



Columbia Pulp Discussion Ag Burning Taskforce

November, 2014



Project Summary

Columbia Pulp will process straw from eastern Washington farmers into valuable products: pulp for papermaking and lignin/sugars for petrochemical replacements.

The companies' business model converts agricultural waste into high-quality, sustainable and competitively priced supply chain solutions.

Columbia Pulp will eliminate thousands of tons of air emissions, impact logging and forest usage and reduce petrochemical demand through the sale of byproducts.

The site and local entitlements have been secured; construction will occur throughout 2015.

Learn more at our website columbiapulp.net





Market & Sales Strategy

Pulp Targeting the Pacific Northwest paper producers, Columbia will sell unbleached, semi-bleached and possibly bleached pulp primarily as a replacement for hardwood pulp. Its straw pulp is a unique product with a number of competitive advantages.

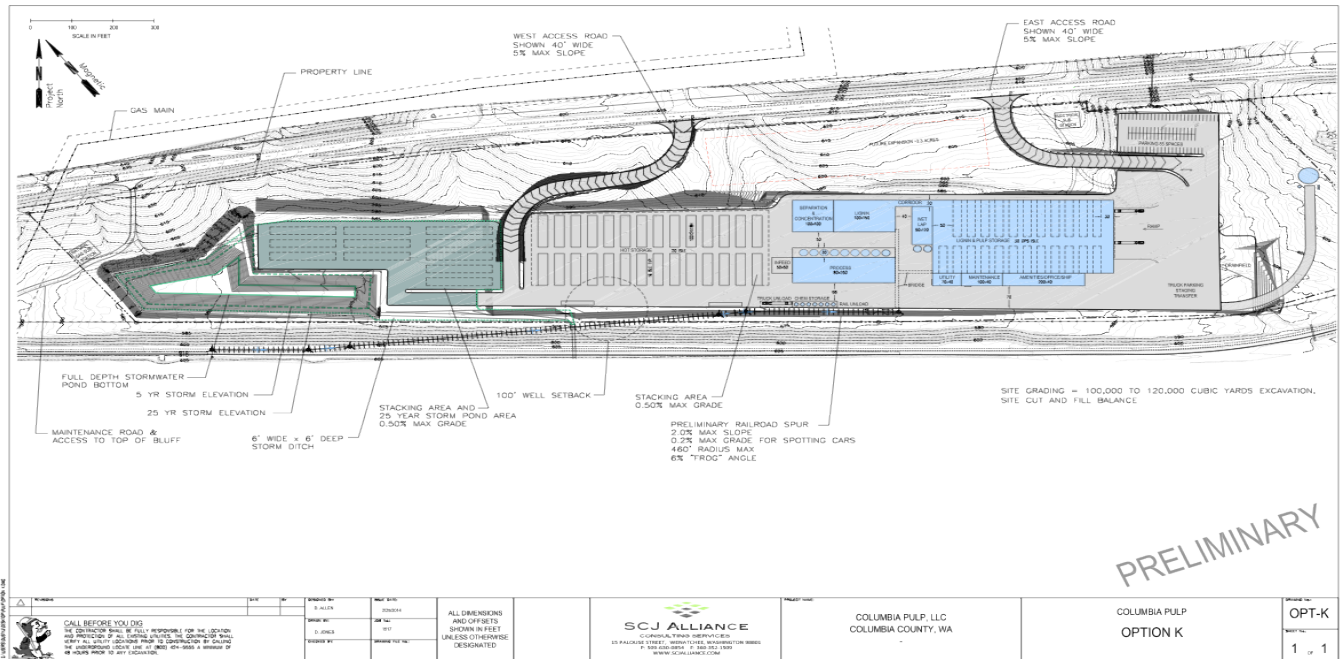
Derivative Products The company is evaluating several options to create a value-added revenue stream from the remaining materials. Readily available markets which have been identified include animal feed enhancement and refining into mixed glycols. It can also be sold as a petrochemical replacement for end uses such as soil enhancements, energy generation, and as a “green” replacement for petrochemical phenolics.





Plant Location / Site Overview

Employing 135 full time workers, the site is located on 449 acres along the Snake River with natural gas, existing electrical supply, rail and barge capability on State Hwy 261. 4+ million tons of straw generated annually within a 100 mile radius of the site. Located in the heart of some of the highest density wheat farming region in North America.






Milestones

Columbia Pulp has a multi-phase construction and development plan to minimize risk. Many significant milestones have already been met:

- Class 10 Engineering complete
- Conditional Use Permit Issued (May '14) without objection
- NOC Application submitted Mar '14, expect issuance December '14
- Environmental, traffic, geologic, cultural and other impact studies complete
- Site purchase negotiation complete, property optioned
- Adequate water rights secured
- Phase 1 & 2 product trials complete with an international paper products company
- General Contractor selected
- CDBG application made
- Underwriter, bond counsel selected. State sponsored tax exempt, Solid Waste Disposal Bond process being implemented
- Columbia Pulp developing secure adequated straw supply with growers
- Straw pulping process currently operational at a “proof of concept” facility
- “Off the shelf” pulping equipment identified



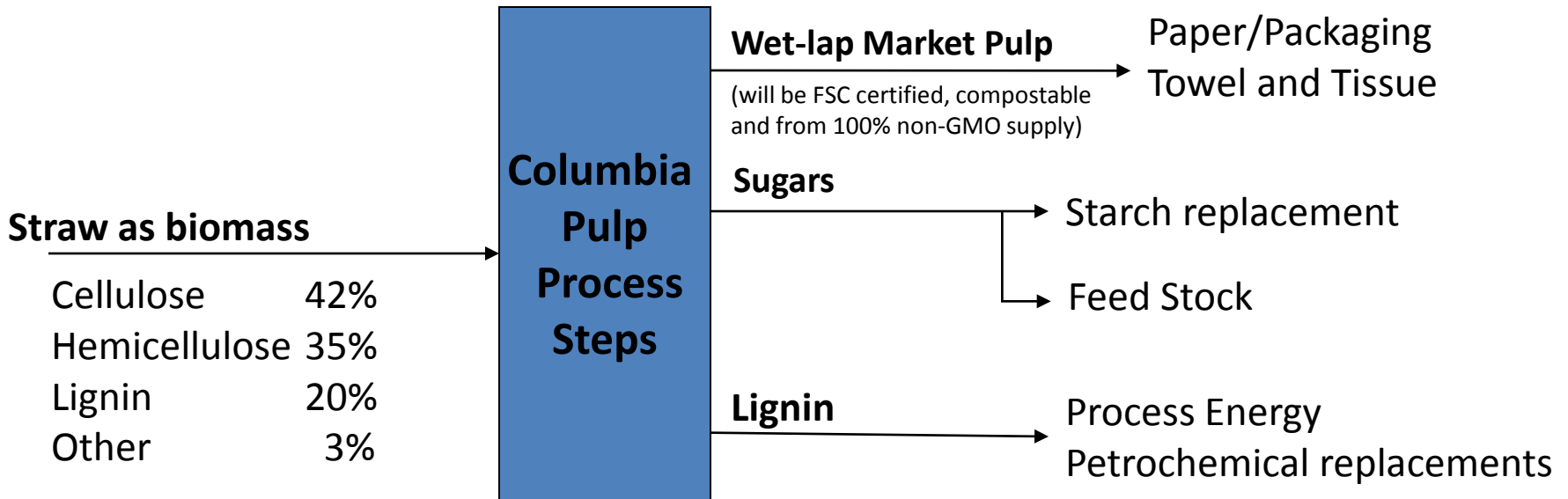
Annual Operating Projections*

Raw Material	Products	Uses	Sales
 <p>Straw 220,000 Tons (620 TPD)</p>	<p>Pulp 140,000 Tons (400 TPD)</p>	<p>Consumer products and packaging grade pulp</p>	<p>\$70mm</p>
	<p>By Products 70,000 Tons (200 TPD)</p>	<p>Feed Stock, soil enhancements</p>	<p>\$14mm</p>

*Based on fully operational facility (2017)



Straw Conversion Overview: Waste and Carbon Reduction



**2000 lbs.
of straw biomass**

- Paper/Packaging: 1300 lbs.
- Starch replacement /Resins: 80 lbs.
- Process Energy/Chemicals: 200 lbs.
- Lignin: 300 lbs.
- Soil Amendment/sugars: 120 lbs.



Local Benefits - *Annual Economic Impact*

- Payroll *\$10,200,000 135 jobs*
- Secondary employment *\$25,000,000 400 jobs*
- Straw purchases *\$13,000,000*
- Other purchases* *\$22,700,000*
- Taxes *\$1,000,000 estimated*

Total ***\$71,900,000***

- Construction *\$35,000,000 50 jobs (temporary)*

** includes energy, chemicals, freight, stores & supplies*