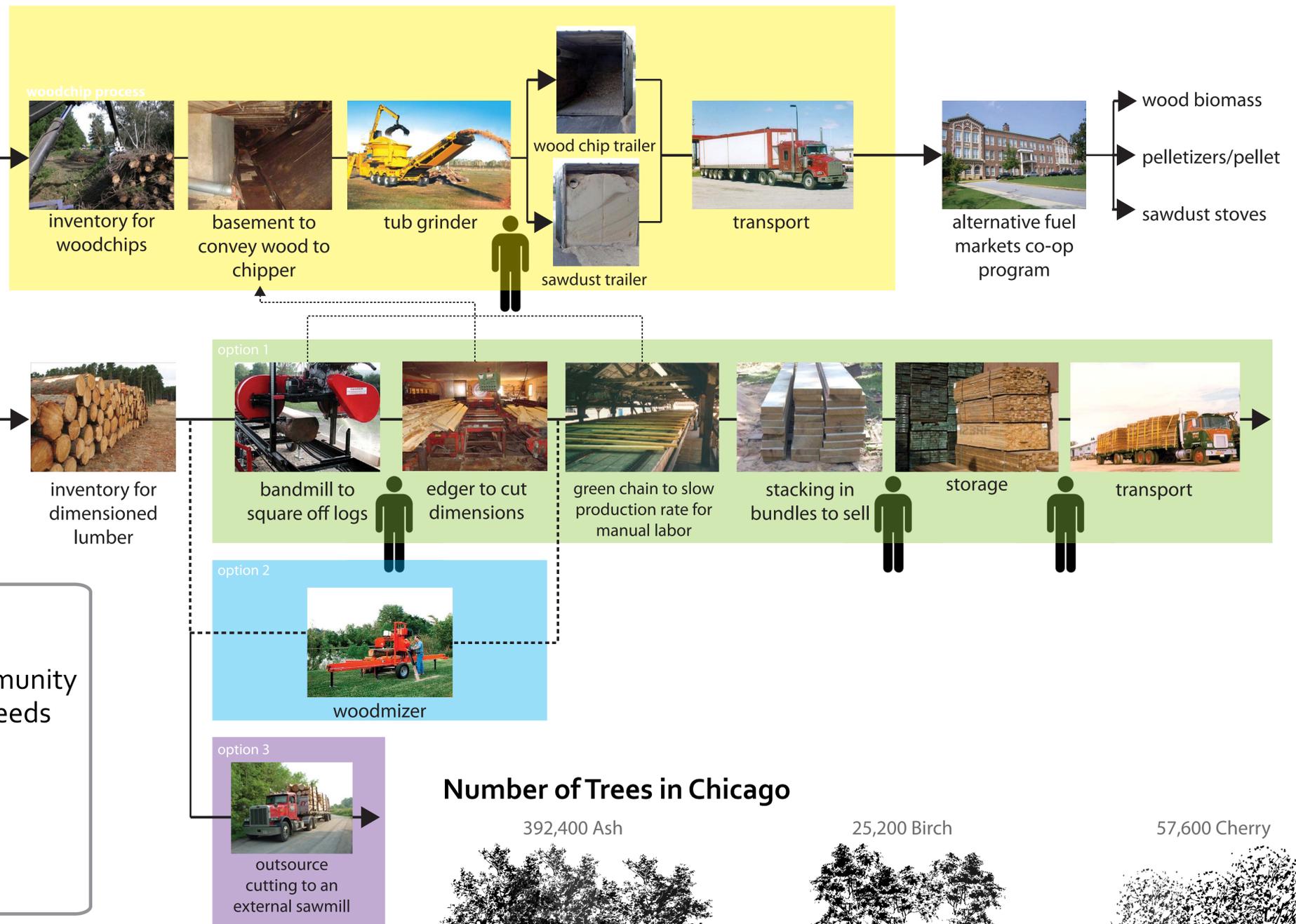
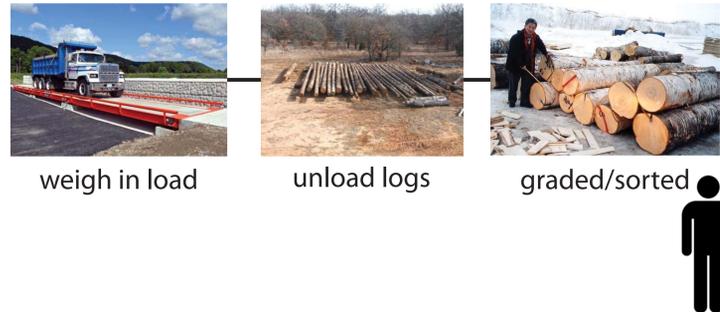




IPRO 347

ROBBINS COMMUNITY POWER
the spark bringing green to energy

Adapted Sawmill Model



Purpose

- Develop a process which supplies the Robbins Community Power plant with a large portion of the wood that it needs
- Use the green wood to aid in producing energy
- Reuse the waste materials produced during the process by transforming into energy fuels

Number of Trees in Chicago



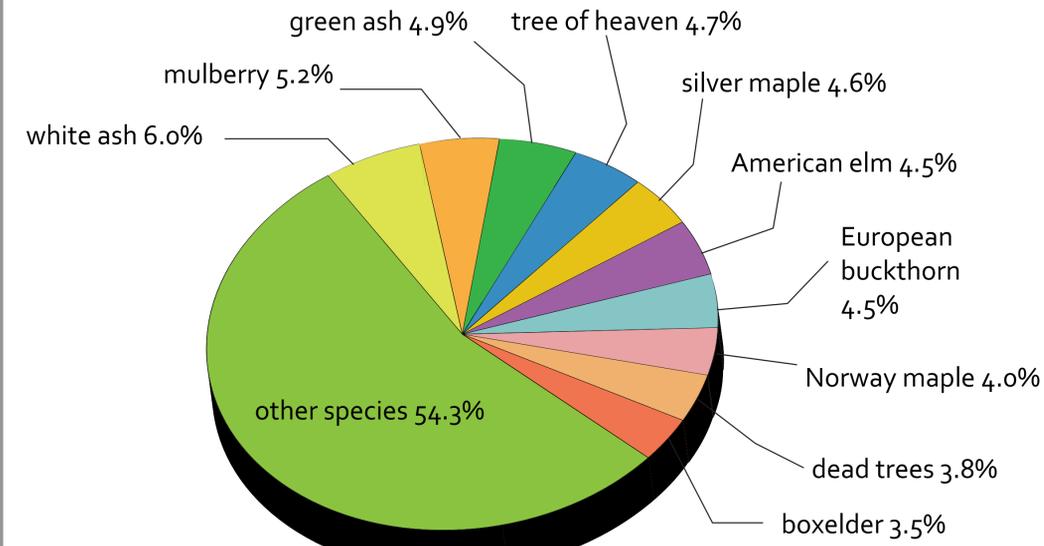
PROCESS



Chicago Urban Forest Summary

Feature	Measure
Number of trees	3,585,000 tons
Tree cover	17.2%
Most common species	white ash, mulberry, green ash, tree-of-heaven
Annual Mortality Rates	61.2%
Ash	0.15
Birch, Cherry, Hickory,	0.03
Poplar, Red Oak, Maple,	0.03
Black Walnut, White Oak	0.03

Tree Population in Chicago



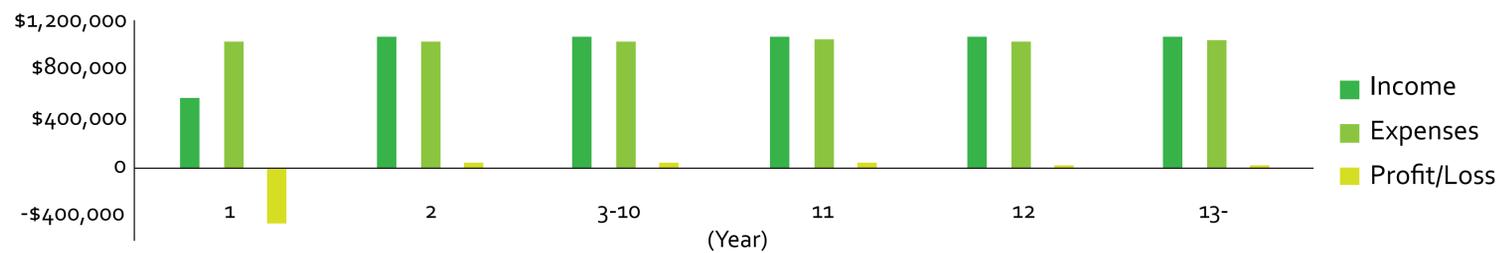
Source: USDA UFORE study of Chicago's Urban Forest

Robbins Community Power



Robbins Community Power is a retrofit of a wood biomass renewable power plant from a municipal solid waste power plant. The focus of this IPRO is to devise a plan which Robbins can use to gather a supply of green wood chips to complement the drier C&D wood chips in order to keep the boilers burning at the most efficient temperature. A plan was devised to create a network with existing companies that produce green waste, such as landscapers and tree trimming companies, and collect their waste at one location for Robbins. Inevitably, wood is more valuable in the form of dimensioned lumber than chips or sawdust. To take advantage of this, the wood should be separated and a sawmill to process the wood could be used. In doing this, Robbins will be taking full advantage of its resources and be the most sustainable it can be.

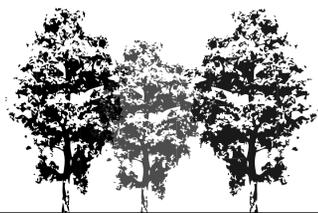
Income/Expenses/Profit Diagram



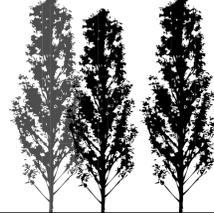
Acknowledgements

Morton Arboretum
 Robbins Community Power
 Village of Robbins
 Reggie Greenwood
 Lee & Associates
 Sterling Lumber

7,200 Hickory



7,200 Poplar



61,200 Red Oak



309,600 Maple



14,400 Black Walnut



43,200 White Oak



PROCESS

