In response to the Public Notice issued June 15, 2012, the Regional Municipality of Wood Buffalo (the Municipality) submits its comments on the adequacy of information filed by Shell Canada Ltd. in support of the Pierre River Mine Project (the “Project”).

As the Panel may note, the attached response is quite similar in nature to the December 16, 2011 adequacy of information submission by the Municipality in relation to the Jackpine Mine Expansion Project. This is due to the fact that there is a large overlap in the socio-economic assessment of two projects. The main variation between the Jackpine Mine Expansion and the Project is that Shell does not intend for Jackpine to use a camp to house operational workers, whereas it does for Pierre River.

Although a hearing date has been set for the Jackpine Mine Expansion Project, the Municipality believes its information requests have not been addressed and are still valid. The Municipality asserts that it is well within the scope of regulatory bodies to request more fulsome socio-economic information of the Project proponent, and requests that the Panel do so for the Project. Requesting this information is an important and meaningful first step in tackling a pervasive and complex issue.

Please note that the Municipality does not intend to represent Alberta Health and Wellness, Keyano College, or the various school boards that operate within its boundaries. The Municipality is not responsible for delivering those services and therefore has attempted to only speak generally of socio-economic impacts that may affect any of those parties.

Sincerely,

Dennis Vroom
1. Introduction

In 2006, struggling under the burden of rapid industrial development that outpaced municipal infrastructure and housing, the Regional Municipality of Wood Buffalo (Municipality) participated in three regulatory proceedings for oil sands mining projects; an act that was then unprecedented. Today, although the Municipality has made great strides forward, a number of significant challenges remain.

Among the challenges facing the region is the Municipality’s ability to plan for the future, which is hampered by the lack of available data on the socio-economic impacts of oil sands development. There is a lack of both project specific and cumulative impact information, which the Municipality believes is necessary to ensure the appropriate identification, monitoring and mitigation of socio-economic impacts. More fulsome and accurate information would not only enhance the abilities of varying levels of government and regulatory agencies to fulfill their mandates efficiently and effectively, it may also reveal opportunities for collaboration both between levels of government and between government and industry.

2. Joint Review Panel socio-economic mandate

The Joint Review Panel (JRP) receives its socio-economic mandate from three separate documents:

- the Final Terms of Reference issued by Alberta Environment (AENV) for the Environmental Impact Assessment Report (EIA) for the Pierre River Mine Project (the “Project”);
- the Canadian Environmental Assessment Act; and

It is the opinion of the Municipality that the above documents, through no fault of the proponent, do not require Shell to provide adequate information to enable the JRP to properly assess the significance of the socio-economic impacts of the Project. Nor is adequate information provided for the Municipality to be able to properly assess the impacts of oil sands development on its residents or to plan urban growth to mitigate those impacts.

2.1. Alberta Environment “Final Terms of Reference”

The AENV Terms of Reference for this Project were finalized in 2007. AENV updated/standardized its Terms of Reference requirements in 2009. Shell’s SEIA has not been updated to include the revised Terms of Reference from AENV. While they are not fully inclusive of the information that the Municipality believes the JRP needs to conduct an appropriate SEIA, the new standardized Terms of Reference are more comprehensive and the information requested would more adequately assist the JRP to assess the socio-economic impacts of the Project. It is important to note that the standardized Terms of Reference are meant to be the starting point and that AENV reserves the right to ask for any additional information it deems necessary. The Municipality feels that in light of the
new information requirements that projects must now fulfill as part the AENV Terms of Reference, the JRP must find the information provided by Shell to be deficient and, at a minimum, update its socio-economic impact assessment to fulfill the requirements of the AENV standardized Terms of Reference.

The finalized AENV Terms of Reference do not require a cumulative socio-economic impact assessment. The Municipality feels that cumulative socio-economic impact assessment – no less than cumulative environmental impact assessment – is imperative to gaining a full understanding of the challenges caused by oil sands development. The Municipality monitors oil sands project announcements and has found there are approximately 29 companies that have announced upwards of 60 separate phases of projects throughout the Region in just a little over two decades. If a fulsome cumulative socio-economic impact assessment is not required by both this and future JRPs, the municipal administration has very limited ability to effectively plan for the rate of continued growth that is expected from now through 2035.1


The ERCB Directive 023 application requirements document was originally drafted in September 1991 and has yet to receive a significant update.2 The degree of change that has occurred in the pace and scale of oil sands development since 1991 has been immense, as have the socio-economic impacts of oil sands development. In 1991 there were two active mining operations for which profitability was ‘hit and miss’; the dazzling growth that characterizes the oil sands today was still a decade away. The Municipality finds it inadequate for proponents of an oil sands application in 2012 to be held to information requirements that are more than 20 years old.

3. Previous Decision Reports

Over the last number of years, previous regulatory panels have had much to say about the socio-economic impacts and the adequacy of information presented by oil sands proponents. Starting with the decision report for Shell’s original Jackpine Mine in 2004, review panels have commented on the lack of information regarding impacts, the process under which this information is collected and disseminated, and associated mitigation efforts.


(presided over by J.D. Dilay, R. Houlihan, G. Kupfer)

When presented with infrastructure and service concerns as part of the regulatory process for Shell’s Jackpine Mine, the Panel noted that

---

to determine the significance of socioeconomic impacts, the Panel looks to the evidence presented for indications that the appropriate authorities were effectively managing the impacts.³

The Panel also noted that it was given little information beyond assurances that the social impacts are being managed⁴ and that it perceive[d] there is a need for a reliable source of information on the social and economic challenges (and opportunities) facing the region.⁵

It noted further that a process is needed that provides a coordinated and effective channel through which regional and cumulative socioeconomic impacts can be addressed in a meaningful and demonstrable way. The Panel expects adequate monitoring and verifying of predictions to take place with respect to socioeconomic and health issues and expects this information to be communicated to the residents of Wood Buffalo.⁶

Finally, it noted that Providing a timely and reliable source of information upon which strategic decisions can be made is especially important to this area, given the expected growth pressures it will continue to experience.⁷

This was the first panel decision to identify the need to improve socio-economic information collection and analysis.

3.2. Suncor – North Steepbank Mine and Voyageur Upgrader – Decision 2006-112

(presided over by J.D. Dilay, J.R. Nichol, and T.M. McGee)

In 2006 the Municipality took the unprecedented step of participating in the public hearing for Suncor’s North Steepbank Mine and Voyageur Upgrader hearing. With respect to public infrastructure and services, the Panel stated that it considers that three key questions need to be addressed with respect to the evidence provided on socioeconomic impacts:

- What is the significance of socioeconomic impacts after taking into account efforts to mitigate the impacts?
- What is the appropriate mechanism for managing socioeconomic impacts?
- Who should bear the cost of addressing socioeconomic impacts?⁸

[emphasis added]

³ ERCB Decision 2004-009: Shell Canada Limited, Applications for an Oil Sands mine, Bitumen Extraction Plant, Cogeneration Plant, and Water Pipeline in the Fort McMurray Area, February 5, 2004, pg 82
⁴ Ibid, pg 83
⁵ Ibid, pg 83
⁶ Ibid, pg 83
⁷ Ibid, pg 84
⁸ ERCB Decision 2006-112: Suncor Energy Ltd., Application for Expansion of an Oil Sands Mine (North Steepbank Mine Extension) and a Bitumen Upgrading Facility (Voyageur Upgrader) in the Fort McMurray Area, November 14, 2006, pg 11
Similar to Decision 2004-009, this Panel noted that it looks to evidence presented to indicate that the impacts are being effectively managed. It also suggested that a process is needed that takes this information and provides a coordinated and effective channel through which *regional and cumulative socioeconomic impacts can be addressed in a meaningful and demonstrable way* [emphasis added]. A coordinated approach is still not evident.  

Finally, it stated that the Board does not have the mandate to resolve these issues. That responsibility rests with the appropriate government bodies in a position to provide direct assistance in these matters.  

This final note perhaps best describes the dilemma in which the Municipality, the Province, JRPs and proponents find themselves: if the Board discharges the responsibility to conduct a public review of oil sands projects, but does not have the mandate to address socio-economic issues, then it is challenging for the public-at-large to have confidence that socio-economic issues are receiving appropriate attention in the regulatory process. It is equally challenging for the Municipality to determine with whom it must collaborate to address these issues, many of which are too evident to residents.  

### 3.3. Albian – Muskeg River Mine Expansion – Decision 2006-128  
(presided over by J.R. Nichol, J.D. Dilay, L. Cooke)  
The decision report for the Albian Muskeg River Mine Expansion Project was similar to the conclusions mentioned above with respect to socio-economic concerns, but included several key differences. One important difference is that the Panel noted it also believes that if *public infrastructure investments* are not made in parallel with continued investment in oil sands development, socioeconomic issues will increasingly become a *critical part of the decision-making* regarding oil sands applications in the Wood Buffalo region [emphasis added].  

Another important difference is that the Panel noted it believes that taking action to ensure the necessary infrastructure is in place to accommodate growth will minimize the impact on the Municipality’s residents, further enhance the region as a place for business, workers, and their families to locate, and increase the competitiveness of the region to attract and sustain oil sands investment.  

Finally, the Panel made the following statement  

The Joint Panel believes that identifying gaps, establishing indicators and measuring progress are powerful catalysts for strategic thinking and collaborative action on socioeconomic issues.  

---

9 Ibid, pg 13  
10 Ibid, pg 13  
12 Ibid, pg 15  
13 Ibid, pg 16
The Municipality affirms the importance of gaps and indicators to measure progress and catalyze collaboration.

3.4. Imperial – Kearl Oil Sands Project – Decision 2007-013

(presided over by J.R. Nichol, T. McGee, L. Cooke)

Decision 2007-0013 followed shortly at the end of an unprecedented year that included three public hearings for oil sands mining projects. In this Decision Report, the Panel referenced the decision reports and views from preceding proceedings (Decision 2006-112 and Decision 2006-128), supported them, and stated further that it saw little value in repeating the recommendations in detail in this report. It is the Joint Panel’s view that capacity constraints related to socioeconomic impacts can be mitigated with proper planning and response by the appropriate government authorities.14

The challenge appears to be identifying what government authorities are the “appropriate government authorities” and how, within the limits of their legislative powers, each is capable of a response in partnership with industry to mitigate industry’s socio-economic impacts.

In summary, for the last seven years the decision reports issued by various oil sands development review panels have been quite similar with respect to socio-economic impacts and mitigations. As far back as 2002, review panels have deliberated about the socio-economic impact of oil sands development. It is clear that previous panels felt there was a critical lack of information available regarding the socio-economic impacts and the corresponding required mitigation measures in proponents’ applications. Given that Shell is operating from the same foundation – out-of-date guidelines to direct the collection and analysis of socio-economic impact data – it is reasonable to assume that it, too, is deficient.

4. Adequacy of information - Shell Pierre River Mine Project

Through its submissions and interventions into ERCB and JRP processes, the Municipality has highlighted many of the challenges it faces. It is important to note that the Municipality is challenged by both project-specific impacts and the cumulative impacts of oil sands development. And, just as regulators, industry and other stakeholders struggle to identify and mitigate cumulative environmental effects, so does the Municipality struggle to identify and mitigate cumulative socio-economic effects.

In its assessment of adequacy of information, the Municipality has focused on two areas – Impact Assessment and Mitigation. As the impact assessment for Shell’s Jackpine Mine Expansion Project and Pierre River Mine are similar, similar impacts – or a similar lack of understanding regarding the impacts – can be reasonably assumed. Just as the Municipality expressed its concern with the Jackpine Mine Expansion, it is concerned with the Pierre River Mine Project. However, the Municipality would also like to note

14 ERCB Decision 2007-013: Imperial Oil Resources Ventures Limited, Application for an Oil Sands Mine and Bitumen Processing Facility (Kearl Oil Sands Project) in the Fort McMurray Area, February 27, 2007, pg 28
that the Pierre River Mine brings with it the additional concern of a fly-in, fly-out (FIFO) approach.

4.1. Impact Assessment

As mentioned in Section 3, socio-economic concerns related to the pace and scale of oil sands development are not new. In fact, AENV, CEAA and the ERCB all require proponents to provide information on these concerns. Previous review panels have commented on the various socio-economic impacts of oil sands mining projects on the Municipality and its residents.

While the challenges the Municipality faces have been identified for a number of years, the information requirements that proponents are required to fulfill have, at best, been modestly updated but remain at a high level. In fact, they remain vague and unclear, and have grown stale in the face of rapid growth. The Municipality feels that both past and current socio-economic impact assessments have not had an appropriate level of rigor associated with them. Socio-economic impacts are as real and challenging to the Municipality and its residents as environmental impacts are to the Province, which is charged with environmental protection. The key difference between these two situations is that the Province has the ability to directly address its challenges while the Municipality does not since its authority is largely restricted to the assessment of property taxes – a means that is wholly inadequate to the task.

While socio-economic concerns such as infrastructure, housing, and municipal finances have been previously brought forward to various regulatory panels, there continues to be a lack of progress in digging deeper into the socio-economic challenges of the Region and what can reasonably be done to mitigate negative impacts.

Approximately four months after the application was originally submitted, Shell submitted a Project Update in May 2008. Since then, the baseline socio-economic landscape in the Municipality has been drastically altered due to the number and scope of additional projects launched within the Region, compounded by the deep and prolonged recession that began later in 2008. Since the baseline has been altered, the socio-economic impact assessment must be revisited and the project-specific impacts (both positive and negative) on the Municipality, the Province and Canada have likely changed as well.

According to Shell, Pierre River Mine will use project accommodations for both its construction and operations workforce, with an estimated 90 to 95 percent of the operational workforce on a fly-in, fly-out schedule. Shell does not include information about possible negative impacts on the host and source communities or the families involved. Research from Western Australia has associated FIFO work with a number of health and social issues, as is evidenced by an Australian Medical Association survey. Additionally, the fact that FIFO holds potential for significant negative concerns is

---

further evidenced by Australia’s current parliamentary inquiry into FIFO, and the more
than 200 submissions it has received from individuals and organizations who wished to
provide comment on the practice. The Municipality is concerned that a fulsome
assessment of FIFO impacts has yet to be conducted and is not being adequately
addressed.

4.2. Mitigation
Once an assessment of significant impacts is made, the Panel must ensure that significant
negative effects are adequately monitored and mitigated. Through its review of the
application materials, the Municipality has found little mitigation that could be counted
as effective, project-specific mitigation of socio-economic effects.

Throughout its application documents, Shell refers to involvement in various multi-
stakeholder groups as evidence of mitigating negative impacts. Involvement in multi-
stakeholder committees is a good thing but should not be accepted by the Panel as
mitigation efforts for project-specific effects. In fact, there is nothing in the citation to
demonstrate tangible action. In general, these committees address cumulative issues, not
project-specific issues – which all parties have already acknowledged are poorly
understood.

In Shell’s Jackpine Mine decision, the Panel found that there was an information deficit
with respect to social and economic challenges. The Municipality strongly believes, and
agrees with that Panel, that “there is a need for a reliable source of information on the
social and economic challenges (and opportunities) facing the region.” The
Municipality is of the opinion that the reliable source of information is still elusive today
and that it is firmly within the mandate of this JRP to ensure that this kind of information
is provided for this regulatory process.

In its 2008 Project Update, Shell outlined the additional funding that the provincial and
federal governments have announced since the Project application was first submitted.
The Municipality has stated through many different people at many different times that it
appreciates the increased provincial investment to address the Region’s various
challenges. The JRP should not view these funding commitments, which originate
outside the proponent, as sufficient mitigation for the project-specific socio-economic
impacts Shell has outlined.

- No determination was made as to when the Project(s) associated with the
  announced funding will be constructed and, therefore, when the socio-economic
  impacts of the Pierre River Mine will be borne by the Municipality.
- Depending on the fiscal health of the provincial government, these funding
  announcements could be cancelled at any time.
- Shell did not quantify how the projects, once constructed, will mitigate its project-
specific impacts.

17 Inquiry into the use of ‘fly-in, fly-out’ (FIFO) workforce practices in regional Australia,
a/fifodido/subs.htm, accessed September 13, 2012
18 Ibid, pg 83
Further, the Municipality has also stated that provincial and federal infrastructure funding commitments made since 2007 have only enabled it to ‘catch up’ to 2010; unfortunately, the calendar is about to turn the page to 2012. In other words, none of those announcements can credibly be applied to the potential socio-economic impacts arising from Shell’s Project.

The Municipality questions who is ultimately responsible to act on the fully adequate information that this JRP can request. While it acknowledges that, as the local order of government is has a role to play, it submits that it does not have the legislated authority to compel a proponent to provide additional information that would enable it to be truly effective in assessing the relevant impacts of oil sands development. As the consultant reports in Appendices C and D show, the Municipality requires a more rigorous assessment of socio-economic impacts to discharge its own role; but it also feels that the JRP requires this enhanced information as well to ensure that the significant socio-economic effects caused by the Pierre River Mine Project are appropriately identified, measured, mitigated, and monitored.

5. Summary
The Municipality finds that the information requirements themselves, and therefore the information provided to fulfill those requirements, are inadequate for the following reasons.

1. The Alberta Environment Terms of Reference for Shell’s original Jackpine Mine application were finalized in 2002 and are largely the same as the Alberta Environment Terms of Reference for the Pierre River Mine application which were finalized in 2007. As outlined in Section 3.1, in Decision 2004-009 for the original Jackpine Mine Application, the Panel expressed significant concerns regarding the adequacy of the information that was provided.
2. Since the application was submitted, AENV has acknowledged that its previous Terms of Reference were inadequate by issuing an updated, standardized Terms of Reference in 2009.
3. The ERCB application requirements are out-dated and do not require an adequate level of information for any party to use in a proper assessment.
4. The socio-economic baseline that was originally assessed has changed dramatically.
5. The mitigation measures that have been identified have not been shown to be adequate in addressing the project-specific effects of the Pierre River Mine Project.

Neither the JRP nor the Municipality are yet at a point where reasonable assurances regarding project-specific socio-economic impacts have been identified and associated mitigation efforts are sufficient. Therefore, the Municipality feels that the information supplied in support of the Pierre River Mine Project is not adequate for the Panel to make an informed decision on the socio-economic impacts, whether they are significant, and whether they will be mitigated.
6. Recommendations

To address the inadequacy of the information that has been provided, the Municipality recommends the following information requirements be satisfied. The recommendations and their corresponding rationale can be found in Appendices A and B, respectively.

6.1. Recommendations from Appendix A

Required Population Impact Information

<table>
<thead>
<tr>
<th>PROJECT PHASE</th>
<th>SCENARIO</th>
<th>TYPE</th>
<th>LOCATION</th>
<th>POPULATION BY AGE (EACH YEAR FOR A 20 YEAR FORECAST PERIOD)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>POPULATION BY AGE (EACH YEAR FOR A 20 YEAR FORECAST PERIOD)</td>
</tr>
<tr>
<td>Construction</td>
<td>Individual Project &amp; Cumulative</td>
<td>Priority Growth Area</td>
<td>Fort McMurray</td>
<td>Population (20 year)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Anzac</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Other Urban</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Rural</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Work Camp</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Operations</td>
<td>Individual Project &amp; Cumulative</td>
<td>Priority Growth Area</td>
<td>Fort McMurray</td>
<td>Population (20 year)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Anzac</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Other Urban</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Rural</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Work Camp</td>
<td></td>
<td>N/A</td>
</tr>
</tbody>
</table>

Recommendation

It is recommended that the Regional Municipality of Wood Buffalo’s Population and Employment Projection model be used as the basis for estimating the population impacts oil sands projects. This would help to ensure that the full impacts of individual and cumulative oil sands development can be evaluated in a consistent and comprehensive manner.

Employment Impacts

Required Project Employment Information

Employment information required for each individual project and the cumulative information for various oil sands projects is summarized in the following table:
### Required Project Employment Impact Information

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>DIRECT/INDIRECT</th>
<th>PERMANENT</th>
<th>NON-PERMANENT</th>
<th>WORK CAMP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Construction</strong></td>
<td>Direct</td>
<td>Workers (Each Year for a 20 Year Forecast Period)</td>
<td>Workers (Each Year for a 20 Year Forecast Period)</td>
<td>Workers (Each Year for a 20 Year Forecast Period)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Proportion of workers available in the local economy for each category of Residency Status.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Indirect/Contractor</td>
<td>Workers (Each Year for a 20 Year Forecast Period)</td>
<td>Workers (Each Year for a 20 Year Forecast Period)</td>
<td>Workers (Each Year for a 20 Year Forecast Period)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Proportion of workers available in the local economy for each category of Residency Status.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Operations</strong></td>
<td>Direct</td>
<td>Workers (Each Year for a 20 Year Forecast Period)</td>
<td>Workers (Each Year for a 20 Year Forecast Period)</td>
<td>Workers (Each Year for a 20 Year Forecast Period)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Proportion of workers available in the local economy for each category of Residency Status.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Indirect/Contractor</td>
<td>Workers (Each Year for a 20 Year Forecast Period)</td>
<td>Workers (Each Year for a 20 Year Forecast Period)</td>
<td>Workers (Each Year for a 20 Year Forecast Period)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Proportion of workers available in the local economy for each category of Residency Status.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Required Economic/Employment Impact Information

For each oil sands project, and cumulative information for various oil sands projects, the economic and employment impacts of these projects required by the municipality is as follows:

- The amount of direct economic impact in dollars and employment that will be retained in the local economy by major industry group (e.g. 2 digit NAICS). This information should be broken down for each of the construction and operations phases of the project.
- The amount of indirect economic impact in dollars and employment that will be retained in the local economy by major industry group (e.g. 2 digit NAICS). As above, this information should be broken down for each of the construction and operations phases of the project.
- The amount of induced economic impact in dollars and employment that will be retained in the local economy by major industry group (e.g. 2 digit NAICS). As above, this information should be broken down for each of the construction and operations phases of the project.

In each case above, it is important that employment data be ‘the number of workers employed’ and not person years. Having the number of workers employed will allow for the information to be consistent with that contained in the Population and Employment
Projection Model and comparable to other publicly available information on employment (e.g. Labour Force Survey, Census employment information).

In addition to the economic/employment impact information described above, it will be important for the project proponent to identify and describe specific arrangements that may be made with local businesses, education/training organizations and employment groups regarding employment or training arrangements that may have been made regarding the project.

**Labour Force Occupation Information Requirements**

Information regarding the occupations of the workforce required for both the construction and operations for individual oil sands projects, and cumulatively for various oil sands projects, is required to determine how the proposed project will affect the local labour market. This demand, combined with information regarding the potential availability of workers from the local labour force will allow for an assessment of the human capital and skill requirements to meet the needs of the project(s). The level of detail for the occupational data required is best met at the 4 digit NOC (National Occupation Classification) level.

**Recommendation**

As recommended for the population growth impacts, is recommended that the Regional Municipality of Wood Buffalo’s Population and Employment Projection model be used as the basis for estimating the employment impacts oil sands projects. This would help to ensure that the full impacts of individual and cumulative oil sands development can be evaluated in a consistent and comprehensive manner.

**Community and Social Services**

The information requirements for this group of impacts is multi-dimensional and can in some cases be difficult to quantify. The Regional Municipality of Wood Buffalo is currently in the process of working on a comprehensive list of community indicators that could be used to evaluate oil sands projects across the full range of community and social services areas important to the community. Until this set of indicators has been completed, it is recommended that the Sustainable Community Indicators developed by the Oil Sands Development Group, and gaps identified in the Municipality’s Social Plan be used as the basis for the information required in this area. The Sustainable Community Indicators and gaps have been summarized for each of five areas: health; education; social services; transportation & mobility; and, recreation, arts and culture.

- **Health**: The OSDG Sustainable Community Indicators (SCI) report identifies two indicators for health care as follows:\(^{19}\)
  - **Health SCI 1**: The number of physicians per 10,000 population for the Northern Lights Health Region as compared to the provincial average and other health regions in the province.

---

\(^{19}\) Sustainable Community Indicators - Summary Report (Revised Version, January 2006), Nichols Applied Management, Oil Sands Development Group, page 5.
Health SCI 2: The average length of stay in the emergency room of the Northern Lights Health Centre in Fort McMurray as compared to that for other selected major centres in the province.

The Social Plan identifies the following gaps in this social service area: 20

▪ Health Gap 1: Funding formulas are based on the permanent population, despite the fact that non-permanent and work camp populations place a high demand on health care services.
▪ Health Gap 2: Inadequate mental health services in the region.
▪ Health Gap 3: Acute care and emergency services do not meet provincial standards.
▪ Health Gap 4: Growing need for long term care facilities for seniors.
▪ Health Gap 5: Need to improve access to medical service for residents in rural communities.
▪ Health Gap 6: Lack of sufficient funding for non-profit organizations providing health services, such as Canadian Mental Health.
▪ Health Gap 7: Better recruitment and retention of healthcare professionals.

Education: The OSDG Sustainable Community Indicators report identifies one indicator for education as follows: 21

▪ Education SCI 1: Educational attainment as measured by the percentage of persons with trades certification as compared to Edmonton and Alberta.

The Social Plan identifies the following gaps in this social service area: 22

▪ Education Gap 1: Difficulty attracting and retaining teaching professionals.
▪ Education Gap 2: A need to promote more diversified programs for post secondary students.
▪ Education Gap 3: Students leave community to access other programs in other universities and some do not return.
▪ Education Gap 4: Affordable and adequate ESL (English as a Second Language) courses are needed for newcomers.
▪ Education Gap 5: High wage rates in the oil sands promotes students leaving prior to completing high school.
▪ Education Gap 6: Schools are operating at near or full capacity.
▪ Education Gap 7: Aboriginal students are streamed into non-academic programs, regardless of their interests or aptitudes.
▪ Education Gap 8: High Aboriginal drop out rates.

---


Social Services: The OSDG Sustainable Community Indicators report identifies four indicators for social services (two each in Public Safety and Community) as follows:  

- **Social Services SCI 1 (Public Safety):** The overall crime rate in Fort McMurray as compared to that in other selected major centres in Alberta.
- **Social Services SCI 2 (Public Safety):** Traffic collision rates on selected roadways in the municipality as compared to provincial averages for comparable roadways.
- **Social Services SCI 3 (Community):** The rate of United Way donations per person in Fort McMurray as compared to other selected major centres in Alberta.
- **Social Services SCI 4 (Community):** Volunteer activity in Fort McMurray as compared to other major selected centres in Alberta.

The Social Plan identifies the following gaps in this social service area:  

- **Social Services Gap 1:** There is an increased demand for child care services. Shortage of child care facilities due to difficulty recruiting and retaining child care workers and lack of affordable suitable space. Child care services are too expensive for many families. Need for extended hours of child care to accommodate shift work.
- **Social Services Gap 2:** High cost of living (i.e. housing) leads to increased demand on food bank resources, and residents are only able to access food every other month through the food bank.
- **Social Services Gap 3:** Non-profit organizations that offer family services are challenged with high costs for office space and operational costs.
- **Social Services Gap 4:** Large transient population leads to less cohesion in the community. This increases the number of policing issues, crime rates, traffic accidents, assaults and drug issues.
- **Social Services Gap 5:** Police staffing experiences an average vacancy rate of 15% to 20% as the Municipality has difficulty recruit new members.

Transportation & Mobility: The OSDG Sustainable Community Indicators report identifies one indicator for transportation as follows:  

- **Transportation SCI 1:** The number of public transit passenger trips per capita as compared to other selected major centres in Alberta.

The Social Plan identifies the following gaps in this social service area:  

- **Transportation Gap 1:** Need for a dangerous goods route around Fort McMurray that bypasses local traffic.
- **Transportation Gap 2:** Lack of bike paths throughout the community.

---


Transportation Gap 3: Increased traffic enforcement on Highway 63 to reduce collisions, speeding and impaired driving.

Transportation Gap 4: Need for increased bus service, including longer hours of operation, more frequent buses, more direct routes, and service on statutory holidays.

Transportation Gap 5: Need better bus service to rural communities.

Transportation Gap 6: Need for improved visibility at pedestrian cross walks.

Transportation Gap 7: Speed limits to address safety concerns.

Recreation, Arts & Culture (RAC): The OSDG Sustainable Community Indicators report identifies one indicator for recreation and cultural facilities as follows:

RAC SCI 1: The number of selected municipal recreational/cultural facilities per 10,000 population in Fort McMurray as compared to selected other major centres in Alberta.

The Social Plan identifies the following gaps in this social service area:

RAC Gap 1: Shortage of recreational facilities in some rural communities.

RAC Gap 2: Lack of community awareness of programs and services being offered from current facilities.

RAC Gap 3: Pressure on rural parks in the region that are in close proximity to oil sands development.

RAC Gap 4: Limited volunteers to assist with planning and operating programs and services.

RAC Gap 5: Desire for a stronger sense of community cohesion.

RAC Gap 6: Need for a concert hall/performing arts theatre in addition to Keyano College.

RAC Gap 7: Need for a dedicated outdoor space for festivals and concerts (currently under development).

RAC Gap 8: Desire for an additional movie theatre.

Recommendation

It is recommended that a complete set of Sustainable Community Indicators be developed that meet the municipality’s requirements to monitor the community and social services impacts of oil sands project. Until this is available, it is recommended that the OSDG Sustainable Community Indicators and gaps identified in the Municipality’s Social Plan be used as the basis for the requirements for individual project information and information on the cumulative impacts of various projects.

Municipal Financial Sustainability

To determine the impact of individual oil sands projects, and the cumulative effects of various oil sands projects on the long term financial viability of the municipality will

---


require an analysis of the service delivery demands and infrastructure requirements the project(s) place on the Municipality. To assess these impacts, the results of the analysis should include information on the following variables for each year in the 20 year forecast period:

- Municipal property tax impacts for residential and non-residential property classifications.
- Utility revenue impacts by utility.
- Municipal operating and capital cost impacts.
- Municipal revenue impacts by revenue type.
- Municipal infrastructure requirements both with and without the project(s).
- Debt and debt servicing limit impacts.

In each case, impacts refer to the projection of the information with the oil sands project(s) as compared to without the oil sands project(s).

**Recommendation**

It is recommended that the information requirements identified for population and employment, as well as project assessment estimates, be retained to facilitate an independent evaluation of the fiscal impact of the individual project, as well as the cumulative impacts of various projects, on the Regional Municipality of Wood Buffalo using the Municipality’s Fiscal Impact Model. This independent analysis could then be compared to the annual local government tax information provided by the proponent as required by the regulator.

**6.2. Recommendations from Appendix B**

**Population**
- Use the High Growth Scenario from the June 2011 version of the Municipality’s Employment and Population Projection Model for determining both the project and cumulative impacts. The projections used in the EIA are lower by 3,234 in 2015 and over 20,000 people by 2020, a significantly different result that leads to much lower impacts.
- Provide details on the annual population by community for both the permanent and non-permanent residents over the forecast period.
- Undertake a demographic breakdown (including age and gender) and analysis for use in determining socio-economic impacts and effects. The required data is contained in the Municipality’s Employment and Population Projection Model.
- Provide options that Shell could use to mitigate the effects of the project on the demographic profile of Fort McMurray. This would require aligning with the direction outlined in the recently approved Municipal Development Plan.

**Housing**
- Undertake a housing needs assessment using the Canada Mortgage and Housing Corporations’ (CMHC) definition of Core Housing Need to answer the following questions:
  1. How many households are in need?
  2. Who is in need and the size of their household?
  3. How big is the affordability gap in Fort McMurray?

The most recent Tax Filer (Statistics Canada) and Core Housing Need (CMHC) data should be used to support the analysis.
- Determine the cumulative impact of (1) using a work camp approach to housing oil sands workers, and (2) providing substantial Living Out Allowances (LOA’s) on the housing market and rental rates.
- Provide actions that Shell could use to mitigate the effects of the project on the housing market. This must include a discussion of how industry could participate with government to alleviate the cumulative effects of oil sands development on the households in need of affordable housing.

Comments Regarding the Regulatory Requirements
While not directly related to the adequacy task, there are issues with the regulatory guidelines and requirements for socio-economic factors being very limited in terms of amount and detail, and in some cases, somewhat vague and unclear. Two comments directed at federal and provincial regulators are presented for consideration:
- Federal and provincial regulators should review their respective SEIA requirements and develop a much more robust and effective set of socio-economic factors that must be used to identify impacts as well as a mitigation measures.
- Federal and provincial regulators should clarify whether cumulative effects apply to socio-economic factors. This area requires clarity to ensure all parties have a clear understanding of the project application requirements in the future.
7. Appendix A – Consultant Report #1 – Review of the Economic and Socio-Economic Information Requirements for Oil Sands Projects – Applications Management Consulting Ltd.
Review of the Economic and Socio-Economic Information Requirements for Oil Sands Projects

Regional Municipality of Wood Buffalo

FINAL REPORT

December 15, 2011
December 15, 2011

Regional Municipality of Wood Buffalo
Stakeholder Relations

Attention: Dennis Vroom, Industry Relations Officer

Subject: Review of the Economic and Socio-Economic Information Requirements for Oil Sands Projects - Final Report

Attached is our Final Report providing a review and analysis of the information requirements related to the economic and socio-economic components of oil sands project regulatory submissions.

Sincerely,

Applications Management Consulting Ltd.

Per:

Darryl Howery
Principal

Encl. (1)
Contents

Introduction .............................................................................................................................................................. 1
  Purpose of the Analysis ........................................................................................................................................ 2
  Organization of this Report .................................................................................................................................. 3

Defining the Information Requirements ................................................................................................................ 4
  Economic and Socio-Economic Impacts .................................................................................................................. 4
  This Analysis Excludes Housing .......................................................................................................................... 4
  Minimum Information Requirements .................................................................................................................... 4
  Economic and Socio-Economic Factors ................................................................................................................ 5

Overview of the Review of RMWB Information Requirements ......................................................................... 5
  Population and Employment Projection Model .................................................................................................... 6
  Municipal Fiscal Impact Model ............................................................................................................................ 7

ERCB Regulatory Information Requirements ..................................................................................................... 8
  Economic Analysis .................................................................................................................................................. 9
  Social Impact Assessment ..................................................................................................................................... 9

Alberta Environment Regulatory Information Requirements .............................................................................. 11

Economic and Socio-Economic Information Requirements ............................................................................... 13
  Jackpine Mine Expansion Project Information .................................................................................................. 13
  Categories of Economic and Socio-Economic Information .................................................................................. 13
  Population Growth Impacts ................................................................................................................................ 13
    Required Project Population Impact Information .............................................................................................. 14
    Information Provided in the Jackpine Mine Expansion EIA & Update ............................................................. 16
    Regulatory Information Requirements ............................................................................................................... 19
    Recommendations ............................................................................................................................................... 19
  Employment Impacts .......................................................................................................................................... 20
    Required Project Employment Information ........................................................................................................ 21
    Required Economic/Employment Impact Information ..................................................................................... 22
    Labour Force Occupation Information Requirements ....................................................................................... 23
    Employment Impact Information Provided for the JME .................................................................................. 23
    Regulatory Information Requirements ............................................................................................................... 25
    Recommendations ............................................................................................................................................... 26
Community and Social Services

Required Project Community and Social Services Information

Community and Social Services Forecast Information Provided for the JME

Regulatory Information Requirements

Recommendations

Municipal Financial Sustainability

Required Municipal Fiscal Impact Information

Municipal Fiscal Impact Information Provided for the JME

Regulatory Information Requirements

Recommendations

Conclusions and Recommendations

Population Growth Impacts

Recommendation

Employment Impacts

Required Project Employment Information

Required Economic/Employment Impact Information

Labour Force Occupation Information Requirements

Recommendation

Community and Social Services

Recommendation

Municipal Financial Sustainability

Recommendation

Appendix A: Guidelines Respecting An Application for a Commercial Crude Bitumen Recovery and Upgrading Project - Section 3: Economic Information

Appendix B: Guidelines Respecting An Application for a Commercial Crude Bitumen Recovery and Upgrading Project - Section 6: Socio-Economic Assessment

Appendix C: Guide to Preparing Environmental Impact Assessment Reports in Alberta - Socio-Economic Assessment

Appendix D: Energy Resources Conservation Act (Selected Excerpts)

Appendix E: Oil Sands Conservation Acts (Selected Excerpts)
Introduction

The Regional Municipality of Wood Buffalo (RMWB) is unique in Canada. It covers the largest area of any municipality in Alberta or Canada, exceeding in size the provinces of New Brunswick, Nova Scotia and Prince Edward Island. It is home to the Athabasca Oil Sands Area (AOSA), the third largest reservoir of crude bitumen in the world. Development of the oil sands resources through both surface mining and in situ technologies has accelerated over the past decade.

Mining production has increased from 536,000 barrels per day in 2005 to 727,000 barrels per day in 2010. This translates into an annual average growth of rate 6.3 per cent. Over the same period, in-situ production increased on average by 11.2 per cent annually from 437,000 barrels per day to 743,000 barrels per day. Over the period 2005 to 2010, total oil sands production has increased by over 50 per cent.

Oil Sands Production (000s barrels per day)

As a result of increased oil sands production, the RMWB has faced tremendous growth pressures over the past decade, with total population more than doubling since 2000. The municipality’s population has grown on average by 7.3 per cent per year over the last ten years. This rate of average annual growth was by far the largest growth rate among other major urban centers in Alberta. In comparison, provincial population grew on average by 2.1 per cent annually over the same period while national population grew by 1.1 per cent.
Population Growth Rates (2000 - 2010)*

<table>
<thead>
<tr>
<th>City</th>
<th>Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edmonton</td>
<td>7.3%</td>
</tr>
<tr>
<td>Medicine Hat</td>
<td>3.2%</td>
</tr>
<tr>
<td>Calgary</td>
<td>2.3%</td>
</tr>
<tr>
<td>Lethbridge</td>
<td>2.2%</td>
</tr>
<tr>
<td>Red Deer</td>
<td>2.0%</td>
</tr>
<tr>
<td>RMWB</td>
<td>1.9%</td>
</tr>
</tbody>
</table>

Source: Albert Municipal Affairs Official Population List except the RMWB.1
* Edmonton, Medicine Hat and Lethbridge annual average growth rates are based on the years 1999-2009.

The importance of oil sands development and the impact this development has on the Regional Municipality of Wood Buffalo has become increasingly important. With the rapid pace of oil sands development over the past decade and with various proposed oil sands projects that on the horizon seeking regulatory approval, it is imperative that the RMWB have a sufficient level of knowledge and information about these proposed projects and their potential implications for the municipality.

PURPOSE OF THE ANALYSIS

The purpose of this analysis is to identify the information requirements for the Regional Municipality of Wood Buffalo to evaluate the implications and effects of oil sands project development on an individual and cumulative basis. This analysis focusses on economic and socio-economic information requirements. The specific objectives of the analysis are as follows:

- Make a determination as to the types of economic and socio-economic information necessary to satisfy the regulatory guidelines, as well as the information required by the Municipality to be able to effectively determine the impact of the proposed project and achieve the stated development and policy objectives of the municipality, including those outlined in the recently completed Municipal Development Plan (MDP).
- Review the information provided in the economic and socio-economic impact assessment sections of the Jackpine Mine Expansion EIA (Environmental Impact Assessment) and EIA Update, and evaluate how the information provided meets the regulatory requirements and the requirements of the Municipality.

---

1 http://www.woodbuffalo.ab.ca/Assets/Corporate/Census+Reports/2010+Municipal+Census.pdf As discussed during the Total Joslyn North Mine Public hearing, the RMWB and Municipal Affairs have different views on the population of the RMWB. The population growth rate shown on the chart is taken from the data from the RMWB’s 2010 census and should be viewed as the most up-to-date data of the RMWB’s population.
Review the relevant published regulatory review guidelines, as they pertain to economic and socio-economic aspects of oil sands projects as evaluated by the Provincial/Federal Joint Review Panel. This will include the general areas of economic analysis and socio-economic impact analysis.

**Organization of this Report**

This report has been organized into four main sections. Following this introductory section, the report includes the following:

- **Defining the Information Requirements:** This section of the report defines the scope of information to be included in the review and the sources to be used to help determine the economic and socio-economic information required for oil sands project.

- **Economic and Socio-Economic Information Requirements:** This section reviews the economic and socio-economic information requirements of the Regional Municipality of Wood Buffalo in four broad areas: Population Growth Impacts; Employment Impacts; Community and Social Service Impacts; and Municipal Financial Sustainability. In each section, the information requirements are defined and the Jackpine Mine Expansion project information as provided in the EIA and EIA Update related to these is evaluated. The information requirements of the regulator are also provided along with recommendations as to the information that the RMWB should be able to expect from individual oil sands projects.

- **Conclusions and Recommendations:** This section provides a summary of the conclusions of the analysis conducted and recommendations regarding the information that the RMWB should be able to expect from individual oil sands projects.

Also provided are five appendices which contain sections of various publications that outline the information requirements for the regulatory review process. This includes the ERCB information guidelines that pertain to the economic (Appendix A) and socio-economic (Appendix B) requirements of an Environmental Impact Assessment as well as the relevant Socio-Economic Assessment component of the Environmental Assessment Program as provided by the Government of Alberta in the Guide to Preparing Environmental Impact Assessment Reports in Alberta (Appendix C). Also provided are excerpts from the Energy Resources Conservation Act (Section 3) and Oil Sands Conservation Act (Sections 3, 10, 11) that provide broad direction regarding the Joint Review Panels responsibility to consider the social and economic effects when considering the public interest arguments for an oil sands project (see Appendices D & E respectively).

---


5 [http://www.ercb.ca/docs/requirements/actsregs/osc_act.pdf](http://www.ercb.ca/docs/requirements/actsregs/osc_act.pdf)
Defining the Information Requirements

The Regional Municipality of Wood Buffalo bears the largest direct impact of oil sands development occurring in the Athabasca Oil Sands Area. As a result, it is imperative that the RMWB have the opportunity to evaluate the potential impact on the municipality, and communities in the municipality, of current and future oil sands development.

This need to evaluate the potential impacts of oil sands development isn’t just a desire of the municipality, but its obligation as a municipality in Alberta as noted in Part 1 Municipal Government Act.

“The purposes of a municipality are (a) to provide good government, (b) to provide services, facilities and other things that, in the opinion of council, are necessary or desirable for all or a part of the municipality, and (c) development and maintain safe and viable communities.”

In order to be able to complete its responsibilities as a municipality, it is necessary that the RMWB review and analyze the potential impact of each oil sands project prior to a decision regarding its approval. To effectively fulfill these responsibilities, information about the nature and scope of the project is required.

Economic and Socio-Economic Impacts

While the scope of the analysis contained in this report is limited to economic and socio-economic factors, it is expected that the RMWB will be reviewing the information requirements for all relevant aspects of each individual oil sands project’s impacts on the municipality.

This Analysis Excludes Housing

While housing, affordable housing and homelessness are typically included as part of the economic and socio-economic impact analysis of a major project, these components have not been included in this analysis. A review of the housing information requirements has completed as a separate analysis for the Regional Municipality of Wood Buffalo. This analysis is contained in the report “Adequacy Review of the Environmental Impact Statement - Shell Canada Jackpine Mine Expansion Application”.

Minimum Information Requirements

In the scope of this project, the information requirements identified reflect the minimum information required for the RMWB to effectively evaluate the project. This has been determined using a number of documents that reflect the objectives and policies of the municipality.


It should be noted that the information requirements identified in this report reflect the current needs of the RMWB. It is possible these may change as the municipality grows or the nature of the oil sands projects change over time. Further, these minimum information requirements should not preclude additional information being provided by the proponent of an oil sands project, or requested by the municipality, if the circumstances and nature of the oil sands project dictate this need.

**Economic and Socio-Economic Factors**

Economic and socio-economic impacts can encompass a range of issues as they affect communities and regions. Typically, economic impacts refer to the value of economic change that can be expected to result from proceeding with a project, as compared to the project not going forward. Economic impacts typically encompass changes in income, measured regionally by GDP (Gross Domestic Product) and employment and employment income. These impacts can be measured by major sector or industry in the economy as well as by type of impact, including tax and revenue implications for various levels of government.

The concern of the socio-economic impact analysis is typically focussed on answering the question – is the community better off or worse off as a result of the project? Answering this question can involve determining how the population and demographics of the community will change, and how it will impact on the health, vitality and sustainability of the community in question. This could involve consideration of an array of individual factors, including:

- The physical health of the community and members of the community.
- The level of education and access to education services.
- Community safety and levels of crime.
- Community cohesion and well being reflecting peoples attachment to their community.
- Opportunities for personal and social enrichment through arts, cultural and recreational activities.
- Mobility of the population.
- Accessibility of services to special needs members of the community.
- The availability of services to people in the community who are under privileged or have extraordinary needs.

While the list of factors that could contribute to a healthy and vibrant community can be considered ubiquitous, their definition and importance can often be community specific.

**Overview of the Review of RMWB Information Requirements**

The primary focus of this review is on the adequacy of the information provided on major oil sands projects for the Regional Municipality of Wood Buffalo to review the potential impact of oil sands projects on the municipality. However, in some instances the responsibility for the delivery of the services affected by development of an oil sands project may not be limited to that of the municipality, or it may be a shared responsibility across several levels of government, including local government. Also, some in some cases, the impacts in one area that is not a municipal responsibility (e.g. health, education), will have consequences on on other areas of shared responsibility (e.g. FCSS) or sole municipal responsibility (e.g. police, recreation). As a result, each of the areas relevant to the economic and socio-economic impacts of oil sands projects are
reviewed. However, it should be noted that the views of the other levels of government and service providers should be contacted to obtain their specific information requirements.

This review has relied upon the following documents to reference the specific economic and socio-economic information requirements to conduct a review of each oil sands project.

- **Regional Municipality of Wood Buffalo - Municipal Development Plan**: Bylaw No. 11/027, October 2011
- **The Regional Municipality of Wood Buffalo Social Plan** (Enhancing quality of life for current and future residents of Wood Buffalo): July 1, 2010

The RMWB has developed various tools to assist in decision making process around financial sustainability and financial policies, as well as planning, development and service delivery related to future growth. These tools are described below:

- **Regional Municipality of Wood Buffalo - Population and Employment Projection Model**: Developed in conjunction with a group of community stakeholders in 2010. This model was subsequently adapted to the Athabasca Oil Sands Area (AOSA) and Cold Lake Oil Sands Area (CLOSA) for the Oil Sands Secretariat in support of the Comprehensive Regional Infrastructure Sustainability Plan (CRISP).
- **Regional Municipality of Wood Buffalo - Municipal Fiscal Impact Model**: Developed in conjunction with Alberta Municipal Affairs in 2009, this model is designed to measure the financial implications of growth and development in both the urban services and rural areas of the municipality.

The purpose and scope of each of these models is briefly outlined below.

**Population and Employment Projection Model**

Historically, the population projections provided in project Socio Economic Impact Assessment (SEIA) component of the Environmental Impact Assessment (EIA) have underestimated the actual growth of the Regional Municipality of Wood Buffalo. Relying on these SEIA forecasts has resulted in the municipality and other community stakeholders underestimating the population growth it will have to plan for, and ultimately provide services to. In 2009 the RMWB struck a committee of community and industry stakeholders with an interest in population growth in the RMWB and individual communities within the RMWB. Through a process of determining the stakeholders information requirements, a plan was established whereby the municipality would develop a population and employment forecasting model that would meet the needs of this user group. Subsequently, the model has been developed and various forecasts have been produced using the model. Most recently, this model has been used to prepare the population and employment forecast employed in the municipality’s Municipal Development Plan (2011).

Following the development of the RMWB Population and Employment Projection Model, the model was adapted to the Athabasca Oil Sands Area (AOSA) and Cold Lake Oil Sands Area (CLOSA) to develop long-term population and employment forecasts.

---


range population projections for each of these oil sands areas. These forecasts are an integral part of the Comprehensive Regional Infrastructure Sustainability Plan (CRISP) process.

"...infrastructure requirements are defined relative to potential oil sands production rates and associated population growth increments. The CRISP Monitoring Framework, described in Section 5.2, will utilize a series of population and resource-development "triggers" to monitor growth in the AOSA so that infrastructure needs are anticipated and responded to in a timely way."\(^2\)

In order to determine whether the regional infrastructure plan (CRISP) is on track, or if adjustments are required, a Monitoring Framework\(^3\) was developed to track population and employment growth (as well as other factors) over time to determine what changes may be required in the plan. The monitoring activities associated with population and employment are outlined in the Monitoring Framework as follows:

- The Alberta Municipal Affairs Official Population List reflects the result of the most recent Statistics Canada Census or the most recent municipal census accepted by the Ministry. Municipalities tend to conduct their own censuses if population is increasing or if there is a substantial number of people in the region that are not counted by the federal census. This information needs to be considered alongside other relevant population data from various government, industry and private sources to ensure an up-to-date picture of population in the area is understood. Population growth in excess of the provincial average (2.04%) indicates a particular need for vigilance with respect to infrastructure needs. Population growth higher/lower than the growth assumed for the CRISP means advance/delay in infrastructure requirements.

- Mobile workers in construction and operations camps can be a substantial portion of the total people in the region. High construction camp counts (>10,000) indicates near term permanent population pressures as the new projects come on stream.

As a result, information requirements for the municipality’s Population and Employment Projection Model, which include the types of information required for the AOSA and CLOSA CRISP Monitoring Framework, will be used as the basis for the minimum information requirements related to population and employment impacts of oil sands projects.

**Municipal Fiscal Impact Model**

The origins of the Municipal Fiscal Impact Model go back to the Suncor-Voyageur EUB hearings in 2006 during which the Regional Municipality of Wood Buffalo raised concerns about the financial viability of the municipality in light of the pace and scope of oil sands development. In response to these concerns, the province and municipality jointly engaged in the development of a Municipal Fiscal Impact Model to undertake various analysis of the financial consequences of oil sands and related developments on the RMWB’s financial position. This includes the following:

- A projection of the fiscal position of municipal operations over a 20 year forecast period.
- Assessment of the fiscal impact of various development scenarios on municipal operations and costs, the tax base and taxation rates.
- The ability to test the sensitivity of the fiscal impact analysis results to changes in the basic assumptions in the model.
- A determination of the effect of policy changes on the fiscal impact analysis results.

\(^{12}\) Comprehensive Regional Infrastructure Sustainability Plan for the Athabasca Oil Sands Area, Government of Alberta, page 11.

\(^{13}\) Comprehensive Regional Infrastructure Sustainability Plan for the Cold Lake Oil Sands Area, Government of Alberta, page 63.
This model is comprehensive in that it accounts for all significant factors that contribute to the financial health of the municipality over the forecast period. It also allows for the estimation of fiscal impacts on both an individual oil sands project basis, as well as the cumulative impacts of various oil sands projects.

The import of this model to the municipality to determine both the short run and long run implications of project approvals is paramount. It also is important to the Province of Alberta, as the province provides funding to municipalities and the RMWB for various purposes. A determination of the adequacy and priorities around this funding can be substantially informed by information from the Municipal Fiscal Impact Model. As a result, the information requirements for this model have been utilized to determine some of the information requirements from the oil sands project regulatory review process.

**ERCB Regulatory Information Requirements**

The Energy Resources Conservation Board has established guidelines for the information required of project proponents to describe their project and its potential impacts. These guidelines are outlined in “Requirements For Applications For Approval of a Commercial Crude Bitumen Recovery Scheme”.\(^{14}\)\(^{15}\) The introduction to this guide states the following:

> “The following is intended as a guideline of the information required in an application to the Energy Resources Conservation Board (ERCB) under the Oil Sands Conservation Act (Act) for approval of a scheme for the recovery of oil sands, crude bitumen or products derived there from, in order to meet the needs of both Alberta Environment and the ERCB.

> These guidelines are designed to apply to all commercial oil sands projects. Additional information may be required for large-scale projects, if the situation warrants, and in the case of smaller projects or for an amendment to a scheme, some of the information may not be necessary.”\(^{16}\)

This guide specifically refers to economic information and the requirement for a benefit-cost analysis.

> “Technical and directly related economic details of the proposed development must be included. Assessments of biophysical impact, social impact, and benefit-cost are also required.”\(^{17}\)

Further, the guide makes reference to the level of detail that should be provided by the project proponent in support of the application.

> “Although the guidelines do not explicitly specify the ‘detail’ that should be provided, the intent is that sufficient information must be available to permit the overall evaluation of whether the project will result in the economic and efficient use of resources and protection of the environment. An application would necessarily be made available to the public and in that context there is no intent to force an application to reveal research or

---


\(^{15}\)This is also referenced as EUB Directive 023 - Guidelines Respecting an Application for a Commercial Crude Bitumen Recovery and Upgrading Project, Alberta Energy and Utilities Board, September 1991.

\(^{16}\)Ibid, page 1.

\(^{17}\)Ibid, page 1.
development information it considers to be confidential. Applicants are cautioned that in some cases, a lack of this kind of information could lead to delays and complications in the processing of an application.\textsuperscript{18}

The specific expectations regarding economic analysis and socio-economic impact analysis are outlined in subsequent sections of ERCB Directive 23.

**ECONOMIC ANALYSIS**

Section 3 of the “Guidelines Respecting an Application for a Commercial Crude Bitumen Recovery and Upgrading Project” outlines the information expected of the proponent regarding the economics of the project (see Appendix A). This information falls into three categories as follows:\textsuperscript{19}

- **Commercial Viability** - information should include a depiction of relevant annual information on the following:
  - Revenues by product
  - Itemized capital and operating costs
  - Project financing
  - Royalties and taxes
  - Net cash flow
  - Marketing arrangements, and
  - Supply arrangements for fuel requirements and electric power.

- **Benefit-Cost Analysis** - information should include the following:
  - A summary of the quantifiable public benefits and costs incurred during the construction and operation of the project as they pertain directly to the Province of Alberta and Canada.
  - A summary of any non-quantifiable public benefits and costs incurred each year during the construction and operation of the project as they pertain directly to the Province of Alberta and Canada.

- **Economic Impact** - information should include the following:
  - An appraisal of the economic impact of the project on the region, and province, as well as any economic impact at the national level.
  - Discussion of any initiatives undertaken in conjunction with the project to accommodate regional economic priorities and interests.
  - An assessment of direct and indirect employment opportunities for all groups associated with the project.

**SOCIAL IMPACT ASSESSMENT**

Section 6 of the “Guidelines Respecting an Application for a Commercial Crude bitumen Recovery and Upgrading Project” outlines the information expected of the proponent regarding the social impacts of the project (see Appendix B).

\textsuperscript{18} Ibid, page 2.

\textsuperscript{19} Ibid, page 24.
The social impact assessment is intended to present the effects of the scheme on the population base in the impacted area and its consequence on the need for infrastructure. It should also address the quality of life issues that are of interest to the communities affected.

The assessment is required to follow a basic format which includes, (emphasis provided in the original document) for each type of impact being considered: baseline conditions, impact identification, impact significance, mitigative measures, and residual impacts. Emphasis is to be placed on the mitigative measures and not the detailed description of baseline conditions.

This information falls into seven categories, outlined as follows:

- **Population Assessment Information** - including population growth and its distribution in the study area compared to the baseline. This would include:
  - Historical population and distribution data.
  - The most likely projection of annual population from the date of application to an appropriate time after the project start up.
  - The range from the most likely projection with some discussion of the factors affecting each projection.

- **Services and Infrastructure** - including a discussion of the impact on public services at the provincial, regional and local level:
  - A description of basic services presently available.
  - An assessment of the impact the project will have on existing services.
  - An identification of the need for new services or improvement to existing services, and how the applicant will facilitate planning by municipal and provincial agencies to provide the services or improvements.

- **Land Use** - including the following:
  - An assessment of land use patterns in the area and details of the impact of the proposed project on these patterns, including information on the displacement of other land uses and the economic consequences.
  - The resource land use, including (as relevant): agriculture, forestry, mineral resources, surficial resources, wildlife and fisheries, recreation and access management.
  - An identification of the project impacts on the natural resources of the affected region and proposed mitigation measures to minimize these impacts.

- **Housing** - including the following:
  - A discussion of the plans by the applicant for providing housing and other services for its workforce during the construction phase of the development, including the location and scope of a camp and address the issues such as health services, security, access, recreation and other relevant services.

- **Quality of Life** - including a general discussion of the impact of the project on the quality of life in the study area and the institutional changes that may be necessary to accommodate the development. This should address the social effects caused by changes in the economic base of the impacted area.

---

20 Ibid, page 38.
Special Groups - including the identification and assessment of any special population groups in the region.

Historical Resources - including an assessment of historical resources consistent with the requirements of a Historical Resources Act.

**Alberta Environment Regulatory Information Requirements**

Alberta Environment has published a Standardized Terms of Reference (Updated February 2011) that outlines the scope of an Environmental Impact Assessment report on the environmental and socio-economic effects of various types of project, including: industrial plants, coal mines, oil sands mines and all types of in situ projects. The components of the Standardized Terms of Reference that refer to the Socio-Economic Assessment Components are provided in Section 7 for both in situ and oil sands mining projects (see Appendix C). The socio-economic information requirements include the following:

- **Baseline Information**
  - A description of the existing socio-economic conditions in the region and communities in the region.
  - A description of the factors that may affect the existing socio-economic conditions, including: changes in population, workforce requirements for the project (including a description of when peak activity will occur) and planned accommodations for the workforce for all stages of the Project.

- **Impact assessment**
  - A description of the socio-economic impacts of construction and operation of the Project, including: local training, employment and business opportunities; regional and provincial economic benefits, housing, recreational activities, and impacts to First Nations and Métis land use and social and cultural implications.
  - An estimate of the total Project cost, including various breakdowns for labour and materials, as well as the proportion of expenditures expected to occur in the region, Alberta, Canada outside of Alberta and outside of Canada.
  - The impacts of the project on the availability of affordable housing and the quality of health care services.
  - The impacts on the primary and secondary highway systems and other regional roads caused by anticipated changes in traffic volumes.
  - A description of the socio-economic impacts of any construction camp required for the Project, including: its location, the number of workers it is intended to house; whether the camp will service the Project or other clients; the length of time the camp will be in service; and the services to be provided at the camp.
  - A description of the mitigation measures that may be taken to eliminate or reduce any negative impacts of the project.
  - A description of the residual impacts of the project on socio-economic conditions and the plans for managing these impacts.

- **Monitoring**

---

A description of the programs proposed to monitor any socio-economic impacts and measure the effectiveness of the proposed mitigation plans.
Economic and Socio-Economic Information Requirements

The economic and socio-economic information requirements necessary for the Regional Municipality of Wood Buffalo to effectively evaluate oil sands projects are outlined below.

**Jackpine Mine Expansion Project Information**

The project information provided on the Jackpine Mine Expansion (JME) by the applicant – Shell Canada Limited – is used as the basis to test the adequacy of the required economic and socio-economic information defined in this analysis. The JME information is provided in two documents:

- Application for the Approval of the Jackpine Mine Expansion Project, December 2007, Volume 1: Project Description, Shell Canada Limited. This includes the Socio-Economics section (8.7) contained in Volume 5: Terrestrial Resources and Human Environment. Hereafter, this information is referred to throughout this report as the EIA.

**Categories of Economic and Socio-Economic Information**

The analysis of the economic and socio-economic impact information requirements for the Regional Municipality have been grouped into four categories:

- Population Growth Impacts
- Employment Impacts
- Community and Social Service Impacts
- Municipal Financial Sustainability

Each of these areas have areas are reviewed and analyzed in the sections below.

**Population Growth Impacts**

At the base of determining the impacts of a major oil sands project is understanding how that project will affect the population of the municipality. Population growth is directly related to the employment impacts of the project (see below) and need to be considered together. The importance of population impact information was noted in the *Investing in our Future: Responding to the Rapid Growth of Oil Sands Development* report prepared by the Government of Alberta. As stated in this report, population growth consequences are at the heart of understanding the implications of oil sands development.22

---

“In order to assess the potential gaps in infrastructure and essential services in the three oil sands areas, it’s important to begin with projections of future growth.

The focus is primarily on the next three to five years, from 2006 to 2011. At the same time, in order to understand and evaluate growth prospects in the proper context during this period it is necessary to look at the longer term. Hence the need to assess oil sand growth prospects out to 2020.”

From a municipality’s point of view, planning for growth and how services can be provided in an efficient and effective way to accommodate that growth is critical. In the case of the RMWB, this need is complicated by the size of the municipality and its diverse nature of communities. This is particularly true for Wood Buffalo, as the location and nature of growth are as important as the amount of growth.

From a community planning point of view, the size and nature of growth is important for various reasons. The RMWB Municipal Development Plan (MDP) outlines several objectives regarding population growth that are important from a growth management perspective, as follows:

The RMWB Municipal Development Plan outlines several objectives regarding employment as follows:

- **Priority Growth Areas (R.1.1):** The Municipal Development Plan identifies two Priority Growth Areas – Fort McMurray which will be the primary settlement area and service centre for the region; and Anzac which will evolve to become a small urban centre with associated municipal services. Promoting growth in defined areas supports other directions defined in the MDP. These include the successful development of Integrated Multi-model Mobility Systems (R.2), securing Sufficient land for Urban and Rural Development (1.1), and Making Efficient Use of Available Land (1.1.1).

- **Consolidate Work Camps (R.1.3):** For temporary construction workers in remote locations that are outside a reasonable commuting distance from a Priority Growth Area, work camps should be consolidated to facilitate the provision of services. Two consolidated work camp areas are identified in the MDP – one north of Fort MacKay and another in the Conklin area.

- **Encourage Permanent Residency (R.1.4):** It is the objective of the municipality to encourage, where possible, permanent residency in the region. This will include construction workers and contractors that can find on-going work in the region due to new project construction or maintenance activities. The RMWB would like to limit the use of work camps for temporary workers that are outside a reasonable commuting distance from a Priority Growth Area.

**REQUIRED PROJECT POPULATION IMPACT INFORMATION**

To be able to evaluate the impact of an individual oil sands project, or the cumulative impact of various projects, the population growth impacts of these projects need to be defined at a level of detail that allows the RMWB to evaluate the impact against the broad planning objectives identified in the MDP. The municipality also requires the ability to input the relevant project information into their models to analyze the impacts of the project. In considering these factors, the specific population growth information required for an individual project, or cumulative impact of various projects is as follows:


24 Ibid, page 51.

Required Population Impact Information

<table>
<thead>
<tr>
<th>PROJECT PHASE</th>
<th>SCENARIO</th>
<th>TYPE</th>
<th>LOCATION</th>
<th>PERMANENT RESIDENT</th>
<th>NON-PERMANENT RESIDENT</th>
<th>WORK CAMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>Individual Project &amp; Cumulative</td>
<td>Priority Growth Area</td>
<td>Fort McMurray</td>
<td>Population (20 year)</td>
<td>Population (20 year)</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Anzac</td>
<td>Population (20 year)</td>
<td>Population (20 year)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other Urban</td>
<td>Each Community</td>
<td>Population (20 year)</td>
<td>Population (20 year)</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rural</td>
<td>Population (20 year)</td>
<td>Population (20 year)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Work Camp</td>
<td>by Camp</td>
<td>N/A</td>
<td>N/A</td>
<td>Population (20 year)</td>
</tr>
<tr>
<td>Operations</td>
<td>Individual Project &amp; Cumulative</td>
<td>Priority Growth Area</td>
<td>Fort McMurray</td>
<td>Population (20 year)</td>
<td>Population (20 year)</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Anzac</td>
<td>Population (20 year)</td>
<td>Population (20 year)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other Urban</td>
<td>Each Community</td>
<td>Population (20 year)</td>
<td>Population (20 year)</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rural</td>
<td>Population (20 year)</td>
<td>Population (20 year)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Work Camp</td>
<td>by Camp</td>
<td>N/A</td>
<td>N/A</td>
<td>Population (20 year)</td>
</tr>
</tbody>
</table>

The details of the information required is as follows:

- **Project Phase**: Because construction activity occurs over a period of time, it is important to distinguish between construction and operations workers and associated population.

- **Scenario**: The impact of both the individual project and the cumulative effect of various oil sands projects is required to make a determination of the relative contribution of the individual project to growth, and to get an updated picture of total cumulative growth resulting from oil sands development.

- **Type**: The type of population area relates to the definitions provided in the RMWB Municipal Development Plan.

- **Location**: The location of growth is important for municipal planning, infrastructure planning and service delivery planning. These all have implications for municipal fiscal impact and sustainability.

- **Permanent Resident/Non-Permanent Resident**: The Regional Municipality of Wood Buffalo has a high non-permanent resident to permanent resident ratio compared to most municipalities. The extent to which the proposed project will either contribute to, or detract from, the MDP goal of encouraging permanent residency can be tracked with this information. Further, it is recognized that permanency of residence affects several important service delivery and community issues. These include the following:

---

26 Statistics Canada defines a permanent resident by their ‘usual place of residence’ which is: ‘Usual place of residence’ refers to dwelling in which a person lives most of the time. [Source](http://geodepot.statcan.gc.ca/2006/Reference/COGG/Short_RSE_e.jsp?FILENAME=UsualPlaceofResidence&REFCODE=10&DTYPE=L)
Permanent residents typically live with their family in the community. This provides for a typical community where workers and related family members all reside in the community. Having a family provides important supports to workers and additional family members bring a secondary workforce to the community to offer work and volunteer services in the community. This basic but fundamental structure provides a ‘balanced’ lifestyle for the family and the community.

Non-permanent residents typically don’t have their other family members residing with them in the community, as they live somewhere else. This separation of the non-permanent resident worker from the rest of their family creates an absence of the home supports typically found in a family, and creates the possibility of a greater need for community supports to replace those typically provided by the family. It also reduces the secondary work force available to the community as spouses and related family members of working age reside in a different community. Finally, it is recognized that non-permanent residents do not have the same attachment to the community as their permanent residence is elsewhere. This can reduce the level of community involvement and volunteerism in the community.

**Work Camp:** The population expected to reside in a work camp, or camps, is important as these residents typically require fewer municipal services compared to either permanent or non-permanent residents, as the camp will typically provide some of these services. In addition, the location of the work camp residents, by work camp is important to determine how the proposed project will be supporting the MDP objective of consolidating work camps and also help to determine the extent of impact the work camp population will have on demand for services in the community.

It is important that the population information associated with each individual oil sands project, and cumulatively for various oil sands projects, be provided with some breakdown of the population by age. This is important to the municipality as well as other community stakeholders because the type and level of services required can vary by age. This is important in the following sectors:

- **Recreation/Leisure/Culture:** Municipality and various service providers.
- **Transportation:** Municipal responsibility
- **Education (K-12/Post Secondary):** Local school boards, Keyano College, Alberta Education
- **Health:** Alberta Health Services
- **Law Enforcement:** Municipal / Provincial responsibility
- **Child Care:** The demand for child care and availability of child care workers.
- **Youth Services:** Family and Community Support Services (FCSS), Municipality, various service providers.
- **Seniors Services:** Municipality and various service providers.

### Information Provided in the Jackpine Mine Expansion EIA & Update

The Jackpine Mine Expansion Update provides population growth information in Section 5.6 (Population Impacts). The population growth impact information provided is limited to urban services area of Fort McMurray (including Sapre Creek). As depicted in the table below, information for only four of the 18 required municipal information categories were provided in the JME Update. It is noted that where information is available for the JME, it only partially satisfies the information requirements identified here.

---

27 “Large transient population leads to less cohesion in the community. This increases the number of policing issues, crime rates, traffic accidents, assaults and drug issues. The Regional Municipality of Wood Buffalo Social Plan, The Social Planning and Research Council of BC, July 1, 2010, page 36.

Population Impact Information Provided for the JME

<table>
<thead>
<tr>
<th>POPULATION</th>
<th>SCENARIO</th>
<th>TYPE</th>
<th>LOCATION</th>
<th>PERMANENT RESIDENT</th>
<th>NON-PERMANENT RESIDENT</th>
<th>WORK CAMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>Individual Project &amp; Cumulative</td>
<td>Priority Growth Area</td>
<td>Fort McMurray</td>
<td>Population (20 year)</td>
<td>Population (20 year)</td>
<td>N/A</td>
</tr>
<tr>
<td>Operations</td>
<td>Individual Project &amp; Cumulative</td>
<td>Priority Growth Area</td>
<td>Fort McMurray</td>
<td>Population (20 year)</td>
<td>Population (20 year)</td>
<td>N/A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Work Camp</th>
<th>by Camp</th>
<th>N/A</th>
<th>N/A</th>
<th>Population (20 year)</th>
</tr>
</thead>
</table>

The information provided in the EIA and Update on the population impacts of the Jackpine Mine expansion is very limited and subject to some interpretation.

**Construction/Operations (JME - Application Case):**

- Population impacts for the JME expansion are not disaggregated by construction and operations workers in the Update. It is stated in the EIA that “The Jackpine Mine Expansion will not be supported by an operations camp. The Jackpine Mine Expansion’s employees (operations) will be expected to live in Fort McMurray.”

- The population impacts in the EIA are provided in a chart with no specific data, and are combined for the JME and Pierre River Mine, so it is not possible to disaggregate the impacts of each project from this document.

- No specific population impact data is provided for the impact either individually or collectively for construction or operations. In the Update, a line chart is provided that does not allow for the

---


30 Application for the Approval of the Jackpine Mine Expansion Project, December 2007, Volume 5: Terrestrial Resources and Human Environment, Shell Canada Limited., page 8-236, 237. The data provided is for “The Project” which includes the Jackpine Mine Expansion and Pierre River Mining Area (PRMA).
determination of specific population impacts (Figure 5.6-1). Only two points of reference are provided related to the population impacts of the JME, that being for 2015 where the population “will be approximately 7.0% higher than the Base Case” and 2021 where the population will be 4.3% higher than the Base Case. The related population impacts are provided in a table for 2015 and 2021 (Table 5.6-1).

- No population impact information is provided for any other geography except for the Urban Services Area.
- No population impact information is provided by permanent and non-permanent residents.
- No population impact information is provided for work camps, either in total, or by individual work camp.
- No age breakdown is provided for any population impact information.
- The population impact timeframe ends in 2021 (a 15 year forecast timeframe from the original EIA submission using 2006 as a base year) and does not provide a full 20 years of forecast data. This does not provide for a full 20 years of population impact information.

Construction/Operations (Planned Development Case - PDC):

- The JME EIA also provides population impact information on what is termed as the Planned Development Case. This PDC is described as follows: “The Planned Development Case is the Application Case, plus other planned projects.” The list of projects included in the PDC are provided in the EIA, however no information about these projects is provided (e.g. assumptions regarding project, construction workforce, population impacts, etc.). As a result, it is not possible to utilize this limited amount of population impact information effectively.

- The population impact information provided for the Planned Development Case suffer from the same deficiencies as noted above for the JME (Application Case).

---

32 Ibid, page 146.
33 Ibid, page 149.
34 The rural services area is mentioned in the Shell Canada Limited Jackpine Mine Expansion & Pierre River Mine Project, EIA Update, May 2008 (page 8-10) as follows: “Changes in the population levels in Fort McKay and the other rural communities in the RMWB are related mostly to community-level demographic pressures...”
35 Application for the Approval of the Jackpine Mine Expansion Project, December 2007, Volume 5: Terrestrial Resources and Human Environment, Shell Canada Limited, page 8-239. It is indicated that “some employees” may live outside the Urban Services Area of Fort McMurray. No information is provided as to the number of workers or the population associated with these workers.
36 Work camps are mentioned in the Shell Canada Limited Jackpine Mine Expansion & Pierre River Mine Project, EIA Update, May 2008, (page18-11) but no specific JME or PDC impacts are provided.
37 Work camps are discussed in Shell Canada Limited Jackpine Mine Expansion & Pierre River Mine Project, EIA Update, May 2008, (page 18.14) but no information about where the workers on the JME will be living (i.e. which camp or camps) nor how many workers would be in each camp, “As with other oil sands facilities in the region, the Project (JME) will be built by construction workers who will be housed in on-site camps at the mines, or in third-part camps nearby.” Albian Village is discussed, but it is also said “Shell expects to have commercial arrangement in place with one or more third-part camp providers. Current, several camps are in the region. A new facility is expected to open in mid-2008 and the community of Fort McKay is one of the joint venture participants.”
REGULATORY INFORMATION REQUIREMENTS

The regulatory information requirements around population impacts are provided in Section 6.1 of the ERCB Guide G-23 (see Appendix B). In this section it is stated that:

“the population growth and its distribution in the study area assuming the scheme proceeds and, for baseline comparison purposes, what it would have been in the absence of the project...” (emphasis added)

This clearly indicates that the regulatory requirements expect some geographic distribution of the population impacts associated with the project. Further, requirements indicate that annual population impact data along with some sensitivity around the point estimates and factors influencing these estimates is required. The population impact information available in the JME EIA and Update do not provide this level of detail.

The Standardized Terms of Reference provided by Alberta Environment also indicate that population impact information should be provided. This includes “population changes” and the plans for “accommodations for the workforce for all stages of the project”. Presumably the latter would identify the location of population growth during both the construction and operations phases, and include the location of number of workers at work camps. Further regarding work camps, a number of specific pieces of information are identified, including:

- Describe the socio-economic impact of any construction camp required for the project and identify:
  - its location
  - the number of workers it is intended to house
  - whether the camp will service the project only, or other clients
  - the length of time the camp will be in service, and
  - describe what services will be provided in the camp (e.g. security, recreation and leisure, medical services).

RECOMMENDATIONS

It is recommended that the Regional Municipality of Wood Buffalo’s Population and Employment Projection Model be used as the basis for estimating the population impacts of this and other proposed oil sands projects, both on an individual project basis and on a cumulative basis.

- This would ensure that all proposed project information regarding population and employment impacts associated with individual projects would meet (or exceed) the information requirements of the municipality.
- It would also ensure that all the community stakeholders involved in the development of the model and members of the User Group would have the information they need.

---


42 Ibid, page 27.
It would also ensure that all population and employment information is generated in a consistent fashion.

Finally, because the structure and methodology of this model is the same as the population and employment model developed for the Oil Sands Secretariat to develop long range population and employment forecasts for AOSA, it would provide the information necessary to allow for the on-going monitoring of the AOSA CRISP.

To meet the information requirements of the model, the population related income identified in the table “Required Population Impact Information” provided above, would need to be provided. This table, in conjunction with the Work Camp information identified in the Standardized Terms of Reference would meet the municipal information requirements around the population impacts of an individual project.

The specific information requirements for the use of this model are provided in the next section on Employment, since the Population and Employment Projection Model is employment and oil sands project driven.

**EMPLOYMENT IMPACTS**

The demand for workers has been, and is expected to be, the main driver of population growth and change in the region. As a result, it is important that employment information regarding any individual project and the cumulative effects of various projects, be provided in sufficient detail to allow the municipality to evaluate how the project will contribute to the local economy.

- **Diversify the Regional Economy (3.1):** The Municipal Development Plan identifies regional economic diversity as a key objective. Growth in oil sands activity has not been matched with growth in the other sectors of the local economy. The MDP specifically calls for the further development of commercial and retail services to increase the local capture of consumer spending in the region (3.1.1) and enhanced development of manufacturing, fabrication and other secondary industries that support oil sands development (3.1.2). Economic diversification also involves the promotion of local small business opportunities (3.1.3) and diversification into other driver industries of growth, such as tourism (3.1.4).

  It is important to note that here are natural relationships between some of the economic objectives of the MDP their socio-economic implications. In the case of regional economic diversity, there are the practical issues of having a vibrant and thriving local economy that provides a full array of goods and services as well as employment opportunities to the local population. This has obvious implications for municipal planning and ensuring that sufficient land resources are available to accommodate this development. What is less obvious is how the broader local economic base provides a sense of cohesion and attachment to the community. If workers and other residents have to travel, sometimes great distances, outside the community to purchase household goods or consume personal services, this detracts from their lived experience and connection to the community they live in. Similarly, having limited employment opportunities also limits the opportunities for personal growth and can reduce attachment to community. These socio-economic factors are discussed in the Community and Social Services section of this report.

- **Integrated Regional Economic Development (3.2):** Integrating oil sands development with enhancements to the local regional and rural economies in the municipality will also help to diversity the local economy. Specifically, creating joint economic development activities with all regional stakeholders, including Métis and First Nations communities (3.2.1) as well as other rural development...
partners (3.2.2) will help to strengthen the local labour force and create business opportunities outside the urban areas.44

▶ **Skill and Knowledge Development (3.4):** In order to help maximize the benefit of oil sands and related development in the municipality, two objectives have been identified in the MDP around enhancing the human capital available in the region (Develop Skills Locally 3.4.1 and Support Labour Force Development 3.4.3).45

For each of these objectives, it is implicit that encouraging permanent residency of oil sands workers will be a key factor of success. In each case, increasing the proportion of local population that are permanent residents will increase the market base for commercial and retail services, which will in turn help to make these enterprises more viable in the local market. It will also increase the availability and supply of workers that could be employed in the service and retail sectors, but also in other sectors of the local economy.

In support of these objectives, the employment information required by the Municipality has been identified in the following categories: Project Employment, Workforce Skill Requirements and Economic Multiplier Impacts.

**Required Project Employment Information**

The number of construction and operations workers by their residency status (permanent, non-permanent, work camp). This would include the number of workers each year for each category as defined in the table below. This basic project information is required to support the population impact information discussed above.

### Required Project Employment Impact Information

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>DIRECT/INDIRECT</th>
<th>PERMANENT</th>
<th>NON-PERMANENT</th>
<th>WORK CAMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>Direct</td>
<td>Workers (Each Year for a 20 Year Forecast Period)</td>
<td>Workers (Each Year for a 20 Year Forecast Period)</td>
<td>Workers (Each Year for a 20 Year Forecast Period)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Proportion of workers available in the local economy for each category of Residency Status.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Indirect/Contractor</td>
<td>Workers (Each Year for a 20 Year Forecast Period)</td>
<td>Workers (Each Year for a 20 Year Forecast Period)</td>
<td>Workers (Each Year for a 20 Year Forecast Period)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Proportion of workers available in the local economy for each category of Residency Status.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operations</td>
<td>Direct</td>
<td>Workers (Each Year for a 20 Year Forecast Period)</td>
<td>Workers (Each Year for a 20 Year Forecast Period)</td>
<td>Workers (Each Year for a 20 Year Forecast Period)</td>
</tr>
</tbody>
</table>

---

44 Ibid, page 114.

The details of the information required is as follows:

- **Construction/Operations**: Because construction activity occurs over a defined period of time, it is important to distinguish between construction and operations workers and the population associated with these workers.

- **Direct/Indirect/Contractor**: It is expected that the proportion of direct workers (those employed directly by the project proponent) and indirect workers (including contractors who are hired by the project proponent) will vary from project to project. The residency status and availability of local workforce in each category will also vary. As a result, to determine the population impacts associated with the project, it is important to disaggregate the data for workers across these categories.

- **Permanent Resident/Non-Permanent Resident**: This is discussed above for Population Growth.

In addition to the information regarding local employment impacts of the proposed project on the RMWB, there are requirements to provide this information at a provincial and federal level. At the provincial level, the source of workers is critically important, especially during periods of labour shortages. The need for, and source of the required workforce at a local/regional level and provincial level, by industry and occupation are key factors in assessing the labour force requirements of the project.

**REQUIRED ECONOMIC/EMPLOYMENT IMPACT INFORMATION**

As noted above, the MDP identifies various objectives related to the development and diversification of the local RMWB economy. As a result, it is important to understand how individual oil sands projects, and cumulatively various oil sands projects, may contribute to these objectives. In order to evaluate these impacts, it will be important to have information about the estimated indirect and induced multiplier effects associated with each project as follows:

- The amount of **direct** economic impact in dollars and employment that will be retained in the local economy by major industry group (e.g., 2 digit NAICS).

- The amount of **indirect** economic impact in dollars and employment that will be retained in the local economy by major industry group (e.g., 2 digit NAICS). As above, this information should be broken down for each of the construction and operations phases of the project.

---


47 The indirect economic and employment impacts refer to those economic activities that are inputs into the construction and operation of the plant. This is not to be confused with indirect/contractor employment used in the construction or operation of the plant. All costs associated with the construction and operation of the plant are considered ‘direct’ (including indirect/contract workers) for the purposes of estimating economic impacts.
The amount of induced economic impact in dollars and employment that will be retained in the local economy by major industry group (e.g. 2 digit NAICS). As above, this information should be broken down for each of the construction and operations phases of the project.

In each case above, it is important that employment data be ‘the number of workers employed’ and not person years. Having the number of workers employed will allow for the information to be consistent with that contained in the Population and Employment Projection Model and comparable to other publicly available information on employment (e.g. Labour Force Survey, Census employment information).

In addition to the economic/employment impact information described above, it will be important for the project proponent to identify and describe specific arrangements that may be made with local businesses, education/training organizations and employment groups regarding employment or training arrangements that may have been made regarding the project. This would help the municipality evaluate how the project is contributing to the MDP objectives around Integrated Regional Economic Development (3.2) and Skills and Knowledge Development (3.4).

**Labour Force Occupation Information Requirements**

In addition to information on the total magnitude of employment impacts of an individual project, or cumulative impacts of various projects, it is important for various reasons to understand the occupation distribution of the required workforce, both construction and operations workers. This will serve to provide information on the potential availability of local workers and the skill requirements of workers for the project. This will also help the local labour force as well as educators in the region to be able to develop the human capital and skills required to meet the needs of oil sands projects.

In addition, from a broader perspective, the occupation information for the required construction and operations workforce will assist the province in determining the overall demand for workers and where skill needs and shortages exist.

The level of detail for occupational data is best met at the 4 digit NOC level. This would allow the province and other stakeholders, including education providers and policy makers, to make a determination of appropriate labour policy and program directions. Most of the information provided by the province on occupational data is provided at either the 3 or 4 digit NOC level. The 4 digit NOC level is preferable as it makes a sufficient distinction between most occupations as to the specific skill requirements.

In addition, correlating the total workforce requirements for the project and identifying the source of workers by occupation would be required to identify specific occupational needs and shortages that may exist at both the local/regional and provincial level.

**Employment Impact Information Provided for the JME**

The information provided in the JME EIA and Update on the employment impacts of the Jackpine Mine expansion are very limited and subject to some interpretation.

- Project Employment Information

---


49 Occinfo: http://alis.alberta.ca/ and http://alis.alberta.ca/occinfo/
The total number of workers for both construction and operations phases are reported in person years not number of workers or employees. This makes it difficult to translate employment to population changes.\textsuperscript{50} \textsuperscript{51}

The total number of workers, or person years of employment for construction is not broken out by year.\textsuperscript{52} Also, in the EIA, it is indicated that the construction of the project may be accelerated. The information provided for this alternative is less detailed than that for the first option described.\textsuperscript{53}

The total number of workers, or person years of employer for operations is provided by three components (i.e. Plant Operations, Mine Operations and General/Administrative). However, the timing of when these person years of employment will come on stream is not provided.\textsuperscript{54}

The number of workers that will be hired from the local economy is not provided. The EIA indicates that local hiring will attempt to hire locally, but no specific projection of the number of workers that could be hired locally is provided.\textsuperscript{55} \textsuperscript{56}

\textbf{Economic/Employment Impact Information:}

The EIA\textsuperscript{57} and Update provide a breakdown of the dollar amount of \textit{direct} construction expenditures that are projected to accrue locally and for other geographies. This is broken down by three categories but not by industry. This data is not broken down by year of the construction phase. Employment information is not provided.\textsuperscript{58}

The EIA\textsuperscript{59} and Update also provide a breakdown of the dollar amount of \textit{direct} operation expenditures that are projected to accrue locally and for other geographies. This is broken down by two categories but not by industry. This data is not broken down by year of the operations phase. Employment information is not provided.\textsuperscript{60}

\textit{Indirect} and \textit{induced} impacts of the project are estimated for dollars and employment for the project as a whole. This is not broken down by geography, year or industry. It is indicated that the

\begin{itemize}
  \item \textsuperscript{50} Application for the Approval of the Jackpine Mine Expansion Project, December 2007, Volume 1: Project Description, Shell Canada Limited, pages 18-7 to 18-9.
  \item \textsuperscript{52} Application for the Approval of the Jackpine Mine Expansion Project, December 2007, Volume 5: Terrestrial Resources and Human Environment, Shell Canada Limited, page 8-222. The person years of on-site construction workforce is provided in a chart. This does not include all construction activity.
  \item \textsuperscript{53} Ibid, page 8-222.
  \item \textsuperscript{54} Ibid, page 8-226.
  \item \textsuperscript{55} Application for the Approval of the Jackpine Mine Expansion Project, December 2007, Volume 1: Project Description, Shell Canada Limited, pages 18-8 to 18-9.
  \item \textsuperscript{56} Application for the Approval of the Jackpine Mine Expansion Project, December 2007, Volume 5: Terrestrial Resources and Human Environment, Shell Canada Limited, page 8-227.
  \item \textsuperscript{57} Ibid, page 8-230.
  \item \textsuperscript{58} Jackpine Mine Expansion & Pierre River Mine Project EIA Update, Shell Canada Limited, May 2008, page 142.
  \item \textsuperscript{59} Application for the Approval of the Jackpine Mine Expansion Project, December 2007, Volume 5: Terrestrial Resources and Human Environment, Shell Canada Limited, page 8-231.
  \item \textsuperscript{60} Jackpine Mine Expansion & Pierre River Mine Project EIA Update, Shell Canada Limited, May 2008, page 143.
\end{itemize}
The proponent of the project will attempt to both hire workers and purchase locally, however the impact of this is not documented.61

**Labour Force Occupation Information:**

- No occupation specific information is provided for operations phases of the JME.
- Limited occupation information is provided for the construction phases of the JME. This includes 9 occupation categories that are labelled but not indicated by a NOC classification.62 A large proportion of the workforce is not categorized (29 per cent) and is included as 'Other'.63 Further it is not clear that the occupation breakdown is referring specifically to the JME or the “Project” which includes the Pierre River Mining Area project.
- Very limited information regarding workforce needs and shortages in aggregate or at the occupational level is provided. No specific information regarding the availability of workers by occupation is provided.

**REGULATORY INFORMATION REQUIREMENTS**

The regulatory information requirements around economic impacts are provided in Section 3.3 of the ERCB Guide G-23 (see Appendix A).64 In this section it is stated that an economic impact should include:

- 3.3.1 An appraisal of the economic impact of the project on the region, and province, as well as any economic impact at the national level;
- 3.3.2 Discussion of any initiatives undertaken in conjunction with the project to accommodate regional economic priorities and interests;
- 3.3.3 An assessment of direct and indirect employment opportunities for all groups associated with the project, including:
  - A projection of maximum and minimum workforce demand by skill categories in the construction (quarterly) and operating (annual) phases, and an analysis of how these demands will be met. This should identify the perceived shortages in any category of labour during the period concerned, the measures that could be used to alleviate the shortages, and overall consequences of labour shortages to the province as a whole.
  - An analysis of the indirect and induced employment generated by the project due to employment multiplier effects.
  - A discussion of employment and training arrangements that would be provided by the applicant to enable residents of the region to participate in meeting the workforce demands, and to what extent these arrangements might alleviate any perceived labour shortages.
  - (A discussion of any arrangements with) the applicant’s recommendations to various government agencies (vocational training institutes, advanced education programs, business development agencies, etc.) to facilitate the utilization of the local, regional and provincial workforce in the project.

---


The regulatory information requirements outlined in the ERCB Guide clearly focus on details around the project workforce, the skills required by this workforce, where these skilled workers will be sourced and to what extent can the local/regional and provincial workforce satisfy these needs. Where shortages may exist, the proponent is asked to provide information on arrangements that may be made with government agencies, local/regional and provincial training and educational institutions.

Similarly, the Standardized Terms of Reference indicate that workforce and economic impact information should be provided as follows:

- Describe the socio-economic impacts of construction and operation of the project, including
- a) impacts related to i) local training, employment and business opportunities.
- b) estimated total project cost, including a breakdown for engineering and project management, equipment and materials, and labour for both construction and operations stages. Indicate the percentage of expenditures expected to occur in the region, Alberta, Canada outside of Alberta and outside of Canada.

**RECOMMENDATIONS**

It is recommended that the Regional Municipality of Wood Buffalo's Population and Employment Projection Model be used as the basis for estimating the employment impacts of this and other proposed oil sands projects, both on an individual project basis and on a cumulative basis. The specific information requirements for each project to seed this model are as follows:

- Project production capacity (barrels per day)
- Anticipated production start-up date
- Construction period (number of years)
- Construction related employment for each year of construction period (total person years)
- Operations related employment (total person years)
- Occupational breakdown of construction and operations employment at the 4-digit National Occupational Classification (NOC) level
- Breakdown of construction and operations employment as permanent, non-permanent and project accommodation (work camp) workers
- Anticipated maximum commuting distance for construction and operations related employment
- Anticipated project life (number of years)

It is recommended that when the project consists of multiple basis, this project specific information be provided for each phase of the project.

In addition to the data required to seed the RMWBs Population and Employment Projection Model, it is recommended that the following employment impact information be provided for each oil sands project.

- Project Employment Information (as defined above)
- Economic/Employment Impact Information (as defined above)
- Labour Force Occupation Information (as defined above)

---

COMMUNITY AND SOCIAL SERVICES

The health, vitality and sustainability of the community is multi-dimensional and in some respects difficult to quantify. It includes consideration of the wellness of the community as a whole and the well-being of the members of the community. In particular it addresses the services members of the community need to give them support for personal and social issues, as well as opportunities to enrich their lives through a sense of security and opportunities to connect themselves with the community and other members of the community.

The Regional Municipality of Wood Buffalo Social Plan summarizes the recent and current state of the municipality and issues around providing needed community and social services as follows:

The Regional Municipality of Wood Buffalo is a unique community that has experienced tremendous growth in recent years as a result of demand for oil resources in the region. This growth has presented tremendous opportunities but has also exacerbated some social problems, and has strained the existing capacity to address those problems. While the recent economic downturn afforded an opportunity to “catch up” and put in place solutions and add capacity in the community, it is anticipated that the rapid pace of growth experienced in the region will return, and this plan reflects the need to address social issues in a creative way in times of economic expansion as well as during an economic downturn.”

To assist in defining the specific areas of importance regarding the Community and Social Services components of the socio-economic information requirements, the Regional Municipality of Wood Buffalo’s Social Plan has been used in conjunction with the municipality’s MDP. In most instances, some indicators of progress are available for each area discussed as described in the Sustainable Community Indicators report prepared for the Oil Sands Development Group. It should be noted however, that these Sustainable Community Indicators do not reflect the entire spectrum of issues identified by the municipality in the MDP or the Social Plan.

► Health: While it is recognized that the province has the primary responsibility for health care, a healthy community goes beyond these services. The Municipal Development Plan identifies the promotion of access to health care and social services as an objective (4.4.3).66 This means working with the province and other health care service providers to help enable the delivery of services required by the local population. The Social Plan identifies seven existing gaps in the available health care services in the municipality.67 The OSDG Sustainable Community Indicators report identifies two indicators that could be used to track progress towards improving the access to health care and related services.68

► Education: As with health care, education is not a municipal responsibility. The Social Plan provides a goal for education as follows: “To produce a highly educated and skilled regional workforce to drive the region’s economic engines and promote financial well-being among the Region’s residents.” Further, it identifies eight existing gaps in the available education services in the municipality.69

---


reflected in the MDP objectives relating to Skills and Knowledge Development (3.4). The OSDG Sustainable Community Indicators report identifies one indicator that could be used to track progress towards improving education services.

**Social Services:** The Social Plan refers to social services as Supports to Families. This includes a range of services, including: child care, crime and community safety, cost of living, community cohesion and community attachment. The stated goal for this area is: “To promote a supportive, safe, and enriching environment that contributes to the well-being of families and allows children to grow and develop free of violence, abuse, discrimination and inequity.” Further, it identifies five existing gaps in the available social services in the municipality. The MDP identifies various goals around social services, including: Promote Community Safety (4.3.1) Enhance Assistance and Support to People in Need (4.4.2) and Promote Access to Health Care and Social Services (4.4.3). As well, with the high rates of growth, the municipality is home to a number of newcomers each year. Creating a sense of community and encouraging community cohesion can be a challenge in these circumstances. The MDP outlines providing a welcoming environment for newcomers (4.4.4.), celebrating cultural diversity (5.1.1) and fostering local pride in the community (5.4) as objectives that can help support creating community cohesion and a sense of community. The OSDG Sustainable Community Indicators report identifies four indicators that track the public safety and engagement with the community aspects of social services.

**Transportation & Mobility:** The Municipal Development Plan identifies the development of an Integrated Multi-Modal Mobility System (R.2) as a key component of regional growth management that goes hand in hand with the expected scope and pattern of residential and non-residential development, and how the mobility of work to home and other trips are accommodated in the community (Coordinate Land Development with Transportation and Infrastructure 1.2.2). The MDP also identifies providing an “integrated and well connected street, sidewalk and trail network” can help to provide the opportunity for residents to choose mobility options that are environmentally friendly (4.1.3). While truly multi-modal in scope, the MDP provides specific objectives around the continued development of public transit (Develop Rapid Transit R.2.1), the expansion of the regional road transportation system (R.2.2) and the development of multi-use corridors (R.2.5) to both facilitate mobility as well as conserve the use of land required for transportation and other infrastructure that could be located in these corridors. Related to mobility is the aspect of ensuring that transportation and mobility is facilitated in a safe and inclusive manner as identified in two objectives: Promote Safe

---


73 Ibid, page 36.

74 Regional Municipality of Wood Buffalo Municipal Development Plan, Regional Municipality of Wood Buffalo, October 2011, pages 126, 128 & 129.

75 Ibid, pages 129, 134 and 140.


78 Ibid, page 90.

79 Ibid, page 123.

80 Ibid, pages 52-53.
Mobility (4.3.2) and Promote Accessibility Through Universal Design (4.3.3). The Social Plan provides the following goal for transportation: “Improve the municipal transportation system to respond to local service needs and address unmet access and safety issues.” Seven existing gaps in the provision of transportation services are identified in the Social Plan. The OSDG Sustainable Community Indicators report identifies one indicator for public transit use that is applicable to this area of analysis.

**Recreation, Arts & Culture:** A vibrant, sustainable and healthy community offers an array of recreation and cultural activities to the community. These activities help enrich citizens lives and gives them a sense of attachment to the community. As stated in the Social Plan, community members “emphasized the importance of recreation, arts and culture to quality of life in the Region.” The Social Plan identified eight gaps that currently exist in recreation, arts and culture in the municipality. The Municipal Development Plan addresses recreation, arts and culture for the RMWB in various places. One section of MDP is dedicated to goals and objectives around the preservation and promotion of cultural activities and facilities in the municipality. This includes the celebration of cultural diversity (5.1.1), conservation of cultural and historically significant sites, buildings and areas (5.1.2) and supporting traditional lifestyles of Métis and First Nations communities (5.1.3). Support of arts and cultural activities, programs and facilities (Vibrant Arts and Culture 5.2), as well as Culture of the Outdoors (5.3) and the maintenance and expansion of existing recreational areas (R.3.2) are identified as major themes with various objectives for each. Recreation is traditionally a key social service provided by municipalities, and the MDP identifies the enhancement of access to recreation (4.1.5) in both urban and rural communities as an objective. The OSDG Sustainable Community Indicators report identifies one indicator for the availability of recreational/cultural facilities that is applicable to this area.

**REQUIRED PROJECT COMMUNITY AND SOCIAL SERVICES INFORMATION**

To assist the municipality in reviewing the implications of an oil sands project on the community and social services area, it is first important to define the process by which these socio-economic factors can be considered in the context of how oil sands projects can impact the municipality. The process below provides direction on the types of socio-economic impact information that would be required for the municipality to evaluate these impacts.

- Establish a set of indicators and baseline information for determining the level of service and/or need associated with the indicator. The OSDG’s Sustainable Community Indicators report is a start to defining these indicators and establishing a baseline of information for each indicator. The Sustainable Community Indicators report in conjunction with the Social Plan could form the basis for starting to...
develop a comprehensive set of community indicators and baseline data against which project impacts can be measured.

► Determine the oil sands project impacts by defining how the project is expected to affect each group of services (e.g. health, education, etc.), and by how much? In terms of the indicators mentioned above, what is the expected impact of the individual project, and cumulative impact of various projects, on each of the community indicators?

► If there are gaps or deficiencies in the scope or availability of the community and social services, will the implementation of the project affect these gaps? And if so, will the gaps be wider or narrower as a result of the project.

► If the project, or cumulative impacts of various projects, are expected to widen the gap between the availability of service and need for service, and see this reflected in the expected impact on the indicators of community well being, how is the project proponent planning on working with the responsible agencies to mitigate any negative impacts and make progress in each respective indicator?

► Finally, how successful will mitigation of any negative impacts of the project be as estimated through the community indicators? It is important to understand the degree to which the identified problem will either be resolved and eliminated, or still exist following any mitigative efforts on the part of the project proponent.

It can be expected that the Regional Municipality of Wood Buffalo, and other stakeholders, will be concerned about a project that is expected to have a deleterious effect on any (or all) of the community and social services indicators. If the best efforts of the project proponent are not expected to be successful in eliminating or reducing any negative impacts to an acceptable level, it would be prudent on the part of the municipality to consider this in its assessment of the desirability of the project.

The specific municipal information requirements for the Community and Social Services components are outlined below. It should be noted that in every instance, the population and employment information requirements identified in the previous sections are important in informing the direction and magnitude of the community indicators identified below.

It is also important to note that in most cases, the OSDG Sustainable Community Indicators do not address each of the gaps identified in the Social Plan. While this indicates that some additional work is required to provide a comprehensive set of sustainable community indicators, it could be expected that the oil sands project proponent would be able to, at a minimum, use the OSDG Sustainable Community Indicators as a starting point for providing baseline data for the municipality and how the project will be expected to impact this baseline.

Further, it could be expected that the oil sands project proponent could, through their own research and analysis, identify relevant gaps in community and social service needs and provide a qualitative description of how the individual project will impact on each of these areas.

► **Health**: The OSDG Sustainable Community Indicators (SCI) report identifies two indicators for health care as follows:69

► **Health SCI 1**: The number of physicians per 10,000 population for the Northern Lights Health Region as compared to the provincial average and other health regions in the province.

---

Health SCI 2: The average length of stay in the emergency room of the Northern Lights Health Centre in Fort McMurray as compared to that for other selected major centres in the province.

The Social Plan identifies the following gaps in this social service area: 90

- **Health Gap 1**: Funding formulas are based on the permanent population, despite the fact that non-permanent and work camp populations place a high demand on health care services.
- **Health Gap 2**: Inadequate mental health services in the region.
- **Health Gap 3**: Acute care and emergency services do not meet provincial standards.
- **Health Gap 4**: Growing need for long term care facilities for seniors.
- **Health Gap 5**: Need to improve access to medical service for residents in rural communities.
- **Health Gap 6**: Lack of sufficient funding for non-profit organizations providing health services, such as Canadian Mental Health.
- **Health Gap 7**: Better recruitment and retention of healthcare professionals.

Education: The OSDG Sustainable Community Indicators report identifies one indicator for education as follows: 91

- **Education SCI 1**: Educational attainment as measured by the percentage of persons with trades certification as compared to Edmonton and Alberta.

The Social Plan identifies the following gaps in this social service area: 92

- **Education Gap 1**: Difficulty attracting and retaining teaching professionals.
- **Education Gap 2**: A need to promote more diversified programs for post secondary students.
- **Education Gap 3**: Students leave community to access other programs in other universities and some do not return.
- **Education Gap 4**: Affordable and adequate ESL (English as a Second Language) courses are needed for newcomers.
- **Education Gap 5**: High wage rates in the oil sands promotes students leaving prior to completing high school.
- **Education Gap 6**: Schools are operating at near or full capacity.
- **Education Gap 7**: Aboriginal students are streamed into non-academic programs, regardless of their interests or aptitudes.
- **Education Gap 8**: High Aboriginal drop out rates.

Social Services: The OSDG Sustainable Community Indicators report identifies four indicators for social services (two each in Public Safety and Community) as follows: 93

- **Social Services SCI 1 (Public Safety)**: The overall crime rate in Fort McMurray as compared to that in other selected major centres in Alberta.
- **Social Services SCI 2 (Public Safety)**: Traffic collision rates on selected roadways in the municipality as compared to provincial averages for comparable roadways.


Social Services SCI 3 (Community): The rate of United Way donations per person in Fort McMurray as compared to other selected major centres in Alberta.

Social Services SCI 4 (Community): Volunteer activity in Fort McMurray as compared to other major selected centres in Alberta.

The Social Plan identifies the following gaps in this social service area:

Social Services Gap 1: There is an increased demand for child care services. Shortage of child care facilities due to difficulty recruiting and retaining child care workers and lack of affordable suitable space. Child care services are too expensive for many families. Need for extended hours of child care to accommodate shift work.

Social Services Gap 2: High cost of living (i.e. housing) leads to increased demand on food bank resources, and residents are only able to access food every other month through the food bank.

Social Services Gap 3: Non-profit organizations that offer family services are challenged with high costs for office space and operational costs.

Social Services Gap 4: Large transient population leads to less cohesion in the community. This increases the number of policing issues, crime rates, traffic accidents, assaults and drug issues.

Social Services Gap 5: Police staffing experiences an average vacancy rate of 15% to 20% as the Municipality has difficulty recruit new members.

Transportation & Mobility: The OSDG Sustainable Community Indicators report identifies one indicator for transportation as follows:

Transportation SCI 1: The number of public transit passenger trips per capita as compared to other selected major centres in Alberta.

The Social Plan identifies the following gaps in this social service area:

Transportation Gap 1: Need for a dangerous goods route around Fort McMurray that bypasses local traffic.

Transportation Gap 2: Lack of bike paths throughout the community.

Transportation Gap 3: Increased traffic enforcement on Highway 63 to reduce collisions, speeding and impaired driving.

Transportation Gap 4: Need for increased bus service, including longer hours of operation, more frequent buses, more direct routes, and service on statutory holidays.

Transportation Gap 5: Need better bus service to rural communities.

Transportation Gap 6: Need for improved visibility at pedestrian cross walks.

Transportation Gap 7: Speed limits to address safety concerns.

Recreation, Arts & Culture (RAC): The OSDG Sustainable Community Indicators report identifies one indicator for recreation and cultural facilities as follows:

RAC SCI 1: The number of selected municipal recreational/cultural facilities per 10,000 population in Fort McMurray as compared to selected other major centres in Alberta.

---


The Social Plan identifies the following gaps in this social service area:98

- **RAC Gap 1**: Shortage of recreational facilities in some rural communities.
- **RAC Gap 2**: Lack of community awareness of programs and services being offered from current facilities.
- **RAC Gap 3**: Pressure on rural parks in the region that are in close proximity to oil sands development.
- **RAC Gap 4**: Limited volunteers to assist with planning and operating programs and services.
- **RAC Gap 5**: Desire for a stronger sense of community cohesion.
- **RAC Gap 6**: Need for a concert hall/performing arts theatre in addition to Keyano College.
- **RAC Gap 7**: Need for a dedicated outdoor space for festivals and concerts (currently under development).
- **RAC Gap 8**: Desire for an additional movie theatre.

**COMMUNITY AND SOCIAL SERVICES FORECAST INFORMATION PROVIDED FOR THE JME**

The information provided in the EIA and Update on the employment impacts of the Jackpine Mine expansion has been summarized by area of concern for each group of community and social services impacts.

The health care service impacts described in the EIA and Update for the JME are summarized in the table below. While some impacts are described or acknowledged, no baseline or impact data is provided. Similarly, no indication has been provided as to how the identified mitigation measures will reduce the described impacts.

**Summary of Health Impact Information Provided in the JME EIA & Update**

<table>
<thead>
<tr>
<th>INDICATOR/GAP</th>
<th>EIA INFORMATION</th>
<th>UPDATE INFORMATION</th>
<th>ADEQUACY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health SCI 1: The number of physicians per 10,000 population for the Northern Lights Health Region as compared to the provincial average and other health regions in the province.</td>
<td>The Project and other planned oil sands developments will lead to increases in population that will require additional health services in the RMWB. (pg 18-17) Mitigation consists of providing 24 hour on-site primary, emergency and occupational health care for occupational and non-occupational illnesses and injuries. (pg 8-259)</td>
<td>The Project impacts will add to the Base Case pressures in line with the population impact. To mitigate these impacts, Shell is 'considering' the expansion of the current on-site health care facility at the Albian Sands Village to serve the enlarged JME workforce.</td>
<td>Difficulty in recruiting and retaining health care professionals and support staff is acknowledged. (pg 8-257, 258) No baseline data or project impact data is provided. No indication is provided as to the extent to which mitigation proposed will address the impacts of the project.</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>INDICATOR/GAP</th>
<th>EIA INFORMATION</th>
<th>UPDATE INFORMATION</th>
<th>ADEQUACY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health SCI 2: The average length of stay in the emergency room of the Northern Lights Health Centre in Fort McMurray as compared to that for other selected major centres in the province.</td>
<td>Mitigation includes providing primary emergency health care services on-site.</td>
<td>The construction workforce of JME is expected to contribute to impacts on the health system, especially on emergency room services, in the 2012-2015 period. The ‘considered’ expansion of existing health care facilities at the Albian Sands Village would be expected to reduce the number of people from outside the region that use emergency room services in Fort McMurray.</td>
<td>Health care utilization statistics are provided. (pg 8-258) No baseline data or project impact data is provided. No indication as to the extent to which the proposed mitigation measures will address the impacts of the project.</td>
</tr>
<tr>
<td>Health Gap 1: Funding formulas are based on the permanent population, despite the fact that non-permanent and work camp populations place a high demand on health care services.</td>
<td>Existing problem acknowledged. The project is expected to ‘contribute to pressures on the health care system’ (pg 18-17). Shell commits to providing a more advanced on-site health care facility at the Albian Village site.’ (pg 18-17). As well, Shell will make financial contributions, where appropriate, to the Northern Lights Health Foundation’ (pg 18-18).</td>
<td>Not addressed.</td>
<td>Issues with provincial funding approaches is acknowledged. (pg 8-257) The magnitude of the impact on the health care system is not defined. The extent to which mitigation measures will reduce this impact are not defined.</td>
</tr>
<tr>
<td>Health Gap 2: Inadequate mental health services in the region.</td>
<td>Ongoing operations workers will ‘have access to the company’s confidential employee assistance plan.’ (pg 18-17)</td>
<td>Not addressed.</td>
<td>This issue is acknowledged but it is not clear on the magnitude of project impacts for workers demands on non-company programs.</td>
</tr>
<tr>
<td>Health Gap 4: Growing need for long term care facilities for seniors.</td>
<td>There are ‘ongoing infrastructure needs, including a new continuing care facility.’ (pg 18-17)</td>
<td>Not addressed.</td>
<td>Issue is acknowledged but not addressed.</td>
</tr>
<tr>
<td>Health Gap 6: Lack of sufficient funding for non-profit organizations providing health services, such as Canadian Mental Health.</td>
<td>Ongoing operations workers will ‘have access to the company’s confidential employee assistance plan.’ (pg 18-17)</td>
<td>Not addressed.</td>
<td>This issue is acknowledged but it is not clear on the magnitude of project impacts for workers demands on non-company programs.</td>
</tr>
</tbody>
</table>

The education impacts described in the EIA and Update for the JME are summarized in the table below. While some impacts are described, only a limited amount of impact data is provided. Similarly, no indication has been provided as to how the identified mitigation measures will reduce the described impacts.
## Summary of Education Impact Information Provided in the JME EIA & Update

<table>
<thead>
<tr>
<th>INDICATOR/GAP</th>
<th>EA INFORMATION</th>
<th>UPDATE INFORMATION</th>
<th>ADEQUACY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education SCI 1: Educational attainment as measured by the percentage of persons with trades certification as compared to Edmonton and Alberta.</td>
<td>Shell has identified various education funding initiatives largely related to trades and post secondary education for Aboriginal populations. No dollar amounts of these initiatives is provided. The change in number of school age is provided for the Project (JME &amp; PRMA) and is less than that indicated in the JME Update. (pg 8-251-252)</td>
<td>JME is expected to add 'about 1,180 school aged children in 2015 and 780 in 2020.' Similar information is provided for the Planned Development Case. ‘Shell will continue to assess and support where warranted, educational initiatives in the region.” No dollar amount associated with these initiatives is provided.</td>
<td>Baseline data provided for 2007-2010. K-12 student impacts provided for 2015 and 2020. The Update data is not consistent with the EIA data. No other annual data or detail by age or grade is provided.</td>
</tr>
<tr>
<td>Education Gap 1: Difficulty attracting and retaining teaching professionals.</td>
<td>Use of work camps mean that workers don’t bring their families and children resulting in reduced pressure on K-12 schools to provide capacity.</td>
<td>Keyano College is experiencing facility and staff recruitment and retention challenges.</td>
<td>The issue of attracting and retaining teaching staff (secondary school system) is acknowledged. (pg 8-250) No baseline or impact data is provided. No information regarding the impact of the mitigative measure has been provided.</td>
</tr>
<tr>
<td>Education Gap 2: A need to promote more diversified programs for post secondary students.</td>
<td>e-learning initiatives, such as the Fort McKay E-Learning Centre has been operating since 2004 with Shell’s support. (pg 18-16)</td>
<td>Not addressed.</td>
<td>Partially addressed. Information is of limited value.</td>
</tr>
<tr>
<td>Education Gap 3: Students leave community to access other programs in other universities and some do not return.</td>
<td>e-learning initiatives, such as the Fort McKay E-Learning Centre has been operating since 2004 with Shell’s support. (pg 18-16)</td>
<td>Not addressed.</td>
<td>Partially addressed. Information is of limited value.</td>
</tr>
<tr>
<td>Education Gap 5: High wage rates in the oil sands promotes students leaving prior to completing high school.</td>
<td>Rural schools report low student performance, high dropout rates and transition to high school difficult.</td>
<td>Not addressed.</td>
<td>Not addressed.</td>
</tr>
<tr>
<td>Education Gap 6: Schools are operating at near or full capacity.</td>
<td>Not addressed.</td>
<td>Provincial funding for school facilities is documented.</td>
<td>No baseline or impact data is provided. No information regarding the impact of the mitigative measure has been provided.</td>
</tr>
<tr>
<td>Education Gap 7: Aboriginal students are streamed into non-academic programs, regardless of their interests or aptitudes.</td>
<td>Not addressed.</td>
<td>Not addressed.</td>
<td>Not addressed.</td>
</tr>
<tr>
<td>Education Gap 8: High Aboriginal drop out rates.</td>
<td>Training programs and initiatives in First Nations communities. Aboriginal scholarships are provided. (pg 18-16)</td>
<td>Not addressed.</td>
<td>High drop out rates (in general for rural schools) are acknowledged (pg 8-250) Partially addressed. Information is of limited value.</td>
</tr>
</tbody>
</table>

The community and social services impacts described in the EIA and Update for the JME are summarized in the table below. While some impacts are described, a limited amount of baseline data and no impact data is...
Similarly, no indication has been provided as to how the identified mitigation measures will reduce the described impacts.

### Summary of Community & Social Services Impact Information Provided in the JME EIA & Update

<table>
<thead>
<tr>
<th>INDICATOR/GAP</th>
<th>EIA INFORMATION</th>
<th>UPDATE INFORMATION</th>
<th>ADEQUACY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Services SCI 1 (Public Safety): The overall crime rate in Fort McMurray as compared to that in other selected major centres in Alberta.</td>
<td>Baseline crime statistics are provided. (pg 8-260)</td>
<td>Baseline crime stats provided for 2006. (pg 157) Project impacts expected to be in line with population growth. (pg 158)</td>
<td>Limited baseline data provided and no specific crime rate data for expected project impacts.</td>
</tr>
<tr>
<td>Social Services SCI 2 (Public Safety): Traffic collision rates on selected roadways in the municipality as compared to provincial averages for comparable roadways.</td>
<td>Enter into a mutual aid agreement with the RMWB to respond to motor vehicle accidents on Highway 63. Provided baseline data for highway collision rates from 1998 to 2005. It is indicated that the project will 'contribute to increased traffic impacts on Highway 63 north of Fort McMurray' but no traffic impact data is provided.</td>
<td>Baseline traffic count data 2001-2007 provided. The project will increase traffic on Highway 63 north of Fort McMurray from 2012 to 2015 as a result of construction. A construction work camp and bussing of workers will reduce the expected traffic impacts of the project. (pg 160) Use of the Albian Sands Aerodrome as the main point of fly in fly out activity will reduce road traffic impacts of the project.</td>
<td>Limited baseline data and no specific traffic volume or accident data impacts associated with the project are provided. No impact of proposed mitigation on traffic volumes or accidents is provided.</td>
</tr>
<tr>
<td>Social Services SCI 3 (Community): The rate of United Way donations per person in Fort McMurray as compared to other selected major centres in Alberta.</td>
<td>Not addressed.</td>
<td>Not addressed.</td>
<td>Not addressed.</td>
</tr>
<tr>
<td>Social Services SCI 4 (Community): Volunteer activity in Fort McMurray as compared to other major selected centres in Alberta.</td>
<td>Not addressed.</td>
<td>It is acknowledged that volunteerism is declining. (pg 153)</td>
<td>Not addressed.</td>
</tr>
<tr>
<td>Social Services Gap 1: There is an increased demand for child care services. Shortage of child care facilities due to difficulty recruiting and retaining child care workers and lack of affordable suitable space. Child care services are too expensive for many families. Need for extended hours of child care to accommodate shift work.</td>
<td>Staff retention and high cost of doing business is acknowledged (generally). (pg 8-254)</td>
<td>Staff recruitment and funding issues acknowledged generally for social service providers. (pg 153)</td>
<td>Issue is acknowledged. (pg 153) No baseline data or project impact data is provided.</td>
</tr>
<tr>
<td>Social Services Gap 2: High cost of living (i.e. housing) leads to increased demand on food bank resources, and residents are only able to access food every other month through the food bank.</td>
<td>Not addressed.</td>
<td>Not addressed.</td>
<td>Issue is acknowledged. (pg 8-254) No baseline data or project impact data is provided.</td>
</tr>
<tr>
<td>Social Services Gap 3: Non-profit organizations that offer family services are challenged with high costs for office space and operational costs.</td>
<td>Not addressed.</td>
<td>High costs of providing social services is acknowledged. (pg 153)</td>
<td>Issue is acknowledged but it is not addressed.</td>
</tr>
</tbody>
</table>
Social Services Gap 4: Large transient population leads to less cohesion in the community. This increases the number of policing issues, crime rates, traffic accidents, assaults and drug issues. Various on-site initiatives mentioned, including ‘enforcing drug and alcohol policies for contractors and employees’. ‘Reduced community cohesion and a sense of transience among residents’ is acknowledged. (pg 18-16) Crime rate statistics for criminal code offenses are provided. (pg 8-260). Highway traffic collision data for 1998-2005 is provided. (pg 8-265)

Social Services Gap 5: Police staffing experiences an average vacancy rate of 15% to 20% as the Municipality has difficulty recruit new members. 2005 baseline information on staffing provided. It is indicated that camp security may help RCMP within and sometimes outside the Shell lease boundaries. Various on-site initiatives mentioned. Staff recruitment and retention issues cause actual staffing levels to lag behind the number of funded positions.’ (pg 156)

The transportation impacts described in the EIA and Update for the JME are summarized in the table below. The information on the JME addresses the potential traffic impacts on Highway 63 with some baseline information and a limited amount of qualitative project impact information.

**Summary of Transportation Impact Information Provided in the JME EIA & Update**

<table>
<thead>
<tr>
<th>INDICATOR/GAP</th>
<th>EIA INFORMATION</th>
<th>UPDATE INFORMATION</th>
<th>ADEQUACY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation SCI 1: The number of public transit passenger trips per capita as compared to other selected major centres in Alberta.</td>
<td>Not addressed.</td>
<td>Not addressed.</td>
<td>Not addressed.</td>
</tr>
<tr>
<td>Transportation Gap 3: Increased traffic enforcement on Highway 63 to reduce collisions, speeding and impaired driving.</td>
<td>Shell will attempt to schedule shifts and heavy construction traffic in off peak hours to reduce road congestion. As well, on-site enforcement of drug and alcohol policies for contractors and employees will help reduce traffic related incidents. (pg 18-21)</td>
<td>Baseline traffic count data for Highway 63 (2001-2007) is provided. (pg 159)</td>
<td>Traffic and safety issues are acknowledged but not addressed. No traffic impact or collision data for the project is provided.</td>
</tr>
<tr>
<td>Transportation Gap 4: Need for increased bus service, including longer hours of operation, more frequent buses, more direct routes, and service on statutory holidays.</td>
<td>Not addressed.</td>
<td>Not addressed.</td>
<td>Not addressed.</td>
</tr>
</tbody>
</table>
The EIA and Update for the JME do not address any of the recreation, arts and culture Sustainable Community Indicators or gaps identified in the Social Plan.

Summary of Recreation, Arts & Culture Impact Information Provided in the JME EIA & Update

<table>
<thead>
<tr>
<th>INDICATOR/GAP</th>
<th>EIA INFORMATION</th>
<th>UPDATE INFORMATION</th>
<th>ADEQUACY</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAC SCI 1: The number of selected municipal recreational/cultural facilities per 10,000 population in Fort McMurray as compared to selected other major centres in Alberta.</td>
<td>Not addressed.</td>
<td>Not addressed.</td>
<td>Not addressed.</td>
</tr>
<tr>
<td>RAC Gap 3: Pressure on rural parks in the region that are in close proximity to oil sands development.</td>
<td>Not addressed.</td>
<td>Not addressed.</td>
<td>Not addressed.</td>
</tr>
<tr>
<td>RAC Gap 4: Limited volunteers to assist with planning and operating programs and services.</td>
<td>Not addressed.</td>
<td>Not addressed.</td>
<td>Not addressed.</td>
</tr>
</tbody>
</table>
REGULATORY INFORMATION REQUIREMENTS

The regulatory information requirements around economic impacts are provided in Section 6.2 (6.2.1) and 6.5 of the ERCB Guide G-23 (see Appendix B). In this section it is stated that a socio-economic impact assessment should include the following:

6.2 Services and Infrastructure:
- 6.2.1 A discussion of the project impact on public services at the provincial, regional and local level, including: (a) a description of basic services presently available; (b) an assessment of the impact the project would have on existing services; (c) an identification of the need for new services or improvements to existing services, and how the applicant will facilitate planning by municipal and provincial agencies to provide the services or improvements.

6.5 Quality of Life: A general discussion of the impact of the project on the quality of life in the study area, and the institutional changes that may be necessary to accommodate the development.

The regulatory requirements around the community and social services impacts of an oil sands project are general in terms of what areas are covered (e.g. safety, transportation, etc.) but are specific in the types of information that should be provided for each area. The municipal information requirements identified above clearly fall within the parameters outlined in the ERCB Guide. As well, the general approach to determining baseline information for selected indicators and then estimating the impacts the project will have on the baseline data is required in these guidelines. The JME project information does not adequately address the defined regulatory requirements.

Similarly, the Standardized Terms of Reference indicate that information related to recreation activities and traditional land uses by First Nations and Métis peoples be provided. As well, it identifies information regarding the potential health care impacts to be provided:

- Describe the socio-economic impacts of construction and operation of the project, including
  - a) impacts related to iv) recreational activities; v) hunting, fishing, trapping and gathering; and; vi) impacts on First Nations and Métis (e.g. traditional land use and social and cultural implications).
  - c) impacts of the project on the availability of affordable housing and the quality of health care services. Provide a summary of any discussions that have taken place with local municipalities and the local environmental public health office of Alberta Health Services concerning housing availability and health care services respectively. (emphasis added)

The Standardized Terms of Reference also identify mitigation and monitoring of the effectiveness of any mitigation measure as being required.

- Describe the monitoring programs proposed to assess any project socio-economic impacts and to measure the effectiveness of mitigation plans.

---


101 Ibid, page 27.
RECOMMENDATIONS

It is recommended that a complete set of Sustainable Community Indicators be developed that meet the municipality’s requirements to monitor the community and social services impacts of oil sands projects. As noted above, some of the service gaps identified in the RMWB Social Plan, as well as some objectives outlined in the MDP, are not covered by the SCIs described in the OSDG Sustainable Community Indicators report. The Regional Municipality of Wood Buffalo is currently engaged in the process of developing community indicators that could be used to evaluate oil sands projects across the full range of community and social services areas important to the community.

Until the full set of indicators is available to oil sands project proponents, it is recommended that the OSDG Sustainable Community Indicators and gaps identified in the Social Plan be used as the basis for individual project information and information on the cumulative impacts of various projects. This will provide the Regional Municipality of Wood Buffalo with a set of data to begin to evaluate the potential community and social services impacts of the individual project and cumulative effects of various projects on the community.

MUNICIPAL FINANCIAL SUSTAINABILITY

The financial health and sustainability of the municipality is vital to being able to fulfill its mandate under the Municipal Government Act, and act responsibly and responsively to its citizens and ratepayers. This entails being able to develop and deliver the services required by the community in an effective and cost-efficient manner. Further, it requires short and long-term financial planning to ensure that taxes and other revenues generated by the municipality are put to their best use.

The Regional Municipality of Wood Buffalo Municipal Development Plan identifies several objectives around financial sustainability as follows:

► **Ensure Fiscal Responsibility (6.1.3):** This objective identifies the responsibility of the RMWB to its ratepayers to ensure that services are planned and delivered efficiently and that the collection of revenues is done in a fair and equitable manner. It also speaks to the need for financial planning to ensure that funding and expenditures are stable and predictable.  

102

► **Promote Effectiveness in Service Provision (6.2.1):** This objective identifies the need for the municipality to determine the need for municipal services and how best to effectively deliver these services. It identifies the need to collect and analyze ‘demographic and socio-economic information’ that will enhance the decision-making process around determining the scale and scope of services required.  

103

► **Promote Efficient Use of Resources in Service Delivery (6.2.2):** This objective reinforces the need for effective and efficient use of ratepayer funds in developing infrastructure and delivering municipal services.  

104

REQUIRED MUNICIPAL FISCAL IMPACT INFORMATION

As noted above, the Regional Municipality of Wood Buffalo in conjunction with Alberta Municipal Affairs developed a Municipal Fiscal Impact Model to determine the short-term and long-term implications of growth and development on the RMWB. This model is comprehensive in that it covers all the substantial


cost and revenue areas required to provide a picture of the financial position of the municipality over a 20 year forecast period.

The information required to conduct an analysis using the model is defined in the Regional Municipality of Wood Buffalo Municipal Fiscal Impact Model User Manual.\textsuperscript{105} The information required of the oil sands project comprises a subset of the information required to conduct an analysis using the model. This includes the population information identified earlier in this section of the report, broken down into the categories of permanent, non-permanent and work camp populations as defined above. The geographic location of these populations is also an important input to the model.

In addition to the population information, the following data will be required for each oil sands project to evaluate the fiscal impacts of the project on the RMWB using the Municipal Fiscal Impact Model.

- The indirect employment impacts of the oil sands project on the local economy by major industry group (2-digit NAICS). This information will be used to estimate the related non-residential assessment associated with the project.
- The induced employment impacts of the oil sands project on the local economy by major industry group (2-digit NAICS). As above, this information will be used to estimate the related non-residential assessment associated with the project.
- The estimated assessment associated with the project broken down by assessment category. This will include buildings and improvements, machinery & equipment, and pipelines, power lines and other linear assessment.

To determine the impact of individual oil sands projects, and the cumulative effects of various oil sands projects on the long term financial viability of the municipality will require an analysis of the service delivery demands and infrastructure requirements the project(s) place on the RMWB. To assess these impacts, the results of the analysis should include information on the following variables for each year in the 20 year forecast period:

- Municipal property tax impacts for residential and non-residential property classifications.
- Utility revenue impacts by utility.
- Municipal operating and capital cost impacts.
- Municipal revenue impacts by revenue type.
- Municipal infrastructure requirements both with and without the project(s).
- Debt and debt servicing limit impacts.

In each case, impacts refer to the projection of the information with the oil sands project(s) as compared to without the oil sands project(s).

**Municipal Fiscal Impact Information Provided for the JME**

The information provided in the EIA and Update on the municipal fiscal impacts of the Jackpine Mine Expansion are minimal. The EIA provides estimates of the provincial and federal income tax and royalty revenues. No information or analysis on the local government fiscal impacts is provided.\textsuperscript{106} The EIA


provides an estimate of the ‘property tax payments for the Project’ but it is not defined as to whether this includes just the municipal portion of property taxes, or whether it includes the education portion. Nor is it clear that this is incremental tax revenue associated with the JME or whether it includes the $10 million currently paid in municipal property taxes.\textsuperscript{107}

There is no analysis or information provided on the costs to the municipality or infrastructure requirements to accommodate growth associated with the JME or the cumulative effects of oil sands development as assumed in the Planned Development Case. The extent of information provided on municipal costs is provided in the following:

“\textit{The Project (JME & PRMA) does imply population growth and associated municipal costs and residential assessment growth.”}\textsuperscript{108}

“Housing development, of course, do imply municipal costs.”\textsuperscript{109}

“\textit{The Project (JME & PRMA) and other planned oil sands developments will put additional pressures on municipal services and infrastructure as the result in further population growth. Total non-residential assessment is expected to grow at over 10\% per year over the next five years, expanding the RMWB’s ability to pay for municipal services and infrastructure. The long-term viability of the RMWB is the subject of an ongoing study by the municipality, with support from Alberta Municipal Affairs and Housing}”\textsuperscript{110}

The JME Update provides some examples of municipal initiatives and expenditures, but does not address the question of municipal fiscal impacts directly.

\textit{The long term ability of the RMWB to finance critical infrastructure projects, carry increased debt load, and maintain operating services will depend upon future municipal tax revenues from oil sands development coming on stream as planned. The long term financial future of the RMWB is the subject of an ongoing study executed in co-operation with Alberta Municipal Affairs. Industry is co-operating with this study by providing near-term and long term industrial assessment forecasts.}\textsuperscript{111}

As a result, no municipal fiscal impact information for the JME or the cumulative impact of various oil sands projects is provided.

\textbf{REGULATORY INFORMATION REQUIREMENTS}

The regulatory information requirements municipal fiscal impacts are provided in Section 3.1 (3.1.1) of the ERCB Guide G-23 (see Appendix A) where the evaluation of the commercial viability of the project

\begin{flushleft}
\textsuperscript{107} Application for the Approval of the Jackpine Mine Expansion Project, December 2007, Volume 5: Terrestrial Resources and Human Environment, Shell Canada Limited, page 8-271.

\textsuperscript{108} Ibid, page 8-271.

\textsuperscript{109} Ibid, page 8-271.

\textsuperscript{110} Application for the Approval of the Jackpine Mine Expansion Project, December 2007, Volume 1: Project Description, Shell Canada Limited, page 18-22.

\end{flushleft}
requires a report of (d) royalties and taxes. In this section it is stated that a socio-economic impact assessment should include the following:

- 3.1.1 An appraisal and projections, on an annual basis of
  - (a) revenues by product
  - (b) itemized capital and operating costs, including a breakdown of fuel costs and non-fuel operating costs
  - (c) some discussion of the project financing
  - (d) royalties and taxes
  - (e) net cash flow
  - (f) marketing arrangements, and
  - (g) supply arrangements for fuel requirements and electric power.

The regulatory requirements dictate that an estimate of the annual amount of taxes paid are required. While not prescriptive on this account, it could be expected that the annual taxes paid would be broken down by those paid to each jurisdiction: local, provincial and federal.

Similarly, the Standardized Terms of Reference indicate that information related to the financial impacts of the project on the municipality is required and identifies specific service areas that should be addressed.

Describe the socio-economic impacts of construction and operation of the project, including

- e) the impact on local and regional infrastructure and community services, including consideration of municipal “hard services”, education/training services, social services, urban and regional recreation services, law enforcement and emergency services.
- c) describe municipal growth pressure as they relate to the project and the need for additional Crown land to meet these needs.

The Standardized Terms of Reference specifically outline the need to provide an analysis of the fiscal impacts of the project on the affected municipality and defines some specific areas that should be included in the analysis. Further, they identify the need to address how growth pressures affect the need for additional lands to accommodate growth, and in particular the need for Crown lands. This takes the information requirements back to the initial discussion in this section regarding the nature and timing of population and employment growth associated with the project.

**Recommendations**

It is recommended that the information requirements identified for population and employment, as well as project assessment estimates, be retained to facilitate an independent evaluation of the fiscal impact of the individual project, as well as the cumulative impacts of various projects, on the Regional Municipality of Wood Buffalo using the RMWB Municipal Fiscal Impact Model. This independent analysis could then be compared to the annual local government tax information provided by the proponent as required by the regulator.

---


Conclusions and Recommendations

The findings of the analysis completed regarding the economic and socio-economic information requirements for oil sands projects suggest that additional information and analysis is required to afford the Regional Municipality of Wood Buffalo an opportunity to make an informed decision regarding the impacts of individual oil sands projects. By corollary, additional economic and socio-economic information would be required for the RMWB to review the cumulative effects of various oil sands projects on the community.

The importance of the economic and socio-economic impacts of oil sands project on the community are highlighted by the numerous objectives identified in the RMWB Municipal Development Plan. This plan identifies a series of objectives for the future development and direction of the municipality. It is imperative that the municipality be able to consider the impact of oil sands projects in light of how approval and development of the project will allow the RMWB to make progress in achieving the MDP objectives.

Further, in various analysis as summarized in the Regional Municipality of Wood Buffalo Social Plan, the municipality and community stakeholders are facing a number of challenges, and in some cases deficiencies, in the ability to meet the basic needs of the community. Starting from a point of having to overcome existing challenges makes understanding how future development will impact this progress is important.

Finally, much of the information required by the Regional Municipality of Wood Buffalo is consistent with the broad direction provided in the provincial guidelines for economic and socio-economic information as outlined in the ERCB Guide G-23 published by the Energy Resources Conservation Board and Standardized Terms of Reference published by Alberta Environment.

The specific information requirements for the municipality have been detailed in the main body of the report in four areas: population growth impacts; employment impacts; community and social services impacts and municipal financial sustainability. These information requirements are summarized below.

**Population Growth Impacts**

The population growth impact information requirements identified for the municipality are summarized as follows:
### Required Population Impact Information

<table>
<thead>
<tr>
<th>PROJECT PHASE</th>
<th>SCENARIO</th>
<th>TYPE</th>
<th>LOCATION</th>
<th>PERMANENT RESIDENT</th>
<th>NON-PERMANENT RESIDENT</th>
<th>WORK CAMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>Individual Project &amp; Cumulative</td>
<td>Priority Growth Area</td>
<td>Fort McMurray</td>
<td>Population (20 year)</td>
<td>Population (20 year)</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Anzac</td>
<td></td>
<td>Population (20 year)</td>
<td>Population (20 year)</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other Urban</td>
<td>Each Community</td>
<td>Population (20 year)</td>
<td>Population (20 year)</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rural</td>
<td></td>
<td>Population (20 year)</td>
<td>Population (20 year)</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Work Camp by Camp</td>
<td></td>
<td>N/A</td>
<td>N/A</td>
<td>Population (20 year)</td>
</tr>
<tr>
<td>Operations</td>
<td>Individual Project &amp; Cumulative</td>
<td>Priority Growth Area</td>
<td>Fort McMurray</td>
<td>Population (20 year)</td>
<td>Population (20 year)</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Anzac</td>
<td></td>
<td>Population (20 year)</td>
<td>Population (20 year)</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other Urban</td>
<td>Each Community</td>
<td>Population (20 year)</td>
<td>Population (20 year)</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rural</td>
<td></td>
<td>Population (20 year)</td>
<td>Population (20 year)</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Work Camp by Camp</td>
<td></td>
<td>N/A</td>
<td>N/A</td>
<td>Population (20 year)</td>
</tr>
</tbody>
</table>

The details of the information required is as follows:

- **Project Phase**: Because construction activity occurs over a period of time, it is important to distinguish between construction and operations workers and associated population.

- **Scenario**: The impact of both the individual project and the cumulative effect of various oil sands projects is required to make a determination of the relative contribution of the individual project to growth, and to get an updated picture of total cumulative growth resulting from oil sands development.

- **Type**: The type of population area relates to the definitions provided in the RMWB Municipal Development Plan.

- **Location**: The location of growth is important for municipal planning, infrastructure planning and service delivery planning. These all have implications for municipal fiscal impact and sustainability.

- **Permanent Resident/Non-Permanent Resident**: The Regional Municipality of Wood Buffalo has a high non-permanent resident to permanent resident ratio compared to most municipalities. The extent to which the proposed project will either contribute to, or detract from, the MDP goal of encouraging permanent residency can be tracked with this information. Further, it is recognized that permanency of residence affects several important service delivery and community issues. These include the following:

---

114 Statistics Canada defines a permanent resident by their ‘usual place of residence’ which is: ‘Usual place of residence’ refers to dwelling in which a person lives most of the time. [Link](http://geodepot.statcan.gc.ca/2006/Reference/COGG/Short_RSE_e.jsp?FILENAME=UsualPlaceofResidence&REFCODE=10&type=L)
Permanent residents typically live with their family in the community. This provides for a typical community where workers and related family members all reside in the community. Having a family provides important supports to workers and additional family members bring a secondary workforce to the community to offer work and volunteer services in the community. This basic but fundamental structure provides a ‘balanced’ lifestyle for the family and the community.

Non-permanent residents typically don’t have their other family members residing with them in the community, as they live somewhere else. This separation of the non-permanent resident worker from the rest of their family creates an absence of the home supports typically found in a family, and creates the possibility of a greater need for community supports to replace those typically provided by the family. It also reduces the secondary work force available to the community as spouses and related family members of working age reside in a different community. Finally, it is recognized that non-permanent residents do not have the same attachment to the community as their permanent residence is elsewhere.\textsuperscript{115} This can reduce the level of community involvement and volunteerism in the community.

\textbf{Work Camp:} The population expected to reside in a work camp, or camps, is important as these residents typically require fewer municipal services compared to either permanent or non-permanent residents, as the camp will typically provide some of these services. In addition, the location of the work camp residents, by work camp is important to determine how the proposed project will be supporting the MDP objective of consolidating work camps and also help to determine the extent of impact the work camp population will have on demand for services in the community.

It is important that the population information associated with each individual oil sands project, and cumulatively for various oil sands projects, be provided with some breakdown of the population by age. This is important to the municipality as well as other community stakeholders because the type and level of services required can vary by age.

\textbf{RECOMMENDATION}

It is recommended that the Regional Municipality of Wood Buffalo’s Population and Employment Projection model be used as the basis for estimating the population impacts oil sands projects. This would help to ensure that the full impacts of individual and cumulative oil sands development can be evaluated in a consistent and comprehensive manner.

\textbf{EMPLOYMENT IMPACTS}

The employment impact information requirements identified for the municipality is broken into three categories: required project employment information; required economic/employment impact information; and labour force occupation information requirements.

\textbf{REQUIRED PROJECT EMPLOYMENT INFORMATION}

Employment information required for each individual project and the cumulative information for various oil sands projects is summarized in the following table:

\textsuperscript{115}“Large transient population leads to less cohesion in the community. This increases the number of policing issues, crime rates, traffic accidents, assaults and drug issues. The Regional Municipality of Wood Buffalo Social Plan, The Social Planning and Research Council of BC, July 1, 2010, page 36.
## Required Project Employment Impact Information

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>DIRECT/INDIRECT</th>
<th>PERMANENT</th>
<th>NON-PERMANENT</th>
<th>WORK CAMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>Direct</td>
<td>Workers (Each Year for a 20 Year Forecast Period)</td>
<td>Workers (Each Year for a 20 Year Forecast Period)</td>
<td>Workers (Each Year for a 20 Year Forecast Period)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Proportion of workers available in the local economy for each category of Residency Status.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operations</td>
<td>Direct</td>
<td>Workers (Each Year for a 20 Year Forecast Period)</td>
<td>Workers (Each Year for a 20 Year Forecast Period)</td>
<td>Workers (Each Year for a 20 Year Forecast Period)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Proportion of workers available in the local economy for each category of Residency Status.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Indirect/Contractor</td>
<td>Workers (Each Year for a 20 Year Forecast Period)</td>
<td>Workers (Each Year for a 20 Year Forecast Period)</td>
<td>Workers (Each Year for a 20 Year Forecast Period)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Proportion of workers available in the local economy for each category of Residency Status.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The details of the information required is as follows:

- **Construction/Operations:** Because construction activity occurs over a defined period of time, it is important to distinguish between construction and operations workers and the population associated with these workers.

- **Direct/Indirect/Contractor:** It is expected that the proportion of direct workers (those employed directly by the project proponent) and indirect workers (including contractors who are hired by the project proponent) will vary from project to project. The residency status and availability of local workforce in each category will also vary. As a result, to determine the population impacts associated with the project, it is important to disaggregate the data for workers across these categories.

- **Permanent Resident/Non-Permanent Resident:** This is discussed above for Population Growth.

### Required Economic/Employment Impact Information

For each oil sands project, and cumulative information for various oil sands projects, the economic and employment impacts of these projects required by the municipality is as follows:

- The amount of direct economic impact in dollars and employment that will be retained in the local economy by major industry group (e.g. 2 digit NAICS). This information should be broken down for each of the construction and operations phases of the project.
The amount of **indirect** economic impact in dollars and employment that will be retained in the local economy by major industry group (e.g. 2 digit NAICS). As above, this information should be broken down for each of the construction and operations phases of the project.

The amount of **induced** economic impact in dollars and employment that will be retained in the local economy by major industry group (e.g. 2 digit NAICS). As above, this information should be broken down for each of the construction and operations phases of the project.

In each case above, it is important that employment data be ‘the number of workers employed’ and not person years. Having the number of workers employed will allow for the information to be consistent with that contained in the Population and Employment Projection Model and comparable to other publicly available information on employment (e.g. Labour Force Survey, Census employment information).

In addition to the economic/employment impact information described above, it will be important for the project proponent to identify and describe specific arrangements that may be made with local businesses, education/training organizations and employment groups regarding employment or training arrangements that may have been made regarding the project.

**LABOUR FORCE OCCUPATION INFORMATION REQUIREMENTS**

Information regarding the occupations of the workforce required for both the construction and operations for individual oil sands projects, and cumulatively for various oil sands projects, is required to determine how the proposed project will affect the local labour market. This demand, combined with information regarding the potential availability of workers from the local labour force will allow for an assessment of the human capital and skill requirements to meet the needs of the project(s). The level of detail for the occupational data required is best met at the 4 digit NOC (National Occupation Classification) level.

**RECOMMENDATION**

As recommended for the population growth impacts, is recommended that the Regional Municipality of Wood Buffalo’s Population and Employment Projection model be used as the basis for estimating the employment impacts oil sands projects. This would help to ensure that the full impacts of individual and cumulative oil sands development can be evaluated in a consistent and comprehensive manner.

**COMMUNITY AND SOCIAL SERVICES**

The information requirements for this group of impacts is multi-dimensional and can in some cases be difficult to quantify. The Regional Municipality of Wood Buffalo is currently in the process of working on a comprehensive list of community indicators that could be used to evaluate oil sands projects across the full range of community and social services areas important to the community. Until this set of indicators has been completed, it is recommended that the Sustainable Community Indicators developed by the Oil Sands Development Group, and gaps identified in the RMWB Social Plan be used as the basis for the information required in this area. The Sustainable Community Indicators and gaps have been summarized for each of five areas: health; education; social services; transportation & mobility; and, recreation, arts and culture.

- **Health**: The OSDG Sustainable Community Indicators (SCI) report identifies two indicators for health care as follows:116

---

Health SCI 1: The number of physicians per 10,000 population for the Northern Lights Health Region as compared to the provincial average and other health regions in the province.

Health SCI 2: The average length of stay in the emergency room of the Northern Lights Health Centre in Fort McMurray as compared to that for other selected major centres in the province.

The Social Plan identifies the following gaps in this social service area: 117

Health Gap 1: Funding formulas are based on the permanent population, despite the fact that non-permanent and work camp populations place a high demand on health care services.

Health Gap 2: Inadequate mental health services in the region.

Health Gap 3: Acute care and emergency services do not meet provincial standards.

Health Gap 4: Growing need for long term care facilities for seniors.

Health Gap 5: Need to improve access to medical service for residents in rural communities.

Health Gap 6: Lack of sufficient funding for non-profit organizations providing health services, such as Canadian Mental Health.

Health Gap 7: Better recruitment and retention of healthcare professionals.

Education: The OSDG Sustainable Community Indicators report identifies one indicator for education as follows: 118

Education SCI 1: Educational attainment as measured by the percentage of persons with trades certification as compared to Edmonton and Alberta.

The Social Plan identifies the following gaps in this social service area: 119

Education Gap 1: Difficulty attracting and retaining teaching professionals.

Education Gap 2: A need to promote more diversified programs for post secondary students.

Education Gap 3: Students leave community to access other programs in other universities and some do not return.

Education Gap 4: Affordable and adequate ESL (English as a Second Language) courses are needed for newcomers.

Education Gap 5: High wage rates in the oil sands promotes students leaving prior to completing high school.

Education Gap 6: Schools are operating at near or full capacity.

Education Gap 7: Aboriginal students are streamed into non-academic programs, regardless of their interests or aptitudes.

Education Gap 8: High Aboriginal drop out rates.

Social Services: The OSDG Sustainable Community Indicators report identifies four indicators for social services (two each in Public Safety and Community) as follows: 120

Social Services SCI 1 (Public Safety): The overall crime rate in Fort McMurray as compared to that in other selected major centres in Alberta.

---


**Social Services SCI 2 (Public Safety):** Traffic collision rates on selected roadways in the municipality as compared to provincial averages for comparable roadways.

**Social Services SCI 3 (Community):** The rate of United Way donations per person in Fort McMurray as compared to other selected major centres in Alberta.

**Social Services SCI 4 (Community):** Volunteer activity in Fort McMurray as compared to other major selected centres in Alberta.

The Social Plan identifies the following gaps in this social service area: 121

- **Social Services Gap 1:** There is an increased demand for child care services. Shortage of child care facilities due to difficulty recruiting and retaining child care workers and lack of affordable suitable space. Child care services are too expensive for many families. Need for extended hours of child care to accommodate shift work.

- **Social Services Gap 2:** High cost of living (i.e. housing) leads to increased demand on food bank resources, and residents are only able to access food every other month through the food bank.

- **Social Services Gap 3:** Non-profit organizations that offer family services are challenged with high costs for office space and operational costs.

- **Social Services Gap 4:** Large transient population leads to less cohesion in the community. This increases the number of policing issues, crime rates, traffic accidents, assaults and drug issues.

- **Social Services Gap 5:** Police staffing experiences an average vacancy rate of 15% to 20% as the Municipality has difficulty recruit new members.

**Transportation & Mobility:** The OSDG Sustainable Community Indicators report identifies one indicator for transportation as follows: 122

- **Transportation SCI 1:** The number of public transit passenger trips per capita as compared to other selected major centres in Alberta.

The Social Plan identifies the following gaps in this social service area: 123

- **Transportation Gap 1:** Need for a dangerous goods route around Fort McMurray that bypasses local traffic.

- **Transportation Gap 2:** Lack of bike paths throughout the community.

- **Transportation Gap 3:** Increased traffic enforcement on Highway 63 to reduce collisions, speeding and impaired driving.

- **Transportation Gap 4:** Need for increased bus service, including longer hours of operation, more frequent buses, more direct routes, and service on statutory holidays.

- **Transportation Gap 5:** Need better bus service to rural communities.

- **Transportation Gap 6:** Need for improved visibility at pedestrian cross walks.

- **Transportation Gap 7:** Speed limits to address safety concerns.

**Recreation, Arts & Culture (RAC):** The OSDG Sustainable Community Indicators report identifies one indicator for recreation and cultural facilities as follows: 124

---


The Social Plan identifies the following gaps in this social service area:

- **RAC SCI 1**: The number of selected municipal recreational/cultural facilities per 10,000 population in Fort McMurray as compared to selected other major centres in Alberta.

- **RAC Gap 1**: Shortage of recreational facilities in some rural communities.
- **RAC Gap 2**: Lack of community awareness of programs and services being offered from current facilities.
- **RAC Gap 3**: Pressure on rural parks in the region that are in close proximity to oil sands development.
- **RAC Gap 4**: Limited volunteers to assist with planning and operating programs and services.
- **RAC Gap 5**: Desire for a stronger sense of community cohesion.
- **RAC Gap 6**: Need for a concert hall/performing arts theatre in addition to Keyano College.
- **RAC Gap 7**: Need for a dedicated outdoor space for festivals and concerts (currently under development).
- **RAC Gap 8**: Desire for an additional movie theatre.

**RECOMMENDATION**

It is recommended that a complete set of Sustainable Community Indicators be developed that meet the municipality’s requirements to monitor the community and social services impacts of oil sands project. Until this is available, it is recommended that the OSDG Sustainable Community Indicators and gaps identified in the RMWB Social Plan be used as the basis for the requirements for individual project information and information on the cumulative impacts of various projects.

**MUNICIPAL FINANCIAL SUSTAINABILITY**

To determine the impact of individual oil sands projects, and the cumulative effects of various oil sands projects on the long term financial viability of the municipality will require an analysis of the service delivery demands and infrastructure requirements the project(s) place on the RMWB. To assess these impacts, the results of the analysis should include information on the following variables for each year in the 20 year forecast period:

- Municipal property tax impacts for residential and non-residential property classifications.
- Utility revenue impacts by utility.
- Municipal operating and capital cost impacts.
- Municipal revenue impacts by revenue type.
- Municipal infrastructure requirements both with and without the project(s).
- Debt and debt servicing limit impacts.

In each case, impacts refer to the projection of the information with the oil sands project(s) as compared to without the oil sands project(s).

**RECOMMENDATION**

It is recommended that the information requirements identified for population and employment, as well as project assessment estimates, be retained to facilitate an independent evaluation of the fiscal impact of the oil sands project(s).
individual project, as well as the cumulative impacts of various projects, on the Regional Municipality of Wood Buffalo using the RMWB Municipal Fiscal Impact Model. This independent analysis could then be compared to the annual local government tax information provided by the proponent as required by the regulator.
Appendix A: Guidelines Respecting An Application for a Commercial Crude Bitumen Recovery and Upgrading Project - Section 3: Economic Information
potential or actual emission sources at the operation (including all vents, stacks, flares, product storage tanks, sulphur handling areas, ponds, wells and other fugitive emission sources) during normal, emergency, and maximum operating conditions.

(d) the monitoring program for hydrogen sulphide, sulphur dioxide, total sulphation, hydrogen sulphide sulphation, soil pH, nitrogen oxides and hydrocarbons in the surrounding area;

3.0 ECONOMIC INFORMATION

The economic assessment of a commercial oil sands project should generally include an evaluation of the commercial viability of the project; a benefit-cost analysis in terms of Alberta; an economic impact analysis of the project at the local, provincial and national levels including the implications of employment opportunities.

3.1 Commercial Viability

Commercial viability information should include:

3.1.1 an appraisal and projections, on an annual basis, of

(a) revenues by product,

(b) itemized capital and operating costs, including a breakdown of fuel costs and non-fuel operating costs,

(c) some discussion of the project financing,
3.1.2 a description of project costs which include capital and operating costs and

(a) for a mining application: a breakdown for each component of the project including site preparation, overburden stripping, oil sands mining, extraction upgrading, tailings, utilities and off-sites, operating costs (non-fuel operating costs and fuel costs),

(b) for in-situ applications: a breakdown of capital and operating costs for each component of the project including site preparation, well drilling and completion; central processing facilities including steam generation, water treatment and re-cycling; satellites and surface facilities; production/injection distribution system; upgrading, utilities and off-sites; depreciation, and

(c) for processing applications: a breakdown for each component of the project including site preparation, production/injection distribution system; upgrading, utilities and off-sites.

(d) for pollution abatement and monitoring: a breakdown of capital and operating costs related to overall project costs.

Commercial viability and many public interest matters can be appraised based on easily quantifiable benefits and costs, as determined above.
A more complete project analysis from a public perspective, however, must often incorporate an assessment of non-quantifiable benefits and costs.

3.2 Benefit-Cost Analysis

A benefit cost-analysis should include:

3.2.1 a summary of any additional quantifiable public benefits and costs incurred during the construction and operation of the project, including those outlined in other sections of the application and as they pertain directly to the Province of Alberta and Canada;

3.2.2 a summary of any non-quantifiable public benefits and costs incurred each year during construction and operation of the project, including those in other sections of the application and as they pertain directly to the Province of Alberta and Canada.

3.3 Economic Impact

The economic impact assessment should include:

3.3.1 an appraisal of the economic impact of the project on the region, and province, as well as any economic impact at the national level;
3.3.2 Discussion of any initiatives undertaken in conjunction with the project to accommodate regional economic priorities and interests;

3.3.3 An assessment of direct and indirect employment opportunities for all groups associated with the project including:

(a) A projection of maximum and minimum workforce demand by skill categories in the construction (quarterly) and operating (annual) phases, and an analysis of how these demands will be met. This should identify the perceived shortages in any category of labour during the period concerned, the measures that could be used to alleviate the shortages, and overall consequences of labour shortages to the province as a whole.

(b) An analysis of the indirect and induced employment generated by the project due to employment multiplier effects,

(c) A discussion of the employment and training arrangements that would be provided by the applicant to enable residents of the region to participate in meeting the workforce demands, and to what extent these arrangements might alleviate any perceived labour shortages, and

(d) (A discussion of any arrangements with) the applicant's recommendations to various government agencies (vocational training institutes, advanced education programs, business development agencies, etc.) to facilitate the utilization of the local, regional, and provincial workforce in the project.

4.0 ENVIRONMENTAL IMPACT ASSESSMENT (EIA)
Appendix B: Guidelines Respecting An Application for a Commercial Crude Bitumen Recovery and Upgrading Project - Section 6: Socio-Economic Assessment
(b) in the evaluation of impacts include:
   - habitat effects (loss and alteration),
   - barriers to movements, and
   - hunting pressure and human presence effects - increased access effects,

(c) document the type, location, quantity and capability of habitat that will be disturbed or lost as a result of the project (see also Section 5.1.8);

* Can include big game, small game and non-game mammals, furbearers, upland and migrating birds, waterfowl, raptors, reptiles, and amphibians, and other vertebrates, excluding fish.

5.8 Land Capability

(a) provide inventories (including maps) and evaluations of land capabilities in the development area, including, as appropriate, the following categories: agriculture, forestry, wildlife, fisheries, and recreation, and

(b) for the various land capabilities described, document the area and location of the capability classes to be disturbed by the scheme.

6.0 SOCIAL IMPACT ASSESSMENT

The social impact assessment is intended to present the effects of the scheme on the population base in the impacted area and its consequence on the need for infrastructure. It should also address the quality-of-life issues that are of interest to the communities affected.
The assessment is required to follow a basic format which includes, for each type of impact being considered: baseline conditions, impact identification, impact significance, mitigative measures, and residual impacts. Emphasis is to be placed on the mitigative measures, and not on the detailed description of baseline conditions.

6.1 Population

Population assessment information should include:

6.1.1 the population growth and its distribution in the study area assuming the scheme proceeds and, for baseline comparison purposes, what it would have been in the absence of the project, including

(a) the historical population and distribution data,

(b) the most likely projection of annual population from the date of application to an appropriate time period after the project start-up.

(c) the range in estimate identified in (b) with some discussion of the factors influencing each projection.

6.2 Services and Infrastructure

Services and infrastructure information should include:
6.2.1 a discussion of the project impact on public services at the provincial, regional and local level, including:

(a) a description of basic services presently available.
(b) an assessment of the impact the project would have on existing services,
(c) an identification of the need for new services or improvement to existing services, and how the applicant will facilitate planning by municipal and provincial agencies to provide the services or improvements.

6.3 Land Use

Land use information should include:

(a) an assessment of land use patterns in the area and details of the impact of the proposed scheme on these patterns, including information on the displacement of other land uses and the economic consequences, the effect on land use planning and regional development,
(b) for resource land use, the following information should be included:
   (i) Agriculture
       - areas of arable crop and forage crop production, including cropland diversity, cropping pattern, cultivation practices, and productivity
       - farm types and sizes
       - volume and economic value of farm products
   (ii) Forestry
- present forest management and timber harvesting practices
- forest road patterns
- type and size of forestry operations
- volume and economic value of forest products

(iii) Mineral Resources
- types of mineral resources (i.e. oil, gas, oil sands, coal, sand and gravel)
- location and size of mineral resources
- mineral rights
- volume and economic value of mineral products

(iv) Surficial Resources
- types of surficial resources (sand, gravel, marl, horticultural peat, etc.)
- location and size of surficial resources
- volume and economic values of surficial resources

(v) Wildlife and Fisheries
- location and extent of wildlife and fisheries land uses (i.e., fishing, hunting, trapping, wildlife farming)
- volume and economic value of wildlife and fisheries land use
- present wildlife and fisheries management and harvesting practices

(vi) Recreation
- location and extent of recreation land uses (i.e., consumptive, non-consumptive, commercial, non-commercial, public, private), including water-based recreation on rivers, lakes, streams, and ponds
- access to recreational resources and facilities
- present use rates and trends
- special or unique areas

(vii) Access Management
- location and access in the development area, including highways, roads and trails
- present use for industrial purposes, general public access and recreation

(c) an identification of the project impacts on commercial trapping, fishing or other renewable resource harvesting, and the proposed mitigation measures proposed by the applicant to minimize such impacts.

6.4 Housing

Housing information should include:

(a) a discussion of the plans by the applicant for providing housing and other services for its workforce during the construction phase of the development. This should identify the location and scope of a construction camp, and address such issues as health services, security and access, recreation, etc.,

6.5 Quality of Life

(a) a general discussion of the impact of the project on the quality of life in the study area, and the institutional changes that may be necessary to accommodate the development.
This should address the social effects caused by changes in the economic base of the
impacted area.

6.6 Special Groups

Identify and assess any special population groups in the region.

6.7 Historical Resources

Where Historical Resource Impact Assessment has been required by the Minister of Culture pursuant to
the Historical Resources Act and is available prior to completing an application, a summary of the
assessment should be included as part of the application. 7.1 Mitigation Measures

Information required in the environment protection plan should include

7.0 ENVIRONMENTAL PROTECTION PLAN

The environmental protection plan comprises three parts: mitigation measures, environmental monitoring,
and environmental research. This plan should address both biophysical and social impacts. It should deal
with direct and indirect effects of the project, as well as on-site and off-site effects.
Appendix C: Guide to Preparing Environmental Impact Assessment Reports in Alberta - Socio-Economic Assessment
c) describe how local residents will be contacted during an emergency and the type of information that will be communicated to them;

d) describe the existing agreements with area municipalities or industry groups such as safety cooperatives, emergency response associations, regional mutual aid programs and municipal emergency response agencies;

e) discuss any impacts expected on primary and secondary highway systems and other regional roads caused by anticipated traffic changes;

f) discuss mitigation plans to ensure workforce and public safety for all stages of the Project. Include prevention and safety measures for wildfire occurrences, water saturated plume from cooling towers, icy roads in the winter months, accidental release or spill of chemicals to the environment and failures of structures retaining water or fluid wastes.

7 SOCIO-ECONOMIC ASSESSMENT

7.1 Baseline Information

[A] Describe the existing socio-economic conditions in the region and in the communities in the region.

[B] Describe factors that may affect existing socio-economic conditions including:

a) population changes;

b) the Proponent’s policies and programs regarding the use of regional and Alberta goods and services;

c) a project schedule and a general description of the overall engineering and contracting plan for the Project;

d) workforce requirements for the Project, including a description of when peak activity periods will occur; and

e) planned accommodations for the workforce for all stages of the Project.

7.2 Impact Assessment

[A] Describe the socio-economic impacts of construction and operation of the Project, including:

a) impacts related to:
   i) local training, employment and business opportunities,
   ii) regional and provincial economic benefits,
   iii) housing,
   iv) recreational activities,
   v) hunting, fishing, trapping and gathering, and
   vi) impacts to First Nations and Métis (e.g., traditional land use and social and cultural implications);

b) estimated total Project cost, including a breakdown for engineering and project management, equipment and materials, and labour for both construction and operation stages. Indicate the percentage of expenditures expected to occur in the region, Alberta, Canada outside of Alberta, and outside of Canada;

c) impacts of the Project on the availability of affordable housing and the quality of health care services. Provide a summary of any discussions that have taken place with the local municipalities and the local environmental public health office of
Alberta Health Services concerning housing availability and health care services respectively;

d) discuss any impacts expected on primary and secondary highway systems and other regional roads caused by anticipated traffic changes;

e) the impact on local and regional infrastructure and community services, including consideration of municipal “hard services”, education/training services, social services, urban and regional recreation services, law enforcement and emergency services; and

f) describe municipal growth pressures as they relate to the Project and the need for additional Crown land to meet these needs.

[B] Describe the socio-economic impacts of any construction camp required for the Project and identify:

a) its location;

b) the number of workers it is intended to house;

c) whether the camp will service the Project only or other clients;

d) the length of time the camp will be in service; and

e) describe what services will be provided in the camp (e.g., security, recreation and leisure, medical services).

[C] Discuss options for mitigating impacts including:

a) the Proponent’s policies and programs regarding the use of regional and Alberta goods and services;

b) plans to work with First Nations and Métis communities and groups and other local residents and businesses regarding employment, training needs, and other economic development opportunities arising from the Project;

c) steps that have been undertaken by industry, the municipality, provincial government or through regional and cooperative initiatives to address socio-economic concerns and impacts to local and regional transportation infrastructure;

d) the potential to avoid overlap with other Projects that are reasonably anticipated during all stages of the Project;

e) mitigation plans that will be undertaken to address issues related to the availability of affordable housing and the quality of health care services; and

f) strategies to mitigate socio-economic concerns raised by the local municipality and other stakeholders in the region.

[D] Describe the residual impacts of the Project on socio-economic conditions and the Proponent’s plans to manage those impacts.

7.3 Monitoring

[A] Describe the monitoring programs proposed to assess any Project socio-economic impacts and to measure the effectiveness of mitigation plans.
Appendix D: Energy Resources Conservation Act (Selected Excerpts)
Consideration of public interest

3 Where by any other enactment the Board is charged with the conduct of a hearing, inquiry or other investigation in respect of a proposed energy resource project or carbon capture and storage project, it shall, in addition to any other matters it may or must consider in conducting the hearing, inquiry or investigation, give consideration to whether the project is in the public interest, having regard to the social and economic effects of the project and the effects of the project on the environment.

RSA 2000 cE-10 s3;2010 c14 s1

ALSA regional plans

3.1 In carrying out its mandate under this Act and other enactments, the Board must act in accordance with any applicable ALSA regional plan.

2009 cA-26.8 s75

Continuation of Board

4(1) The Energy Resources Conservation Board is continued as a corporation.

(2) The head office of the Board is to be at the City of Calgary.

RSA 1980 cE-11 s3

Membership of Board

5(1) The Board shall consist of not more than 9 members appointed by the Lieutenant Governor in Council, one of whom shall be designated as chair, not more than 2 of whom may be designated as vice-chairs and the remainder of whom shall be designated as Board members.

(2) In the event of any vacancy occurring in the membership of the Board, the Lieutenant Governor in Council may appoint a member and, in case the office of chair or a vice-chair becomes vacant, the Lieutenant Governor in Council may designate any member to fill the vacancy.

(3) Each of the members of the Board holds office during good behaviour for a term of 5 years from the date of that member’s appointment and afterwards during the pleasure of the Lieutenant Governor in Council.

(4) Notwithstanding anything in this section, any member of the Board may be removed from office by the Lieutenant Governor in Council at any time during the 5-year term referred to in subsection (3) on the address of the Legislative Assembly.
Appendix E: Oil Sands Conservation Acts (Selected Excerpts)
References to subdivisions of unsurveyed land

2 In this Act and in any regulations or orders made under this Act, unsurveyed land may be described or referred to as if it were surveyed into sections in accordance with the *Surveys Act*, and reference to a legal subdivision, section or township in land not so surveyed is deemed to refer to what would be the legal subdivision, section or township if the land were so surveyed.

Application and Purposes of the Act

Purposes of the Act

3 The purposes of this Act are

(a) to effect conservation and prevent waste of the oil sands resources of Alberta,

(b) to ensure orderly, efficient and economical development in the public interest of the oil sands resources of Alberta,

(c) to provide for the appraisal of Alberta’s oil sands resources,

(d) to provide for appraisals of oil sands, crude bitumen, derivatives of crude bitumen and oil sands product requirements in Alberta and in markets outside Alberta,

(e) to assist the Government in controlling pollution in the development and production of the oil sands resources of Alberta,

(f) to provide for the recording and for the timely and useful dissemination of information regarding the oil sands resources of Alberta, and

(g) to ensure the observance, in the public interest, of safe and efficient practices in the exploration for and the recovery, storing, processing and transporting of oil sands, discard, crude bitumen, derivatives of crude bitumen and oil sands products.

Overriding provisions

4(1) A provision of

(a) this Act,

(b) the regulations made pursuant to this Act,
(4) After an inquiry under subsection (3), the Board may
   (a) renew or rescind the order issued under subsection (1), or
   (b) take any other action or make any other order not
      inconsistent with this Act that it considers to be warranted
      by the circumstances.

Approvals

Approval of scheme or operation

10(1) No person shall
   (a) construct facilities for a scheme or operation, or
   (b) commence or continue a scheme or operation

for the recovery of oil sands or crude bitumen, unless the Board, on
application, has granted an approval in respect of the scheme or
operation.

(2) The Board shall, on receiving an application referred to in
subsection (1), make any investigations or inquiries and hold any
hearings that it considers necessary or desirable in connection with
the application.

(3) The Board may, with respect to an application referred to in
subsection (1),
   (a) if in its opinion it is in the public interest to do so, and
      with the prior authorization of the Lieutenant Governor in
      Council, grant an approval on any terms and conditions
      that the Board considers appropriate,
   (b) refuse to grant an approval,
   (c) defer consideration of the application on any terms and
      conditions that the Board may prescribe, or
   (d) make any other disposition of the application that the
      Board considers appropriate.

(4) An authorization of the Lieutenant Governor in Council is
subject to any terms and conditions prescribed by the Lieutenant
Governor in Council.

(5) Notwithstanding subsections (3) and (4), the authorization of
the Lieutenant Governor in Council is not required under this
section in respect of

10
(a) an approval of an experimental scheme where the total quantity of energy, as estimated by the Board, in the oil sands, crude bitumen or derivatives of crude bitumen recovered in any year will not exceed 12.5 petajoules, or

(b) an approval of a scheme or operation, other than an experimental scheme, where the total quantity of energy, as estimated by the Board, in the oil sands, crude bitumen or derivatives of crude bitumen recovered in any year will not exceed 5 petajoules.

Approval of processing plant

11(1) No person shall construct or operate a processing plant unless the Board has, on application, granted an approval in respect of the processing plant.

(2) The Board shall, on receiving an application referred to in subsection (1), make any investigations or inquiries and hold any hearings that it considers necessary or desirable in connection with the application.

(3) The Board may, with respect to an application referred to in subsection (1),

(a) if in its opinion it is in the public interest to do so, and with the prior authorization of the Lieutenant Governor in Council, grant an approval on any terms and conditions that the Board considers appropriate,

(b) refuse to grant an approval,

(c) defer consideration of the application on any terms and conditions that the Board may prescribe, or

(d) make any other disposition of the application that the Board considers appropriate.

(4) An authorization of the Lieutenant Governor in Council is subject to any terms and conditions prescribed by the Lieutenant Governor in Council.

(5) Notwithstanding subsections (3) and (4), the authorization of the Lieutenant Governor in Council is not required under this section in respect of

(a) an approval relating to a processing plant associated with an experimental scheme, where the total quantity of energy, as estimated by the Board, of oil sands products obtained in any year will not exceed 12.5 petajoules, or
Joint Review Panel

Adequacy Review of the Environmental Impact Statement for the Shell Canada Jackpine Mine Expansion Application

Prepared for:

Stakeholder Relations Branch
Regional Municipality of Wood Buffalo (RMWB)
Fort McMurray, Alberta

Prepared by:

Gordon and Associates

December 3, 2011
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Introduction</td>
<td>2</td>
</tr>
<tr>
<td>Purpose</td>
<td>2</td>
</tr>
<tr>
<td>Scope and Approach</td>
<td>2</td>
</tr>
<tr>
<td>II. Relevant Project Application (EIA) Requirements</td>
<td>4</td>
</tr>
<tr>
<td>III. Project Application Content (EIA)</td>
<td>7</td>
</tr>
<tr>
<td>IV. Project Application (EIA) Deficiencies</td>
<td>11</td>
</tr>
<tr>
<td>V. Summary Comments</td>
<td>14</td>
</tr>
</tbody>
</table>
I. BACKGROUND

A Joint Review Panel (JRP) consisting of 3 members from the federal Canadian Environmental Assessment Agency and Alberta Energy Resources Conservation Board was established in September 2011 to assess the environmental effects of the proposed Jackpine Mine Expansion Application submitted by Shell Canada. On October 3, 2011, the JRP announced the beginning of a comment period on the adequacy of the Environmental Impact Statement (EIS) and the Application filed by the project proponent. The purpose is to give "interested parties an opportunity to express their views to the Panel on the adequacy of the available information". The deadline for comments is December 16, 2011. The JRP will review the comments and determine whether it requires any additional information from the project proponent.

The Regional Municipality of Wood Buffalo has retained Gordon and Associates to review the application and provide its views on the adequacy of the population and housing information and analysis contained in the Jackpine Mine Expansion Application.

PURPOSE:

The purpose of this report is to (1) review the population and housing related information contained in the Socio-Economic Impact Assessment (SEIA) portion of the Jackpine Mine Expansion Application and supplemental information, and (2) identify any missing or insufficient information. This will involve determining whether the application adequately addresses the regulatory requirements and responsibilities of the JRP both from a quantitative and qualitative perspective.

SCOPE AND APPROACH:

Eight (8) sets of key documents – four (4) from government ministries and agencies (directives and requirements for the project proposals) and four (4) from the project proponent (the application, update and supplemental information) were reviewed in detail regarding population and housing requirements and information. The documents are listed on the following page:

---

1 Public Notice - Joint Review Panel Invites Public Comment for the Proposed Jackpine Mine Expansion Project

---

Gordon and Associates
Other documents and correspondence from government, the project proponent and key stakeholders will also be reviewed for information. Together, the information contained in these documents form the basis for determining whether the Jackpine Mine Expansion Application and all supplemental materials meet the adequacy requirements of the JRP.

The process used to determine adequacy involved three (3) main steps:

1. Determine what the Joint Review Panel requires from the project proponent in the Environment Impact Assessment (EIA);
2. Review all of the materials on population and housing submitted by the project proponent, including the original proposal, the updated proposal and any supplemental information and materials.
3. The determination of adequacy will be made mainly from a comparison of what is required by the regulator versus what was provided by the project proponent.

Under steps 2 and 3, the relevant information relating to population projections and analysis will be presented first, followed by housing related information. The information presented in the original application and the update will form the basis for the narrative in steps 2 and 3.
II. **RELEVANT PROJECT APPLICATION (EIA) REQUIREMENTS**

The following documents were used to determine what the Joint Review Panel requires from the project proponent in the Environment Impact Assessment (EIA);

- Final Terms of Reference EIA Report for Jackpine Mine Expansion, November, 2007

The Terms of Reference and the Agreement for the Joint Review Panel provide specific direction in terms of the contents of the EIA. Directive 23 and the Reference Guide for the Canadian Environmental Assessment Act were included to provide further clarification regarding what should be considered in a Socio-Economic Impact Assessment (SEIA).

While some of the requirements, especially for environmental factors, are very specific, the socio-economic aspects of the guidelines and requirements are more general and subject to interpretation. The amount of socio-economic requirements is considerably less when compared to detailed and lengthy environmental and legal aspects.

**Final Terms of Reference EIA Report for Jackpine Mine Expansion**

As stated in the Final Terms of Reference for the Jackpine EIA, the report will "assist stakeholders and government in understanding the environmental and socio-economic consequences of the project’s development, operation....." The Terms of Reference go on to say that as part of the scope of work, the EIA will present 

"- Project impacts, including cumulative effects;
- Mitigation options;
- As appropriate for the various types of impacts, predictions in terms of direction, magnitude, frequency, duration, seasonal timing........"

2 Final Terms of Reference EIA Report for Jackpine Mine Expansion, page 1
3 Ibid, page 1
Under the section on Socio-Economic Factors, the following information requirements related to population and housing is included (in summary):

- Discuss the number and distribution of people who may be affected by the Project;
- Discuss the social impacts of the Project on the study areas and on Alberta, including:
  i) local employment and training;
  ii) Population changes;
- Discuss strategies to mitigate socio-economic concerns raised by the RMWB and other stakeholders. Document the work with other industry partners and the Regional Municipality to continue use and development of the urban population prediction model developed for baseline socio-economic purposes; and
- Discuss impacts of the Project on potential shortages of affordable housing and their social ramifications. Identify and discuss the mitigation plans to address these impacts.
- Provide a summary of any discussions that have taken place with the Municipality concerning potential housing shortages.  

The project Terms of Reference state that the EIA report will “discuss possible measures, including established measures and possible improvements based on research and development to (1) prevent or mitigate impacts, and (2) identify residual environmental impacts and their significance including cumulative and regional development considerations.”

**Canada-Alberta Joint Review Panel News Release and Agreement - Jackpine Mine Expansion**

The third document, the AGREEMENT to Establish a Joint Review Panel for the Jackpine Mine Expansion Project defines “Environmental Effect” as meaning:

a. Any change that the project may cause in the environment, including any change it may cause to a listed wildlife species, its critical habitat or the residence of individuals of that species, as those terms are defined in Section 2(1) of the *Species at Risk Act*,

b. Any effect of any change referred to in paragraph a. on
   i. Health and socio-economic conditions

---

4 Ibid, page 27
Directive 023: Guidelines Respecting an Application for a Commercial Crude Bitumen Recovery and Upgrading Project

Directive 023 has some specific requirements regarding population growth and housing:

1. Population growth and distribution in the study area using both baseline and how the project would impact it, including:
   - historical population and distribution
   - likely annual projection from date of application to a point after start-up
   - a range in the estimate and discussion of influencing factors\(^6\)

2. Discussion of plans by the applicant for providing housing and other services for its workforce during the construction phase of development. This should identify the location and scope of a construction camp and address issues such as health services, security and access, recreation, etc.\(^7\)

It also includes a section on Environmental Protection Plan (EPP). The EPP “comprises three parts: mitigation measures, environmental monitoring, and environmental research. The Plan should address both biophysical and environmental impacts. It should deal with direct and indirect effects of the project, as well as on-site and off-site effects.”\(^8\) The mitigation includes a description of the measures as well as any residual effects that cannot be mitigated.

A Reference Guide for the Canadian Environmental Assessment Act – Addressing Cumulative Environmental Effects

A Reference Guide for the Canadian Environmental Assessment Act – Addressing Cumulative Environmental Effects, while not specific about population and housing, addresses the concept of cumulative environmental effects and why it is important. The Guide states that cumulative environmental effects are “a key component of every environmental assessment conducted under the [Canadian Environmental Assessment] Act”\(^9\). It goes on to say that the assessment of cumulative environmental effects must consider “the effects of any such changes on health and socio-economic conditions…..\(^{10}\). The significance is the recognition that the short and long term cumulative effects of oil sands development must be considered when determining the impact on

\(^{6}\) Ibid, page 39
\(^{7}\) Directive 023: Guidelines Respecting an Application for a Commercial Crude Bitumen Recovery and Upgrading Project, page 42
\(^{8}\) Ibid, page 43
\(^{9}\) A Reference Guide for the Canadian Environmental Assessment Act – Addressing Cumulative Environmental Effects, page 136
\(^{10}\) Ibid, page 136-7
socio-economic conditions. This is an important interpretation that will be used in assessing the adequacy of the project proposal.

**Comments:**

The question of information adequacy from the project application relies directly on what is required by the regulators. The regulatory guidelines and requirements for socio-economic factors are very limited in terms of amount and detail. There is a need by both federal and provincial regulators to review their respective SEIA requirements and develop a much more robust and effective set of socio-economic factors that must be fully addressed in terms of identifying impacts as well as a mitigation measures.

The other comment that is critical to ensuring socio-economic impacts are adequately identified and mitigated is for the federal and provincial regulators to clarify whether cumulative effects applies to socio-economic factors. There are numerous references in the documents reviewed that this cumulative also applies to socio-economic factors, but there seems to be some uncertainty regarding what panel members have accepted both in the documentation and at hearings in the past. This area requires clarity to ensure all parties have a clear understanding of the project application requirements in the future.
III. **PROJECT APPLICATION CONTENT (EIA)**

This section will provide details on what was included for population and housing in the following documents:

- Original Jackpine Mine Expansion Application - Volume 5, December 2007
- Update to Jackpine Mine Expansion Application, May 2008
- ERCB/AENV Supplemental Information Responses - Round 1 (Sections 6, 9, 15, 17), December 2009
- ERCB/AENV Supplemental Information Responses - Round 2 (Sections 8, 10), June 2010

The material from the Original Jackpine Mine Expansion Application - Volume 5, December 2007 will be presented. Any updated or revised material or information will be mentioned. Population and housing effects/impacts will be discussed, followed by any mitigation measures/plans included in the application.

**POPULATION**

1. **Impacts:**

The EIA uses the Regional Issues Working Group (RIWG) Population Model to project the population of the Urban Service Area (USA), which includes Fort McMurray, Saprae Creek and Draper. The USA will be referred to as Fort McMurray throughout this report. While an overview of the model is provided in one of the appendices, there are no detailed set of population projections or estimates of impacts for the rural hamlets.

Three population projection scenarios are included in the EIA:

1. The Base Case, which includes the existing and approved projects in the area
2. The Application Case, which the Base Case plus the Project
3. The Planned Development Case (PDC), which includes the above plus all other projects planned for the area.

The model predicts that by 2015, Fort McMurray will reach the following population;

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Case</td>
<td>96,000</td>
</tr>
<tr>
<td>Application Case</td>
<td>98,400</td>
</tr>
<tr>
<td>Planned Development Case</td>
<td>116,600</td>
</tr>
</tbody>
</table>

11 Original Jackpine Mine Expansion Application, Socio-Economic Assessment, page 8-235
It states in the EIA that the Jackpine Mine Expansion would account for 23% of the total population growth in 2015 and 12% in 2020.

The three population projection scenarios are presented in a graph in the EIA over the forecast period. Specific numbers are only included at a few key reference points. Otherwise, there are no demographic details or analysis in terms of the future population trends, which is critical when trying to determine socio-economics impacts.

**Project Updates**

The Update to the Jackpine Mine Expansion Application includes updated population projection scenarios that are somewhat lower than in the original application.

The revised population scenarios for 2015 are as follows:

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Case</td>
<td>80,050</td>
</tr>
<tr>
<td>Application Case</td>
<td>86,160</td>
</tr>
<tr>
<td>Planned Development Case</td>
<td>104,500¹²</td>
</tr>
</tbody>
</table>

While the projected population growth has been reduced, the impact of the Jackpine project goes up. The EIA states that the project would account for 25% of the total population growth in 2015 and 15% in 2020 – a fairly significant impact by any measure.

Again, there are no details on the actual population under the three scenarios or any demographic analysis.

**2. Mitigation Actions/Plans**

The only mitigation actions or plans presented in the EIA regarding population are to house all of the construction workers in a work camp, thereby relieving pressure form the housing market in the future.

**HOUSING**

The section on housing focuses on a situational analysis of the housing market which is essentially an overview of the rental and ownership markets in Fort McMurray. There is some discussion on affordability, but it only uses median income to compare Fort McMurray to other municipalities in

---

¹² Original Jackpine Mine Expansion Application, Socio-Economic Assessment, page 8-235
Alberta. The statement that Edmonton has become less affordable relative to Fort McMurray" 13 is very misleading. The brief discussion on affordable housing only mentions what the Wood Buffalo Housing and Development Corporation are doing to address the problem.

**Impacts:**

The EIA states the “the housing need associated with the population impacts of the Project is estimated at just over 2,100 dwelling units” during the construction phase of the project. This does not include on-site camp accommodations. Once the project is completed, the anticipated 750 operations workers are expected to live in urban service area.

In terms of cumulative effects, the EIA states that “The Project and other planned oil sands developments will contribute to housing market pressures in the Wood Buffalo region. If the population growth in the urban service area is as forecast in the Planned Development Case, the number of new dwelling units required above the Base Case will be 10,87014”. It goes on to state that the shortage of affordable housing is expected to continue. Even though Wood Buffalo Housing and Development Corporation received funding for 700 new affordable housing units, the need was expected to be another 2,000 over the 2005-2009 time period.

**Project Updates**

The Update report states the “housing demand [from the Jackpine project] is estimated at 1,230 dwellings” during the construction phase of the project, not including on-site camp accommodations. The lower population projections in the update result in a lower demand for housing. The number of new dwelling units required under the Planned Development Case has been reduced to 8,700 or about 14% of the total housing demand in Fort McMurray.

In terms of social and affordable housing, there is recognition that those working in the service sector and other lower paying jobs are facing significant difficulties paying the high housing costs in Fort McMurray. However, no quantitative data is presented on the gap between housing costs and lower income households.

**1. Mitigation Actions/Plans**

The project proponent proposes to mitigate negative effects of the project on the housing market during the construction phase by following the same approach that other oil sands developers have used; “in line with the standard approach to construction of oil sands facilities in the region, the Project will be built by construction workers that will be housing in on-site camps...”15 While this

13 Ibid, page 8-246
15 Original Jackpine Mine Expansion Application, Socio-Economic Assessment, page 8-249
approach has been approved and used for previous oil sands projects, the result has been a
dramatic increase in the number and size of work camps, especially since 2005. The number of
beds increased from 5,603 beds in 2000 to 26,284 in 2008. It is estimated that there are over
40,000 mobile workers currently using work camps for accommodation across the region.

The EIA clearly states that it will not use a work camp for the operations, expecting most employees
will reside in Fort McMurray. There are no direct plans by the company to mitigate the effects on
the housing market. The EIA mentions what the industry is doing through the RIWG as a whole to
respond to growth pressures in general. The collective activities mentioned in the EIA include:

- ATC/Athabasca Resource Developers All-Parties Core Agreement, which provided $230,000
  annually to 5 different First Nations, set to expire in 2010.
- funding and resources to a variety of community, social and charitable activities, events and
  organizations in the region
- various long-term planning activities through the RIWG, including developing the industry
  population model and studies of the mobile workers.

The only direct support for housing aimed at addressing growth pressures from the development of
the oil sands has been provided by government. The activities included in the EIA are summarized
below.

**Provincial government**

- $52.5 million from the provincial government to address affordable housing and support for
  150 households (monthly rental supplements)
- Announcement of a 10-year plan to end homelessness
- Alberta Government monthly cost-of-living allowance of $1,040 for all employees of
  provincially funded agencies

**Federal Government**

- The federal government also support the affordable housing homelessness initiatives, which
  although provincial wide, have received additional funds to help address growth pressures

**Municipal Government**

- Completion of long range planning documents (e.g. Fringe Study) to prepare for future
growth
- An annual cost of living allowance of $9,400

---

16 Regional Municipality of Wood Buffalo 2008 Municipal Census
17 Statistics Canada discussions with work camp operators in April and May 2011
18 Ibid, page 8-220
19 Ibid, pages 8-217-19

---

Gordon and Associates
• A designated building that provides municipal staff with a reduced rental rate for one year
• Home equity protection program that protects employees against real estate declines

While federal and provincial funding for affordable housing programs have helped address the growing need for and cost of housing, the staggering demand for housing created by the development of the oil sands have made it difficult for governments to address alone. Furthermore, most of the funding is based on programming with a 3 year budget and there is no guarantee that this level of funding will continue over the longer term to specifically address the impacts of the Jackpine Mine Expansion.
IV. **PROJECT APPLICATION (EIA) DEFICIENCIES**

The purpose of this section is to determine and specifically identify any deficiencies or gaps in information and analysis contained in the project application EIA. This will be accomplished by comparing the regulatory requirements with the contents of the project application and all updated and supplemental information. More recent or relevant data that is available (e.g. RMWB population projections, housing supply backlogs, housing need data, income data, etc.) will be identified.

**POPULATION**

1. **Impacts:**

The main deficiency regarding population projections is the use of the Oil Sands Developers Group (RIWG) Population Model. The RIWG Model uses proprietary information from specific developers and projects and the details are not open to public scrutiny.

The Municipality worked very closely with key stakeholders (which included the RIWG and the consultant who developed and runs their population model) during 2008 and 2009 developing an Employment and Population Projection Model, which was subsequently endorsed by all stakeholders, including the RMWB Regional Council and many provincial government departments. The results and approach were subsequently used to develop the first provincial Comprehensive Regional Infrastructure Sustainability Plan (CRISP).

The Model was updated in June 2011 and strongly endorsed by local industry, including the oil sands through the RIWG. Three scenarios were developed – a base, medium and high growth scenario. The municipality and key stakeholders endorsed the high growth scenario as being the most likely and appropriate for long range planning purposes. The difference between the two sets of projections is illustrated below:

<table>
<thead>
<tr>
<th>Year</th>
<th>RIWG Model</th>
<th>RMWB Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>104,050</td>
<td>107,284</td>
</tr>
<tr>
<td>2020</td>
<td>110,640</td>
<td>131,227</td>
</tr>
</tbody>
</table>

Due to the importance of population growth and trends on demand for basic goods and services, the Jackpine EIA should be revised using the High Growth Scenario from the June 2011 version of the RMWB Employment and Population Projection Model for both the project and cumulative impacts.
Other deficiencies with the RIWG population Model and its output include:

- It only addresses Fort McMurray and does not include any other information on the rural hamlets;
- There are no details available on the annual numbers for each scenario.
- There are no details on demographic make-up and trends resulting from the population projections. This analysis is critical for determining and understanding the impacts of the population growth on socio-economic factors.

Once the EIA has incorporated the results from the RMWB population model, the following new information on population trends should be addressed in the EIA:

- The annual population by community for both the permanent and non-permanent residents over the forecast period;
- A demographic breakdown (minimum age and gender) and analysis for use in determining socio-economic impacts and effects.

2. Mitigation Actions/Plans

There does not appear to be an appreciation of the nature and magnitude that the Jackpine and other oil sands mega projects have on the municipality and its residents. When one project is responsible for 25% of the population growth, the impact is enormous. Compound the high growth with an oversupply of younger, male workers and the impact on the municipality and its residents is overwhelming.

The Municipality is trying to build Fort McMurray into a sustainable, world class northern city. This will require more families moving to the region and creating an environment that encourages people to stay and raise families in Fort McMurray.

The oil sands industry must consider the impact that its policies and practices have on the region and its residents (e.g. fly-in – fly-out operations). The project proponent should be required to provide some options to mitigate the effects of the project on the demographic profile of Fort McMurray.

**HOUSING**

1. Impacts:

The housing need and demand results (impacts) included in the project application and update will change after the latest update to the RMWB Employment and Population Model is used to revise the
EIA. This includes the number of new housing units by dwelling type required to accommodate the future population (cumulative) as well as the project specific impacts during the construction phase.

It should be noted that the cost of housing market in Fort McMurray continues to be the most expensive in Canada. More importantly, the gap between what those at the lower end of the income scale earn versus what the cost of housing in Fort McMurray continues to be relatively high. The segment of the population which is most severely impacted by the extreme demand for housing in Fort McMurray is lower and moderate income households. There is no data or analysis in the application and updates of how these lower and moderate income households are affected by the extremely high housing costs in Fort McMurray.

After completing a thorough demographic analysis of the High Scenario from the RMWB Population Model, a housing needs assessment should be undertaken to answer the following questions:

1. How many households are in need?
2. Who is in need and the size of their household?
3. How big is the affordability gap in Fort McMurray?

The objective is to provide a demographic, quantifiable profile of the households who need financial assistance with their housing costs. The social (and where possible financial) implications of not addressing the need and demand for affordable housing in Fort McMurray should also be qualified.

The cumulative impact of (1) using a work camp approach to housing oil sands workers, and (2) providing substantial Living Out Allowances (LOA’s) on the housing market and rental rates needs to be determined to fully understand the effect of the approach being proposed by Shell to build and operate the Jackpine Mine Expansion.

2. Mitigation Actions/Plans

While industry is not usually directly responsible for helping those who cannot afford market rental rates and house prices, the housing situation in Fort McMurray is unique in Alberta. As mentioned in the previous section, all of the actions to mitigate the cumulative impacts of industrial development are left to governments. While this approach works well in other communities, the extreme shortage and high cost of housing has made effective progress more difficult. It is common for small businesses in Fort McMurray to provide staff accommodation at a significantly reduced rate or no charge (e.g. Canadian Tire, Nova Hotel, Subway, etc.). The participation of the key stakeholders, including oil sands companies, is required to effectively address the affordable housing situation in Fort McMurray.
There are numerous options available to help address the problem. The Project Proponent should be requested to develop options to mitigate the effects, as determined in a revised EIA, of the Jackpine project on the housing market, while meeting the goals of the new Municipal Development Plan. This must include a discussion of how industry could participate with government to alleviate the effect of cumulative effects of oil sands development on the households in need of affordable housing.
V. CONCLUDING COMMENTS

The findings from the adequacy review of the project application requirements and content suggest that further information and analysis is required before an evidence based decision can be made on the socio-economic effects of the Jackpine Mine Expansion. The main deficiencies identified during the review are included below. Some suggestions about data sources are also included.

POPULATION

- Use the High Growth Scenario from the June 2011 version of the RMWB Employment and Population Projection Model for determining both the project and cumulative impacts. The projections used in the EIA are lower by 3,234 in 2015 and over 20,000 people by 2020, a significantly different result that leads to much lower impacts.
- Provide details on the annual population by community for both the permanent and non-permanent residents over the forecast period.
- Undertake a demographic breakdown (including age and gender) and analysis for use in determining socio-economic impacts and effects. The required data is contained in the RMWB Employment and Population Projection Model.
- Provide options that Shell could use to mitigate the effects of the project on the demographic profile of Fort McMurray. This would require aligning with the direction outlined in the recently approved Municipal Development Plan.

HOUSING

- Undertake a housing needs assessment using the Canada Mortgage and Housing Corporations’ (CMHC) definition of Core Housing Need to answer the following questions:
  1. How many households are in need?
  2. Who is in need and the size of their household?
  3. How big is the affordability gap in Fort McMurray?

  The most recent Tax Filer (Statistics Canada) and Core Housing Need (CMHC) data should be used to support the analysis.
- Determine the cumulative impact of (1) using a work camp approach to housing oil sands workers, and (2) providing substantial Living Out Allowances (LOA’s) on the housing market and rental rates.
- Provide actions that Shell could use to mitigate the effects of the project on the housing market. This must include a discussion of how industry could participate with government to alleviate the cumulative effects of oil sands development on the households in need of affordable housing.
COMMENTS REGARDING THE REGULATORY REQUIREMENTS

While not directly related to the adequacy task, there are issues with the regulatory guidelines and requirements for socio-economic factors being very limited in terms of amount and detail, and in some cases, somewhat vague and unclear. Two comments directed at federal and provincial regulators are presented for consideration:

- Federal and provincial regulators should review their respective SEIA requirements and develop a much more robust and effective set of socio-economic factors that must be used to identify impacts as well as a mitigation measures.
- Federal and provincial regulators should clarify whether cumulative effects apply to socio-economic factors. This area requires clarity to ensure all parties have a clear understanding of the project application requirements in the future.