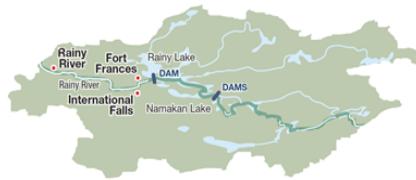




# International Rainy and Namakan Lakes Rule Curves Study Board

## Fact Sheet Series



### Factsheet # 2

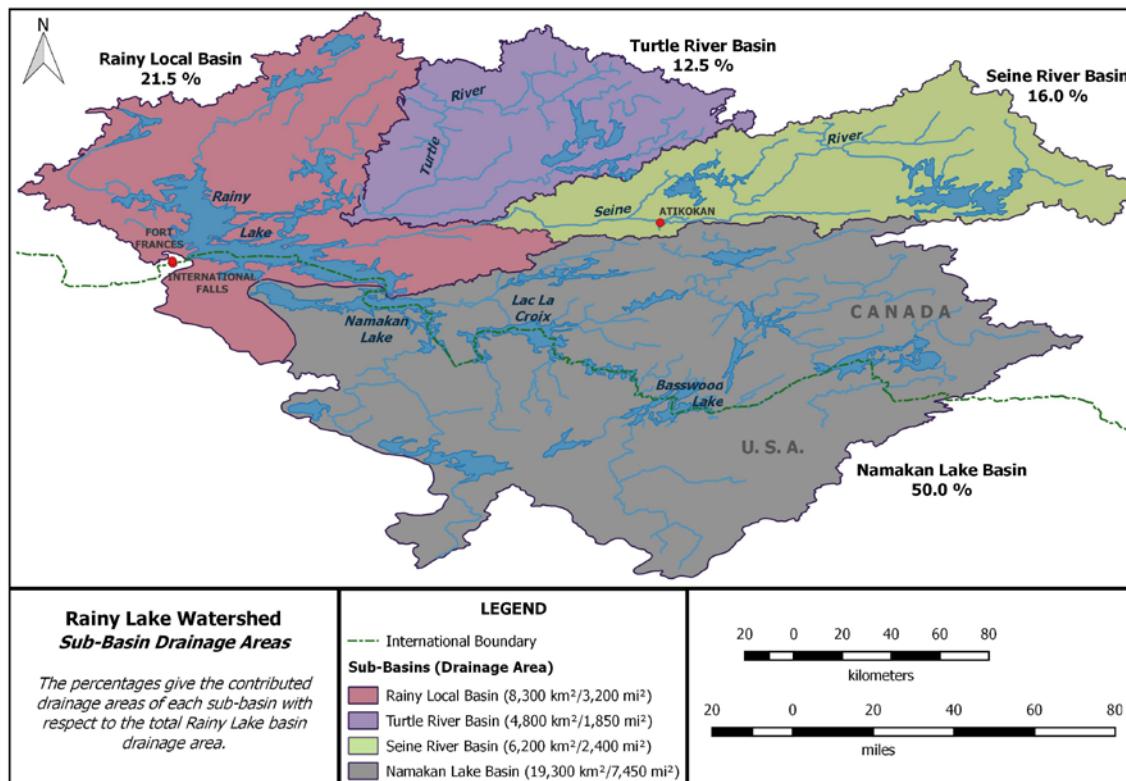
#### Title: The Rainy Lake Watershed – Overview of Flows

#### Background

The watershed of the Rainy Lake is large, with many lakes and rivers draining an area of over 38,600 km<sup>2</sup> (14,900 mi<sup>2</sup>) to the dam at International Falls-Fort Frances. The proportion of flow coming from various portions of the watershed varies over time, depending on the distribution of precipitation across the region and flow management by dams. This fact sheet examines these sources.

#### Sub-basin Drainage Areas

**Figure 1** shows the breakdown of the percentage of land and water area that drains into Rainy Lake from the following four main areas: Namakan Lake and its tributaries, Seine River, Turtle River, and the smaller drainages and direct flows into Rainy Lake.

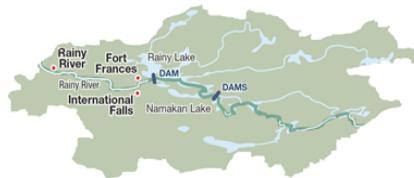


**Figure 1. Area of sub-basins that drain into Rainy Lake**



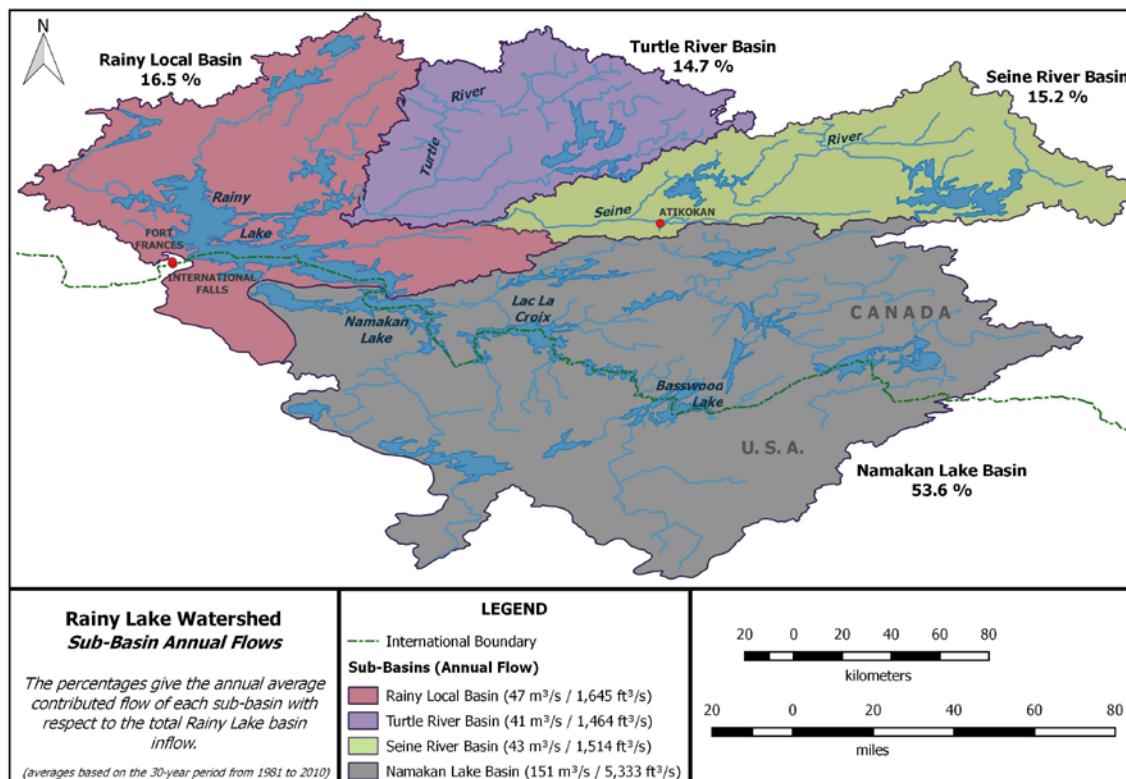
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### Flows by Sub-basin into Rainy Lake

**Figure 2** shows how much flow comes from these sub-basins, on average, over course of a year. This is based on the 30-year period 1981-2010. For the local Rainy Lake sub-basin, this includes direct precipitation on the lake.



**Figure 2. Average Annual Flows into Rainy Lake by Sub-basin.**

It is important to note, however, that over the course of a given year, flows can be higher or lower from any of the sub-basins. In the spring and early summer, when precipitation is typically the greatest, these percentages can change substantially depending on where rainfall is the heaviest over a time. However, on average, the percentage contribution from each area in the spring-summer period is not very different from the year-long averages, as shown in **Figure 3**.

In the spring and summer of 2014, which saw the highest flows into Rainy Lake since 1950, these percentages were slightly different from the longer-term averages. These are shown in **Figure 4**.



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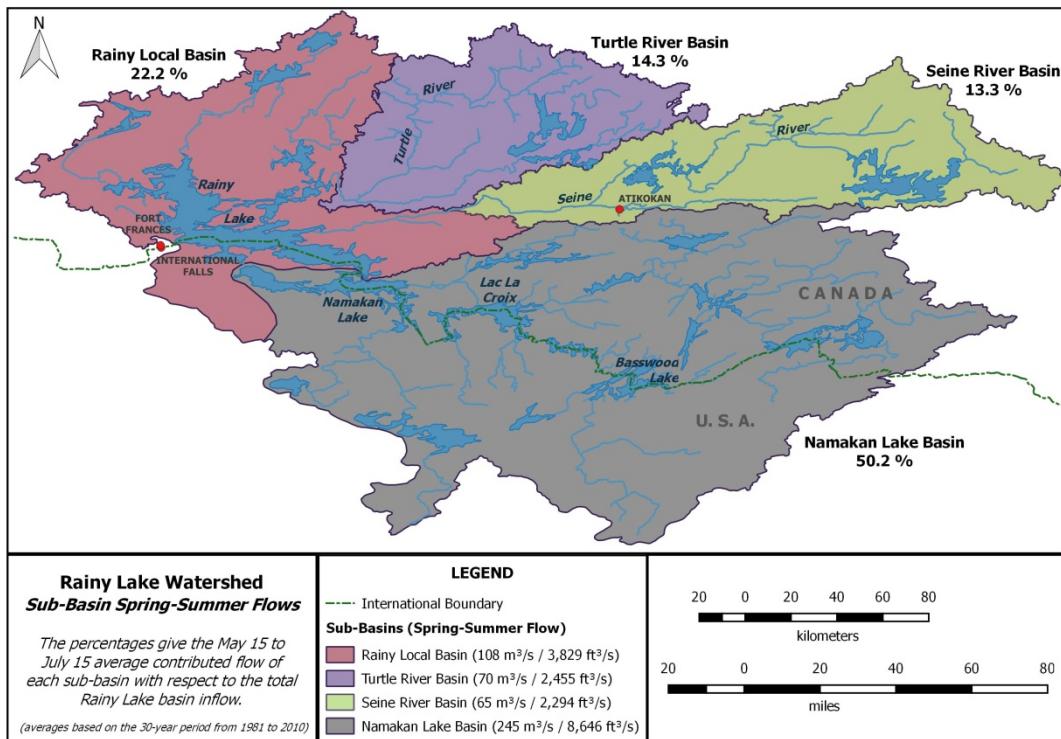


Figure 3. Average May 15-July 15 Flows into Rainy Lake by Sub-basin

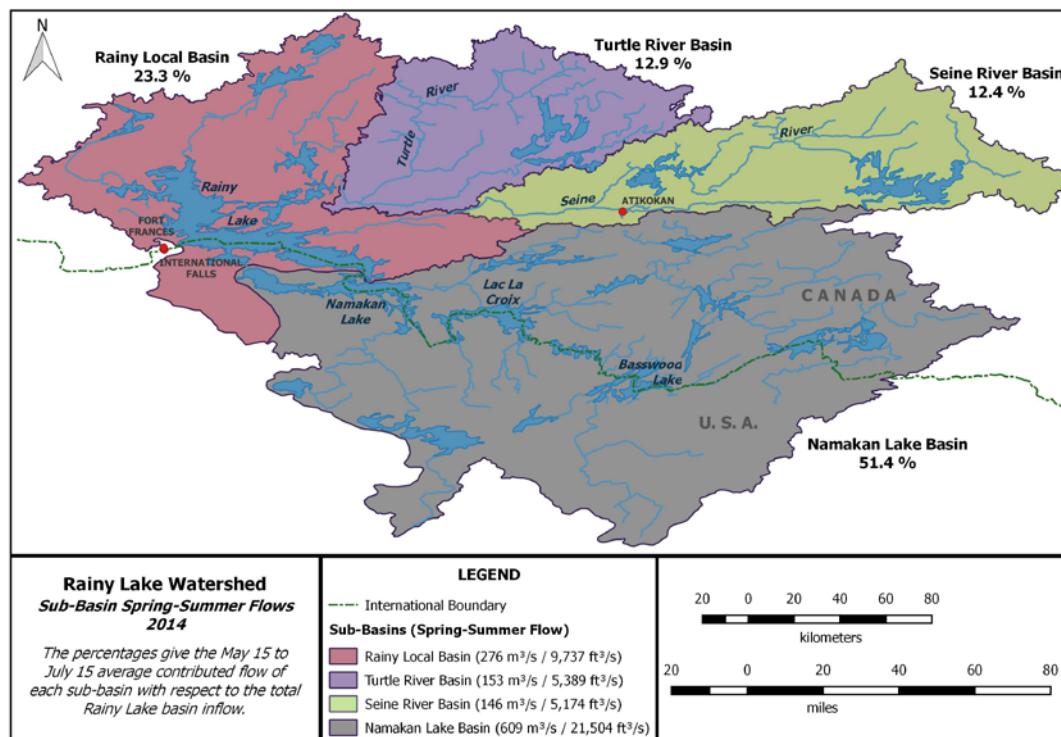


Figure 4. May 15-July 15, 2014 Flows into Rainy Lake by Sub-basin