as Whatcom County, Yakima, and South Correctional Entity which increases the Department's costs as much as $50,000 per month. In November 2014, a request for proposals to expand our current jail/detention center took place. It is anticipated that it could take up to three years to begin remodeling or constructing needed facility improvements.

Cost associated with the additional police staff may be offset by the additional tax revenue generated from new proposals for business parks and retail areas.

III. Standards

The Marysville Police Department follows the standards for all accredited law enforcement agencies for determining adequate levels of service. In 2009, the Marysville Police Department had 53 sworn officers and a total of 80.5 employees to serve a population of 37,560. This resulted in a service ratio of 1.41 commissioned officer per 1,000 population. However, as of 2014, the Marysville Police Department has 60 sworn officers and 87.5 employees to serve a population of 62,600 resulting in a service ratio of approximately 0.96 commissioned officers per 1,000 population.

C. LIBRARY

The City of Marysville has provided library services to its citizens in many different buildings since 1907.

I. Existing

From 1907 to 1925, the library consisted of two or three shelves in a drug store. In 1924, a group of local civic-minded women started a library committee to found and support a more extensive local library. As a result of their efforts, the library was moved to larger quarters in the City's Old Fire Hall on Third Street on July 25, 1925. From the Old Fire Hall, the library moved in 1949 to the "new and spacious" City Hall at Fifth and Delta. There it occupied 1,000 square feet in a room which is now the Ken Baxter Senior Community Center.

A growing collection and increased use by citizens soon mandated another move. From 1977 to 78, the City constructed a new 7,436 square foot building at 4822 Grove Street which was occupied in April 1978.

In 1991, city residents voted to annex to the library district. The current 24,300 square foot building was opened in 1995. The facility houses 112,000 library books, DVDs, audio books, and other materials representing 11.5 percent of the Sno-Isle Libraries total collection of 1,061,873 items. The new building is located on a 5.8 acre site at 6120 Grove Street.

In 2015, ownership of the Marysville Library was transferred to Sno-Isle Libraries which now both owns and operates the library. The Sno-Isle Libraries is a suburban/rural library system serving residents of the unincorporated areas, annexed areas and contracting cities in Snohomish and Island counties.

The library serves residents of the Snohomish-Island Inter-County Rural Library District and their dependents, and residents of jurisdictions within Washington State that provide equitable tax support for public library service. Therefore, the entire UGA and Study Area are served by the library.

Sno-Isle Libraries receive 98 percent of their funding from a general library levy or tax on all property within the Library District; therefore, it affects all properties in the unincorporated areas of Snohomish and Island County, as well as properties within cities which have annexed into the Library District. The levy is collected by the respective county treasurer and transferred to Sno-Isle Libraries. Cities and towns contracting with the Library pay a contract fee for materials, staff and services. The remaining funding comes from timber excise tax, leasehold excise tax, donations, grants, investment interest, and capital project bonds.

The Marysville Library is staffed by 40 employees. Circulation for 2013 was over 721,315 for 50,811 registered borrowers coming into the library at a rate of 82 per hour. In 2013, the Marysville Library saw strong growth in circulation of digital download materials including e-books and videos.

A full range of library services is offered from the Marysville Library. The facility is open 63 hours each week, including Sundays, year around.

II. Future Needs and Assumptions

The building currently provides additional space for collection growth to meet the needs of a growing community.

D. GOALS AND POLICIES: POLICE, FIRE, LIBRARY

Goals:

1. Provide efficient construction of public services and facilities that are consistent with the comprehensive land use plan and available to serve the community concurrent with increased demand generated by new construction.
2. Equitable distribution and maximum utilization of City resources in the delivery of City services and protection.
3. Protect life and property from the hazards of fire and crime.

Policies:

PS-1 Accommodate new residential, commercial, and industrial development only when required facilities and services are available prior to or concurrent with development. Concurrency indicates that facilities are available within six years of construction of the new development. Payment of mitigation fees is considered concurrency.

PS-2 Assist growth and desired land use types and patterns through the planning, design, and installation of public services.

PS-3 Encourage development in areas where services are already available before developing areas where new services would be required.

PS-4 Provide urban level facilities and services only in the Urban Growth Area.

PS-5 Reduce the per unit cost of public facilities and services by encouraging urban density development within the Urban Growth Area, and rural densities outside the Urban Growth Area.

PS-6 Siting of proposed public buildings and other facilities should conform with land use policies and regulations. Local government agencies are not exempt from their own requirements.

PS-7 Locate recreational and community facilities as focal points for the City.

PS-8 The location, design, and construction of public facilities and services should be compatible with existing and planned land uses and with natural systems such as drainage ways and shorelines.

PS-9 Development, residents, businesses, and industries should contribute their fair share toward mitigating identified impacts on public facilities.

PS-10 Implement the International Building Code and related codes, especially built-in fire protection for each structure in order to reduce the fire protection burden on the City. The implementation would also include older buildings, remodeled buildings, and buildings to be expanded that need updated fire protection facilities.

PS-11 Implement National Fire Protection Association (NFPA) codes in order to govern the maintenance of buildings and premises; safeguard life, health, property, and public welfare by regulating the storage, use and handling of dangerous and hazardous materials, substances, processes; regulate the maintenance of adequate egress facilities; and investigate all life and fire losses.

PS-12 Permit public services and facilities to be located in any part of the City through a conditional use permit process.

E. LOCATION AND CRITERIA: POLICE, FIRE, LIBRARY

In planning coordinated delivery of public facilities and services, Marysville will consider the level of key services needed to support existing development; which agency will provide each of the services; when services need to be in place to accommodate proposed land uses; the level of service appropriate and suitable for each use; time

required for installation; and the range of fiscal impacts on the general public and on individual property owners.

F. SCHOOLS[2]

The Study Area is served by four school districts: Marysville, Arlington, Lake Stevens, and Lakewood. However, the Arlington School District is predominantly outside the City, and serves only industrial lands inside the City. Particular coordination is necessary between Marysville, Lakewood, and Lake Stevens School Districts, since they service the City and Urban Growth Area.

I. Existing

School District boundaries within the Study Area are shown in Figure 11-2. Marysville School District No. 25 serves the majority of the City as well as areas outside the City. Lakewood School District No. 306 serves the northwest corner of the City. Lake Stevens School District No. 4 serves the southeast corner of the City.

Figure 11-2 School District Boundaries – BETTER MAP TO BE PROVIDED AT HEARING

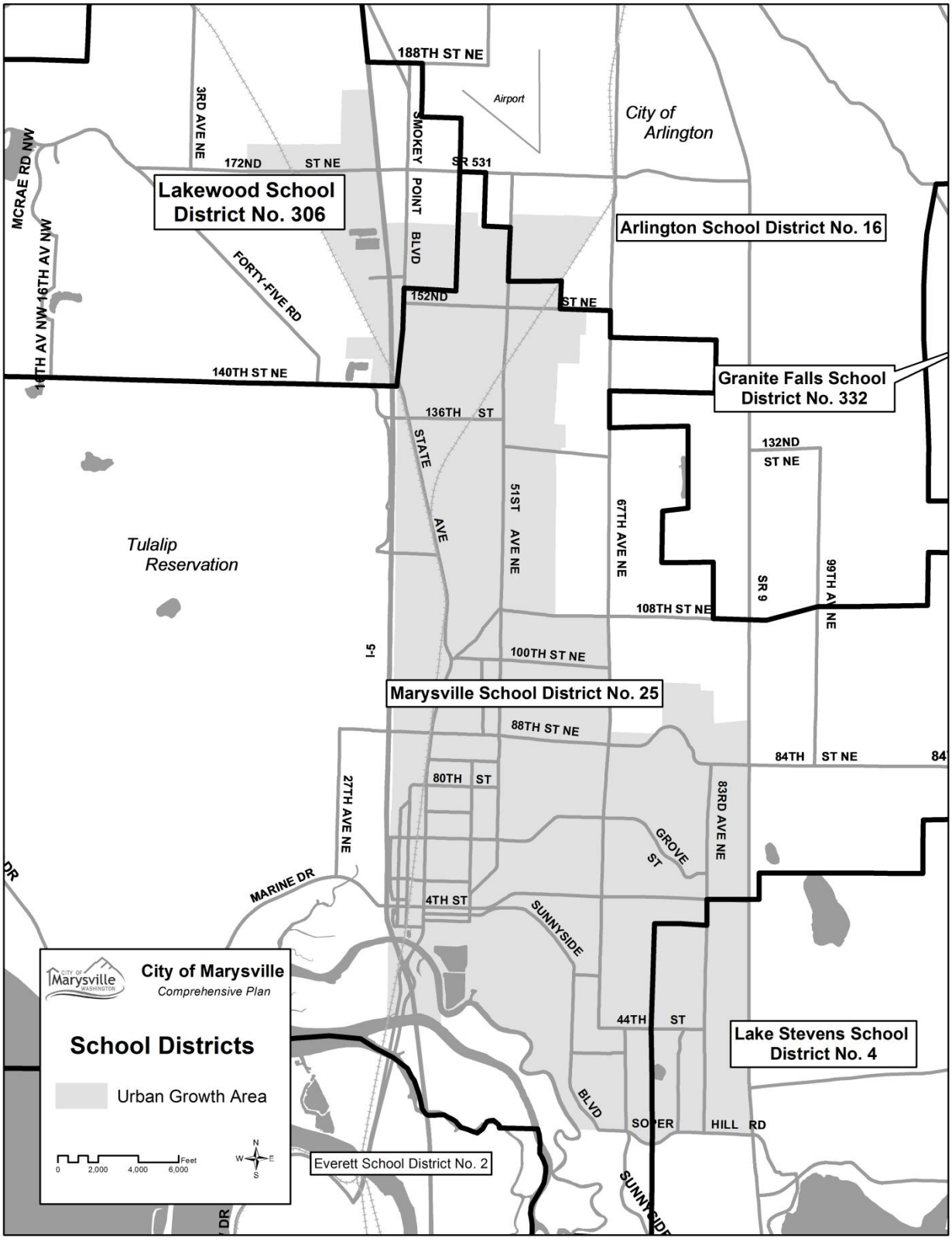
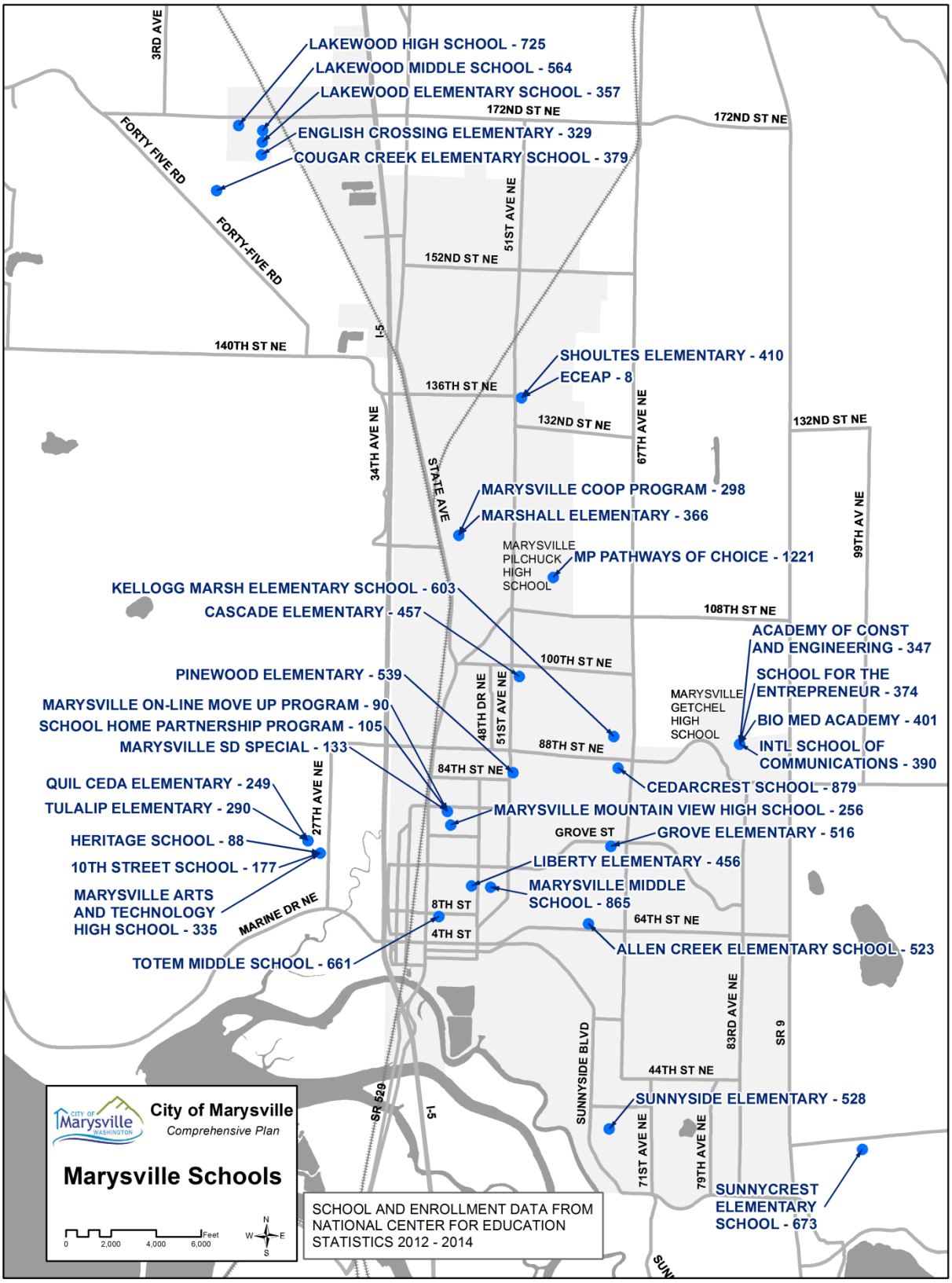


Figure 11-3 Marysville Area Schools



Marysville School District No. 25

In 2013, Marysville School District No. 25 served approximately 10,804 students with eleven elementary schools, four middle level schools, and two comprehensive high school as shown in Figure 11-3 and listed in Table 11-1. In addition, the District operates Marysville Mountainview High School.

Table 11-1 Marysville School District, Existing Schools

SCHOOL	ENROLLMENT ESTIMATE FOR 2013	ESTIMATED STUDENT PERMANENT CAPACITY	ESTIMATED RELOCATABLE (PORTABLE) INTERIM CAPACITY	ESTIMATED ADDITIONAL PERMANENT SCHOOL CAPACITY
Allen Creek Elementary	430	496	165	66
Cascade Elementary	425	496	71	71
Grove Elementary	457	566	-	109
Kellogg Marsh Elementary	507	496	118	-11
Liberty Elementary	505	472	142	-33
Marshall Elementary	586	330	71	-256
Pinewood Elementary	503	401	71	-102
Quil Ceda Elementary	549	637	71	88
Shoultes Elementary	468	378	118	-90
Sunnyside Elementary	451	519	94	68
Marysville Middle School	957	800	175	-157
Cedarcrest Middle School	873	725	300	-148
Marysville Tulalip Campus (6-8) *	171	175	0	4
Marysville Tulalip Campus (9-12) *	390	475	0	85
Totem Middle School	610	750	0	140
Mountain View**	211	200	52	-11
Marysville Getchell	1,413	1,525	0	112
Marysville-Pilchuck High School	1,173	1,400	150	227
TOTAL	10,679	10,841	1,598	162

* The Marysville Tulalip Campus includes the following schools co-located on one campus: Arts & Technology, Tulalip Heritage, and the 10th Street School. Grades 6-12 are served at the Marysville Tulalip Campus. The figures noted for the Marysville Tulalip Campus are separated into grades 6-8 and grades 9-12 as noted above.

**Formerly the Marysville Alternative High School.

Source: Marysville School District Capital Facilities Plan, 2014-2019.

In recent years, district enrollment has declined likely due to a combination of economic circumstances, slower in-migration, and students opting for alternative education plans. One exception is elementary school enrollment which is forecast to grow over the next six years. By 2019, total enrollment is anticipated to decline by 1.04 percent which would result in 10,692 students within the District. Modest growth in elementary school enrollment is anticipated during this period. If all day kindergarten is implemented, further growth in elementary school enrollment is anticipated. Change in enrollment in the Marysville School District is shown in Table 11-2.

Table 11-2 Change in Enrollment in Schools within the Marysville School District

SCHOOL	GRADES	10 YEAR % CHANGE (2002 – 2012)	5 YEAR % CHANGE (2007 – 2012)	3 YEAR % CHANGE (2009 – 2012
Elementary School Level	(K-5)	-6.1 %	-4.7 %	-3.7 %
Middle School Level	(6-8)	-8.1%	-2.6 %	+6.9 %
High School Level	(9-12)	-2 %	-8.4 %	-3.7%

Negative growth.

Source: Marysville School District Capital Facilities Plan, September 2014 .

Lakewood School District No.306

Lakewood School District No.306 currently serves a student population of approximately 2,253 with three elementary schools, one middle school, and one high school as shown in Figure 11-3 and listed in Table 11-3.

Table 11-3 Lakewood School District, Existing Schools

SCHOOL	FTE ENROLLMENT FOR OCTOBER 2013	ESTIMATED STUDENT PERMANENT CAPACITY	RELOCATABLE (PORTABLE) INTERIM CAPACITY	TOTAL CAPACITY
English Crossing Elementary	970 *	520	135	655
Cougar Creek Elementary		572	0	572
Lakewood Elementary		416	130	546
Lakewood Middle	539	756	28	784
Lakewood High	744	598	174	772
TOTAL	2,253	2,862	467	3,329

* Totals are combined for all elementary schools.

Source: Lakewood School District No. 306 Capital Facilities Plan, September 2014

Since 2007, Lakewood School District enrollment has decreased overall about an average of 1.2 percent a year. The largest decreases have been at the elementary school level. The decrease in enrollment in the Lakewood School District is shown in Table 11-4.

Table 11-4 Change in Enrollment in Schools within the Lakewood School District, 2007 to 2013

SCHOOL	GRADES	CHANGE IN NUMBER OF STUDENTS (2007 TO 2013)	PERCENT CHANGE
Elementary School	(K-5)	-93 FTE	-9 %
Middle School	(6-9)	-87 131 FTE	-8.4 18.3%
High School	(10-12)	-23 FTE	-4.1 %

Source: Lakewood School District No. 306 Capital Facilities Plan, September 2014.

Lake Stevens School District No.4

In 2013, Lake Stevens School District No. 4 served a student population of approximately 7,805 with six elementary schools, two middle schools, one mid-high school, and one high school as shown in Figure 11-3 and listed in Table 11-5.

Table 11-5 Lake Stevens School District, Existing Schools

SCHOOL	FTE ENROLLMENT FOR OCTOBER 2013	ESTIMATED STUDENT PERMANENT CAPACITY	RELOCATABLE (PORTABLE) INTERIM CAPACITY	TOTAL CAPACITY
Glenwood Elementary	3,612	513	108	621
Hillcrest Elementary		549	162	711
Highland Elementary		512	108	620
Mt. Pilchuck Elementary		501	81	582
Skyline Elementary		513	108	621
Sunnycrest Elementary		549	189	738
Lake Stevens Middle	1,268	684	240	924
North Lake Middle		751	240	991
Cavelero Mid-High	1,225	1,418	0	1,418
Lake Stevens High	1,654	1,526	510	2,036
TOTAL	7,759	7,516	1,746	9,262

Source: Lake Stevens School District No. 4 Capital Facilities Plan, September 2014.

Between 1973 and 1985, student enrollment in the Lake Stevens School District remained relatively constant (15 percent growth) and then between 1985 and 2005 grew significantly (120 percent). The October 2013 enrollment was 7,805 FTE students. Between 2008 and 2013, student enrollment increased approximately seven percent while countywide there was an overall two percent decline in student enrollment. The Lake Stevens School District has been, and is anticipated to continue to be, one of the fastest growing school districts in Snohomish County based on current OFM population forecasts.

II. Future Needs and Assumptions

Marysville School District No. 25

By 2019, the Marysville School District projects student enrollment to decrease by 1.1 percent, from 10,806 students (October 2013) to 10,692 students. Enrollment projections are shown in Table 11-6.

Table 11-6 Future Enrollment in Marysville Schools

	ENROLLMENT PROJECTION (FTE)		
YEAR	ELEMENTARY (K-5)	MIDDLE SCHOOL (6-9)	HIGH SCHOOL (10-12)
2014	4,934	2,469	3,468
2015	4,924	2,427	3,466
2016	4,911	2,417	3,404
2017	4,971	2,404	3,316
2018	4,974	2,428	3,281
2019	4,944	2,491	3,257

Source: Marysville School District Capital Facilities Plan, September 2014.

In February of 2006, the District's voters approved a school construction bond for approximately $118 million. The bond helped to pay for the construction of Marysville Getchell High School and Grove Elementary School. Construction of these facilities increased the total student capacity for the District. Table 11-7 shows total student capacity without portables. It is not the District's policy to include portable classroom units when determining future capital facility needs.

Table 11-7 Future Capacity in Marysville Schools

	STUDENT CAPACITY		
YEAR	ELEMENTARY (K-5)	MIDDLE SCHOOL (6-9)	HIGH SCHOOL (10-12)
2014	4,791	2,450	3,600
2015	4,791	2,450	3,600
2016	4,791	2,450	3,600
2017	4,791	2,450	3,600
2018	4,791	2,450	3,600
2019	4,955*	2,450	3,600

*The additional capacity in 2019 represents additions at Cascade and Liberty.

Source: Marysville School District Capital Facilities Plan, September 2014.

School facility (capacity) needs are derived by subtracting projected student enrollment from existing student capacity.

Table 11-8 Future Surplus / Deficiency in Marysville Schools

	CAPACITY SURPLUS / (CAPACITY DEFICIENCY)*		
YEAR	ELEMENTARY (K-5)	MIDDLE SCHOOL (6-9)	HIGH SCHOOL (10-12)
2014	(143)	(19)	132
2015	(133)	23	134
2016	(120)	33	196
2017	(180)	46	284
2018	(183)	22	319
2019	11	(41)	343

* Capacity deficiency is expressed in terms of "un-housed students".

Source: Marysville School District Capital Facilities Plan, September 2014.

The District plans to present for voter approval the replacement of, and addition of capacity at, Cascade and Liberty Elementary Schools to address capacity needs at the elementary level. The District is not currently planning to add permanent capacity at the middle or high school levels. New schools planned between 2014 and 2019 to meet the projected increase in student population are listed in Table 11-9.

Table 11-9 Marysville School District Proposed Schools

BUILDING NAME	GRADE SPAN	ACTUAL CAPACITY	YEAR
(New) Cascade Elementary	K-5	525	2016
(New) Liberty Elementary	K-5	525	2016

Source: Marysville School District Capital Facilities Plan, September 2014.

Enrollment at the middle and high school levels is expected to decline over the next six years. Existing relocatables should provide sufficient interim capacity for elementary, middle, and high school levels.

The following school age children per housing unit factors, listed in Table 11-10 were developed by Doyle Consulting for the Marysville School District to estimate the number of school-aged children generated by new development. These factors may be used to determine future school impact fees.

Table 11-10 Marysville District, School Age Children per Housing Unit

SCHOOL TYPE	SINGLE-FAMILY UNIT	MULTI-FAMILY UNIT 2+ BEDROOM
Elementary	0.235	0.136
Middle	0.106	0.051
High	0.147	0.062
Total	0.487	0.249

Source: Marysville School District Capital Facilities Plan, September 2014.

Lakewood School District No. 306

The Lakewood School District projects student enrollment to increase by 10.5 percent from 2014 to 2019 as shown in Table 11-11.

Table 11-11 Future Enrollment in Lakewood Schools

	ENROLLMENT PROJECTION		
YEAR	ELEMENTARY (K-5)	MIDDLE SCHOOL (6-8)	HIGH SCHOOL (9-12)
2014	1,038	553	715
2015	1,062	566	731
2016	1,085	579	748
2017	1,109	592	764
2018	1,133	604	781
2019	1,159	618	799

Source: Lakewood School District No. 306 Capital Facilities Plan, September 2014.

Table 11-12 shows total student capacity without portables. It is not the District's policy to include portable classroom units when determining future capital facility needs.

Table 11-12 Future Capacity in Lakewood Schools

	STUDENT CAPACITY		
YEAR	ELEMENTARY (K-5)	MIDDLE SCHOOL (6-8)	HIGH SCHOOL (9-12)
2014	1,508	756	598
2015	1,508	756	598
2016	1,508	756	598
2017	1,508	756	598
2018	1,508	756	598
2019	1,508	756	921

Source: Lakewood School District No. 306 Capital Facilities Plan, September 2014.

School facility (capacity) needs are derived by subtracting projected student enrollment from existing student capacity. Future capacities for Lakewood Schools are shown in Table 11-13.

Table 11-13 Future Surplus / Deficiency in Lakewood Schools

	CAPACITY SURPLUS / (CAPACITY DEFICIENCY)*		
YEAR	ELEMENTARY (K-5)	MIDDLE SCHOOL (6-8)	HIGH SCHOOL (9-12)
2014	470	203	(117)
2015	446	190	(133)
2016	423	177	(150)
2017	399	164	(166)
2018	375	152	140
2019	349	138	122

* Capacity Deficiency is expressed in terms of "unhoused students".

Source: Lakewood School District No. 306 Capital Facilities Plan, September 2014.

Projects being planned within the next six years to meet the projected increase in the student population are listed in Table 11-14.

Table 11-14 Lakewood School District Proposed Projects Adding Capacity

PROJECT	GRADE SPAN	ACTUAL ADDED CAPACITY
Lakewood Middle School expansion	6-8	-*
Lakewood High School	9-12	323

*Potential expansion subject to future planning analysis and funding. The added capacity is not identified in the 2014-2019 Lakewood School District No. 306 Capital Facilities Plan.

Source: Lakewood School District No. 306 Capital Facilities Plan,September 2014.

Capacity deficits during the time these projects are being constructed will be addressed by use of portable classrooms. The District currently has 18 portables that add an interim capacity of 467.

The following factors, as listed in Table 11-15, were developed by Doyle Consulting for the Lakewood School District to estimate of the number of school-aged children generated by new development. These factors may be used to determine future school impact fees.

Table 11-15 Lakewood School District, School Age Children per Housing Unit

SCHOOL TYPE	SINGLE-FAMILY UNIT	MULTI-FAMILY UNIT 2+ BEDROOM
ELEMENTARY	0.180	0.198
MIDDLE	0.090	0.099
HIGH	0.140	0.139
TOTAL	0.410	0.436

Source: Lakewood School District No. 306 Capital Facilities Plan, September 2014.

Lake Stevens School District No. 4

By 2019, the Lake Stevens School District projects student enrollment to increase by six percent, from 7,860 students (2014) to 8,331 students as shown in Table 11-16.

Table 11-16 Future Enrollment in Lake Stevens Schools, 2014 to 2019

	ENROLLMENT PROJECTION (FTE)			
YEAR	ELEMENTARY (K-5)	MIDDLE SCHOOL (6-7)	MID-HIGH (8-9)	HIGH SCHOOL(10-12)
2014	3,710	1,216	1,310	1,623
2015	3,825	1,228	1,321	1,585
2016	3,886	1,282	1,260	1,627
2017	3,992	1,276	1,262	1,620
2018	4,070	1,250	1,307	1,616
2019	4,122	1,336	1,308	1,565

Source: Lake Stevens School District No. 4 Capital Facilities Plan, September 2014.

School facility (capacity) needs, derived by subtracting projected FTE student enrollment from existing permanent student capacity, are listed in Table 11-17.

Table 11-17 Additional Capacity Needs 2014 to 2019

		(CAPACITY DEFICIENCY)		
YEAR	ELEMENTARY (K-5)	MIDDLE SCHOOL (6-7)	MID-HIGH (8-9)	HIGH SCHOOL (10-12)
2014	573	219	108	97
2015	688	207	97	59
2016	749	153	158	101
2017	855	159	156	94
2018	933	185	111	90
2019	985	99	110	39

Source: Lake Stevens School District No. 4 Capital Facilities Plan, September 2014.

Planned improvements to accommodate unhoused students for years 2013 through 2019 includes the anticipated construction of a new elementary school which is projected to be needed by 2019, and will require passage of a bond. If an elementary school is constructed, it is anticipated that there would be 485 unhoused students which meets the District's standard of 500-student capacity for elementary schools. In 2007, Cavelero Mid-High was opened to serve students in grades 8 and 9. Since the eighth grade was transferred to Cavelero, presently both middle and mid-high schools have sufficient capacity.. The high school has an estimated 39 unhoused students; the additional classroom space will be provided with portables. Capacity deficits during the interim will be addressed by adding additional portable classrooms to the inventory.

School age children per housing unit factors are listed in Table 11-18. These factors may be used to determine future school impact fees.

Table 11-18 Lake Stevens District, School Age Children per Housing Unit

SCHOOL TYPE	SINGLE-FAMILY UNIT	MULTI-FAMILY UNIT 2+ BEDROOM
Elementary	0.332	0.169
Middle	0.111	0.038
Mid-High	0.092	0.063
High	0.118	0.055
Total	0.653	0.325

Source: Lake Stevens School District No. 4 Capital Facilities Plan, September 2014.

III. Standards

Marysville School District No. 25

Elementary School

- Average class size for Kindergarten and grades 1-3 should not exceed 23 students. Average class size for grades 4-5 should not exceed 25 students.
- Special Education for students may be provided in regular classes when inclusion is possible and in self-contained classroom when this is the most appropriate option available.

Middle, Junior, and High Schools

- Average class size for grades 6-8 should not exceed 25 students. Average class size for grades 9-12 should not exceed 25 students.
- It is not possible to achieve 100 percent utilization of all regular teaching stations throughout the day. Therefore, classroom capacity should be adjusted using utilization factor of available teaching stations depending on the physical characteristics of the facility and program needs.
- Special education for students may be provided in regular classes when inclusion is possible and in self-contained classrooms when this is the most appropriate option available.
- Identified students will also be provided other programs in "resource rooms" (i.e. computer labs, study rooms), and program specific classrooms (i.e. music, drama, art, home and family education).

Lakewood School District No. 306

Elementary School

- Class size for grades K – 4 will not exceed 26 students. Class size for grades 5 – 8 will not exceed 28 students.
- All students will be provided library/media services in a school library.
- Special Education for students may be provided in self-contained or specialized classrooms.
- All students will be provided music instruction in a separate classroom.
- All students will have scheduled time in a computer lab.Each classroom will have access to computers and related educational technology.
- Optimum design capacity for new elementary schools is 475 students. However, actual capacity of individual schools may vary depending on the educational programs offered.
- All students will be provided physical education instruction in a gym or in a multipurpose room.

Middle, Junior, and High Schools

- Class size for middle school grades will not exceed 28 students. Class size for high school grades will not exceed 30 students.
- As a result of scheduling conflicts for student programs, the need for specialized rooms for certain programs, and the need for teachers to have a work space during planning periods, it is not possible to achieve 100 percent utilization of all regular teaching stations throughout the day. Therefore, classroom capacity should be adjusted using a utilization factor of 86 percent at the middle school and 83 percent at the high school to reflect the use of classrooms for teacher planning. Special Education for students will be provided in self-contained or specialized classrooms.

All students will have access to computer labs. Each classroom is equipped with access to computers and related educational technology. Identified students will also be provided other nontraditional educational opportunities in classrooms designated as follows: counseling offices; resource rooms (i.e. computer labs, study rooms); special education classrooms; and program specific classrooms (i.e. music, drama, art, physical education, industrial arts and agricultural sciences).

Optimum design capacity for new middle schools is 600 students. However, actual capacity of individual schools may vary depending on the educational programs offered.

Optimum design capacity for new high schools is 800 students. However, actual capacity of individual schools may vary depending on the educational programs offered.

Lake Stevens School District No. 4

Elementary School

- Average class size for grades K-5 should not exceed 27 students.
- Special Education for students may be provided in a self-contained classroom. The practical capacity for these classrooms is 15 students.
- All students will be provided music instruction in a separate classroom.
- Students may have a scheduled time in a computer lab.
- Optimum design capacity for new elementary schools is 500 students. However, actual capacity of individual schools may vary depending on the educational programs offered.

Middle, Mid-High, and High Schools

- Class size for secondary grade (6-12) regular classrooms should not exceed 30 students. The District assumes a practical capacity for middle, mid-high, and high school classrooms of 30 students.
- Special Education for students may be provided in a self-contained classroom. The practical capacity for these classrooms is 15 students.
- As a result of scheduling conflicts for student programs, the need for specialized rooms for certain programs, and the need for teachers to have a work space during planning periods, it is not possible to achieve 100 percent utilization of all regular teaching stations throughout the day. Therefore, classroom capacity is adjusted using a utilization factor of 83 percent at the middle, mid-high, and high school levels.
- Some Special Education services for students will be provided in a self-contained classroom.
- Identified students will also be provided other nontraditional educational opportunities in classrooms designated as Resource Rooms (i.e. computer labs, study rooms) or Special Education Classrooms.
- Program Specific Classrooms: music, drama, art, physical education, family and consumer sciences, and career and technical education).
- Optimum design capacity for new middle schools is 750 students. However, actual capacity of individual schools may vary depending on the educational programs offered.
- Optimum design capacity for new high schools is 1,500 students. However, actual capacity of individual schools may vary depending on the educational programs offered.

IV. Goals and Policies

Goals:

1. Include school districts in land use planning to ensure adequate facilities to handle growth.
2. Provide equitable distribution and maximum utilization of school district resources in the delivery of educational services.

Policies:

SC-1 The City and school districts should maintain open communications to keep each other abreast of plans and recommendations regarding: closures, changes, and expansions of schools, streets, other facilities, etc. that might impact the other; and the location of schools and school-related facilities.

SC-2 Encourage construction and location of schools and their facilities within the Urban Growth Area.

SC-3 Encourage elementary schools, junior high, and high schools to locate close to existing or proposed residential areas.

SC-4 The location, design, and construction of school facilities should be compatible with existing land use, drainage, and natural systems.

SC-5 Locate schools as focal points for neighborhoods.

SC-6 Accommodate new development only when required school space is available prior to or concurrent with development. Concurrency indicates that facilities are available within six years of construction of the new development. Payment of mitigation fees is considered concurrency.

SC-7 Promote cooperation between the City and the school districts to provide adequate opportunities for community utilization of school facilities.

SC-8 Maximize utilization of existing school district facilities whenever possible to supplement new and existing parks and their programming. Encourage future development of school grounds to complement the facilities planned in future park developments and maintain an interlocal agreement with district to facilitate this goal.

SC-9 Development and design proposals for school facilities should address street and trail improvements to provide safe site access by pedestrians, bicyclists and vehicles.

SC-10 Encourage the location and design of new schools, and improve existing ones to facilitate access and circulation by transit, car/van pools, pedestrians, bicyclists, and other alternative transportation modes whenever possible.

SC-11 Permit schools, through a conditional use process, to be located in any part of the City.

V. Criteria

The following criteria should be considered whenever possible when locating and designing schools:

- Each Planning Area should have an elementary school, placed within a 1/2 mile radius walking distance of residences. (State law requires that children be transported if they live outside of one mile diameter distance from the school, unless walking conditions are hazardous.)
- Located on an arterial or possibly a collector street.

Whenever possible, the optimum capacity range and site size for school buildings should be maintained as specified in Table 11-19.

Table 11-19 Optimum School Capacity

SCHOOL	STUDENTS	ACRES
Elementary	500	10
Middle	800	20
High	1,550	40

VI. Identification

Please see Figure 11-3 for the locations of schools. The locations are generalized. School locations may be adjusted, up to a half mile if land is not available in the location identified.

G. WATER[1]

I. Existing

The Marysville Water System, operated and maintained by the Department of Public Works, provides water to a Water Retail Service Area (WRSA) formerly known as a Coordinated Service Area (CSA) as illustrated in Figure 11-4. Marysville's Water Retail Service Area is based on the 1991 North Snohomish County Coordinated Water System Plan (CWSP) plus subsequent modifications adopted by the City Council.

Water supplied via the Everett-Marysville pipeline is a result of a Joint Operating Agreement (JOA) between Marysville, Snohomish County Public Utility District No. 1, and the Tulalip Tribes.

a. Demand

The City of Marysville supplied water to approximately 17,000 accounts in 2009. The population served in 2009 was 56,000. Annual sales for 2014 were 1,585 million gallons resulting in a retail usage of approximately 4.34 million gallons per day (MGD) as shown in Table 11-22.

Table 11-20 Marysville Retail Water Usage Breakdown

USE	PERCENTAGE OF AVERAGE DAILY RETAIL DEMAND
Single Family	63
Multi family	16
Industrial/Commercial	16
Schools	2
Irrigation	3
TOTAL	100

Source: Table 5-2, City of Marysville 2009 Water Comprehensive Plan.

Over the last decade, water demand has been greatest among the single family residential category followed by commercial/industrial and multi-family residential (which have equal shares of water usage), and schools as shown in Table 11-21.

[1] This section primarily relies on the City of Marysville, 2002 Water System Plan Update.

Table 11-21 Marysville WRSA Retail Water Sold

RETAIL WATER SOLD, 2006 – 2014 (MGD)*

YEAR	SINGLE FAMILY	MULTI-FAMILY	COMMERCIAL/ INDUSTRIAL	SCHOOLS	TOTAL
2006	2.93	0.72	0.80	0.07	4.52
2007	2.78	0.68	0.84	0.07	4.38
2008	2.72	0.69	0.80	0.08	4.29
2009	2.91	0.73	0.86	0.07	4.57
2010	2.69	0.68	0.77	0.06	4.20
2011	2.59	0.64	0.74	0.06	4.03
2012	2.62	0.62	0.70	0.05	3.99
2013	2.68	0.64	0.76	0.06	4.13
2014	2.86	0.69	0.73	0.07	4.34
Total	24.79	6.08	6.99	0.59	38.45

*MGD Millions of Gallons per Day

Source: City of Marysville 2009 Water Comprehensive Plan Update with supplemental information provided by Finance Department.

b. Supply

The City of Marysville draws water from four primary sources: Edward Springs, the Stillaguamish Ranney Well Collector, the Lake Goodwin Well, and an intertie to the City of Everett water system through the Everett-Marysville pipeline. Primary sources are those that provide water during normal operating conditions. Secondary sources are intended for use in the event of emergencies, high demand, or when primary sources are off-line. Combined these sources provide approximately 21.85 MGD as shown in Tables 11-22 and 11-23.

Table 11-22 Contributing Sources of Water Supply

		CAPACITY	WATER RIGHTS
PRIMARY SUPPLY SOURCES			
Stillaguamish River Ranney Well Collector		3.2 MGD	3.2 MGD
Edward Springs		2.5 MGD	2.1 MGD[1]
Lake Goodwin Well		0.5 MGD	0.8 MGD
Everett-Marysville (JOA) Pipeline		13.15 MGD[2]	13.15 MGD[3]
	Total	**19.35 MGD***	**19.25 MGD**
SECONDARY SUPPLY SOURCES[4]			
Highway 9 Well		1.4 MGD	1.4 MGD
Sunnyside Well No. 2		1.1 MGD	1.1 MGD
	Total	**2.5 MGD**	**2.5 MGD**

*MGD Millions of Gallons per Day

1. In addition to the primary water rights listed for Edwards Springs, the City also holds additional, supplemental water rights for this source.
2. Marysville's current entitlement based on the 1991 Joint Operating Agreement (JOA) with the Snohomish County PUD No.1 which transferred capacity for the Marysville/PUD Overlap area to Marysville. The full capacity of the JOA pipeline is 20 MGD. The remaining capacity is allocated to the Tulalip Tribes and Snohomish County PUD No.1, and Marysville wheels water to each of them.
3. Water rights related to JOA supply are held by City of Everett. Value shown is Marysville's allocation under JOA.
4. The City hold water rights for two additional wells that are not currently in use: the Cedarcrest La Joy Well (only used for Cedarcrest Golf Course) and Sunnyside Well No. 1.
Source: City of Marysville 2009 Water Comprehensive Plan.

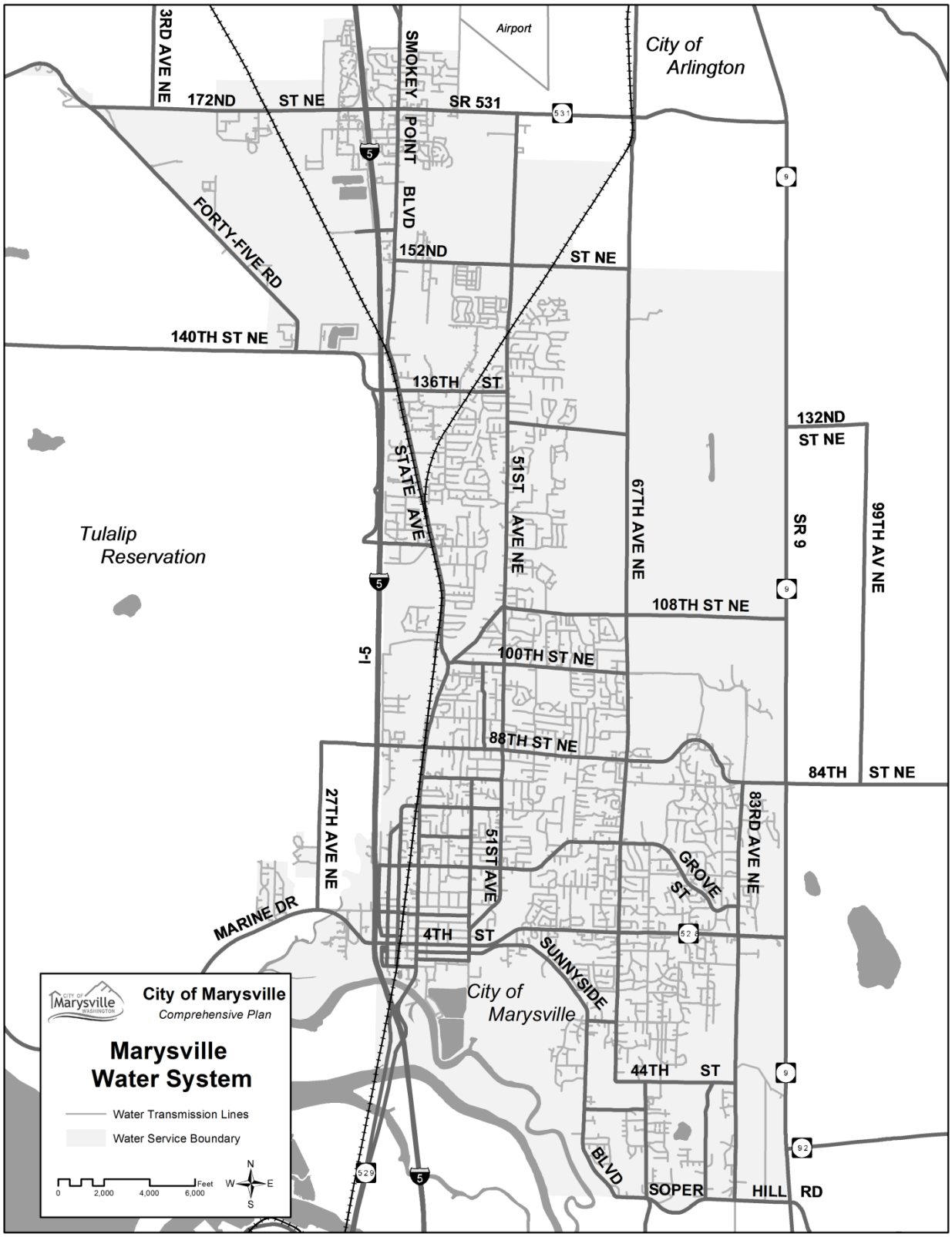
Table 11-23 Water Production

AVERAGE DAILY WATER PRODUCTION, 2005 - 2014 (MGD)*

Year	STILLAGUAMISH RIVER RANNEY COLLECTOR	EDWARD SPRINGS	SUNNYSIDE WELL	LAKE GOODWIN WELL	PURCHASED FROM EVERETT	TOTAL PRODUCTION
2005	0.21	1.15	0	0.01	3.73	5.11
2006	0.29	1.05	0	0.02	4.09	5.45
2007	0.32	1.05	0	0.02	4.02	5.41
2008	0.36	1.09	0	0.02	3.87	5.34
2009	0.55	1.19	0	0.04	3.98	5.77
2010	0.40	1.16	0	0.03	3.73	5.31
2011	0.47	1.23	0	0.02	3.58	5.31
2012	0.71	1.26	0	0.03	3.42	5.42
2013	0.83	1.15	0	0.03	3.55	5.56
2014	1.00	1.14	0	0.03	4.14	6.31

*MGD Millions of Gallons per Day
Source: City of Marysville 2009 Water System Plan Update and supplemental information provided by Public Works.

Figure 11-4 Water Service Area – BETTER MAP TO BE PROVIDED AT HEARING



II. Distribution

Marysville has three principal supply mains: two serving the South Service Area and one serving the North Service Area . Supply mains convey the water from the sources to the distribution system and storage. Marysville categorizes supply mains generally as any main 18-inches or greater in diameter.

The largest supply main is the 30-inch steel JOA Supply Pipeline constructed in 1992. The supply main begins at Everett's No. 2 and No. 3 transmission lines near the intersection of the Bonneville Power Administration right-of-way and Hewitt Avenue East in Everett. Connection to the Marysville system is located at the intersection of 83rd Avenue NE and 44th Street NE, just northeast of the Sunnyside Well and Reservoir.

In 1993, the JOA Supply Pipeline was extended from 44th Street NE to SR528. This portion of the pipeline, known as the Everett-Marysville pipeline, was reduced from 30-inches to 24-inches. In 1994 to 1995, the 24-inch Everett-Marysville Pipeline was extended north from SR528 to 84th Street along 83rd Street/Olympic Pipeline right-of-way. At 84th Street, the main is reduced to 20-inches, and extends north along 83rd Street right-of-way to 100th Street terminating at the Getchell Reservoir. A 24-inch transmission main is located along 100th Street NE leading to the former site of the Kellogg-Marsh Reservoir just west of 67th Avenue NE on 100th Street NE. in 1996, an 18-inch water main was extended along 100th Street NE west to State Avenue. Water is conveyed to the distribution system through an 18-inch/24-inch transmission main within 100th Street NE.

The Stillaguamish Collector Supply Main is an 18-inch ductile iron pipe extending from the Ranney Well Collector, in the Stillaguamish River, south to the Stillguamish River Water Treatment Plant and then continues carrying treated water from the clearwell into the distribution system. Some modifications were made to break the line into two lines, one carrying raw water from the river to the Stillaguamish River Water Treatment Plant and the other carrying water from the clearwell into the north 240 pressure zone.

Transmission mains are generally 12- to 16- inch diameter mains that connect with the distribution mains. Many of the system transmission mains are regulated by control valves at the pressure zone boundaries. There are approximately 49 miles of transmission mains within the City's system.

Distribution mains are typically 10-inch and smaller and supply water to service connections and fire hydrants. The current city standard minimum distribution main size is 8 inches. The City has approximately 219 miles of distribution mains.

The Marysville supply, transmission, and distribution consist of 291 miles of pipe.

d. Pressure Zones

The City's WRSA is physically divided into north and south service areas by valves. The south service area is served with water purchased from the City of Everett. The north service area is served from Marysville-owned sources. There are eight pressure zones with the City's WRSA as shown in Figure 11-5. The zones are labeled according to the elevation, relative to mean sea level, of the static pressure head in each zone. The zone boundaries are located to provide a service pressure range of 30 to 90 psi under maximum and average day demand conditions.

The North Service Area contains three pressure zones: the 460 Zone, North 240 Zone, and 327 Zone. The South Service Area contains six pressure zones: the 170 Zone, 203

Zone, South 240 Zone, 260 Zone, 360 Zone, and 510 Zone. The North and South 240 Zones are physically separated with separate supply and storage.

e. Storage Facilities

Water storage facilities or reservoirs provide for user's daily storage needs, fire storage, and emergency reserves. (Fire flow storageis calculated as either 1,000 gpm x 1 hour or 2,500 gpm x 2 hours depending on the reservoir.)

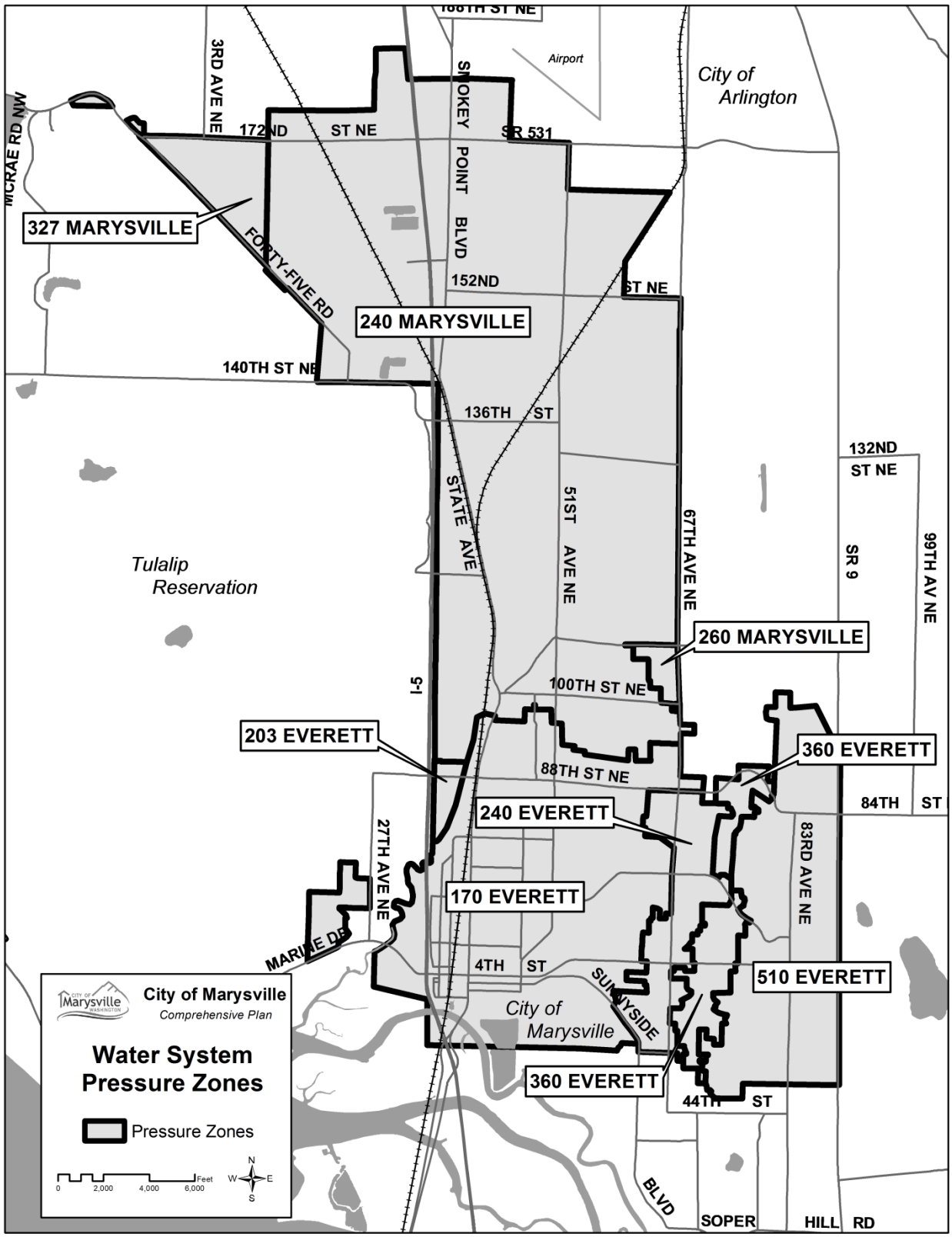
The Marysville water system currently operates 24.34 million gallons (MG) of storage as shown in Table 11-24. The Edward Springs, Wade Road, and 327 Zone Reservoirs and the Stillaguamish Water Treatment Plant Clearwell store for the North Service Area while the Getchell, Cedarcrest, Highway 9 and Sunnyside Reservoirs store for the South Service Area.

Table 11-24 Water Storage Facilities

FACILITY	YEAR CONSTRUCTED	CAPACITY (GALLONS)
Edward Springs Reservoir	1975[1]	6,000,000
Stillaguamish Water Treatment Plant Clearwell	2006	460,000
Wade Road Reservoir	2007	3,000,000
327 Zone Reservoir	2008	680,000
Getchell Reservoir	1995	6,000,000
Cedarcrest Reservoir	1987	3,500,000
Highway 9 Reservoir	1998	1,700,000
Sunnyside Reservoir	2007	3,000,000
Total Storage Capacity		24,340,000

[1] A new Hypalon® cover and PVC liner with an improved anchoring system were installed in 1999.
Source: City of Marysville 2009 Water Comprehensive Plan

Figure 11-5 Existing System, Pressures, and Reservoir Lines – BETTER MAP TO BE PROVIDED AT HEARING



III. Future Needs and Assumptions

The City has projected demand through 2028 as shown in Table 11-25.

Table 11-25 Summary Forecast of Total System Demand (MGD)[1]

	2007	2014	2028
Average Day Demand (ADD)			
Retail System	5.1	6.6	9.1
Wholesale/Wheeled Water	1.1	5.7	7.5
Total ADD	6.2	12.3	16.6
Maximum Day Demand (MDD)			
Total MDD	9.7	17.0	22.9

[1]MGD Millions of Gallons per Day

Source: City of Marysville 2009 Water Comprehensive Plan

Based on supply capacity and projected demand, maximum day demand will not exceed available supply until sometime after 2028. Available supply is adequate to serve average day demand beyond 2028. The only improvement required to address source capacity needs through 2028 is the addition of a future pump station to provide supply to the North 510 Zone.

Demand projections combine demographic data with water use factors to develop the demand for retail sales. Demand components for non-revenue water, as well as for the Tulalip Tribes and Snohomish County PUD, are then added in to create the total average day demand. To generate the total maximum day demand, a peaking factor is applied to all demands except the Tulalip and PUD demands. Demographic data and forecasts used in demand projections are shown in Table 11-26.

Table 11-26 Demographic Forecast for Marysville Water System[1]

YEAR	POPULATION	SINGLE-FAMILY HOUSEHOLDS	MULTI-FAMILY HOUSEHOLDS	EMPLOYMENT
2011	54,265	19,427	5,583	12,814
2012	55,389	19,917	5,700	13,074
2013	56,513	20,407	5,816	13,334
2014	57,637	20,897	5,933	13,594
2028	77,244	29,212	8,140	17,364
% Growth 2011- 2028	29.8 %	33.5 %	31.5 %	26 %

1. At the time the demand forecast was developed, the most recent year for which a complete year of data was available was 2006. Therefore, the water use characteristics were analyzed through 2006. 2007 data was provided with Marysville's hydraulic model at a later date. Since the modeling work in the 2009 Water Comprehensive Plan uses 2007 as the current year, the Water Comprehensive Plan uses 2007 as the current year for consistency.

Source: Table 3-1, City of Marysville 2009 Water Comprehensive Plan

a. Systems Analysis and Proposed Capital Improvements

Hydraulic analysis evaluation of the Marysville source, storage, distribution, transmission, and water quality identified a number of necessary improvements. Many of these improvements require upgrading water mains.

There are 36 recommended capital improvement projects for years 2009 to 2014 and nine for years 2009 to 2028. Brief descriptions of these projects are listed in Table 11-27.

Table 11-27 Recommended Water System Capital Improvements

Project Number	Project Title	Description
Water Supply and Treatment		
WS-1	Additional Spring Collector Improvements	Spring collector improvements.
WS-2	Lake Goodwin Well Development	Well improvements.
WS-3	Sunnyside Well No. 1 Relocated and No. 2 Rehabilitation	Well relocation and rehabilitation.
WS-4	Ultraviolet Treatment	Ultraviolet treatment.
Water Storage		
ST-1	Edward Springs Baffles	Baffles for water quality.
ST-2	Highway 9 Reservoir Demolition	Demolition of substandard reservoir.
ST-3	Highway 9 Reservoir	Construction of new reservoir for additional storage.
ST-4	Soper Hill (Whiskey Ridge) Property & Reservoir	Property acquisition and construction of one million gallon reservoir.
ST-5	North 510 Zone Reservoir	Pump station for new pressure zone.
Water Booster Pump Stations		
PS-1	Edward Springs Pump Modification	Pump modification to improve fire flow.
PS-2	Edward Springs Booster Pump Building	Building to protect new equipment.
PS-3	Cedarcrest Pump Station Rehabilitation	Motor control and valve replacement to improve operations.
PS-4	Soper Hill (Whiskey Ridge) Pump Station	Acquisition of pump station for future service area.
PS-5	North 510 Zone Pump Station	Pump station for new pressure zone.
Water Transmission and Distribution System		
WD-1	State Avenue (102nd Street to 116th Street)	Replace and upsize 4,578 feet of 12-inch AC with 18-inch DI.
WD-2	67th Avenue (100th Street to 132nd Street)	Install 10,469 feet of 18-inch and PRV.
WD-3	83rd Avenue NE (60th Street to 64th Street)	Replace and upsize 1,301 feet of 10-inch to 16-inch.
WD-4	67th Avenue NE (52nd Street to 64th Street)	Replace and upsize 3,943 feet of 10-inch to 16-inch.

WD-5	51st Avenue (119th Place NE to 122nd Place NE)	Replace 820 feet of 12-inch CI with 12-inch DI.
WD-6	Ebey Slough Bridge	Install 717 feet of new 12-inch.
WD-7	Cedar Avenue 1st to 5th	1,407 feet of new 8-inch to improve fire flow.
WD-8	Quinn Avenue 6th to 8th	972 feet of new 8-inch to improve fire flow.
WD-9	67th Avenue NE (44th to 52nd Streets); 44th Street NE (67th to 71st Avenues); and 71st Avenue NE (to Sunnyside Reservoir).	4,697 feet of new 18-inch.
WD-10	140th Place NE (23rd Avenue to I-5; north on 23rd Avenue NE, then northwest on 45 Road (144th to 156th Streets).	10,053 feet replace 12-inch AC with 18-inch DI
WD-11	71st Avenue NE (52nd to 72nd Street)	6,559 feet of 12-inch.
WD-12	52nd Street NE (67th to 73rd Avenue)	2,023 feet. Replace 10-inch with 12-inch.
WD-13	Soper Hill (Whiskey Ridge) Reservoir waterline	4,378 feet of new 12-inch.
WD-14	Soper Hill (Whiskey Ridge)	Three PRVs.
WD-15	Connection of Soper Hill to 360 Zone on 49th Street NE	200 feet of new 8-inch.
WD-16	83rd Avenue NE (Soper Hill Reservoir to 60th Street)	6,859 feet of new 16-inch for future transmission.
WD-17	North 510 Zone Reservoir waterline	22,838 feet of new 12-inch for acquisition of a future service area.
WD-18	52nd Drive NE (north from 81st Place NE to existing 6-inch CI).	340 feet of new 8-inch to improve fire flow.
WD-19	77th Place NE and 76th Street NE	600 feet replacement of 6-inch with 8-inch on 77th Place NE and 410 feet replacement of 6-inch with 8-inch on 76th Street NE.
WD-20	60th Drive NE	3,842 feet upsize from 6-inch to 8-inch.
WD-21	61st Drive NE and 84th Place NE; 87th Street NE; and 86th Street NE	758 feet replacement of 6-inch with 8-inch on 61st Drive NE and 84th Place NE; 621 feet replacement of 6-inch with 8-inch on 87th Street NE; and 855 feet replacement of 6-inch with 8-inch on 86th Street NE in order to improve fire flow.
WD-22	50th Avenue NE	250 feet upsize from 6-inch to 8-inch to improve fire flow.

WD-23	92nd Street NE	561 feet upsize from 6-inch to 8-inch to improve fire flow.
WD-24	134th Place NE and 54th Drive NE	1,502 feet upsize from 6-inch to 8-inch and install some new 8-inch.
WD-25	140th Place NE	305 feet upsize from 4-inch to 8-inch to improve fire flow.
WD-26	North-South Boundary Adjustment	Install pipes and valves to adjust the North-South Boundary (five segments; 25 feet each and 8-inch.
Water Maintenance and Operations		
WM-1	Watermain R&R	Replacement
WM-2	Watermain Oversizing	Operations improvement.
WM-3	PRV Rate of Flow	Operations improvement.
WM-4	Stillaguamish Fiber Optics	Operations improvement.
WM-5	Water Meter AMR	Operations improvement.

Source: City of Marysville 2009 Water Comprehensive Plan.

IV. Standards

For planning purposes the current water system plan uses a standard consumption amount of 188 gallons per day per Equivalent Residential Unit (ERU) for estimating future water demand.

H. SEWER[2]

The City of Marysville operates and maintains the sanitary sewer system and wastewater treatment facility that serves the City and entire Urban Growth Area (UGA). There are also three areas within the Rural Utility Service Area (RUSA) that are currently served by the sewer collection system but are located outside of the UGA: a part of Arlington to the north, part of the Tulalip Tribes to the west, and Mountain View Shores, a small subdivision, also to the west.

I. Existing

The City of Marysville sewer system service area is bounded by the Utility Service Area (USA) which coincides, for sewer, with the Urban Growth Area (UGA). As of 2011, the sewer system has approximately 18,421 connections. Of these, 16,817 are single family residential customers, 726 are multifamily residential customers, and 878 are school, commercial, and industrial customers.

a. Wastewater Treatment Plant

The existing lagoon wastewater treatment plant (WWTP) is in the southwest corner of the City on Ebey Slough. The WWTP was originally constructed at the current site in

[2] This section primarily relies upon the City of Marysville 2011 Sewer Comprehensive Plan prepared by Gray & Osborne, Inc.

1959. After a plant expansion in 1980-1981, the biological treatment train consisted of two lagoons, each divided with curtains into two treatment cells. The first three cells in the train were partially mixed and aerated with aspirating-type aerators, while the fourth cell served as a stabilizing pond. In addition to the lagoons, the WWTP included influent and effluent flow monitoring flumes, manuallycleaned bar screens, a grit chamber, and a chlorine contact chamber using gaseous chlorine.

Another plant expansion occurred in 1994. A portion of the north lagoon system was converted to two complete mix aerated lagoon cells. Influent screw pumps and mechanically cleaned bar screens were added to the headworks. A third channel was constructed in the headworks to accommodate a future screw pump (later installed in Phase 1 of the 2002-2004 upgrade). Effluent sand filters (manufactured by Dynasand) were added to remove solids from the lagoon effluent, and a new chlorine contact tank was constructed.

In 2004 another upgrade of the wastewater treatment plant was completed in two phases. Phase 1 of the upgrade included the addition of two new complete mix aerated lagoon cells, one new influent screw pump and one new influent bar screen, and four effluent pumps. Phase 2 added two complete mix aerated lagoon cells, 1,600 square feet of effluent sand filters, UV disinfection, and an effluent pipeline to Everett. The WWTP biological treatment components include six complete mix aerated lagoons, a partially mixed aerated lagoon, three partially mixed facultative lagoons, and a facultative only stabilization lagoon. The plant discharges to Steamboat Slough in the Snohomish River Estuary, which is designated as a Class A Marine receiving water in the vicinity of the outfall, during high river flow months (November through June). Following 2004 completion of construction of a new effluent conveyance pipeline to Everett (outfall into Port Gardner), the City now has a second discharge location necessary to meet dry-season permit requirements.

The wastewater treatment plant design flows and loading are shown in Table 11-28.

Table 11-28 Wastewater Treatment Plant Design Flows and Loading[1]

Parameter	Phase 1	Phase 2
Design Year	2004	2010
Flows (mgd)		
Average Annual	8.52	10.1
Maximum Month	10.7	12.7
Maximum Day	13.1	15.6
Peak Hour	17.2	20.3
Mass Loading (lb/day)		
Annual Average		
BOD_5	14,943	17,070
TSS	14,943	17,815
Average Day, Max. Month		
BOD_5	17,632	20,143
TSS	20,322	24,229
Maximum Day		
BOD_5	21,816	24,922
TSS	31,977	38,125

(1) This information is from the design drawings prepared by Tetratech/KCM, Phase 2 (2003).

The City's most recent NPDES permit was issued by the Washington State Department of Ecology on August 1, 2013 and will expire on July 31, 2018. Due to Total Maximum Daily Loads (TMDL) (total maximum daily load) constraints on the Snohomish River Estuary, Marysville has a discharge permit with differing seasonal discharge limits based on dry period (July through October) versus the wet period (November through June). The following Table 11-29 and 11-30 summarize the permit limits.

Table 11-29 Wastewater Treatment Plant NPDES Permit Limits – Low Flow Season (July-October)

NPDES Effluent Limitations	**Average Monthly**	**Average Weekly**
$CBOD_5$	25 mg/L[1]	40 mg/L
TSS	30 mg/L[1] (3,180 lb/d)	45 mg/L (4,770 lb/d)
pH		6.0 – 9.0 (daily)
Fecal Coliform	200 cfu / 100mL	400 cfu / 100mL
NPDES Effluent Limitations	**Average Monthly**	**Maximum Daily**
Ammonia (as N)	178 lb/d	403 lb/d
$CBOD_5$	419 lb/d	672 lb/d

1. Or 15 percent of the respective monthly average influent concentrations, whichever is more stringent.

Source: City of Marysville Sewer Comprehensive Plan, 2011, Gray &Osborne, Inc.

Table 11-30 Wastewater Treatment Plant NPDES Permit Limits –High Flow Season (November-June)

NPDES Effluent Limitations	**Average Monthly**	**Average Weekly**
$CBOD_5$	25 mg/L[1] (2,650 lb/d)	40 mg/L (4,240 lb/d)
TSS	30 mg/L[1] (3,180 lb/d)	45 mg/L (4,770 lb/d)
pH		6.0 – 9.0 (daily)
Fecal Coliform	200 cfu / 100mL	400 cfu / 100mL

1. Or 15 percent of the respective monthly average influent concentrations, whichever is more stringent.

Source: City of Marysville Sewer Comprehensive Plan, 2011, Gray &Osborne, Inc.

b. Collection System

The sanitary sewers in the downtown core area of "older" Marysville, were constructed as a combined sewer system prior to 1940. Portions of the secondary collection system downtown system consist of clay pipes with asphalt or mortar joints. These pipes are showing signs of deterioration, and the joint material has deteriorated in some sections of pipe.

Since 1989, nearly 100 percent of this older remaining combined sewer system has been replaced with a separate storm drainage system. Replacement of old sewer and storm drain separation are important so that groundwater and storm runoff are not using capacity of the system that should otherwise be available for wastewater flows.

An extensive expansion of the original sewer system has occurred over the past approximately forty years. In 1968, Trunk Sewer C, Trunk D (the Eastside Trunk), and Trunk G (the Westside Trunk) extended the system to the north, east and west, respectively. In 1970, Trunk Sewer A (eight miles long) was constructed to serve the area northeast of Marysville. Map 11-6 shows the existing trunk sewer system.

Current sewer system components include waterwater collection mains, pump stations and force mains, and the wasterwater treatment and disposal facility. The existing collection system is organized around eight (8) trunk sewer systems: A, B, C, D, F, F-A, G, and Lakewood. The general direction of flow in the City's collection systems is from north to south, starting near Arlington and discharging to the wasterwater treatment facility at the south end of the service area.

The trunk sewer systems serving the largest portion of the sewer service area population is Trunk A. By acreage served, Trunk D is the largest at 4,054 acres, Trunk A is the second largest at 3,341 acres, and Trunk C is the third largest at 3,267 acres. Only Trunk G and Trunk C are not directly tributary to Trunk A. All components of the collection system discharge to the wastewater treatment facility either through Trunk A or Trunk C.

The trunk sewers and other recent additions have been constructed under the supervision of the City, and are made of concrete or PVC pipe with rubber gasketed joints. The existing trunk sewer system contains approximately 226 miles of mainline sewer pipes ranging from 6 to 48 inches in diameter.

Most of the service area is served by gravity sewers. The City's collection system includes 210 miles of gravity sewer ranging from 6- to 48-inch diameter pipe, force main ranging from 2- to 12-inch diameter pipe, and 15 pump stations.

c. Tributary Area

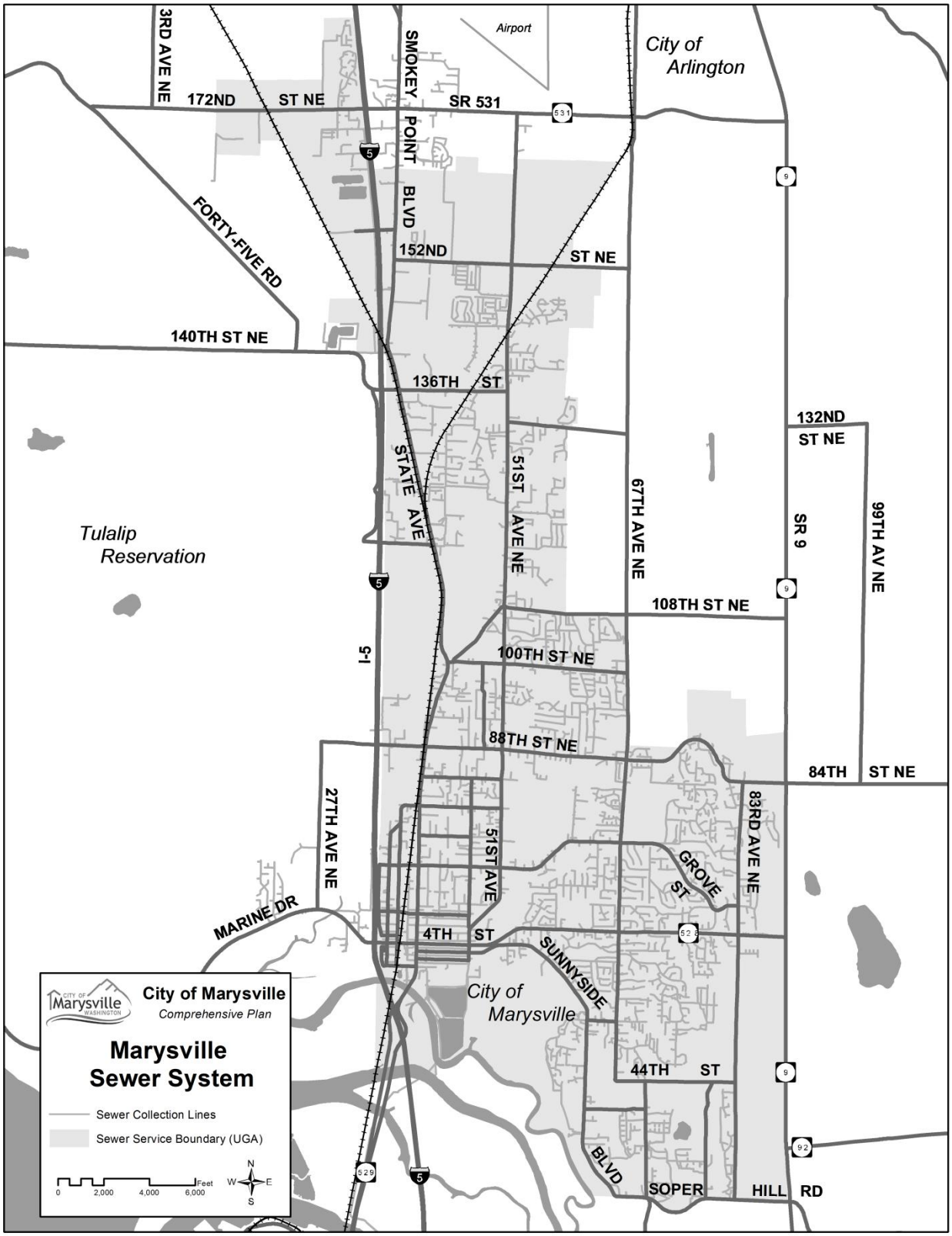
Two major drainage basins exist within the service area with small portions of other drainage basins located north of 180th Place NE in the Lakewood Neighborhood, and the southeast corner of the East Sunnyside-Whiskey Ridge Neighborhood. Most of the existing sewer service area is within the Quilceda Creek and Allen Creek Basins which flow south from 172nd Street NE towards Ebey Slough. The area north of the northern city limits and a small portion of land within the city that is generally north of 180th Place NE is in the Stillaguamish Sub-basin and creeks within this area flow towards the Stillaguamish River.

d. Pumping Stations

The City operates and maintains 15 pump stations. Five of these are primary pump stations for the City (Soper Hill, 51st Avenue, 88th Street, Marysville West, and West Trunk) that serve significant portions of the sewer service area while the remaining nine pump stations are "developer-type" stations serving a more limited service area..

Within these two basins, 15 lift stations exist to keep buried sewer pipe depth reasonable and maintain a logical flow pattern to the low points of the basins. All of the pump stations are in good condition and meet the present needs of the system; however, some pumps will need to be replaced with larger pumps in the future. Each station is equipped with at least two pumps (the West Trunk Pump Station has three pumps) and emergency standby power generators. In addition to the 15 pump stations owned and operated by the City, there are several private pump stations within the sewer service area.

Figure 11-6 Existing Sewer System – NOTE: UPDATED MAP TO BE PROVIDED



II. Future Needs and Assumptions

The Wasterwater Treatment Plant Upgrade and Expansion were completed in late 2004. These improvements enable the plant to now operate at design capacity which is adequate to serve Marysville and projected growth to the year 2031; however, when sewage reaches approximately 12 million gallons per day, additional aeration will need to be provided.

The projected future sewer service population is shown in Table 11-31.

Table 11-31 Projected Future Sewer Service Population

Year	2011	2017	2031
UGA Population	61,491	69,338	84,989
Service Area Population including Non-UGA	64,669	72,616	87,757
Service Area Population Connected to Sewer	50,543	62,250	87,757
Percent Increase	-	23.16%	73.63%
Percent Connected	78%	86%	100%

Source: City of Marysville Sewer Comprehensive Plan, 2011, Gray &Osborne, Inc.

Future improvements included in the City's Capital Improvement Plan for the wastewater treatment plan include biosolids removal, which is anticipated to be completed in 2018 or thereafter. Other scheduled improvements include replacement or reconstruction of the headworks parshall flume, extension of the filter reject line to complete mix cell 1 at the headworks of the plant, upsizing the filter reject pump station wet well and pumps, construction of a pre-settling basin, and replacement of the mechanical barscreens at the headworks.

Additional sewerage system improvements for the 2011 to 2031 planning period are included in Marysville's Sewer Comprehensive Plan. The plan includes a capital facilities improvement plan and financing plan.

The City of Marysville will provide sewer to the City's Urban Growth Area. Sewer service will also be consistent with City ordinances. Any variance request for providing sewer outside of the City's Urban Growth Area will necessitate that the property meet the criteria outlined in the City Code.

I. STORMWATER[3]

I. Existing

Within Marysville, stormwater runoff from buildings, driveways, parking lots and other impervious surfaces is collected, then conveyed through public and private drainage facilities.

[3] This section primarily relies upon the City of Marysville Stormwater Management Plan, 2012.

Most of the tributary drainages lines are within existing road rights-of-way. The City's drainage system consists of approximately 6.5 miles of publicly owned detention pipes, 114 miles of storm lines, ditches and culverts, 6,500 catch basins, a number of outfalls to the river, 8-10 miles of open streams, 1.5 miles of stream culverts, 40 swales, 100 retention/detention ponds, 40 swales, and numerous wetlands and riparian areas. Run-off is collected on individual properties and either conveyed to area-wide detention/water quality facilities prior to release or detained and treated on-site with metered release into the public system. Marysville currently regulates storm drainage utilizing Title 14 of the Marysville Municipal Code.

The City of Marysville has had an ongoing surface water management (SWM) program for over twenty years. A Surface Water Utility (SWM Utility), including lands within the City of Marysville, was originally formed by Snohomish County in 1991 and funds were remitted to the City of Marysville on a quarterly basis under an interlocal agreement. The County continued billing and collecting utility fees until January 2007 when the City took over the billing and administrative functions. The City's SWM Utility is now administered by the City of Marysville's Public Works Department. The purpose of the Utility is to finance, acquire, construct, develop, improve, maintain, and operate public stormwater facilities to help prevent flooding, reduce local drainage problems, improve water quality and habitat, and meet regulatory requirements.

In 1999, the City of Marysville adopted Ordinance 2245 which allowed for the establishment of regional stormwater detention facilities. In 2003, the City constructed a seven acre regional stormwater detention facility known as Regional Stormwater Pond I to serve the commercial areas generally north of 152nd Street NE; this facility is at capacity. In 2014, a second adjacent regional stormwater facilty, Regional Stormwater Pond II, was constructed to continue serving this area. City-owned surface water facilities are complemented by the numerous on-site detention and water quality enhancement facilities constructed by private landowners and businesses.

a. Surface Water Management

Drainage standards for new developments are guided by the 2005 Washington State Department of Ecology Stormwater Management Manual for Western Washington. Specific drainage standards are tailored as a result of local basin planning studies to unique, local drainage needs of the City.

The City requires water quality treatment for storm water runoff. Approved methods include the construction of stormwater detention ponds, grass lined swales, or raingardens to trap and filter solids and pollutants. Similar to other detention facilities mentioned above, these are located on both private and public property.

b. Flood Plain Management and Filling/Grading Guidelines

The City has adopted a floodplain management ordinance that prohibits the construction of any new structures within the federally designated floodway.

c. Problem Areas

Rainfall onto undeveloped properties is mostly absorbed by vegetation and soils. Disturbance or removal of these natural features can cause flooding, erosion, siltation of streams, and mudslides. Further, stormwater runoff from developed land includes many pollutants such as chemicals, oils, fertilizers, and sediments that have deleterious effects on receiving waters and regional water quality.

Deficient construction practices have, in the past, resulted in erosion and sedimentation problems. Water quality in both Quilceda and Allen Creeks has diminished as a result of these deficient construction practices.

Problems with flooding from one developed site to another result from lack of drainage to capacity of the storm drain system. Positive drainage, which is the collection of all lot development runoff, is presently a standard practice in new developments. The long term effectiveness and performance of stormwater detention facilities, whether municipally owned or privately owned, is dependent upon the ability and resources of the responsible party to maintain them as designed.

Annual localized drainage problems commonly occur throughout the City but cause little property damage or inconvenience. However, storm events such as those in 2007, 1996, and 1990 caused significant public and private property damage. Most of the drainage problems in the City and UGA are conveyance related. Restrictions in the collection and conveyance system within the Downtown portion of the Ebey Slough Watershed have been noted at numerous locations. Additionally, conveyance, drainage, and retention problems have been noted at the Quilceda Creek and Allen Creek Watersheds. Problem areas are listed in Table 11-32.

Table 11-32 Problem Areas

PROBLEM AREA LOCATION	PROBLEM DESCRIPTION
Quil Ceda Creek Watershed Location	
Edgecomb Creek	Creek has poor aquatic resource function.
Channel Realignment and Floodplain Restoration (Hayho Creek)	Headwater base flow attenuation of creek needs to be improved.
North Marysville Master Drainage Plan (Hayho Creek)	Creek has poor aquatic resource function.
Hayho at Railroad Culvert	Hayho Creek is not connected to the 48-inch steel culvert installed in 2005.
Hayho Creek - railroad culverts to 47th Drive NE	Hayho Creek is incising and banks are eroding through this portion of the creek.
Edgecomb Creek at 152nd Street NE	Culvert undersized and overtops road for existing 25 year and future 10 year events.
Hayho Creek (from 152nd Street NE to the southwest corner of the Navy Complex both upstream and downstream)	Channel is undersized and subject to overtopping, and also constricts flows and proper drainage within the subbasin during winter months. Beaver dams cause adjacent flooding.
Olaf Strad Creek at 152nd Street NE	Undersized culvert, potential fish barrier, and property flooding.
West Quil Ceda Tributary and 104th Street NE	Culvert has insufficient capacity and overtops road. Culvert is silted in. Water boils up to surface blocking fish passage.
West Quil Ceda Tributary at 103rd Street	Culvert has insufficient capacity and overtops road. Culvert has a beaver dam immediately upstream of inlet blocking fish passage.
Edgecomb Creek, north of 152nd Street	Culvert undersized and overtops road for existing 10 year and both existing and future two year events.
Hayho Creek at 43rd Avenue and Emerald Hills Estates	Beaver dams in Hayho Creek cause periodic flooding of 43rd Avenue NE culvert overtopping road and retirement community of Emerald Hills Estates.
Hayho Creek at 160th Avenue NE	Fish swim or are drawn into a diversion in the Hayho Creek channel.
Quilceda Creek, south of 152nd Street	Culvert is a partial barrier to fish passage. Lack of adequate large woody debris and riparian vegetation in this portion of stream.
Quil Ceda Creek at State Avenue	Culvert is undersized and partial barrier to fish based upon velocity criteria.
Quil Ceda Creek and railroad	Culvert is a partial barrier to fish based upon velocity criteria.
Allen Creek Capital Improvement Projects	

Jones Creek– Sunnyside Neighborhood	Sinkholes have formed next to Jones Creek as a result of water seeping into a detention creek parallel to Jones Creek. Water may also be traveling through the detention tank backfill.
Brashler's Industrial Park	Industrial park floods/ponds because Allen Creek backwaters the conveyance system. Existing conveyance has undersized/adverse grade pipes. Street settling contributes to ponding.
60th Place NE – Sunnyside Neighborhood	Insufficient conveyance capacity for existing 10-year event. Localized flooding also occurs for the 6-month event on 60th Place NE west of 63rd Avenue NE.
Allen Creek west of 60th Drive NE	Location has poor fish habitat, lacking woody debris and riparian vegetation.
Culvert Replacement and Erosion Control Measures at 88th Street NE	Culvert is velocity barrier to fish passage as predicted by hydraulic analysis. Flooding over roadway predicted if culvert is not maintained. Downstream 50 lineal feet of existing riprap bank armoring has failed.
Storm Drain Replacement at 95th Street NE and 67th Avenue NE	Insufficient conveyance capacity for 10-year existing and future events.
Culvert Replacement at 55th Avenue NE (Allen Creek	Culvert is a velocity barrier to fish passage as predicted by hydraulic analysis.
Culvert Replacement at 80th Street NE (Allen Creek)	Culvert is a velocity barrier to fish passage as predicted by hydraulic analysis.
Storm Drain Replacement at 61st Street Cul-de-Sac Sunnyside Neighborhood	Insufficient conveyance capacity for 10-year existing events.
Sunnyside Creek Capital Improvement Projects	
Sunnyside Wetland Acquisition	Development has impacted a high percentage of local wetlands in the Sunnyside area.
Ebey Slough Basin Capital Improvement Projects	
No deficiencies in the Ebey Slough basin ranked high enough to become a capital improvement project.	

Source: City of Marysville Surface Water Comprehenisve Plan, November 2009 , by Otak, Inc.

II. Future Needs and Assumptions

Stormwater facilities can and should be coordinated so that as much as possible several projects combine their storm water facility needs. The stormwater pipes and detention facilities would be constructed on-site during each construction project and the off-site release rates would be limited to pre-development levels.

The City of Marysville and Snohomish County have existing stormwater conveyance systems which are planned and administered by the City and County, in their respective areas of jurisdiction.

Continued growth throughout the City and the region will further exacerbate the existing problem areas. Many of the major conveyance and regional storage facilities must be enhanced while future new development will be required to provide water quality treatment and on-site surface water retention.

Proposed surface water capital improvements are listed in Table 11-33.

Table 11-33 Proposed Surface Water Capital Improvements

Quil Ceda Creek Capital Improvement Projects			
PROJECT	**PROJECT DESCRIPTION**	**RANK**	**COST**
North Marysville Master Drainage Plan (Edgecomb Creek)	Realign approximately two miles of Edgecomb Creek providing flood storage and forested wetland buffers. Develop a detention and stormwater conveyance system for future development.	5	$23,526,000
Channel Realignment and Floodplain Restoration (Hayho Creek)	Realign Hayho Creek through 15 acre restoration site connecting Hayho Creek to existing and constructed wetlands.	5	$913,000
North Marysville Master Drainage Plan (Hayho Creek)	Develop a conveyance and stormwater detention system for future development.	5	$10,379,000
Breach Hayho Bank at Railroad Culvert	Breach the bank of Hayho Creek to allow low flows access to the 48-inch steel culvert. Leave currently connected 36-inch culvert in place for high flows. Plant riparian corridor around newly relocated stream channel.	5	$74,000
Erosion Control Measures – Railroad culverts to 47th Drive NE (Hayho Creek)	Stablize 850 linear feet of stream by re-grading and installing large wood debris with riparian vegetation along the banks.	5	$1,545,000
Culvert Replacement at 152nd Street NE (Edgecomb Creek)	Replace existing three foot diameter CMP culvert with one 18-foot span x 5 foot rise, 41 foot long reinforced concrete box culvert.	4	$261,000
Upper Channel Conveyance Enhancement/Hayho Restoration Plan	Dig a deeper and wider channel to accommodate greater flows and provide hydraulic support for habitat enhancement. Meanders will be added to the channel and the riparian area may be replanted.	4	$3,146,000
Marysville Drainage Inventory	Full drainage inventory needed for NPDES permit compliance. Update existing GIS drainage inventory. As-built or survey grade data needed for 30 structures and 40 pipe/culvert inlet/outlet locations.	4	$10,000
Culvert Replacement at 152nd Street NE (Olaf Strad Creek)	Replace existing 3-foot diameter culvert with 18-foot span x 5-foot rise, 50-foot long reinforced concrete box	4	$277,000

	culvert.		
Culvert Modifications at 104th Street (West Quil Ceda Tributary)	Project will include two phases. Phase I: remove beaver dam located along previously breached dike. Phase II: cleanout 104th Street culvert, and replace existing 4-foot span box culvert if conditions require.	4	$75,000
Culvert Modifications at 103rd Street (West Quil Ceda Tributary)	Project will include two phases. Phase I: remove beaver dam upstream of the 103rd Street culvert and clean out the 103rd Street culvert. Phase II: replace the existing 2-foot diameter CMP culvert with a 5-foot span reinforced concrete box culvert that meets WDFW criteria for fish passage.	4	$355,000
Field Access Culvert Removal and Bridge Installation at Edgecomb Creek	Replace existing 2 ½ foot diameter CMP culvert with a railspan bridge.	3	$167,000
Field Access Culvert Removal and Bridge Installation at Edgecomb Creek	Replace existing 2 ½ foot diameter concrete pipe with a railspan bridge.	3	$172,000
Field Access Culvert Removal and Bridge Installation at Edgecomb Creek	Replace existing 2 ½ foot diameter CMP culvert with a railspan bridge.	3	$189,000
Field Access Culvert Removal and Bridge Installation at Edgecomb Creek	Replace existing 1 ½ foot diameter concrete pipe with a railspan bridge.	3	$190,000
	Install berm on downstream side of 43rd Avenue culvert. Excavate ditch on northwest side of the berm to allow collection of street runoff and backwatering from Hayho Creek	3	$43,000
Install Fish Screen at 160th Avenue NE	Install fish screen to prevent fish from swimming or being drawn into a diversion within the channel.	3	$209,000
Field Access Culvert Removal/Bridge Installation and Stream Restoration (Quilceda Creek)	Replace existing 3-foot diameter CMP culvert with a railspan bridge. Restore approximately 1,750 lineal feet of stream channel by installing large wood debris, root wads, and supplemental woody riparian vegetation along a 300 foot wide riparian corridor.	3	$293,000
Culvert Replacement at	Replace existing 6-foot span x 6-foot	3	$3,964,000

State Avenue (Quil Ceda Creek)	rise concrete box culvert with a 175 foot single span bridge. Restore recently day-lighted stream.		
Culvert Replacement at Railroad (Quil Ceda Creek)	Replace existing 8-foot span x 6-foot rise CMP arch culvert with a 140-foot long 12-foot diameter culvert. Project will require installation of an access road for pipe jacking construction.	3	$982,000
Allen Creek Capital Improvement Projects			
Jones Creek Flood Damage Repairs – Sunnyside Neighborhood	Fill the existing 4-foot diameter detention pipe with controlled density fill (CDF). Regrade the stream channel for improved flood storage. Approximately 825 feet of riparian plantings will be planted along the stream.	5	$619,000
Brashler's Industrial Park Flooding	Replace 1,725 feet of existing 12-inch diameter CMP with 15-inch diameter, Schedule A pipe. Remove 18 existing catch basins and replace with 14 new 48-inch diameter catch basins. Install tide gates at outfalls. Replace pavement on 56th Place NE and 47th Avenue NE south of 56th Place NE.	4	$1,756,000
Storm Drain Replacement at 60th Place NE – Sunnyside Neighborhood	Replace approximately 1,230 lineal feet of existing storm drain pipe with 450 lineal feet of 18-inch diameter and 780 lineal feet of 15-inch diameter Schedule A pipe. Replace 13 catch basins with 48-inch catch basins.	3	$457,000
Stream Restoration and Land Acquisition west of 60th Drive NE (Allen Creek)	Acquire 400-foot long by 100-foot wide riparian corridor for restoration. Install large woody debris and plant native woody riparian vegetation along the stream corridor to create pools and complex habitat.	3	$230,000
Culvert Replacement and Erosion Control Measures at 88th Street NE	Replace existing 7 ½ foot span x 5 foot rise concrete box culvert with 11 foot span x 5 ½ foot rise, 100 foot long CMP arch culvert with headwall. Remove loose riprap from channel. Stabilize eroded south bank with 50 lineal feet of bio-engineered bank stabilization measures.	3	$324,000
Storm Drain Replacement at 95th Street NE and 67th Avenue NE	Replace 227 feet of existing 12-inch diameter storm drain pipe with 18-inch diameter HDPE pipe.	3	$176,000

Culvert Replacement at 55th Avenue NE (Allen Creek	Replace existing 6-foot diameter CMP culvert with a 13-foot span x 5 ½ foot rise, 80-foot long CMP arch culvert with headwall.	3	$337,000
Culvert Replacement at 80th Street NE (Allen Creek)	Replace existing 6.4-foot span x 4.2-foot rise CMP arch culvert with dual 6-foot span x 5 ½ foot rise, 50-foot long CMP arch culverts with headwall.	3	$230,000
Storm Drain Replacement at 61st Street Cul-de-Sac Sunnyside Neighborhood	Replace approximately 680 lineal feet of existing storm drain pipe with 520 lineal feet of 15-inch diameter and 160 lineal feet of 12-inch diameter Schedule A pipe. Replace five catch basins with 48-inch catch basins.	3	$221,000
Sunnyside Creek Capital Improvement Projects			
Sunnyside Wetland Acquisition	Acquire 28 acres of forested emergent wetlands for preservation near the headwaters of Sunnyside Creek.	3	$2,440,000
Ebey Slough Basin Capital Improvement Projects			
No deficiencies in the Ebey Slough basin ranked high enough to become a capital improvement project.			

Source: City of Marysville Surface Water Comprehensive Plan, November 2009, Otak, Inc.

J. SOLID WASTE

Solid waste removal services are provided by the City of Marysville Public Works Department within the city limits. Unincorporated areas within the Study Area are serviced by Waste Management-Northwest, Inc. Both the City of Marysville and Snohomish County have active recycling programs which operate as a component of area solid waste removal services. Waste Management-Northwest, Inc. provides recycling services through a contractual agreement with the City.

I. Existing

The City's solid waste service consists of eight full-time refuse collectors, one lead, and one supervisor who also oversees the Streets Division. The City provides service to 12,851 accounts: 12,195 residential and 656 commercial. Accounts, type, and size are listed in Table 11-34. (Note: An account may have more than one container).

Table 11-34 Solid Waste Accounts

Type/Size of Container	Number
20 Gallon	702
36 Gallon (one time per Month)	987
36 Gallon	8,959
64 Gallon	1,387
96 Gallon	160
1 Yard	146
1.5 Yard	70
2 Yard	89
3 Yard	72
4 Yard	111
6 Yard	88
8 Yard	80
Total	12,851

The department has five garbage trucks, one commercial capacity rear end load truck, and four front end loaders. The new front loading automated trucks can serve any size container. A truck can serve between 500 and 700 accounts per day.

Recycling services are contracted out to Waste Management Northwest, Inc. They provide weekly recycling services to residential and commercial customers. They pick up yard waste, mixed paper, corrugated cardboard, newspaper, glass, tin, aluminum, and some types of plastic (types 1 and 2).

II. Future Needs and Assumptions

The September 2004, conversion from rear-loaders to automated front-end loaders has enabled solid waste removal services to exceed capacity requirements for the current population; however, when the accounts from the Central Marysville Annexation (CMA) are transferred to the City in 2017, there will be need for two additional garbage trucks and refuse collectors.

Land use considerations that impact solid waste services include development density and road networks. Areas of higher density development permit more efficient collection of solid waste, whereas areas that are more spread out are less efficient. The road network is a factor in providing efficient service; a street system that isolates neighborhoods and has many cul-de-sacs and dead-ends may impact the speed of collection.

Dumping fees have risen quickly in the last few years. Rates will probably continue to rise to cover these increases, since rates cover all garbage costs. No significant changes in recycling service are anticipated. However, the level of change that recycling has experienced in the previous 20 years, makes future changes difficult to predict. In some other counties, scrap metal and motor oil are recycled, so these are potential services.

K. GOALS AND POLICIES: WATER, SEWER, STORM DRAINAGE, SOLID WASTE

Goals:

1. Provide efficient construction of public services and facilities that are consistent with the comprehensive land use plan and available to serve the community concurrent with increased demand generated by new construction.
2. Equitable distribution and maximum utilization of City resources in the delivery of City services.

Policies:

PF-1 Accommodate new residential, commercial, and industrial development only when required facilities and services are available prior to or concurrent with development. Concurrency indicates that facilities are available within 6 years of construction of the new development. Payment of mitigation fees is considered concurrency.

PF-2 Encourage development in areas where facilities and services are already available before developing areas where new facilities and services would be required.

PF-3 Provide urban level facilities and services only in Urban Growth Areas.

PF-4 Provide urban level facilities and services in Urban Growth Areas to avoid health hazards, enhance the quality of life, and maintain viable, efficient, and cost-effective delivery.

PF-5 Give priority to water and sewer line extensions where on-site disposal systems have created known pollution or health hazards.

PF-6 Seek to coordinate, where appropriate, City investment in public facilities with business, employment, and economic development opportunities.

PF-7 Reduce the per unit cost of public facilities and services by encouraging urban density development, allowing the distribution of public and private facilities and services more efficiently.

PF-8 Coordinate and consolidate special districts providing facilities and services, where feasible, to distribute public and private services more efficiently.

PF-9 Respect the capability of land and natural systems when determining how to provide such facilities and services as storm water drainage and flood prevention, water, sewage and garbage disposal.

PF-10 Maintain or restore, wherever feasible, natural drainage systems in order to minimize the need for public expenditures and to recognize the amenity as well as the utilitarian functions as part of the natural drainage system.

PF-11 Allow location of public facility distribution sites within residential areas, provided they are suitably landscaped and buffered, designed, and improved to prevent hazards to life and adverse effects on the surrounding neighborhood.

PF-12 Encourage new techniques or innovative systems for sewage and sludge disposal, while also considering health and environmental concerns.

PF-13 Design and locate solid waste disposal systems and sites with proper consideration for present and future health and environmental impacts.

PF-14 Encourage reduction of solid waste, recycling, and pretreatment of industrial wastes. Educate the public on how to reduce their garbage output and how to participate in waste reduction and recycling programs. Encourage expansion of current recycling programs, especially plastics.

PF-15 Water reuse and reclamation should be encouraged, especially for large commercial and industrial developments, and for high water users such as parks, schools, and golf courses.

PF-16 Water conservation should be aggressively pursued as a means of ensuring efficient water use and protection of water resources, and as a water supply source that can make a substantial contribution toward meeting future regional water needs.

PF-17 Use incentives to encourage undergrounding of distribution lines.

PF-18 Encourage development that minimizes water and other liquids from being discharged into any natural water courses, storm drainage system, or sanitary sewer in accordance with provisions of county, state, and federal water quality programs, guidelines, and regulations.

PF-19 Encourage the design of future developments to utilize natural drainage patterns and incorporate means to entrap storm water and water pollutants before they are carried down slope or before they enter watercourses.

PF-20 Limit the quantity and velocity of runoff during and after site development to levels that are not substantially greater than pre-development conditions. Means for implementing this policy should be approved prior to the initiation of land surface modifications.

PF-21 Where feasible, regional detention should be used as opposed to site or project specific detention ponds.

PF-22 As appropriate, storm detention facilities should be combined with park projects to meet multiple goals.

PF-23 Encourage the design of residential, commercial, and industrial developments that reduce the amount of impervious surfaces, grading, and the removal of vegetation to minimize problems associated with increased volume and velocity of storm water runoff.

PF-24 Limit the removal of vegetation and require reasonable replacement of vegetation in order to maximize rainfall interception and minimize erosion and siltation within the drainage system.

PF-25 Recognize the inter-jurisdictional characteristics of storm drainage management problems and work with Snohomish County Diking District No. 3, Snohomish County, other jurisdictions, and area wide residents to improve storm drainage and to mitigate the impacts of increased storm water runoff caused by new construction.

PF-26 Developers shall provide storm water drainage plans and facilities so that storm water runoff during and after construction prevents destruction of private property, disruption of natural drainage, and degradation of water resources and quality.

PF-27 The condition of infrastructure should be assessed at appropriate intervals, and be rehabilitated, repaired, or maintained as necessary.

PF-28 Public easements and rights-of-way should be considered multiple-purpose utility/public facility corridors. New systems, including water and sewer transmission and distribution lines, should be located in existing public rights-of-way and easements where possible.

L. CRITERIA AND STANDARDS: WATER, SEWER, STORM DRAINAGE, SOLID WASTE

Criteria and Standards are established by the applicable Marysville Municipal Code, Snohomish County Code, Puget Sound Water Quality Authority, North Snohomish County Coordinated Water System Plan; Washington State Department of Health, Washington State Department of Natural Resources, Washington Department of Fish & Wildlife, and Washington State Department of Ecology, US Environmental Protection Agency, and U.S. Army Corp of Engineers.

M. SITING ESSENTIAL PUBLIC FACILITIES

An essential public facility can be any facility owned or operated by a unit of local or State government, by a public utility or transportation company, or by any other entity providing a public service as its primary mission.

Under the provisions of the Growth Management Act, a process or criteria for siting essential public facilities that are typically difficult to site such as State education facilities, regional transportation facilities (e.g. airports), solid waste-handling facilities, regional transit authority facilities, state or local correctional facilities and in-patient facilities including substance abuse, mental health and group homes must be included in the comprehensive plan. Other facilities may qualify by completing the designation procedure described below.

I. Eligibility for Common Site Review

Essential public facilities which are not already in a local comprehensive plan are eligible for review under the common siting process described below. Either the project sponsor or a local jurisdiction wishing to be the site of the project (i.e. host community) may submit the project for review.

A facility may be appropriate for review by this process under the following conditions:

1. The Snohomish County Tomorrow Steering Committee or the governing board of the host community determines that the proposed facility meets the definition of an essential public facility; or, the facility appears on the State, County, or the host community's list of essential public facilities.
2. Either the sponsoring agency or the host community determines that the facility will be difficult to site.

II. Common Site Review

In Snohomish County, sponsors of essential public facilities that are eligible for review under the Common Site Review Process may choose to follow the process described below. Alternatively, sponsors of such facilities that have identified a preferred site may choose to seek siting approval directly from the host community.

The Common Site Review process is:

1. *Determination of Eligibility*
   Either the host community or the Snohomish County Tomorrow Steering Committee must determine if the project is eligible for review. This determination of eligibility ascertains if the proposed facility constitutes an essential public facility as defined above. This initial step also considers if the facility in question presents siting difficulties. If the facility does not present siting difficulties, it should be follow the normal siting process, as recommended in WAC 365-195-340 (2)(a)(iii).

2. *Site Search Consultation*
   Project sponsors have the option of requesting that either the Planning Advisory Committee (PAC) and/or the Infrastructure Coordinating Committee (ICC) offer a forum for project sponsors prior to the initiation of the formal siting review process. The sponsor of a project can initiate this process by contacting Snohomish County Tomorrow and requesting aid in the siting of its proposed facility.

In this forum sponsors will have the opportunity to present proposed essential public facilities projects. The committee can then provide the sponsors with information on potential sites within Snohomish County and about potential concerns related to siting. Sponsors may also propose possible incentives for host communities. The PAC/ICC may ask local jurisdictions to provide information to sponsors regarding potential sites within their communities.

3. L*ocal Land Use Review*
   Following the Determination of Eligibility, and the optional site consultation by the PAC and/or the ICC if requested by the sponsor, the sponsor can then apply for site approval with the local land use or permit authority. The common siting process, local codes and ordinances are the basis for the local jurisdiction's review. This includes public hearings that are required for any land use action which may be needed by the proposal, such as comprehensive plan amendment, rezoning, conditional use permit, or similar approval.
   In making its land use decision on the project proposal, the local authority shall evaluate the proposal against the common siting criteria described below, as well as against any local criteria generally applicable to the type of action. Where no local land use action is required the sponsor may proceed directly to the permit application stage.

4. *Appeal Process*
   In addition to any existing appeal processes already provided by local ordinance, the local land use authority's decision is subject to appeal under one of the alternatives described below.
   Within 30 days following a local land use authority's formal action that is required to approve the proposal, an appeal may be made by the sponsor. Appeals may be made to the Puget Sound Regional Growth Hearing Board, where questions of interpretation of the GMA are involved, or to a three-member appeal board appointed by the Snohomish County Tomorrow Executive Board. The appeal board does not have the authority to overturn a local decision. However, where the board finds that the local decision does not accurately reflect the evidence provided by the sponsor, or that adequate consideration was not give to the evaluation criteria, it may remand a decision back to the local agency for reconsideration.
   A recommended alternative for host communities and sponsors would be to use arbitration as the final recourse for resolution of differences. In cases where this option is agreed to in advance, a pre-selected arbitrator would serve as the appeal agent for these parties.

5. P*ermit Application*
   After receiving the required land use approvals by the local land use authority, the sponsor may then apply for the required permits to construct the proposed facility. The permitting authority shall not issue a final building permit during the time when appeals may be filed, nor while an active appeal is in process. When a permit is denied, the permitting authority will submit in writing the reasons for permit denial to the sponsor.

III. Site Evaluation Criteria

The following criteria will be used by all county and city review authorities to evaluate the siting proposals made by sponsoring agencies seeking to site an essential public facility (EPF) in Snohomish County. The sponsor shall provide the information needed for the reviewing body to evaluate a site(s), and make a recommendation or decision on

a specific proposal. These criteria cover both an evaluation of regional need and local site suitability for the proposed and designated essential public facility. Findings concerning the proposal's conformance with each criterion shall be included in the documentation of the local authority's decision.

1. *Documentation of Need*
   Project sponsors must demonstrate the need for their proposed EPFs. Included in the analysis of need should be the projected service population, an inventory of existing and planned comparable facilities, and projected demand for this type of essential public facility.

2. *Consistency with Sponsor's Plans*
   The proposed project should be consistent with the sponsor's own long-range plans for facilities and operations.

3. *Consistency with Other Plans*
   The proposal must demonstrate the relationship of the project to local, regional, and state plans. The proposal should be consistent with the comprehensive plan and other adopted plans of the prospective host community. In evaluating this consistency, consideration shall be give to urban growth area designations and critical area designations, population and employment holding capacities and targets, and the land use, capital facilities, and utilities elements of these adopted plans.

4. *Relationship of Service Area to Population*
   The facility's service area population should include a significant share of the host community's population, and the proposed site should be able to reasonably serve its over-all service area population. (Linear transmission facilities are exempt from this criterion.)

5. *Minimum Site Requirements*
   Sponsors shall submit documentation showing the minimum siting requirements for the proposed facility. Site requirements may be determined by the following factors: minimum size of the facility, access, support facilities, topography, geology, and mitigation needs. The sponsor shall also identify future expansion needs of the facility.

6. *Alternative Site Selection*
   In general, the project sponsor should search for and investigate alternative sites before submitting a proposal for siting review. Additionally, the proposal should indicate whether any alternative sites that meet the minimum site requirements of the facility have been identified. The sponsor's site selection methodology will also be reviewed. Where a proposal involves expansion of an existing facility, the documentation should indicate why relocation of the facility to another site would not be feasible.

7. *Consistency with County-wide Policies*
   The proposal must be consistent with the adopted County-wide Planning Policies for Snohomish County.

8. *Distribution of Essential Public Facilities*
   In considering a proposal, the local review agency will examine the overall distribution of essential public facilities within Snohomish County to avoid placing an undue burden on any one community.

9. *Public Participation*
   Sponsors should encourage local public participation, particularly by any affected parties outside of the host community's corporate limits, in the development of the proposal, including mitigation measures. Sponsors should conduct local outreach efforts to inform prospective neighbors about the project and to engage local residents in site planning and mitigation design prior to the initiation of formal hearings. The sponsor's efforts in this regard should be evaluated.

10. *Consistency with Existing Land Use Regulations*
    The proposed facility must conform to existing land use and zoning regulations. Compliance with other applicable local regulations shall also be required.

11. *Compatibility with Surrounding Land Uses*
    The sponsor's documentation should demonstrate that the site, as developed for the proposed project, will be compatible with surrounding land uses.

12. *Proposed Impact Mitigation*
    The proposal must include adequate and appropriate mitigation measures for the impacted area(s) and community(ies). Mitigation measures may include, but are not limited to, natural features that will be preserved or created to serve as buffers, other site design elements used in the development plan, and/or operational or other programmatic measures contained in the proposal. The proposed measures should be adequate to substantially reduce or compensate for anticipated adverse impacts on the local environment.

IV. Amendments

This siting process may be amended, upon recommendation by the Snohomish County Tomorrow Steering Committee, through established procedures for amending the comprehensive plan in accordance with local code and the State Growth Management Act.