



STAYING THE COURSE TOWARDS SUSTAINABLE WATER MANAGEMENT



2015 Update to Alberta's Forest Sector Water
Conservation, Efficiency and Productivity Plan

Content

- The AFPA and WFL
- The Forest Sector CEP Plan
 - ▣ Vision
 - ▣ Goals
- 2015 Plan Update
 - ▣ Water Use
 - ▣ Water Productivity
 - ▣ Technology and Partnerships
- Future Challenges and Opportunities



Alberta Forest Products Association

- ❑ Established in 1942
- ❑ a non-profit organization
- ❑ funded by members companies that manufacture wood products in Alberta including lumber, panelboard, pulp and paper, and secondary manufactured wood products.
- ❑ For more info, visit the website at <http://www.albertaforestproducts.ca/>



Water for Life

- Alberta's provincial water strategy
- First released in 2003; renewed in 2008
- Identifies Conservation as a Key Direction to achieve 3 goals:
 - ▣ Safe, secure drinking water
 - ▣ Healthy aquatic ecosystems
 - ▣ Reliable quality supplies for a sustainable economy
- *Albertans will be leaders in conservation by using water efficiently and effectively.*

Forest Sector Water CEP Plan

- Alberta's 7 pulp and paper mills = only licensed water users in the province's Forest sector
- In 2011, AFPA, working with these 7 mills, produced a Water CEP plan with data from 2000 - 2009
- The plan follows Alberta Water Council guidelines
- Updates on plan progress:
 - 2011 (2010 – 2011 inclusive)
 - 2015 (2012 – 2014 inclusive)



Forest Sector Water CEP Plan

□ Plan Vision:

- *Alberta's pulp and paper mills are world leaders in water-use reduction technologies and process operations, have further reduced their water consumption and improved their efficiency and productivity. As stewards of Alberta's water resources, they are actively working with partnerships to ensure aquatic ecosystems are healthy.*



Forest Sector Water CEP Plan

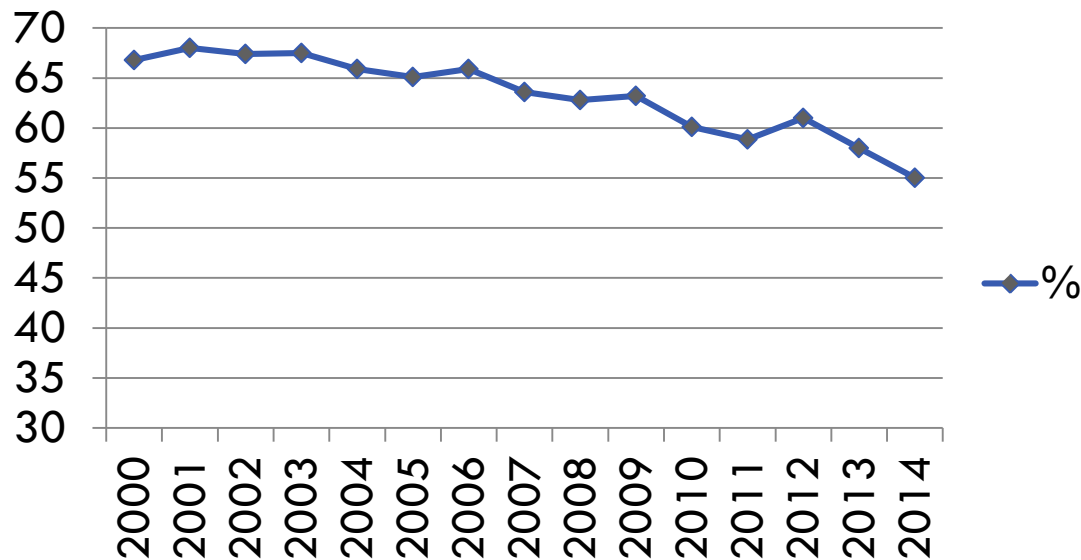
□ Plan Goals:

- To keep water withdrawals and returns from Alberta's seven pulp and paper mills at current (2009) or improved levels;
- To utilize research and technology to improve productivity by a further 5% over the next decade; and
- To continue to work individually and with partnerships to improve water quality and to ensure aquatic ecosystems are healthy.

2015 Plan Update

□ Water Use

- Water withdrawals have declined to a little more than half of licensed volumes



2015 Plan Update

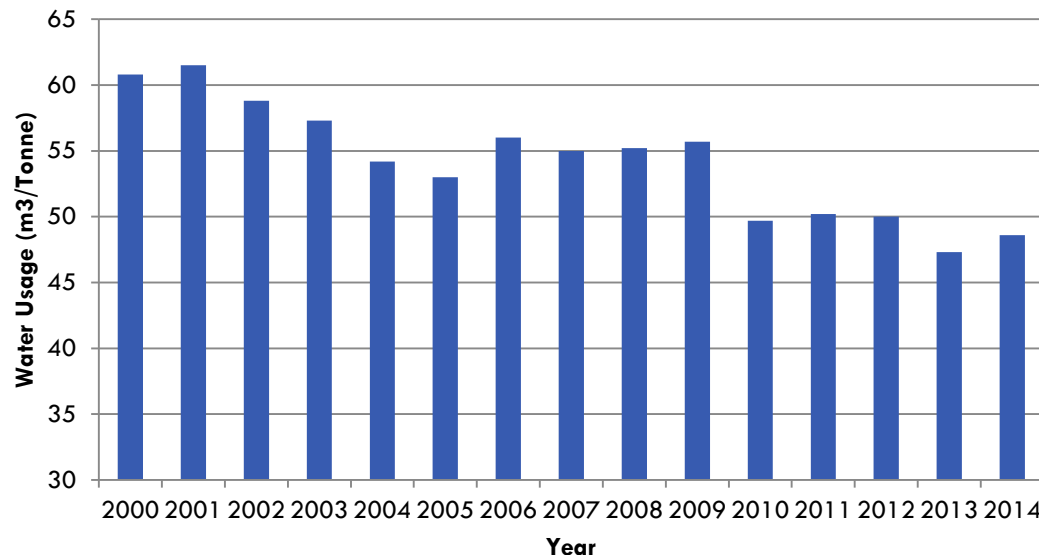
□ Water Return Flows

- Most (93%) of the water withdrawn gets treated and returned to the river contributing to instream flows and other downstream needs;
- This number (93%) has been steady since 2009
- The 7% actually consumed in production gets released as steam or remains in the final product.

2015 Plan Update

□ Water Productivity

- Measured as m³ of water/ tonne of dry product
- Significant improvement made since 2009 (13%)



2015 Plan Update

□ Technology

■ Significant investments in technology have led to these improvements

- E.g. A new evaporator plant and cooling tower at Weyerhaeuser have led to a 15% reduction in water use.
- E.g. A dispersed aeration system at Alberta Newsprint Company removes contaminants from wastewater streams from the paper machine, allowing reuse of these streams in the process, thereby decreasing water usage.
- E.g. A treated final effluent recovery/re-use project at Alberta Newsprint Company took up about 20% of effluent back into the mill's water supply intake in 2014.
- E.g. ANC is currently evaluating new biomass dewatering technology that uses up to 1000 litres per minute less water than the current dewatering system. This project is currently on the 2016 capital project list.

2015 Plan Update

□ Partnerships

- AFPA members continue to meet regulatory monitoring requirements
- In addition, voluntarily support research partnerships such as Foothills Research Institute, EMEND project
- Continue to support water partnerships including the AWC and provincial WPACs
- Opportunities to use treated effluent rather than fresh water for oil field injection.



Future Challenges and Opportunities

□ Challenges:

- Given the improvements already made, it may be a challenge to make further technological gains specific to water.
- Other challenges:
- Green Power projects offer significant cost savings as well as Climate Change mitigation.
 - 2 bio-methanization plants currently being commissioned.

Future Challenges and Opportunities

□ Opportunities:

- New initiatives like *Chain of Command* certification and the *Canadian Boreal Forest Agreement* provide opportunities to showcase Alberta Forest sector's commitment to sustainability
- Continuing to work with WPACs to ensure watershed health



Acknowledgements

- Alberta Newsprint Company
- Hinton Pulp (A division of West Fraser Mills Ltd.)
- Millar Western Forest Products Ltd
- Slave Lake Pulp (A wholly owned subsidiary of West Fraser Mills Ltd.)
- Weyerhaeuser Company Limited
- Alberta Pacific Forest Industries Inc.
- Daishowa-Marubeni International Ltd.



Forest Sector Water CEP Plan

□ Questions?

