BACKGROUND

A. A SHARED HISTORY

Before there were airport cities, the region – and the area now known as southern and southwestern King County – had a common shared heritage. The earliest known inhabitants in the region were the First Nation Lushootseed-speaking tribes of the Muckleshoot, Puyallup, Duwamish, Suquamish who established encampments for fishing, clamming, hunting and agriculture.

Tribal activities predated settlement by white and European settlers by hundreds, if not thousands, of years. They are the original inhabitants of the region. Not much of this influence is visibly remaining today, but it is an important part of the shared common heritage shared by the study area cities and Seattle-Tacoma International Airport.

B. SEATTLE-TACOMA INTERNATIONAL AIRPORT

The Seattle metropolitan area is one of the most vibrant and active regions in the nation. Few cities outside Silicon Valley are so closely aligned with technology – Microsoft, Nintendo, Adobe, and Amazon are a few of the tech giants that call Seattle home. But it is not just technology – retail giants from Nordstrom to Starbucks got their start here. And Seattle enjoys a robust tourism industry, both as a destination and as a starting point for discovering the Pacific Northwest.

But before e-commerce, before coffee, before software, there was aviation. For over 100 years, the history of Seattle and of the metropolitan region has been inextricably linked to aviation.

Ports, Wooden Planes, and Airports

In 1911, the voters of King County approved a measure to put Seattle's waterfront under the coordinated control of a single public entity – the Port of Seattle. At that time, the city's economy and growth were highly dependent on port activity, especially moving freight between ships and the railroad. Creation of the Port allowed the development of improvements that would assure the city's long-term economic success, including expansion of international markets. Officially, the Port of Seattle is a special purpose municipal corporation. From the Port's own website, it proclaims that its mission is:

"To create economic development, advance trade and commerce, promote manufacturing and maritime growth, and stimulate economic development."

In 1916, partners William Boeing and Conrad Westervelt built their first single-engine floatplane (the Boeing Model 1) with the intent of entering the then-nascent aviation industry. In those early years, flying was little more than a curiosity, something limited to the military or daredevils. But from that humble beginning arose the Boeing Company – one of the world's premier designers and builders of defense and aerospace products. Boeing's corporate footprint covers the United States and beyond, but it is most strongly linked with Seattle. And Mr. Boeing's innovations would require a location to operate.

The popularity of flight increased in the early 1900s, and airplanes landed just about anywhere there was a flat grassy strip of land, or in the case of floatplanes, on the water.

World War I saw the prominence of military aviation, and cities across the U.S. began to establish military airfields. After World War I, the Navy began construction of a new airfield in 1922 at Sand Point on Lake Washington.

Non-military aviation use also expanded after World War I. In 1925, the Kelly Act authorized

Figure 2.1
July 9, 1949: Opening Day Ceremony at Sea-Tac Airport
(photo courtesy of the Museum of History & Industry)

the U.S. Post Office to contract with private air carriers for air mail and cargo. Now with established routes, regular scheduled passenger service became a financial reality for many operators. By 1926, Western Air Express (the precursor to Delta Airlines) flew the first successful scheduled commercial passenger service between Salt Lake City and Los Angeles. By 1928, regular air passenger service began in Seattle at Boeing Field (now King County International Airport, owned and operated by King County).

World War II and the Baby Boom

The runup to the U.S. involvement in World War II provided the impetus to expand the region's capacity and to improve its military preparedness. The site that would eventually become Seattle-Tacoma International Airport was developed in direct response to the attack on Pearl Harbor in 1941. Seattle's west coast location meant that a new military presence was needed to protect the region. Once again, the Port provided the means to develop a new site near Bow Lake to be designated as Seattle-Tacoma Airport (with the cooperation of the city of Tacoma and Pierce County). Construction of the new Seattle-Tacoma Airport began in 1943 and was completed in 1944 but was used exclusively for military purposes.

In 1947, commercial passenger began to slowly transition from Boeing Field to the new airport – now no-longer exclusively a military base. A new passenger terminal opened in July 1949, ushering in a new era of commercial passenger service, as the bulk of passenger service moved to the new Seattle-Tacoma Airport. (Boeing Field continues to provide limited passenger service but is primarily for cargo, freight, and private operations.) Service grew rapidly at the new Seattle-Tacoma Airport and by 1970, a second runway was added to meet demand.

Growth and Expansion

By the mid-1990s, a third runway was proposed by the Port of Seattle – to be an 8,500-foot long north/south runway on the airport's western side (Runway 16R/34L). In response to concerns regarding the potential effects associated with increased aviation-related activity upon the neighboring communities, the state of Washington initiated a grant in 1995 to assess the project effects of the proposed third runway. The grant (authored by then-State Sen. Mike Heavy) was administered through the state's Department of Community, Trade, and Economic Development (CTED) – the predecessor to the state's Department of Commerce.

The purpose of that study was to assess the projected effects of the proposed third runway and to develop mitigation strategies for the cities of Burien, Des Moines, Federal Way, Normandy Park, and Tukwila, the Highline School District, and Highline Community Hospital.

At that time, the third runway was proposed to be used only for landings during inclement weather. After much discussion and legal challenges, the third runway was constructed and became officially operational in November 2008. Today, Seattle-Tacoma

International Airport encompasses 2,500 acres and is served by three terminals (one main terminal with four concourses, a North Satellite Terminal, and a South Satellite Terminal), and the following three runways:

- 16L/34R (11,901 feet) ....original single runway (extended since its original length).
- 16C/34C (9,426 feet) ....center runway, added in 1970.
- 16R/34L (8,500 feet).................westernmost runway, opened in 2008.

Since 1997, Seattle-Tacoma International Airport has grown through improvements such as the addition of the third runway, while being landlocked by existing communities on all sides (see Figure 1.1).

Seattle-Tacoma International Airport has also increased its annual passenger count since 1997, adding over 25 million annual passengers – a 101.6% increase – due in part to increased expansion of Alaska Airlines and a larger local presence by Delta Airlines. While total annual operations have grown more modestly, increasing by 53,909 operations (14% growth), that number must be considered in light of the decline of air taxi operations at the airport. The growth of air carrier operations has been more pronounced – from 235,445 in 1997 to 427,170 in 2018 – an 81.4% increase.

In 2019, the airport showcased many of its highlights, including:

- Eighth busiest U.S. airport, with 51.8 million passengers and almost 413,000 operations.
- 32 passenger airlines serving 91 non-stop domestic and 29 international destinations.
- More than 87,300 direct jobs and 64,100 indirect jobs.
- $3.8 billion in direct earnings, generating over $442 million in state and local taxes.

Seattle-Tacoma International Airport continues to look to the future and plans for growth and change. This is consistent with the Port of Seattle's history of ongoing expansion and improvement to the airport's facilities. To address projected future needs as the Seattle metropolitan area continues to grow, the Port of Seattle has embarked on an initiative to implement a variety of projects that will, in their words:

"Improve efficiency, safety, access to the airport, and support facilities for airlines and the airport."

This list of near-term projects is included in the airport's sustainable airport master plan (SAMP), which when completed in 2027, will increase annual airport operations to almost 500,000 and over 56 million passengers each year. To accommodate this growth, the SAMP's near-term projects include:

- Construction of a second terminal.
- A centralized maintenance campus.
- Off-airport cargo handling facilities.
- Realignment of airport roadways.
- Expansion of the fueling facilities.

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As part of the scoping for these projects, a series of public community meetings was held in 2018, many within the study area cities. A total of 304 people attended, providing 133 comment sheets and 43 people giving testimony to an on-site court report. Those comments have been included in the project document by the Port of Seattle and were grouped into 13 "themes," many of which parallel the metrics evaluated by this study:

1. Master plan/purpose and need/proposed action.
2. Alternatives.
3. Air quality/climate.
4. Noise.
5. Human health.
6. Transportation.
7. Water resources.
8. Socioeconomic.
9. Biological and natural resources.
10. Public properties and resources.
11. NEPA/SEPA process.
12. General scoping comments.
13. Other general comments.

Community Concerns

Seattle-Tacoma International Airport is surrounded by established communities on all sides, and it has a lengthy experience in dealing with neighbors who often take issue with the airport's operations and are concerned about how aviation-related operations affect their communities.

Airport area residents raised concerns as far back as 1970 when the second runway opened, citing noise, vibration, smoke, and other concerns. Lawsuits were brought against the Port of Seattle to address these concerns, and by 1976 the Port and King County adopted the "Sea-Tac Communities Plan" to address these concerns and help guide the growth of the area.

One part of this plan was an effort to acquire close-in sensitive properties (residences and schools) and to pay for sound insulation and improved window systems in other homes and structures. Over $100 million was spent, however there are long-time residents who received those initial mitigation packages who report that the insulation measures were either inadequate or, in some cases, failed.

When the government deregulated the airline industry during the Carter administration (1978), airlines were free to set their own fare structures and routes, resulting in increased competition, and in some cases, increased operations at some airports. About this same time, the federal government started requiring airports to develop noise compatibility programs, which included the development of noise contours to identify areas for acquisition or mitigation. Many area residents continued to dispute the noise contours as the appropriate measure of how noise affects a community. It was also alleged that many of the contractors performing mitigation renovations were not reliable and had subsequently gone out of business.

As operations at Seattle-Tacoma International Airport continued to grow, local officials began considering a major expansion (a third runway) by the early 1990s. Local area communities disagreed and banded together to oppose the expansion of the airport and construction of the third runway. This included five cities (Burien, Des Moines, Federal Way, Normandy Park, and Tukwila), the Highline School District and the Highline Hospital District. The city of SeaTac was not part of this group opposing the third runway.

Since Seattle-Tacoma International Airport is on a relatively small and land-locked site, a 1994 study was undertaken to determine a potential site for a new future airport. That study was unable to find a suitable site and recommended the Port of Seattle continue with its plans to expand, while also looking for a location for a smaller supplementary airport in a nearby county.

The previously referenced 1997 study was the state's response to help the area cities consider how expanded operations associated with increased runway capacity might affect these communities. The 1997 study recommended a more far-reaching mitigation program, and despite local legal challenges, the third runway received the necessary approvals and was opened in November 2008, costing over $1 billion.

Since 2008, Seattle-Tacoma International Airport has experienced significant growth in both passengers and annual operations. Changes in the nature of the airline business, and partially as a result of the Great Recession, the air taxi component at Seattle-Tacoma International Airport began to decrease and was quickly replaced (and exceeded) by growth in commercial passenger service. By 2018, the airport was hitting historically high annual passenger figures, indicating it was surpassing its previous growth projections.

At the same time, local area communities believed they were shouldering a disproportionate share of the costs of this growth – represented by concerns regarding noise, air quality, depressed home values, increases in traffic congestion and crime, a generally poorer quality of life, effects on public health, and other similar metrics. Area residents are concerned with such issues as:

- Increased daily operation frequency, sometimes as often as 90 seconds or less between departures.
- Increased late-night passenger and cargo flights directly over residential areas, disrupting sleep and negatively affecting quality of life.
- Low glide-slope departures resulting in lower altitudes over neighborhoods and populated areas.
- Mid-field crossing departing aircraft (Q400s) which fly over residential areas that are not aligned with the runway headings.
- Air emissions from arrival and departure flights, with associated health and pollution concerns.
- Increased aircraft activity that devalues residential properties, to name a few.

Noise has often been a concern of residential areas close to airports. In 2002, the Port of Seattle established a voluntary "Fly Quiet Incentive Program," penalizing airlines for late night flights (between midnight and 5 a.m.) and to recognize those airlines that are sensitive to the effect of aircraft noise on their neighbors. While the Fly Quiet program addresses noise concerns, it carries no known penalties for violating the voluntary measures. The Port noted that there were 237 exceedances of these standards during the third quarter of 2019.

Figure 2.3
Fly Quiet Banner in Seattle-Tacoma International Airport
(photo by Stantec)

Partially in response to these community concerns, the Port of Seattle established the StART (Sea-Tac Airport Stakeholder Advisory Round Table) Committee in 2018:

> "To engage with Port of Seattle staff and aviation industry representatives. StART provides a chance to develop a shared understanding, discuss community concerns and voice feedback on the airport's construction projects, programs, and operations."

StART meetings are held monthly and membership was extended to the six study area cities, each having three members representing each community. However, due to the strained relationship with some communities, by summer 2019, several area cities voluntarily left the StART Committee.

Similar to the Fly Quiet program, in September 2019 the Port of Seattle revised its Runway Use Agreement with the Federal Aviation Administration in order to implement "Late Night Noise Limitation Program." This program promises to minimize use of Runway 16R/34L (the third runway) between midnight and 5 a.m. The Port of Seattle also committed to raise the glide slope of Runway 34R (south-flow) to 3.0 to 3.1 degrees, as opposed to

the current 2.75 degrees. A noise reporting app has also been developed to make noise complaints easier to register.

Separate from the above efforts was a court decision in a lawsuit filed by the city of Burien against the Federal Aviation Administration. On Nov. 27, 2019, the Ninth Circuit Court of Appeals ruled in favor of the city of Burien regarding its claim that the flight path over the city was changed without proper environmental review. This specifically relates to automatic mid-field turns by turboprop aircraft – known as the 250-degree heading – resulting in low altitude flights over largely residential portions of Burien. This decision will not completely eliminate turboprop aircraft flights over Burien, but it does eliminate the 250-degree turn and requires the Federal Aviation Administration:

"To evaluate the cumulative impacts of all of the future actions – including the planned growth addressed by the SAMP (Sustainable Airport Master Plan) in an environmental review process."

Port of Seattle Outreach Efforts

In addition to the aforementioned StART committee, the Port of Seattle has been involved in numerous community outreach supported in part financially and with Port staff resources. These include:

- **Highline Forum**
  Since 2005, the Highline Forum has been a forum for elected officials from the six airport cities, the Port, and representatives from the area's educational institutions, to converse regarding airport, transportation, and other issues of common interest. StART formally reports to the elected officials at the Highline Forum.

- **Soundside Alliance**
  For about 20 years, the Soundside Alliance (formerly known as the South King County Economic Development Initiative) has been a forum for five of the airport communities, the Port, and Highline College to help foster promotion of economic development opportunities, workforce development, and small business assistance.

- **Local Partnerships**
  The Port has been a partner in the Burien Downtown Association, Seattle Southside Chamber of Commerce, Federal Way Chamber of Commerce, and has been a supporter of the Seattle Southside Regional Tourism Authority (Tukwila, SeaTac, Des Moines) in promoting tourism and small businesses in the airport communities.

- **Economic Development Grants**
  The Port has funded economic development grants, most of which have been leveraged to help with business attraction, business retention, and wayfinding in all six airport communities.

- **Tourism Grants**
  The Port has funded tourism grants and has provided special opportunities for the six airport communities in the Spotlight Advertising Program.

- **Green Cities Programs**
  The Port has provided funding to Forterra to develop Green Cities programs for Burien, Des Moines, and SeaTac, helping to identify land on which additional tree canopy can be planted, including provision of the trees and planting opportunities. (Forterra is a non-profit organization based in Seattle and is the largest land conservation, stewardship and community building organization dedicated solely to the region in the state of Washington.)

- **Local Community Group Funding**
  The Port has provided funding to local community groups through the Airport Community Ecology (ACE) small works grant program, providing localized environmental education and programs to residents in Burien, Des Moines, and SeaTac.

C. CITY OF BURIEN, WASHINGTON

The city of Burien is located immediately west and north of Seattle-Tacoma International Airport and shares a border with the airport. Burien is also bordered by the cities of Normandy Park, Des Moines, Tukwila, as well as Puget Sound to the west.

Figure 2.4
Three Tree Point in Burien
(photo courtesy of Wikipedia)

While incorporated in 1993, Burien's roots as a community go back many years. French-Canadian settlers came to the area in the mid-1860s, followed by a German immigrant family (Gottlieb Burian) who settled in the community in the mid-1880s. Thanks to an error in spelling over the years, the name "Burien" stuck, and a community was born.

In its early years, the community was little more than open land, with few improvements. With access to nearby Puget Sound, the community became a recreational destination, even spawning an interurban rail connection – the Highland Park and Lake Burien Railway in 1912. By 1929, even though rail service was suspended due to the growing popularity of the automobile, the line's nickname – the Highline – continues to define many portions of this part of King County.

While it was an unincorporated community, Burien continued to grow throughout the 20th century. The area attracted many Japanese immigrants in the years before World War I, many of whom were attracted to the availability of farmland in Sunnydale/Burien. The Highline School District was also an attraction, as an alternative to the Seattle school district.

Even in its early days as a community, Burien was associated with aviation. In the early 1900s, Boeing used timber from this part of King County, and Burien became a popular residential area, as did other neighboring communities. But concern over airport expansion and the addition of a third runway prompted Burien to incorporate as a city in 1993.

Burien further grew in 2010 when it annexed the southern portion of the North Highline area. Today, the city of Burien is 10.11 square miles, and the city's population growth reflects this annexation.

In the last few years, Burien has made significant community improvements, including a revitalized downtown area that includes retail, residential and a "foodie" destination with unique local dining options. The city has also made significant investments in a new city hall and library complex, surrounded by residential and retail buildings.

Figure 2.5
Downtown Burien Mixed-Use
(photo by Stantec)

In 2018, Burien included White (50.4%), Hispanic (24.5%), and Asian (11.3%) residents, with a median age of 37.4 years old. Median household income was $59,596, median home value was $350,326, and the unemployment rate was 4.3%.

Figure 2.6
Burien Population Growth: 1980-2018

Year	Population
1980	23,189
1990	25,089
2000	31,881
2010	33,313
2018 (estimate)	51,908

Source: City of Burien and U.S. Census

Burien has a diverse economic base, with the following industries represented:

- Accommodation and food services 8.2%
- Construction 7.0%
- Health care 6.9%
- Educational services 6.6%
- Transportation equipment 6.4%
- Professional, scientific and technical services 5.1%
- Administrative, support and waste management services 4.3%

Even though Burien has its fair share of accommodation and food services, it is mostly composed of a variety of dining options. The city has expressed its desire to establish a more robust hospitality market, given its proximity to Seattle-Tacoma International Airport.

Burien adopted its current comprehensive plan in 2018, which included the following vision statements:

- A friendly community with well-established neighborhoods and a small town atmosphere.
- A culturally diverse, safety-conscious, crime free, and people-oriented community.
- A community that has established programs serving people of all ages.
- A community with an open, responsive, local government with active, informed citizens.
- A community with natural open spaces, neighborhood parks, paths, and trails.
- A community that has preserved and enhanced its historic and natural features, habitat areas, and air and water quality.
- A community with a local and regional transportation system that integrates cars, pedestrians, bicycles, and transit.
- A community with a thriving, attractive, and customer-friendly city center and business areas.
- A community with land use patterns that bring together individual, business and community goals.
- A model community with excellent police and fire services, outstanding schools, and quality community services and facilities.

D. CITY OF DES MOINES, WASHINGTON

The city of Des Moines is located south of Seattle-Tacoma International Airport, bordered by Burien, Normandy Park, Federal Way, Kent, and the City of SeaTac.

Homesteaders and settlers began to arrive in the late 1860s. By 1887, a developer with ties to Des Moines (Iowa) who developed the core of the city along Puget Sound, creating homesteads, farms, and lumber mills, is credited with giving the city its name

At the time, the area has a limited network of unpaved roads. Access to what would become Des Moines was mostly by water, provided by what was called the "Mosquito Fleet" – an informal collection of private boats and steamers that provided ferry service along the coast, principally between World Wars I and II. As the use of automobiles expanded, the need for paved roadways began to change the transportation demands of the area.

Figure 2.7
Des Moines Marina
(photo courtesy of City-Data.com)

Like most of the rest of the nation, post-World War II development pushed out into the suburbs. At that time, Des Moines was an unincorporated community, but it was experiencing growth and development beyond the capabilities of King County to manage. To address its growing pains and manage its future, Des Moines officially incorporated on June 17, 1959.

Des Moines is unique among the study area cities in that it has an active waterfront area that includes a marina, restaurants, retail, offices, and residential. The marina area has become the city's downtown and reinforces the city's identity as a coastal community.

Figure 2.8
Old Masonic Lodge in Des Moines
(photo courtesy of Google Earth)

A little less than two miles south of the marina lies Saltwater State Park – an 87-acre area that offers camping, hiking, and a long beach along the Puget Sound coastline. Saltwater State Park was dedicated in 1926 and was supposedly established as an "olive branch" between the rival cities of Seattle and Tacoma. (A hatchet was symbolically buried under a rock somewhere in the park.) Today, the park also is the site of one of the noise monitors from Seattle-Tacoma International Airport.

In 2018, Des Moines included White (53.6%), Hispanic (17.9%), and Asian (13.3%) residents, with a median age of 41.1 years old. Median household income was $65,498, median home value was $321,383, and the unemployment rate was 4.4%. The city's population has grown steadily over the past 40 years, with significant growth during the 1980 to 1990 decade. Population has stabilized around 32,364 people, but a new residential development under construction across the street from city hall should increase the city's population.

Figure 2.9
Des Moines Population Growth: 1980-2018

Year	Population
1980	7,378
1990	17,283
2000	29,267
2010	29,673
2018 (estimate)	32,364

Source: City of Des Moines and U.S. Census

Des Moines has a diverse economic base, with the most common industries including:

- Transportation equipment 8.0%
- Health care 7.3%
- Educational services 6.8%
- Construction 6.7%
- Accommodation and food services 4.8%
- Finance and insurance.. 4.1%

Des Moines' proximity to Seattle-Tacoma International Airport has made it a desirable destination for some corporate relocations, as well as area hotels that cater to travelers using the airport.

In 2015, the city updated its comprehensive plan in order to best address how to maintain its quality of life over the next two decades. As part of that effort, it adopted a vision for the city that stated Des Moines would be "an inviting, livable, safe waterfront community, embracing change for the future while preserving our past." The 2015 plan noted the need to grow by an additional 3,480 dwelling units (homes and apartments) and to add 5,800 new jobs in order to serve the local and regional demands of 2035.

E. CITY OF FEDERAL WAY, WASHINGTON

Federal Way is the largest of the study area cities, both by population and in land area. It is also the farthest away from Seattle-Tacoma International Airport, lying generally between the city of Des Moines and the King/Pierce County line. The area was settled in the late 1800s and grew rapidly. Existing trails became roads to connect strategic developments, including Fort Steilacoom and Fort Bellingham. With more homesteads came many small schoolhouses to serve the new residents. The city's name is derived from the eight small school districts that consolidated in 1929 to form the Federal Way School District.

Figure 2.10
Highway 99 and Land for Federal Shopping Way
(photo courtesy of Historical Society of Federal Way)

Automobiles were still a novelty in the early 1900s, so it was the predominance of bicycles and horse-drawn carriages that prompted the U.S. to establish the Bureau of Public Roads (1915) to serve new forms of transportation. The Bureau established the standards for the nation's growing roadway network. In 1928, Federal Highway 99 (essentially a re-designation of Military Road) provided paved access between Seattle and Tacoma.

By the start of World War II, the area that would eventually become Federal Way was composed of many small communities – some sited to take advantage of view to Puget Sound, others clustered around local lakes. Many of these residents worked in local timber and logging industries, resulting in the growth of such major corporations as Weyerhaeuser.

Federal Way's post-World War II growth saw it become a residential destination as area corporations like Boeing grew and prospered. Many professionals looked to new developments like Marine Hills (1958) which offered unparalleled views to Puget Sound. And Weyerhaeuser leveraged its land ownership into high-quality residential developments, such as golf course communities. Weyerhaeuser was not only a significant

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landowner, developer and employer, it was also a major corporate resident of Federal Way until 2016, when their corporate headquarters relocated to downtown Seattle.

Growth continued throughout the 1970s and 1980s, and while the community considered incorporating as a new city, residents were not quite ready, voting the proposal down three times (in 1971, 1981 and 1985). With new residential and commercial development continuing unabated, voters eventually approved incorporation on Feb. 28, 1990.

Figure 2.11
Weyerhaeuser Headquarters Campus, circa 1990
(photo courtesy of Weyerhaeuser)

In 2018, Federal Way included White (51.7%), Hispanic (21.8%), and Asian (12.9%) residents, with a median age of 35.5 years old. Median household income was $65,788, median home value was $314,700, and the unemployment rate was 4.4%.

Figure 2.12
Federal Way Population Growth: 1980-2018

Year	Population
1980 (estimate)	52,016
1990	67,554
2000	83,259
2010	89,306
2018 (estimate)	97,044

Source: City of Federal Way and U.S. Census

Federal Way also has a diverse economic base, with the most common industries including:

- Healthcare 8.1%
- Transportation equipment 7.0%
- Accommodation and food services 6.9%
- Construction 6.2%
- Educational services 5.5%
- Finance and insurance.. 5.0%
- Professional, scientific and technical services 4.4%

Federal Way's proximity to both Seattle and Tacoma has historically positioned it as a "bedroom community," where working residents are mostly employed elsewhere. The *2015 Federal Way Comprehensive Plan* noted that only 16.5% of the labor force living in Federal Way also work within the city limits. The 2015 plan also noted the following seven vision characteristics that it plans to achieve by 2035:

- Government for and by the people.
- Vibrant and diverse growth.
- Economic vitality.
- Efficient transportation system.
- Safety, infrastructure, and utilities.
- Caring for our own.
- Quality culture, environment, and play.

F. CITY OF NORMANDY PARK, WASHINGTON

Normandy Park is located between Puget Sound and the cities of Des Moines and Burien. The area remained relatively undeveloped until a few homestead claims were filed in the late 1800s under the *Homestead Act of 1862*. The area remained sparsely populated until the 1920s when the Seattle-Tacoma Land Company sold lots under the name of "Normandy Park," featuring homes with French Norman architecture.   The community soon began to be known as an area for exclusive residences, especially those with private beach access.

Figure 2.13
1920s Era Street in Normandy Park
(photo courtesy of City of Normandy Park)

Normandy Park rode out the bleak economic period associated with the 1929 Great Depression and by the late 1930s, the outlook started to improve, only to be slowed once more by the onset of World War II.

The post-World War II economic boom that benefited most of the U.S. also helped Normandy Park. Its relative proximity to the then-new civilian airport (Seattle-Tacoma Airport, 1949) and the growth of the Boeing Company made Normandy Park a destination for affluent homeowners. Normandy Park was well-positioned as an affluent suburb with views and access to Puget Sound.

It was the growth concerns of the post-World War II period that prompted local officials to consider incorporation. Some feared the community would grow uncontrolled. Others wanted to protect access to the private beaches. Regardless of the motivation, Normandy Park was officially incorporated in June 1953.

The concern for quality of life and of the local amenities (beaches and heavily treed neighborhoods) has been at the forefront of Normandy Park's emphasis for its long-range growth plans. The city has been cautious regarding how to (or not to) annex into certain areas, and to maintain its environment of largely single-family homes. In the mid-1990s, Normandy Park felt its quality of life was threatened by a then-proposed third runway at Seattle-Tacoma International Airport and joined with its neighboring communities to study the proposal and to push for assurances that the new runway would not negatively affect the city.

Figure 2.14
Normandy Park Towne Center Entrance
(photo courtesy of Google Earth)

Recently, Normandy Park has attracted some diversified development, including the Normandy Park Towne Center (1st Avenue South at South 199th Street) and a few nearby attached residential products, but it remains a largely single-family residential community.

The city's forest-like setting and residential development pattern define its character. As part of its most recent comprehensive plan (January 2016), the city incorporated the following policy framework as a basis for its future character and growth:

- Celebrate the community's proximity, access and visual relationship to Puget Sound.
- Preserve and promote safe, healthy, quiet and secure residential neighborhoods.
- Honor the city's existing low-density, forested character.
- Establish and preserve natural open spaces and environmentally-sensitive areas.
- Enhance the water quality and habitat value of local streams and shorelines.
- Protect identified critical areas.
- Promote the ongoing development of "neighborhood commercial centers" along 1st Avenue South, providing needed in-town services and a variety of compatible housing options.
- Support cost-effective management of facilities, transportation systems and services.
- Promote long-term economic and fiscal sustainability for the city.

In 2018, Normandy Park included White (83.3%), Asian (5.8%) and Hispanic (5.2%) residents, with a median age of 49.7 years old. Median household income was $97,704, median home value was $584,519, and the unemployment rate was 3.6%.

Figure 2.15
Normandy Park Population Growth: 1980-2018

Year	Population
1980	4,268
1990	6,709
2000	6,392
2010	6,335
2018 (estimate)	6,660

Source: City of Normandy Park and
U.S. Census

The city's population has remained relatively stable over the past 40 years. This is due to a local preference for single-family homes over apartments and/or condominiums, and to manage local growth within reasonable amounts. Today, Normandy Park remains a predominantly residential community. It has a low unemployment rate even though most of the city is residentially developed.

Non-residential uses located within Normandy Park are generally diversified as follows:

- Educational services 11.0%
- Transportation equipment.. 8.8%
- Professional, Scientific and technical services 7.5%
- Construction 7.3%
- Health care.. 6.5%
- Finance and Insurance... 4.5%
- Accommodation and food services 4.4%

Normandy Park continues to maintain its reputation as a destination for affluent residential development, surrounded by an enviable combination of heavily treed areas, views to Puget Sound, and private beach access.

G. CITY OF SEATAC, WASHINGTON

The City of SeaTac is unique among the interesting communities in the study area cities, as it encompasses and surrounds the land occupied by Seattle-Tacoma International Airport. It shares borders with the cities of Burien, Des Moines, Tukwila, and Kent (the latter is not part the study area). City officials report that 40% of the city's land area is developed for airport use.

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Early settlers began to appear in the SeaTac area in the mid-1800s. The previously mentioned military road linking Fort Steilacoom and Fort Bellingham also made travel in the pre-automobile days a bit easier.

Figure 2.16
International Boulevard/US Highway 99
(photo by Stantec)

Prior to incorporation, SeaTac was a collection of smaller communities, including Angle Lake, Bow Lake, McMicken Heights and Riverton Heights, many of which were developed to take advantage of the area's economy, which included timber and aviation. As operations at Seattle-Tacoma International Airport grew, so too did nearby support business including numerous hotels, restaurants, and commercial off-airport parking lots. At that time, the surrounding area was in unincorporated King County, so municipal services, as well as tax revenue collection, were not controlled by the local communities.

By the late 1980s, the local communities began to explore the idea of becoming a city through incorporation. The measure was approved by the voters and the city of SeaTac was established on February 28, 1990 – the exact same date the city of Federal Way incorporated.

The city is inextricably linked to the airport, although they are individual political entities, separated by a hyphen. "Sea-Tac" is the abbreviated name for the Airport, while "SeaTac" is the city's official name.

The economic fortunes of Seattle-Tacoma International Airport and the city of SeaTac are closely tied. The city of SeaTac is the home to the corporate headquarters to both Alaska Airlines and its subsidiary Horizon Air. There are thousands of hotel rooms in the city of SeaTac – most located along or near International Boulevard/U.S. Highway 99 – and most of which cater to business and tourist travelers from around the world. The city's population has grown slowly but steadily over the past 40 years. A little under 30,000 residents now call SeaTac home.

Figure 2.17
City of SeaTac Population Growth: 1980-2018

Year	Population
1980	17,961
1990	22,694
2000	25,496
2010	26,909
2018 (estimate)	29,239

Source: City of SeaTac and U.S. Census

In 2018, SeaTac included White (32.6%), African-American (21.6%), Hispanic (19.1%), and Asian (16.7%) residents, with a median age of 34.2 years old. Median household income was $52,976, median home value was $296,782, and the unemployment rate was 4.6%.

The city of SeaTac has a diverse economic base that is mostly associated with Seattle-Tacoma International Airport, including:

- Accommodation and food services 10.8%
- Construction 9.3%
- Transportation equipment.. 6.5%
- Health care.. 6.3%
- Administrative, support and waste management services 5.9%

- Educational services 4.1%
- Other transportation, support activities and couriers............... 3.9%

The city of SeaTac is the only city in the study area to be served by two Sound Transit Link light rail stations:

- SeaTac/Airport Station (opened in 2009) serves the airport and provides a direct link to Downtown Seattle, serving over 5,600 daily riders. Sea/Tac Airport station is immediately adjacent to the northside of Seattle/Tacoma International Airport and is within walking distance of the main terminal, as well as several area hotels. It does not provide any parking spaces but does provide bicycle racks and lockers.

- Angle Lake Station (South 200th Street, opened in 2016) serves approximately 3,600 daily riders. It has 1,120 parking spaces (1,050 located in a garage), along with bicycle racks and lockers. Angle Lake Station is currently the southern terminus of the Link's Red Line, with future plans to expand to the south.

While technically located in the city of Tukwila, the Sound Transit Link's Tukwila International Boulevard Station (TIB, opened in 2009) is located across the street from the city of SeaTac in southern Tukwila (at South 154th Street/Southcenter Boulevard, at the intersection State Route 518 and U.S. Highway 99/International Boulevard). TIB Station serves SeaTac area residents and businesses and has approximately 2,900 daily users. It provides 662 parking spaces, as well as parking for bicycles in racks and lockers.

Figure 2.18
Sound Link Light Rail SeaTac Airport Station
(photo by Stantec)

In 2015, the city of SeaTac adopted its updated comprehensive plan and adopted the following vision statement to guide its growth:

- The city of SeaTac is envisioned to be economically strong, environmentally sensitive, visually pleasing, and people-oriented with a socially diverse but cohesive population and employment mix. These attributes create a positive identity and image for the community and contribute to a city of the future that works.

- The essence of a growing, prosperous, and vibrant city of SeaTac is found not in its built or natural environment alone but in the collective spirit of those who live and who work within the SeaTac community.

- The built aspects of this community – its residential and commercial structures, transportation network, park and recreation facilities, utility systems and other public and private facilities, as well as the natural environmental setting – are not considered as ends in themselves, but as means for enhancing the quality of life and enriching the human spirit.

H. CITY OF TUKWILA, WASHINGTON

The city of Tukwila is located immediately east of the cities of Burien and SeaTac and is east/northeast of Seattle-Tacoma International Airport. The cities of Seattle, Kent, and Renton (outside of the study area) also share borders with Tukwila to the north, south and east.

Tukwila is the only study area city with a name that references its indigenous heritage – the name comes from the indigenous term for hazelnut (a direct reference to the hazelnut trees native to the area). The area that is modern Tukwila sits in a valley that had been at the convergence of two important regional rivers – the White River and the Black River, which combined to form the Duwamish River.

Settlers began to stake their claims in Tukwila in the mid-1850s. The presence of rivers, trails, and fertile lane made the area attractive for farmers, fisheries, loggers, and homesteaders. Even in the face of periodic natural and man-made economic challenges, the area continued to grow throughout the 1800s.

Incorporated in 1908, Tukwila is the oldest of the six study area cities. Tukwila's incorporation was a means to leverage its numerous local assets, rather than as a response to an external condition. But a new technological innovation would soon bring opportunity and prosperity to Tukwila.

That innovation was the creation by Messrs. Boeing and Westervelt and would soon yield a nearby economic giant – the Boeing Company. Tukwila's proximity to the Boeing plant made it a natural destination for the new workers employed at the plant. And as the U.S. prepared to enter World War II, production expanded.

Figure 2.19
Downtown Tukwila, circa 1900
(photo courtesy of Tukwila Historical Society)

Aviation was not the only influencer in Tukwila. The city is located along the line of the former Seattle-Tukwila Interurban railway – an electric train that connected Seattle and Tacoma. Interurban railways were common throughout the U.S. and provided quick and convenient access to many urban dwellers. But the increasing popularity of the automobile eventually forced these interurban lines out of business.

Tukwila's connection to diverse transportation modes – river, rail, road, and air – made it a natural center for commerce, especially retail and distribution. One of the city's most significant developments is the Westfield Southcenter Mall (opened in 1968) – a major retail destination in the Pacific Northwest and the core of a vibrant retail district.

The city has grown through a combination of natural growth and annexation of adjacent communities. It now has a diverse population, including White (30.7%), Asian (23.8%), African-American (18.2%), and Hispanic (3.5%) residents, with a median age of 34.0 years old. Median household income was $52,979, median home value was $299,797, and the unemployment rate was 3.6%.

Figure 2.20
Tukwila Population Growth: 1980-2018

Year	Population
1980	3,578
1990	11,874
2000	17,181
2010	19,107
2018 (estimate)	20,294

Source: City of Tukwila and U.S. Census

Tukwila has a diverse economic base, including:

- Accommodation and food services 8.7%
- Transportation equipment 8.2%
- Construction 5.9%
- Health care 5.8%
- Educational services 5.1%
- Administrative, support and waste management services 4.8%
- Professional, scientific and technical services 4.7%

Tukwila's local economy is supported by a variety of retail and hospitality uses associated primarily with the Westfield Southcenter Mall, as well as the city's proximity to the Seattle-Tacoma International Airport. Other than retail and hospitality, other major local employers include Boeing, Kaiser Permanente and King County Metro, among others.

The city's population grew rapidly from 1980 to 2000 and has stabilized for the last 20 years, due in part to a local preference for single-family homes over apartments and/or condominiums, and to manage local growth within reasonable amounts.

Like all study area cities, the city of Tukwila maintains and regularly updates its comprehensive plan. Its basic objectives include:

Figure 2.21
Westfield Southcenter Mall
(photo by Stantec)

- Great neighborhoods.
- A vibrant and diverse Tukwila International Boulevard District.
- Good jobs along East Marginal Way.
- A thriving Southcenter/Urban Center for shopping, working, living and playing.

In the 2015 plan update, Tukwila adopted the following four vision statements:

- **Respect for the past and present:**
  Tukwila was and will continue as a regional crossroads.
  We honor the past as we move toward the future.

- **Compassion and support for individuals and families:**
  We support our residents.
  We support our families.
  We support our children.

- **Pride of place:**
  We value our environment.
  We appreciate our surroundings.

- **Quality opportunities for working, living, and community involvement:**
  Thriving and responsible businesses.
  Responsive government that respects individual rights.
  We seek to provide opportunities for residents.

I.   STUDY AREA SUMMARY

The study area is a collection of six diverse cities. They share many common attributes, not the least of which is their early heritage traced to First Nation peoples.

The four westernmost cities – Burien, Normandy Park, Des Moines, and Federal Way – share a common interest in preserving the beauty and ecological integrity of Puget Sound and its coastline. While the two cities on the eastside of the study area – SeaTac and Tukwila – do not have coastline views or access, they do have a more diverse economic base, including businesses that support and cater to airport use.

The study area cities combined have grown significantly over the last 40 years – growing by almost 120% to a total of 235,778 people. Growth was significant during the 1980-1990 (39%) and 1990-2000 (28%) decades, slowing down (but still growing) during the early 2000s (less than 6%). Growth during the 2010 decade has increased to approximately 16%.

Current population and area metrics indicate that the study area is denser than the average for King County. The study area accounts for a small portion of King County (2.6%) but over 10.6% of the county's population. The result is that the study area density is almost four times denser than the county average.

Figure 2.22
Study area cities Population Growth: 1980-2018

Year	Burien	Des Moines	Federal Way	Normandy Park	SeaTac	Tukwila	Combined Total
1980	23,189	7,378	52,016 *	4,268	17,961	3,578	**108,390**
1990	25,089	17,283	67,554	6,709	22,694	11,874	**151,203**
2000	31,881	29,267	83,259	6,392	25,496	17,181	**193,476**
2010	33,313	29,673	89,306	6,335	26,909	19,107	**204,643**
2018 (est.)	51,908	32,364	97,044	6,660	29,239	20,294	**237,509**

Source: Cities of Burien, Des Moines, Federal Way, Normandy Park, SeaTac and Tukwila; and U.S. Census.
* estimated (Federal Way not incorporated until 1990)

Economic data within the study area, as shown by Figure 2.23, varies from city to city. The city of Normandy Park had the highest median income level and highest median home value, with the cities of SeaTac and Tukwila virtually tied for the lowest median figures for both metrics. Unemployment rates for the study area cities were more closely grouped. The cities of Normandy Park and Tukwila were tied for the lowest unemployment rate, with the remainder of the study area only 0.7% to 1.0% higher.

Figure 2.23
Comparison of Study area cities Economic Data: 2018

Metric	Burien	Des Moines	Federal Way	Normandy Park	SeaTac	Tukwila
Median Household Income	$59,596	$65,498	$65,788	$97,704	$52,976	$52,979
Median Home Value	$350,326	$321,383	$314,700	$584,519	$296,782	$299,797
Unemployment Rate	4.3%	4.4%	4.4%	3.6%	4.6%	3.6%

Source: www.City-Data.com

The study area has a denser development pattern than the King County average, so even though some effects may occur over a small area, they can be more significant due to this higher density. Thus, the area of each effect (from square feet to square miles) is a significant characteristic to be considered. Community size, density, and character also vary from city to city within the study area.

Figure 2.24
Study Area and County Density

Area	2018 Total Population	Total Area (square miles)	Density (people per square mile)
Study Area	237,509	61.36 sq. mi.	3,870.7/sq. mi.
King County	2,233,163	2,307.00 sq. mi.	967.99/sq. mil

Source: Cities of Burien, Des Moines, Federal Way, Normandy Park, SeaTac and Tukwila; and U.S. Census.

Figure 2.25
Individual Study Area City Density

City	2018 Total Population	Total Area (square miles)	Density (people per square mile)
City of Burien	51,908	10.11 sq. mi.	5,134.3/sq. mi.
City of Des Moines	32,364	6.41 sq. mi.	5,049.0/sq. mi.
City of Federal Way	97,044	22.49 sq. mi.	4,330.4/sq. mi
City of Normandy Park	6,660	2.51 sq. mi.	2,653.4/sq. mi.
City of SeaTac	29,239	10.24 sq. mi.	2,855.4/sq. mi.
City of Tukwila	20,294	9.60 sq. mi.	2,113.9/sq. mi.

Source: Cities of Burien, Des Moines, Federal Way, Normandy Park, SeaTac and Tukwila; and U.S. Census

As previously noted in Section 1, since approximately 40% of the city of SeaTac's 10.24 square mile area is composed of Seattle-Tacoma International Airport land, the city's average density increases to 4,754.3 persons per square mile, making it the third most densely populated study area city behind Burien and Des Moines.

The 2018 figures show, for example, that Federal Way is the largest city by population and area. But Burien and Des Moines are much more urbanized (denser), even though they are each roughly half the physical size of Federal Way. While the city of Normandy Park has the smallest population and area, its density is quite close to that of the larger cities of SeaTac and Tukwila.

The 2020 study will account for both the proximity of each study area city, as well as relative density as a characteristic of potential effects.

Comparing Community and Airport Growth: 2000 to 2018

From 2000 to 2018, the entire study area grew, as well as the city of Seattle, King County, and the Seattle metropolitan statistical area (MSA) – from 22.8% (study Area) to 32.2% (city of Seattle).

Burien's growth during this period shows the highest rate of the study area cities. However, that includes its 2010 annexation of the southern portion of North Highline, which added 1,600 acres and 14,292 residents to the city. Had this annexation not occurred, Burien's population growth rate is projected to have been closer to 20%, still the fastest growing city in the study area.

The growth rate of the remaining study area cities was generally in the teens. The exception is Normandy Park, which is comprised predominantly of single-family homes, and has little room to grow. Normandy Park has had some recent land use development patterns with more density (in the area of the Normandy Park Towne Center), but the city's growth is generally stable at around 4%.

The growth of the study area is slightly behind the growth rates for King County (28.6%) and the region (29.4%). The city of Seattle has grown at the fastest rate (32.2%) which could also be attributed to increased residential density in areas such as downtown. Since the study area's growth rate of 22.8% is the lowest in the region, this indicates that the study area – while growing – is not growing as fast as other parts of the area.

Passenger growth at Seattle-Tacoma International Airport has seen the largest increase over this same period (75.5%). This is due not only to more passenger enplanements and deplanements, but also an increase in through passengers who connect through the airport for other destinations. (Through passengers usually remain inside the airport between flights unless there is a long layover, a lengthy delay, or some other unforeseen circumstance.)

Figure 2.26
Area Growth: 2000-2018

Area	2000 Population	2018 Population	Growth: 2000-2018
City of Burien	31,881	51,908	62.8%
City of Des Moines	29,267	32,364	10.6%
City of Federal Way	83,259	97,044	16.6%
City of Normandy Park	6,392	6,660	4.0%
City of SeaTac	25,496	29,239	14.7%
City of Tukwila	17,181	20,294	18.1%
Total: Study area cities	**193,476**	**237,449**	**22.8%**
City of Seattle	563,374	744,955	32.2%
King County	1,737,034	2,233,163	28.6%
Seattle MSA	3,043,878	3,939,363	29.4%
Airport (Annual Passengers):			
Total: Annual Passengers	**28,408,553**	**49,849,520**	**75.5%**
Airport (Annual Operations):			
Air Carrier	236,355	427,170	80.7%
Air Taxi	203,723	8,509	(-95.8%)
General Aviation	5,448	2,625	(-51.8%)
Military	95	87	(-8.4%)
Civil	56	0	(-100.0%)
Total: Annual Operations	**445,677**	**438,391**	**(-1.6%)**

Source: Cities of Burien, Des Moines, Federal Way, Normandy Park, SeaTac and Tukwila; and U.S. Census

Total operations at Seattle-Tacoma International Airport do not tell the whole story. While total operations decreased by 7,286 (-1.6%) from 2000 to 2018, air carrier operations increased significantly (80.7%), consistent with passenger increases during this same period. The decrease in total operations at Seattle-Tacoma International Airport from 2000 to 2018 is attributed to decreases (or eliminations) in air taxi, general aviation military, and civil operations at the airport.

Based on these growth rates, the entire area has grown between 2000 and 2018. But the study area posted the lowest growth rate, while Seattle-Tacoma International Airport experienced the highest growth rates in passengers and air carrier operations.

Planning: Local, State and Regional

The study area cities have adopted comprehensive plans and have updated them in the last few years. Comprehensive plans are the means by which each city evaluates current conditions, establishes a vision for its future growth, adopts supporting policy goals, and develops various plans to proactively guide the city's growth (such as land use, transportation, housing, etc.).

No comprehensive plan can accurately project future conditions, and new opportunities and/or challenges that were unknown when the plan was developed constantly present themselves. Therefore, these plans are designed to be updated on a regular basis to take these conditions into account.

Another factor influencing comprehensive plans is the Growth Management Act (RCW 36.70A.140), adopted by the state of Washington in 1990, along with subsequent updates and revisions. The GMA establishes the following 14 statutory goals that each comprehensive plan must be consistent with:

- **Growth** – Guide urban growth to areas where urban services can be adequately provided.
- **Sprawl** – Reduce urban sprawl.
- **Mobility** – Encourage efficient multi-modal transportation systems.

- **Housing** – Encourage the availability of affordable housing to all economic segments of the population.
- **Economic Development** – Encourage economic development throughout the state.
- **Property Rights** – Assure private property is not taken for public use without just compensation.
- **Permitting** – Encourage predictable and timely permit processing.
- **Natural Resource Industries** – Maintain and enhance natural resource-based industries.
- **Open Space and Recreation** – Encourage retention of open space and development of recreational opportunities.
- **Environment** – Protect the environment and enhance the state's quality of life.
- **Citizen Participation** – Encourage the participation of citizens in the planning process.
- **Public Facilities and Services** – Ensure adequate public facilities and services necessary to support development.
- **Historic Preservation** – Identify and preserve lands and sites of historic and archaeological significance.
- **Coastal Management** – Manage shorelines of statewide significance.

There is also a regional initiative to coordinate planning efforts between cities in the Puget Sound area. *Vision 2040* is the regional growth strategy that coordinates long-range planning efforts in King, Pierce, Snohomish, and Kitsap counties. It is managed by the Puget Sound Regional Council (PSRC), and the study area cities are part of this regional effort. The Port of Seattle also participates as a statutory member. An update to this plan (*Vision 2050*) is in its draft stages and is scheduled for adoption in 2020.

The planning efforts at the local, regional, and statewide level are all focused on maintaining quality of life for existing and future residents, while preserving and protecting vital natural resources and culturally significant and historic assets. These efforts are important to help local, county, regional, and state officials allocate resources, manpower, and funds to support these efforts. And it also helps position the public sector to anticipate future growth-related issues.

As both a major employer and land use, the Port of Seattle and Seattle-Tacoma International Airport have a vested interest in the success of these planning collective efforts and of the growth and prosperity of the study area cities. The Port of Seattle and Seattle-Tacoma International Airport are not just "statutory members" of this planning community – they are major participants in the success of the region and have significant resources that may help define the future of the region and of the study area.

J. REFERENCES

City-Data. http://www.city-data.com

City of Burien, Washington. Revised December 2018. The Burien Plan: The Comprehensive Plan for the City of Burien, Washington.

City of Burien, Washington. https://burienwa.gov

City of Des Moines, Washington. Amended November 2018. Des Moines 2035: Charting Our Course for a Sustainable Future.

City of Des Moines, Washington. http://www.desmoineswa.gov

City of Federal Way, Washington. Revised December 2015. The Federal Way Comprehensive Plan.

City of Federal Way, Washington. https://www.cityoffederalway.com

City of Normandy Park, Washington. Adopted December 2015.   The City of Normandy Park Comprehensive Plan.

City of Normandy Park, Washington. https://normandyparkwa.gov

City of SeaTac, Washington. Adopted December 2015.   The City of SeaTac Comprehensive Plan.

City of SeaTac, Washington. https://www.seatacwa.gov

City of Tukwila, Washington. Adopted 2015. The Tukwila Comprehensive Plan.

City of Tukwila, Washington. https://www.tukwilawa.gov

Des Moines Historical Society. http://dmhs.org

HistoryLink. https://www.historylink.org

Port of Seattle. https://www.portseattle.org

United States Census Bureau. https://www.census.gov