

# IPRO 350

# ENVIRONMENTAL AND URBAN WOOD RECLAMATION

## Municipal Data

Evanston	Oak Park	Wilmette
Total tree #: 14600	Total tree #: 12700	Total tree #: approx. 8000
# Ash: 4000	# Ash: 2524	# Ash: 3855
# Other: 3300	# Other: 2638	# Other: n/a
Total removed (2008) n/a	Total removed (2008) 260	Total removed (2008) 650
Predicted removed (2009) n/a	Predicted removed (2009) 235	Predicted removed (2009) 650
Average diameter of removal: 12-20"	Average diameter of removal: 22-30"	Average diameter of removal: 15.1"
Expected percentage of usable material for lumber is 80%	Expected percentage of usable material for lumber is 10%	Expected percentage of usable material for lumber is 10%
Predicted usable quality: n/a	Predicted usable quality: 24	Predicted usable quality: 65
Removal party: Evanston (in house)	Removal party: B Haney & Son	Removal party: Various
Current use: Mulch and Firewood	Current use: Mulch	Current use: Various
Further processors: Northwest Wood Products	Further processors: B Haney & Son	Further processors: Various
In house facilities: Staging Yard	In house facilities: None	In house facilities: None

## Contact Programs

- HABITAT FOR HUMANITY-ILLINOIS**  
The Better Built program provides contacts, materials and resources for local Habitat affiliates who seek help in building more sustainable houses. In addition, we assist interested affiliates in exploring other practical and affordable green building options.
- US FOREST SERVICE PRODUCTS LAB**  
"A new structural biocomposite product developed by researchers at the USDA Forest Products Laboratory (FPL) can add value to low-value biomass to help mitigate costs associated with fuel reduction treatments, invasive species management and enhance the sustainability of renewable resources."
- NILES NORTH HIGH SCHOOL**  
Utilization of wood is undertaken by Niles North High School's Theatre Arts Programme. Theatre production sets are designed and built in-house by students in Stagecraft, Play Production, and Advanced Theatre Studio classes.
- ILLINOIS DEPARTMENT OF CORRECTIONS**  
The Illinois Department of Corrections implements a furniture department in many of their prison facilities. These men and women are voluntarily employed in meaningful work situations that aid in developing usable skills and positive work habits.
- HORIGAN URBAN FOREST PRODUCTS INC.**  
An environmentally friendly Chicago private business specializing in taking urban trees and creating wood products. Since this business is already achieving the aim of putting this urban wood to its highest use, Horigan has proven to be a great model and source of innovation.

**Illinois Emerald Ash Borer Wood Utilization Team**

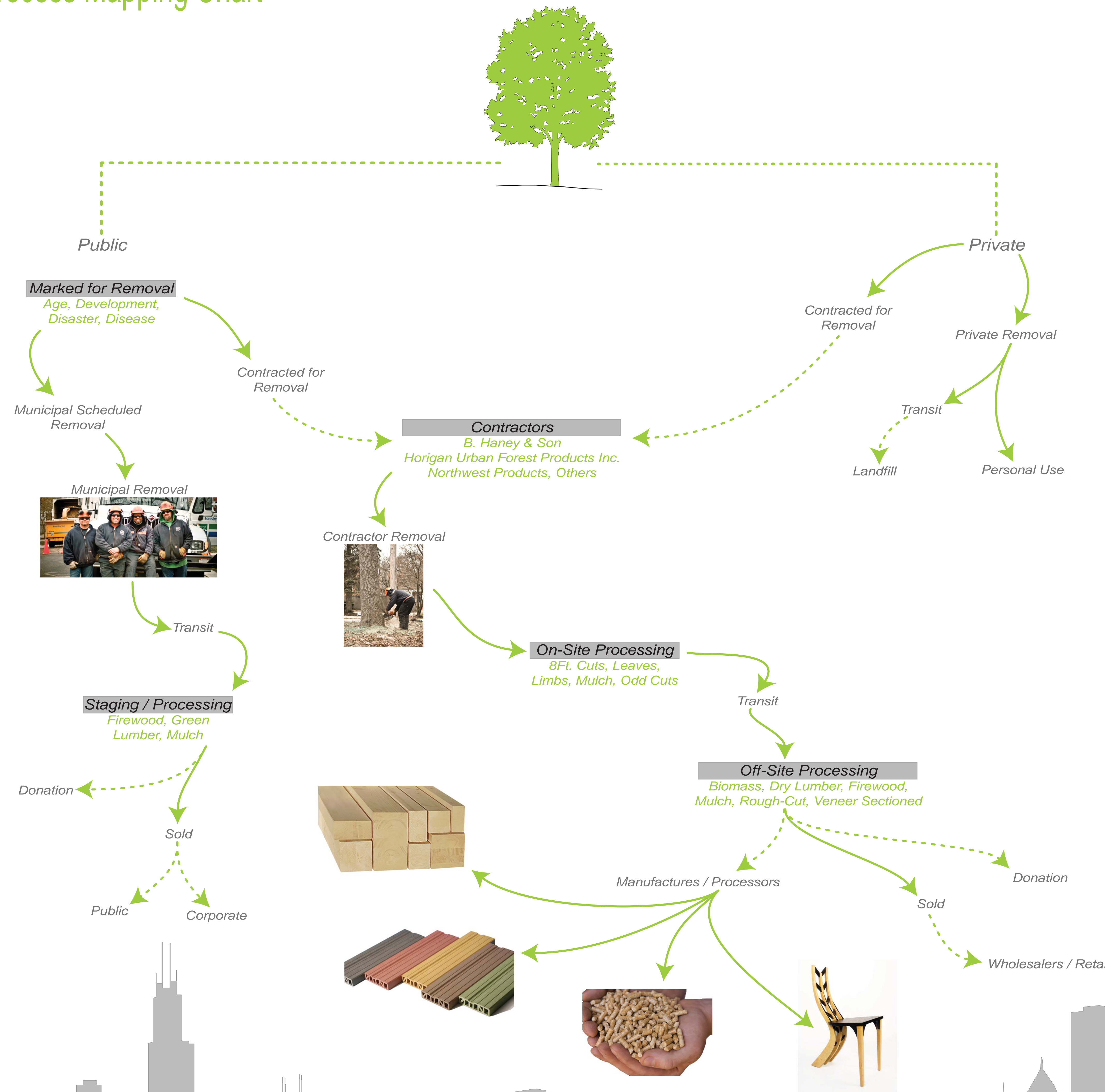
Tom Gargrave Illinois Department of Natural Resources	Jeffery Coath USDA AHIS PPQ	Michele Beaulieux WUT Administrator
Paul Deitzman Illinois Department of Agriculture	Lauren Blissard U.S. Green Building Council	

**IPRO 350 Team**

<b>EVANSTON</b> Phillip Haywood Jesse Stepienewski Maksym Ostapenko	<b>OAK PARK</b> David Connelly Nicholas Sahrn	<b>WILMETTE</b> Joshua Cabrera Keegan Springfield William Perkins	<b>TEAM ADVISORS</b> John Stoner Nik Rokop
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THE PROBLEM POSED THROUGH THE WOOD UTILIZATION TEAM FOCUSED ON HIGHEST AND BEST USE. IN THE NORTH EAST CHICAGO REGION THERE EXISTS 25,000,000 ASH TREES, ALL ANTICIPATED TO BE LOST TO THE EMERALD ASH BORER OVER THE NEXT TEN YEARS. A PERCENTAGE OF THESE ASH TREES, INCLUDING OTHERS REMOVED FOR VARIOUS REASONS, MAKE UP THE REMOVAL NUMBERS LOCATED IN CHICAGO MUNICIPAL AREAS. CURRENTLY CHICAGO MUNICIPALITIES DEAL WITH THESE TREES THROUGH DIFFERENT AVENUES, SOME NOT CONSIDERED TO BE THE HIGHEST SOCIAL OR ECONOMIC USE.

## Process Mapping Chart



## Background

IPRO 350 is a continuing Entrepreneurial Project dealing with the problem of urban wood and its under utilization. Previous groups have explored utilizing the free-market to create a business structure which will enable urban wood to be utilized much the same as forest trees. Since then, the current IPRO has collaborated with the Wood Utilization Team(WUT), a team of wood industry experts, and three Chicago municipalities to conduct feasibility studies to ascertain potential future areas for expanded utilization of urban wood within the communities.

## Objective / Methodology

The primary objective was finding and developing outlets for under utilized urban wood. Specifically ash trees in the Chicagoland area which are being cut down at an alarming rate due to infection by the Emerald Ash Borer(EAB). We have been working with the Illinois Wood Utilization Team(WUT) and the municipalities of Evanston, Oak Park, and Wilmette to identify all the current uses for this wood, as well as investigate ways to promote its usage in higher end products. This investigation includes data acquisition, analysis, market research, contact development, and a feasibility study, to be provided to the Municipalities and the WUT. Accordingly, we seek to encourage its use through contacts made, such as non-profits, local artist and manufacturers. These efforts will seek to identify ways in which urban wood may be further utilized.

## Recommendations

- RECOMMENDATION A**  
Municipalities - Contractors.  
Since the municipalities of Evanston, Oak Park, and Wilmette currently contract their work through second party contractors, the aim will be to change the contractual agreements currently standing between municipalities and contractors to ensure that the wood material harvested is put to its highest possible use. The municipalities have shown a willingness to change their contracts to incorporate this mandate. Since legally binding, the contractors will either utilize the wood themselves, or sell it to a third-party which will put the wood to the intended higher use.
- RECOMMENDATION B**  
Municipalities - Small Business/Non-Profits.  
In conducting business based surveys on possible end users of harvested urban wood, a number of businesses have shown interest in utilizing this urban wood for projects ranging from fiberboard processing, to furniture building. While the quantities of wood being utilized by these small businesses are small compared to the availability, there are a myriad of businesses, that taken as a whole, can form a significant segment of possible end users. These users range from private, public/government, to non-profit users. Therefore, one on one relationships between all parties involved will be necessary to ensure that in the processing of this urban wood, its highest potential can be realized.
- RECOMMENDATION C**  
Municipalities - Large Scale Businesses.  
Through our research phase, a number of large-scale business were identified as being possible end users of urban wood. These are primarily energy generation companies that deal with converting biomass to electricity/heat. Since these businesses use a large amount of "woody" material in the processing phase, the inclusion of localized urban wood harvest stocks can play an important role in these power generation facilities.

## Conclusion

- Urban wood is generated in significant quantities to be a viable source of wood. While the supply of urban wood is harvested in small quantities at a time, with appropriate stocking measures, this can be effectively negated.
- There are businesses already working with urban wood, however, they are part of a fragmented market. By conducting surveys to pinpoint businesses using wood products in general, the aim should be to foster interaction among these businesses to stimulate urban wood utilization.
- Potential end users of urban wood are reluctant to utilize this wood in place of their currently existing supply networks. However, most have shown a willingness to utilize urban wood, if shown to be of quality and economically beneficial. With quality of urban wood comparable to forest trees, raising awareness will increase use.
- Current government regulations (due to EAB), create a non-conductive business environment for the utilization of urban timber. With current regulations, uses at the local level are recommended.
- While forest management in communities is above average, there remains a lack of effective communication between forest management programs and relevant businesses and community representatives to put the urban material to its highest use. There are current efforts by the municipalities, (WUT) and this IPRO course to bridge these connections.

