

## Wood Supply Analysis of Resolute Forest Products' Caribou, English River, Black Spruce and Dog River-Matawin Forests in NW Ontario

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### Summary of Findings

Montreal-based Resolute Forest Products is one of the largest forestry companies in Canada. They hold tenure on four contiguous Forest Management Units (FMUs) in Northwestern Ontario that total over 4 million hectares: the Dog River-Matawin, Black Spruce, English River and Caribou Forests.

These four forests overlap with the Brightsand Caribou Range, which is at a high level of risk based on current disturbance and a declining population of woodland caribou, a threatened species. These tenures are public land. Resolute does not own the land or the trees, but has been granted long-term licenses to log the forests and access to the land by the Province.

Given the precarious state of the local Brightsand Caribou Range and the importance of forests for the northern economy, CPAWS Wildlands League wanted to determine what the net changes in capacity and demand were and the implications for the area of forest available for forest related jobs and conservation initiatives, such as setting aside land for caribou.

We did an analysis of (1) the current mill capacity, (2) the planned level of logging and (3) the actual amount cut for recent years and compared the three amounts.

**These comparisons revealed a large surplus in the current volume of wood supply: over 2.4 million cubic metres (m<sup>3</sup>) of wood based on recent cutting, and over 1.2 million m<sup>3</sup> even if Resolute utilized its full mill capacity in Northwestern Ontario. This large annual volume of unused wood translates into a similarly huge forest area: between 1.2 and 2.4 million hectares of forest that could be put towards caribou conservation and diversifying local economic initiatives because they are not currently being used by Resolute.**

## The Analysis

We undertook the following steps to complete the analysis:

Step 1: Determine the current capacity of Resolute's facilities in NW Ontario.

Step 2. Compare the actual recent volumes cut with the planned cut volumes.

Step 3. Compare Resolute's full industrial capacity with the planned cut volumes.

Step 4. Determine how much forest area is represented by the resulting volumes of wood fibre.

The details of the analysis are described below.

### **Step 1: Determine the current capacity of Resolute's facilities in NW Ontario**

We compiled the data for each facility from Resolute's Annual Financial Reports to the U.S. Securities Exchange Commission<sup>(a)</sup>. The Fort Frances Pulp and Paper mill was permanently closed in 2014<sup>(1)</sup>. Because the reports presented the facilities' capacities in different units, we converted them all to cubic metres (m<sup>3</sup>) of wood using two online tools<sup>(b)</sup>. We then totaled the current capacity.

Table 1 shows that the total capacity for Resolute's mills in NW Ontario is 2,667,344 m<sup>3</sup>. This is an overestimate of the total possible demand on the forest for three reasons. One, mills never run at full capacity all the time because of maintenance schedules and machinery breakdowns. Second, waste from sawmills is used by other facilities to make paper and wood pellets, so the supply for these does not come directly from the forest. Third, market conditions may not warrant running the mills at full steam, which has been the case for many years. It is therefore highly unlikely that Resolute would ever actually require 2.6 million m<sup>3</sup> per year from the forest in any given year.

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<sup>a</sup> Available at [http://www.sedar.com/search/search\\_form\\_pc\\_en.htm](http://www.sedar.com/search/search_form_pc_en.htm). We searched 'Resolute Forest Products' under 'Company Name' and from January 1 2015 to January 1, 2016 under 'Date of Filing' and viewed the Annual Report on Form 10-K – English.

<sup>b</sup> Metric tonnes measurements were converted to cubic metres using <http://www.thecalculatorsite.com/conversions/substances/wood.php>. We averaged the results from the Wood Density List when Canadian Spruce and Canadian Pine were selected as this represents the mix of species utilized at the mills.

Board feet were converted to cubic metres using the relationship between 1,000 board feet and cubic meters average found at [http://cta.ornl.gov/bedb/appendix\\_a/Wood\\_and\\_Log\\_Volume\\_Conversion\\_Factors.pdf](http://cta.ornl.gov/bedb/appendix_a/Wood_and_Log_Volume_Conversion_Factors.pdf)

Table 1. Resolute Forest Products' Current Industrial Capacity in NW Ontario.

Facility	Capacity	Units	Capacity in m <sup>3</sup>
Thunder Bay Pulp and Paper	564,000 <sup>(2)</sup>	metric tonnes	1,246,409
Atikokan Sawmill	145,000,000 <sup>(3)</sup>	board feet	342,171
Ignace Sawmill	115,000,000 <sup>(3)</sup>	board feet	271,377
Thunder Bay Sawmill	300,000,000 <sup>(3)</sup>	board feet	707,940
Thunder Bay Wood Pellet	45,000 <sup>(3)</sup>	metric tonnes	99,448
<b>Total volume:</b>			<b>2,667,344</b>

## Step 2. Compare the actual recent cut volumes with the planned cut volumes

Reflecting a sustained decreased demand for forest products, Resolute has not come close to cutting the volume forecasted in its forest management plans for at least 6 years. To determine the difference between the planned cut and the actual cut, we calculated the planned average annual cut from the four contiguous forest management units from which Resolute supplies its mills based on the volumes forecast in the forest management plans. We then calculated the actual average annual cut from the annual reports for each forest management unit since 2008-2009 and determined the difference from the planned harvest both for the individual forest management units and for the area as a whole. The results are shown in Table 2.

For both calculations we used the available public information from the Ontario Ministry of Natural Resources and Forestry (OMNRF) Forest Management Plan webpage<sup>4</sup> and averaged multi-year data (e.g. annual reports) to determine average annual amounts.

The planned cut exceeds the actual cut by more than 2.4 million cubic meters. This is wood that is planned to be cut every year but has not been used for at least six years. These actual cut rates, however, do not represent the full capacity of Resolute's processing facilities. In the event that demand ever rises to the level that Resolute would need all of its facilities, we looked at those numbers in Step 3.

Table 2. Actual vs. Planned Cut Volume (m<sup>3</sup>/year)

Forest Management Unit	Planned Average Annual Cut	Actual Average Annual Cut	Surplus Wood (Planned Cut – Actual Cut)
Dog River-Matawin	1,200,000 <sup>(5)</sup>	443,659 <sup>(6)</sup>	756,341
Black Spruce Forest	1,171,985 <sup>(7)</sup>	639,649 <sup>(8)</sup>	532,516
English River Forest	896,298 <sup>(9)</sup>	263,923 <sup>(10)</sup>	632,375
Caribou Forest	610,856 <sup>(11)</sup>	86,018 <sup>(12)</sup>	524,838
<b>Total Average Annual Volumes</b>	<b>3,879,139</b>	<b>1,458,453</b>	<b>2,420,686</b>

**Step 3. Compare Resolute’s full industrial capacity with planned volumes.**

The total planned average annual cut is 3,879,139 m<sup>3</sup> (from Table 2). The total mill capacity of Resolute in Northwestern Ontario is 2,667,344 m<sup>3</sup> (from Table 1). The difference between these two is 1,211,795 m<sup>3</sup>. This is the planned yearly cut volume that is in excess of Resolute’s wood supply needs, even if the company dramatically increased its operations to fully utilize its current mill capacity in Northwestern Ontario.

#### **Step 4. Determine how much forest area is represented by surplus cut volumes.**

The commonly accepted relationship between the total area of managed forest and the long term available harvest for boreal forests is 1 cubic metre per hectare. That is, for each hectare of forest land, 1 m<sup>3</sup> of wood can be cut per year over the long term. With a wood supply surplus of between 1.2 million m<sup>3</sup> (based on full Resolute capacity) and 2.4 million m<sup>3</sup> (based on the last 6 years of actual cutting) **the area of forest that is not needed for logging is between 1.2 million hectares and 2.4 million hectares.**

This is an immense area representing approximately one-quarter to one-half of the forested area in Resolute's contiguous Northwestern Ontario units. It is between 19 and 39 times the size of Toronto and large enough to both prevent further caribou range disturbance and provide more opportunities for other local industries.

#### **Assumptions**

These calculations are based on the current total available volumes and current Resolute industrial capacity. They do not reflect other demands for wood on these forests such as that going to Domtar's Dryden facility or small volume users within the tenure. There is also the possibility that Resolute's former Fort Frances pulp mill could re-open under new management. However, our analysis also does not consider the amount of wood supplied from private land and other adjacent forest tenures. We assume that any additional current demand would be more than offset by additional current supply. For example, most of the fibre for the Fort Frances mill could be supplied by tenures outside our study area and by private land.

There may be other sources of information unknown or unavailable to us from public sources that would affect the wood supply picture.

As explained previously it is unlikely that all of Resolute's mills in the area could ever demand their full capacity from the forest. Our estimated wood supply surplus is therefore highly conservative.

#### **Conclusion**

There are currently large annual surpluses of wood supply in the Forest Management Units that feed Resolute's mills in Northwestern Ontario. Overlapping with Resolute's four contiguous Units is the highly threatened Brightsand Caribou Range. The wood supply surplus volume in these Forest Management Units ranges between at least 1.2 million m<sup>3</sup> (if Resolute were to utilize their full industrial capacity) and 2.4 million m<sup>3</sup> (based on actual recent harvest levels).

This represents a comparably huge area of forest that, in the current conditions, would never need to be harvested.

While there is always uncertainty about the extent of future demand and other variables beyond the scope of our study, we are confident that:

- There is currently a wood supply surplus over and above both current demand and full operation of Resolute's facilities.
- The surplus is sufficiently large to contribute to immediate and meaningful conservation efforts for caribou and to other local economic opportunities.

### **Recommendations:**

This surplus between 1.2 million and 2.4 million m<sup>3</sup> should be used to implement range management measures for caribou conservation and for additional opportunities for local forest entrepreneurs.

Resolute should facilitate the sharing of this immense surplus.

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### **References**

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Note: Documents have complicated internet access paths, and so have been posted to our website for easier reader access and are marked [posted-wildlandsleague.org]

1. Resolute News Release. Resolute Announces Permanent Closure of Fort Frances Mill May 6, 2014. See <http://resolutefp.mediaroom.com/index.php?s=28238&item=135276>.
2. United States Securities and Exchange Commission Annual Report Form 10-K for Resolute Forest Products Inc., filed Mar 2, 2015. P. 4. [posted-wildlandsleague.org]
3. United States Securities and Exchange Commission Annual Report Form 10-K for Resolute Forest Products Inc., filed Mar 2, 2015. P.5. [posted-wildlandsleague.org]
4. The Ontario Ministry of Natural Resources and Forestry (OMNRF) Forest Management Plan webpage can be found at:  
<http://www.efmp.lrc.gov.on.ca/eFMP/home.do?currentFmu=&language=en>.
5. 2009-2019 Forest Management Plan for the Dog River-Matawin Forest, Sec 9.0 Forest Management Plan Tables, FMP 18 Planned Harvest Volume and Wood Utilization (5-year), page 419. [posted-wildlandsleague.org]
6. Dog River-Matawin Forest Annual Reports (2008-2009 through 2013-2014) Tables AR-1 Annual Report of Wood Utilization, Total Actual Volume Utilized. [posted-wildlandsleague.org]
7. 2011-2021 Forest Management Plan for the Black Spruce Forest, Table FMP 14 Planned Harvest Volume and Wood Utilization (5-year), page 253. [posted-wildlandsleague.org]
8. Black Spruce Forest Annual Reports (2008-2009 through 2013-2014) Tables AR-1 Annual Report of Wood Utilization, Total Actual Volume Utilized. [posted-wildlandsleague.org]. For 2008-2009 through 2010-2011, we combined AR-1 data from the former Black Sturgeon and Spruce River Forests that make up the current Black Spruce Forest.
9. 2009-2019 Forest Management Plan for the English River Forest, Table FMP 18 Planned Harvest Volume and Wood Utilization (5-year), page 216. [posted-wildlandsleague.org]
10. English River Forest Annual Reports (2008-2009 through 2013-2014) Tables AR-1 Annual Report of Wood Utilization, Total Actual Volume Utilized. [posted-wildlandsleague.org]
11. 2008-2018 Forest Management Plan for the Caribou Forest, Table FMP 18 Planned Harvest Volume and Wood Utilization (5-year), page 318. [posted-wildlandsleague.org]
12. Caribou Forest Annual Reports (2008-2009 through 2013-2014) Tables AR-1 Annual Report of Wood Utilization, Total Actual Volume Utilized. [posted-wildlandsleague.org]

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**Citation**

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