LAND USE BACKGROUND REPORT

CHAPTER 2

City of SeaTac
everywhere's possible

SeaTac 2035

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HISTORY OF THE SEATAC AREA BEFORE INCORPORATION

The area that is currently the City of SeaTac and its vicinity was settled in the mid to late 1800s primarily along Military Road. This road was constructed in the 1850s for the U.S. military by mandate of the territorial legislature, and followed a tribal trade route from the Duwamish River in south Seattle to Fort Steilacoom, south of Tacoma. Kelly Road (also called High Line Road, and later renamed Des Moines Memorial Drive) branched off of Military and continued west of the Duwamish to the Black River Crossing. It was constructed in 1873 as a route for settlers to take their produce to Seattle. In 1916 it was extended, paved with bricks, and became the first road to connect Seattle with Tacoma (Des Moines Highway).

Settlers primarily farmed and logged in the area between 1870 and 1915, and lived in small communities with limited road access to one another. These small communities included Riverton, Sunnydale, Lake Burien, Five Corners, Normandy Park, Manhattan, and Des Moines. Large homesteads included the Kelly tract which became Sunnydale neighborhood, and Reeploeg's Angle Lake Park directly across from the Angle Lake School, which was located at what is today the intersection of S.192nd Street and 28th Avenue S.

Changes in land uses and economic activities have occurred, primarily due to increased access and ease of transportation in SeaTac and its vicinity. In 1928, Highway 99 was completed, dramatically changing the possible land uses and patterns of settlement in the area. The regional connection provided by this roadway facilitated growth that would ultimately transform the area into a suburban community.

In the 1940s, the Highline Area population tripled, accompanied by a boom in housing in the area. This dramatic growth is partially attributable to the growth in defense industry activity in the area, primarily the supply of WWII aircraft by the Boeing Airplane Company. Another related, large scale change in the area was the siting and building of Seattle-Tacoma International Airport which began full scale operation in 1949.

In the 1950s, regional and even national factors caused the Highline area population to double. Post-WWII housing, perhaps for veterans, is said to have been the original use of housing on the small lots in the western portion of the neighborhood currently known as McMicken Heights.

The completion of Interstate Highway 5 and expansion of the Seattle-Tacoma International Airport in the 1960s both contributed to accelerated economic activity and growth in the area.

In just over three decades, or a little more than one generation, access to what is currently the City of SeaTac and its surrounding area had gone from having only two major passable roadways and rough paths between isolated settlements, to having an International Airport and being at the intersection of national and regional highways serving a major defense industry and the surrounding suburban area. In that same period, economic activities in SeaTac had gone from largely logging and farming to overwhelmingly transportation-related industry and business.

Throughout the late 1960s and early 1970s, the Airport expanded and modernized significantly. Its impacts on area residents increased, exemplifying the issues associated with increased intensity and variety of land uses. The Port's noise remedy program, including areas of residential acquisition, was initiated in 1973.

The 1970s saw population decline slightly, due in part to major layoffs in the aircraft industry, and declining family size in general. Commercial development increased in the SeaTac area during the 1980s.

In November 1989, SeaTac voters elected to incorporate as a city. The City's incorporation became effective in February of 1990.

PHYSICAL FEATURES

The City of SeaTac is located in South King County between the Duwamish/Green River and Puget Sound, separated from the Sound by Burien, Normandy Park, and Des Moines to the West. Bordering cities to the East include Kent and Tukwila, and to the north the Boulevard Park section of Burien.

Geographic Features

Topography

Elevation in the City ranges between 80 and 500 feet above sea level. Significant topographic features are the hills at McMicken Heights and Riverton Heights, forming a steep slope down to the Green River Valley along the eastern City boundary. A ravine with moderately sloping banks carries Des Moines Creek to Puget Sound in the south of the City, and at the western boundary a steep slope extends down to the west from the edge of the Airport runways.

The section of the City to the north of SR 518, including Riverton Heights, slopes gently ranging between 295 and 460 feet above sea level. Near the eastern City boundary at Military Road, the terrain slopes upward toward the west, and a ridge runs parallel to Military Rd.

The eastern portion of the City, including McMicken Heights and Bow Lake neighborhoods, peaks at 510 feet above sea level and is generally gentle in slope. Along the eastern City boundary however, it drops from 330 to 165 feet above sea level rather rapidly.

The Angle Lake neighborhood and the southern portion of the City ranges between 230 feet above sea level at Des Moines Creek and 460 feet above sea level near S. 216th Street. Small hills of 395 and 425 feet above sea level are found west of International Boulevard and south of the Airport.

Sea-Tac International Airport makes up the remainder of City land. This area is primarily flat at 410 feet above sea level, with a slope at the western perimeter from 330 down to 230 feet above sea level at the center of the Miller Creek ravine.

Soils

The soil in the City is predominantly Alderwood gravelly sandy loam (Ag). There is an area of shallow Rifle Peat (no current equivalent) surrounding Bow Lake, and patches of the following additional soil types also occur within the City: Arents-Alderwood material, Indianola loam fine sandy, Alderwood and Kitsap soils, Everett gravelly sandy loam, Norma sandy loam, Tukwila muck and Bellingham silt loam.

High Erosion or Landslide Potential

Areas of erosion hazard and landslide hazard in the City lie primarily along the southeastern border (See Maps 9.3 and 9.4, Environment Element). Erosion hazard occurs on the slope east of Interstate-5 between S. 176th St. and S. 188th St. and from S. 204th St. to the southern boundary of the City. Two additional small areas of erosion hazard are located in the southwestern corner of the City, near S. 208th Street and Des Moines Memorial Drive. Areas of the city affected by landslide hazard include two narrow strips extending into the City from the eastern border between S. 172nd Pl. and S. 176th St. Under I-5 east of Angle Lake, and east of Military Road between S. 200th St. and S. 221st St. are two additional landslide hazard areas of this level.

Seismic "Hazard" Areas

The entire Puget Sound Region is considered seismically active, and is characterized by a history of major earthquake frequency. Seismic hazards are those areas within this region that are subject to the most severe level of earthquake response due to slope of the land and soil density.

Seismic hazard areas surround Bow Lake, Tub Lake and exist extensively around Lora Lake and Lake Reba (stretching from the City's boundary to 24th Avenue S. in the east and beyond). A belt of seismic hazard extends along the eastern perimeter of the City south of S. 176th St. Several smaller areas of seismic hazard are scattered throughout the City, with primary patches on the western border north of S. 192nd and of S. 176th Streets. Another linear seismic hazard area lies near S. 161st St. at the City boundary, in the north. (See Map 9.5, Environment Element).

Water Resources

Drainage Basins

The City of SeaTac is comprised of three primary drainage basins: Des Moines Creek Basin, Miller/Walker Creek Basin, Green/Duwamish River Basin. While the Des Moines Creek and Miller/Walker Creek drainage basins discharge directly to Puget Sound, the Green/Duwamish basin drains east to the Green River, discharging to Elliott Bay. Five lakes and two major creeks (Des Moines and Miller) are located within the City limits (see Map 9.1, Environment Element). These drainage basins and water bodies are summarized below:

- Des Moines Creek Drainage Basin:
    - Des Moines Creek
    - Bow Lake
- Miller/Walker Creek Drainage Basin:
    - Lora Lake
    - Lake Reba
    - Miller Creek

    - Walker Creek
    - Tub Lake
- Green/Duwamish River Drainage Basin:
    - Angle Lake

Des Moines Creek Drainage Basin

The Des Moines Creek drainage basin occupies a total of 3,936 acres within the City of SeaTac and the City of Des Moines, 75 percent of which (2,942 acres) lies within the City of SeaTac. The basin drains highly urbanized areas of SeaTac and Des Moines (including Sea-Tac Airport); approximately 40 percent of the total basin area is composed of impervious surfaces (EarthTech 1997). Most of the basin was developed before the City implemented stormwater management and detention requirements. Two main tributaries to Des Moines Creek drain three subbasins within the Des Moines Creek drainage basin: Plateau, Ravine, and Lower subbasins.

- Des Moines Creek

  Des Moines Creek flows for 3.8 miles from Bow Lake, located east of Sea-Tac Airport, to Des Moines Beach Park located on Puget Sound. The creek is a Class II salmonid bearing stream, and drains a highly urbanized basin located in the Cities of SeaTac and Des Moines. Two main branches of the creek, known as the East Fork and the West Fork run southwest and southeast and converge at a golf course south of Sea-Tac Airport before heading southwest to Puget Sound. Drainage from Bow Lake is piped into the East Fork through a 60inch storm drain (EarthTech 1997). Airport-related drainage is conveyed separately to the East Fork after detention and treatment. The East Fork and west fork then converge just north of South 200th Streetthen flows through Tyee Pond prior to converging with the West Fork. The West Fork of the creek originates near the western edge of the Tyee Golf Course at the Northwest Ponds complex. Tyee Pond is a regional flood control facility that was built by King County in 1988 and has been owned and operated by the Port of Seattle since 1997.

- Bow Lake

  Located in the north portion of the Des Moines Creek Basin, Bow Lake is a 15.5acre lake that feeds East Fork of Des Moines Creek. The 36inch concrete outlet of Bow Lake discharges to a 60inch storm drain at International Boulevard (EarthTech 1997). Bow Lake drains approximately 525 acres of primarily residential area in the City of SeaTac. The shoreline of the lake is surrounded primarily by private commercial development and parking, and the lake itself in inaccessible to the public.

Miller/Walker Creek Drainage Basin

Miller/Walker Creek drainage basin occupies a total of 5,622 acres, 20 percent of which (1,265 acres) lies within the City of SeaTac. Approximately 22 percent of the total drainage basin area is impervious surface (King County 2006). Bound on the north and east by the Green/Duwamish River drainage basin, the Miller/Walker Creek drainage basin includes area within the cities of Burien, Normandy Park, and SeaTac. Although Walker Creek originates in the City of SeaTac, most of Walker Creek lies outside the City limits. A large portion of Miller Creek flows inside the City limits, and Lake Reba, Lora Lake and Tub Lake lie completely within the City limits.

- Miller Creek

  Miller Creek runs for 6 miles through Burien and SeaTac, entering the City at S 138th Street and Des Moines Memorial Drive as a Class III stream, and flowing south through Tub Lake. It converges with the western tributary near the intersection of Des Moines Memorial Drive and SR 518. From here, the main stem of the creek gathers flow from a number of tributaries and winds southward through Lake Reba and Lora Lake, becoming a Class II, salmonid bearing stream. Miller Creek then turns to the west and flows through the cities of Burien and Normandy Park before it discharges into Puget Sound.

- Walker Creek

  Walker Creek originates in a wetland just east of Des Moines Memorial Drive near S 171st Street and S 176th Street. While the creek originates in the City, it flows west into Burien almost immediately, eventually merging with Miller Creek and discharging to Puget Sound.

- Lora Lake

  Lora Lake is a small 2.84acre lake located just north of Sea-Tac Airport and west of Lake Reba. Lora Lake drains an area of 317 acres within the City dominated by forest and grass and discharges to Miller Creek.

- Lake Reba

  Lake Reba is a small 1.18acre lake located just north of Sea-Tac Airport. Miller Creek Regional Detention Facility is located adjacent to Lake Reba. Lake Reba drains 179 acres within the City.

- Tub Lake

  Tub Lake is a small 1.82acre lake surrounded by North SeaTac Park property, and is not currently accessible to the public. Tub Lake drains 188 acres within the City.

Green/Duwamish River Drainage Basin

The Lower Green River drainage basin occupies a total of 9,720 acres, approximately 22 percent of which (2,139 acres) lies within the City. The majority of the basin discharges east under Interstate 5; however, approximately 536 acres in the City discharges north in the direction of SR 518 to Gilliam Creek in the City of Tukwila.

- Angle Lake

  Angle Lake, known for its distinct Lshape and exceptional water quality, drains 336 acres within the City. Located in the center of the City, Angle Lake has a surface area of 102 acres and maximum depth of 52 feet. Angle Lake discharges under Interstate 5 through an 18inch stormwater pipe. Angle Lake is the only water body in the City that falls under the Shoreline Management regulations.
  The area within the City that discharges north to theDuwamish River Basin is 364 acres. A portion of the basin discharges to the stream behind the former Glacier High School and is routed to a 36inch stormwater drainage pipe in 20th Avenue S, while the other portion of the basin discharges through a series

of natural drainages to a depression adjacent to S 128th Street before crossing under the street to the north (EarthTech 1997). No other water bodies lie within the Duwamish River drainage basin within the City limits.

Other Streams

One unclassified buried stream leads into Bow Lake from the North, emerging as a Class III intermittent stream flowing out between S. 188th and S. 192nd Streets and on to feed Des Moines Creek as the East Fork. Two streams, one Class II and one Class III, flow out of the City toward the Green River near the eastern border between S. 172nd and S. 178th Streets. Small portions of a Class II salmonid bearing stream fall just inside the City boundaries in the East at S. 204th St. Two Class III streams fall just inside the City boundaries in the West at S. 206th St.

Lakes

Angle Lake, Bow Lake, Lake Reba, Lora Lake, and Tub Lake lie within the City.

Wetlands

Wetlands are classified on a descending scale of sensitivity. Class I wetlands are classified as unique/outstanding, and require a 100-foot buffer. Classes II and III are designated significant (requiring a 50-foot buffer) and of lesser concern (requiring a 25-foot buffer) respectively.

A Class I wetland (called Miller Creek 3) surrounds Tub Lake in the North of the City. It is on the grounds of North SeaTac Park, and its preservation in this context is planned.

The Wetlands surrounding Lora Lake (Miller Creek 4), and Lake Reba (Miller Creek 10) near Miller Creek in the North are Class I, as is the one at the head of Des Moines Creek (Des Moines Creek 4), and the wetland surrounding Bow Lake (Des Moines 1).

There is a 6-acre Class I wetland between 8th Avenue South and Des Moines Memorial Drive, north of South 192nd Street.

In the areas between South 204th and South 216th Streets and west of Orillia Road/42nd Avenue South there are three Class I wetlands, two Class II wetlands, and five small Class III wetlands.

Three additional Class II Wetlands (Des Moines 5 and 7, Lower Green River 5) lie between S. 204th and S. 212th St. east of International Boulevard.

Extending to the east of Miller Creek at its southernmost point in the City there are several small Class II and one Class III wetlands. There are several small Class III wetlands associated with the East Fork of Des Moines Creek

Aquifers Used for Public Drinking Water

The Highline Water District operates two wells within the City, located near S. 209th St. and 30th Avenue S. (Angle Lake Well) and in the vicinity of 3700 164th Street. (McMicken Heights well). Another well is located near S. 208th St. and 12th Avenue S. just outside the Cityin Des Moines. Highline Water District operates a third well located on the Tyee golf course on the north side of S. 200th Street. This well is only used for supplementing the flow of Des Moines Creek in times of low creek flow.

Seattle Water District operates three wells within the City. Two are located at S. 146th Street and 24th Avenue S., and one at S. 128th Street. and 20th Avenue S.

Land use issues related to this type of aquifer are addressed in the Environment Element.

The primary source of water for all four of the water districts serving the City districts is the Seattle Water Department.

EXISTING LAND USE PATTERNS

Land uses in SeaTac reflect the general range of land uses that are found in an urban environment, such as residential, commercial, and industrial development. Several prominent features of the City include SeaTac International Airport, Angle and Bow Lakes, and the several highways and major arterials that intersect SeaTac.

The City of SeaTac currently contains 8,072 acres, or 12.6 square miles, of land within its borders (this includes all streets, roads, highways, and other rights-of-way not shown in Figures BR2.1 and BR2.2). As shown in Figure BR2.1below, this land acreage consists primarily of Airport-related, single family residential, and commercial/retail land uses. The percentages cited below are based on a SeaTac acreage subtotal (5,492 acres) that excludes rights-of-way from the total amount. If included into the percentage breakdowns, rights-of-way would be among the single largest land use category with 2,580 acres (32 percent of the total land area). Map 1.4 illustrates the existing land use distribution in the City.

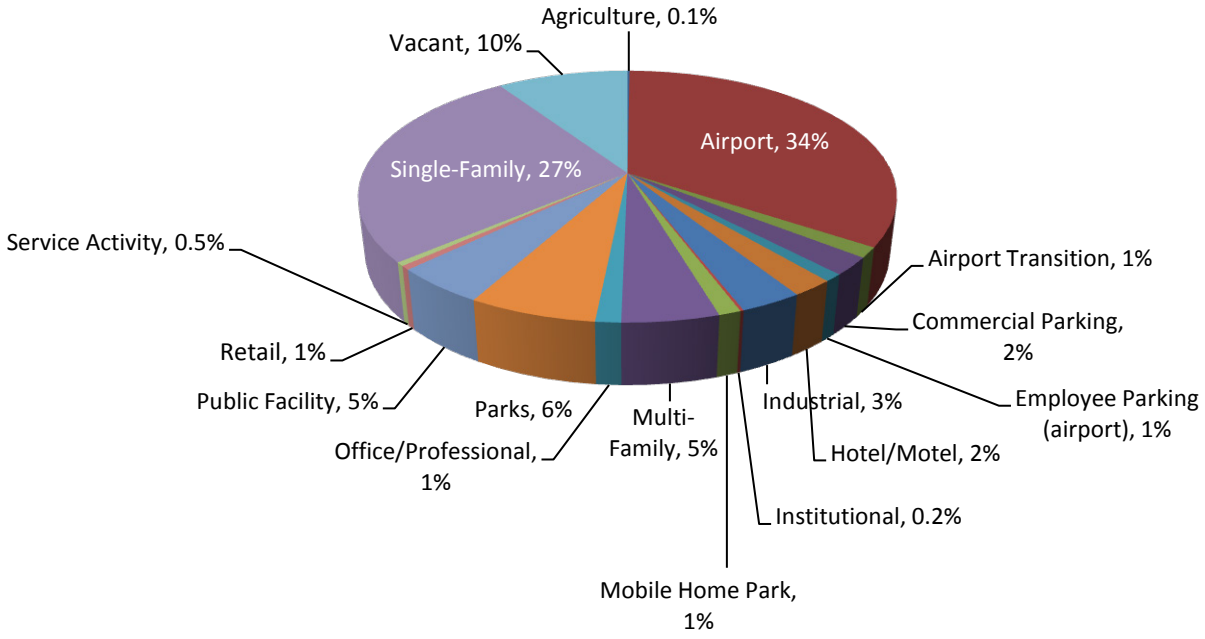

Figure BR2.1 Land Use Summary Chart

The existing land use categories are described below.

Table BR2.1 Land Use Summary Table

LAND USE	SQUARE FEET	ACRES	PERCENT OF TOTAL
Agriculture	351,530	8	0.1%
Airport	80,873,455	1,857	34%
Airport Transition	3,091,908	71	1%
Commercial Parking/Auto Rental/Sales	5,363,200	123	2%
Employee Parking (airport)	2,261,600	52	1%
Hotel/Motel	5,067,280	116	2%
Industrial	7,488,869	172	3%
Institutional	414,200	10	0.2%
Mobile Home Park	2,671,132	61	1%
Multi-Family	11,875,533	273	5%
Office/Professional	3,043,837	70	1%
Open Space/Park/Recreation	15,381,745	353	6%
Public/Quasi-Public Facility	11,895,952	273	5%
Retail	1,230,189	28	1%
Service Activity	1,080,461	25	0.5%
Single-Family	63,611,881	1,460	27%
Vacant	23,530,243	540	10%
Total	239,233,015	5,492	100%

Residential Land Uses

A majority (53 percent) of SeaTac's residential units are **single family** homes (2012 Washington Office of Financial Management). In fact, 27 percent (1,460 acres) of the City's acreage is single family residential. This situation represents the area's historic development trend, which initially was focused primarily on residential and agricultural land uses. It wasn't until the construction of SR 99 and, later, Seattle-Tacoma International Airport that significant commercial development started to appear within the community.

Much of the newer residential development in SeaTac has been **multi-family** in nature, although single family residential development continues through short platting and individual home construction. Recent multi-family developments include the 55-unit Sunset Station, 3351 S. 176th Street, completed in 2007, and the 90-unit Viewpoint Apartments, 21428 International Boulevard, completed in 2011. While there are pockets of multiple family housing in numerous sections of the City, two areas of major concentration are located in the vicinity of:

- S. 176th and S. 180th Streets between 32nd and 38th Avenues South; and
- S. 204th and S. 211th Streets between International Boulevard and I5.

Multi-family development consumes less land per housing unit than single family housing. For example, multi-family residential units make up 41 percent of the total residential units in SeaTac, but only consume five percent of the City's area and 15 percent of the residentially used land.

SeaTac has a relatively large number of **mobile homes** (544 units), which make up five percent of the City's housing units. Most of the mobile homes are located in mobile home parks, which include the following (data are from the City's 2012 OFM Housing Unit and Population Estimate Report):

- Bow Lake Mobile Home Park 408 Units

18030 32nd Avenue South

- Firs Mobile Home Park 73 Units

20440 International Boulevard

- Angle Lake Mobile Home Park 63 Units

2916 S. 200th Street

The last of the mobile home parks west of International Boulevard was closed in January of 2010. The three mobile home parks listed above are located east of International Boulevard and are outside of the 65+ Ldn noise impact contour areas, and therefore are not subject to FAA noise insulation requirements.

Commercial Land Uses

Due to the presence of Seattle-Tacoma International Airport, the City has a substantial number of **hotels, motels and restaurants**. There are 33 hotels with more than 5,700 hotel rooms. The type of establishment ranges from high end, national hotel chains like Hilton and Marriott to lower cost chains like Days Inn and Motel 6. Most of the City's hotels and motels are located along International Boulevard, with a concentration near the Airport, between S. 176th and S. 192nd Streets. Many of the hotels have one or more restaurants located on their premises. There are also other restaurants in SeaTac, serving both ends of the market, ranging from sit-down restaurants to fast-food establishments.

The City's major **office** facility is the SeaTac Office Center, with two 13-story buildings and one four-story office/structured parking building. A four-building office complex is located just south of Angle Lake Park, and the SeaTac City Hall and other tenants presently occupy a three-story office building at 4800 S. 188th Street. Alaska Airlines has a large amount of office space within SeaTac, including its corporate headquarters building, a telephone reservations facility, a training facility, and an office building for its subsidiary business, Horizon Airlines.

Most of SeaTac's **retail** establishments are relatively small in scale, especially when compared to the regional retail businesses located in Tukwila's Southcenter Mall area. As a result, the retailers within SeaTac are oriented primarily to residents of the City and adjacent neighborhoods.

The demand for **parking and rental cars** generated by Sea-Tac International Airport has resulted in a proliferation of such establishments in SeaTac. In many instances, a parcel of land will have both types of activities taking place on it.

The Airport itself has a major parking structure, with direct access to the terminal building and a total capacity of 9,000 vehicles. It also has several surface parking lots that are primarily used for Airport-related employee parking. The Airport's high parking fees have created a demand for less expensive, off-site parking spaces. These private "park 'n fly" parking lots are located mainly along International Boulevard.

Most visitors interested in renting a car can pick up their leased vehicle at the consolidated Rental Car Facility located at S. 160th Street and International Boulevard. Some of the car rental agencies use off-site parking lots for vehicle storage and/or for the sale of older rental cars.

In most cases, the park 'n fly parking and rental car land uses do not require the construction of major buildings. This situation allows the property owners to derive income from their land with a minimal investment, while reserving the ability to more intensively develop their property in the future.

Airport/Airport-Related

One of the most significant land uses in SeaTac is Seattle-Tacoma International Airport. An estimated 33.2 million passengers were served by the Airport in 2012. In 2003 there were approximately 33,000 jobs on the airport site, with 16,000 of those directly employed by the airport (Final Seattle-Tacoma International Airport Comprehensive Development Plan Environmental Review/NEPA Environmental Assessment, August 2007, pg. 5-44). Table BR2.2 summarizes the trends occurring between 2002 and 2012, in total passengers served (domestic and international), total operations (air carrier, air taxi, general aviation, and military), and total air cargo (domestic and international air freight, as well as air mail).

Table BR2.2 Seattle-Tacoma International Airport 10-Year Air Travel Trends				
	2002	2007	2012	2005 – 2012 % INCREASE
Passengers (Millions)	26.7	31.2	33.2	24.3 %
Operations (Thousands)	364.7	347.0	309.5	-15.1 %
Air Cargo (Thousand Metric Tons)	351.4	319.0	283.5	-19.3 %

Source: 2012 Seattle-Tacoma International Airport Activity Report

The Airport's Comprehensive Development Plan (CDP) was adopted in 2007. The CDP plans for airport growth to accommodate up to 42 million annual passengers (MAP) and 517,000 aircraft operations by 2020. The Airport's current planning effort, the Sustainable Airport Master Plan anticipates 66 MAP by 2035.

Industrial Land Uses

The City of SeaTac does not have a large amount of **industrial and manufacturing** activity at the present time. Instead, most of the City's industrially zoned land, other than the Airport, is used for warehousing and distribution. One example of SeaTac's warehousing and distribution is the Boeing Spares Distribution Facility, located at 2301 S. 144th Street. This large facility was sited in order to take advantage of the proximity to the Airport. Its highly automated systems capitalize on its location, focusing on rapid and efficient turnaround of replacement part orders.

Park/Recreation Land and Open Space

The City of SeaTac contains several **parks**. They range in scale from small neighborhood parks, like McMicken Heights Park, to a regional park, like North SeaTac Park. More information on parks may be found in the Parks, Recreation and Open Space Background Report, and the Capital Facilities Background Report.

Public Facility/Institution

There are several buildings that are used for City of SeaTac purposes, including three fire stations, two community centers, City Hall, and a maintenance facility. The City of SeaTac contains several elementary schools, one middle school, and one high school. Several additional school structures are either being used for non-educational purposes or are vacant. The City also contains a number of churches, and other public facility/institutional land uses.

LAND USE GROWTH TARGETS

The growth targets used for planning by the City are allocations of regional and subregional growth estimates. The growth targets are not growth quotas (commitments to produce population and jobs) but are estimates of potential future growth for which the City must plan to accommodate. This section describes the sources of SeaTac's future growth targets, and analyzes the City's ability to accommodate that growth.

The horizon year for SeaTac's Comprehensive Plan is 2035, representing 20 years from the Plan's 2015 amendment. Both the employment and household growth targets are consistent with the regional growth forecast used in the Puget Sound Regional Council's (PSRC) Vision 2040 and Transportation 2040 plans; and are consistent with the King County Growth Management Planning Council's (GMPC) adopted growth targets for 2031. (SeaTac's 2031 Targets were extended to 2035 by the straight line method-used by many King County Cities, annualizing the 2006 to 2031 growth target, and adding 4 years of that growth to the 2031 target.)

Employment: Existing and Target

The City of SeaTac employment target was developed from data prepared by the PSRC at the subregional level, and allocated to cities through a collaborative process of City and County staff working as the GMPC's Buildable Lands and Targets subcommittee. SeaTac's employment growth target is 29,348 additional jobs in the City by 2035, more than doubling the 2012 (covered) jobs estimate of 27,010.

Households: Existing and Target

The City of SeaTac household target was developed from the Washington Office of Financial Management's growth projection for King County as a whole, and allocated to cities through a collaborative process of City and County staff working as the GMPC's Buildable Lands and Targets subcommittee. SeaTac's household growth target is 6,153 additional households, which, when added to the 2012 household baseline of 9,680 would bring SeaTac's total households to an estimated 15,833 by 2035.

Table BR2.3 below shows the employment and household growth targets for the year 2035 in the context of the 2012 employment and household estimates.

Table BR2.3 Net New Growth for the Year 2035

	2012*	2035+	GROWTH TARGET+
Employment	27,010	56,358	29,348
Households	9,680	15,833	6,153

** Sources:* *Employment Baseline: PSRC figures derived from analysis of geocoded Washington Employment Security Department (ESD) 2012 data. Washington ESD only reports "covered" employment. Covered employment refers to the employees covered under the State's unemployment insurance program, and excludes self-employed*

workers, proprietors, CEOs, and other non-insured workers. Total employment in SeaTac is estimated to be 28,350.

Households Baseline: Washington Office of Financial Management (OFM) estimate, based on U.S. Census of Population and Housing, 2010 and annual surveys of City building permit data for 2011 and 2012.

+ Sources: *Employment and Household Growth Targets: The King County GMPC used Countywide projections of population (from Washington OFM) and forecasts of employment (from PSRC) and allocated these to cities through a collaborative process. Distribution of growth targets to cities was based partly on an estimate of land capacity that each City developed as part of the King County Buildable Lands Report.*

LAND USE CAPACITY ESTIMATES

In support of the 2014 King County Buildable Lands Report, City staff has researched the number of available acres that are zoned for development but are currently vacant. Additionally, the City's land capacity analysis identified parcels considered to have redevelopment potential.

Opportunities for commercial redevelopment were assumed for those parcels where the existing density was less than 25% of the intensity assumed for the applicable zone (using floor area ratio (FAR) as the measure). That is, where redevelopment on the site would be 4 times more intense than the existing development.

The single family redevelopment potential figure includes those parcels that are underutilized based on the minimum lot size allowed by zoning.

Potential for multi-family redevelopment was estimated by examining the gap between existing densities of development and the maximum densities allowed under current zoning. For each parcel a ratio of existing density to maximum allowed density was calculated. Parcels were considered redevelopable when that ratio fell below 0.5. That is, where redevelopment on the site would be 2 times the density of the existing development.

Publicly owned parcels (Federal, State, County, City, school district, utility district) that were not considered to have any potential to accommodate future household or employment growth were removed from the analysis. Some city-owned parcels that are not used for City operations were assumed to be available for development and were included in the analysis, as were Port-owned parcels designated for Aviation Commercial uses.

Parcels suitable for development or redevelopment were analyzed for sensitive areas using GIS data. Deductions were made for the area of each parcel occupied by steep slopes, wetlands, water bodies, habitat areas, and buffers associated with these sensitive areas. Further deductions were

made for rights-of-way and public purpose lands, as a percentage of the gross acreage. A portion of the resulting net acreage was deducted to account for land unavailable due to market factors and other unknown property owner considerations, yielding the amount of land available for further development.

The process used is consistent with the King County Buildable Lands Report methodology, was developed by staff from King County and cities within King County, and is used by the County and those cities to estimate the land capacity for the 2014 Buildable lands Report.

When SeaTac's development capacity is translated into jobs and household numbers and compared with the 2035 employment and household targets, it is clear that there is more than enough land capacity to accommodate the City's residential (Table BR2.4) and employment (Table BR2.5) growth targets through 2035.

The City's 2014 Buildable Lands analysis showed a residential capacity surplus of 364 units and an employment capacity surplus of 3,387 jobs relative to the City's growth targets.

Tables BR2.4 and BR2.5 below illustrate the household and employment capacity represented by the vacant and redevelopable land in SeaTac, and show the City's capacity to accommodate the household and employment growth targets forecast for the year 2022, which is the SeaTac Comprehensive Plan's time horizon.

Table BR2.4

New Residential Growth Capacity Estimates – Year 2035

LAND USE	WITHIN URBAN CENTER		OUTSIDE URBAN CENTER		TOTAL CAPACITY
	Land Available	Capacity in Housing Units	Land Available	Capacity in Housing Units	
Single Family Residential	0 acres	0	310 acres	815	815 Housing Units
Multi-Family Residential	85 acres	3,103	43 acres	975	4,078 Housing Units
Mixed Use (Residential)*	178 acres	1,507	10 acres	117	1,624 Housing Units
Total Residential Capacity	4,610		1,907		6,517 Housing Units
Housing Unit Growth Target	6,153				
Surplus/Deficit	364				

** These estimates represent total acreage for parcels designated for mixed use. The number of units represents the residential component of future mixed use projects.*

Table BR2.5 New Employment Growth Capacity Estimates – Year 2035					
LAND USE	WITHIN URBAN CENTER		OUTSIDE URBAN CENTER	TOTAL CAPACITY	
	Land Available	Capacity in Jobs	Land Available	Capacity in Jobs	
Commercial	0 acres	0	2 acres	126	126 jobs
Industrial	26 acres	779	134 acres	3,512	4,291 jobs
Mixed Use (Jobs)*	178 acres	26,363	10 acres	1,955	28,318 jobs
Total Employment Capacity	27,142 jobs		5,593 jobs	32,735	
Employment Growth Target	29,348				
Surplus/Deficit	3,387				

* *These estimates represent total acreage for parcels designated for mixed use. The number of employees represents the commercial capacity of future mixed use projects.*

Source for Tables BR2.4 and BR2.5: City of SeaTac Department of Community and Economic Development, 2014 Buildable Lands Report.

Assumed Future Densities

As explained above, City staff identified land that was vacant or likely to redevelop during the 20-year planning time frame. Depending on the zoning of the vacant or redevelopable land, estimates of the number of dwelling units or jobs (the "land capacity") represented by that land were developed. The assumed future densities are based on recent development in this city or in similar areas of other local cities.

For residential uses and the residential components of mixed-use areas, the densities are given in dwelling units per acre (DU/Ac.)

For commercial uses or the commercial components of mixed use areas, and for industrial areas the square footage of buildings is estimated for each vacant or redevelopable parcel using a floor area ratio (FAR). FAR is a measure of how intensely a piece of land is developed. For example, if a building covered an entire site at one story, the FAR would be 1. If a building covered ½ of a site at one story, the FAR would be 0.5. A building that covered half of a site at 4 stories would have an FAR of 2. When an assumed FAR is applied to a site where the size of the site is known, the result represents an estimated size of the future building. In the case of mixed use areas, assumptions are also made regarding the proportions of the site that will be in residential and non-residential uses.

SeaTac used local examples of existing development to determine existing densities and FARs. Where there weren't local examples of some expected future development types, staff referred to existing

examples in other local cities for those types of developments. Recommended examples were compiled by King County staff and others.

Table BR2.6 below shows the assumptions that were used for the City's estimates of land capacity to accommodate the growth targets.

Table BR2.6

Assumed Future Densities

ZONE	ASSUMED DU/AC	ASSUMED FAR	ASSUMED RESIDENTIAL/NON-RESIDENTIAL SPLIT
UL-5000	6.86	N/A	100% Res.
UL-7200	4.77	N/A	100% Res.
UL-9600	4.04	N/A	100% Res.
UL-15000	2.15	N/A	100% Res.
UM-3600	13.29	N/A	100% Res.
UM-2400	15	N/A	100% Res.
UH-1800	26	N/A	100% Res.
UH-900	55	N/A	100% Res.
UH-UCR	70	N/A	100% Res.
Townhouse (in Urban Center)	22	N/A	100% Res.
Townhouse (outside Urban Center)	15	N/A	100% Res.
O/C/MU	30	0.6	66% Res./34% Non-res.
O/CM	45	0.6	66% Res./34% Non-res.
CB	100	3.0	10% Res./90% Non-res.
ABC (North of SR 509 ext.	75	2.5	20% Res./80% Non-res.

Table BR2.6 Assumed Future Densities			
ZONE	ASSUMED DU/AC	ASSUMED FAR	ASSUMED RESIDENTIAL/NON-RESIDENTIAL SPLIT
ABC (South of SR 509 ext.	0	0.4	100% Non-res.
Ind	0	0.35	100% Non-res.
BP	0	0.33	100% Non-res.
AVC (outside Urban Center)	0	0.35	100% Non-res.
AVC (in Urban Center	0	0.45	100% Non-res.

Land Use Growth Forecasts

The preceding sections address the King County GMPC growth targets and the City's ability to accommodate them. The level of residential growth that SeaTac has actually experienced is much less than the growth represented by the growth target, though. If the residential growth target is annualized, it would represent an increase of 307 dwelling units each year for the next 20 years; SeaTac has actually grown by only an average of 62 housing units per year since 1992. Based on this, the City does not expect the growth represented by the growth target to occur.

This section addresses SeaTac's need for locally relevant growth forecasts; City staff has developed forecasts using land capacity estimates developed as part of the 2014 Buildable Lands work, and local knowledge of development trends and conditions. SeaTac's forecast for households and employment is shown in Table BR2.7, below.

Note that the adopted growth targets are the basis for the transportation model and the resulting analysis described in the Transportation Master Plan. Thus, the Land Use and Transportation elements are internally consistent and consistent with regional plans.

Table BR2.7 Forecasts of Households and Employment Growth Through 2035			
LAND USE	IN URBAN CENTER	OUTSIDE URBAN CENTER	TOTAL GROWTH
Housing			
Single Family	0	404	404
Multi-family	1,642	310	1,952
Mixed Use	621	16	637
Housing Growth	2,262	731	2,993
Employment			
Commercial	0	12	12
Industrial	438	1,398	1,836
Mixed Use	9,678	72	9,750
Employment Growth	10,116	1,481	11,597

LAND USE PLAN

The comprehensive planning process provides the opportunity to identify an overall vision for future community development that encompasses all major facets of City life including land use, transportation, housing, and capital facilities, to name just a few.

The assumed forecast year for SeaTac's Comprehensive Plan is 2035, consistent with PRSC's regional Vision 2040, the Regional Transit System Plan and other major project planning (for example, the SR 509 Extension project) in the SeaTac area. Thus, a forecast period of 20 years is provided. This two-decade period allows a wide range of changes to occur in the physical character of the City. Whether the changes incorporated in the plan actually occur in a given year is not as important as establishing a clear direction for the City of SeaTac to achieve its agreed-upon goals and objectives.

The future land use plan for the City of SeaTac is depicted on the Comprehensive Plan Map, Map 2.2 of this Comprehensive Plan. SeaTac's future land use along International Boulevard would be characterized by three clusters, or "nodes," of intensive development, each serving the needs of adjacent mixed use development as well as nearby residential neighborhoods. Sound Transit's LINK light rail system connects the three nodes, each of which is served by a light rail transit station: Tukwila International Boulevard Station (S.154th Street and International Boulevard), SeaTac/Airport Station (S.176th Street and International Boulevard) and Angle Lake Station (S. 200th Street and International Boulevard).

DESCRIPTION OF LAND USE ALTERNATIVES

An Environmental Impact Statement (EIS) was prepared for the Comprehensive Plan in 1994, in accordance with the requirements of the State Environmental Policy Act (SEPA). As part of the EIS process, different growth alternatives for SeaTac were developed, and their impacts analyzed. The three land use alternatives are identified below. In addition, a fourth option that briefly considered, but thenrejected as an alternative, the "DispersedGrowth" Alternative.

- **"Current Plan," or No Action, Alternative**
- **"City Center" Alternative**
- **"Urban Villages" Alternative**

Detailed descriptions and analyses of the three major land use alternatives may be found in the August 26, 1994 Comprehensive Plan's Environmental Impact Statement. The adopted Comprehensive Plan is based on a refinement of the Urban Villages alternative.

The three centers will each have a different emphasis:

- **Tukwila International Boulevard Station**: Located north of SR 518/east of International Boulevard in Tukwila with one-quarter mile TOD area extending into SeaTac. An auto-oriented activity area which would provides easy access from SR 518 and International Boulevard. Parking is provided to accommodate HCT users at the station. SeaTac adopted the South 154th Street Station Area Action Plan in 2006 to plan for the portion of the one-quarter mile TOD area located within SeaTac. The Plan provides that street frontages with transit access should accommodate office, commercial and multi-family land uses. Convenience retail will also be available. The station area within SeaTac is defined as lying between South 150th Street to the north and South 154th Street to the south with 30th Avenue South as the western boundary and portions of Military Road and International Boulevard acting as the eastern border.
- **SeaTac/Airport Station**: A gateway center will be developed with high density, high rise (12 to 16 stories approximately), mixed use office commercial, support retail, entertainment, and multi-family residential land uses within SeaTac's designated City Center. This area will develop around the light rail transit station, which is located on Port property west of the intersection of S. 176th Street and International Boulevard and is connected to the City by a pedestrian bridge to the northeast corner of the intersection where Sound Transit has constructed a public plaza with vertical circulation to the pedestrian bridge. The City is encouraging the development of a significant mixed use project on the site.
- **Angle Lake Station**: The City developed the Angle Lake District Station Area Plan during 2015. The station is expected to be open in 2016.

Land Use Designations

Relationship Between the Comprehensive Plan Map and the Zoning Map

The designations on the Comprehensive Plan Map depict both existing and future land uses within the City of SeaTac. In some cases, such as with "Residential – Low Density," "Residential – Medium Density" and "Residential – High Density," the Comprehensive Plan's land use designations are general categories that encompass more than one zoning classification on the City's Zoning Map. For example, the "Residential – Medium Density" designation includes several Urban Medium zoning classifications, as well as the Mobile Home Park zone. In such cases, it is the Official Zoning Map that will determine the actual "potential zone" classification that emanates from a parcel's Land Use Plan Map designation. The following chart lists the zoning classifications that correspond to the Comprehensive Plan designations.

Table BR2.8
Comprehensive Land Use Designations' Corresponding Zones

COMPREHENSIVE PLAN DESIGNATIONS	ZONING CLASSIFICATIONS
Residential Low Density:	UL-15,000
	UL-9,600
	UL-7,200
	UL-5,000 Floating Overlay
Townhouse:	Townhouse

Table BR2.8 Comprehensive Land Use Designations' Corresponding Zones	
COMPREHENSIVE PLAN DESIGNATIONS	**ZONING CLASSIFICATIONS**
Residential Medium Density:	UM-3,600
	UM-2,400
	MHP
Residential High Density:	UH-1,800
	UH-900
Residential High – Mixed Use:	UH-UCR
Commercial Low Density:	NB (Neighborhood Business)
Office/Commercial/Mixed Use:	O/C/MU (Office/Commercial/Mixed Use)
Commercial Medium Density:	OCM (Office/Commercial Medium)
Commercial High Density:	CB (Community Business) and CB-C (Community Business in the Urban Center)
Aviation Business Center:	Aviation Business Center (ABC)
Business Park:	BP
Industrial:	Industrial (I)
Airport:	AVC (Aviation Commercial)
	AVO (Aviation Operations)
Park:	Park

ESSENTIAL PUBLIC FACILITIES

The Washington Growth Management Act (GMA) requires that local comprehensive plans include a process for identifying and siting "essential public facilities."

An initial list of essential public facilities for SeaTac includes, but is not limited to, airports; State and local correction facilities; State educational facilities; State and regional transportation facilities; landfills; solid waste handling facilities; sewage treatment facilities; major communication facilities and antennas (excluding wireless telecommunications facilities); and in-patient facilities, such as group homes (excluding those facilities covered by the Washington Housing Policy Act), mental health facilities, secure community transition facilities (SCTFs), and substance abuse facilities.

Specific essential public facilities that already exist or are under development in SeaTac include Seattle-Tacoma International Airport, Interstate 5, SR 509, SR 518, the King County solid waste transfer station (off South 188th Street) and the Federal Detention Center.

The City shall examine the proposed facility under the following criteria:

1. **Analysis of Proposed Site and Review of Alternatives.** The applicant shall provide an explanation of the need and suitability for the proposed facility in the proposed location and an analysis of alternative sites considered for the proposed facility, including a description of the process used to identify and evaluate the alternative sites.

2. **Financial and Infrastructure Analysis.** The City shall review the proposal in order to discern if any disproportionate financial burden may fall on its jurisdiction resulting from a facility of a Statewide or regional nature locating within the City. In such a case, an interjurisdictional agreement shall be sought to mitigate or avoid this expense.

3. **Analysis of Physical Characteristics.** Given the difficulty in siting some essential public facilities, design and development standards shall address the following:

- The potential adverse impacts, such as noise, odor, traffic and pollution.
- The availability and physical constraints of land.
- The capability of the site to meet basic infrastructure needs, such as vehicular access, and the availability of necessary utilities and services.
- Compatibility with adjacent and nearby land uses.
- State criteria (risk factors) for siting secure community transition facilities.

The applicant shall be required to mitigate significant adverse impacts as the City may deem appropriate.

With respect to the review process, an ad-hoc review committee may be established by the City Council, as needed, in response to a request to site an essential public facility in SeaTac.

In addition, any entity proposing to site an essential public facility in SeaTac shall be required to follow established procedures, including but not limited to the following:

1. **Public Notice and Participation**: The applicant shall be required to give substantial public notice about the proposed development. The intent of this requirement is to ensure public knowledge of any proposed facilities and allow time for the public to comment on it; and

4. **Conditional Use Permits/Special District Overlay Zones**: A particular "essential public facility" will be subject to the conditional use permit (CUP) process (see Figure A1.9 and the City of SeaTac Zoning Code). In addition, the impacts generated by an essential public facility may necessitate the creation of a special district overlay zone for the affected area, in order to address specific impacts caused by the proposed facility. If a proposed essential public

facility is not specifically listed in Figure A1.9 or otherwise addressed by the City's Zoning Code, then the City Council shall need to identify the appropriate standards for the proposed type of facility. Secure community transition facilities are allowed as conditional uses in all zones; all other in-patient facilities are conditionally allowed only in commercial zones.

Due to issues regarding proposed expansion of Sea-Tac Airport, the City of SeaTac has come to an understanding of land use jurisdiction in regard to Sea-Tac Airport as follows:

The Port of Seattle is a Washington municipal corporation that owns and operates Seattle-Tacoma International Airport, which is located wholly within the City limits. The Port of Seattle adopted the Master Plan Update on August 1, 1996, by Resolution 3212 (as amended) ("Port Master Plan"). In addition, the third runway has been incorporated into the Metropolitan Transportation Plan adopted by the Puget Sound Regional Council. The City's Comprehensive Plan recognizes Seattle-Tacoma International Airport as an Essential Public Facility, and its importance for the City as well as the region. The ILA comprises appropriate mitigation and operating conditions for the Port Master Plan consistent with RCW 36.70A.200.

The City recognizes that the current planned development at Seattle-Tacoma International Airport has undergone a thorough regional planning review before the Puget Sound Regional Council, including a review of alternative sites and interjurisdictional analysis. Similarly, the specific planned development in the Airport's Master Plan Update has been the subject of intensive public review and comment in the joint project review by the Port of Seattle and the Federal Aviation Administration, including the joint SEPA/NEPA environmental review process. That analysis included examination of each of the City's essential public facilities siting criteria including analysis of proposed sites and review of alternatives, interjurisdictional analysis, financial and infrastructure analysis, analysis of physical characteristics, public notice and participation, and conditional use permits/special district overlay zones. Therefore, the City's essential public facility siting process is deemed to have been completed regarding those projects listed in ILA Attachment A-1, "List of Port Master Plan Projects."

Table BR2.9
Summary of Regulatory Approaches to Certain Essential Public Facilities[1]

	GENERAL ZONING CLASSIFICATION

General Type of Facility	Single Family	Multi-Family	Commercial	Industrial	Airport
Airports	—	—	—	—	Permitted (if consistent with provisions of the ILA)
Correction Facilities	—	—	Conditional Use	Conditional Use	Conditional Use
Landfill; Solid Waste Handling Facilities; Sewage Treatment Facilities	—	—	—	Conditional Use	Conditional Use
Educational Facilities	Conditional Use	Conditional Use	Conditional Use	—	—
Major State and Regional Transportation Facilities	Conditional Use	Conditional Use	Conditional Use	Conditional Use	Conditional Use
In-Patient Facilities	SCTF: Conditional Use Other in-patient facility: —	SCTF: Conditional Use Other in-patient facility: —	Conditional Use	SCTF: Conditional Use Other in-patient facility: —	SCTF: Conditional Use Other in-patient facility: —

(1) Appropriate mitigation measures to be determined by the City of SeaTac.