

# Executive Summary

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## 1. Study Objectives

Volume II of the Anchorage Industrial Land Assessment characterizes the existing and potential industrial lands in Anchorage and Chugiak-Eagle River, their acreage and distribution, and the predominant industrial and commercial activities in industrially zoned areas.

The Municipality of Anchorage (MOA) teamed with Cardno, Inc., to provide an updated assessment of industrial land sufficiency within the Anchorage Bowl and Chugiak-Eagle River areas. This is a technical study that comes as the MOA recognizes industrial lands as a key asset in growing and diversifying the regional economy.

This document is the second of three volumes of the study. It updates and refines the inventory of industrial uses and buildable land supply, in order to inform municipal policy regarding industrial land use and economic development. Volume II does the following:

1. Defines the industrial sectors and land use context in Anchorage;
2. Inventories existing land use activities on industrial lands; and
3. Estimates the remaining land supply available for industrial development.

Its findings enable Volume I of the study to compare the industrial land supply with a forecast of projected industrial land needs in the MOA. Volume I then identifies potential strategies to address the supply of industrial land.

This study includes the Anchorage Bowl, Chugiak-Eagle River, and major landholdings in the MOA not currently zoned for industrial use but that are subject to speculation regarding their potential. Additional data from the lands inventory process is provided in appendices. Meeting summaries from the Anchorage Industrial Land Assessment Advisory Committee are provided as an appendix at the end of Volume II. Volume III provides the dictionary of the land use classification system that the Planning Division employed to overhaul the city's inventory of industrial uses.

Volume II fulfills the purpose of the Industrial Land Assessment to improve the community's understanding of Anchorage's industrial lands and sectors. It is a source of information for public officials, planners, real estate developers, industrial firms and investors, and economic development specialists. The movement to inform an industrial land strategy for Anchorage comes in the context of other needs in the overall land use system for residential, commercial, and other uses. Volumes I and II will help to inform efforts by the community to balance and reconcile the competing and yet interdependent land needs in the MOA over the long term.

## 2. Study Area

The Industrial Lands Inventory examines the areas that are currently industrial or are subject to speculation about future industrial potential in the Municipality. The study area encompasses industrial zoning districts, areas designated for industrial use in the Comprehensive Plan, non-industrial zoning district areas that have a concentration of industrial uses or that intermingle with industrial districts, and, lastly, undeveloped landholdings in the Municipality that are not currently designated for industrial use but, according to some observers, may at least in some part, have future industrial potential. The study area does not include the Turnagain Arm or Girdwood.

Special study areas within the Industrial Lands Inventory that are not currently zoned industrial include the landholdings of the municipal Heritage Land Bank (HLB), Joint Base Elmendorf-Richardson (JBER), Ted Stevens Anchorage International Airport (TSAIA), the Alaska Railroad Corporation, as well as the Fire Island landholdings of CIRI, and Chugiak-Eagle River landholdings of Eklutna, Inc., Native Village Corporation, and others. The Anchorage Industrial Lands Assessment examines these areas to help the community understand their likelihood and extent of availability for industrial development over the next 20 years. It also helps inform the community about the functions, operational constraints, and land needs of the owner institutions.

## 3. Land Use Context

Anchorage has a variety of activities that make up its land use system. Because the urbanized land area is limited, there is competition over space for housing, businesses, and other uses. These land use activities are interrelated in that they support and impact one another. To be successful, a city provides space for a diversity of important activities.

Industrial production, distribution, and repair activities are a part of that balance. They include economic driver sectors and local industrial support to other economic sectors. Industrial sectors supply a high proportion of family wage jobs and locally owned businesses. They also diversify the local economy to become more resilient through changing economic cycles. In context of the pressures to convert the use of industrial parcels to commercial retail and other uses, a predictable and sustained supply of industrial land on the market is essential for retaining and attracting industrial uses in the local land use economy.

Modern industrial uses are defined by being engaged in the activities of making, moving, and maintaining goods and equipment. These industrial “production, distribution, and repair” (or “PDR”) uses include manufacturing, goods handling and transportation, and repair and maintenance service categories of industrial use. Production category uses include manufacturing, power generation and construction contracting enterprises. Small- and medium-sized manufacturers are widely recognized for their disproportionate contribution to jobs and innovation, exports and economic growth.

Distribution category industries include wholesale activities, ground freight trucking, warehousing, and especially the major airport, marine, and railroad transportation facilities. The prevalence of distribution category PDR uses reflects Anchorage’s position as a transportation hub and support center for economic activities taking place elsewhere in Alaska and the region. Repair category uses are integral to the industrial economy and share land use characteristics and needs with the production and distribution enterprises. Characteristic needs of industrial “PDR” uses include:

- Accessibility to customers, suppliers, workers, and road networks.
- Affordable, low rents per square foot.
- Clustering of similar industries and supplier and service networks.
- Separation or buffering from incompatible residential and mixed-uses.
- Large, flexible indoor spaces in low-rise or single-story buildings.
- Adequate parcel size with space for freight vehicles and equipment.

Some non-industrial land use activities share physical characteristics with industrial PDR uses, although they are not industrial PDR functions. For example, car dealerships, bulk goods retailers, and self-storage leasing are space intensive and occupy a significant share of the industrial land base; however, they do not function as industrial production, distribution, or repair firms.

The inventory of existing industrial uses for this study cross-references the North American Industrial Classification System (NAICS) of economic sectors with the PDR industrial categories conceptualized above.

#### **4. Findings as to Existing Industrial Land Use**

Excluding the city’s major airport, railroad, and port transportation facilities, the *Production* category of local industrial uses, led by *manufacturing* and *natural resource production* sectors, is the largest industrial land user in the Municipality, in terms of area. These two production sectors utilize approximately 420 acres of industrial-zoned land, and 520 acres total including non-industrial zones. Most manufacturers are a variety of small- to medium-sized establishments.

The *Production* category also includes the power generation and water *utilities* and *construction* contracting enterprises, both of which are prevalent in the Municipality. *Construction* contractors – e.g., heavy construction, special trades, and machinery related – occupy 330 acres total, and are the third-largest user of industrially zoned land among all local industrial sectors. Contrary to expectations at the outset of the study, very little of the land used by the construction sector is for materials laydown yards. Most of the space is used for parking, storage, and maintenance of work vehicles and equipment, as well as company offices and assembly/work areas.

Excluding the major airport, railroad, and port transportation facilities, the *Distribution* category of industrial uses, led by the *ground transportation services* sector, is the second largest user of local industrial zoned land among the major industrial categories. *Ground transportation services* – trucking and freight services, delivery services, towing, taxi, and other transportation services – utilizes approximately 430 acres of industrial zoned land, and 500 acres total including non-industrial zones. The *warehousing* sector, while not as prevalent in Anchorage as in some cities, is still among the top 10 industrial PDR sectors for land area in the Municipality. The *wholesale trade* sector occupies 190 acres and rounds out the *Distribution* category of industrial PDR uses.

For the *Repair* category of industrial PDR uses, the *vehicle and equipment repair* sector is a relatively major user of industrial land in the Study Area, occupying approximately 120 acres of industrial land and 150 total in the Study Area. The greatest land user among the Repair category sectors is *waste management services*, including solid waste disposal facilities, snow disposal sites, and salvage yards. This sector occupies approximately 580 acres when including the regional landfill in Eagle River.

**Summary Table I. Acres in Use by Industrial Sector  
Anchorage Bowl and Chugiak-Eagle River, 2013-14**

<b>Industrial Sector</b>	<b>Industrial Districts</b>	<b>All Districts in Study Area</b>
Production	880	1,320
Manufacturing and Non-metallic Mineral Products	420	520
Utilities – Power, Water and Wastewater	150	470
Construction	310	330
Distribution (Airport, Railroad, and Port Facilities)	930	3,640
Distribution (Ground Transportation, Wholesale, and Warehousing)	620	710
Ground Transportation and Freight Services	340	400
Wholesale Trade	190	210
Warehousing	90	100
Repair	340	790
Vehicle and Equipment Repair	120	150
Services to Buildings and Facilities	50	60
Waste Management, Salvage, and Snow Disposal	170	580

Non-industrial users also compete for industrial zoned land. In particular, the industrial land base in the Anchorage Bowl has in recent years experienced increasing pressure by non-industrial uses as the city's overall land supply has become tighter. The three non-industrial sectors occupying the most industrial zoned land in the Municipality include: *vehicle sales and heavy goods retail* (260 acres); *self-storage, leasing, equipment rental* (160 acres, including 100 acres in self-storage); and *general retail* (120 acres).

**Summary Table II. Acres of Industrial Land in Use by Non-industrial Sector, 2013-14**

Non-industrial Economic Sector	Industrial Districts
Retail Trade	380
General Retail	120
Vehicle Sales and Heavy Goods Retail	260
Finance, Real Estate, Leasing, and Self-storage	190
Finance, Insurance, and Real Estate Services	30
Leasing and Equipment Rental	60
Self-storage (including outdoor and mini-storage)	100
Business and Professional Services	110
Professional and Business Services	80
Communications and Information	30
Leisure and Accommodations	90
Education and Health Services	80
Personal and Other Services (except repair)	70
Government and Public Safety	70
Residences	50

Some industrial zoned areas have more non-industrial uses than others. Major non-industrial users are often concentrated in certain areas that have evolved as commercial centers in spite of industrial zoning – such as in Abbott Town Center or Northway Town Center, and along certain segments of C Street and Old Seward Highway. Other uses, such as fitness clubs, martial arts studios, and churches, are distributed more evenly through the industrial districts.

Using a conservative measure of existing non-industrial space utilization of I-1 and I-2 land, the Industrial Lands Inventory estimates a 37 percent utilization rate on industrial zoned lands by non-industrial uses in the Anchorage Bowl. It estimates a much lower, 6 percent utilization rate in Chugiak-Eagle River. The non-industrial utilization rate takes into account that a certain amount of the employment even in these commercial categories is in industrial-type activities.

## 5. Findings as to Industrial Land Supply – Anchorage Bowl

The Anchorage Bowl has between 130 and 230 acres remaining of buildable, industrial zoned land that likely to be available for future industrial development. This range estimate considers site constraints to development (environmental and utility service constraints), removes parcels committed to a future planned non-industrial use, and factors in the rate of non-industrial utilization of industrially zoned lands in the Bowl.

The high-range estimate of 230 acres includes small parcels not considered optimal for medium-size local establishments. It also includes lands with partial or significant environmental constraints, which may be more expensive and difficult for industrial users to develop. Lastly, it includes some parcels of questionable future availability.

The low-range estimate of 130 acres includes only “Tier 1” parcels that have a minimum one-acre size that can accommodate a majority of local industrial enterprises, that have no environmental constraints, and that are anticipated to receive water and wastewater service. However, even the low-range estimate may in some ways overstate the supply of industrial land. It includes several large sites that may experience greater site-specific pressure to convert to commercial use because of their locations. The finding that there is a very limited supply of industrially zoned land remaining in the Bowl corroborates the many comments and observations from dozens of industrial business owners, managers, and employees that have informed this study.

The majority of the industrial zoned acreage consists of small infill parcels of between a half acre and several acres in size, scattered across the industrial districts primarily in Central and South Anchorage. A handful of large vacant sites remain in the I-1 and I-2 land supply, the largest being 38.6 acres in Central Anchorage. Aside from a cluster of medium-sized vacant lots north of 64<sup>th</sup> Avenue in Central Anchorage, most medium to large sites remaining in the Bowl are located in South Anchorage.

In addition to industrial zoned sites, Anchorage has approximately 80 to 160 acres of land zoned PLI and T available for industrial development. These lands include four large tracts of Ted Stevens Anchorage International Airport land that will be available for long-term leases for non-aeronautical uses, the municipally owned former Native Hospital site, and a JBER parcel northeast of the Boniface Parkway and Glenn Highway intersection which may someday transfer to Eklutna, Inc., depending on the future outcome of a three-party land agreement.

The estimate of industrial land supply does not include lands that are committed to future public utility operations, military operations, or airport, port, or railroad transportation operations. These facility lands mostly meet and exceed the projected land needed for the public utility and airport, railroad, and port transportation facility sectors.

**Summary Table III. Buildable Acres of Industrial Land in Anchorage Bowl, 2014**

	I-1	I-2	Industrial Districts Total	PLI	T	All Districts Total
<b>High-Range Estimate:</b>	150	80	230	70	90	390
Includes constrained lands, parcels less than 1 acre, and lots of uncertain availability.						
<b>Low-Range Estimate</b>	65	65	130	70	10	210
Includes only unconstrained lands on parcels 1 acre or larger considered available.						

The buildable acres above include vacant, partially vacant, and marginally used lots. Redevelopment potential for a higher intensity use on existing developed lots was addressed in a different way.

Many industrial lots have few improvements: a low floor-to-area-ratio (FAR) and a low building-value-to-lot-value-ratio (BLVR). However, most of these lots are in fact fully utilized by the business for equipment parking, maneuvering, storage, and maintenance that is integral to the enterprise. Most industrial users cannot build upward above one or two stories. Industrial business function, equipment layout, and resulting space usage generally renders substantial gains in intensity through redevelopment more difficult.

Therefore, this study instead assumes a more gradual increase in average floor-to-area-ratios among industrial uses over the 20-year study horizon. Average FARs of sites developed with buildings increased to above 0.3 FAR in the 1970s and 1980s, but then fell to just over 0.2 FAR in the 1990s and 2000s. Industrial land development since 2010 appears to be trending back toward the higher industrial development densities experienced in the 1970s. Although relatively few in number, these recent developments have averaged nearly 0.3 FAR. Lower parking requirements in the new land use regulations combined with higher land prices and other market factors may contribute to industrial land use becoming more efficient. Volume I of this study builds this assumption into its industrial land demand forecasts (Volume I, page 34).

Among industrial users in Anchorage, manufacturing, wholesale trade, and warehousing achieve the highest FARs, between 0.3 and 0.5 FAR. Construction, transportation, and utilities typically have lower FARs, between 0.1 and 0.2 FAR. The most inefficient non-industrial sector using industrial land is the Leasing, Rental, and Self-storage sector, which achieves only 0.08 FAR on average.

## 6. Findings as to Industrial Land Supply – Chugiak-Eagle River

Chugiak-Eagle River has approximately 190 acres of buildable, industrial-zoned land capacity for industrial development. The estimate accounts for site constraints to development, removes parcels committed to a non-industrial use, and factors in a localized rate of non-industrial utilization of industrial lands.

The estimate of land capacity in Chugiak-Eagle River is impacted by the lack of wastewater service in its northern communities. The land capacity estimate includes an assumption that parcels unlikely to receive wastewater service during the study time horizon will, on average, develop at only half the intensity of those lots with sewer service. This assumption, which was developed in consultation with the Industrial Land Assessment Advisory Committee, reduced the effective acreage in the Powder Reserve, Birchwood, Chugiak, and Eklutna.

Although substantial tracts of undeveloped lands exist in Chugiak-Eagle River, the estimate of industrial land supply does not include military lands, public utility facility lands, or lands that are determined to be unlikely to receive road access during the planning horizon. Large tracts of Eklutna land west of Mirror Lake and north of the Eklutna Power Generation Plant are seen as unlikely to receive road access within the time horizon, under current trends and policy scenarios. In addition, the Mink Creek wetland tracts, the Eklutna River Estuary, and the Fire Creek Estuary located southwest of Birchwood Airport have recently been placed in conservation easements.

Therefore, only 190 acres of buildable non-industrial zoned land, mostly PC (Planned Community) and T (Transition), is likely be available for industrial development within the planning horizon. This additional land brings the total estimate of land capacity in Chugiak-Eagle River to approximately 380 acres.

**Summary Table IV. Buildable Acres of Industrial Land, Chugiak-Eagle River, 2014**

	I-1	I-2	Industrial Districts Total**	PC	PLI	T	All Districts Total
Eagle River	30	13	43	0	3	0	46
Powder Reserve *	0	0	0	0	0	121	121
Chugiak with 770 *	6	0	6	56	0	0	63
Birchwood Airport *	19	70	89	0	0	0	89
Eklutna Vicinity *	36	14	49	0	0	11	60
<b>Chugiak-Eagle River Total</b>	<b>91</b>	<b>96</b>	<b>187</b>	<b>56</b>	<b>3</b>	<b>132</b>	<b>378</b>

\* Land capacity estimate affected by anticipated lack of sewer service through 2035.

\*\* I-3 rural industrial district has 0.1 acres of buildable land.

## 7. Prohibitively Constrained Lands

In both Anchorage and Chugiak-Eagle River, much of the gross supply of vacant lands is prohibitively constrained from industrial development for at least the next 20 years, based on current growth forecasts and policy trends. In some cases, changes in land use and transportation planning policies and public infrastructure investment priorities would need to take place if these lands were to become available for future industrial use within the planning horizon.

**Summary Table V. Prohibitively Constrained Landholdings**

<b>Major Landholdings</b>	<b>Prohibitive Constraints</b>
Ted Stevens Anchorage International Airport	Most of TSAIA is encumbered for aeronautical use by FAA regulation, and is not available for long-term industrial leases.
Alaska Railroad Ship Creek Terminal Reserve	The Railroad anticipates it will continue to use the majority of its industrial zoned land for railroad operations. Most of its lease lots are occupied. Its largest vacant properties are zoned for mixed-use redevelopment with offices, retail, and housing.
HLB Parcels west of Minnesota Drive south of Connors Lake Bog	These are natural open space woodland and high value wetlands, and in conservation easements or to become part of a wetlands mitigation bank.
Laurel Acres Subdivision (small lot portion)	This is a “paper plat” without roads or utilities, in undeveloped wetlands, with many property owners.
Fire Island	Fire Island is located approximately three miles west of Point Campbell, nearly as far from Anchorage as is Point MacKenzie. Road access is considered unlikely within the study horizon.
Joint Base Elmendorf-Richardson (JBER)	JBER actively uses most of its lands for operations and training. The lands that may seem undeveloped between Anchorage and Eagle River are in fact training areas that are needed to support the base’s mission. The base is already 11,000 acres under sized.
Powder Reserve and Eklutna 770 Tracts.	120 acres of Tract B and all 770 acres of Tract C of Powder Reserve are not anticipated to be developed as industrial. Most of the Eklutna 770 Tract is designated for residential use.
Eklutna coastal areas and Fire Creek Estuary	Eklutna, Inc., recently established conservation easements over most of its coastlands and 520 acres in the Fire Creek Estuary area. It has also established a cultural overlay over most of the Eklutna Village area, making industrial development unlikely.
Mirror Lake reserve lands of Eklutna, Inc.	Highway interchange access to this 1,200 acre reserve is not anticipated in the 20-year horizon.

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