Position Paper

FIFO in the Oil Sands: Fly-In/Fly-Out Operations in the RMWB

Submitted to: Oil Sands Community Alliance (OSCA)

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Participating Companies

- Suncor
- Syncrude
- CNRL
- Imperial Oil
- ConocoPhillips
- Devon
- Cenovus
- Nexen
- Jacos
- Connacher

1. Executive Summary

Purpose of this Paper

There is considerable discussion and debate in the Wood Buffalo region regarding the use of fly-in/fly-out (FIFO)-based operations. With the increased use of FIFO, especially in relation to ongoing operations, the municipality and others in the community are expressing concerns of potential effects from FIFO, including taking jobs away from locals and limiting the region's potential growth.

In response, the Oil Sands Community Alliance (OSCA) has developed a discussion paper regarding the oil sands industry's use of FIFO. The objectives of this position statement are to:

- better inform local and provincial government, communities, businesses and service providers about the rationale and operational considerations related to the use of this strategy, and
- contribute to ongoing discussions regarding industry's motivation, the potential to attract FIFO workers to live in the region and the possibility of enhancing the regional benefits of FIFO.

Current Use of FIFO

There are currently 15 projects in the region which are identified as FIFO-based operations. Eleven of these projects utilize seven private aerodromes, while four projects use the Fort McMurray International Airport (YMM). Other projects use YMM and private aerodromes to move workers on an as-needed basis. These FIFO-based projects represent approximately 60% of the province's total annual oil sands production, while employing less than half the existing oil sands operations workforce in the region.

FIFO-Based Projects are Predominantly in Remote Locations

Most of the FIFO-based projects in the region are remote, located an average of 110 km from Fort McMurray. The northern projects are an average of 100 km from the edge of Fort McMurray, while the southern projects are an average of 120 km. Drive times to these projects are correspondingly long. Including the time for neighbourhood pickup and drop off routes and from the project gate to work areas, one-way trips range from a minimum of one and one-half hours to over three hours. This does not factor in morning and evening peak traffic, lower speed limits on industrial roads, and weather conditions.

While a few smaller projects are in proximity to Fort McMurray, the majority of FIFO-based projects are essentially located outside of a safe daily commuting distance for shift workers. In industry's experience, a FIFO-based system is the only viable approach for these projects.

A Key Driver for FIFO is Reducing Traffic and Improving Safety on Area Highways

Traffic reduction and driving safety were and remain key motivators behind FIFO programs, a priority of both the residents in the region as well as companies and workers.

Industry has Invested Substantially in FIFO Infrastructure

FIFO programs were contemplated and constructed in a period of high economic activity and population growth. Industry has invested hundreds of millions in infrastructure to support FIFO, justified by years of planned future operational use.

On-Site or Nearby Private Aerodromes Save Time and Money

The economics of FIFO varies and is influenced by a number of cost considerations. Considering worker time, operational requirements and overall human resource management, including the cost of employee relocations, FIFO programs are cost-effective. Historically and up to today, flying directly to and from site has been the most efficient way for remote projects to move personnel, reduce costs and travel time and increases the quality of life for workers.

FIFO Programs Also Benefit YMM

In addition to private aerodrome activity, substantial FIFO-related activity utilizes the Fort McMurray International Airport. According to the Airport Authority, an estimated 45% of travelers indicated they were a part of the FIFO worker population. FIFO-related activity also contributes tens of millions in annual expenditures in local contracts and income for employees in the region.

The Trend towards FIFO is Not Unique to the Region

The increase in FIFO-based operations is not unique to oil sands development in the RMWB. It aligns with broader trends observed in resource development in Canada and beyond, driven by several factors including workforce competition and societal preferences.

Companies Remain Committed to Supporting Local Workers and Communities

From industry's perspective, FIFO is not an either-or decision. Companies remain committed to hiring locally and developing the regional labour force, while also using workers from outside the region to effectively staff operations. Industry strives to ensure benefits related to FIFO activities as well as broader operations accrue to the region. Although remote, these projects cumulatively spend roughly $1billion annually on contractors, suppliers and employees in the region. Further, inclusion of Fort Chipewyan in FIFO programs contributes to the hamlet's ongoing sustainability and helps residents to maintain their traditional ways of life.

2. Background and Purpose

2.1 Background

One of the logistical challenges faced by oil sands developers is how to effectively transport large numbers of workers to and from worksites in the region. At first, this was largely accomplished by contracted bussing from Fort McMurray with only limited use of FIFO arrangements. The earliest FIFO-type program was operated by Syncrude since the 1980s involving Fort Chipewyan.

However, as oil sands development moved farther away from Fort McMurray, and as local residents became increasingly concerned with the socio-economic impacts of out-of-region workers on their communities, the use of FIFO to support camp-based operations became increasingly common. So much so that today there are roughly 15 oil sands operations in the region that use FIFO to transport the majority of their operations-related workers. These 15 projects represent roughly 60% of total oil sands production capacity in the province.

Fly-in/fly-out (FIFO) refers to company-funded and organized programs for flying workers to and from the job site between shift rotations

The use of FIFO arrangements is of interest to government, host communities, and industry. Specifically:

- **Municipalities have expressed an interest in seeing more workers relocate to the region.** There is a perception that FIFO is an impediment because it makes it easier for workers to live elsewhere, and as a result, fewer workers, their spouses and families are living in the region and contributing towards community well-being.
- **Local business communities which, although benefit from existing FIFO-related spending (e.g. materials, supplies), would like to see more workers live in the region.** There is a feeling that the use of FIFO means missed opportunities to gain additional population in the region and the associated household spending. There is a perception that economic activity is effectively bypassing, or “flying over”, the region via the private aerodromes.
- **Local workers, including those in Indigenous communities, are interested in obtaining employment at oil sands projects.** Again, a perception exists that FIFO-based operations facilitate jobs being filled by workers from outside the region, thereby making it more difficult for local residents to take advantage of existing employment and business opportunities.
- **Industry, which has to attract highly qualified workers, minimize operating costs and staff projects outside of daily commutable distance.** Industry also has an interest in supporting local communities. Although the use of FIFO supports the attraction of qualified workers, it implies other costs. In addition, the development and use of FIFO over time was seen as a benefit to local communities as it minimized the impact on limited infrastructure and services in the region.

2.2 Purpose of this Discussion Paper

Oil sands producers understand these concerns and would like to contribute to the discussion. OSCA, which represents oil sands producers in the region, has produced this discussion paper to clearly articulate the industry's current and anticipated future use of FIFO arrangements. The objective is to better inform local and provincial government, communities, businesses and service providers about the rationale and operational considerations related to this strategy.

Various OSCA member companies have provided input regarding the drivers, considerations and learned experiences of FIFO-based systems within the context of operations in the region today. Concerns regarding the sharing of potentially sensitive information has been accommodated through use of a third-party consultant and the aggregation of results.

2.3 Questions Considered

Development of this paper was guided by the following key questions:

KEY QUESTIONS

- **What is the current state of FIFO in the region?** For which project stages and locations?
- **Why is FIFO used in support of oil sands development?** Do these same reasons apply for projects within commuting distance of Fort McMurray?
- **What investments have companies made as part of FIFO programs?**
- **Is the approach to FIFO expected to change over time?** Under what circumstances could the approach change?
- **What are the local economic impacts of FIFO?** Are there opportunities to maximize the value of FIFO for local stakeholders, including better utilization of municipal infrastructure?

2.4 Scope and Limitations

This discussion paper is based upon input received through discussions with representatives of FIFO-based operations in the region. Company respondents represent many corporate functions, including operations, transportation and logistics, human resources, stakeholder relations and executive management. This paper does not provide an in-depth quantitative analysis, but rather a higher-level examination of key drivers for industry to operate a FIFO-based system and associated considerations for host communities.

The focus of this paper is on operations workforces for commercial-scale producing projects. While construction workers can represent a sizeable portion of the total oil sands workforce depending on activity levels – based on 2013 OSCA research roughly half of the total oil sands workforce was involved in construction activities – this workforce has demonstrated ongoing mobility over time, following work in and out of the region. As stakeholder interest is on understanding workers filling long-term operations positions, the focus is on that specific workforce.

The geographic focus is oil sands projects in and around the RMWB, including southern *in situ* projects and their linkages to Lac La Biche.

For some projects, a segment of operations workers reportedly self-commute, whereby they maintain a residence in the region for use during shift and fly (via YMM) or drive home at their own cost during their time off. The practice of worker self-commuting has been ongoing for decades in the region. This segment of the workforce is not considered in this study, as the focus is on company-organized FIFO programs.

3. Current State of FIFO

3.1 FIFO-Based Projects

There are approximately 15 projects currently operating FIFO programs for their operations workforces. Of these, 11 use private aerodromes located at or near to project sites, and 4 use the Fort McMurray International Airport (YMM).

There are seven private aerodromes in the region servicing the FIFO-based projects. Four of the aerodromes are dedicated to specific oil sands projects, while the remaining three are owned by oil sands operators but available for regular use by other operators through lease agreements. The FIFO-based projects and aerodromes or airports they utilize are identified in Table 3-1.

A private aerodrome is defined in this paper as:

- *a surface used for the arrival, departure, movement or servicing of aircraft; and*
- *includes any associated buildings, installations and equipment*[1]

Table 3-1 FIFO Projects in the Region

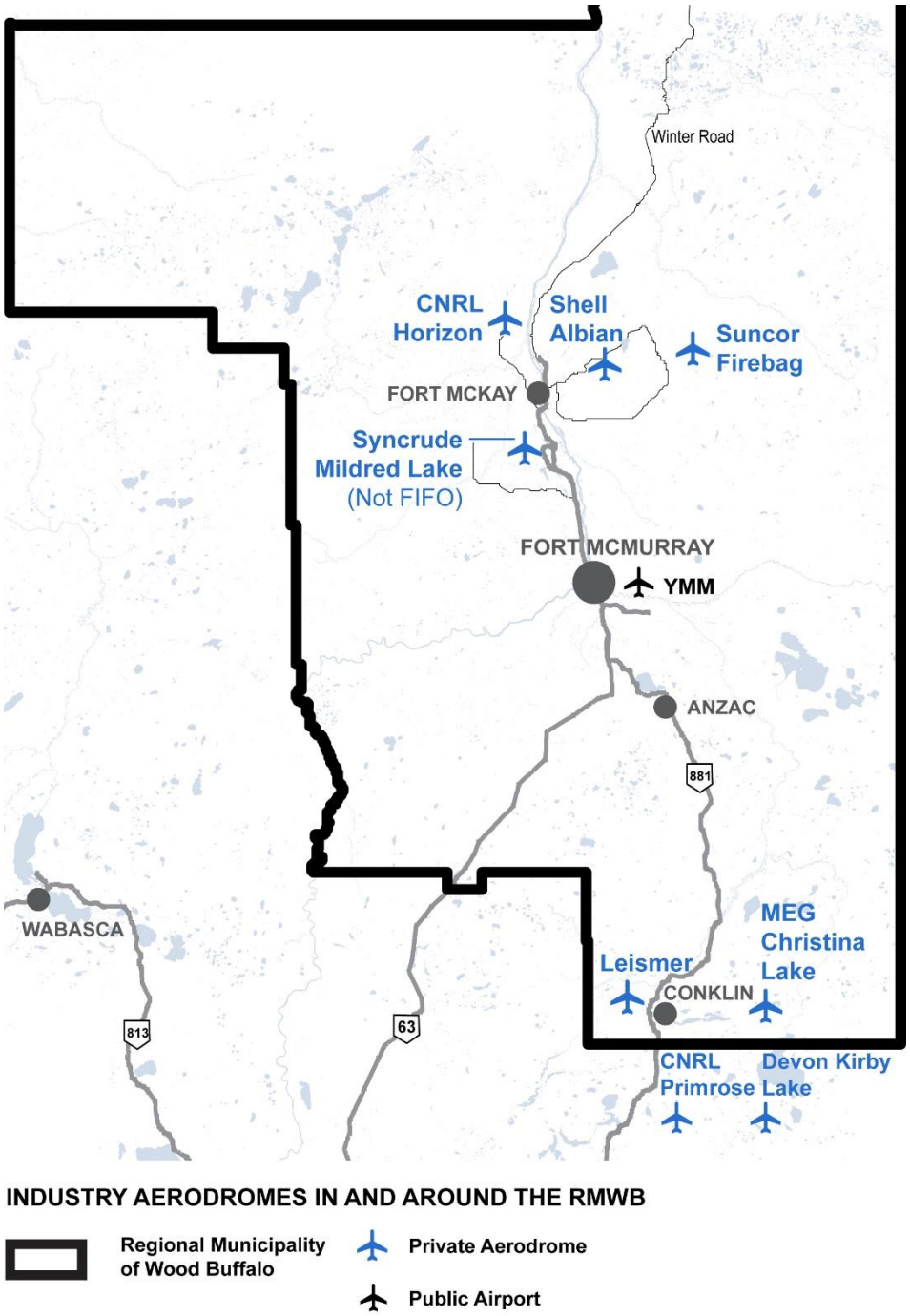
		Proponent / Project	Aerodrome / Airport
Location Relative to Fort McMurray	***North***	• CNRL - Horizon	Horizon
		• CNRL – Albian Sands • Imperial Oil - Kearl	Albian
		• Suncor - Firebag • Husky – Sunrise • Suncor - Fort Hills	Firebag
	South	• Cenovus – Christina Lake • Athabasca Oil Sands - Leismer	Leismer
		• Devon – Jackfish	Kirby Lake
		• CNRL – Kirby	Primrose
		• MEG – Christina Lake	Christina Lake
		• ConocoPhillips – Surmont • Athabasca Oil Sands – Hangingstone • Jacos – Hangingstone • Connacher Great Divide	Fort McMurray International Airport

In addition to the aerodromes identified in Table 3-1, Syncrude maintains an aerodrome at its Mildred Lake site to move staff between Calgary, Edmonton and site on an as-needed basis. Syncrude does not have a regularly scheduled FIFO program for its operations workforce; all corporate flights originate and terminate from the company's hangar at YMM. Figure 3-1 presents an indication of where private aerodromes in the region are located.

1. *Adapted from Transport Canada, available at:* https://www.tc.gc.ca/eng/programs/airports-policy-requirements-2947.html

After municipal boundary changes several years ago, the CNRL Primrose (Kirby site) and Devon Kirby Lake aerodromes are now located in Lac La Biche County, not the RMWB.

Figure 3-1 Map of Aerodromes in the Region



3.2 FIFO Workforce

The workforce associated with the 15 FIFO-based projects identified in Figure 3-1 is estimated at about 15,000. This represents less than half the total operations-based workforce currently in the region.[2]

A large majority of the 15 FIFO-based projects (11) are *in situ* developments, with the remainder (4) being mining operations. *In situ* projects, in comparison to mines, require considerably fewer workers. As a result, although FIFO-based projects account for less than half the region's operations-related workforce, they collectively account for roughly 60% of provincial production.

Oil sands activity generates other flight movements through the private aerodromes, involving construction and maintenance workforces as well as corporate staff and short-term contractors moving to and from project sites.

3.3 Use of YMM

ConocoPhillips Surmont, Athabasca Oil Sands Hangingstone, Jacos and Connacher projects utilize YMM exclusively for their FIFO programs. Various other projects utilize YMM for some element of workforce movements, typically involving contractors. This can include workforces involved at sites with private aerodromes, as YMM offers schedule advantages due to more frequent flying and selection of destinations. Research conducted by the Fort McMurray Airport Authority indicated that roughly 45% of YMM passengers were a part of a FIFO worker population[3], the majority assumed to be involved in oil sands (construction, operations and maintenance).

The Lac La Biche airport has been used for workforce movements in the past. The amount of use at present is unknown – respondents do not indicate using this airport currently for regular FIFO-based commuting, although it may be used by other projects.

3.4 Aviation Providers

Aviation services tend to be provided by aviation companies on a contractual basis. Some projects use commercial carriers, either through a charter arrangement, or via existing commercial routes via YMM. One company used to own and operate its own airline but made the shift recently to contracting that service out to a commercial airline, supplemented by a charter company.

2. *Estimating the size of the total oil sands operations workforce is challenging due to a number of factors, including lack of common definitions regarding oil-sands related jobs, size of contracted workforces and commuting patterns of workers with earnings reported in other jurisdictions.*

3. *Fort McMurray International Airport Final Report: Economic Impacts Associated with Current Air Services. Intervistas 2017.*

3.5 Out-of-Region Hubs

Edmonton and Calgary airports are the primary out-of-region hubs for FIFO flights due to:

- their relative proximity to the Wood Buffalo region
- proximity to home communities for many Alberta-based workers
- the numerous flight options at these two airports for workers travelling outside of Alberta

Other cities listed as hubs used by some projects include Kelowna and Vancouver.

During previous periods of high construction activity, industry utilized numerous other hubs to source the required large-scale workforce. Other centres used included Red Deer, Lethbridge, Terrace, Prince George and Nanaimo.

As large construction projects ended, as well as in response to recent challenging economic conditions, industry has reduced the number of active hubs. The ongoing workforce requirement is reduced as projects have transitioned from construction to ongoing operations and maintenance stages.

The frequency of flights is dependent on the total workforce size, number of hubs and activity level. Some projects have daily flights, while others are less often.

3.6 Cost Coverage

Companies incur the cost of flying workers to and from designated airport hubs. For most projects, employees cover their own costs associated with arriving at a designated airport hub (i.e. typically, Edmonton or Calgary). Some type of compensation for travel time may be offered depending on the company.

3.7 Local Workers

Essentially all participating projects indicate a contingent of their workforce lives in the region and commutes between rotations. Most projects have bus or shuttle trips to Fort McMurray and other communities within the region. Ranging from daily to weekly, these trips transport workers from their homes at the beginning or end of their shift rotations. A limited number of individuals from rural hamlets in proximity to project sites commute daily.

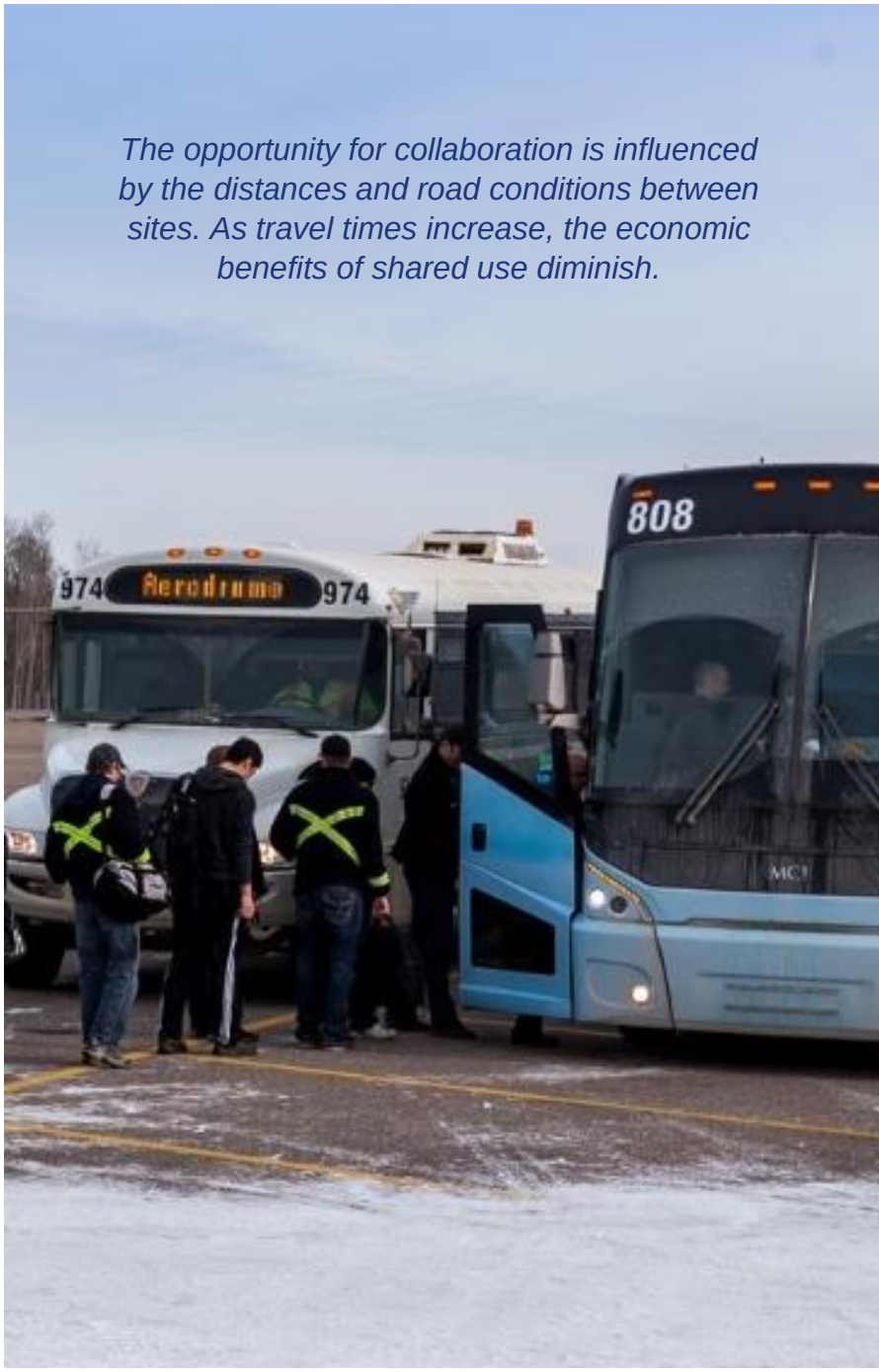
Some projects run shuttles between site and the Fort McMurray Airport for connecting workers. Projects in the Conklin region run busses to Lac La Biche, a staging area for some workers to drive and park while on shift. These southern projects do not bus to Fort McMurray.

All participating companies indicate actively seeking local employees through open job postings, career fairs, and other approaches. Depending on project location, companies report varying degrees of interest expressed by local residents in working at their projects. Some respondents assume that residents are more interested in projects within closer proximity to Fort McMurray.

3.8 Level of Coordination

Collaboration between FIFO-based projects is common. Seven projects utilize three aerodromes through lease arrangements, avoiding the need for additional airstrips in the region. In some instances, companies lease space on regularly scheduled flights to other projects. Asset sharing also occurs in instances of inclement weather or mechanical issues, providing redundancy coverage for unplanned events.

Companies indicate an interest in exploring further opportunities for collaboration, including potential increased sharing of charter flights and aerodrome use.



The opportunity for collaboration is influenced by the distances and road conditions between sites. As travel times increase, the economic benefits of shared use diminish.

4. Rationale Behind FIFO

The planning and implementation of FIFO arrangements has been driven by a number of considerations specific to individual projects and influenced by the context of regional growth. Companies have gained experience during operations, which informs ongoing strategy. These considerations are discussed below.

4.1 Remoteness Factor

The average driving distance of FIFO-based projects, from site gates to the urban limits of Fort McMurray is 110 km. The northern projects are an average of 100 km from Fort McMurray, while the southern projects are an average of 120 km. Most FIFO projects are not considered to be in proximity to Fort McMurray.

ConocoPhillips Surmont, Connacher Great Divide and Athabasca Oil Sands Hangingstone (to the south) and CNRL Horizon and Albian Sands (to the north) are the closest projects to Fort McMurray, at roughly 60 to 80 km from site gate to the urban centre's limits.

Drive times to these projects are correspondingly long. Including the time for neighbourhood pickup and drop off routes and from the project gate to work areas, one-way trips range from a minimum of one and one-half hours to over three hours. This does not factor in morning and evening peak traffic and weather conditions.

4.2 Safety

A daily commute by vehicle would add three to four hours onto a 10- or 12-hour workday, introducing performance and safety concerns. Most companies consider the safe daily limit for driving commutes for its workers on 12-hour shift schedules is 60 minutes per one-way trip. The experience with FIFO operations on the edge of daily commuting is many workers find the fatigue of a 12-hour shift combined with the daily commute unmanageable, and request to be in camp during shift. About three-quarters of the FIFO-based operations in the region are located outside a safe daily commutable range.

Another safety consideration arises on shift-change days. For the portion of the workforce commuting in and out of the region, the combination of a vehicle commute to/from their home community and a full work shift would make for very long days (18+ hours), creating a driving safety risk. With FIFO, the shift commute is reduced. While FIFO implies regular (weekly) flying, it replaces daily commuting, which for some workers can far exceed the travel time incurred through the program.

Safety related to highway traffic has been a long-standing concern in the region, both for industry and residents. During the 2000s when most FIFO projects were being planned and constructed, concern was particularly high for safety along Highway 63 and Highway 881. Reducing vehicle movements along these highways was and remains a major reason why companies support use of a FIFO system.

> *"FIFO is the most convenient, safest way to get our workers to site"*
>
> *- Company Representative*

While the twinning of Highway 63 south of Fort McMurray has helped reduce safety considerations, concerns remain on Highway 881 as well as on Highway 63 north of Syncrude. Reduced traffic improves safety conditions for both workers and residents in the region, particularly those in the rural hamlets (Fort MacKay, Fort Chipewyan, Anzac, Janvier and Conklin) which have expressed concern over traffic volumes and safety.

4.3 Quality of Life Considerations

A key advantage of FIFO programs is the fact it permits employment at projects while allowing workers' spouses and other family to remain in their home communities. This allows spouses and families access to existing support networks, which can be particularly important when managing with the absence of a family member for sustained periods of time. While these types of support networks are available or can be nurtured in Fort McMurray, relocation causes disruption in the lives of workers and their families and effectively requires 'building from scratch' a network of friends and other social supports.

The ability to spend quality time with family at home is identified as a key advantage, not as easily accomplished for workers returning home daily after 12-hour shifts plus commuting time

Another key advantage associated with the rotational nature of FIFO programs is the typical work schedule. These schedules are often characterized by extended periods of work followed by extended periods of time off – for example, 10 (days on) /4 (days off), 14/14 and for some, 21/7, amongst other options. Many workers appreciate this type of schedule: while the work segment is substantial, having sustained time off allows for decompression, more free time and flexibility in terms of vacation planning. While workers might be away from home for extended periods of time, they are also able to spend dedicated time with family during their extended periods of time off.

FIFO-based work, with regular travel and being away from home on a regular basis, is not for everyone. But for a certain subset of the workforce, this arrangement is preferred due to its advantages, particularly when compared to similar shift-based work with a daily commute. Companies report high satisfaction levels expressed by their workforce as to the rotational aspect of their jobs.

4.4 Job Coverage

Job coverage provided via FIFO arrangements can help to enhance the quality of time off. For example, most positions typically have a 'cross-shift' responsible for handling job duties when the worker is off-shift and in their home community. This built-in coverage reduces the possibility of workers who are off-shift having to respond to work issues, therefore allowing for a more relaxed experience when taking time off.

"Having a cross-shift is nice, allowing you to really be 'off' when not working"

- Company Representative

4.5 Worker Performance

Readiness for work is a key focus for proponents, as it effects productivity and safety. This can be a challenge which needs particular focus in jobs involving long shiftwork and can be further complicated by a lengthy daily commute. Prior to implementing a FIFO-based system, one company utilized a daily bussing commute between its remote project site and Fort McMurray. Higher levels of discontent and employee turnover from cumulative exhaustion were reported due to the daily commute. Changing to a camp-based rotational shift resulted in improved morale and performance and reduced turnover.

On-time performance is an important metric at industrial projects which operate on a continuous (24/7) basis. FIFO contributes to employees arriving for shift on time and maintaining production levels by reducing the number of highway-related delays due to traffic conditions or incidents. By having the workforce housed on-site, day-to-day late arrivals can be avoided.

This does place greater importance on shift-change days and on-time performance of the aviation and bussing programs. In the instances where flights or busses are delayed, the onsite workforce is available to provide coverage through overtime, with the facility having the support accommodation infrastructure in place. The reliability of worker movement systems at FIFO projects is reportedly very high.

Another advantage of FIFO-based operations reported by companies is reduced absenteeism and minimal substance abuse issues. Operations tend to be 'dry', with no alcohol permitted in camps. These factors also contribute to positive worker performance.

4.6 Competition for Skilled Labour

The era in which the FIFO-based operations were planned, permitted, constructed and began operations coincided with high levels of investment and economic activity, in the region and elsewhere. For instance[4]:

- capital investment in oil sands projects in Alberta increased from $5.2 billion in 2000 to $33.8 billion in 2014
- operating expenditures during this same timeframe increased from $2.4 billion to $24.4 billion annually

Broad adoption of a FIFO-based approach has been an important enabler of this growth, translating to more opportunities for local businesses and employees over time.

The region's existing labour force, and associated population, also grew substantially in response to this economic activity. Despite this growth, the resident workforce in the region remained insufficient to fill all operations jobs and associated economic activity.

4. *Canadian Association of Petroleum Producers (CAPP) Statistical Handbook 2016.*

During this period of high investment, some companies beginning operations invested substantial resources to create attractive housing and other incentive programs to attract labour to relocate to Fort McMurray. These programs had limited effectiveness, with workers expressing a preference to either work at sites closer to Fort McMurray, or work outside the region. Correspondingly, FIFO programs became necessary to source adequate staffing levels at these remote sites.

Even so, FIFO programs do not preclude skilled and experienced local workers from employment opportunities. Of the 15,000 full-time workers currently employed at FIFO projects, a number are residents of the region[5], with the majority in Fort McMurray. Proponents remain active in recruiting workers, indicating a preference of hiring from within the region. Both historically and today, the local labour supply is insufficient to meet cumulative industry demand. FIFO programs help broaden the available labour pool.

Companies stress that the competition for labour, particularly skilled labour, spans sectors and geographies. Certain job types, including equipment operators, power engineers and key trades positions (millwrights, mechanics, etc.) are in demand across many industrial sectors including ore and diamond mining, conventional energy production, forestry and pulp and paper.

Projects across both southern and northern Canada are competing for sufficient labour, supplemented by local labour force development initiatives. Many such operations are FIFO-based, offering the same advantages and choice to workers as provided in the oil sands. FIFO is a starting point to engage this workforce; the quality of amenities and shift schedules are assets used by proponents to differentiate themselves from the competition.

4.7 Worker Turnover

Company respondents indicate that low turnover is observed across many FIFO projects, with most employees having multi-year tenure. Most proponents do not notice a higher turnover trend when compared to similar, rotational operations which are not FIFO-based.

"As long as the employee wants to do that type of work, FIFO can ensure long service, not the opposite"

- Company Representative

4.8 Time and Cost Efficiencies

A key focus of FIFO is ensuring quick and efficient travel to and from site, which reduces the travel burden on staff and minimizes costs incurred in transit. For example, workers living in or near aerodromes can be home within four hours after shift end on travel days.

Another key consideration for industry with FIFO operations is the change-over period where the workers meet with their 'cross-shift' partners and do a face-to-face handover. The more efficiently this exchange can occur, the less time and expense incurred. This supports the location of aerodromes near project sites. Additional time incurred with, say commuters travelling from YMM would impact the on-site exchange time of the workforce, impacting costs and delaying workers returning home.

5. *Based on the 2017 OSCA rotational operations workforce survey, approximately 5% of the rotational operations workforce reside in the region.*

4.9 Shifting Nature of Resource Extraction

The approach taken by mining and other remote resource extraction-based operations to sourcing and housing their workers has changed significantly over the past number of decades. In the past, often because of limited transportation options, 'company towns' were built near project sites to accommodate the workforce and accompanying families. These towns were often built where no pre-existing communities existed. Communities were built to support, and were in turn entirely dependent upon, these industrial operations.

Some communities have continued to exist while others have become unviable and abandoned over time due to declining output or commodity prices. Through an increase in the use of FIFO, coupled with evolving remote accommodation services and operations technology, single industry-dependent communities are no longer the development norm.

Camp-based operations can help ensure community sustainability by avoiding overbuilding permanent housing and other infrastructure in support of defined-life, remote projects. The recent experience in the region underscores this point. As a result of the recent economic slowdown and the 2016 wildfire, the estimated resident population in the RMWB decreased by 8% between 2015 and 2017. During this same timeframe, the estimated camp-based population dropped by nearly 30% (including construction, maintenance and operations workforces). The extensive use of camps in the region helped to mute the effect of the region's population change, which would have been more acutely felt in Fort McMurray had these workers been part of the region's housing market.

The increase in FIFO-based operations is not unique to the oil sands development in the region. It aligns with broader trends observed in resource development in Canada and beyond, driven by several factors including workforce competition and societal preferences.

5. Investment by Industry

Costs vary widely by project and are a factor of project size, location, linkages to other projects (sharing with other sites), use of open versus on-site camps and approaches taken. Table 5-1 presents an indication of capital and operating costs associated with elements of FIFO programs.

Table 5-1 Approximate Capital and Operating Costs for FIFO Programs

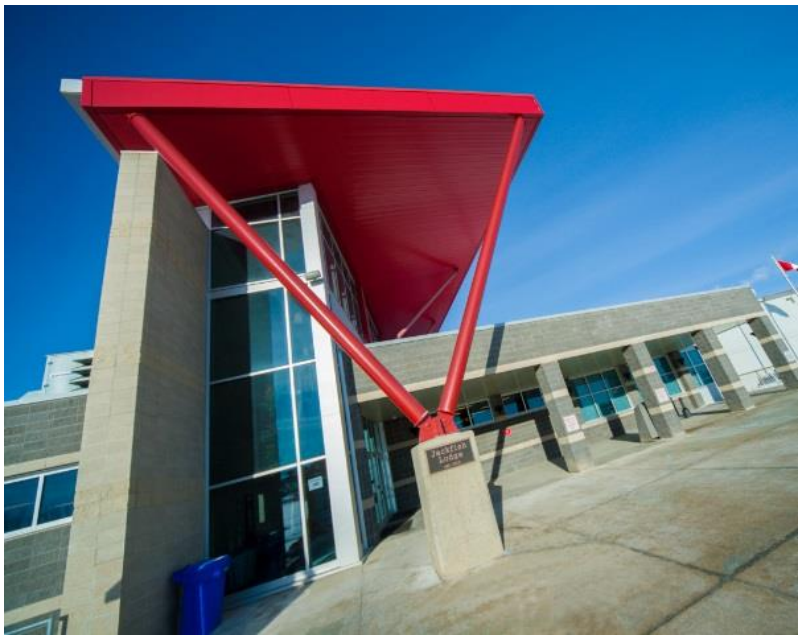
Program Component	Capital Investment ($M)	Annual Operating ($M)
Aerodrome	$ 10 - 100	$ 2 - 10
Accommodation[1]	$ 30 - 250	$ 5 - 100
Flights[2]	-	$ 2 - 50
Bussing	-	$ 1 - 35

Notes:

1 Including lodging, food and recreation.
2 Some companies previously owned aircraft, representing capital investments, but now contract flights from aviation companies.

While there has been public discussion of the ongoing costs to industry of offering FIFO, consideration must also be given to the substantial industry investments already made in developing, permitting, and constructing aerodromes and other associated FIFO infrastructure and services. Aerodromes can cost up to $100 million to build while full-service lodge facilities can cost up to $250 million. With these substantial capital investments already made, companies are keen to maximize the utilization of these assets, to recover their investments. Recognizing the long-term nature of hosting workforces, operations lodges are built to very high standards, offering comfortable private rooms, recreation and entertainment facilities and dining rooms with high quality food offerings. The quality of lodging facilities is a key factor with which companies compete for skilled labour. Ongoing operating costs range from approximately $10 to $200 million annually, depending on the size of the FIFO program.

As already noted in Table 5-1 (above), there are substantive ongoing operational costs to industry in moving workers to and from site and accommodating them during their shifts.



The degree to which FIFO programs represent additional costs for an employer depends on the total workforce recruitment program of a company, and whether the project is within daily commuting distance. Considerations include whether an employee:

- is already resident to the region and can commute daily – the cost of hiring locally could be advantageous, if the company does not have to provide housing or other living allowances[6]
- is locally based, but stays in camp due to an excessive daily commute – the cost advantage diminishes
- is non-resident to the region – substantial housing and other allowances required to incent a relocation can equal the costs incurred by a FIFO program

As well, flying is not necessarily costlier than ground transportation. When accounting for worker travel-time costs incurred by the company (whether employees are driving, bussing or flying) and depending on the project location and ease of access, some companies indicate that the cost differential between FIFO and other transportation options is minimal.

6. *Many operators offer local living allowances to workers resident in the region.*

6. Local Economic Impacts

6.1 Local Opportunities

FIFO programs, amongst other logistics work in support of oil sands extraction offer one of the most accessible points of entry to project supply chains for local goods and service providers in the region. FIFO-related activity represents in the order of tens of millions in annual expenditures in local contracts and income for local employees.

The types of FIFO-related contracts held by local, including Indigenous, companies and employees in the region include transportation, catering and accommodation, flight and camp security, aerodrome operation and maintenance. Many contracts involve joint ventures between service providers and Indigenous communities.

It is estimated that the FIFO-based projects cumulatively spend roughly $1billion annually in the region. This spending consists of labour (direct employee payroll) and procurement from firms in the region providing goods and services in support of ongoing operations and sustaining maintenance. While the majority of workers at these sites do not live in the region, the substantial expenditures from these projects locally translates to economic opportunities for local suppliers, contractors and workers.

These local opportunities are based on activities driven by FIFO-based projects in the region. These opportunities are in addition to the substantial economic activity generated by (non-FIFO) projects near Fort McMurray, such as Suncor Base Plant, Syncrude and Nexen/CNOOC.

6.2 Opportunity for Increased Participation

Industry respondents indicate increased local involvement in supply chain activities remains a constant focus, and companies are actively working with local goods and service providers, including Indigenous-owned, on how best to work together.

Industry's involvement with Indigenous-owned joint ventures is increasing and is becoming a growing expectation within negotiated benefit agreements. Respondents note that these FIFO-related (camp and accommodation) expenditures can be key parts of such agreements. Any reductions in these expenditures through, for example, more workers living locally, would not necessarily translate across as cost-savings to proponents, as these reductions would likely be covered off in other areas of impact agreements. A shift away from business contracts can also increase regulatory costs and risk for proponents.

At the request of the community, some operators have, and will continue to, include Fort Chipewyan in their FIFO programs. Through these programs, residents in this remote hamlet, which lacks all season road access, have opportunities to participate in oil sands activity while maintaining their permanent residences in the community. This contributes to the community's ongoing viability as residents do not need to leave the community to work. It also allows participating residents the opportunity to continue practicing their traditional ways of life in and around the community.

7. Other Considerations

7.1 Use of YMM

As noted in Section 3, YMM is used explicitly for FIFO by four projects[7], while other sites have used it for a portion of workforce movements during construction stages. As well, employees at various projects self-fund rotational commuting through the public airport.

The Fort McMurray Airport Authority is keen to increase passenger traffic through YMM, both to take advantage of its dedicated charter terminal and the ample capacity offered by the newly constructed terminal. From the Authority's perspective, increased passenger traffic could be achieved either through flying workers to and from the region via YMM rather than through on-site aerodromes or including YMM as a stopover between sites and hubs outside the region.

However, most companies which move workers between Fort McMurray and site indicate bussing as the preferred approach. It is also more efficient and cost effective for overall workforce movement to fly directly to the main hubs of Edmonton and Calgary than to stop off or use YMM as a hub.

With regards to using YMM's dedicated charter terminal, companies prefer to rotate a portion of their operations workforces daily, rather than in large groups, for operational integrity reasons. This reduces the size of daily movements which affects the economics of chartering. For those utilizing YMM, commercial flights in these instances are more practical.

Another key challenge in using YMM in place of regional aerodromes is the additional highway traffic generated by transporting workers to and from site – an issue of historical concern in the region and a driver behind projects investing in FIFO infrastructure in the first place (see Section 4.2). Removing as much traffic as possible off the roads has been and remains an important objective for industry.

After accounting for morning and evening bus routes within the urban service area, rush-hour traffic, travel time to worksites, weather conditions and gate clearance at site, meeting the 1-hour one-way commute limit likely remains out of reach for most remote sites.

7.2 Municipal Infrastructure Improvements

Major new infrastructure investments, such as a north-south highway connector between Fort McMurray and projects on the east side of the Athabasca River have been contemplated for the region. Such new infrastructure could improve commuting times in the region, an idea explored in the RMWB's Regional Structure Action Strategy (RSAS). However, results from the RSAS analysis indicate that additional road infrastructure is likely to capture relatively modest numbers of additional operations workers in a 60-minute commute zone.

While drive times to projects could be reduced, achieving a 'daily commutable' timeline is doubtful. Proponents note that simple bus routes between open camps located 20 km from site can take half-an-hour, depending on road and weather conditions.

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7. ConocoPhillips Surmont, Athabasca Oil Sands Hangingstone, Jacos Hangingstone and Connacher Great Divide.

7.3 Support During the Wildfire

One unintended benefit of the camp capacity in the region was the ability to accommodate thousands of displaced residents during the 2016 Fort McMurray Wildfire. Through the private aerodromes, industry was able to support the mass evacuation of Fort McMurray and other communities in the region to Edmonton and Calgary. The FIFO-support infrastructure in the region was an important contributor to one of the largest public evacuations in Canadian history.

7.4 Outlook

Companies continue to adjust their FIFO programs for cost and time efficiencies. These adjustments are linked to workforce attraction and retention trends. Proponents remain committed to FIFO-based operations, and in some cases, envision an increase if project expansions occur.

A move away from a FIFO-based system would pose many challenges. For companies, FIFO makes the most sense from a safety and cost perspective and offers for many an improved work-life balance. Companies indicate they would likely lose the majority of their current workforces if they required workers to relocate to the region. They also would not be able to fully recuperate the sizeable investments made in aerodromes and other related assets.

For industry, the consideration of a FIFO program is not whether to use local versus outside workers, but rather how to effectively staff an operation, both locally as well as with workers from elsewhere.

Industry remains committed to labour force development in the region and maximizing local recruitment. At the same time, as evidenced by historical strong population growth and labour market indicators, staffing requirements in the oil sands continue to outstrip the locally available skilled labour supply. Until the local labour market is sufficient to meet cumulative demand, industry will continue to require labour from outside the region to complement the local workforce. For these remote operations, FIFO programs are the most effective way to transport this workforce to and from site, from a cost, safety and worker quality of life perspective.

That is not to say change could not happen over time. If a substantial proportion of the workforce expresses an interest in relocating to Fort McMurray, or the resident supply of an available skilled and experienced workforce is sufficient to meet project employment needs, proponents would consider switching to local bussing-based commute programs.

Two other considerations relate to the geographic span of the region. As one of the largest municipalities in Alberta, the RMWB encompasses over 61,000 square kilometres. Being a Specialized Municipality, it contains both a large urban centre, a number of small hamlets and reserves, vast areas of Crown land and numerous oil sands projects. The municipality benefits from the industrial property tax revenue yet avoids much of the municipal residential services costs as workers do not live in the region. This places it in a fiscally strong position.

The region's large municipal boundaries are likely a contributing factor to a perception among some local residents that is not commonly held in other communities: namely, that employees working an hour-and-a-half away from the nearest major population centre should live in that population centre.

The clear consensus is the likelihood of being able to switch from FIFO to all local-based operations in the near-term is low, and that under the current economic and labour market conditions, FIFO is here to stay.

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