Facts & Figures
Forest Management In the Prince Albert Timber Supply Area
Spring 2022

Contents

Prince Albert Timber Supply Area

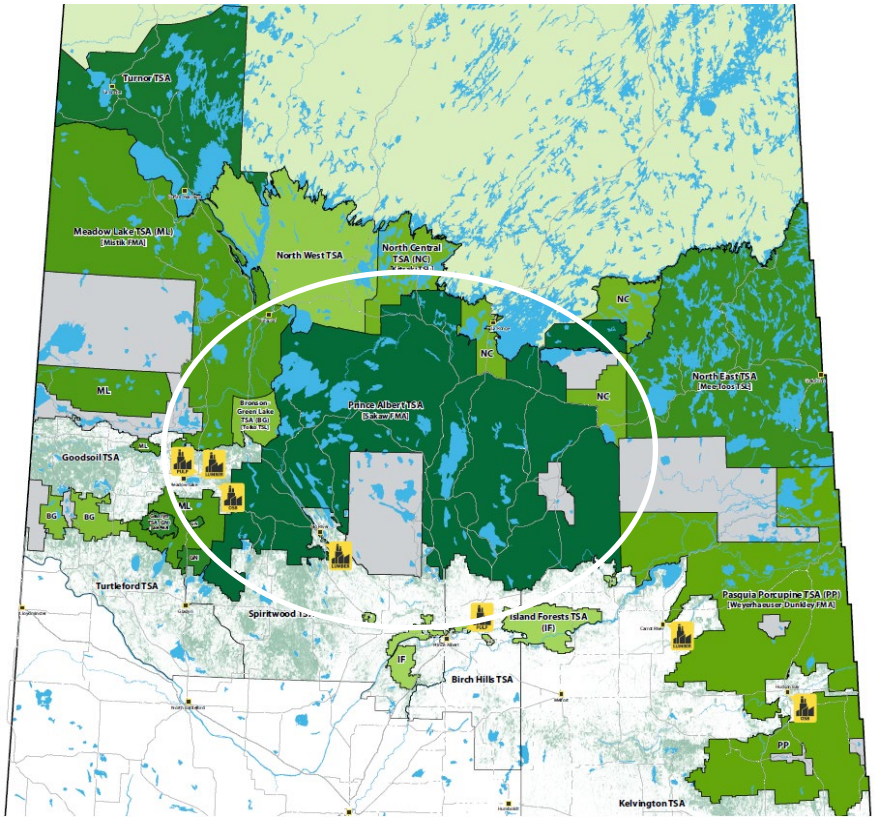
More than half of Saskatchewan is forest.

Timber Supply Areas are areas within Saskatchewan's Commercial and Fringe Forest Zones where licenses to harvest timber for local forest products mills are issued. Forest Management Agreements the province signs with the industry include commitments for wood supplies, as well as significant industry commitments that help ensure the forest's long-term health.

There are lakes, wetlands, rocks, people and communities, reserves, and ecological factors in each Timber Supply Area. Only forty percent (40%) of the Prince Albert Timber Supply Area is available for timber harvesting, after removing areas for:

- leave trees (retention)
- reserves around water
- parks, representative areas
- reserves, private lands, and
- non-forest, inoperable areas.

On that 40% of the landbase that is available for harvesting, there are ecological, economic and social considerations (such as wildlife features and visual impacts) that further restrict when and where harvesting can occur.



Harvesting Takes Years of Planning and Engagement

Before trees can be harvested In Saskatchewan's publicly owned forests, years of planning takes place in consultation with affected stakeholders and communities.

Strategic Forest Management Plan

A long-term Forest Management Plan (FMP) provides direction for managing forests in the Timber Supply Area. It includes calculation of the sustainable wood supply for the next 200 years. It also sets strategies (for forest age, caribou habitat areas, etc.) for maintaining the forest's health and biological diversity - while balancing the use of crown forest lands for economic, social, and cultural benefits. Multiple public reviews take place during the development of this strategic plan.

As part of tracking whether the forest management strategies are being achieved, Sakaw reports annually on 33 "Indicators" (guideposts) that have measurable targets. These reports allow Sakâw, the provincial government and the public to assess how the big picture plan for this forest area is being implemented and whether expected outcomes for the forest are being achieved.

'On-the-Ground' Operating Plans

The big picture outlined in the Forest Management Plan drives the harvesting plans that are outlined each year in Operating Plans.

The time is right for harvesting when the trees are a merchantable size, the season and weather allow access into the area, market demand enables good utilization of the available trees, and the harvesting plan is aligned with the long-term forest management strategies for the area. Only a small proportion of the harvestable landbase will meet all those conditions and be ready to harvest at a given time.

Operating Plans focus in detail on proposed harvesting, roads, and forest renewal activities for the upcoming year, for which approval is being requested. Many more years' worth of harvesting is also shown as future areas, for informational purposes and to initiate early discussion.

Lines of communication with people in this forest area are always open but are especially important in the fall when the next year's plans are being prepared. Residents have an opportunity to share information about their own land uses as well as their knowledge of the land, and this helps foresters prepare plans that work better for everyone.

The areas identified in Operating Plans encompass at least twice the annual volume of wood that can be harvested. This is because extra contingency areas are included, since factors such as

weather, markets, wildfires, contractor and equipment availability, and stakeholder concerns change even the best laid plans.

Despite this additional wood volume being included in the plan, there is no risk of unsustainable harvest. The amount harvested can fluctuate from year to year, but companies are not permitted to exceed the sustainable harvest over any five-year period, and never have.

Why Harvest Here, Now?

The Prince Albert Timber Supply Area is vast, but only 40% of it will be available at some point for timber harvesting (after removing waterbodies, wetlands, areas that off-limits, inoperable or uneconomic, etc.)

The time is right for harvesting when the trees are a merchantable size, the season and weather allow access into the area, market demand enables good utilization of the available trees, and the harvesting plan is aligned with the long-term forest management strategies for the area. Only a small proportion of the 40% will meet all those conditions and be ready to harvest at a certain time.

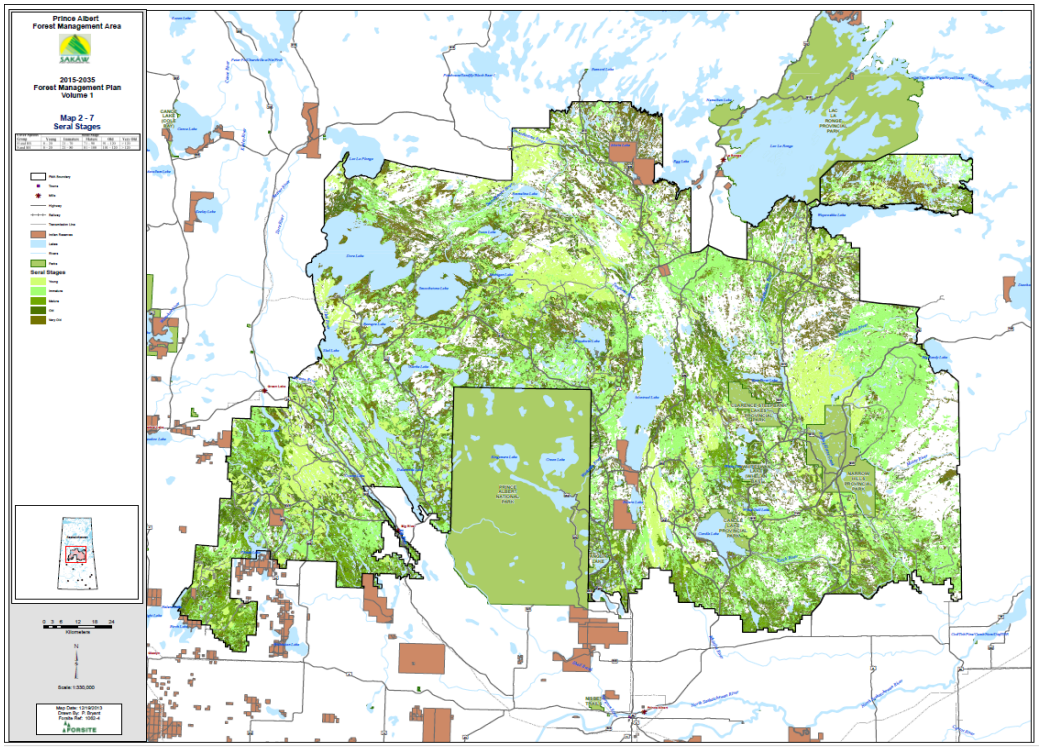
For example, a key management strategy is to distribute the harvest over the entire forest area, by forest types. Targets are set for how much forest can be cut in a planning unit to ensure overcutting does not occur in any geographic area or forest type. To harvest the full allowable cut during a 5-year period, harvesting would have to occur in all planning zones and forest types – otherwise a portion of the allowable cut will go unharvested.

Another key management strategy is the creation of a shifting mosaic of good caribou habitat across most of this landscape. Boreal forest woodland caribou are a threatened species in Canada, and Saskatchewan's SK2 Central caribou range plan for managing caribou habitat largely overlaps with this forest area. No harvesting will occur in areas that are currently high value habitat (Tier 1 areas) for the next 20 years. Harvest is occurring for 10 years in habitat areas with high value for the future (Tier 2 areas), then there will be no harvesting in these Tier 2 areas for the next 20 years. While these areas have not been removed from the timber supply area, they are shifting the locations where harvesting can occur.

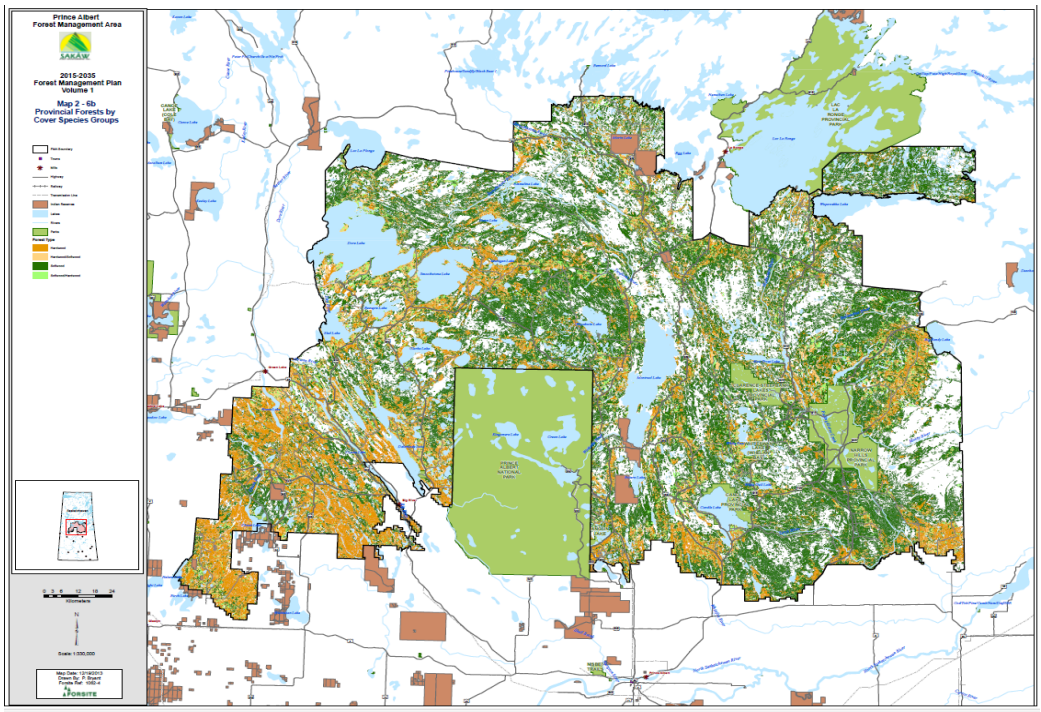
There is a concentration of hardwood trees in the southwest corner of the Prince Albert forest area, so the mills that use hardwood are located there, close to an abundant supply of the raw material they use. Nevertheless, they cannot exceed the sustainable harvest levels that have been established for that area.

The following maps show the age of the forest, the forest types, and caribou habitat management areas in Prince Albert Timber Supply Area.

Forest Ages:
The darker the green, the older the forest is.

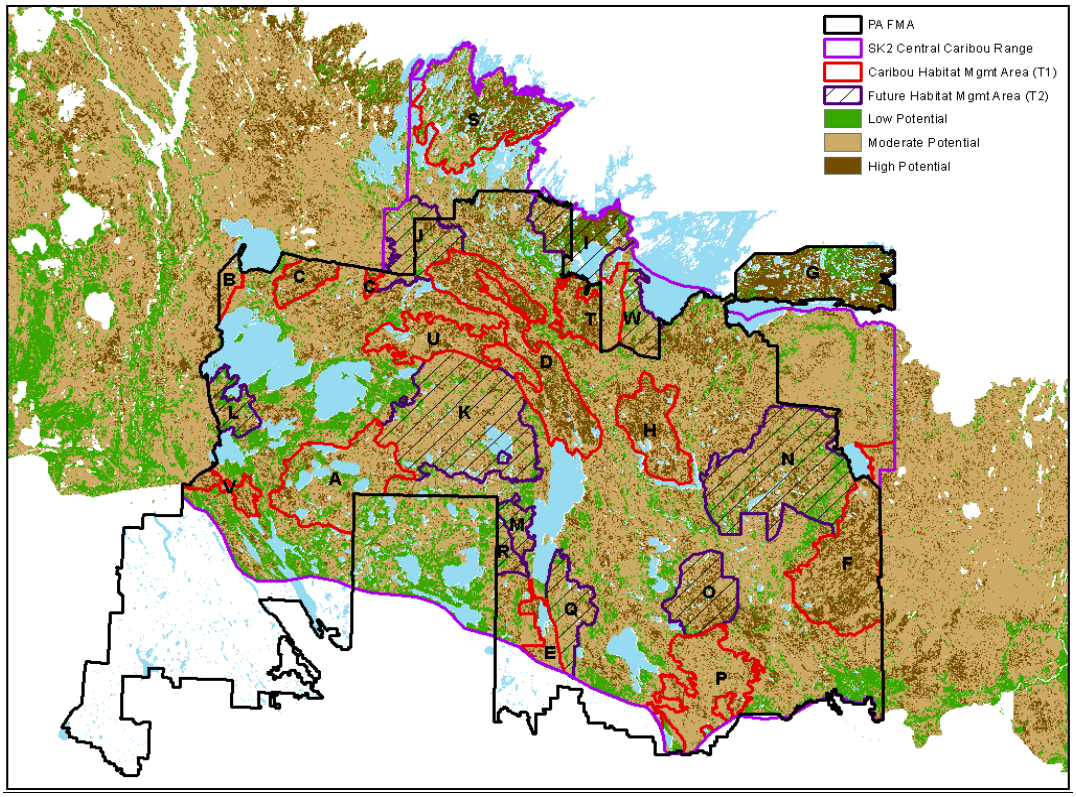


Provincial Forest Types:
Brown forest areas are hardwood dominated (e.g. trembling aspen, balsam poplar).
Green forest areas are softwood dominated (e.g. spruce, pine, fir)



Caribou Habitat Management Areas:

- Tier 1 areas (no harvesting for 20 years) are outlined in red.
- Tier 2 areas (harvest for 10 years, then no harvest for 20 years) are outlined in black.



Do I Have a Say?

Yes. There are other users and values on every hectare in Prince Albert Timber Supply Area, to consider when harvesting wood. The area is covered by both trapping furblocks and outfitter licence areas. There are also permanent and seasonal communities, non-timber forest products, recreational areas and trails, etc. Wildlife, biological diversity and forest health considerations also need to be factored into every harvesting plan.

There is ongoing communication with people throughout the year about forestry plans (roads, harvesting, renewal, reclamation), but the fall is the busiest time because that is when the next Operating Plan, that will start on April 1st of upcoming year, is being developed.

Planners have the challenging task of balancing all interests in forest management and harvesting plans. Hundreds of changes are made each year based on where other land users are and their concerns. Land uses can conflict with each other and our record of finding acceptable solutions is good. Proposed Operating Plans and the feedback received on them are submitted to the Forest Service, as the regulator of the forest industry on Crown forests, for review and a decision.

Tourism and Harvesting

A well-managed forest resource benefits everyone, and harvesting operations make up only one element of the various interests in Saskatchewan's forest resource. Other interests matter, including the desire for a diverse economy that includes tourism, and will always be considered. Harvesting and recreational / tourism can coexist, and the Forest Management Planning Standard requires integration of forest management activities with non-timber values and uses resources that include recreation areas, visual resources, tourism, lakes, streams and wetlands.

For multiple reasons, including because areas are within the commercial forest and contribute to harvest sustainability targets, areas ready for harvest cannot be walked away from completely. However, there is flexibility in harvesting plans that planners can use to support tourism and recreational experiences.

This can include protecting scenic views, minimizing traffic and noise disturbance during peak seasons, and agreements that can minimize conflicts. Concerns and ideas for conserving sites with tourism or visual values should be discussed with planners so the plans being developed work better for everyone.

Accommodation Made for Trapping

Accommodation made for trapping will vary according to what works for each situation; there is no "cookie cutter" approach that works or is appropriate to use everywhere. Accommodation measures may include:

- Mapping key features and values. Planners prefer to meet with trappers in the field to GPS the location of traplines and cabins so they can be mapped and avoided.
- Retaining high value trapping habitat within harvesting events. This could be done by modifying the harvest area design or the placement of patches of green trees being retained. (On average across the landscape, 9% of merchantable wood (retention) is left unharvested in harvest areas for ecological reasons).
- Maintaining traditional trapping trails. Experience has shown that if a strip of retention is left around a trapping trail, it will often blow down on the trail, requiring a lot of clean-up work to make the trail usable again. The thinking now is that it is better to protect a trail by harvesting up to it and avoiding crossing it, and where possible leave the trail next to the forest edge.
- Providing wildlife travel corridors and cover and protecting key habitat features.
    - Patches of retention can be left in a way that connects to riparian buffers or other forested areas to provide a wildlife travel corridor and provides cover from hunting. Retention patches are also important refugia for sensitive plant and wildlife species, and potential future nesting sites for raptors, owls and other species.

- Site-specific wildlife features such as known nests, sensitive plant and wildlife sites, mineral licks and active bear dens can be protected by restricting the timing of harvest and/or buffering them with no-harvest areas.

- Protecting important gathering areas for botanicals (such as berries, mushrooms etc.) by placing a no -harvest area over them
- Protecting riparian areas that also provide important wildlife shelter.

Forest Renewal

100% of harvested areas are regrown by law. The reforestation of harvested areas is a fundamental prerequisite to having the rights to harvest timber. We are legally and professionally required to ensure that managed forests successfully regenerate.

The reforestation occurs through a combination of natural seeding in, root suckering, and hand-planting.

To maintain biodiversity, we ensure that in the overall balance, the new forest replaces the species that were harvested.

The regrowth of trees on harvested sites is surveyed and reported on at 4-7 years after harvest, and again at 11- 14 years.

Forest Harvesting is Not Deforestation

Natural disturbances such as forest fires and infestations are part of a forest's natural cycle -- the forests grow back, as they have for thousands of years.

Similarly, a forest that has been harvested is still a forest. The trees start to grow back immediately, and the forest life cycle starts again through a combination of root suckering, natural seeding, assisted natural seeding and planting.

Deforestation is a permanent loss of forests because of a change in land use such as agriculture, communities or permanent roads.

Most forestry roads are temporary and decommissioned or reclaimed after use. There are also some long-term roads that will eventually be reclaimed. Road construction is minimized as much as possible to reduce the impact on wildlife habitat and reduce costs and exposure to environmental liabilities.

A target of <300 ha/yr converted to other land uses (e.g. long-term roads, landing strips/pads, gravel pits, etc.) has been set for the Prince Albert Timber Supply Area. The actual level of area converted has been much lower. (5.5 ha in 2018-29, and 25.5 ha in 2019-20)

Natural Forest Pattern Harvesting

Natural disturbances play the primary role in shaping the structure and function of boreal forest landscapes and ecosystems. Fire is the most significant natural disturbance responsible for forest renewal in the boreal forest. Animals and plants have become adapted to, and dependent on, the pattern and structure that has been created by these disturbances. Forest ecological science suggests that the more closely natural stand and landscape levels of pattern and structure can be approximated by human activities, the more likely that the full range of biodiversity, native species and ecological processes will be maintained.

Forest harvesting is planned at the landscape, event, and harvest block levels. The sizes, shapes and structures of wildfires are approximated in the design of harvest events and blocks, and harvests are planned to reduce the fragmentation of forests in the landscape.

Harvesting strategies involve:

- Creating variation between and within harvest events. Events should purposely range in size, with most falling in the 100 – 1,500 ha range.
- Clustering the harvest in an area and carry it out relatively quickly so the area can be reclaimed and the time over which it is impacted is minimized.
- Leaving an average of 9% of the trees uncut, within or between the harvest areas.
- In fragmented forests, finishing the harvesting so the area can be reclaimed.
- In contiguous (large, unfragmented) forests, planning large events that create future forests that are even-aged and have more interior forest.
- Using ecological boundaries to delineate harvest events rather than administrative ones.

There are many differences between natural disturbances and harvesting. Harvesting is a mechanical process that cannot replace the thermo-chemical processes of wildfire, and there are no natural equivalents of roads. To reduce these differences, harvest event planning aims to aggregate harvest blocks and events, minimize road networks to the greatest extent possible, and ensure timely road reclamation and forest renewal.

Forest Health and Life Cycle

Trees have a lifespan and die naturally as a result of fire, disease, insects, wind, or old age before the age of 90 to 120 year, depending on the species, in much of Saskatchewan's forests. The harvesting of mature trees (suitable for making forest products) and natural disturbances create young healthy and vigorous forests that are more resistant to climate change and start the forest life cycle again.

When fires are put out to protect human values (communities, cabins) there is a higher risk of uncontrollable fires with fuel build-up, and more risk of insect and disease outbreaks as trees reach the end of their life span. Harvesting creates healthy new forests in a more controllable fashion than natural disturbances.

Biodiversity

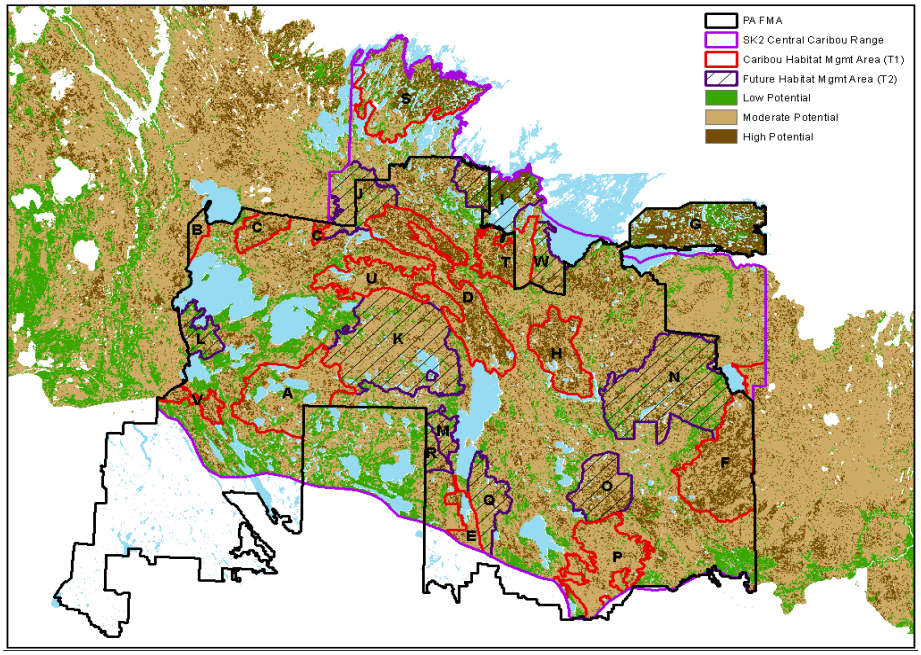
The landbase is managed to provide a variety of forest ages, stand types, and spatial patterns representative of natural conditions. This is expected to address the habitat needs of most plant and animal species on the FMA area, creating a landbase suitable for a variety of creatures.

Where this is not expected to provide sufficient habitat for a specific species, a detailed habitat strategy is developed for species may be endangered or at risk of becoming extinct. This has been the case for boreal woodland caribou.

Woodland Caribou

Boreal woodland caribou are a species whose survival is deemed to be at risk in Canada. The federal and provincial governments have developed recovery strategies. The goal is to have self-sustaining woodland caribou populations by managing their habitat, while allowing for continued economic activity in northern Saskatchewan.

This has translated into a strategy for the Prince Albert Timber Supply Area aimed at providing a shifting mosaic of suitable habitat across the landbase over time, because the forest is never static. Activity is limited in specific areas deemed to be high value habitat now (shown in red below) while other areas (hatched and outlined in dark purple) are being developed as replacement habitat areas for the future.



With the exception of areas where harvesting was underway before the caribou habitat areas were finalized, no harvesting will occur in areas that are currently high value habitat (Tier 1 areas) for 20 years. Harvest is occurring for 10 years in habitat areas with high value for the future (Tier 2 areas), then there will be no harvesting in these areas for the next 20 years. While

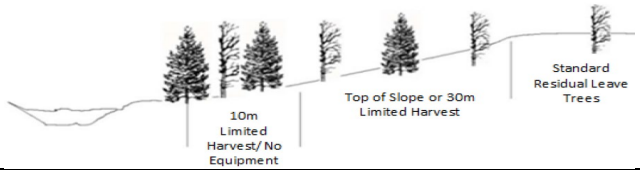
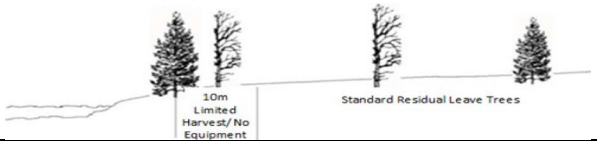
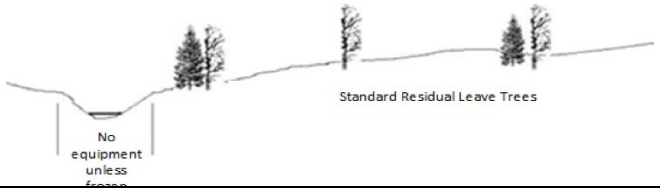
these habitat areas have not been removed from the timber supply area, they are shifting the locations where harvesting can occur.

Water and Riparian Areas

Water quality is maintained by:

- Complying with conditions for constructing, maintaining and reclaiming watercourse crossings on roads (in Aquatic Habitat Protection Permits), and
- Following standards for riparian management systems, designed to maintain the integrity of the transition areas between land and water, when harvesting or renewing forests
- Where appropriate, projects are also submitted to the Department of Fisheries and Oceans Canada for federal review.

Requirements for Riparian Management Systems

Waterbody Type	Riparian Prescription
Category 1 Large Lakes, Rivers, Streams (>5 ha)	10m No Harvest / No Equipment Zone adjacent to the waterbody, plus a 30m Limited Harvest Zone (can be partially harvested) 
Category 2 High Slope Areas (>15%) on Small Lakes or Ponds (<5 ha)	10m No Equipment Zone adjacent to the waterbody, plus a Limited Harvest Zone to the top of the slope (max 40m) 
Category 3 Low Slope Areas (<15%) on Small Lakes or Ponds (<5 ha)	10m Limited Harvest / No Equipment Zone 
Category 4 Intermittent Streams	Leave single or clumped trees adjacent to the stream. Ensure equipment does not alter the stream bed, bank or boundary. Crossings can occur on frozen ground or with appropriate crossing structures. 
Category 5 Ephemeral Streams and Wetlands	Do not obstruct or impede surface or subsurface water flow No equipment in the waterbody/stream/wetland unless approved to operate in frozen conditions.

Aesthetics and visual objectives, as a result of feedback from stakeholders, often result in larger buffers being used. A 90 m Visually Sensitive Area buffer is most commonly used in those cases.

Climate Change

Forest management considers long-term outcomes, including the impacts of a changing climate. Predicted changes in the climate of the Prince Albert Timber Supply Area are warmer winters, more precipitation in winter and spring, longer drier summers, and an increase in storm intensity and frequency.

On the positive side, this change in climate could result in more favourable growing conditions where sites are not moisture limited, there is a longer growing season, and growth is enhanced from the presence of more carbon dioxide. On the negative side, it could mean increases in fire frequency and intensity, drought stress for vegetation on moisture limited sites, insect and disease outbreaks, wind and mechanical damage (ice and snow), and flooding.

These expected changes could negatively impact the ability to achieve some of the long-term forest management objectives and strategies for forests in the Prince Albert Timber Supply Area. For example, an increase in fire on the landscape could impact the ability to achieve targets for forest ages and wood volumes. And a change in tree growth rates (due to drought on moisture limited sites) could change the harvest rates that are considered sustainable.

Those risks are being addressed by monitoring the tree growth rates used in calculating sustainable rates of harvest. Progress against targets set under forest management strategies is also monitored and reported on annually for review by a joint industry and government management team and a Public Advisory Group.

The young vigorous forests created through forest management or natural disturbances are more resistant to climate change. Harvested trees are made into wood products that store carbon that would otherwise be released as the tree dies and decomposes.

Carbon in Forests

Wildfire is a natural disturbance that replenishes the forest and releases large amounts of carbon quickly. Harvesting is a managed disturbance after which the forest is also replenished. Both harvesting and fire result in young forests that capture more carbon than old forests where growth has slowed or even reversed through decadence.

Forest greenhouse gas emissions (carbon release) come from physical disturbances which include harvesting, land use changes, natural disturbances (wildfire, insects and disease) and forest decline.

Depending on the accounting system used, Saskatchewan's forests could be considered a small source of carbon, or a small carbon sink.[1]

Saskatchewan's Forest Sector [2]

The forest industry makes an important contribution to Saskatchewan's economy, and the forest industry is northern Saskatchewan's largest industry. Forestry jobs are important in the north where opportunities are limited. Harvested wood goes to mills that make forest products people use daily.

In Saskatchewan there are:

- 7 large forest products mills that produce lumber, pulp and oriented strand board
- 210+ small businesses that produce a variety of forest products (posts, flooring, custom sawn lumber)
- 230+ supply chain businesses ranging from timber harvesting, road construction, trucking and reforestation.

In normal market conditions the forest industry in SK generates about $1 billion in forest products sales annually and supports nearly 8,000 direct and indirect jobs.

The typical return on investment (profit) from a forest products mill is 5-10%. This means that 90-95% of the sales revenue stays in the province - spent on wages, taxes, royalties and capital investments.

Dues Paid on Timber Harvested

Almost all of Saskatchewan's forests are on publicly owned land. The royalties paid on wood harvested from these Crown forests are made up of two parts: base dues plus incremental market-based dues. When markets are good, the rate paid is higher. For example, in early 2021 when the markets were high, dues on trees larger than 15 cm (6 inches) used for lumber were $\$56.93/m^3$.

Dues are not paid on residues produced as a by-product of wood processing operations. This includes the tops of trees with a stem less than 10 cm (4 inches) in diameter, that at this time are too small to be used by the current mills.

Harvest Levels

The amount of wood that can be harvested is like the interest on a bank account. If you want to

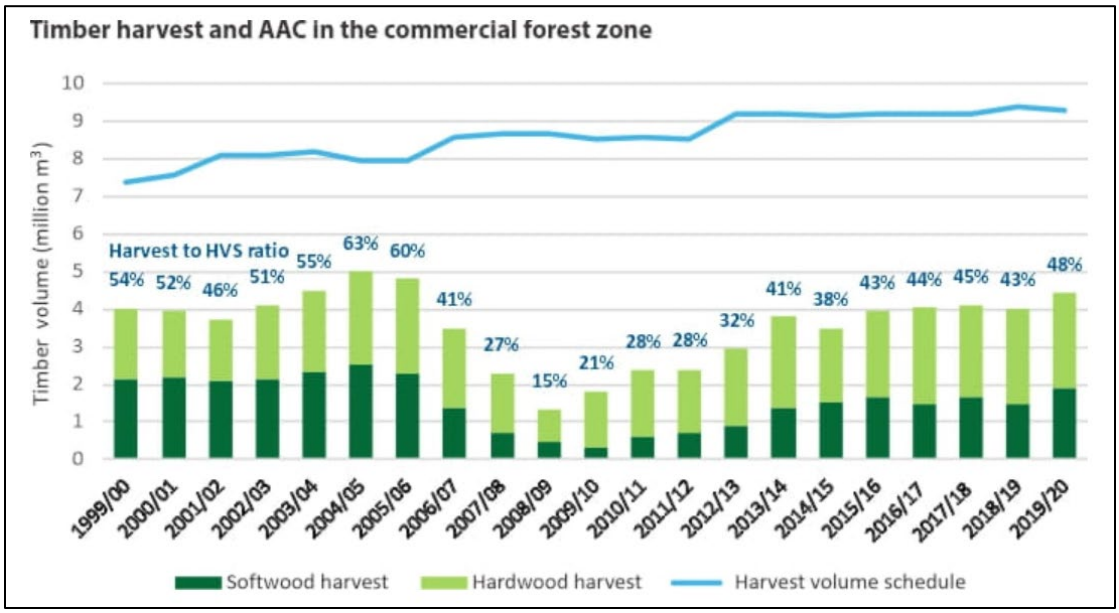
[1] State of the Environment 2019: A Focus on Forests. 2019. Accessed Oct 22, 2021 at https://www.saskatchewan.ca/residents/environment-public-health-and-safety/state-of-the-environment/state-of-the-environment-2019-a-focus-on-forests/productivity-and-resilience/managed-forests-and-greenhouse-gas-emissions

[2] Forestry in Saskatchewan. Accessed October 22, 2021 at https://www.saskatchewan.ca/business/investment-and-economic-development/key-economic-sectors/forestry-development

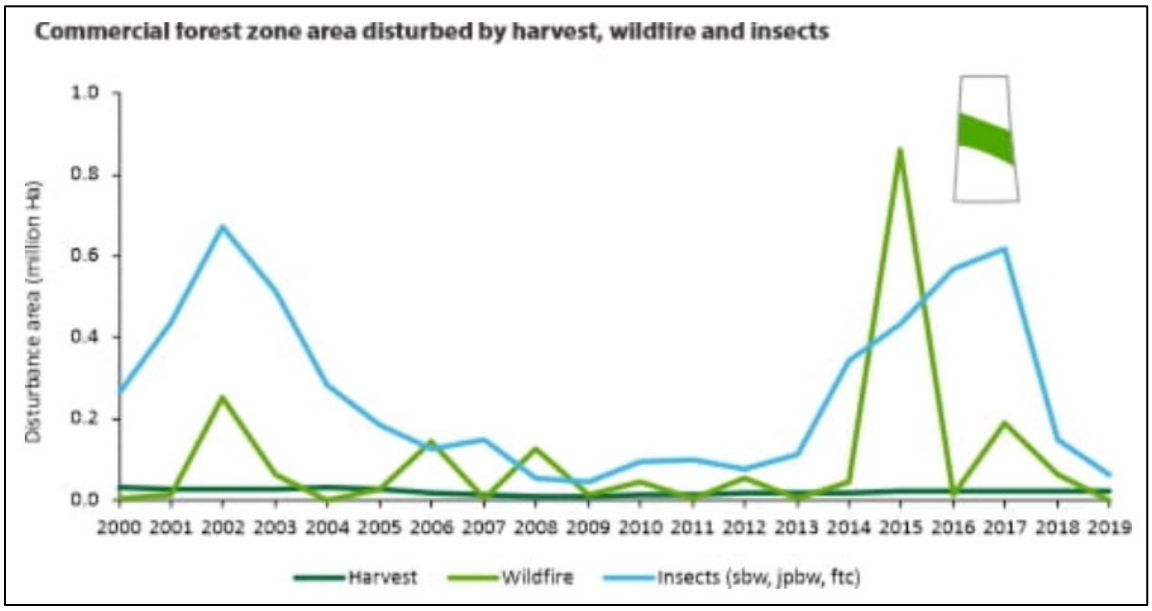
keep what's in the account for future generations, you live off the interest that the account is generating. In forestry, you calculate the growth of the trees, and don't harvest more than what is growing.

Timber harvesting occurs on less than 1% of the harvestable forest landbase in the province annually.[1]

Historically provincial harvest levels have been well below the allowable harvest levels (the blue line in the graph below).[1]



Significantly more area in the commercial forest zone is disturbed by wildfire and insects than is harvested, as shown below.[1]



There is variation in the amount harvested from year to year since market demand for forest products and many other factors cause fluctuations in harvest levels each year. Harvest levels can be above or below the approved volume in any given year, but the average volume harvested over a 5-year period cannot exceed approved levels.

In the Prince Albert Timber Supply Area, harvest levels have been as follows:

Operating Year	Softwood Sawlogs			Softwood Pulpwood			Hardwood			Total	
	HVS Target[1]	Harvested Volumes[2]	% HVS Used	HVS Target[1]	Harvested Volumes[2]	% HVS Used	HVS Target[1]	Harvested Volumes[2]	% HVS Used	Harvested Volumes[2]	% HVS Used
2018-19	1,265,000	785,353	62%	600,000	19,193	3%	1,126,000	754,294	67%	1,558,841	52%
2019-20	1,265,000	1,150,703	91%	600,000	17,818	3%	1,126,000	799,022	71%	1,967,542	66%

Sakaw Askiy

Sakaw Askiy holds the licence to harvest timber (a Forest Management Agreement) in the Prince Albert Timber Supply Area on behalf of 6 shareholders who harvest wood from the area. The agreement includes an obligation to manage the forest resources in the area sustainably, which includes the reforestation of all harvested areas.

The shareholders are Agency Chiefs (AC) Forestry, Carrier Forest Products, Dunkley Lumber (Edgewood), Montreal Lake Business Ventures, NorSask Forest Products, and Tolko Meadow Lake OSB Division.

The wood goes to forest products mills located in Meadow Lake, Big River, Glaslyn, Carrot River and various smaller mills run by independent operators.

Indigenous Involvement

One of the objectives when forming Sakaw was to create economic opportunities for Indigenous people in the forest industry. Forty four percent (44%) of the wood available in the Prince Albert Timber Supply Area has been allocated to Indigenous interests.

Three Sakaw shareholders are Indigenous owned companies - AC Forestry, Montreal Lake Business Ventures, and NorSask. The NorSask sawmill in Meadow Lake is the largest 100% First Nations owned and operated sawmill in Canada. There are also Aboriginal owned companies involved in harvesting operations as contractors.

Regulation of the Forest Industry

There are many hoops to jump through in meeting provincial and federal standards for all the aspects of forestry that must be considered – from protecting fish, water, soil and species at risk, to working with other land users when developing forestry plans.

Government field inspectors monitor forestry activities for compliance with all legislation and standards. Companies also have their forest practices audited by independent third-party auditors against voluntary, internationally recognized certification standards for sustainable forest management. These standards set high thresholds that forest companies must meet – above and beyond tough regulatory requirements.

Saskatchewan's forest industry currently has 62% of the commercial forest certified to one or more forest certification standards, which represents over 95% of the timber harvested annually.[2]

Utilization

The configuration of mills in the province became out of balance with the forest, after the 2007 crash of the forest industry left no user for the tops of conifer trees used for lumber, and a surplus of hardwood (deciduous) trees.

Given this imbalance companies only enter stands where most trees are the type used by their mills for making forest products. However, there may still be incidental trees, small tops, and dry wood (from standing dead trees) leftover from those stands. In that case the incidental trees that meet green tree retention guidelines are left uncut whenever possible. And where the slash left on site is enough that it could impede regeneration, it is piled and burned during the winter.

A Renewable Resource

Wood is our only renewable, natural resource. It is beautiful, compostable and reusable. We're seeing glimpses of new wood technology like transparent wood, biofuel-powered vehicles, personal protective equipment like masks, packaging to help reduce the use of single-use plastics, and more tall buildings made from cross-laminated timber.[3]

In addition, forests contribute to global greenhouse gas reductions and carbon sequestration.**Error! Bookmark not defined.**

To Contact Us:

Sakaw Askiy Management Inc.
219 - 1061 Central Ave., Prince Albert, SK S6V 4V4
Website: www.sakaw.ca | Phone: (306) 953-2021 | Email: gm@sakaw.ca

[3] Opinion: Forestry does not equal deforestation–and other lessons I've learned as a Canadian forest. Lacey Rose. June 15, 2021. Published in Canadian Forest Industry Magazine