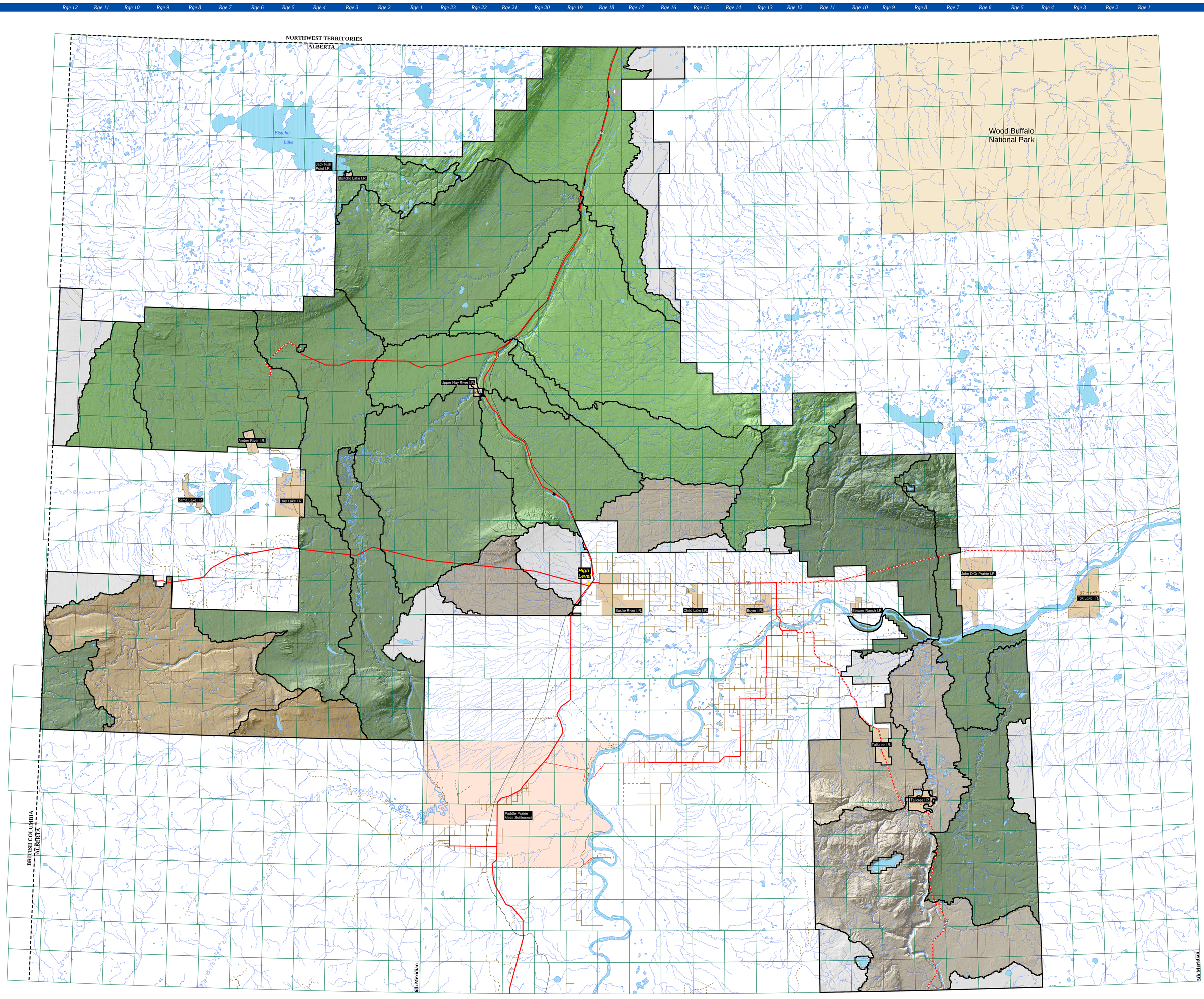
TOLKO INDUSTRIES LTD.

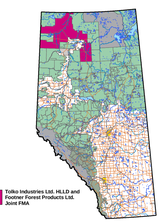
HIGH LEVEL LUMBER DIVISON

CUMULATIVE WATERSHED DISTURBANCE AND HYDROLOGIC RECOVERY ANALYSIS

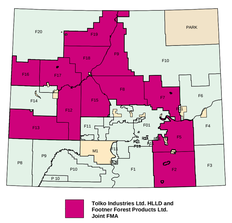
Time:100 Year Projection



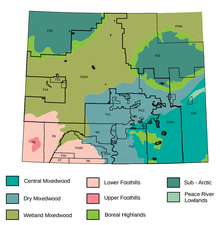
PROVINCIAL INDEX



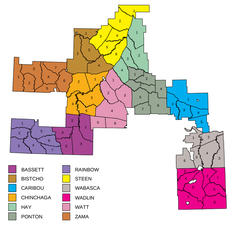
OLD FOREST MANAGEMENT UNITS



NATURAL SUB-REGIONS



OPERATING AREA INDEX



PLANIMETRIC LEGEND

- Divided Primary Highway
- Paved Primary Highway
- Gravel Primary Road
- Paved Secondary Highway
- Gravel Secondary Road
- Improved Road
- Unimproved Road
- Truck Trail
- Railway
- Perennial Stream
- Intermittent Stream
- Provincial Boundary
- Lakes/Rivers
- Indian Reserve
- Metis Settlement
- National Park

ECA

0% 25% 50% 75% 100%

Watersheds not included in analysis

* Watersheds having only small fractions within the FMA were not included in this analysis

N W E S

0 10 20 30 Kilometres

This analysis was derived from the Cumulative Watershed Disturbance and Hydrologic Recovery Simulator (ECA - Alberta).
ECA stands for "equivalent clearcut area" which describes the "effective" area that a recovering historic disturbance currently represents in terms of its ecological effects.
Example: a 100ha stand harvested 20 years ago would use 75% of the water a mature stand would use. Therefore, this 20 year old clearcut would be equal to a 25ha recent clearcut.
Model accuracy depends primarily on accurate hydrologic recovery information of forest stands after disturbance, as well as representative regional streamflow and precipitation data.
Hydrologic recovery of mixedwood stands is not simulated by this model. Minimum harvest age (90 years conifer, 70 years deciduous) was used to represent full hydrological recovery.
Model calculations reflect provincial averages for unmanaged (primarily fire origin) stands.
Deviation of regional forest growth from provincial averages may produce unreliable results for some regions.
This analysis only represents the incremental cumulative effect of harvesting. Watershed boundaries were derived using a digital elevation model (DEM) with a cell size of 25 metres. The accuracy of these boundaries depends on the quality of the DEM and is not intended to be used for accurate measurements.
* The above information was referenced from the ECA - Alberta model.

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