

Domtar, Cornwall History of the Fine Paper Mill and Forestry Programs



History of Cornwall Fine Paper Mill



Mill History (1881-1883)

- Most fine papers were imported into Canada
- Canada's population was 4,325,000
- Canadian Pacific Railroad was established (last spike driven in 1885)
- Cornwall paper mill is envisioned by John Barber
- The mill's story is one of innovation, growth, response to challenges, and eventual decline

Mill History (1881-1883)

- Founded as the Toronto Paper Mfg. Co. to produce ledger and book paper
- Cornwall site had plentiful supplies of water, transportation, labour, and materials
- Construction cost was \$250,000
- First sheet of paper produced in 1883
- 100 employees

Mill History (1881-1883)

- Pulp was made from purchased rags and purchased groundwood spruce pulp
- Originally powered by 5 water wheels
- Lighting was by candle and lantern
- Paper machine No 1 produced **1,200 tons/ year**
- The main gears of the paper machine were made from hard maple

Mill History (1888)

- Supply of rags was uncertain and expensive
- Rumour had it that one NA company bought the rag wrappings of stolen Egyptian mummies
- Groundwood pulp was low quality and expensive

Mill History (1888)

- Canada's first sulphite pulp mill
- Two huge steel, lead-lined digesters from Germany were too big to ship, so they were sealed and floated up the St Lawrence River from Montreal
- Initial annual production of 5,000 tons of low-cost spruce pulp

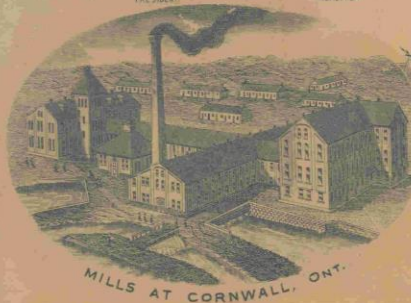


Mill History (1888)

- **Spruce was harvested from local farms**
- **One farmer used seven teams of horses to bring in a 96 foot tree**

J. R. BARBER, GEORGETOWN,
PRESIDENT

EDWARD TROUT,
TREASURER



Cornwall, Ont. Dec. 14 1896

James Rayside Esq.
South Lancaster. Ont.

Dear Sir:—

Confirming our wire of this a.m.
by: "You may go ahead with spruce wood for
us. bidding."

We hereby agree to pay you £. per cord
for 1000 cords (about) of spruce wood sawed
4 ft long, 6" diam at small end and upward
reasonably free from knots and sound,
piled in our yard here during the
summer of 1897.

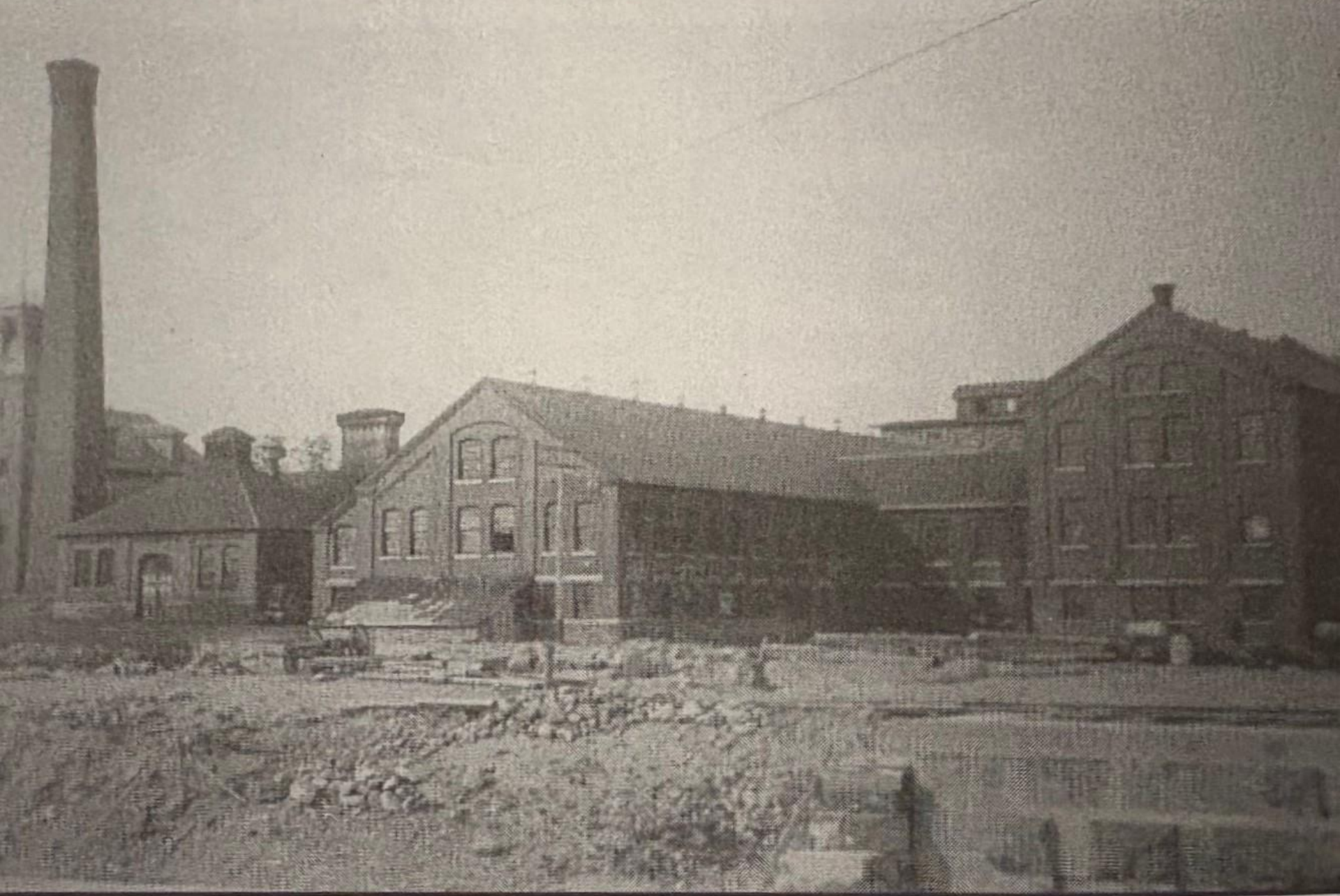
Will measure up in lots of say 100 cords
or more and remit from time to time.

Your reply will oblige.

Yours truly,

James Rayside
Toronto Paper Co.
J. H. Wallace.

James Rayside
South Lancaster



The Paper Mill from the canal, 1893.

Mill History (1889-1919)

- Business demand for paper increased with improved pulp quality and lower costs
- Three paper machines were added in 1889, 1898 and 1917, bringing annual paper production to **20,000 tons**
- Pulp production increased with a 3rd sulphite digester
- 1905: Steam plants were installed
- Employment standard was 10 hours/ day, 6 days per week, \$1.00/ day

Mill History (1889-1919)

- Acquired by Howard Smith Paper Mills Ltd on December 31, 1919
- Company assets were valued at \$495,245
- Howard Smith provided work for numerous Mohawk people from Caughnawaga at his Beauharnois, Quebec mill and was named an honorary Chief

Mill History (1920s)

- Market pulp prices fluctuated wildly due to shortages in WW1
- Installation of a new sulphite mill resulted in self sufficiency in spruce pulp production by 1920
- 1927: first soda pulp mill in Canada using poplar
- Annual wood consumption was 50,000 cords
- 1928: installation of 5th paper machine, old paper machine No 1 was retired

Mill History (1930s)

- Despite economic challenges, the company continued to survive and innovate
- Paper production was **25,000 tons/ year**
- Annual pulp production was 50,000 tons of softwood pulp and 30,000 tons of soda pulp
- 1937: new process developed to produce artificial vanilla extract from the waste sulphite liquor
- 600 employees with an annual payroll of \$720,000

Mill History (1940s)

- 278 men and women employees enlisted in the armed forces, 19 of whom never returned
- Youths, women and older workers actually increased production to **30,400** tons in 1941
- Cornwall mill pioneered the creation of Arborite from lignin in waste soda pulp liquor

Mill History (1950s)

- Recovery boiler introduced to recover chemicals from the pulping processes
- Hardwood kraft pulp mill allowed the use of all hardwood species
- Spruce pulp was produced from the sulphite mill and a new kraft softwood mill

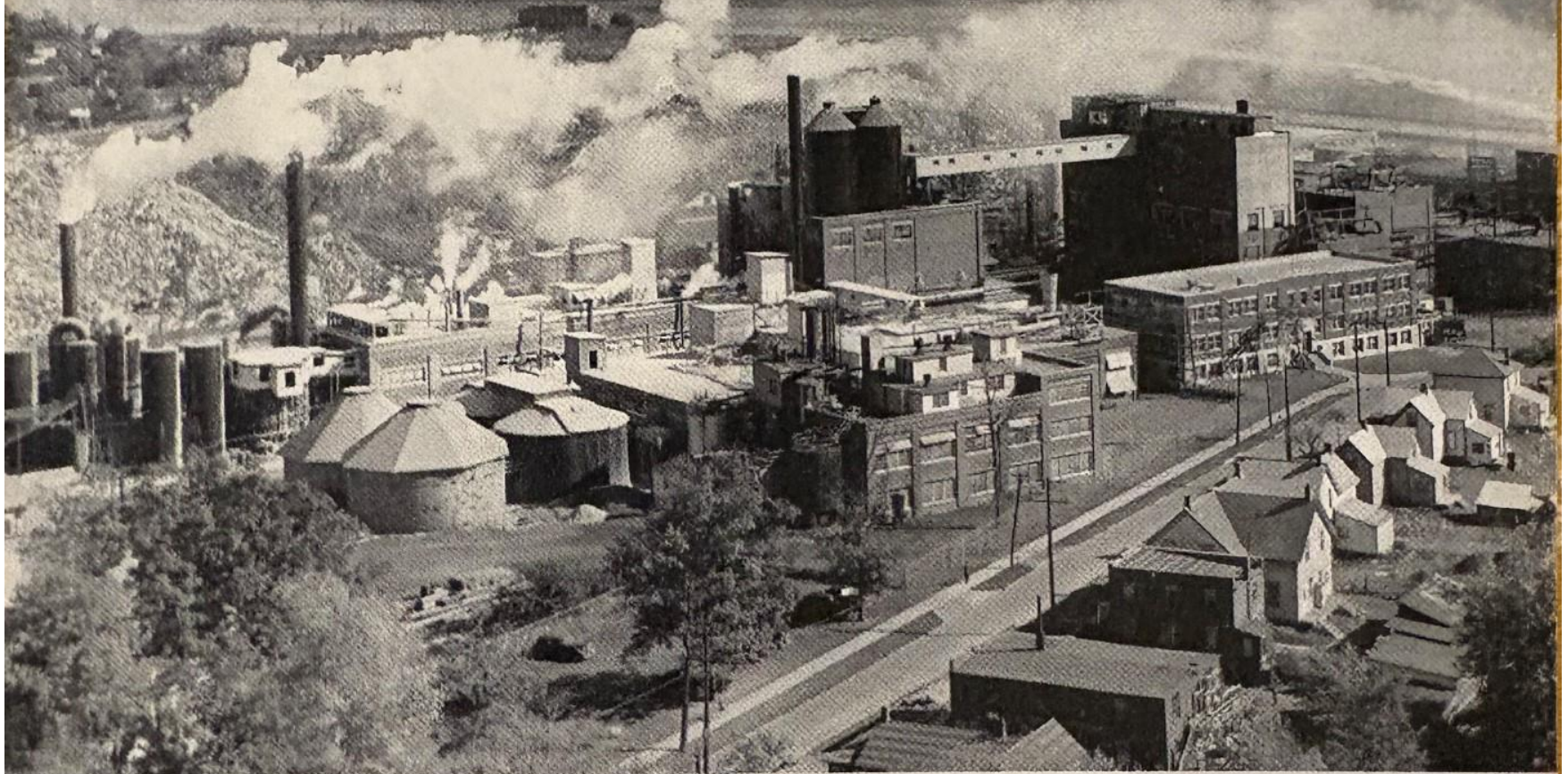
Mill History (1950s)

- New paper machine to replace old No 1
- Mill production increased by 30-35%
- Construction of a small experimental paper machine in the technical department to test new types and grades

Mill History (1950s)

- 1957: Dominion Tar (renamed Domtar in 1965) acquired controlling interest of Howard Smith Paper Mills

In my Mother's Footsteps



Memories of Smithville

Mill History (1960s)

- Installation of two of the largest paper machines in Canada (Nos 6 and 7), capable of making a total of **100,000 tons per year**
- Smithville demolished for mill expansion
- Greatly increased wood demand, requiring a new woodyard north of Second Street
- 1,750 employees

Mill History (1970s to 1990s)

- Integration of computer technology
- Modernization of paper machines 1 and 7
- Substantial investments in environmental technology:
 - Primary and secondary effluent treatment
 - Air emission scrubbers
 - Recycled bleached cardboard plant
 - Registration to ISO 14000

Mill History (2000s)



MULTIPURPOSE / OPAQUE / COVER

Plainfield

Plus from DOMTAR

- Production Capacity **250,000** tons
- Two main products: Coated Bristol, Opaque Offset
- 1100 employees, 200 wood suppliers



Mill History (2000s)

- Part of Domtar/Eddy papers (8 pulp and/or paper mills)
- Wood Products (18 sawmills)
- Norampac Inc. (29 containerboard mills/box plants)
- Forest Resources (11.5 million hectares under management)

Mill History (2000s)

- 2006: Mill closure
 - Aging paper-making technology
 - Competition from lower cost countries
 - Decline in paper demand
 - Physically constrained by city of Cornwall
- In 2025, the largest paper machine in North America (Maine) produces **520,000 tons/ year**

History of Forestry Programs



Wood Supply

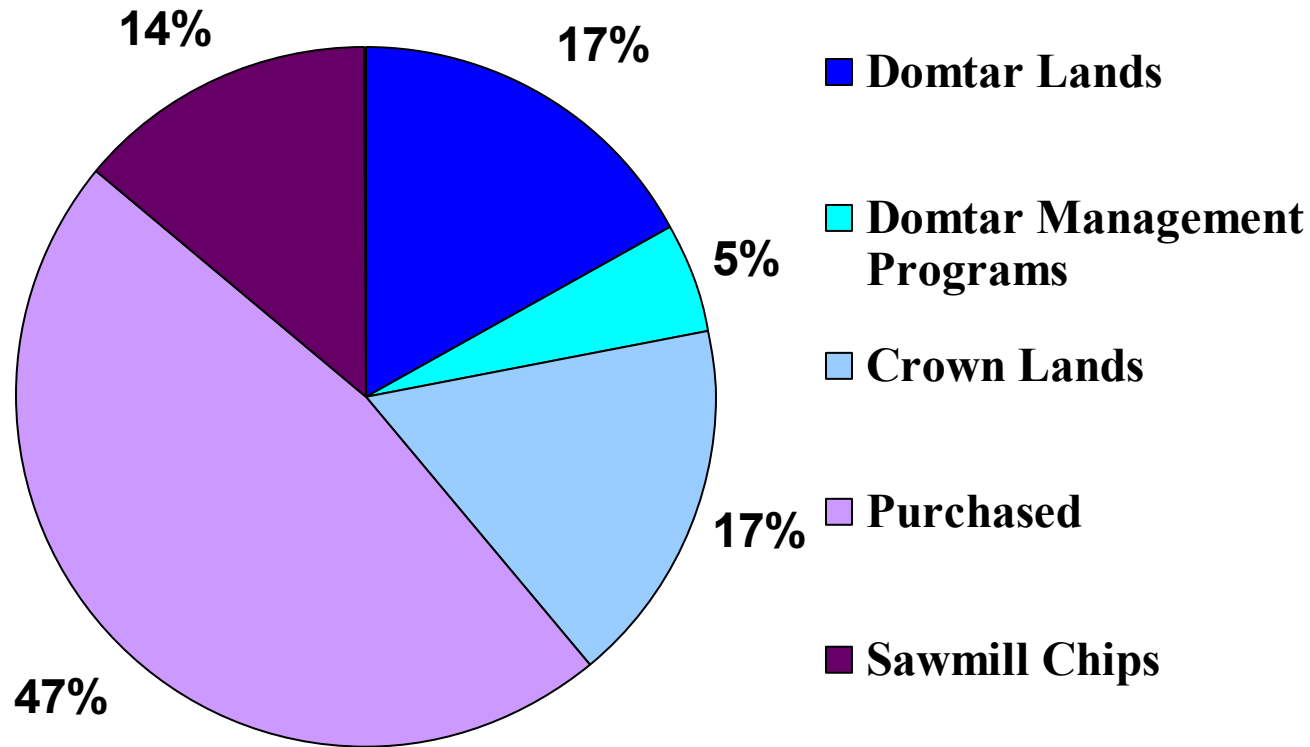
- Annual wood fibre requirements:
 - 440,000 GMT (200,000 cords)
 - or
 - approx. 13,000 truck loads



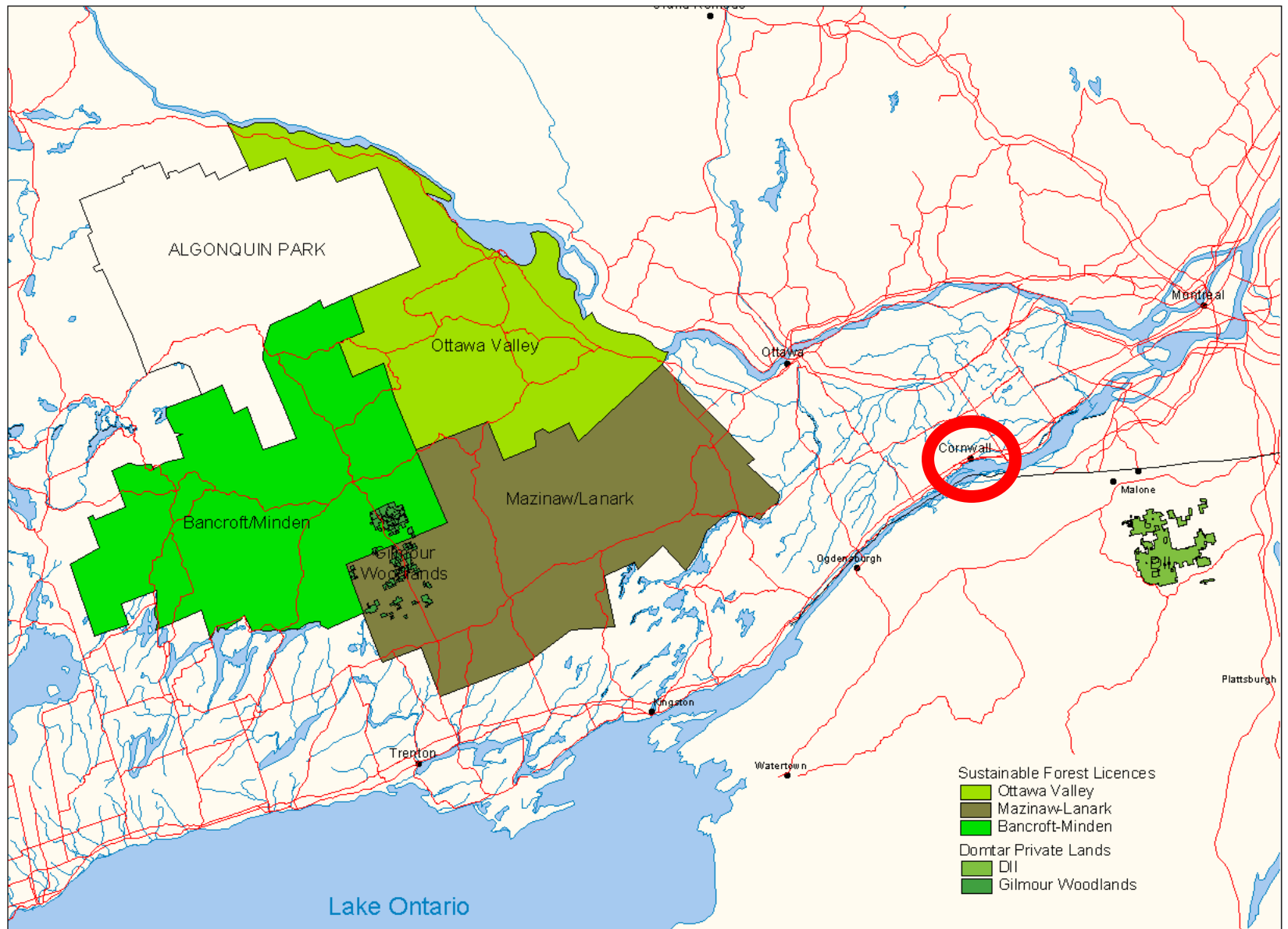
Wood Supply

- Species:
 - Hard and soft maple: 52%
 - Beech: 15%
 - Poplar: 11%
 - Birch: 6%
 - Other hardwoods 16%
- Approx. 50% - 50% USA/ Canada
- Minor amount of purchased spruce pulp

Target Wood Supply



Eastern Ontario Region & Upper State New York Managed Lands





Wood Supply Strategy

Traditional wood purchasing (1880-1980)

Secure wood supply at lowest cost

Wood Supply Strategy

Wood purchasing evolution (1980-2005)

from sustainably managed forests

Secure wood supply ^ at lowest cost

Temagami Wilderness Society's Red Squirrel Road Blockade Wakimika Lake, September 1989



Domtar's Forest Policy





Domtar Forest Resources - Cornwall

810 -2nd St. West, PO Box 40, Cornwall Ontario, Canada, K6H 5S3

is certified by SmartWood as a SmartWood Resource Manager.

Domtar Forest Resources - Cornwall provides SmartWood certified forest management services to a portion of the forest lands under its management. The SmartWood certified forest lands are well-managed sources of wood products, whose forest management practices adhere to strict environmental and socioeconomic standards in accordance with the Principles and Criteria of the Forest Stewardship Council (FSC). Domtar Forest Resources - Cornwall is also certified as a nonexclusive chain-of-custody operation.

SmartWood is a program of the Rainforest Alliance.



FSC Trademark © 1996 Forest Stewardship Council A.C.

**W. Robert Beer, Director, SmartWood
Rainforest Alliance**

65 Millet Street, Richmond, VT 05477

Valid from: October 1, 2002 to September 30, 2007

Certificate Registration Code: SW-FM/COC -210

Domtar Lands:

- Adirondack Forest
- St Lawrence Forest (SDG)

Adirondack Forest

- Purchased in 1959 (Republic Steel)
- 42,260 Hectares
- Within Adirondack Park
- FSC Certified



St Lawrence Forest

- Original purchase 1974
- Portions were MNR-managed Agreement Forest
- 3, 687 Hectares
- MFTIP registered
- Hardwood operations FSC Certified

Crown Land SFLs:

One of The Founding Partners of :

a) Ottawa Valley Forest

b) Mazinaw – Lanark

(FSC certified)

SDG Private Land Programs

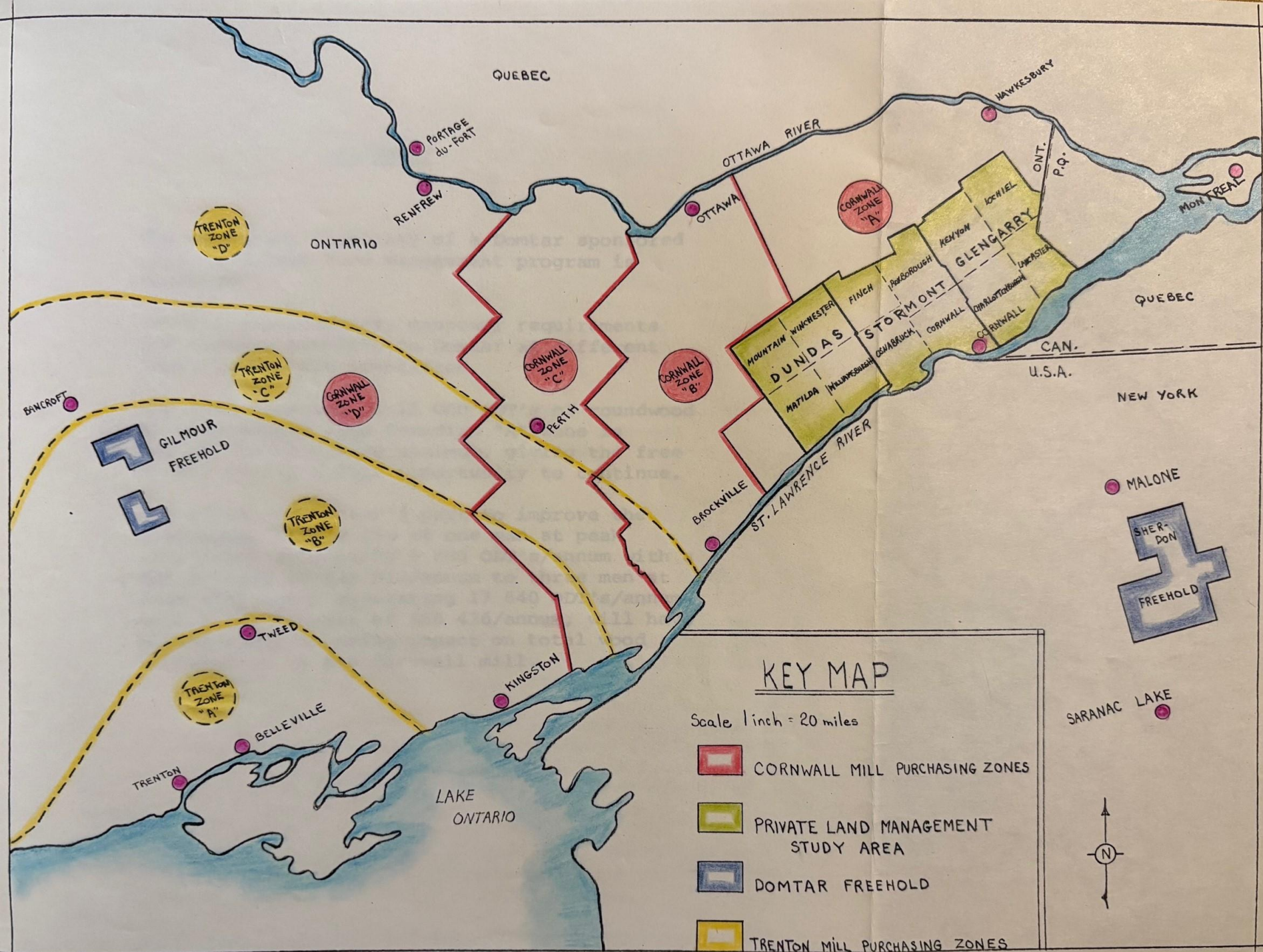
- Started 1980
- 300 Properties
- 4,312 Hectares
- Woodlot management and hybrid poplar

SDG Private Land Programs: Objectives (1980)

- Increase wood supply from lowest cost Zone “A”
- Encourage landowners to harvest
- Redirect wood from the firewood market
- Improve community image by making forest management available to all landowners

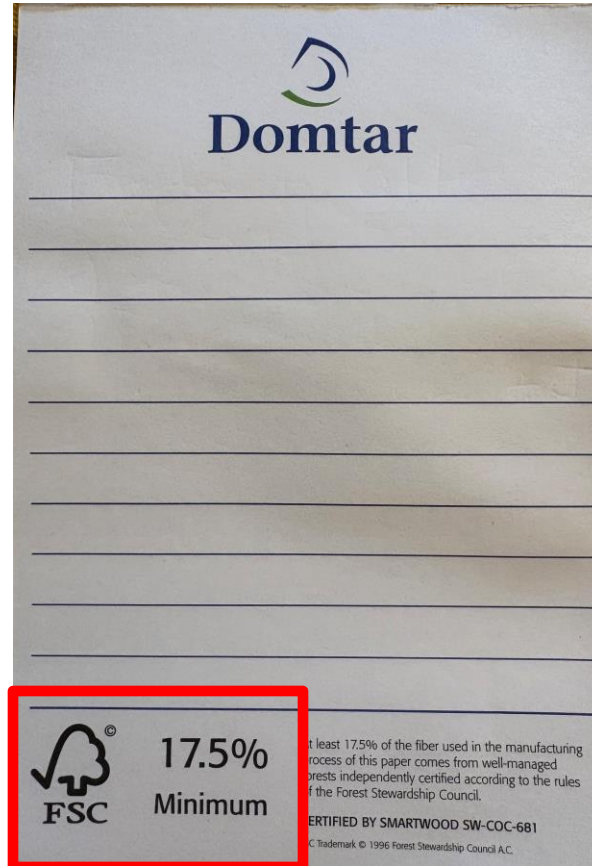
SDG Private Land Programs: Financial Objectives (1980)

- Lowest cost Zone “A” vs
Highest cost USA zone “C”
- **Savings of \$ 20.16 / GMT or**
\$975.00/ Hectare



SDG Private Land Programs: Additional Objectives (2000s)

- Increase the percentage of certified fibre



SDG Private Land Programs: Additional Objectives (2000s)

- Foster the retention of woodlands through income



Woodlot Management

- a) Full service woodlot management
(MFTIP Plan, Prescription, Tree
Marking, Cut Supervision)
- b) 203 properties, 2,882 hectares
- c) FSC certified 2002

Private Lands and Community Forests





Hybrid Poplar Program



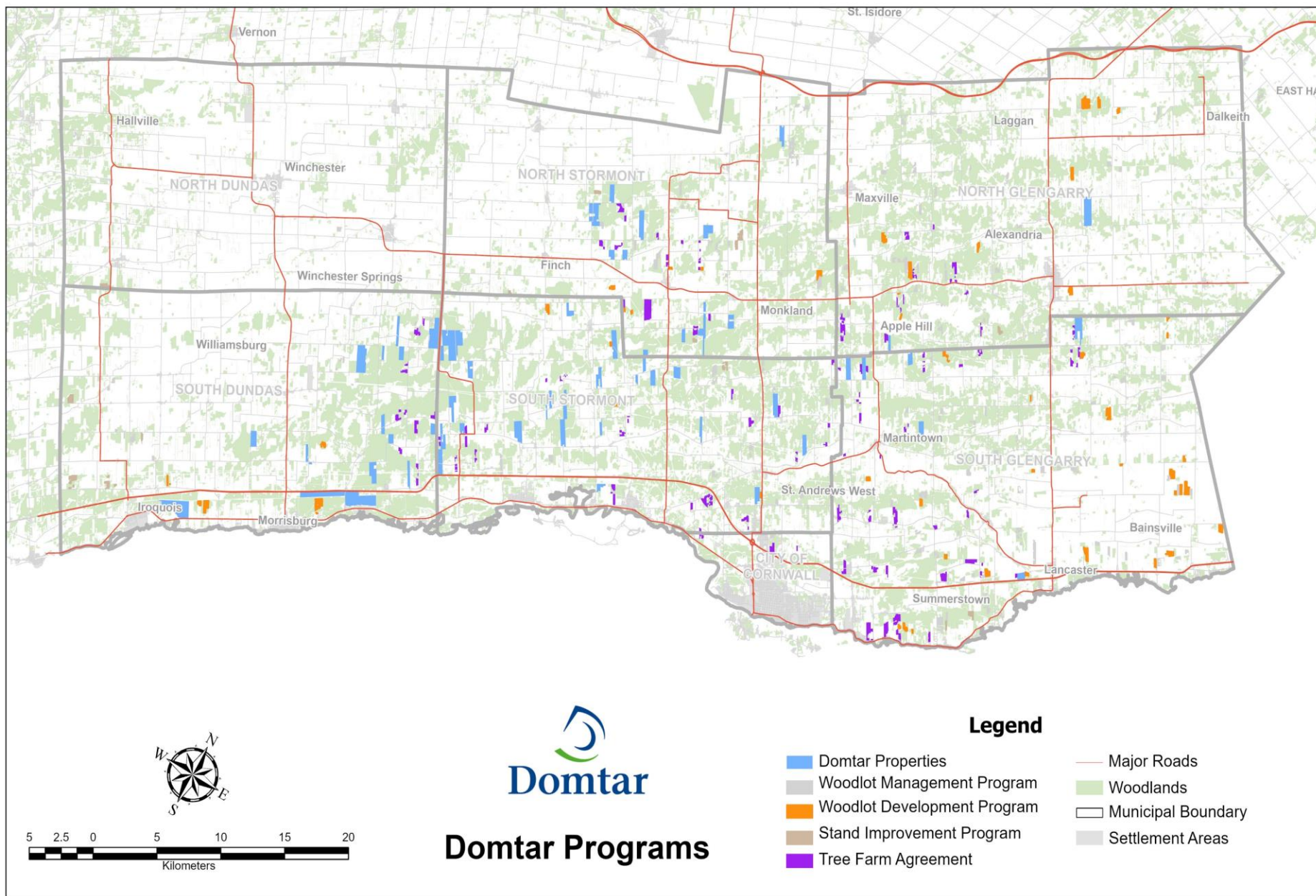
- a) Unique development partnership with MNR
- b) Domtar Lands: 1094 hectares
- c) Tree Farm Agreements - leased private lands:
97 properties, 1430 hectares

Production Objectives

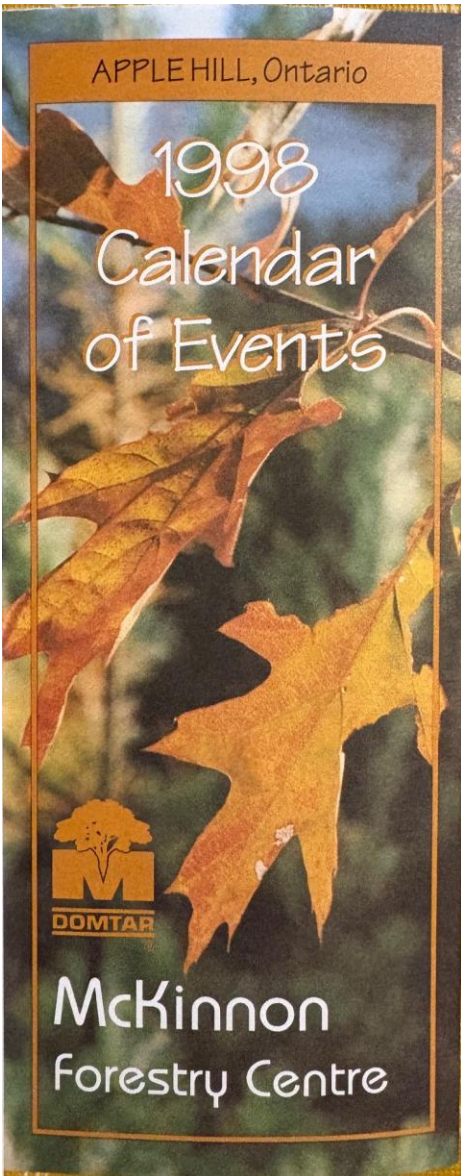
- 180 GMT @ 15 Years (12 GMT/ ha/ year)
- Row Thinning Age 15
- Final Harvest Age 25-30
- Mill volume: 12,000 - 15,000 GMT/year

DN 74





McKinnon Forestry Centre



Eastern Ontario Model Forest

- Established in 1992
- Founding partners
 - Canadian Forest Service
 - Domtar (Cornwall)
 - Mohawk Council of Akwesasne
 - Ontario Ministry of Natural Resources



Forest Legacies: Direct

- Adirondack Forest (**100% conserved**)
 - 8,080 hectares NY State conservation lands (**19%**)
 - 34,180 hectares conservation easements including sustainable forestry and recreation (**81%**)
- St Lawrence Forest (**2024: 77% conserved**)
 - 1,052 hectares SNCA, RRCA, SDG Counties (**29%**)
 - 1,778 hectares forested private land (**48%**)





Forest Legacies: Indirect

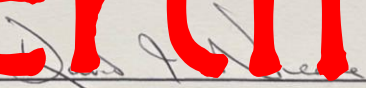
- Domtar Program: Private Land Forests (2024)
 - Woodlots: 2,199 hectares remaining (**76%**)
 - Hybrid Poplar: 771 hectares remaining (**54%**)
- SFLs: significantly reduced volumes of pulpwood on Crown Forests
- SDG Chapter of the Ontario Woodlot Association
- EOMF partnerships and programs

Over 93,000
Ha Certified

EASTERN ONTARIO MODEL FOREST

WE WOULD LIKE TO ACKNOWLEDGE YOUR SUPPORT AND
LEADERSHIP IN ASSISTING THE EASTERN ONTARIO MODEL
FOREST IN ACHIEVING SMARTWOOD FOREST
CERTIFICATION IN ACCORDANCE WITH THE PRINCIPLES
AND GUIDELINES OF THE FOREST STEWARDSHIP COUNCIL

Domtar Inc.


DAVE NEAVE
PRESIDENT, EASTERN ONTARIO FOREST GROUP
JANUARY 2003



Natural Resources
Canada
Canadian Forest
Service



Ministry of Natural
Resources
Ministère des
Richesses
naturelles



EASTERN ONTARIO
MODEL FOREST

Mohawk Council
of Akwesasne

Forest Legacies: Hybrid Poplar



National Audubon Society The Habitat Value of Short-Rotation Poplar Plantations

- “Forest interior birds made substantial use of more mature plantations, especially ones that abutted natural forest.”

Forest Legacies: Hybrid Poplar



Forest Legacies: Hybrid Poplar



Forest Legacies: Hybrid Poplar



Science and Technology Series, Volume 1

New Forests in Eastern Ontario

Hybrid Poplar



Ministry of
Natural
Resources

Hon. Alan W. Pope
Minister
W. T. Foster
Deputy Minister

A GROWER'S GUIDE TO HYBRID POPLAR



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