

Urban Wood Utilization for a Healthy Community

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VirginiaTech

College of Natural Resources
and Environment



Presentation Overview

- **SCOPE and AIM**
 - features and benefits of utilization
 - recent research findings
- **BACKGROUND**
 - how utilization is practiced
 - why utilization matters
- **RESEARCH**
 - utilization practices
 - utilization perceptions
- **LOOK AHEAD**
 - hypotheses to be tested
 - capabilities to be developed
- **SUMMARY**
 - your questions
 - your comments



Source: <http://www.greenwasterecyclingyard.com>

OVERVIEW

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Community Forestry Areas

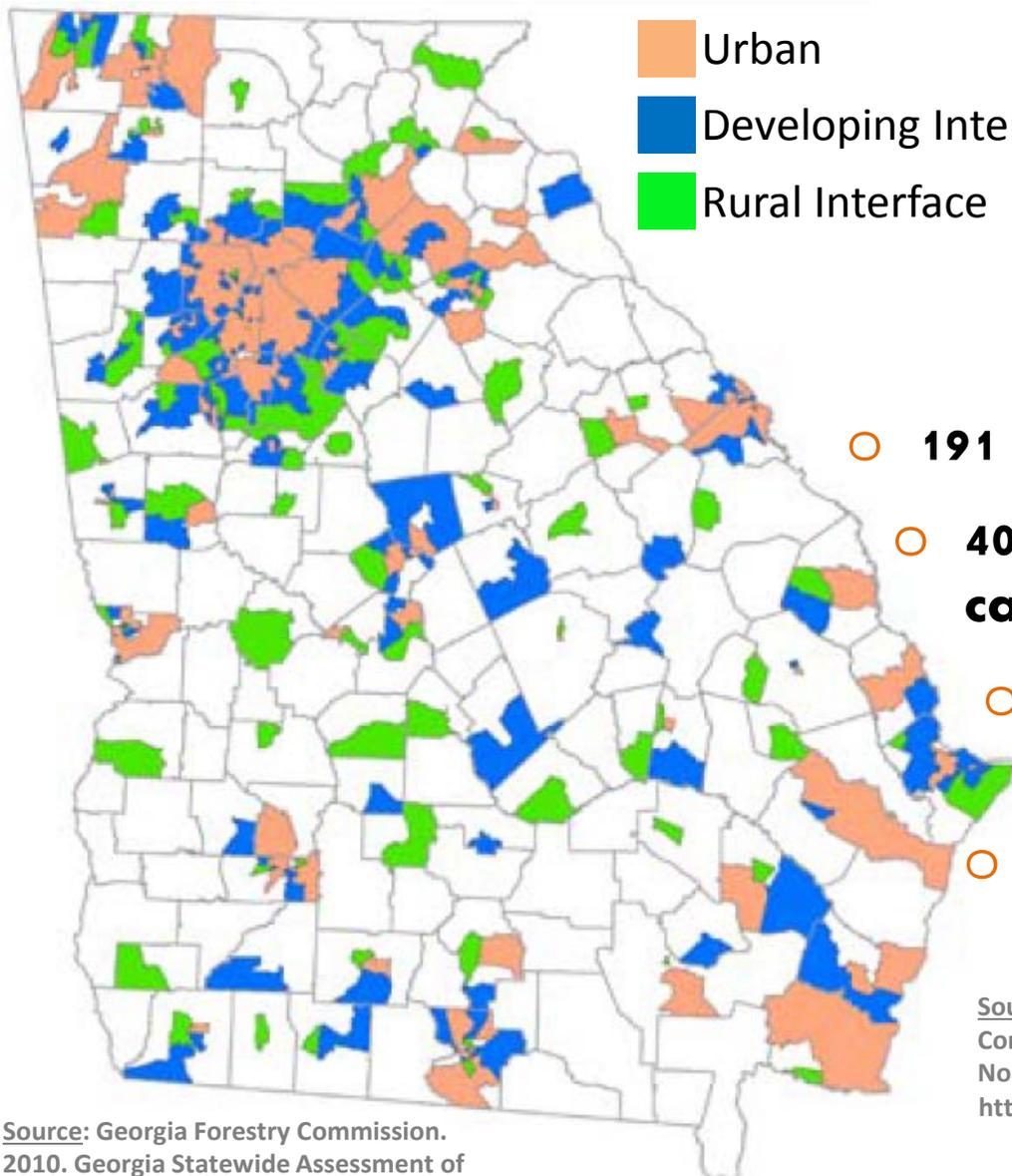
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SUMMARY



- Urban
- Developing Interface
- Rural Interface

- 191 million urban trees
- 40 million tons stored carbon
- 293 million urban or community trees
- 62 million tons stored carbon

Source: Georgia Forestry Commission. 2010. Georgia Statewide Assessment of Forest Resources. <http://www.gatrees.org/about-us/strategic-plan/GAStateAssessment-6-17-10.pdf>

Source: USDA Forest Service. 2009. Urban and Community Forests of the Southern Atlantic Region. Northern Research Station. GTR NRS-50. http://www.nrs.fs.fed.us/pubs/gtr/gtr_nrs50.pdf

Conceptual Framework

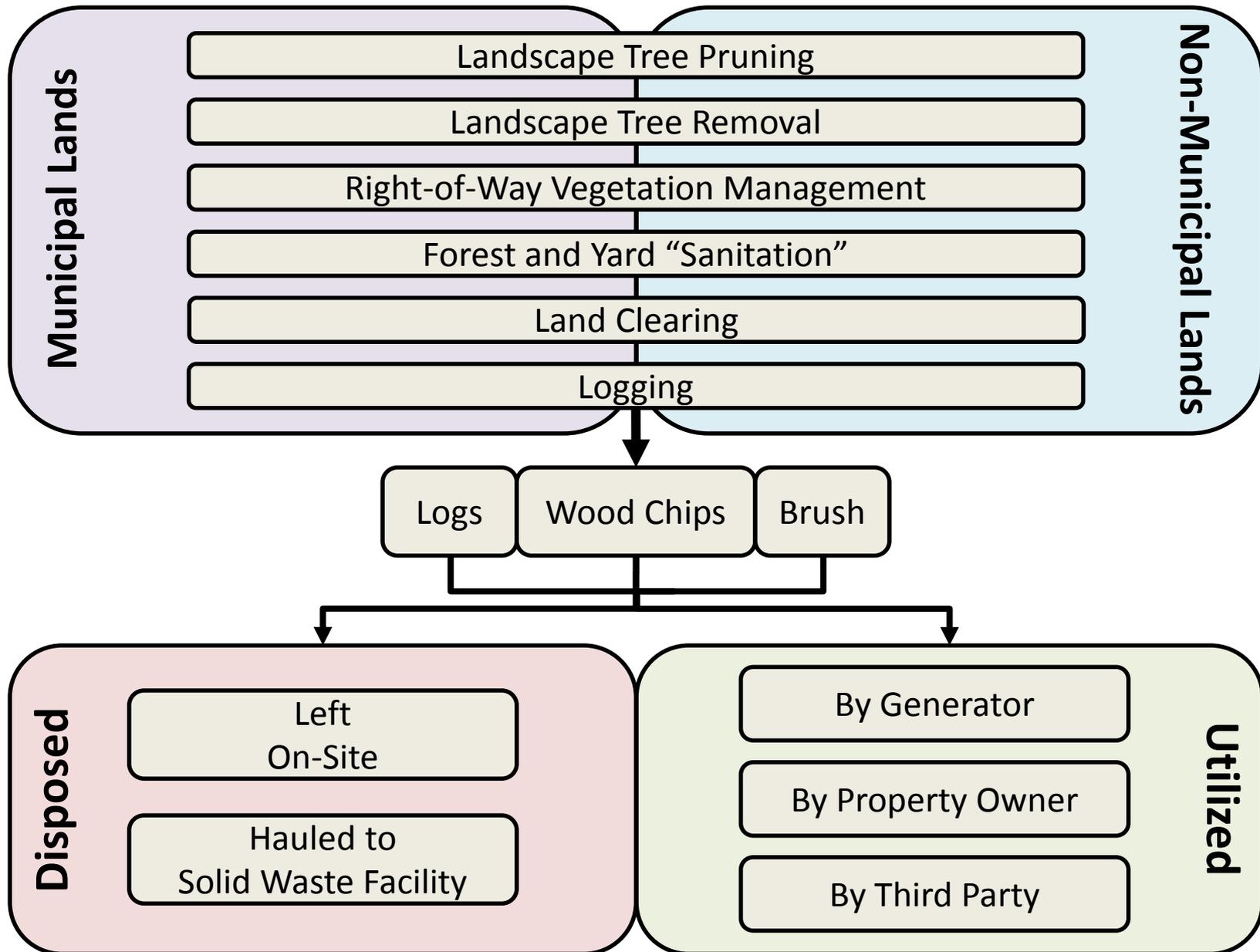
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Conceptual Framework

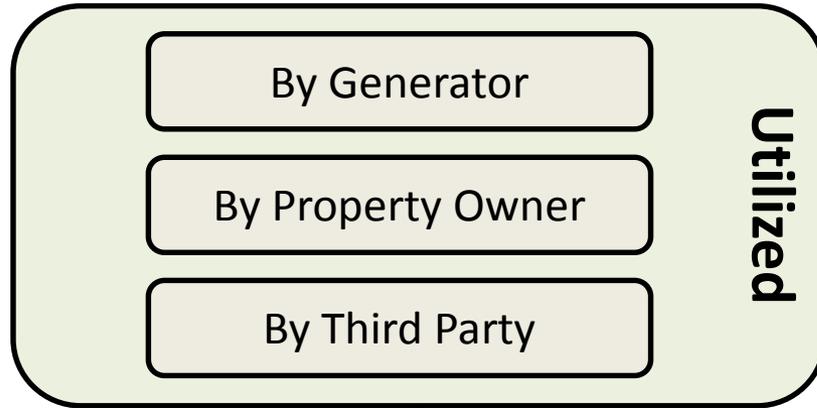
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Conceptual Framework

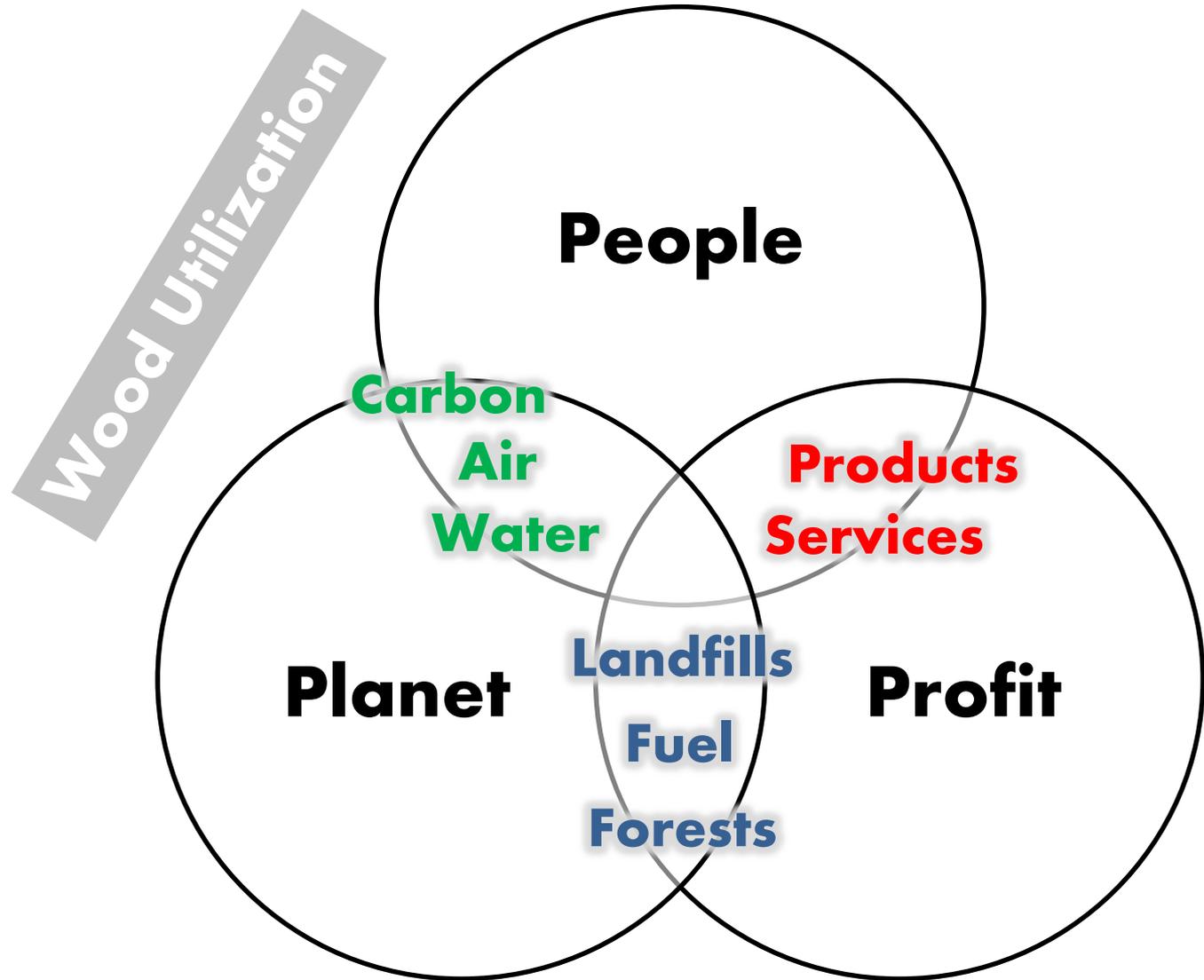
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Conceptual Framework

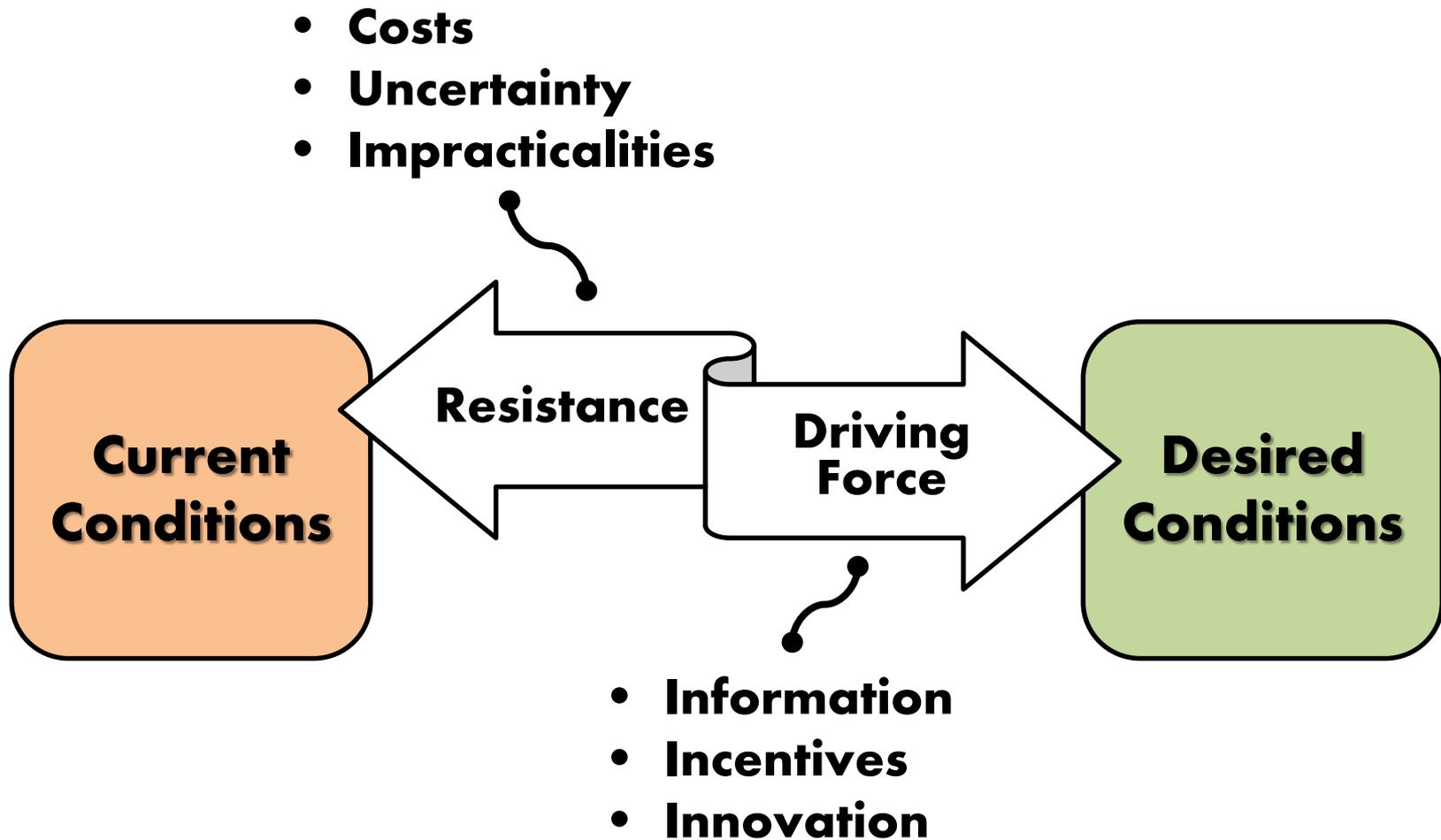
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Research Questions

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- **Where does urban forest waste (UFW) come from?**

BACKGROUND

- **Where does urban forest waste (UFW) end up?**

RESEARCH

- **What urban forest products (UFPs) are made from urban forest waste (UFW)?**

LOOK AHEAD

- **What do the people involved with the generation and utilization of UFW think about it?**

SUMMARY



Source: <http://www.greenwasterecyclingyard.com>

Research Methods

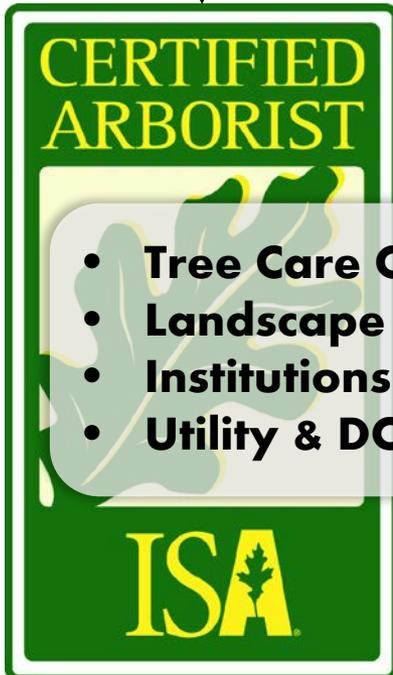
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- **Tree Care Companies**
- **Landscape Companies**
- **Institutions and NGOs**
- **Utility & DOT Contractors**



- **Municipal Arborists**
- **Municipal Foresters**
- **Public Works Administrators**
- **Solid Waste Administrators**

Research Methods

OVERVIEW

	Invited	601
	Responded	179
	Response Rate	30%

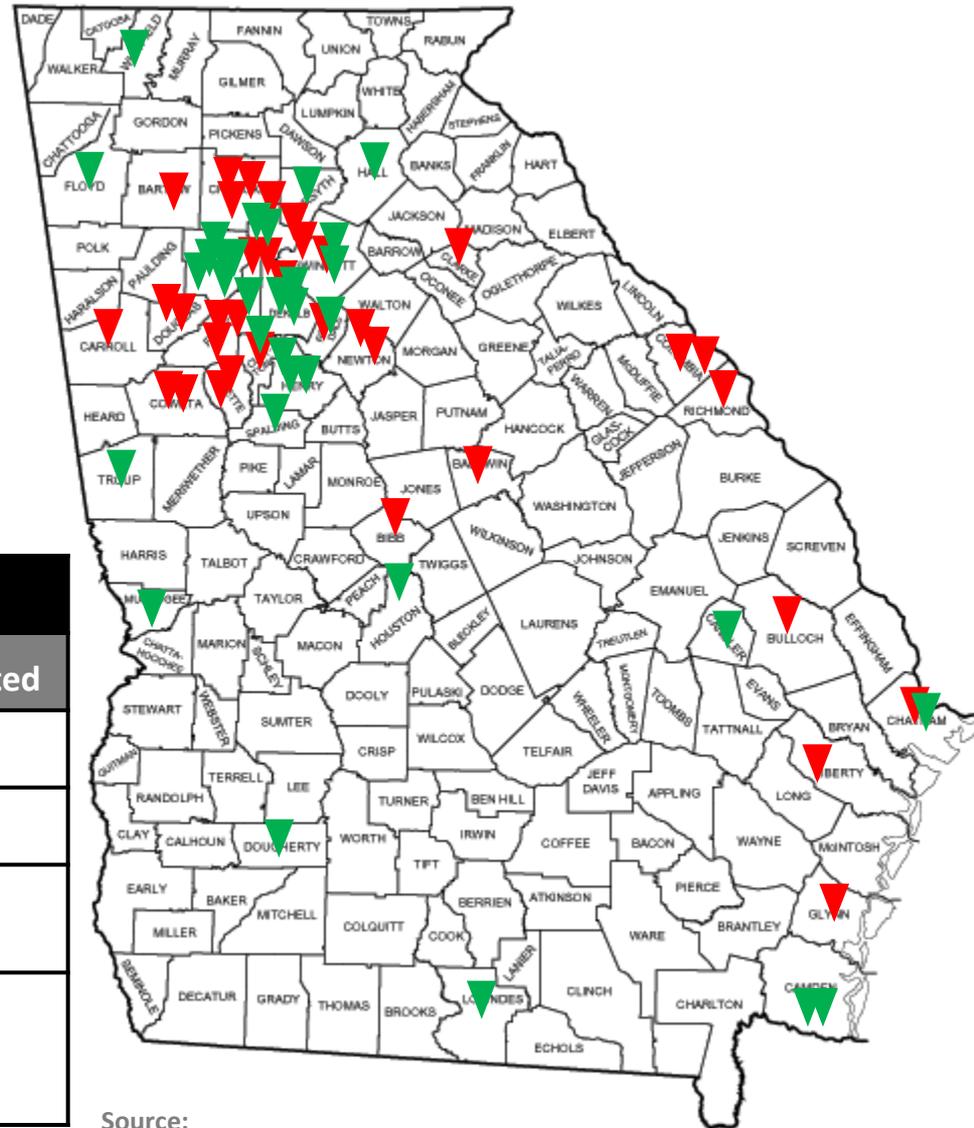
BACKGROUND

RESEARCH

MUNICIPALITIES			
	City	County	Consolidated
Invited	48	16	4
Responded	28	5	1
Response Rate	58%	31%	25%
Overall Response Rate			50%

LOOK AHEAD

SUMMARY



Source:
<http://www.officialusa.com/stateguides/georgia/maps/counties.html>

Urban Forest Waste Practices

OVERVIEW

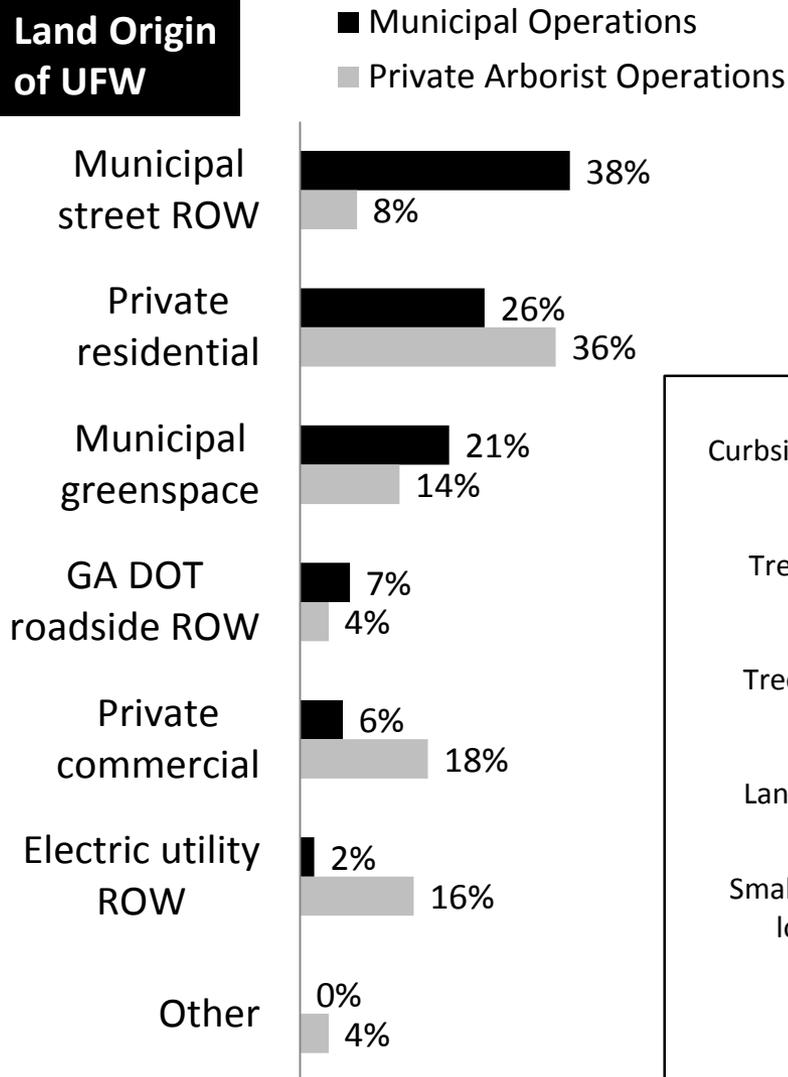
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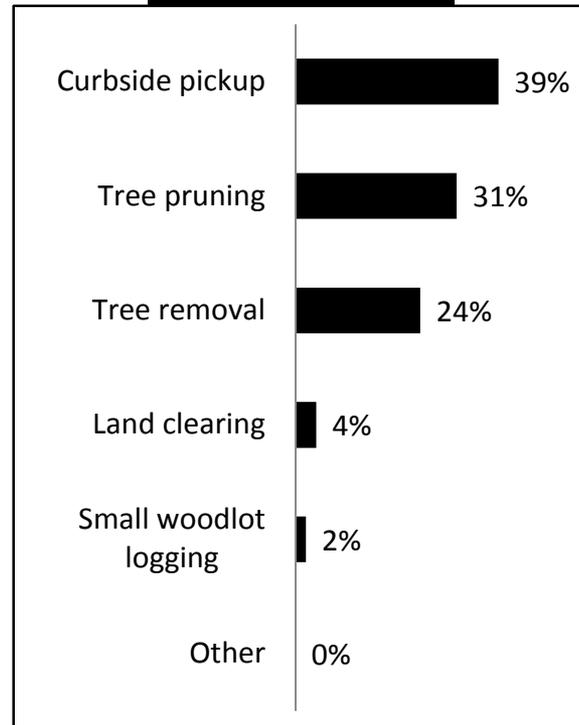
LOOK AHEAD

SUMMARY

Land Origin of UFW



Source of UFW



Urban Forest Waste Practices

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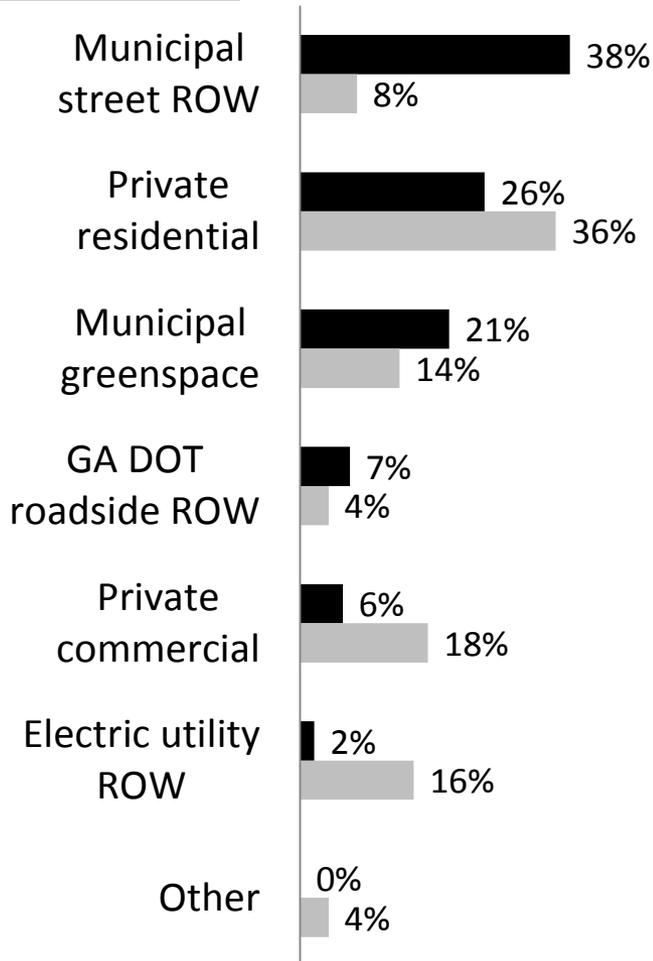
RESEARCH

LOOK AHEAD

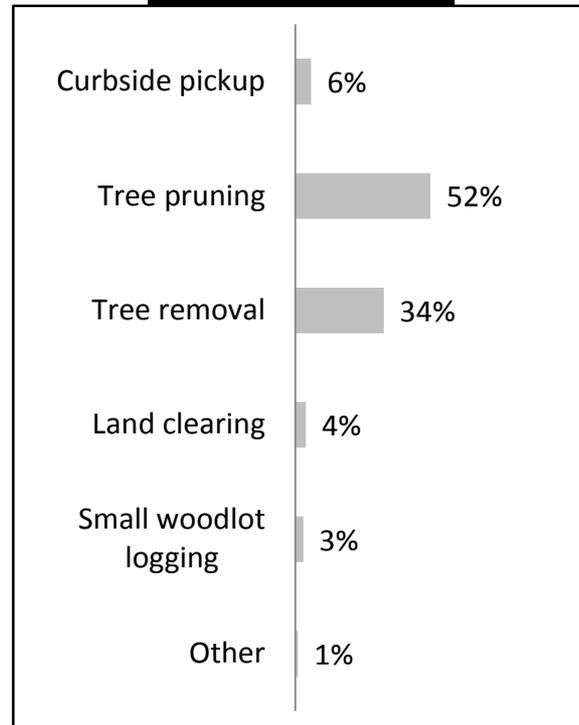
SUMMARY

Land Origin of UFW

■ Municipal Operations
■ Private Arborist Operations



Source of UFW



Urban Forest Waste Practices

OVERVIEW

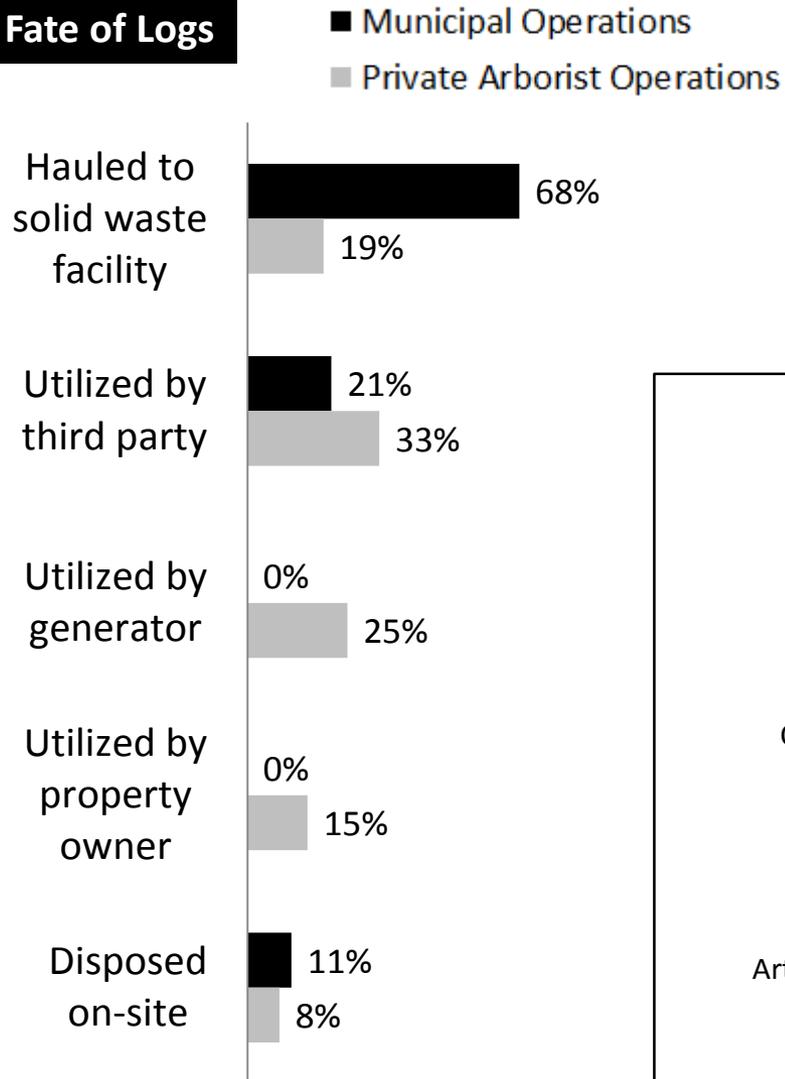
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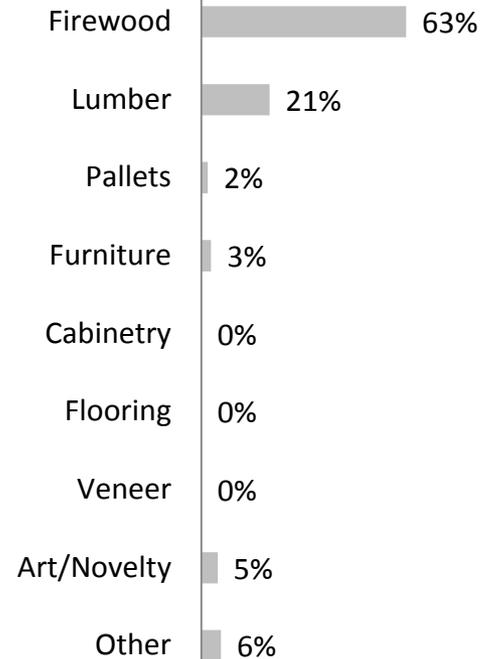
LOOK AHEAD

SUMMARY

Fate of Logs



Generator UFPs



Urban Forest Waste Practices

OVERVIEW

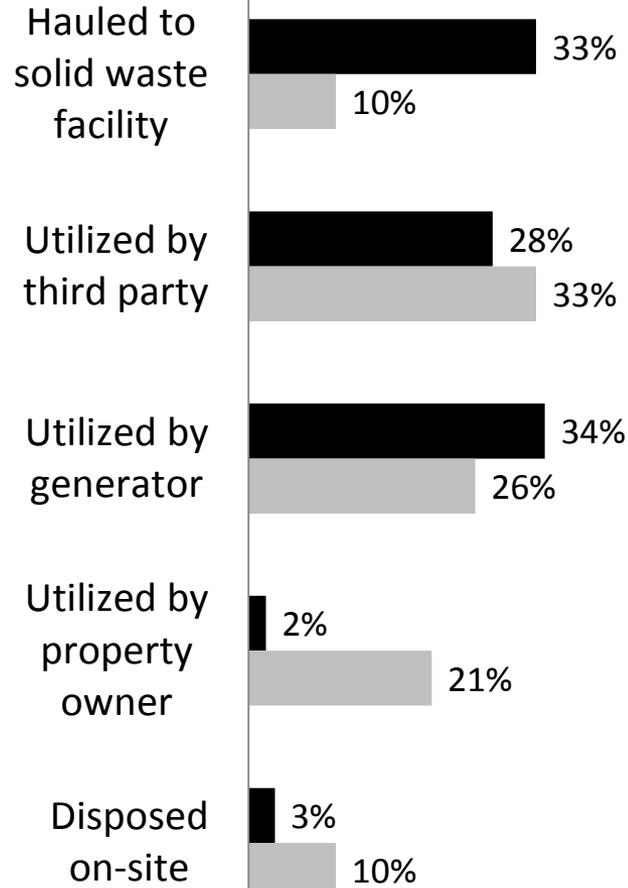
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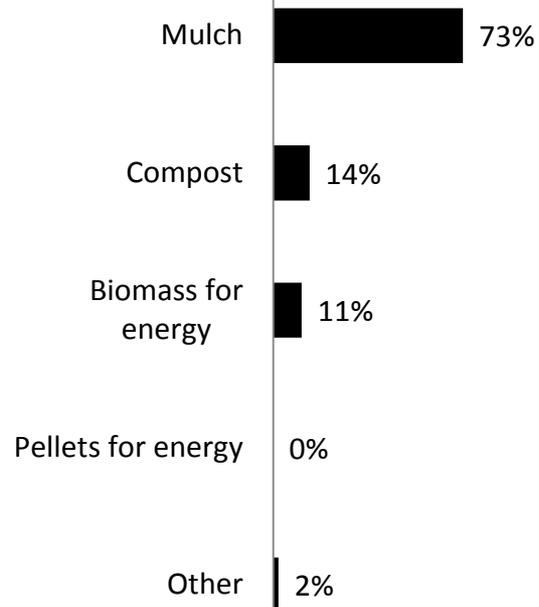
Fate of Wood Chips



■ Municipal Operations
■ Private Arborist Operations



Generator UFPs



Urban Forest Waste Practices

OVERVIEW

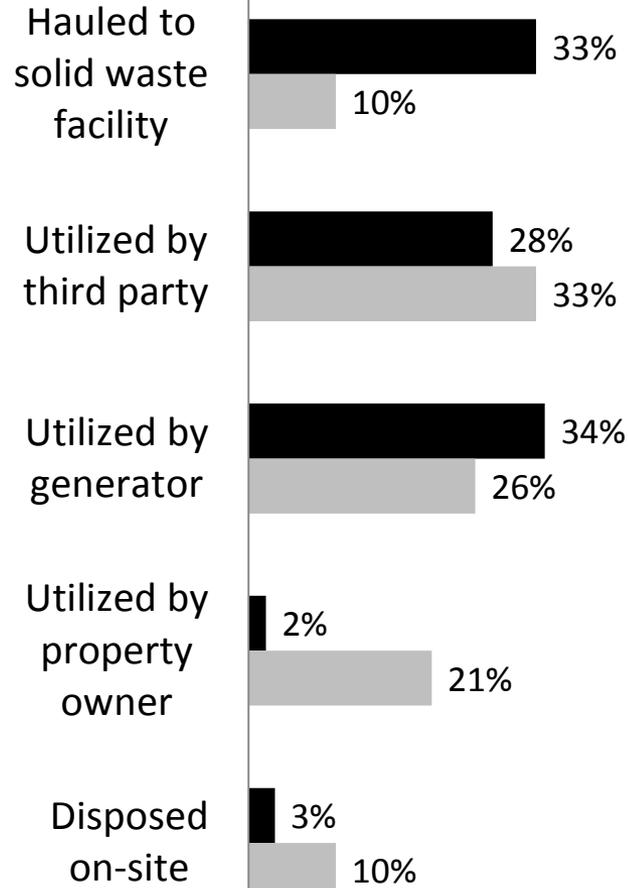
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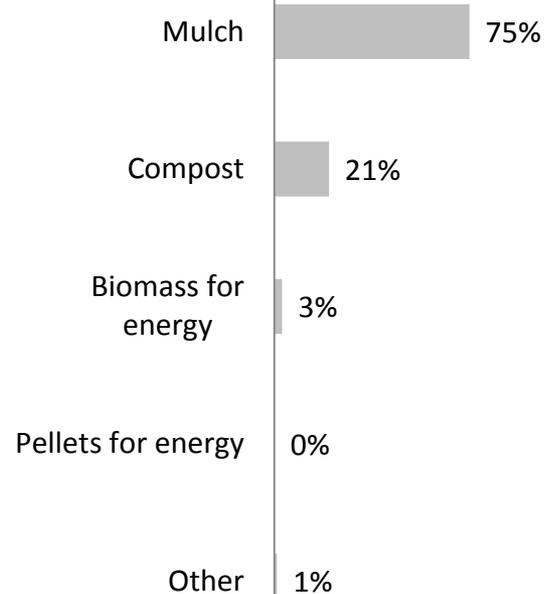
Fate of Wood Chips



■ Municipal Operations
■ Private Arborist Operations



Generator UFPs



Urban Forest Waste Practices

OVERVIEW

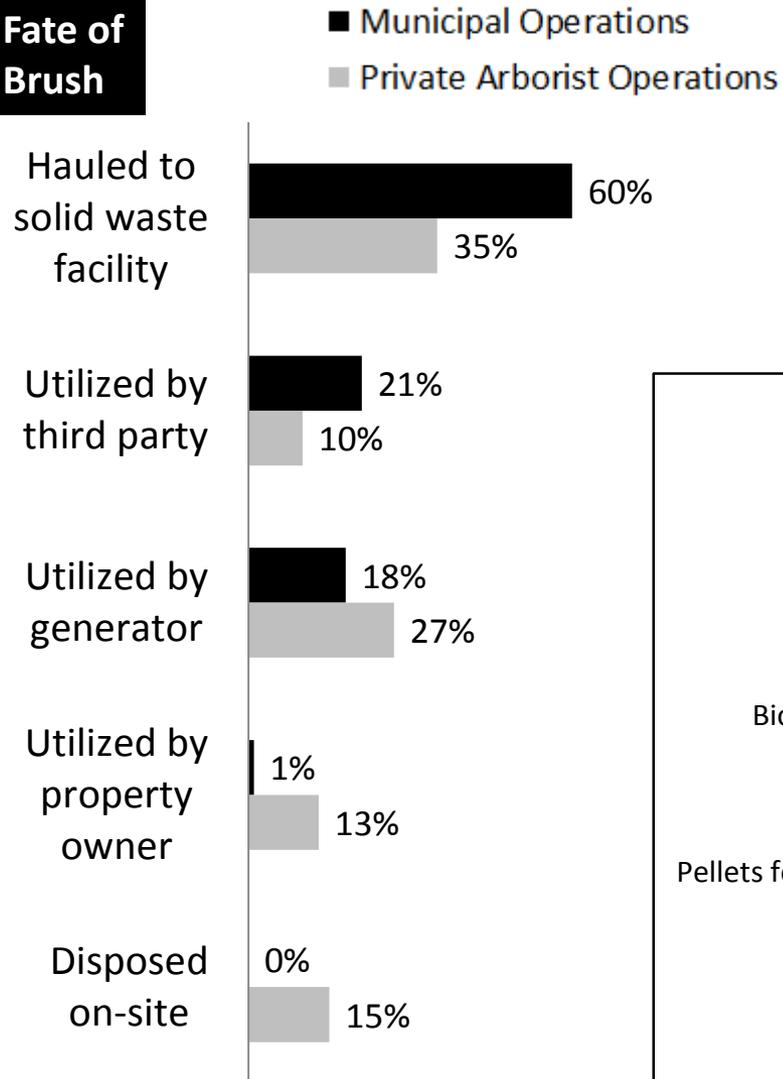
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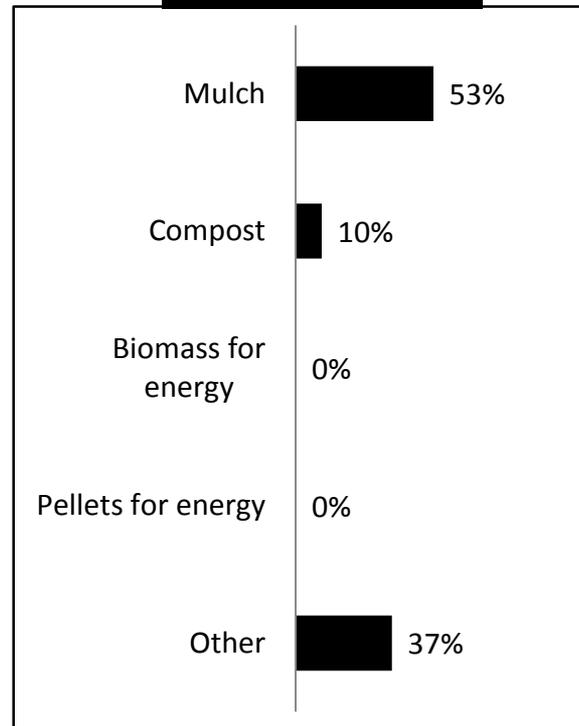
LOOK AHEAD

SUMMARY

Fate of Brush



Generator UFPs



Urban Forest Waste Practices

OVERVIEW

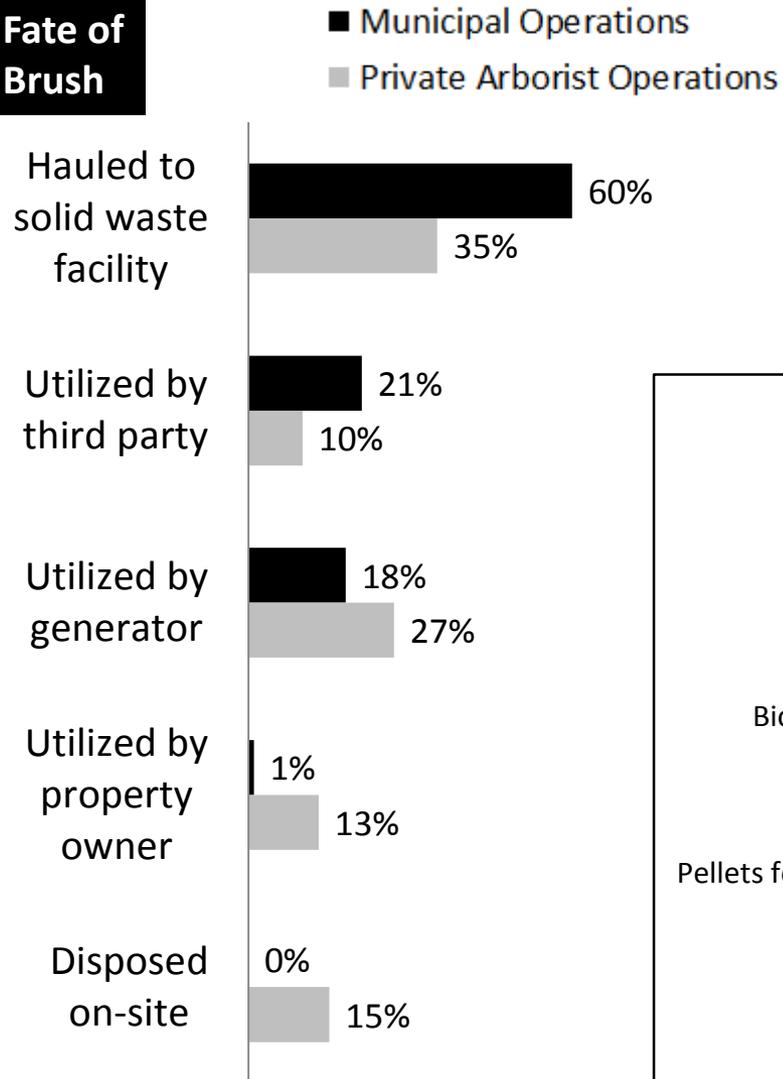
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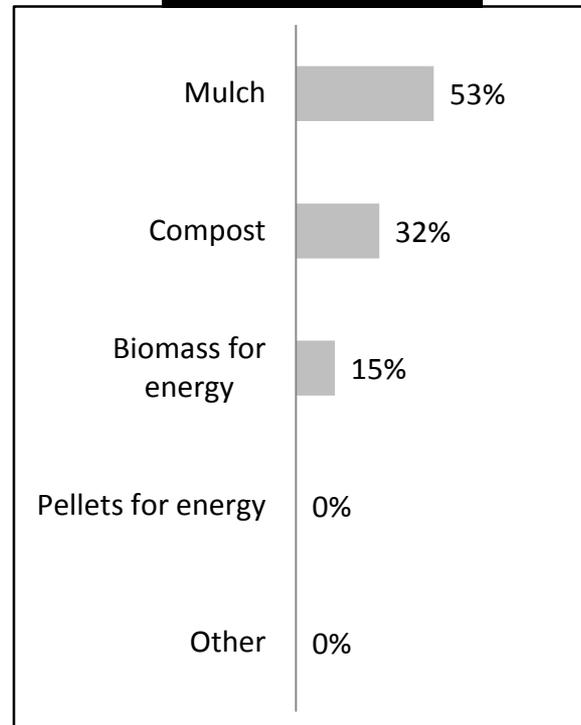
LOOK AHEAD

SUMMARY

Fate of Brush



Generator UFPs



Urban Forest Waste Perceptions

OVERVIEW

My operation seeks to increase UFW utilization...

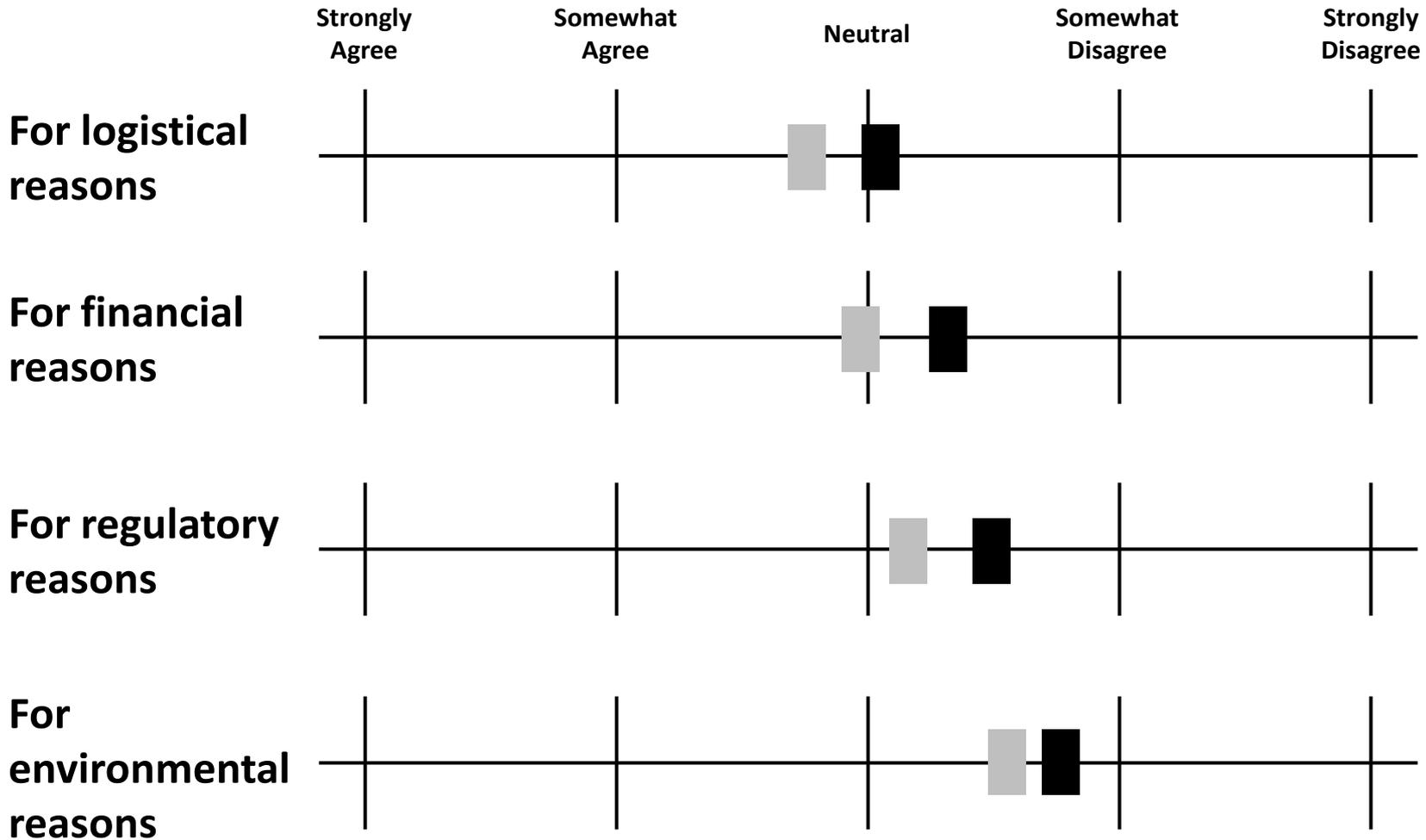
Municipal Employees
Certified Arborists

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Urban Forest Waste Perceptions

OVERVIEW

Urban forest waste...

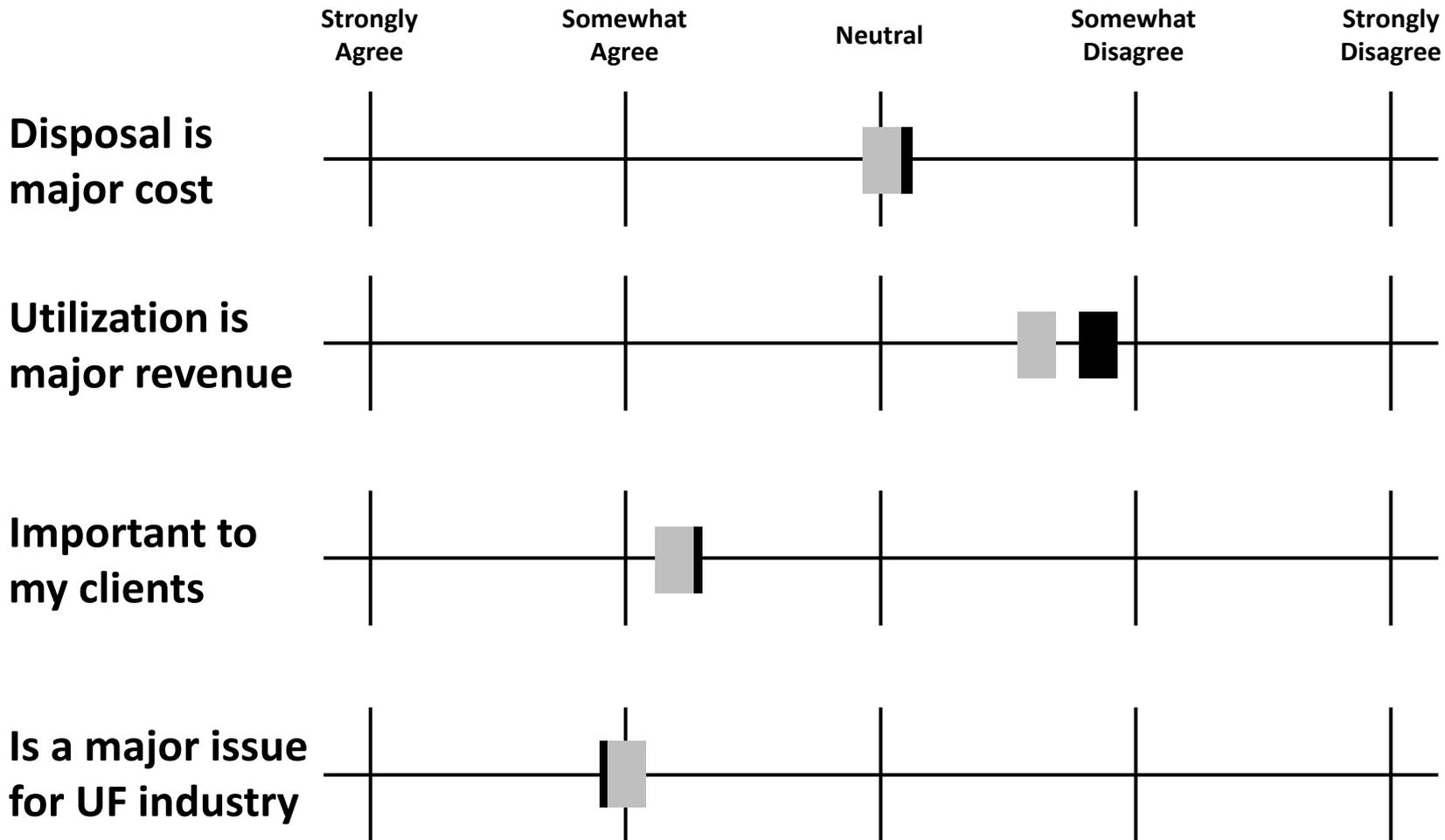


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Urban Forest Waste Perceptions

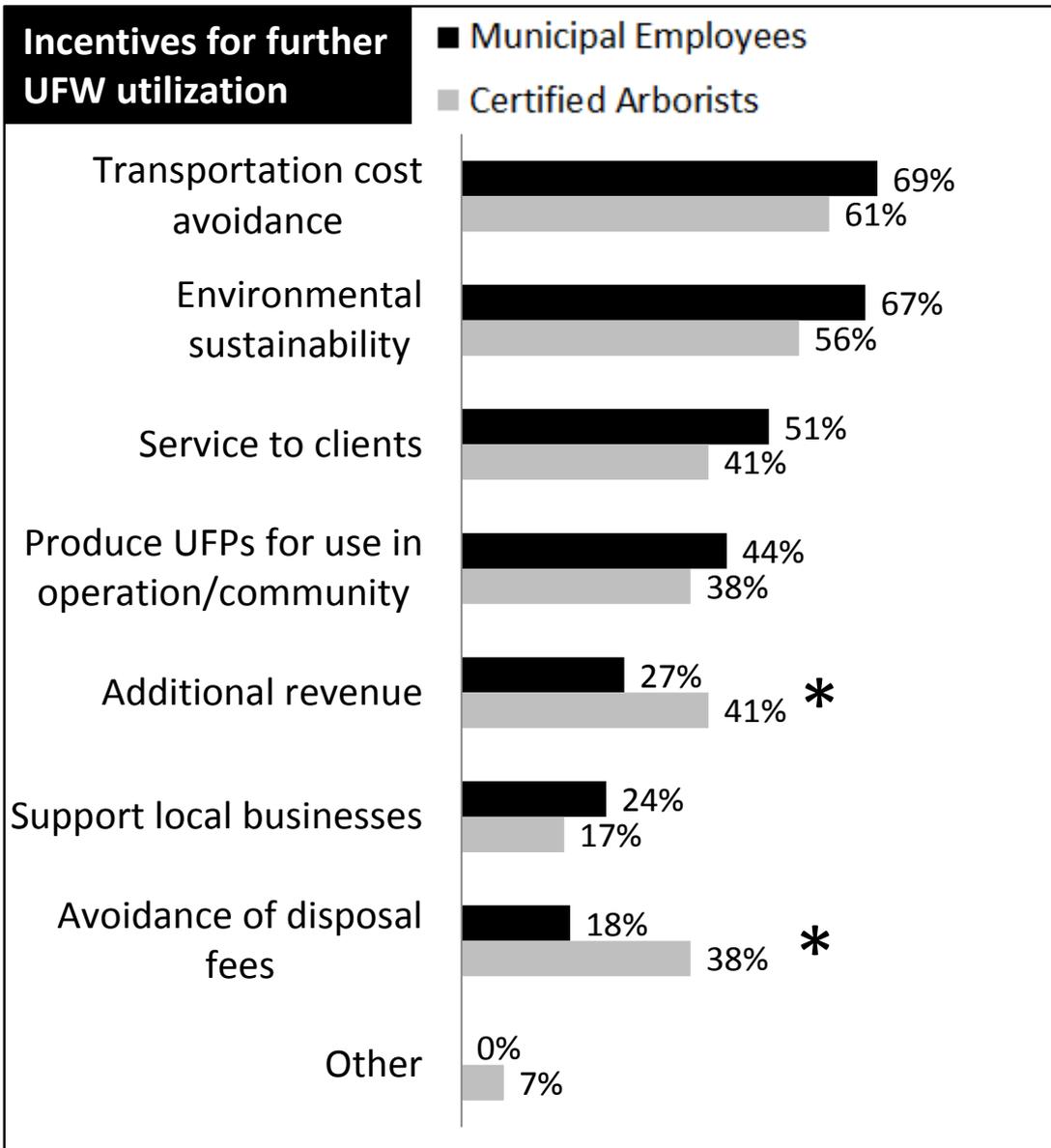
OVERVIEW

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Urban Forest Waste Perceptions

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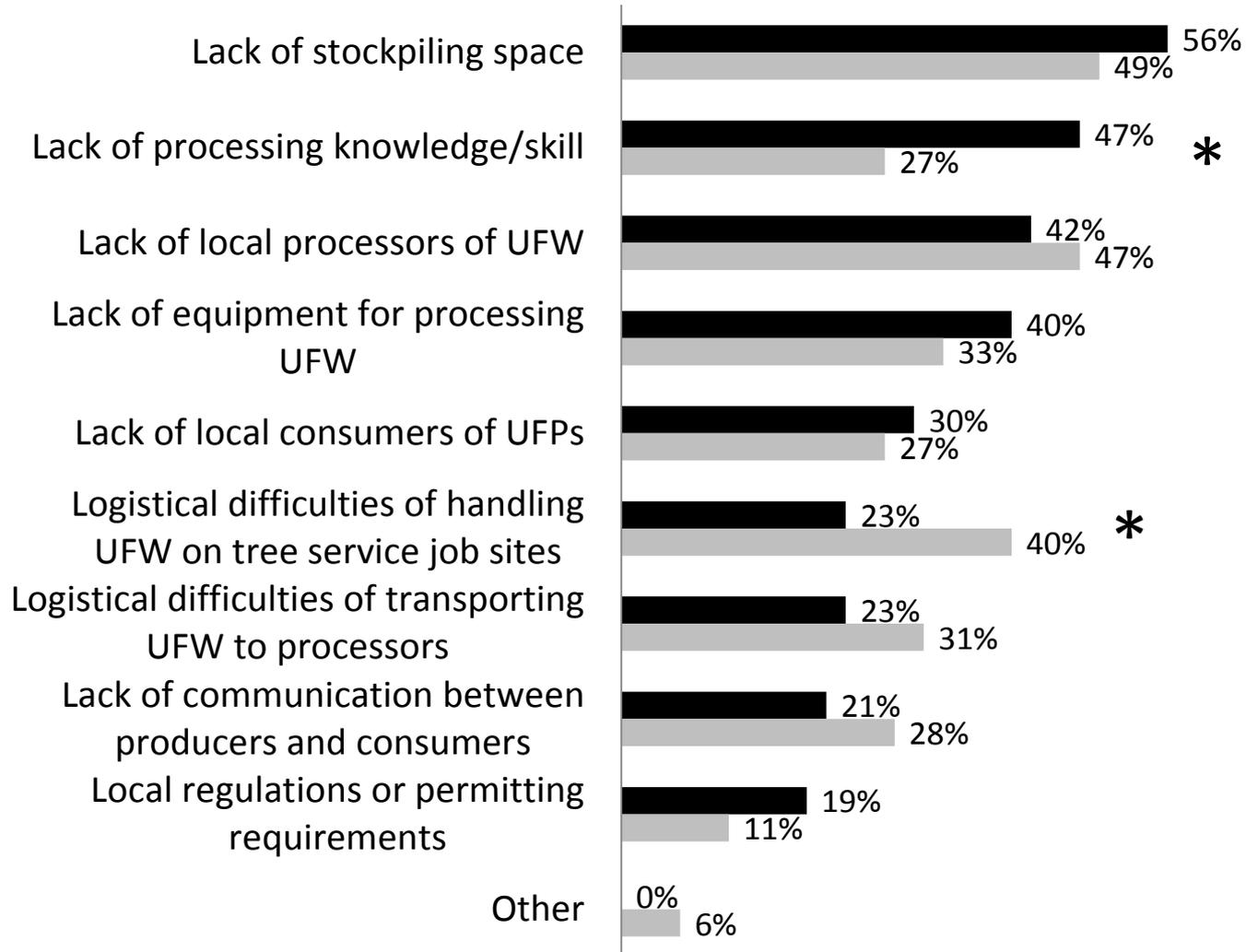
RESEARCH

LOOK AHEAD

SUMMARY

Barriers for further UFW utilization

■ Municipal Employees
■ Certified Arborists



Hypotheses to be tested

- **Is wood truly under-utilized?**
- **How much carbon can be offset by wood utilization?**
- **Is wood utilization better or worse for air quality?**
- **What is the economic impact of utilization?**



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Capabilities to be developed

OVERVIEW

- **Mensuration and procurement of urban wood**
- **Practical ways to transport, stockpile, and sort urban wood**
- **Technologies to connect urban wood generators and consumers**
- **Marketing campaigns for urban wood products**
- **Investment to support start-up companies and innovative solutions to utilization barriers**

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Your questions and comments

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GEORGIA
FORESTRY
COMMISSION

