



Economic Profile Supply and Demand of Industrial Land in Kamloops BC

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THOMPSON RIVERS  UNIVERSITY

Executive Summary

Venture Kamloops, the Economic Development Agency of the City of Kamloops, was interested in conducting an economic profile on the supply and demand for vacant land, specifically, land zoned C-4, I-1, I-2, I-3, and I-1S within the City of Kamloops, British Columbia. It is important for communities to plan and estimate the amount of industrial land required to support job growth, economic expansion, and to keep account of under-utilized or mis-utilised industrial lands.

Objectives and Findings

The objectives and findings of this study were as follows:

- **To identify existing parcels of land suitable for various industrial uses, including warehousing and storage and light and heavy manufacturing.**

The City of Kamloops has 887.7 hectares (2,193.5 acres) of land zoned for industrial use of which 82.9 hectares (204.8 acres) are zoned for commercial (C-4) purposes that allows light industrial use. Of these 887.7 hectares, 139.3 hectares (344.2 acres) are vacant.

The City has a total of 638 lots in I-1, I-2, I-3, I-1S and C-4; of which, 60 lots remain vacant. The average hectare per parcel varies depending on the zoning, with the overall average of 1.4 hectares/parcel (3.5 acres) and vacant average of 2.12 hectares/parcel (5.2 acres). It can be deduced that there is higher demand for I-1, I-1S and C-4 lands with lot sizes ranging from 2.8 acres to 6.9 acres in the City of Kamloops.

There appears to be net decrease in the industrial land base (excluding C-4) between 1985 (818.1 ha) and 2005 (804.9 ha) of 13.2 ha (32.6 acres). This decrease in net industrial land is discouraging even though the new industrial park of Iron Mask (52.9 hectares) has since been added. The loss in I-1, I-2, I-3 and I-1S lands could be as a result of rezoning to more commercial purposes (this is particularly true for Southgate).

- **To identify private sector demand for industrial land.**

The allocation of the location of future space is a function of industrial land availability more than any other factor. Communities that have the most supply of industrial land will capture the majority share of future industrial development.

The empirical survey findings, as reported by city planners and developers, indicate that the City of Kamloops has to plan 81 to 162 hectares (200- 400 acres) of industrial land in the next 5-10 years to meet expected demands.

There are barriers (topography, access, economic class, and perception) to developing certain areas, particularly in North Kamloops.

Kamloops needs to be strategic in its thinking and planning to target and recruit specific industry that will benefit from the location of the City and the accessibility of Western North American markets. The stakeholders indicated that the growth in Kamloops will

continue on its chosen path unless a large external factor, for example an Intermodal Rail Facility, is located here.

- **To provide City of Kamloops administration staff with accurate and up to date information on the land availability and rate of absorption for future community planning.**

Through the calculations and analysis of vacant and occupied land, as well as the stakeholder surveys, it is difficult to conclude exactly what the City of Kamloops should do to address the issue of adequate supply of industrial land for the future. The City of Kamloops appears to have sufficient supply of vacant industrial land (at 0.6% annual absorption rate, or 4.97 hectares per year) until the year 2029. However, it does not necessarily mean the City has enough of the desired type of vacant land, since some of the parcels may need to be rezoned, location may be a factor, parcel sizes may be unsuitable, accessibility and amenities may be inappropriate, or the parcels may be limited by topography.

It is also necessary to match supply of industry land with population growth. As indicated by employment density calculations, Kamloops will have to add 215.5 hectares by 2020. Since relative uptake varies by zoning, it appears that I-1 and C-4 are in greatest demand. I-1S and I-2 may have lower uptake for a number of reasons, including where the parcels are located (airport), parcel size (average size of the vacant lots are 3.4 and 2.8 ha), and topography since some of the I-2 (Campbell Creek East and Iron Mask) lots have slopes greater than 25%.

A good level of ready-to-use inventory of the right types of parcels needs to be determined by the planners and developers for each of the industrial zonings. Parcel sizes ranging from 0.3 ha (0.7 acres) to 1.5 ha (3.7 acres) are in high demand and have a relatively higher demand than parcel sizes greater than 2.0 ha (4.9 acres). This high uptake is particularly true for C-4 zones where there are a total of 323 parcels, but only 13 remain vacant. The vacancy rate for these parcels is 21.6% while the vacancy rate for parcels greater than 2.0 ha is 36%. In the future, City planners should allocate land and design parcel size to industrial zones reflecting these findings.

The challenge for future planning and zoning of industrial land in Kamloops is daunting since most of the demand is in South Kamloops for both industrial and residential development and these two uses are not always compatible. If Kamloops wants to expand the industrial parks at the Airport, Rayleigh, Heffley, and to the west of the Airport, improved highway access and services need to be developed. Kamloops should seriously consider the possibility of developing the Afton Mine site for industrial use since it was mentioned several times as a potential future development area during the stakeholder survey.

Summary of Recommendations:

1. The City of Kamloops should develop a vision and prepare a long term Industrial Land Use Strategic Development Plan to direct industrial development and to attract industrial based employment growth in the City.
2. The City should develop appropriate infrastructure, services and allocation of industrial space that will be sufficient to accommodate the demand over the next 50 years.

3. The City should target key industries in the Lower Mainland, Northern British Columbia, the Western Provinces and Northwest Washington to attract them to relocate to the City. Therefore, the City should create an appropriate environment to attract such industry to Kamloops.
4. The City should prepare a detailed industry profile, not only on what types of companies have located in Kamloops in the last 20 years, but what type of company will be a natural fit to take advantage of the existing transportation infrastructure and quality of life the City has to offer.
5. From the survey, it was evident that the City should target light value-added (wood, metals, plastics, recycling, etc.) industry, warehousing and distribution. After the airport expands, secondary and tertiary related air transport companies should also be targeted.
6. Develop a live industrial and commercial lands database that is automatically updated to indicate supply industrial lands in Kamloops.
7. The uptake of industrial land, as determined in this report, needs to be combined with the information collected when companies search the area for potential sites, but don't find appropriate industrial land for their needs. This will allow the planners and developers to be pro-active in providing and designing industrial parks.

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Area Unit Conversions

To convert hectares to acres - multiply hectare value by 2.4711

To convert acres to hectares - divide the acres value by 2.4711

1 hectares = 10,000 m²

1 hectares = 2.4711 acres

1 acre = 4,046.9 m²

1.0 Introduction

In order to promote economic development, create jobs and maintain levels of employment comparable to regional and national levels, it is important for communities to have land available for development to attract leading edge manufacturing and service industries. Land properly suited for industrial development has good transportation access, a range of utilities available, minimal environmental concerns, and limited site-topography constraints. In order to compete, communities have to set aside a reserve of industrial land to ensure that a variety of options are available to meet specific industry requirements. Venture Kamloops, the Economic Development Agency of the City of Kamloops, was interested in conducting an economic profile on the supply and demand for vacant land, specifically, land zoned C-4,I-1, I-2, I-3, and I-1S within the City of Kamloops, British Columbia. It is important for communities to plan and estimate the amount of industrial land required to support job growth and economic expansion and to keep account of under-utilized or mis-utilised industrial lands.

1.1 Project Objectives

The objectives of this study were as follows:

- To identify existing parcels of land suitable for various industrial uses, including warehousing and storage and light and heavy manufacturing.
- To identify private sector demand for industrial land.
- To provide City of Kamloops administration staff with accurate and up to date information on the land availability and rate of absorption for future community planning.

2.0 Literature Review

This is not a wide or extensive literature review, but rather an applied review of literature of studies directed by City of Kamloops relating to availability, land use and development plans carried in relation to industrial land use planning. The literature reviewed was made available by Venture Kamloops to provide background to this study, for the purposes of establishing trends, and to track absorption of industrial lands since 1985.

- City of Kamloops (February, 1985). ***Community Profiles: Industrial Land Availability and Land Use.***

This study was made available by the City Planning department. The study and results were not presented in any particular order, and there was no description as to the purpose or the methodology used to develop the information on the total and vacant industrial land in the City of Kamloops. The data presented can be summarized as follows:

Table 1: Community Profiles: Industrial Land Availability and Land Use, 1985

Industrial Park	Total Land Area		Total Vacant Area		No. of Properties
	Hectares	Acres	Hectares	Acers	
Southgate	145.63	364.08	21.16	52.90	107
Campbell Creek	226.29	565.74	141.86	354.67	41
Versatile/Michel	95.62	239.05	24.43	61.08	39
West Trans Highway/South Kamloops	264.94	662.37	261.75	654.38	35
Valleyview	16.19	40.48	0.57	1.44	13
Balco	28.9	72.25	0.72	1.8	3
Mission Flats	184.32	460.81	6.92	17.32	39
North Shore/Ord Rd.	111.59	278.99	24.62	61.56	50
City Total	1073.48	2683.77	482.03	1205.15	327

- City of Kamloops (June, 1988). ***Vacant Industrial Land Use by Area and Zone.***

A one page summary sheet was found in the files at City Planning department. It summarizes vacant industrial land by area and zones as follows:

Table 2: Vacant Industrial Land Use by Area and Zone, 1988

Vacant Industrial Land by Area		Vacant Industrial Land by Zone	
Industrial Park	Hectares	Zone	Hectares
Southgate	21.2	General Urban Reserve	287
Campbell Creek	137.5	I-1 (Light Industrial)	24.4
Versatile/Lac Le Jeune Rd.	279.6	I-1R (Light Industrial Restricted)	3.2
Valleyview	.6	I-1L (Light Industrial Limited)	13.5
Balco Lands	.7	I-2 (General Industrial)	127.5
Mission Flats	6.4	I-2A (Industrial)	9.8
Halston/Ord Road	24.6	I-3 (Heavy Industrial)	6.8
Total Vacant Land		472.2	

- Urban Systems (September, 2002). ***City of Kamloops: Analysis of Vacant Industrial Land.***

The purpose of this study was to identify vacant land zoned for industrial uses. The study reported that the City of Kamloops has in total 809 ha of land zoned for industrial use of which 104 ha is vacant. This study only looked at industrial zonings of I-1, I-2 and I-3 in the 8 industrial parks in the City of Kamloops. The eight industrial parks assessed for vacant land were:

1. Bowers Industrial Land (Iron Mask)
2. Versatile Industrial Land
3. Southgate Industrial Land
4. Valleyview Industrial Land
5. Campbell Creek West Industrial Land
6. Campbell Creek East/Lafarge Industrial Land
7. Mission Flats Industrial Land
8. Airport Industrial Land
9. Others

Vacant industrial land parcels were identified by using geo-referenced British Columbia Assessment Authority data and then cross referencing this data with the City of Kamloops zoning maps. Then these maps were overlaid onto air photos and vacant properties were also verified. A slope analysis was carried out on vacant properties and land with slopes greater than 25% were classified as unsuitable for industrial land development. It was concluded that, of the 104 ha of vacant land, only 78.4 ha is developable for industrial purposes due to slope, accessibility, and servicing constraints. The following table summarizes total land zoned for industrial use and vacant areas by industrial parks.

Table 3: City of Kamloops - Analysis of Vacant Industrial Land, 2002

Area	Total Area (ha)	Vacant Area (ha)	% Vacant	Total # of Parcels	# Vacant Parcel
Bowers	10.6	6.3	59%	31	15
Versatile	119.1	6.0	5%	43	3
Southgate	116.3	9.5	8%	106	7
Valleyview	19.5	2.4	12%	16	1
Campbell Creek West	71.8	22.9	32%	32	16
Campbell Creek East	165.4	2.9	2%	35	4
Mission Flats	185.3	13.7	7%	37	18
Airport	57.7	36.2	63%	5	3
Other	63.0	3.6	6%	33	5
Total	808.7	103.5	13%	338	72

- Urban Systems (2002). Kamloops North Shore Business Improvement Association. ***Kamloops Airport Area Land Use and Development Plan.***

The aim of this plan is to facilitate industrial and commercial development in Kamloops Airport Lands and surrounding Tranquille lands. The sizes of these lands are approximately 330 ha and are fully serviced by water, sanitary sewer and storm drainage. Existing zoning allows for airport related services/ businesses and light industrial, service commercial, heavy industry and residential. The study also identifies land base, infrastructure capacity, flood plain and environmental issues that may effect development of the area. The second part of the study lays out a land use plan, proposed zoning and implementation strategy to direct future development of the Airport and Tranquille area.

- True Consulting Group (2001). The City of Kamloops and University College of the Cariboo. ***McGill Corridor/Southgate Project – Concept Plan.***

This document is a land use and design concept plan for McGill Road and Southgate Industrial Park. The Southgate Industrial Park was originally planned as a phased subdivision in the 1970s. The park is fully serviced by storm drainage, water, sewer, street lighting and landscaping and the park is heavily subscribed to and is close to full occupancy. The plan reviews current zoning and patterns of land use. Out of the total 234 hectares considered, 118 hectares is designated for light industrial. A new concept plan is recommended. It proposes an alternative land use distribution in which light industrial is readjusted from 118 ha to 57 ha. This reduction is to accommodate the new Technology Park which will accommodate high-tech offices and manufacturing activities. The following table highlights the recommended changes to the exiting land use.

Table 4: McGill Corridor/Southgate Project – Concept Plan, 2001

Land Use	Existing		Concept Plan	
	Area (ha)	%	Area (ha)	%
Retail	19	8%	28	12%
Recreation	12	5%	12	5%
Technology Park			51	22%
Mixed Use			7	3%
Light Industrial	118	50%	57	24%
Residential	14	6%	14	6%
Campus Core	46	20%	40	17%
Public Use/Open Space	25	11%	25	11%
Total	234	100%	234	100%

The implementation strategy recommends amendments to KamPlan and to zoning by-laws to accommodate readjustment recommended in the concept plan.

3.0 Industrial Land Use Defined

For the purposes of this study, the following zones as defined in the City of Kamloops Zoning By-Law NO. 5-1-2001 regulations were considered as industrial land use (see Map A indicating all C-4, I-1S, I-1, I-2 and I-3 zoned land in Kamloops):

- C-4 (Service Commercial) Zone – the permitted use in this zone “is to provide for commercial uses which have a repair, maintenance, service or distribution component or are small scale manufacturing uses.” These commercial developments have “large outdoor areas designated for storage, handling and servicing of material, goods and equipment.” Small scale manufacturing which does not produce smoke, noise, vibrations, glare, noxious fumes or electrical interference can locate in this zone. The types of business allowed in this zone are clothing and garment, electrical product, fabrication, leather goods, non-metallic products, and wood products.
- I-1S (Industrial Park) Zone – this zone allows for an industrial park consisting of light industry and related commercial uses. These industrial parks have high level of site services, landscaping and design. Permitted uses include auto body repair, automobile sales and rentals, cartage, hauling, moving and storage, commercial printing and publishing, warehouse and storage, retail sales of building materials and home improvements, u-brew operations, transportation depots, warehousing, wholesale distribution and offices associated with construction and engineering.
- I-1 (light Industrial) – the purpose and permitted uses in this zone are similar to I-1S. Permitted industrial uses may include fabrication, assembly, and servicing of finished products, packaging and wholesale distribution.
- I-2 (General Industrial) – these industrial zones are located adjacent to a highway corridor and allow for full range of industrial uses such as manufacturing of prepared materials, of finished products or parts; including processing, fabrication, assembly, treatment, packaging, incidental storage and wholesale distribution.
- I-3 (heavy Industrial) – the City of Kamloops zoning by-law No. 5-12001 in I-3 zones allows for industrial functions that are “engaged in the storage, processing or manufacturing of materials or products predominantly from extracted, bulk, or raw materials, or a use engaged in storage of, or manufacturing processes using flammable or explosive material, or storage or manufacturing processes that potentially involve hazardous or commonly recognized offensive conditions but specifically excluding the storage processing or handling of special waste.”

4.0 Stakeholders Survey

A survey tool was developed to gather qualitative and quantitative information on trends in industrial land use, as well as the supply and demand for industrial land in Kamloops (See Appendix “A”). The following categories of stakeholders, defined in table 5, were surveyed and interviewed:

Table 5: Survey Methodology

Sector	Stakeholders	Information
Planners	<ul style="list-style-type: none"> • Planning Department • Mayor and City Administration • Manager of Client Services • Development Services • Venture Kamloops 	<ul style="list-style-type: none"> ➤ Process of planning and zoning of industrial lands ➤ Overall vision for industrial land use planning ➤ Tracking and database for supply and demand of industrial land ➤ Land issues for future planning and rezoning requirements ➤ Issues of land limitations according to growth ➤ Cost of development and planning
Developers	<ul style="list-style-type: none"> • Kamloops and District Real Estate Association • Commercial/ Industrial Real Estate Agents • Chamber of Commerce & BIA 	<ul style="list-style-type: none"> ➤ Profile of private sector demand ➤ Trends and issues in the industry ➤ Cost of land ➤ Marketing methods (SWOT analysis) ➤ Community competitiveness options ➤ Location, size, etc.
Consumers	<ul style="list-style-type: none"> • Business Owners of Industrial Sectors I1, I2, I3 • Stakeholders in Industrial Parks 	<ul style="list-style-type: none"> ➤ Location decisions ➤ Land or lease costs ➤ Ownership ➤ Site development issues ➤ Needs of the industry in terms of supply and demand of industrial land ➤ Trends and issues in the industry ➤ Expansion or relocation plans

4.1 Survey Findings

In total, 34 identified stakeholders were contacted and 18 were interviewed face to face or on the telephone (see References for list of interviewees). Interviews in each of the stakeholder groups were stopped once the information supplied became repetitive. The results are presented as given by the respondents, and represent their expert knowledge to the questions posed. There may be discrepancies between the survey results and findings made during ground truthing.

Kamloops City Planners

The City of Kamloops wants to ensure an adequate supply of industrial land for the next 15-20 years and wants to plan for a 50 year supply. There is an immediate need to supply land for light industrial development. Heavy industry is difficult to pre-zone for since it has particular needs with potentially heavy environmental and social impacts; and, as a result, is dealt with on a parcel-by-parcel basis or as identified by industry interested in locating to Kamloops.

The City has identified potential sites for expanding the industrial land supply, which include the areas of Rayleigh, Heffley Creek and the Airport. Industrial parks, such as Campbell Creek and Southgate, are reaching full occupancy, while Versatile and Iron Mask are still in an early phases of subscription.

Kamloops is in a good position to compete with Calgary, Vancouver, and North West Washington state because of the low cost of land, lower population density, lower cost of living and housing. The city is located in a transportation hub; a cross-roads of 3 main highways, 2 main railways, and an international airport that offers regional service. This hub allows the City and its businesses to have ready access to major markets.

The biggest challenge for Kamloops to overcome and reach its full potential is how the city is perceived. Generally it is believed that Kamloops does not offer a wide variety of social and cultural amenities, it has a low diversity in employment opportunities for second incomes, it has a rugged and dry landscape, “blue collar” attitude and access to outdoor activities that are no closer than other cities in the Central Interior. It was also reported that there is poor brand awareness of the City and people are not aware what Kamloops has to offer. It was recommended that Kamloops prepare a marketing package to brand Kamloops.

The City wants to attract diverse small scale manufacturing and value-added wood companies; however, they recognize the fact that Kamloops’ topography does not lend itself easily for industrial development. Industrial land supply and development is also affected by the Agricultural Land Reserve and mining claims. It is estimated that the city needs to further develop at least 300 acres of industrial land to meet expected demand in the next 10 years.

Kamloops Developers

Kamloops commercial real estate companies reported that there is a limited supply of raw available land for industrial development purposes as well as a limited selection of various sizes of developed parcels with buildings. Topography was mentioned as the key barrier in the provision of adequate industrial land. According to the developers, Southgate is the largest industrial park in Kamloops, but it is near capacity; Versatile has few suitable sites available; and further development in South West Kamloops is affected by mining claims. Overall, however, South West Kamloops is considered to be the most desirable location for industry wishing to locate in Kamloops.

South West Kamloops needs 1 to 5 acre parcels of land with at least 50 acres of available inventory. Industries looking to locate in Kamloops want good visibility, access to highways, serviced land, and levelled parcels to control improvement costs. Kamloops is a strategic location for industry because it's on the Trans-Canada and is proximal to the Lower Mainland and Alberta markets. This group believes that the City of Kamloops should develop 200-400 acres of industrial land in the next 5-10 years to meet expected demands.

North Kamloops and the Airport Industrial Park are not in high demand by general industry at this time because the access into industrial sites in North Kamloops from the major highways is along tertiary roads (e.g. Ord Road has rural classification). Once the Airport extends its runway and expands its service, there is expected growth in the industry sectors that rely on air cargo (e.g. Purolator, UPS, etc.) and air related service industries.

The City of Kamloops has competitive land costs as compared to larger city centres, where the average price is \$200,000 per acre for I-1 and C4 zoned is \$250,000 per acre. These prices have exploded due to the scarcity of industrial land.

A natural fit industry for Kamloops would be one based on transportation and distribution; this would be encouraged if an Intermodal facility were to develop in Kamloops.

The commercial real-estate agencies and developers reported an improvement in the City of Kamloops' attitude towards promoting and encouraging industrial and commercial development, but believe it still falls short of what is needed. The realtors also indicated that not only does Kamloops have limited supply, but they really did not know how much is readily available because there is land in private holding that can be developed for industrial purposes.

This group believes that the Afton Mine site should be explored for potential development.

Kamloops Manufacturers/Consumers

Location decisions by industry are based on land availability, proximity to highways, distance from residential development, purchase opportunities and land costs. Kamloops was chosen by several of the manufacturers due to the proximity to material suppliers and customers. Their main purpose of business is to supply components to the pulp mill, saw mills and the mining industry (KPM, Moly-Cop, Beaver Manufacturing,

HPM, BC Bearing, etc.). Access to transportation infrastructure is very important and means that customers in Vancouver are easily accessible.

Industry reported that the City of Kamloops does not have adequate supply of appropriate industrial land. They believe that the airport is in-accessible, Iron Mask is too far out of town, Southgate is expensive and too close to residential areas, and they are concerned that residential development is encroaching on industrial lands.

For industry, Kamloops offers transportation infrastructure, lower land rents than Vancouver, and enables employees to live affordably. Opportunities for the City include expanding the airport runway to increase traffic, developing additional industrial land surrounding the Airport, developing Afton Mines for industrial use, and an Intermodal transportation facility.

Kamloops Indian Band

Kamloops Indian Band has 120 acres at its Mount Paul Industrial Park. The park is 30 years old and is serviced by electricity and water; the remainder of the services are the tenant's responsibility. The Industrial Park has 228 tenants, while 70 acres remain vacant. The Kamloops Indian Band is developing a 50 year plan that includes designing a 190 acre Industrial Park on IR#1 north of the Halston interchange. Indications are that the original Industrial Park will relocate itself to the Halston site as Mount Paul matures and highest and best use transitions to higher commercial and eventually residential. The plan is to encourage light and general industry to locate at the new site.

Thompson Nicola Regional District

According to the Regional Growth Strategy, the TNRD policy is to encourage industrial development within the City of Kamloops' boundaries. However, if individuals or companies want to locate within the TNRD, they can. Basically, communities situated within the TNRD control and regulate industrial development according to their own economic development plans.

Kamloops Airport

The Kamloops Airport has I2, I1S and T2 lands available for lease development and are managed by the Kamloops Airport Society. There has been a slow uptake of these lands due to perceptions on the land lease arrangements; however, these concerns have been alleviated by a "No Disturbance" agreement between the Airport and Transport Canada. There was concern, stated by some of the Real Estate Agents and Industry, that access to the Airport lands was difficult. This will be greatly improved if Ord Street is upgraded and the Singh Street Bridge goes ahead.

A runway extension is under development, which will expand airport services and give rise to secondary and tertiary industry. According to the 10-Year YKA Development Plan (2002), land adjacent to the air side system is reserved for aviation dedicated commercial development, and lands further away are allocated for aviation support development. Four aviation related activities are proposed in this plan: 1) A Fixed Base Operators Facility. This facility will service private and corporate aircraft by providing terminal facilities, fuelling, cleaning, parking and light maintenance; 2) Air Cargo facility; 3) Aircraft maintenance; 4) Other commercial development that are airport compatible.

These lands generally attract airport related companies and activities, but are not necessarily restricted to this. The Airport Society is not actively promoting its land, but are willing to work with Developers who may be interested.

Kelowna and Okanagan

The Kelowna Economic Development Commission was contacted. Their information is five years old and they found it difficult to keep their database up to date. Their information can be summarized as follows:

- Industrial development in Kelowna is centralized in three main corridors – north of the downtown core, along Highway 97, and in the northern sector along Beaver Lake Road. Serviced industrial lands sell for \$150,000 per acre. Approximately 3,000 acres are zoned industrial land, of which 1,405 acres is vacant.
- Westbank First Nation (WFN) holds 6% of the Central Okanagan's total industrial zoned lands. WFN has in total 5,400 acres of which 80% is vacant and available for residential, commercial and industrial development.
- Future plans for industrial development in Lake Country include a fully serviced 495 acre industrial area at the South East end, along the City of Kelowna's municipal boundary. Two industrial parks are also proposed along Glenmore Road and the second industrial park is proposed near the new 60 acre industrial development in the Beaver Lake Road area.

Greater Vancouver Regional District

According to the *“Commercial and Industrial Real Estate Development Trends and Forecast – For the Greater Vancouver Region 1991 – 2021”* prepared by Royal LePage Advisors INC, in 2003 the industrial market is forecast to grow by 4 million square feet (371,600 m² / 92 acres) per year reflecting similar trends for 1991 to 2001. A growth rate of 2.2% per year is forecasted for the next 20 year period. As the inner urban areas, such as Vancouver and Burnaby, are built out, and due to infrastructure improvements and as highest and best use are redefined, the majority of new industrial development is expected to locate in the Fraser Valley, primarily Surrey. Surrey/White Rock are estimated to absorb 40% (33 million square feet) of forecast industrial development, while Vancouver will experience a net loss of 600,000 square feet of industrial floor space as industrial lands are redeveloped to alternative land use. The study reports that “the allocation of the location of future space is a function of industrial land availability more than any other factor.” Since Surrey has the most supply of industrial land, it is expected that it will capture the majority share of future industrial development.

5.0 Municipal Services in Industrial Parks

The City of Kamloops is responsible for supplying a basic level of municipal services, including water, sewer and storm drainage. Municipal services in the industrial parks are described in the table 6 below.

Table 6: Municipal Services in Industrial Parks

Industrial Parks	Water	Sewer	Storm Drainage	Rail Access	3 phased power
Campbell East	√	Some areas not serviced *1	√	√ north of railway lines	√
Campbell West	√	√	√*2	√ dedication for a spur line	√
Valleyview	√	√			√
Downtown	√	√	√	√	√
North Shore	√	√	Some areas serviced	-	√
Mission Flats	√	-	√	√ Weyerhaeuser Pulp Mill	√
Southgate	√	√	√	-	√
Versatile	√	√	√	-	√
Iron Mask	√	-		-	√
Halston/Ord Rd	√	√	Some areas serviced	-	√
Brockelhurst	√	√		-	√
Airport	√	Will require		√	√
Westsyde	√	√	√		√
Rayleigh Hefley Creek	Private Water	Out of City service area		√ Tolko Mill	√

*1 areas north of CP rail lines are not serviced, other areas rely on pump hole system

* 2Storm Water Management Plan is in place due to the industrial parks vicinity to the South Thompson River

Rail access is defined as the presence of a rail spur or a siding. A rail spur is a branch line that leads to sidings at businesses where the cars are loaded or unloaded. The sidings are generally owned by the business, but are maintained by the railways.

6.0 Supply of Vacant Industrial Land

An inventory of vacant land in the following industrial parks was carried out with zoning classification of I-1S, I-1, I-2, I-3 and C-4:

- Campbell Creek East/Lafarge Industrial Land
- Campbell Creek West/Gateway Industrial land
- Valleyview Industrial Land
- Downtown
- North Shore
- Mission Flats Industrial Land
- Southgate Industrial Land
- Versatile Industrial Land
- Iron Mask
- Halston
- Brockelhurst
- Airport Industrial Land
- Raleigh
- Westsyde

Maps were prepared and provided by the City of Kamloops Planning Department on all lands with the defined zoning classifications including lot size in square meters for I-1S, I-1, I-2, I-3 and C-4. A second set of maps were provided on industrial and C-4 lands that are classified vacant according to the British Columbia Assessment Authority (BCAA). Lands with improvements less than a \$1.00 are classified vacant by BCAA. In order to truly assess vacancy, ground truthing was conducted for each of the industrial areas. Those parcels that were identified as BCAA vacant were checked and photographed to confirm vacancy and availability. The C-4 zoning showed the greatest discrepancies between the BCAA vacancy and utilization. These lands may not have any building improvements; however, they were in use, predominantly as vehicle inventory storage, machine yards, parts yards and parking. These lands, as well as those for I-1, I-2, I-3 and I-1S, were not identified as 'truly' vacant and therefore removed from the inventory of vacant land.

Some of the BCAA classified vacant lands are privately held, and are reserved for the land owner's use. Therefore, they may not necessarily be available; however, we have shown these lands as being vacant unless we know these lands will not be made available in the near future.

6.1 Total and Vacant Industrial and Commercial (C4) Lands

The City of Kamloops has 887.7 hectares of land zoned for industrial use of which 82.9 hectares are zoned for commercial (C-4) purposes that allows light industrial use. Of these 887.7 hectares, 15.6% (139.3 hectares) is vacant. The highest percentage of vacant land area and number of lots is zoned I-2, while the lowest percentage of vacant land area is I-3 (See table 7 and 8).

Table 7: Total Land Summary by Zone Classification, 2005

Zones	Total Hectares	Total Acres	% Of Total	Total No.Lots	% of Total	Average Ha/Parcel	Average Ac/Parcel
			Land Area		No. Lots		
I-1	118	291.5	13%	103	16%	1.1	2.8
I-2	168.7	416.8	19%	80	13%	2.1	5.2
I-3	352.7	871.2	40%	20	3%	17.6	43.6
I-1S	165.4	408.5	19%	112	18%	1.5	3.6
C-4	82.9	204.7	9%	323	51%	0.3	0.6
Total	887.7	2,192.70	100%	638	100%	-	-

Table 8: Ground Truth Vacant Land Summary by Zone Classification, 2005

Zones	Total	Total	% Of Total	Total	% of Total	Average	Average
	Hectares	Acres	Land Area	No.Lots	No. Lots	Ha/Parcel	Ac/Parcel
I-1	11.8	29	8%	11	18%	1.1	2.6
I-2	70.6	174.3	51%	21	35%	3.4	8.3
I-3	4.3	10.6	3%	2	3%	2.2	5.3
I-1S	36.8	91	27%	13	22%	2.8	7
C-4	15.1	37.4	11%	13	22%	1.2	2.9
Total	138.6	324.4	100%	60	100%	-	-

Industrial I-3 zoned land is taken up by well established companies involved in heavy industry, such as tank farms, major saw mills, pulp mills and cement processors. These industries have particular land and service requirements and take up 40% (352.7 ha) of the total 887.7 ha of industrial lands in the City of Kamloops. This skews the percentage of total land for the other zones. Since I-3 land is usually zoned as required, these lands are difficult to zone for ahead of time; however, potential lands must be identified for heavy industry use. When I-3 numbers are removed from the total calculations (see Table 9), the percentage of total I-1 land is 22%, I-2 is 32%, I-1S is 31% and C4 is 15%.

Table 9: Percentage of Land Excluding I-3 Zoned Land

Zones	% Of Total Land Area	% Of Total Vacant Land Area	% of Total No. Lots	% of Total Vacant No. Lots
I-1	22%	9%	17%	19%
I-2	32%	53%	13%	36%
I-1S	31%	27%	18%	22%
C-4	15%	11%	52%	23%
Total	100%	100%	100%	100%

To understand Table 9, compare the differences in percentage of total land to the percentage of vacant land (both area and number of lots). The difference between the two numbers indicates relative demand.

Analysis of these numbers indicates that the demand for I-1 and C-4, and to a lesser extent I-1S, is higher than the demand for I-2. Industrial I-2 zoned lands represent approximately one third of the total industrial land, but over fifty percent of vacant land. Industrial I-2 land also has 13% of the total number of lots, but 36% of the number of vacant lots.

The low demand for I-2 zoned land could be for a number of reasons, such as the level of service, proximity to town and lot size. There is also the possibility that industry that requires I-2 zoned land is not attracted to Kamloops. The type of demand for light industry in Kamloops is reflective of North American trend to attract light industry, which should be compared to recent business start-ups.

Table 10: Vacant Lots and Size

Zones	Total # of Lots	Total # of Vacant Lots	% of Vacant Lots	Average size of Vacant Lot ha
I-1	103	11	19%	1.1
I-2	80	21	36%	3.4
I-3	20	2		2.2
I-1S	112	13	22%	2.8
C-4	323	14	24%	1.1
Total	638	61	100%	2.12 overall Average

Analyses from table 10 indicate that the average size of vacant lots in the City of Kamloops is 2.12 hectares. The I-2 industrial lands have 21 (36%) vacant lots, which is the largest vacancy rate. The average size of vacant lots in I-2 is 3.4 ha (8.4 acres). The vacancy rate for lots in I-1, I-2, I-1S and C-4 is between 19% and 24% with an average vacant lot size between 1.1 and 2.8 ha (2.8 and 6.91 acres). It can be deduced that there is higher demand for I-1, I-1S and C-4 lands with lot sizes ranging from 2.8 acres to 6.9 acres in the City of Kamloops. However, this needs to be combined with information collected by the Economic Development office. Table 11 and 12 display total and vacant land summary by industrial park and zone for 2005.

Table 11: Total Land Summary by Industrial Park and Zone Classification, 2005

Area	I1		I2		I3		I1S		C4	
	Ha.	No.Lots	Ha	No.Lots	Ha	No.Lots	Ha	No.Lots	Ha	No.Lots
Campbell East			102.3	30.0	63.0	2.0			0.8	1.0
Campbell			50.0	17.0			22.0	14.0	7.8	5.0
Valleyview	18.4	16.0							15.9	46.0
Downtown									12.8	142.0
North Shore									7.8	71.0
Mission Flats	13.3	27.0			176.7	6.0				
SouthGate							110.3	97.0	7.1	13.0
Versatile	70.5	38.0			47.0	3.0			10.7	17.0
Iron Mask	2.5	1.0	16.4	33.0						
Halston	9.3	15.0							9.2	11.0
Brockhurst	3.0	5.0								
Airport	0.9	1.0			21.5	2.0	33.2	2.0	8.0	12.0
Rayleigh					44.6	7.0			1.7	1.0
Westsyde									1.2	4.0
Total	117.9	103	168.7	80	352.8	20	165.5	113	83	323

Table 12: Ground Truth Vacant Land Summary by Industrial Park and Zone Classification, 2005

Area	I1		I2		I3		I1S		C4	
	Ha	No.Lots	Ha	No.Lots	Ha	No.Lots	Ha	No.Lots	Ha	No.Lots
Campbell East			54.6	4.0					0.8	1.0
Campbell			8.0	5.0			15.8	8.0	7.6	4.0
Valleyview	1.3	3.0								
Downtown										
North Shore									0.1	2.0
Mission Flats					4.3	2.0				
SouthGate							12.9	4.0	0.2	1.0
Versatile	8.7	4.0							0.6	2.0
Iron Mask			7.9	12.0						
Halston	0.8	2.0								
Brockhurst	0.1	1.0								
Airport	0.9	1.0					8.2	1.0	4.1	2.0
Rayleigh									1.7	1.0
Westsyde										
Total	11.8	11	70.5	21	4.3	2	36.9	13	15.1	13

The information collected in this study is displayed on maps, clearly showing land inventory and classification.

6.2 Comparative Analysis of Total Land and Vacant Land

Since commercial C-4 lands were not included in the studies of 1985, 1988, and 2002, they are examined separately in table 22 and are excluded from the comparative analysis by industrial parks.

Table 13: Absorption of Industrial Lands from 1985 -2005

	1985		1988		2002		2005	
	Total (ha)	Vacant (ha)	Total (ha)	Vacant (ha)	Total (ha)	Vacant (ha)	Total (ha)	Vacant (ha)
Industrial Parks								
Campbell Creek (E&W)	228.95	143.53	n/a	137.5	237.20	25.8	237.3	78.4
Valleyview	16.38	.58	n/a	.6	19.5	2.4	18.4	1.3
North Shore & Airport	112.90	24.91	n/a	29.6	57.7	36.2	67.90	10.0
Mission Flats	186.48	7.0	n/a	6.4	185.3	13.7	190.0	4.3
Southgate	147.34	21.40	n/a	21.2	116.3	9.5	110.3	13.2
Versatile	96.7	24.71	n/a	279.6	119.1	6.0	117.5	8.7
Iron Mask			n/a		10.6	6.3	18.9	7.9
Balco/Rayleigh	29.23	.72	n/a	.7			44.6	0
Other			n/a		63.0	3.6		
Total	818.1	222.9	n/a	472.2	808.7	103.5	804.9	123.5

Campbell Creek East and West (Maps 1,2)

Since 1985, 8.4 hectares has been added to these two industrial parks (See table 14 and Appendix B: Maps 1 and 2). The differences between the 2002 and 2005 numbers are due to the large parcel of I-2 land south of Dallas Drive (52.8 ha) not considered to be vacant in 2002 (likely due to slope greater than 25%). Otherwise, there is no net change in vacant land in this industrial park; however, there have been shifts in parcels available due to subdivision and leasing opportunities. Currently, Campbell Creek East and West have 237.3 ha of land zoned for industrial purposes of which 123.5 ha remain vacant. In these two parks, 152.3 ha are zoned for I-2, 63.0 ha for I-3 and 22.0 ha are classified for I-1S purposes. There are also 8.6 ha zoned for C-4 purposes of which 8.4 ha remain vacant.

Table 14: Campbell Creek East and West

	1985		1988		2002		2005	
	Total (ha)	Vacant (ha)	Total (ha)	Vacant (ha)	Total (ha)	Vacant (ha)	Total (ha)	Vacant (ha)
Industrial Parks								
Campbell Creek (E&W)	228.95	143.53	n/a	137.5	237.20	25.8	237.3	78.4
Total	818.1	222.9	n/a	472.2	808.7	103.5	804.9	123.5

Valleyview (Map 3)

As of 2005, Valleyview has 18.4 ha (16 lots) zoned for I-1 industrial of which only 1.3 ha (3 lots) remain vacant (See table 15 and Appendix B: Map 3). Valleyview also has 15.9

ha of C-4 lands which are fully subscribed to. It appears that some industrial land has been added since 1985. The difference in vacancy reported between 2002 and 2005 is that in the 2002 study the Commercial Logistics trailer yard at the west end is considered vacant, while the narrow strip between the Trans-Canada Highway and the South Thompson River to the East, is not vacant. This study reports the opposite. Otherwise, there is no significant overall differences in total available land between 1985 (0.58 ha) and 2005 (1.2 ha).

Table 15: Valleyview

	1985		1988		2002		2005	
	Total (ha)	Vacant (ha)	Total (ha)	Vacant (ha)	Total (ha)	Vacant (ha)	Total (ha)	Vacant (ha)
Industrial Parks	16.38	.58	n/a	.6	19.5	2.4	18.4	1.3
Valleyview	16.38	.58	n/a	.6	19.5	2.4	18.4	1.3
Total	818.1	222.9	n/a	472.2	808.7	103.5	804.9	123.5

North Shore and Airport (Map 5,10,11,12)

It is unclear what boundaries were used in the 1985 study to define the North Shore and Airport industrial areas; hence it is difficult to make comparisons with the 2005 information. However, looking at the 2002 Urban Systems maps for the Airport, the 26.5 ha parcel of I-1S north of the runway was reported vacant, but the 2005 BC Assessment Authority indicates that it is not vacant. This study also includes the industrial land located on Ord Road in its totals. In 2005, there are 67.90 ha of zoned industrial land of which 0.9 ha is designated for I-1, 21.5 ha for I-3, and 33.2 ha for I-1S. There are also 15.8 ha zoned for C-4 purposes. I-3 lands in this area are fully subscribed to, but 0.9 ha of I-1, 8.2 ha of I-1S and 4.2 ha of C-4 remain vacant (See table 16 and Appendix B: Maps 5, 10, 11 and 12).

Table 16: North Shore and Airport

	1985		1988		2002		2005	
	Total (ha)	Vacant (ha)	Total (ha)	Vacant (ha)	Total (ha)	Vacant (ha)	Total (ha)	Vacant (ha)
Industrial Parks	112.90	24.91	n/a	29.6	57.7	36.2	67.90	10.0
North Shore & Airport	112.90	24.91	n/a	29.6	57.7	36.2	67.90	10.0
Total	818.1	222.9	n/a	472.2	808.7	103.5	804.9	123.5

Mission Flats (Map 6)

Mission Flats has 190 ha of total industrial zoned lands in 2005 of which 13.3 ha are for I-1 and 176.7 ha are designated for I-3 use. In total, only 4.3 ha of I-3 remain vacant (See table 17 and Appendix B: Map 6). There has been no significant change since 1985, in either total land or vacant land in the Mission Flats industrial area. In 2006, the City of Kamloops is planning to re-locate the City Yard facility – this land (approximately 7 ha.) will then become available. There is currently 4.3 hectares of land available for industrial development.

Table 17: Mission Flats

	1985		1988		2002		2005	
	Total (ha)	Vacant (ha)	Total (ha)	Vacant (ha)	Total (ha)	Vacant (ha)	Total (ha)	Vacant (ha)
Industrial Parks	186.48	7.0	n/a	6.4	185.3	13.7	190.0	4.3
Mission Flats	818.1	222.9	n/a	472.2	808.7	103.5	804.9	123.5

Southgate Industrial Park (Map 7)

The total land in 1985 exceeds that of subsequent study years. There may be many reasons for this including: industrial park borders may have been redefined or land could have been removed through re-zoning as recommended in the McGill Corridor/Southgate Project – Concept Plan (2001) by True Consulting. Between 2002 and 1988, 11.7 hectares of land was absorbed, which represents a 55% reduction in vacant land.

The Urban System study in 2002 considered the 44,800 square meters of land at the end of McGill Road to be not vacant. Adjusting the numbers between 2002 and 2005 accordingly, 2005 has 8.7 ha vacant. Since this study included ground-truthing, actually comparing the 2002 maps with what we discovered to be truly vacant – there was no net change; the same land that was vacant in 2002, remains vacant in 2005. Therefore, in 2005, Southgate has 110.3 ha of I-1S zoned lands of which 12.9 ha remain vacant. It also has 7.1 ha of C-4 zones of which only 0.2 ha remain vacant. Southgate is over 30 years old and is close to reaching full subscription (See table 18 and Appendix B: Map 7).

Table 18: Southgate Industrial Park

	1985		1988		2002		2005	
	Total (ha)	Vacant (ha)	Total (ha)	Vacant (ha)	Total (ha)	Vacant (ha)	Total (ha)	Vacant (ha)
Industrial Parks	147.34	21.40	n/a	21.2	116.3	9.5	110.3	13.2
Southgate	818.1	222.9	n/a	472.2	808.7	103.5	804.9	123.5

Versatile (Map 8)

Versatile has 117.5 ha of industrial zoned land of which 70.5 is I-1 and 47.0 ha are designated I-3. I-3 has been fully absorbed by tank farms and 8.7 ha remain vacant in I-1. Versatile also has 10.7 ha of C-4 lands of which only 0.6 ha remain vacant (see table 19 and Appendix B for Map 8). Significant land was added to this Industrial Park between 1985 and 1988 (approximately 182 ha.) Since then, this park has experienced the greatest uptake of land. The 279.6 hectares vacant in 1988 was reduced to 8.7 by 2005. This area has also seen significant growth in residential and commercial development as well.

Between 2002 and 2005, two parcels of land have become available (ground-truthing indicated For-Sale signs). Otherwise, there are no significant changes between 2002 and 2005.

Table 19: Versatile

	1985		1988		2002		2005	
	Total (ha)	Vacant (ha)	Total (ha)	Vacant (ha)	Total (ha)	Vacant (ha)	Total (ha)	Vacant (ha)
Industrial Parks								
Versatile	96.7	24.71	n/a	279.6	119.1	6.0	117.5	8.7
Total	818.1	222.9	n/a	472.2	808.7	103.5	804.9	123.5

Iron Mask/Bowers (Map 9)

This park was developed after 1988, and has a total of 10.6 ha of industrial zoned land. The park was expanded between 2002 and 2005, with the addition of 8.3 ha. Currently, there is in total 18.9 ha of which 2.5 ha are designated for I-1 and 1.4 ha for I-2. There is no vacancy in I-1 zoned lands and only 7.9 ha remain vacant in I-2 (see table 20 and Appendix B: Map 9).

Table 20: Iron Mask

	1985		1988		2002		2005	
	Total (ha)	Vacant (ha)	Total (ha)	Vacant (ha)	Total (ha)	Vacant (ha)	Total (ha)	Vacant (ha)
Industrial Parks								
Iron Mask			n/a		10.6	6.3	18.9	7.9
Total	818.1	222.9	n/a	472.2	808.7	103.5	804.9	123.5

Rayleigh/Balco (Map 13, 15)

In 1985, a total 29.3 ha was zoned for industrial use, of which only 0.72 ha was indicated as vacant. This information was the same in 1988; unfortunately, the information was not clearly presented in 2002; in 2005, 44.6 ha is zoned for I-3 industrial use and there is no unused or vacant land available (see table 21 and Appendix B: Maps 13 and 15).

Table 21: Rayleigh/Balco

	1985		1988		2002		2005	
	Total (ha)	Vacant (ha)	Total (ha)	Vacant (ha)	Total (ha)	Vacant (ha)	Total (ha)	Vacant (ha)
Industrial Parks								
Balco/Rayleigh	29.23	.72	n/a	.7			44.6	0
Total	818.1	222.9	n/a	472.2	808.7	103.5	804.9	123.5

Commercial C-4 Zoning Maps 4 (Downtown) and 14 (Westside)

In this study, commercial C-4 zoning was considered because it allows for small scale manufacturing and distribution. Most of the C-4 in the Downtown, North Shore, Valleyview, Southgate, and Versatile areas are developed at a higher density than other areas. Many of these lots were defined as vacant by BC Assessment Authority while in actual fact they were not vacant when checked with ground truthing. These lots did not carry any improvements, but were used as parking, equipment and inventory storage. The City of Kamloops has in total 84 ha of lands zoned for commercial C-4 of which 15.1 remains vacant (see table 22 and Appendix B: Maps 4 and 14).

Table 22: Commercial C-4 Downtown and Westsyde

Areas	Total C-4 (ha)	Vacant C-4 (ha)
Campbell East	0.8	0.8
Campbell	7.8	7.6
Valleyview	15.9	0
Downtown	12.8	0
North Shore	7.8	0.1
Southgate	7.1	0.2
Versatile	10.7	0.6
Halston	9.2	0
Airport	8.0	4.1
Rayleigh	1.7	1.7
Westsyde	1.2	0
Total	83.0	15.1 (18%)

7.0 Absorption of Industrial Land

Demand for industrial land is determined and influenced by many factors. Therefore, it is always difficult to determine adequate industrial land stocks in a community. The most relevant and useful method is to rely on the projection of recent trends or to establish average occupancy and vacancy rates per year over a 15 to 20 year period. This method for determining industrial land demand is fairly accurate in estimating an aggregate industrial land stock in excess of 15 years' supply, as well as the need to maintain stocks of a variety of parcel sizes and zoning types.

There was no long term or consistently developed data available for the City of Kamloops; therefore absorption rate of industrial lands in the City of Kamloops was determined by using three different methods. Description of the methods, absorption rate calculations and results are as follows.

Method I – Trends in Occupied vs. Vacant Industrial Lands

In Method I, various calculations were carried out using data from 1985, 2002, and 2005 on land zoned for industrial development and vacant land in Kamloops industrial parks (the information from 1988 was excluded since it did not contain total lands). The data from 1985 was compared to data from 2005 to calculate the rate of absorption by measuring the percentage change over the 20 year period. Since the 1985 data did not include C-4 zoned land, these were removed from the 2005 totals. The calculations show that the industrial lands in the City of Kamloops have been consumed at a rate of 0.6% (4.97 ha) per year since 1985 (see table 23). Usually an assumption is made when measuring absorption rates that a comparison between past and projected rates of growth indicates that, to a large degree, industrial space will increase much as it has in the past.

Table 23: Method I Absorption Rate

	1985	2002	2005
Land Occupied	595.2 ha	703.2 ha	681.4 ha
Land Vacant	222.9 ha	103.5 ha	123.5 ha
Total	818.1 ha	808.7 ha	804.9 ha
% Occupied	73%	87%	85%
% Vacant	27%	13%	15%

If this rate of absorption (0.6% per year) continues, then the City of Kamloops will run out of its 123.5 ha of vacant industrial land in 24.8 years (year 2029). However this vacant land may have site limitations based on parcel size or topography. Most, but not all, of the industrial land identified as vacant in the Urban Systems 2002 study still remains vacant. They reported 104 ha of vacant land of which only 78.4 was suitable for development and 25.6 ha not suitable due to slopes greater than 25%.

Method II – Trends in Business Licenses Granted

In method II the absorption rate of industrial land in Kamloops was determined by examining the number of businesses established annually (business licenses granted by

the City of Kamloops per year) and land lease agreements starting in 1985 for each of the industrial parks. The rate of absorption was also itemized for I-1, I-2, and I-3 zonings. However, the business licenses are not categorized by industrial zones rather they are categorized by business type. Also, the City of Kamloops implemented a new system of administering and tracking business licenses in 1998 and, therefore, data prior to 1998 on business licenses was not accessible. As a result, 1998 to 2004 data was used to calculate the absorption rate.

The City of Kamloops divides its business licenses into 35 categories. The categories of businesses that matched the permitted uses under C-4, I-1S, I-1, I-2 and I-3 were separated from other business license categories and were assumed to be located in industrial zones considered in this study. The number of occupied industrial parcels as identified through the City's zoning maps of C-4 and industrial lands was 578; and the number of business licenses as of 2004 was 520. Table 24 indicates the categories and number of business licenses that match permitted uses from 1998 to 2004 and compares it to the number of total business licenses issued.

Table 24: Method II Business Licenses

Business Licences Category	Sub Category	1998	1999	2000	2001	2002	2003	2004
Auto vehicle sales, rental services	Sales Rental	30	30	31	26	24	25	27
	Sales Rental Services	24	22	24	21	23	24	24
	Snowmobiles, boats, motorbikes	7	7	7	10	8	9	9
Equipment Sales, Rental, Services	Heavy Industrial	10	10	11	12	12	11	11
	Light Industrial and farm	15	14	15	14	12	13	15
	Light commercial	20	15	15	13	17	17	18
Fabricating		63	58	59	60	58	55	56
Fuel Sales and Services		43	40	39	40	40	40	40
Manufacturing Plants	Pulp Mill, refinery, cement	2	2	2	2	2	2	2
	Sawmills	4	4	4	4	5	5	4
	Others	13	12	13	13	11	12	12
Mobile Home Sales	Dealer sales	2	2	1	0	0	0	1
Repair Shops		115	120	126	124	131	129	129
Auto Wreckers		5	4	4	4	4	5	5
Transport Services	Independent Truckers	35	30	30	32	29	29	37
Warehousing		15	15	16	16	18	18	17
Wholesale		113	103	100	107	102	98	94
	1-5 Employees	11	11	11	12	13	11	11
	6-12 Employees	6	5	5	5	5	5	5
	>12 Employees	2	2	1	0	1	0	3
Total		535	506	514	515	515	508	520
All Business Licenses		4,379	4,301	4,283	4,255	4,393	4,428	4,633
Percentage Industrial Licenses		12%	12%	12%	12%	12%	11%	11%

Figures 1, 2 and 3 show summary information and indicates no significant variation.

Figure 1: Total Business Licences and Industrial Licences

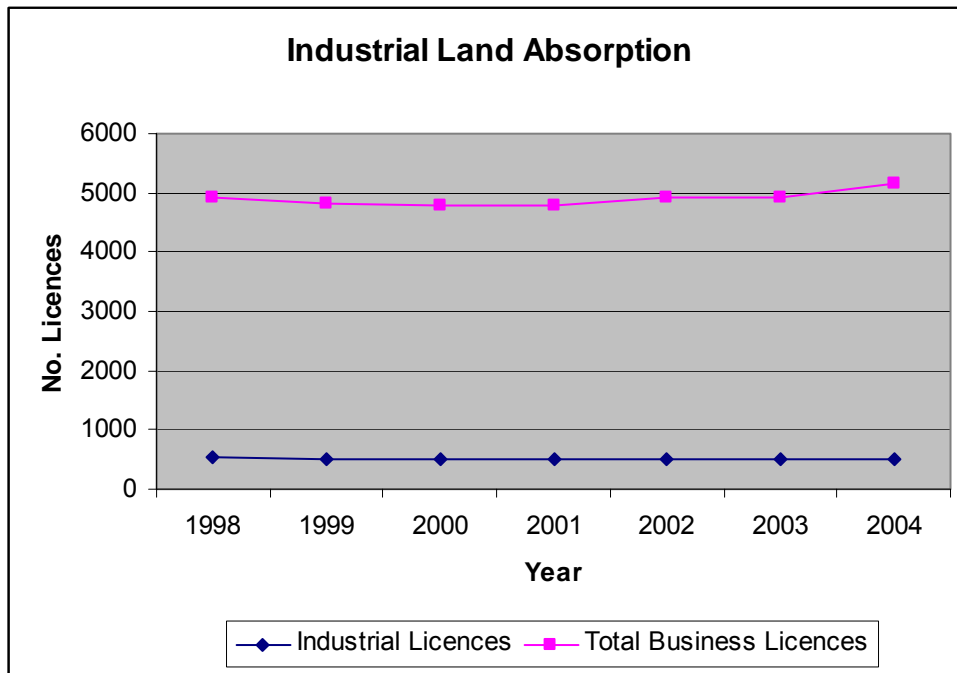


Figure 2: Industrial Licences 1998 - 2004

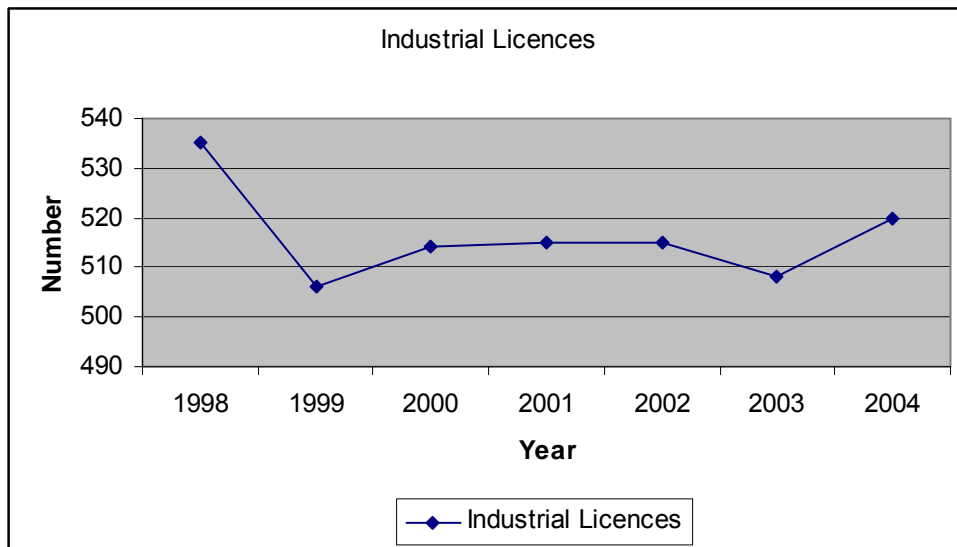


Figure 3: Total Business Licences

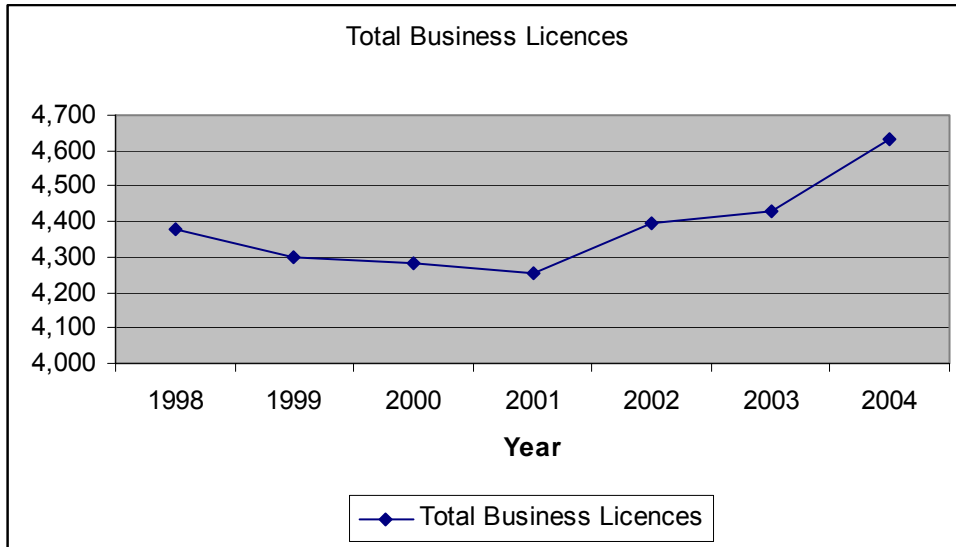


Figure 4: Business License Annual Percentage Change

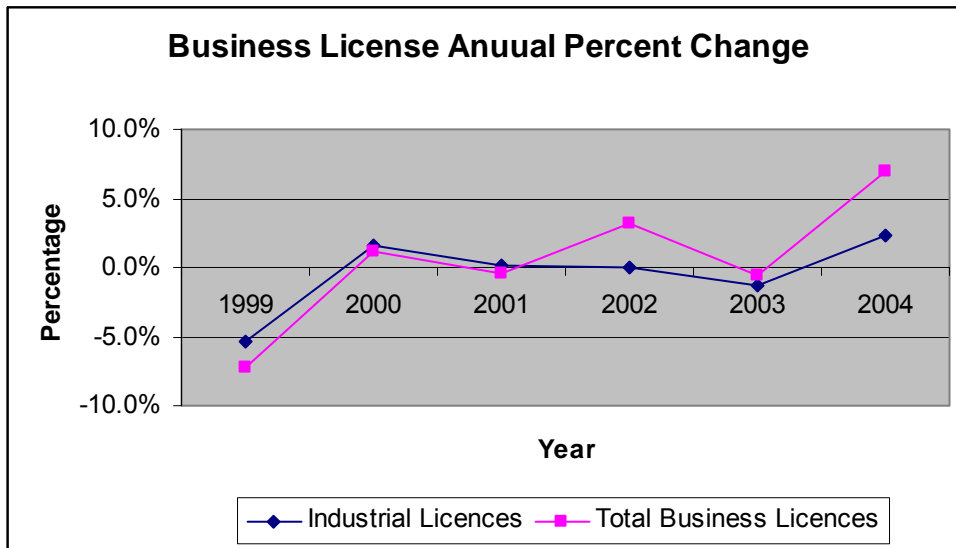


Figure 4 illustrates that in general, the trends for industrial and total business licenses follow the same patterns; however, in 2002 there was a spike in total business licenses and between 2003 and 2004, the rate of increase for non-industrial business licenses was greater than for industrial licenses. Therefore, it is difficult to decipher a trend using this information, particularly since it is only over the last 7 years. Usually 15 to 20 years of data is needed to decipher real trends.

Method III – Employment Densities

Each industry has its own employment density. Employment density is the number of employees that will typically occupy a unit of space in a given industry. Different industries have different employment densities. By calculating employment densities, one can estimate the amount of industrial land required to support employment growth. As of 2001, the City of Kamloops had 7,880 people employed in industrial based jobs such as manufacturing, wholesale trade, transportation and warehousing. This represents 9.4% of Kamloops' population. In 2001, there was approximately 705.2 total hectares occupied industrial land. This indicates that there is 895 m² (0.22 acres) per person in industrial zoned lands. This calculation includes not only working space, but also space used for parking, bathrooms, circulating, offices and inventory storage. According to the OCP KAMPLAN, 1997, the population projection for the year 2020 is 119,000 people. Using the percentage of industrial labour force from 2001, the number of industrial workers in 2020 will be 11,186. Since each employee takes up 895 m² of space, it is projected that an additional 314 hectares (776 acres) of industrial zoned land will be required by 2020.

In 2001, 103.5 hectares of industrial lands was reported vacant. Given that 314 hectares will be taken up by 2020, means that 215.5 hectares (532 acres) of additional lands will have to be added. Therefore, if the population projections are accurate, then the City of Kamloops will run out of industrial land in 5 to 10 years. This contradicts the earlier absorption rate calculation of Method I that indicated that Kamloops will run out of industrial lands in 2029.

7.1 Future Demand for Industrial Land

The purpose of calculating the absorption rate is to determine how much vacant industrial land stock is currently available and to what extent it needs to be further developed to meet expected levels of future demand. The three different methods employed to calculate absorption rate in this study used very different data sets to determine long term demand for industrial lands with varying and contradicting results. The results from the three methods for the absorption rate can be summarized as follows:

Method I employed trends in occupied versus vacant industrial lands using data from 1985, 2002, and 2005. It was calculated that the industrial land in the city of Kamloops has been absorbed at the rate of 0.6% (4.97 hectares/ 12.28 acres) per year since 1985. This method projects that there is sufficient industrial land to meet 24.8 years of demand.

Method II determined the absorption rates in Kamloops by examining the number of businesses established annually in industrial-type activities between 1998 and 2004. It was difficult to decipher any trends with only 7 years of data. Usually 15-20 years of data is needed to accurately determine trends.

Method III used employment densities to estimate the amount of industrial land required to support projected population and industrial employment growth. It was projected that by 2020, 11,186 workers will be involved in the industrial sector. Since each employee takes up 895m² of space, it is projected that an additional 314 hectares of industrial

zoned land will be required. Since Kamloops had 103.5 hectares of vacant industrial land in 2001, an additional 215.5 hectares will have to be added by 2020.

8.0 Conclusion: Land Issues for Future Planning and Rezoning Requirements

Through the calculations and analysis of vacant and occupied land, as well as the stakeholder surveys, it is difficult to conclude exactly what the City of Kamloops should do to address the issue of an adequate supply of industrial land in the future. The City of Kamloops seems to have sufficient supply of vacant industrial land (at 0.6% annual absorption rate) until the year 2029. However, it does not necessarily mean the City has enough of the desired type of vacant land, since some of the parcels may need to be rezoned, location may be a factor, parcel sizes may be unsuitable, accessibility and amenities may be inappropriate, or the parcels may be limited by topography.

It is also necessary to match supply of industrial land with population growth. As indicated by employment density calculations, Kamloops will have to add 215.5 hectares by 2020. Since relative uptake varies by zoning (see table 25), it appears that I-1 and C-4 are in greatest demand. I-1S and I-2 may have lower uptake only because of the location of the parcels (airport), size (average size of the vacant lots are 3.4 and 2.8 ha), and topography since some of the I-2 (Campbell Creek East and Iron Mask) lots have slopes greater than 25%.

Table 25: Relative Demand

Zones	Current Allocation of Vacant Lots	Relative Uptake based on Occupancy
I-1	19%	81%
I-1S	22%	64%
C-4	23%	77%
I-2	36%	76%
I-3	-	As required
Total	100%	-

A good level of ready-to-use inventory of the right types of parcels needs to be determined by the planners and developers for each of the industrial zonings. Parcel sizes ranging from 0.3 ha to 1.5 ha are in high demand and have a relatively higher demand than parcel sizes greater than 2.0 ha. In particular C-4, zones where there are 323 parcels and only 13 remain vacant indicate the most demand. The vacancy rate for these parcels is 21.6% while the vacancy rate for parcels greater than 2.0 ha is 36%. In the future, City planners should allocate land and design parcel size to industrial zones reflecting these findings.

There appears to be a net decrease in the industrial land base (excluding C-4) between 1985 (818.1 ha) and 2005 (804.9 ha) of 13.2 ha (see table 26). This decrease in net industrial land is curious even though the new industrial park of Iron Mask (52.9 hectares) has since been added. The loss in I-1, I-2, I-3 and I-1S lands could be as a result of rezoning to more commercial activities (particularly true for Southgate).

Table 26: Net Loss or Gain by Industrial Parks

Industrial Parks	Total Industrial Land 1985 (ha)	Total Industrial Land 2005 (ha)	Net Loss or Gain (ha)
Campbell Creek (E&W)	228.95	237.3	+8.35
Valleyview	16.38	18.4	+2.0
North Shore & Airport	112.90	67.90	-45.0
Mission Flats	186.48	190.0	+3.5
Southgate	147.34	110.3	-37.0
Versatile	96.7	117.5	+28.8
Iron Mask	-	18.9	+18.9
Balco/Rayleigh	29.23	44.6	+15.37
Total	818.1	804.9	-13.0

The challenge for future planning and zoning of industrial land in Kamloops is daunting since most of the demand is in South Kamloops for both industrial and residential development and these two uses are not always compatible. If Kamloops wants to expand the industrial park at the Airport, Rayleigh, Heffley, and to the west of the Airport, improved highway access and services need to be developed. Kamloops should seriously consider the possibility of developing the Afton Mine site for industrial use since it was mentioned several times as a potential future development area during the stakeholder survey.

Kamloops needs to be strategic in its thinking and planning in targeting and recruiting specific industry that will benefit from the location of the City and its easy access to the Western North American markets. The stakeholders indicated that the growth in Kamloops will continue on its chosen path unless a large external factor, for example an Intermodal Rail Facility, is located here.

The uptake of industrial land, as determined in this report, needs to be combined with the information collected when companies search the area for potential sites, but don't find appropriate industrial land for their needs. This will allow the planners and developers to be pro-active in providing and designing industrial parks.

9.0 Key Findings

The City of Kamloops has a total of 887.7 hectares of land zoned for industrial use of which 82.9 hectares are zoned for commercial (C-4) purposes that allows light industrial use. Of these 887.7 hectares, 15.6% (139.3 hectares) is vacant.

1. The City of Kamloops has 804.9 hectares of industrial zoned lands and 82.9 hectares zoned commercial C-4.
2. There are 123.5 hectares of vacant industrial land and 15.1 hectares of vacant commercial C-4 land available for development.
3. Initial vacancy was determined using BC Assessment Authority data (land with improvements valued less than \$1.00 is considered vacant). Ground truthing was crucial in this study to determine true vacancy. There was 194.8 hectares identified as vacant using the BC Assessment Authority information, with ground truthing 56.2 hectares was confirmed as not being vacant, or available for immediate industrial development.
4. The City has a total of 638 lots in I-1, I-2, I-3, I-1S and C-4; of which 60 lots remain vacant. The average hectare per parcel varies depending on the zoning, with the overall average being 1.4 hectares/parcel and vacant average of 2.12 hectares/parcel.
5. Three different methods were used to determine absorption rates of industrial land.
 - Method I: The rate of absorption for industrial land in Kamloops from 1985 to 2005 is 0.6% per year, which is 4.97 hectares per year.
 - Method II: It was difficult to determine the rate of absorption using the number of industrial business licenses issued per year. This was because there was only 7 years (1998- 2004) of data and no real trends could be established.
 - Method III: It was calculated that each employee in the City of Kamloops takes up 895 m² of space; it is projected that an additional 314 hectares of industrial zoned land will be required. Since Kamloops had 103.5 hectares of vacant industrial land in 2001, an additional 215.5 hectares will have to be added by 2020.
6. The allocation of the location of future space is a function of industrial land availability more than any other factor. Communities that have the most supply of industrial land will capture the majority share of future industrial development.
7. The empirical survey findings indicate that the City of Kamloops has to plan 200-400 acres of industrial land in the next 5-10 years to meet expected demands.

8. The calculated absorption rate of 0.6% indicates that the existing supply of 138.6 (Industrial and C-4 land, assuming C-4 has the same absorption rate as industrial lands) vacant land will take 24.8 years to be consumed.
9. There are barriers (topography, access, economic class, and perception) to developing certain areas, particularly North Kamloops.
10. It can be deduced that there is higher uptake/demand for I-1, I-1S and C-4 lands with lot sizes ranging from 2.8 acres to 6.9 acres in the City of Kamloops.

10.0 Recommendations

1. The City of Kamloops should develop a vision and prepare a long term Industrial Land Use Strategic Development Plan to direct industrial development and to attract industrial based employment growth in the City.
2. The City should develop appropriate infrastructure, services and allocation of industrial space that will be sufficient to accommodate the demand over the next 50 years.
3. The City should target key industries in the Lower Mainland, Northern British Columbia, the Western Provinces and Northwest Washington to attract them to relocate to the City. Therefore, the City should create an appropriate environment to attract such industry to Kamloops.
4. The City should prepare a detailed industry profile, not only on what types of companies have located in Kamloops in the last 20 years, but what type of company will be a natural fit to take advantage of the existing transportation infrastructure and quality of life the City has to offer.
5. From the survey, it was evident that the City should target light value-added (wood, metals, plastics, recycling, etc.) industry, warehousing and distribution, and after the airport expands, secondary and tertiary related air transport companies should be targeted.
6. Develop a live Industrial and commercial lands database that is automatically updated to indicate supply industrial lands in Kamloops.
7. The uptake of industrial land, as determined in this report, needs to be combined with the information collected when companies search the area for potential sites, but don't find appropriate industrial land for their needs. This will allow the planners and developers to pro-active in providing and designing industrial parks.

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Appendix “A” - Survey Tool

Venture Kamloops – Supply and Demand for Industrial Land Survey Questionnaire

Survey of Planners

1. What is the process of planning and zoning for industrial lands in City of Kamloops?

Prompts

- How do you determine how much land to zone as industrial and what are the triggers to add to the zoning?
- How do you determine where to place the industrial zones?
- What about the costs of providing services to the industrial lands?
- What is the role of the City in marketing industrial lands?
- What are the plans right now?

2. What is the vision of your department in regards to industrial land use planning?

Prompts

- what type of industry do you want to attract?
- What directs your organization in planning for industrial zoning?

3. How do you track supply and demand of industrial land?

- Do you have a database?

4. Are there any land use issues that will affect future planning, allotment and zoning of industrial lands?

5. What is Kamloops' SWOT in regards to supply and demand of industrial lands in City of Kamloops?

Survey of Developers

1. What is Kamloops' SWOT in regards to supply and demand of industrial lands in City of Kamloops?

2. What are the usual requirements of your industrial clients?

3. What are the trends and issues regarding industrial land consumption and demand?

Prompts

- Size of land
- Services
- Type of industry (light, medium and heavy)
- Location, buildings, costs

4. Does Kamloops meet these requirements and how can the City go about meeting these requirements?

5. What are the channels of communication or networking in indicating particulars of

6. supply and demand of industrial land?

- 7.

Survey of Consumers

1. Reasons for selecting current location?
2. What is Kamloops' SWOT in regards to supply and demand of industrial lands in City of Kamloops?
3. What are the trends and issues in your industry?
4. What are the needs of your company in terms of supply and availability of industrial land in City of Kamloops?

Prompts

- Cost of development
- Size
- Land or lease costs

Appendix “B” - Maps of Industrial Parks

Map “A” – Industrial Lands in City of Kamloops

Map “1” – Campbell Creek East

Map “2” – Campbell Creek West

Map “3” – Valleyview

Map “4” – South shore

Map “5” – North Shore & Mission Flats

Map “6” – Weyerhaeuser

Map “7” – Southgate

Map “8” – Versatile

Map “9” – Iron Mask

Map “10” – Halston

Map “11” – Brocklehurst

Map “12” – Airport

Map “13” – Heffley Creek

Map “14” – Westsyde

Map “15” - Rayleigh

Appendix “C” - Data Spreadsheets