

## LEARNING ABOUT THE BC FOREST SECTOR

The *Healthy Forests-Healthy Communities: A conversation on BC forests* (HFHC) initiative identified community capacity building as an issue. Regardless of the present and current efforts of Government, industry, forest professionals, academic institutions, etc., communities remain concerned over both the lack of community knowledge and the future of BC forests.

A considerable amount of basic forest information for layperson consumption is available through short videos. Unfortunately, not all aspects of forests, forest management, land use, etc. are available in this mode but the gaps can be partially filled through information on various websites. This combined source of educational material can be useful in introducing people to the various components of forestry that will assist in building capacity within communities. Those not familiar with the sector will find it difficult and time consuming to search through the websites to get the information they need to be informed about the subject. Compiling a database of videos and key web site links that can be accessed by the public would be more attractive in getting them interested and informed regarding BC forests and the wood products coming from this asset.

The intent of the database is to provide an introduction to the BC Forest Sector. **It consists generally of videos from sources that are either independent of present materials supported by most professionals.** It should be recognized that in some instances the videos do not reflect all the changes that have occurred since their production. However, they are current for the most part. Additional update information can be found through the website links for those wanting more specific information. It has been organized in two major sections, one regarding information on forestry and the other regarding the wood products produced in BC as shown in the following table of contents.

The database will continually be updated as more and improved communications materials become available and visitors identify other topics that will improve their knowledge of BCs forests and wood products.

## **TABLE OF CONTENTS**

### **FORESTRY SECTOR**

#### **FOREST MANAGEMENT INFRASTRUCTURE**

- 1) Legislation, regulation and policies
- 2) Crown forest tenures
- 3) Forestry support sector
  - a) Government organizations
  - b) Professional associations
  - c) Forest industry associations
  - d) BC forest industry contractor associations
  - e) Forest research and teaching organizations
  - f) Forestry technical schools

#### **FOREST MANAGEMENT**

- 1) Types of forestry in BC
- 2) Forest planning tools
- 3) Forest management practices
- 4) Forest management monitoring and assessments

### **WOOD PRODUCTS SECTOR**

#### **BC WOOD PRODUCTS INFRASTRUCTURE**

- 1) History of BC wood products
- 2) Wood products sector support infrastructure
  - a) Wood products associations
  - b) Wood products research and teaching organizations

#### **BC WOOD PRODUCTS**

- 1) Primary manufactured wood products
- 2) Secondary manufactured wood products
- 3) Wood residue products

## FORESTRY SECTOR

The forestry sector operates primarily on Crown land. The Ministry of Forests, Lands and Natural Resource Operations identifies the forests and working forests summary in the following graphic.

### FOREST MANAGEMENT INFRASTRUCTURE

The forest sector originated in the form of promoting a forest industry and production of primary wood products (lumber, wood panels, pulp and paper). This has changed over the decades whereby other components of the forest sector have emerged. The infrastructure that guides forestry in BC remains with a primary products focus but now includes more components associated with other products (e.g., secondary wood manufacturing, residue wood products). The infrastructure that supports the management of BC forests includes: a comprehensive set of legislation, regulations and policies, a series of Crown land tenures and a support sector.

#### 1) Legislation, regulations and policies

A number of Acts need to be met while practicing forest management on Crown lands in BC. The following are only a few but those that dominate decision-making.

##### a) Forest Act & regulations

- i) Act (Website link) [http://www.bclaws.ca/Recon/document/ID/freeside/96157\\_00](http://www.bclaws.ca/Recon/document/ID/freeside/96157_00)
- ii) Regulations (Website link) <https://www.for.gov.bc.ca/tasb/legsregs/forest/faregs/>

##### b) Range Act & regulation

- i) Act (Website link) [http://www.bclaws.ca/civix/document/id/complete/statreg/04071\\_01](http://www.bclaws.ca/civix/document/id/complete/statreg/04071_01)
- ii) Regulation (Website link)  
[http://www.bclaws.ca/Recon/document/ID/freeside/10\\_116\\_2005](http://www.bclaws.ca/Recon/document/ID/freeside/10_116_2005)

##### c) Forest and Range Practices Act & regulations

- i) Act (Website link) [http://www.bclaws.ca/Recon/document/ID/freeside/00\\_96159\\_01](http://www.bclaws.ca/Recon/document/ID/freeside/00_96159_01)
- ii) Regulations (Website link) <https://www.for.gov.bc.ca/tasb/legsregs/frpa/frparegs/>

##### d) Wildfire Act

- i) Act (Website link) [http://www.bclaws.ca/civix/document/id/complete/statreg/04031\\_01](http://www.bclaws.ca/civix/document/id/complete/statreg/04031_01)
- ii) Regulations (Website link)  
[http://www.bclaws.ca/Recon/document/ID/freeside/11\\_38\\_2005](http://www.bclaws.ca/Recon/document/ID/freeside/11_38_2005)

##### e) Wildlife Act & regulations

- i) Act (Website link) [http://www.bclaws.ca/civix/document/id/complete/statreg/96488\\_01](http://www.bclaws.ca/civix/document/id/complete/statreg/96488_01)
- ii) Regulations (Website link) [http://www.bclaws.ca/Recon/document/ID/freeside/26\\_340\\_82](http://www.bclaws.ca/Recon/document/ID/freeside/26_340_82)

- f) Foresters Act & regulations
  - i) (Website link) [http://www.bclaws.ca/Recon/document/ID/freeside/00\\_03019\\_01](http://www.bclaws.ca/Recon/document/ID/freeside/00_03019_01)
- g) Private Managed Forest Land Act (Website link)  
[http://www.bclaws.ca/EPLibraries/bclaws\\_new/document/ID/freeside/00\\_03080\\_01#section1](http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/00_03080_01#section1)
- f) Forest policies  
Numerous forest policies are associated with the Acts and Regulations. The following are a few related to forest management.
  - i) Forest Sector Strategy (1.55' video)  
[https://www.youtube.com/watch?feature=player\\_embedded&v=WWuRYgF75Ds](https://www.youtube.com/watch?feature=player_embedded&v=WWuRYgF75Ds)  
(Website link) <https://www.for.gov.bc.ca/mof/forestsectorstrategy/>
  - ii) Public participation
    - (1) Public participation requirements and commitments - Canada (3.45' video) <http://www.nrcan.gc.ca/forests/video/13593>
    - (2) Public involvement (Website link) <https://www.for.gov.bc.ca/code/public.htm>
    - (3) Community engagement framework (Website link)  
<http://www.for.gov.bc.ca/ftp/hex/external!/publish/web/efs/Community-Engagement-Framework.pdf>
  - iii) Protection of fish, wildlife, soils, water and biodiversity
    - (1) Policy re unduly reducing supply of timber (Website link)  
[http://www.bclaws.ca/Recon/document/ID/freeside/14\\_2004#section4.1](http://www.bclaws.ca/Recon/document/ID/freeside/14_2004#section4.1)

## 2) Crown forest tenures

BC has 14 different forest tenures. The following cover the majority of the forest area and Allowable Annual Cut (AAC)

- a) Forest tenures overview (Reference document) – *Timber tenures in British Columbia*, Ministry of Forests, Lands and Natural Resource Operations, June 2012  
<https://www.for.gov.bc.ca/ftp/hth/external!/publish/web/timber-tenures/timber-tenures-2006.pdf>
  - i) Description of forest tenures (Website link) <https://www.for.gov.bc.ca/hth/timber-tenures/index.htm>
  - ii) Description of tenures (Website link) <http://opentextbc.ca/geography/chapter/7-5-forest-tree-tenures/>
  - iii) Timber Supply Areas and Tree Farm Licenses – BC map (Website link)  
<https://www.for.gov.bc.ca/hth/timber-tenures/provincial-map.htm>

- b) Tree Farm Licenses (TFL) – area-based tenures
  - i) Description of TFL (Website link)  
[http://www.bclaws.ca/civix/document/LOC/complete/statreg/--%20F%20--/Forest%20Act%20%5BRSBC%201996%5D%20c.%20157/00 Act/96157\\_03.xml](http://www.bclaws.ca/civix/document/LOC/complete/statreg/--%20F%20--/Forest%20Act%20%5BRSBC%201996%5D%20c.%20157/00 Act/96157_03.xml)
- c) Forest Licenses – volume-based tenures
  - i) Replaceable Forest Licenses (Website link)  
[http://www.bclaws.ca/Recon/document/ID/freeside/96157\\_03#part3\\_division2](http://www.bclaws.ca/Recon/document/ID/freeside/96157_03#part3_division2)
  - ii) Non-replaceable Forest Licenses (Reference document)  
<https://www.for.gov.bc.ca/hfd/library/documents/bib95806.pdf>
- d) Community Forest Agreements
  - i) Description of Community Forest Agreement  
(Website link) <https://www.for.gov.bc.ca/hth/timber-tenures/community/index.htm>
- e) Woodlot Licenses
  - i) Description of Woodlot License (Website link) <https://www.for.gov.bc.ca/hth/timber-tenures/woodlots/index.htm>
- f) First Nations Woodlands Licenses
  - i) Description of First Nations Woodlands Licenses (Website link)  
<https://www.for.gov.bc.ca/hth/timber-tenures/agreements/fnwl/fnwl-index.htm>
- g) Other forest related licenses
  - i) Description of timber tenures (Website link) <https://www.for.gov.bc.ca/hth/timber-tenures/index.htm>
  - ii) Adventure tourism tenures (Website link)  
<http://www2.gov.bc.ca/gov/content/employment-business/natural-resource-use/land-use/crown-land/crown-land-uses/recreation-tourism/adventure-tourism-commercial-recreation>
  - iii) Agriculture tenures – grazing and extensive agriculture (Website link)  
<http://www2.gov.bc.ca/gov/content/employment-business/natural-resource-use/land-use/crown-land/crown-land-uses/agriculture>

### 3) Forestry support sector

The forestry support sector encompasses Government organizations, forest industry suppliers and contractors as well as professional associations, research organizations and research and technical training institutions.

#### a) Government organizations

- i) BC Ministry of Forests, Lands and Natural Resources Operations
  - (1) Service Plan (Website link) <http://www.gov.bc.ca/for/>
  - (2) MFLNRO organization charts (HFHC Website link) [MFLNRO Admin Structure](#)
- ii) BC Ministry of Environment – Service Plan (Website link) <http://www.gov.bc.ca/env/>
- iii) Forest Practices Board (3.02' video)  
[https://www.youtube.com/watch?feature=player\\_detailpage&v=brltlIFOOuw](https://www.youtube.com/watch?feature=player_detailpage&v=brltlIFOOuw)
- iv) Canadian Forestry Service (Website link) <http://www.nrcan.gc.ca/forests>
  - (1) CFS organization (Website link) <http://www.nrcan.gc.ca/forests/about/13501>

#### b) Professional Associations

- i) Association of BC Forest Professionals – advocate and registration group (2.30' video)  
[https://www.youtube.com/watch?v=bEcZJe9WUH4&index=3&list=UUd\\_ovY7UfYcpHVEAodbDVgQ](https://www.youtube.com/watch?v=bEcZJe9WUH4&index=3&list=UUd_ovY7UfYcpHVEAodbDVgQ)
- ii) Association of Professional Biology – advocate group (Website link)  
<https://professionalbiology.com/about/our-role>
- iii) College of Applied Biology – registration group (3.41' video) <https://vimeo.com/130363551>
- iv) BC Institute of Agrologists (Website link) [http://www.bcia.com/what\\_is\\_bcia.php](http://www.bcia.com/what_is_bcia.php)
- v) Canadian Institute of Forestry (3.45' video)  
[https://www.youtube.com/watch?list=UUpodDIBEv1MoK\\_4o8oKvxA&v=drLA8KJt4IE&feature=player\\_embedded](https://www.youtube.com/watch?list=UUpodDIBEv1MoK_4o8oKvxA&v=drLA8KJt4IE&feature=player_embedded)

#### c) Forest industry associations

- i) Forest industry associations of Canada directory (Website link) <http://www.canadian-forests.com/industry-associations.html>
- ii) Coast Forest Products Association description (Website link)  
<http://www.coastforest.org/who-we-are/about-us/>
- iii) Council of Forest Industries description (Website link) <http://www.cofi.org/about-us/what-we-do/>
- iv) Interior Lumber Manufacturers Association description (Website link)  
<http://www.irma.com/about/purpose-2/>
- v) Private Forest Landowners Association
  - (1) Description (Website link) <http://www.pfla.bc.ca/about-pfla/>

- (2) Description (2.37' video)  
[https://www.youtube.com/watch?feature=player\\_embedded&v=2t14wYxCd0Q&list=UU\\_Ri0ba5Ad17KqODfmOFVRVg](https://www.youtube.com/watch?feature=player_embedded&v=2t14wYxCd0Q&list=UU_Ri0ba5Ad17KqODfmOFVRVg)
- vi) BC Community Forests Association description (Website link) <http://bccfa.ca/>
- vii) Federation of BC Woodlot Associations description (Website link) <http://woodlot.bc.ca/>
- viii) Forest Products Association of Canada description (Website link)  
<http://www.fpac.ca/index.php/en/page/about-us>
- ix) First Nations Forestry Council of BC description (Website link)  
<http://www.fnforestrycouncil.ca/>
- x) National Aboriginal Forestry Association description (Website link)  
<http://www.nafaforestry.org/>
- d) BC forest industry contractor associations
- i) Truck Loggers Association description
- (1) (4.04' video) <https://www.youtube.com/watch?v=kHuur4Mz0rM>
- (2) (Website link) <http://www.tla.ca/about-us>
- ii) Interior Loggers Association description (Website link) <http://www.interiorlogging.org/>
- iii) Forest Nursery Association of BC description (Website link)  
<http://www.fnabc.com/index.html>
- iv) Western Silviculture Contractors Association description (Website link)  
<http://wsca.ca/about/>
- v) Consulting Foresters of BC description (Website link) <http://cfbc.bc.ca/who-we-are/>
- e) Forest related associations
- i) Outdoor Recreation Council description (Website link) [http://orc.bc.ca/about\\_mission.htm](http://orc.bc.ca/about_mission.htm)
- ii) Wilderness Tourism Association description (Website link) <http://www.wilderness-tourism.bc.ca/about.html>
- iii) BC Cattlemen's Association description (Website link)  
<http://www.cattlemen.bc.ca/about.htm>
- f) Forest research organizations
- i) Universities
- (1) University of BC (Website link) <http://www.forestry.ubc.ca/research/>
- (2) University of Northern BC (Website link) <http://www.unbc.ca/forestry>
- (3) Thompson Rivers University (Website link)  
<http://www.tru.ca/science/programs/nrs/programoverview.html>
- (4) Vancouver Island University (Website link) <https://www2.viu.ca/forestry/>
- ii) Government
- (1) Canadian Forestry Service (Website link) <http://www.nrcan.gc.ca/forests/research-centres/pfc/13489>

- iii) Industry
  - (1) Forest Products Innovations (Website link) <https://fpinnovations.ca/about-us/organization/Pages/default.aspx>
  
- f) Forestry technical schools
  - i) BC Institute of Technology (Website link) <http://www.bcit.ca/study/programs/7470dipma#overview>
  - ii) College of New Caledonia (Website link) <http://www.cnc.bc.ca/programs-courses/NRET.htm>
  - iii) Selkirk College (Website link) <http://selkirk.ca/program/forest-technology>
  - iv) Nicola Valley Institute of Technology (Website link) <http://www.nvit.ca/programs/environmentalresourcestechnology.htm>

## FOREST MANAGEMENT

Forest management is “a [branch](#) of [forestry](#) concerned with the overall administrative, economic, legal and social aspects and with the essentially scientific and technical aspects, especially [silviculture](#), [protection](#), and forest regulation. This includes management for [aesthetics](#), [fish](#), [recreation](#), urban values, [water](#), [wilderness](#), [wildlife](#), [wood products](#), [forest genetic resources](#) and other [forest resource values](#). Management can be based on conservation, economics, or a mixture of the two. Techniques include [timber](#) extraction, [planting](#) and [replanting](#) of various [species](#), cutting roads and pathways through forests, and preventing [fire](#).” Source: [https://en.wikipedia.org/wiki/Forest\\_management](https://en.wikipedia.org/wiki/Forest_management).

Forest management in BC is practiced through a range of types and utilizing a variety of planning tools and management practices. In addition, there are monitoring and assessment tools intended to determine the progress of management relative to goals and objectives and communicate lessons learned for continuous improvement.

### 1) Types of forestry in BC

- a) Industrial Forestry
  - i) Overview of BC forest sector (Website link and reference documents) <http://www.bcfii.ca/bc-forest-sector/>
  - ii) Major Licensees as described through industry trade associations
    - (1) Coast Forest Products Association purpose for members (Website link) <http://www.coastforest.org/who-we-are/about-us/>
    - (2) Council of Forest Industries purpose for members (Website link) <http://www.cofi.org/about-us/members/>
    - (3) Independent Lumber Manufacturers Association purpose for members (Website link) <http://www.ilma.com/about/purpose-2/>
  - iii) BC Timber Sales – Government managed timber allocation
    - (1) Mandate and commitments (Website link) <https://www.for.gov.bc.ca/bcts/>



- iv) First Nations Licensees
  - (1) Available licences and descriptions (Website link)  
[https://www.for.gov.bc.ca/haa/policies\\_reports.htm](https://www.for.gov.bc.ca/haa/policies_reports.htm)
- v) Private forest landowners
  - (1) Forest management on private forest lands (2.46' video)  
[https://www.youtube.com/watch?feature=player\\_embedded&v=ITSHjH8PfyY&list=UURj0ba5Ad17KqODfmOFVRVg](https://www.youtube.com/watch?feature=player_embedded&v=ITSHjH8PfyY&list=UURj0ba5Ad17KqODfmOFVRVg)
  - (2) Tree harvesting on private forest lands (3.57' video)  
[https://www.youtube.com/watch?feature=player\\_embedded&v=6PdLFE-dZcE&list=UURj0ba5Ad17KqODfmOFVRVg](https://www.youtube.com/watch?feature=player_embedded&v=6PdLFE-dZcE&list=UURj0ba5Ad17KqODfmOFVRVg)
- b) Community forestry
  - i) History and purpose of BC community forests (Website link)  
<https://www.for.gov.bc.ca/hth/timber-tenures/community/history.htm>
  - ii) Forest management in BC Community Forests
    - (1) Value of Community Forests - Overview (11.54' video) <http://vimeo.com/5895541>
    - (2) Community forests (videos on specific Community Forests)  
<http://bccfa.ca/index.php/what-we-do/films>
  - iii) Forest management in BC Woodlots
    - (1) Development of Woodlot License program (14.54' video)  
[https://www.youtube.com/watch?v=JNR42x\\_23I4&feature=youtu.be](https://www.youtube.com/watch?v=JNR42x_23I4&feature=youtu.be)
    - (2) (Various videos) - examples of Community Forests <http://woodlot.bc.ca/videos/>
  - iv) Non-timber forest products
    - (1) Wildcraft-botanical products from BC forest – (Website link)  
<http://www.buybcwild.com/>
- c) Urban forestry
  - i) Importance of urban forests (5.37' video) [https://www.youtube.com/watch?v=jlz\\_rZH1lYk](https://www.youtube.com/watch?v=jlz_rZH1lYk)
  - ii) What is an urban forest and its value (10.00' video) [vimeo.com/38418158](http://vimeo.com/38418158) courtesy of Lorien Nesbitt
  - iii) Urban forest health and well-being benefits (1.00' video)  
[https://www.youtube.com/watch?feature=player\\_embedded&v=dZPafy3PJdE](https://www.youtube.com/watch?feature=player_embedded&v=dZPafy3PJdE)
  - iv) Urban forest air pollution benefits (4.14' video)  
<https://www.youtube.com/watch?v=sH6aWGtLkJY>
- d) Conservation land management
  - i) Nature Trust of BC
    - (1) Overview description (Website link) <http://www.naturetrust.bc.ca/about-us/overview/>
    - (2) Various videos <http://www.naturetrust.bc.ca/news-events/videos/>
  - ii) The Land Trust Alliance of BC

- (1) Description(Website link) <http://ltabc.ca/>
  - (2) Description (0.30' video) [https://www.youtube.com/watch?v=cKKdGQd\\_81o](https://www.youtube.com/watch?v=cKKdGQd_81o)
  - (3) Videos <https://www.youtube.com/user/LandTrustAllianceBC>
  - iii) Nature Conservancy of Canada
    - (1) Overview description (Website link) <http://www.natureconservancy.ca/en/who-we-are/our-story/>
    - (2) Videos <http://www.natureconservancy.ca/en/where-we-work/british-columbia/#cvid-tab>
- 2) Forest planning tools**
- a) Sustainable forest management (SFM) – an overview
    - i) SFM in Canada – Canadian Council of Forest Ministers video series  
<http://www.sfmcanada.org/en>
      - (1) Introduction to SFM (3.05' video)
      - (2) Protected areas and SFM (3.11' video)
      - (3) Natural disturbances (3.44' video)
      - (4) Exploring the boreal forest (2.53' video)
    - b) Land use planning
      - i) BC land use framework (Website link)  
<http://www2.gov.bc.ca/gov/topic.page?id=7F6663432F6449A399A59D0F4E9D2C0E>
      - ii) Next step in land use planning (Website link) <https://www.bcfpb.ca/reports-publications/reports/provincial-land-use-planning-which-way-here/>
    - c) Allowable Annual Cut (AAC)
      - i) Description of determination process (Website link)  
[https://www.for.gov.bc.ca/hts/pubs/tsr/Timber%20Supply%20Review%20Backgrounder\\_Nov\\_2013.pdf](https://www.for.gov.bc.ca/hts/pubs/tsr/Timber%20Supply%20Review%20Backgrounder_Nov_2013.pdf)
    - d) Forest inventory, growth and timber yield – it's importance
      - i) Forest inventory (1.23' video)  
[https://www.youtube.com/watch?feature=player\\_embedded&v=dEteuFfHg90](https://www.youtube.com/watch?feature=player_embedded&v=dEteuFfHg90)
      - ii) Status of BC forest inventory (Website link) <https://www.for.gov.bc.ca/hts/vri/> pdf reference document
      - iii) Growth and timber yield of forest stands
        - (1) Need for stable and adequate funding for forest inventory (1.23' video)  
<https://www.youtube.com/watch?v=dEteuFfHg90&feature=youtu.be>
        - (2) Forest dynamics – forest changes over time (6.27' video)  
<http://mediasite.mediagroup.ubc.ca/MediaGroup/Viewer/?peid=0539b4f42837444fa81f5709ed7b16251d&playFrom=382000>



(3) Forest stand modelling – predicting growth (16.23' video)

<http://mediasite.mediagroup.ubc.ca/MediaGroup/Viewer/?peid=ece6d6eba0914bf885fac0e86d7703bb1d&playFrom=90000>

- e) Forest stewardship planning (FSP)
  - i) Description of FSP (Website link) [https://www.for.gov.bc.ca/dck/lim/dck\\_fsp.html](https://www.for.gov.bc.ca/dck/lim/dck_fsp.html)
  - ii) Regulation (Website link) [http://www.bclaws.ca/Recon/document/ID/freeside/14\\_2004](http://www.bclaws.ca/Recon/document/ID/freeside/14_2004)
  - iii) Public involvement opportunities (Website link & pdf brochure) <https://www.for.gov.bc.ca/code/>
  - iv) Protection and conservation of non-timber forest values
    - (1) Forest and Range Practices Act (FRPA) resource values and objectives to be addressed in FSP (Website link) <https://www.for.gov.bc.ca/hre/ntfp/>
    - (2) FRPA eleven (11) resource values and goals to be addressed in FSP (Website link) <https://www.for.gov.bc.ca/hfp/frep/values/index.htm>
    - (3) Protected areas-biodiversity conservation (4.28' video) <http://www.nrcan.gc.ca/forests/video/13549>
    - (4) Introduction to non-timber forest products (Website link) <https://www.for.gov.bc.ca/hre/ntfp/>

### 3) Forest management practices

- a) Tree harvesting systems
  - i) Tree harvesting in sustainably managed forests (3.37' video) <http://video.nationalgeographic.com/video/sustainable-logging>
  - ii) Cable harvesting systems
    - (1) Description of the grapple yarder cable system (2.20' video) [https://www.youtube.com/watch?feature=player\\_embedded&v=3uRhzzG2HSs&list=UURj0ba5Ad17KqODfmOFVRVg](https://www.youtube.com/watch?feature=player_embedded&v=3uRhzzG2HSs&list=UURj0ba5Ad17KqODfmOFVRVg)
    - (2) Visuals of types of cable harvesting systems (0.55' video) <https://www.bcfpb.ca/news-resources/videos/cable-yarding/>
  - iii) Single tree feller buncher harvesting system (2.00' video) [https://www.youtube.com/watch?feature=player\\_embedded&v=hm4rAGkA2uY&list=UURj0ba5Ad17KqODfmOFVRVg](https://www.youtube.com/watch?feature=player_embedded&v=hm4rAGkA2uY&list=UURj0ba5Ad17KqODfmOFVRVg)
  - iv) Visuals of ground-based harvesting systems (1.30' video) <https://www.bcfpb.ca/news-resources/videos/mechanical-harvesting/>
  - v) Helicopter harvesting
    - (1) Process (6.52' video) <https://www.youtube.com/watch?v=Uhb7XHUypJo>
    - (2) Single tree helicopter harvesting (1.29' video) <https://www.bcfpb.ca/news-resources/videos/helicopter-harvesting/>

- b) Reforestation
  - i) Natural regeneration (4.21' video) <http://www.nrcan.gc.ca/forests/video/13581>
  - ii) Artificial regeneration
    - (1) Tree Planting (2.33' video) [https://www.youtube.com/watch?v=o\\_hQnXNfns4](https://www.youtube.com/watch?v=o_hQnXNfns4)
    - (2) Forest genetics (1.16' video) [https://www.youtube.com/watch?feature=player\\_embedded&v=IZQN8MDcjEY](https://www.youtube.com/watch?feature=player_embedded&v=IZQN8MDcjEY)
    - (3) Seed orchards
      - Seed production (3.05' video) [https://www.youtube.com/watch?v=0GntYMIiTqQ&list=PL28D434E3F387412E&feature=player\\_detailpage](https://www.youtube.com/watch?v=0GntYMIiTqQ&list=PL28D434E3F387412E&feature=player_detailpage)
      - Seed selection and climate change adaptation (2.55' video) [https://www.youtube.com/watch?feature=player\\_embedded&v=r947uEu5Vjl](https://www.youtube.com/watch?feature=player_embedded&v=r947uEu5Vjl)
    - (4) Seed zones
      - (a) Purpose and other details (Website link) [https://www.for.gov.bc.ca/code/cfstandards/html/3\\_purpose.htm](https://www.for.gov.bc.ca/code/cfstandards/html/3_purpose.htm)
    - (5) Tree seedling nurseries
      - (a) Growing trees in seedling nurseries (1.53' video) [https://www.youtube.com/watch?feature=player\\_embedded&v=nvIBmo2O700](https://www.youtube.com/watch?feature=player_embedded&v=nvIBmo2O700)
      - (b) Seedling lifting process (1.55' video) [https://www.youtube.com/watch?feature=player\\_embedded&v=TwUWWbv-P50&list=UURj0ba5Ad17KqODfmOFVRVg](https://www.youtube.com/watch?feature=player_embedded&v=TwUWWbv-P50&list=UURj0ba5Ad17KqODfmOFVRVg)
- c) Forest stand treatments
  - (1) Spacing and pruning (2.58' video) [https://www.youtube.com/watch?feature=player\\_embedded&list=UURj0ba5Ad17KqODfmOFVRVg&v=VGSmerebtC8](https://www.youtube.com/watch?feature=player_embedded&list=UURj0ba5Ad17KqODfmOFVRVg&v=VGSmerebtC8)
  - (2) Forest fertilization description (Reference document) *Forest Fertilization in British Columbia-Synopsis*, Ministry of Forests and Range, 2006, pdf
- d) Wildfire management
  - i) History of wildfires and practices to minimize catastrophic events (14.53' TEDx video) <https://youtu.be/edDZNkm8Mas>
  - ii) Role of wildfires in the forest (5.04' video) <http://www.nrcan.gc.ca/forests/video/13552>
- e) Climate change management and adaptation
  - i) Climate change description (2.57' video) <http://www.sfmcanada.org/en>
  - ii) Forest products are part of the climate change solution (2.12' video) <https://youtu.be/xg23mjp6dvc>

- iii) Forest fire a symptom of climate change (1.34' video)  
<http://www.vancouversun.com/news/Video+Extreme+weather+wild+fires+strong+indicatio+n+climate+change/11192668/story.html>
  - iv) Tackling climate change - use wood (5.34' video)  
<https://www.youtube.com/watch?v=JBRvrAAMGQ8>
  - v) Forests and climate change (2.59' video) <http://www.nrcan.gc.ca/forests/video/13557>
  - vi) Climate change and adaptation (2.39' video) <http://www.sfmcanada.org/en>
  - vii) Carbon neutral description (1.47' video) <https://www.youtube.com/watch?v=dEPn4eTqJ7s>
  - viii) Impact of climate change on forests (9.29' video)  
[http://www.forestbusinessnetwork.com/44929/video-our-forests-our-solutions-how-climate-change-affects-forests/?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed%3A+ForestBusinessNetwork+\(Forest+Business+Network\)](http://www.forestbusinessnetwork.com/44929/video-our-forests-our-solutions-how-climate-change-affects-forests/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+ForestBusinessNetwork+(Forest+Business+Network))
  - f) Invasive species management
    - i) Invasive Species Council of BC overview (7.48' video) <http://bcinvasives.ca/news-events/media/videos/invasive-plants-threaten-bc-an-overview-by-the-ipcbc>
    - ii) BC invasive species (various species specific videos) <http://bcinvasives.ca/news-events/media/videos>
- 4) **Forest management monitoring and assessments**
- a) Forest and Range Evaluation Program (Website link) <https://www.for.gov.bc.ca/hfp/frep/>
  - b) Forest Practices Board (Website link) <https://www.bcfpb.ca/board/what-we-do/>
  - c) Third Party forest certification
    - i) Overview of forest certification
      - (1) Description (2.56' video) <http://youtu.be/jrGPsXKmlc8>
      - (2) Description (Website link) <http://www.nrcan.gc.ca/forests/canada/certification/17474>
      - (3) Certification - What is it, its history and the systems used in Canada-Part1 and Part 2
        - (a) (7.05' video) <https://www.youtube.com/watch?v=GhiHRddol48>
        - (b) (8.03' video) <https://www.youtube.com/watch?v=D4glbFwI1BM>
    - ii) Chain of Custody description (7.05' video)  
<https://www.youtube.com/watch?v=mw1d48JVpdo>
    - iii) Forest certification systems used in BC
      - (1) Forest Stewardship Council
        - (a) Description (7.59' video) <https://ca.fsc.org/videos.303.htm>
        - (b) Description (Website link) <https://ca.fsc.org/>
      - (2) Sustainable Forestry Initiative

- (a) Description (5.13' video)  
[https://www.youtube.com/watch?v=RAqSa6wI5WU&feature=share&list=PLrOvhuHkoKLN\\_RPaUiValv9vAw\\_uBwBqa](https://www.youtube.com/watch?v=RAqSa6wI5WU&feature=share&list=PLrOvhuHkoKLN_RPaUiValv9vAw_uBwBqa)
- (b) Description (Website link) <http://www.sfiprogram.org/about-us/>
- (3) Canadian Standards Association-SFM certification
  - (a) Description (Website link) <http://www.csasfmforests.ca/forestmanagement.htm>
  - (b) Association with Programme for the Endorsement of Forest Certification-PEFC (2.02' video) <https://youtu.be/ZGHuse425rE>
- d) State of BC Forest reports (Website link) <https://www.for.gov.bc.ca/hfp/sof/>

## **WOOD PRODUCTS SECTOR**

BC produces a wide range of high quality wood products that demonstrate the innovation within the wood products sector. There are a number of areas where the traditional and emerging industry are moving into new products. The flexibility that exists within BC due to the wide range of tree species that positions BC to become a world leader in wood products. To accomplish this, innovations will need to be encouraged and risks taken to move away from the traditional primary wood products into more secondary and bioenergy and biochemical wood products.

### **BC WOOD PRODUCTS HISTORY**

The BC wood products sector has a long history of producing quality products. In the past decade, there have been a number of new products and their uses to enhance this history.

#### **1) Overview of BC wood products**

- a) BC wood construction history (10.11' video)  
<https://www.youtube.com/watch?v=WSe3mThNhU#t=359>
- b) Description of BC wood products (2.55' video) <http://www.naturallywood.com/wood-products/product-types>
- c) BC wood products description (Resource document)  
[www.naturallywood.com/sites/default/files/FII-Buyers-Guide.pdf](http://www.naturallywood.com/sites/default/files/FII-Buyers-Guide.pdf)
- d) Uses of wood
  - i) Overview (1.34' video) <http://www.nrcan.gc.ca/forests/video/13528>
  - ii) Wood as a sustainable construction building material (11.06' video)  
[https://www.youtube.com/watch?feature=player\\_detailpage&v=1L54y6pVYCA](https://www.youtube.com/watch?feature=player_detailpage&v=1L54y6pVYCA)
  - iii) Building with wood in BC (5.14' video) <https://www.youtube.com/watch?v=WhumN00fXw8&width=640&height=480>

- iv) Benefits of wood in building construction (2.07' video)  
<http://www.nrcan.gc.ca/forests/video/16213>
- v) Mid-rise buildings of wood (18.35' video)  
[https://www.youtube.com/watch?feature=player\\_detailpage&v=aA43q\\_nubUQ](https://www.youtube.com/watch?feature=player_detailpage&v=aA43q_nubUQ)
- vi) Tall wood buildings – TED talk (12.22' video)  
[https://www.youtube.com/watch?list=UUr0WJM7E1Dy2OP8qrAnDKnA&v=5-P9aYgpuWU&feature=player\\_detailpage](https://www.youtube.com/watch?list=UUr0WJM7E1Dy2OP8qrAnDKnA&v=5-P9aYgpuWU&feature=player_detailpage)

## **BC WOOD PRODUCTS SECTOR SUPPORT INFRASTRUCTURE**

The wood products sector is supported by a number of trade associations, many but not all, of which are listed below. In addition, there are research and teaching organizations that contribute to the innovation and continuous improvement of BC wood products.

### **1) Wood products associations**

- a) BC Wood Group (Website link) <http://www.bcwood.com/>
- b) Independent Wood Processors Association of BC (Website link) <http://iwpace.com/about/>
- c) BC Log and Timberframe Industry Association (Website link)  
<http://www.bclogandtimberbuilders.com/about-us/>
- d) Western Red Cedar Lumber Association (Website link) <http://www.realcedar.com/>
- e) Manufactured Housing Association of BC (Website link) <http://www.mhabc.com/about-us/>
- f) Western Wood Truss Association of BC (Website link) <http://wwtabc.com/index.php>
- g) Forest Products Association of Canada (Website link) <http://www.fpac.ca/index.php/en/>
- h) Wood Pellet Association of Canada (Website link) <http://www.pellet.org/about/about-us>
- i) BC Bioenergy Network (Website link) <http://bcbioenergy.ca/who-we-are/overview-and-mandate/>

### **2) Wood products research and teaching organizations (universities and industry)**

- a) Forest Products Innovations (Website link) <https://fpinnovations.ca/about-us/organization/Pages/default.aspx>
- b) Centre for Applied Wood Processing, UBC (Website link) <http://cawp.ubc.ca/other-activities/cawp-projects/>





- c) UNBC wood engineering program (2.33' video) <http://www.unbc.ca/engineering-graduate-program/wood-innovation-and-design-centre>

## **BC WOOD PRODUCTS**

BC wood products are commonly categorized into primary or commodity products, secondary manufactured wood products and most recently wood residue products. Primary wood products are those responsible for the development of the BC forest industry and concentrate on dimension lumber, panels (e.g., plywood) and pulp and paper products. The latter associated with utilization of the residue from BC sawmills. The secondary manufactured wood products are most commonly associated with either using the primary products or conversion of logs into products that have higher value for such things as flooring, cabinets, log homes, engineered wood products, etc. The pulp and paper industry is now being challenged due not only the reduction in the use of paper but emerging competitors for the residue wood from sawmills and forest harvesting. This emerging industry is generally referred to as the bio-refinery and bio-energy sectors.

### **1) Primary manufactured wood products**

- a) Lumber products (Website link) <http://www.naturallywood.com/wood-products/product-types/lumber>
- b) Pulp products (Website link) <http://www.naturallywood.com/wood-products/product-types/market-pulp>
- c) Paper products (Website link) <http://www.naturallywood.com/wood-products/product-types/paper>
- d) Panel products description (Resource document) [www.naturallywood.com/sites/default/files/FII-Buyers-Guide.pdf](http://www.naturallywood.com/sites/default/files/FII-Buyers-Guide.pdf)

### **2) Secondary manufactured wood products** – videos intended as examples and not to promote any of the companies

- a) Overview of BC secondary manufactured wood products
  - i) BC specialty wood products (Website link-Resource document) <http://www.naturallywood.com/wood-products/product-types/specialty>
  - ii) Marketing - Global Buyers Mission (5.02' video) <https://www.youtube.com/watch?v=xuLB4IRpoU0>
  - iii) Global Buyers Mission (2.56' news video) <https://www.youtube.com/user/BCWoodAssociation>
- b) Millwork – an example of products (1.15' video) <http://www.yellowpages.ca/bus/British-Columbia/Surrey/Westcoast-Moulding-Millwork-Ltd/1704584.html>

- c) Engineered wood products
  - i) Description and benefits (2.02' video) <https://www.nrcan.gc.ca/forests/video/16592>
  - ii) Overview of engineered wood products (8.50' video - general) <https://www.youtube.com/watch?v=37FBUNvegHQ>
  - iii) Cross Laminated Timber – CLT (3.23' video) <https://www.youtube.com/watch?v=CNwIS3S1vBo>
  - iv) Introducing CLT to wood building (4.11' video) <https://www.youtube.com/watch?v=wFVUw5duyb4>
  - v) Glue Laminated Timber (Glulam) products (3.59' video) <https://www.youtube.com/watch?v=zvHaCOQroNQ>
- d) Log and timber frame homes
  - i) Douglas fir for timber frame construction (1.55' video and Website link) [http://www.bctimberframe.ca/Timber\\_frame\\_Homes.html](http://www.bctimberframe.ca/Timber_frame_Homes.html)
- e) Prefabricated homes
  - i) Prefabricated vs Stick frame construction research comparison (11.45' video) <http://pacific-homes.com/post/2579>
  - ii) Factory built homes introduction (1.55' video and Website link) <http://www.mhabc.com/why-mhabc/manufactured-home-facts/#lightbox/0/>
  - iii) Factory built homes process and challenges (3.42' video) <https://www.youtube.com/watch?v=5d268LAFGIM>
- f) Artistic wood products
  - i) The use of technology in Aboriginal art (5.08" video) FP Innovations program featuring Aboriginal carving using technology <https://youtu.be/V6TGqZMUI3c>

### 3) Wood residue products

- a) Bioenergy wood products
  - i) Bioenergy description (4.18' video) [http://www.youtube.com/watch?v=56MqAHB-3LQ&feature=youtu.be&utm\\_source=2014-10-03+-+BCBN+Bioenergy+Video&utm\\_campaign=BCBN+Video&utm\\_medium=email](http://www.youtube.com/watch?v=56MqAHB-3LQ&feature=youtu.be&utm_source=2014-10-03+-+BCBN+Bioenergy+Video&utm_campaign=BCBN+Video&utm_medium=email)
  - ii) Sustainable forest-based bioenergy (4.12' video) <http://www.nrcan.gc.ca/forests/video/13569>
  - iii) Increased interest in forest industry and bioenergy (3.45' video) <http://www.nrcan.gc.ca/forests/video/13589>
- b) Biochemical wood products
  - i) Overview (Reference document) [www.fpac.ca/publications/D%20fpac-partnerkit-biochemicals-en.pdf](http://www.fpac.ca/publications/D%20fpac-partnerkit-biochemicals-en.pdf)

- ii) Examples of commercialized products – mainly to produce industrial sugars for producing a variety of other products
  - (1) Renmatix conversion to bio-chemicals (3.41' video) <http://renmatix.com/video-overview/>
  - (2) Ensyn – converts wood residue to biofuels and chemicals (0.36' video and Website link) <http://www.ensyn.com/about-ensyn/overview/>

## **SPONSORS**

BC Government Employees Union

Canadian Standards Association Forest Certification

Coastland Industries

DWB Consultants

FP Innovations

Kalesnikoff Lumber

Professional Employees Association

Weyerhaeuser Canada