



GAA'S TREE CARE INDUSTRY SPEAKS

*Results of the Georgia Tree Care Industry Economic
Impact and Licensing Grant*

ABSTRACT

In October of 2019, The Georgia Arborist Association surveyed its membership to the scope of the tree care industry in Georgia; perceptions of safety and measures of professionalism; adherence to safety regulations; and perceptions about professional licensing. Results are presented in this report, along with an analysis of other state licensing models.

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Executive Summary

The Georgia Arborist Association conducted an online survey of its membership to determine the scope of the tree care profession and to explore opinions and concerns about the professional practice of tree care in the state. In addition, they undertook an exploration of licensure of tree care professionals in other states.

Survey respondents were experienced, educated, and knowledgeable in the field. There was limited specialization within the industry with residential work predominating. The industry was robust with businesses that range from very small to very large. There was a slight skew toward the very small and very large businesses.

Respondents understood the importance of safety and associated it with professionalism, but did not always practice it. Respondents implemented in-house safety training and expressed a preference for that approach. They had little confidence in their competitors' safety practices and did not feel the current regulations adequately address safety issues.

There was broad general support for mandatory licensing. The New Jersey licensing and registration model addresses the issues identified in the survey (safety and professionalism) and of consumer confidence.

Introduction

It is not surprising a rich and robust tree care industry has developed to attend to Georgia's trees. Georgia is a lush state, rich in trees. Atlanta is often called a "city in a forest." Georgia's native trees include red cedar, a variety of pines, 52 varieties of native oaks, maples, palms, sweetgum, and white hickories, as well as many others.

The Tree Care Industry operates freely in Georgia. A business license must be obtained from the county and/or city in which the primary place of business is located. Local ordinances may limit some activity, but there is no specific licensing or registration.

The Tree Care Industry Association (TCIA) conducts analyses of worker injuries and fatalities. A 2017 TCIA report stated that struck-by or struck-against incidents were most common, totaling 43, followed by falls (42), and electric shock or burn (22). California (14), Florida (12) and Georgia (9) posted the most incidents, according to the report. The report also stated that:

- The typical fall victim was unsecured;
- The typical struck-by victim stayed in the drop zone; and
- The typical electrocution victim violated minimum approach distance and made contact through a conductive tool/object.

Each type of these failings happened in clear violation of long-standing safety standards and regulations. They represent behaviors that are contrary to training resources that are commonly used and widely available through professional tree care organizations.

In recognition of the danger, OSHA frequently targets the tree care industry for special training. Unfortunately, some segments of the industry are difficult to reach because of the informal structure of many of the companies. Some service providers appear with storms and disappear quickly, hiring and laying off workers as needed. Frequently the workers are paid “under the table” and lack employment records. They may pay diminished or no taxes and have no access to workers compensation benefits in the event of injuries. For companies that operate under the radar of government records, knowledge of safety requirements or training opportunities is often nonexistent.

There are indications that customer satisfaction with the tree service industry is low. Barriers to entry in the industry are minimal; anyone with a chain saw and a truck can offer services. This ease-of-entry can result in companies doing work for which they are unqualified and/or insufficiently insured. After weather events, when reputable tree care companies are overwhelmed with emergency calls, “door-knockers” offer services house-to-house, often performing substandard work for cash, and often without general liability or worker compensation insurance. This can result in worker injuries or fatalities, property damage, poor-quality tree care, and diminished public perceptions of tree care providers in general.

The United States Better Business Bureau (US BBB) compiles and releases Complaint and Inquiry Statistics. The [2018 summary](#) is available online. The US BBB received 1,064,337 inquiries about tree service companies in 2018. The inquiries are made by people asking for services in their area or recommendations. The number of inquiries is a high, placing tree care services in the 25th place out of 5,962 industries listed (the top 0.5 percentile). Although no reason for this high number of inquiries is presented in the report, it does suggest that many consumers do not know who they should contact for reliable tree services.

The US BBB received 1,506 complaints concerning tree services, earning the industry a rank of 101 among 5,962 listed industries and placing it in the top 1.7% in terms of total complaints. This is not an enviable position. On average, the US BBB was able to settle 78% of the received complaints for all businesses. Just 45% of the complaints were settled in Tree Care, 49% were not settled, and 6% of the complaints were not pursued. This large share of unresolved complaints could well result from the informal structure and temporary nature of many companies that may cease doing business or change the company name.

The Georgia Arborist Association (GAA), Inc. is a non-profit organization with 351 members. The GAA’s mission is to promote safe and proper arboriculture practices in the state of Georgia through networking, training, and public education; and to be a voice for the professional arborists who manage and care for Georgia’s trees. Conversations and formal training of members within the GAA often focus on efforts to improve both professionalism and safety within the industry.

The Production and Safety Sub-committee (PSS) of the GAA Board of Directors decided to conduct a survey of tree care companies in Georgia to ascertain the scope of the profession and to explore opinions and concerns about the professional practice of tree care in the state. In addition, they undertook an exploration of licensure of tree care professionals in other states.

Materials and Methods

In 2019 the GAA received the *Georgia Tree Care Industry Economic Impact and Licensing Grant* as part of the Urban & Community Forestry Grant from the Georgia Forestry Commission. PSS partnered with researchers from the University of Georgia to develop a questionnaire consisting of 31 questions (Appendix A). The electronic version of the questionnaire was created in Qualtrics and focused on four areas: the size and scope of the industry, safety within the industry, support for licensing within the industry, and wood chip disposal.

The information about the survey was distributed to the membership of the GAA through electronic means, during meetings, via phone calls, and in conversations with individual members. A dedicated website with the posted questionnaire was available online from October - December, in 2019. Three hundred sixty-eight business received the survey; 187 respondents initiated the survey and 153 completed the survey.

Most of the results of the survey are presented in this report with the exception of questions about wood chip disposal. That issue will be a focus of a separate publication.

In addition, five states were identified that have arborist licensing programs in place: Maine, Connecticut, New Jersey, Louisiana and Maryland. Information about these licensing programs was gathered online and through phone calls to the licensing agencies.

Size and Scope of Georgia's Tree Care Industry

Education, training and location. The individuals who responded to the survey had an average of 18.8 years of experience in the business (Appx. A, Question 27). They were educated with 88% continuing their studies past high school (Appx. A, Question 28). They had an average age of 51 and just over half of them were the owner or a manager of the firm (Appx. A, Questions 26 and 29). Twenty-seven percent of the respondents said their company was accredited by TCIA (Appx. A, Question 3), a rigorous third-party consumer confidence verification program administered by the TCIA. The vast majority of companies employed an International Society of Arboriculture (ISA) Certified Arborist (88.5%) and 35% of them employed a TCIA Certified Tree Care Safety Professional (Appx. A, Question 15).

The respondents represented companies headquartered in 36 counties throughout the state (Appx. A, Question 1). Not surprisingly, they tended to be clustered around the metropolitan areas of Georgia. Many of the respondents operated locally. On average, their company provided services in 7.2 counties and one-half of them worked in five or fewer counties (Appx. A, Question 2).

Company characteristics. Respondents indicated that their companies did a wide variety of arboricultural work. Trimming and removal of trees were the two the most frequent types of service, with 46% and 46% of respondents, respectively, indicating they did those activities “very often” (Appx. A, Question 17). Consulting services and tree consultations were the next most frequent service, each named by 29% of the respondents. This, too, is not surprising, given that 11% of respondents categorized themselves as consultants and that many tree service providers offer consulting as one of their services. When asked if the company planned to add services in the next 12 months following the survey, consulting was the most frequently cited as *likely* or *very likely* (Appx. A, Question 18).

Almost half (49%) of the respondents listed commercial/residential/tree company as their primary practice, followed by public sector practice (14%) and the consulting/tree/risk appraisal service (11%) (Appx. A, Question 4).

Most of the respondents (124) reported their companies engaged in residential service provision with 62% of those engaged at a level of at least 50% (Appx. A, Question 5). Quite a few companies (107) engaged in servicing commercial customers, but just 14% engaged at a level of 50% or more. The results suggest the surveyed companies readily pick up commercial work when available, but do not specialize in it. The same can be said of municipal work. Almost a third of the respondents do municipal work, but just 20% spend half or more their time at it.

Companies engaged in utility, consulting, and other activities had slightly higher levels of specialization. Relatively few firms engaged in utility work (19), but 58% of these engaged at a level of at least 50% and another 26% engaged at a level of 90% or more. Ninety-one of the respondents engaged in consulting, while 28% engaged in that activity at a level of at least 50% and 20% reported their engagement at a level of at least 90%.

There were many *niche* companies that listed services in the “Other” category. Those companies listed such services as maintenance, stump grinding, education and other lines of work. These were highly specialized companies with 60% of them engaging 50% in this business and 35% engaging at a level of 90% in a single activity.

Overall, the results suggest that residential work drives the industry in Georgia and that there is limited specialization.

The number of workers employed averaged 18.7 (Appx. A, Question 7) with a clear predominance of full-time rather than part-time employees. Respondents indicated their company had an average of three crews¹ with an average of 2.7 workers in each crew (Appx. A, Question 8 and 9). Once again, the results suggest numerous small companies.

A question (Appx. A, Question 13) probed whether workers in various positions had expressed a preference to be paid as contract labor rather than hourly labor. In general, the most frequent responses for various categories of employees was “not applicable or do not have this position,”

¹ A crew is an organized group of workers under a leader working at a task.

which would be consistent with consultancies and many small operations. The second most frequent responses tended to be “strongly disagree.”

When asked if their companies subcontract any of their work, nearly half (44.8%) of respondents indicated that they did (Appx. A, Question 10). Many of those that do subcontract also responded that they are primarily employers but rely on subcontractors to perform some aspects of daily operations.

Company revenue. The distribution of tree care companies according to their annual revenues shows the concentration of respondents in three categories (Appx. A, Question 6). The largest share of companies, 29%, reported revenues not exceeding \$100,000 in 2018. This group likely includes part-time businesses. Another 10% of the respondents reported revenues in the range \$200,001-\$500,000 annually. Interestingly, the majority of the respondents (54%) reported company income in the first four categories that did not exceed \$500,000. Small businesses dominate the Georgia Tree Care Industry.

The third concentration of respondents worked for companies earning between \$2,500,001 and \$5,000,000 per year (Appx. A, Question 6). Firms falling into this revenue category are large, likely well equipped, and likely operating over a relatively large area in the State of Georgia. Nearly one in four reported their firms (23%) earned in excess of \$2,500,001 2018 and 14% earned more than five million dollars.

The combination of many small firms and large firms falling into the revenue categories at the low and high end of the scale, with relatively few firms in between (Appx. A, Question 6) has been observed in other surveys of the Green Industry conducted in Georgia. The distribution of responding firms across the twelve revenue categories reflects to some extent the economies of scale and the challenges accompanying company growth.

Safety and Georgia’s Tree Care Industry

The survey results indicated that many companies had safety training programs; 75 % of the respondents regularly or always learned safety practices from staff in their own company and 66% responded they regularly or always learned safety through work experience (“hands-on”) on the job (Appx. A, Question 11). Similarly, 52% learned about safety from their peers and 51% learned from arborist professional organizations. Cooperative Extension, trade shows, commercial representatives, or third-party training solutions were not common sources of safety information with 44%, 54%, 72%, and 59% of respondents, respectively, never or seldom learning about safety from those sources. Respondents expressed a preference for in-house, hands-on training and had little interest in learning at trade shows or from social media (Appx. A, Question 12).

Wearing required personal protective equipment (PPE) is often considered a measure of safety regulation adherence as well as professionalism. Head, eye, ear, and leg protection are required by OSHA when operating a chainsaw, yet just 55%, 65% 59%, and 51% of respondents, respectively, always used the appropriate PPE (Appx. A, Question 19). Respondents were

familiar with ANSI Z133 (arboriculture safety requirements) and ANSI A300 (industry tree care standards), but were relatively unfamiliar with safety standards on logging, cranes, and electric power generation, transmission, and distribution (Appx. A, Question 20).

The respondents clearly understood the importance of safety. Most respondents linked safety to professionalism (Appx. A, Question 23). Almost all (91%) agreed that a safety training program, use of PPE (92%), and adherence to ANSI standards (89%) were necessary to establish professionalism in tree care services.

The respondents did not express confidence in the safety practices of their competitors (Appx. A, Question 22). Just 13% expressed any level of agreement with the statement, “My Competitors follow well-known safety rules.” The respondents also expressed concern with new companies. There was strong disagreement among respondents with the statement “Newly formed tree companies quickly implement best practices and quickly come into compliance with ANSI regulations.” Only 3% agreed with the statement and 62% of the respondents disagreed.

Georgia’s tree care industry expressed ambivalence that safety practices would improve over time (Appx. A, Question 22). Twenty-three percent agreed with the statement, “On average tree companies are getting safer and more compliant every year in Georgia,” but 25% disagreed. The respondents express little confidence that current regulations addressed the safety in the tree care industry. Just 19% felt that, “Georgia law ensures that companies take responsibility for the safety of their workers.”

Support for Licensing

The survey probed respondents for their support for mandatory licensing. Respondents felt that the absence of mandatory licensing fosters a lack of professionalism (63%), keeps wages to a minimum (43%), devalues the industry (64%), and results in a failure to enforce safety rules (59%) (Table 22).

When asked if they supported mandatory licensing, 43 % responded *definitely yes*, and 26% responded *probably yes*, (Appx. A, Question 24). Just 11% responded with *probably not* or *definitely not*. Nineteen percent were undecided.

Comparison of Licensing Programs in Other States

Five states which have licensing programs in place are: Maine, Connecticut, New Jersey, Louisiana and Maryland. The programs’ structure, administration, and requirements were compared and contrasted (Appx. B, Table 1).

The Connecticut licensing program applies only to businesses engaged in feeding, fertilizing, pruning, trimming, bracing, treating cavities, and protecting trees from insects or disease by spraying or other methods. It does not apply to tree removal and, therefore, it does not address the safety issues.

The other four programs have commonalities. All require insurance. There is an obligatory exam and a continuing education component that ensures commitment to education and professionalism. The licensing programs are housed in various departments in each state. Exam and license fees vary but are quite reasonable. Annual fees range from \$30 to \$175 per year.

The New Jersey Tree Expert (NJTE) Program is unique. The NJTE Board is an independent agency housed under the Environmental Protection Department that oversees licensure. Both a license and registration are required. The NJTE Board oversees the administration of Licensed Tree Expert and Licensed Tree Care Operator examinations, assuring knowledge and expertise in tree work.

The NJTE program requires at least one licensed person in every company and the company must be registered. The registration requires businesses to provide instruction and training on safe use of equipment and safe working procedures at the work site. The business must document their training to the board using a Model Tree Safety Training Checklist Form (Appx. C) and an attendance form each year.

The licensing program and business registration allow the NJTE Board to communicate directly to all companies offering tree care services within the state and provide opportunities for safety information to be circulated to the industry in addition to important health advisories (e.g. COVID 19) and pest infestations (e.g. emerald ash borer). The NJTE Board is also allowed to remedy complaints against both registered and unregistered tree care companies.

To help protect the consumer businesses are required to display the Business Registration Certificate for public view in the principle and branch offices and carry the registration number on all vehicles. The business must also abide by the Canons of Professional Ethics and Standards of Conduct for Businesses. (Appx. D).

Conclusions

- Survey respondents were experienced, educated, and knowledgeable in the field.
- There was limited specialization within the industry with residential work predominating.
- The industry was robust with businesses that range from very small to very large. There was a slight skew toward the very small and very large businesses.
- Respondents understood the importance of safety and associated it with professionalism but did not always practice it.
- The respondents were doing in-house safety training and expressed a preference for that approach.

- Respondents had little confidence in their competitors' safety practices and did not feel the current regulations adequately address safety issues.
- There was broad general support for mandatory licensing.
- The New Jersey licensing and registration model addresses the issues identified in the survey (safety and professionalism) and of consumer confidence.

Appendix A: Survey Questions and Response Summary

1. Please indicate the Georgia county in which your company is headquartered.

6 Athens Clarke	14 Cobb	1 Harris	2 Muscogee	2 Spalding
1 Baldwin	2 Columbia	2 Henry	9 Newton	1 Sumter
1 Bibb	27 DeKalb	2 Jackson	1 Oconee	1 Troup
4 Carroll	1 Glynn	1 Jones	1 Oglethorpe	4 Walton
1 Catoosa	20 Gwinnett	1 Liberty	1 Paulding	1 Wilkes
1 Charlton	1 Habersham	1 Lowndes	1 Pickens	
9 Chatham	5 Hall	1 Morgan	2 Rockdale	2 NA
4 Cherokee			1 Schley	1 DeKalb/Fulton Not counted

2. How many counties do you operate in on a regular basis?

Min: 1
 Max: 156
 Mean: 7.23 and std 16.62
 Median: 4
 Mode: 5

3. Is your company accredited by the Tree Care Industry Association?

Yes 50 27.0%
 No 114 61.6%
 Don't Know 21 11.3%

4. Which area best describes the primary practice of your company?

Activity	Frequency	
Commercial/Residential/Tree company	91	49.5%
Consulting/Tree/Risk appraisal	20	10.9%
Education/Training/Research/Extension	10	5.4%
Landscaping/Landscape architecture/Nursery	13	7.1%
Municipal/Public/Local government	25	13.6%
Supplier/Manufacturer/Vendor	1	0.5%
Utility/Vegetation management/Clearing/ROW	8	4.4%
Consulting arborist	8	4.4%
Other	8	4.4%
Total	184	

5. Please identify the scope of services your company provides; please allocate the percent of the company activity if the company was engaged in more than one of the businesses listed below in 2018; for example 80% landscape installation and 20% other. Please make sure the total adds to 100%.

Company Activity	Total Activity (Percentage of Total Respondents Engaging in Activity)					
	Residential	Commercial	Municipal	Utility	Consulting	Other
50% or more	78 (62%)	15 (14%)	14 (20%)	11 (58%)	26 (28%)	34 (60%)
90% or more	20 (16%)	3 (3%)	9 (15%)	3 (26 %)	18 (20%)	20 (35%)
Total Respondents (out of 187)	124	107	60	19	91	57

6. Please provide an indication of the size of your company by marking the total 2018 revenue category.

Income	Frequency	%
Less than \$100,000	50	28.6
\$100,001 - \$150,000	17	9.7
\$150,001- \$200,000	9	5.1
\$200,001 - \$500,000	18	10.3
\$500,001 - \$750,000	7	4.0
\$750,001 - \$1,000,000	9	5.1
\$1,000,001 -\$1,500,000	12	6.9
\$1,501,000 -\$2,500,000	10	5.7
\$2,501,000 -\$5,000,000	19	10.9
\$5,000,001-\$10,000,000	12	6.9
\$10,000,001-\$20,000,000	6	3.4
more than \$20 million	6	3.4
Total	175	

7. Please tell us how many workers you employed in 2018.

Workers	Range	Mean
Total employees, including yourself	0-250	18.7
Full-time year-round employees	0-200	18.06
Part-time year-round employees	0-50	1.52
Full-time seasonal employees	0-1040	12.42
Part-time seasonal employees	0-50	1.36
177 observations		

8. How many crews do you run?

Min 0

Max. 45

Mean 3.03

9. How many workers are in your typical crew?

Range of 1-20 with a mean of 2.78

10 . Do you subcontract out any of your work?

Yes: 81

No: 100

Select the statement that best describes the use of subcontracting within your business.

	%	Frequency
I am primarily a general contractor and the focus of the business is on project management; subcontractors perform the bulk of the operational activity.	18.3%	13
I am primarily a general contractor, but the business has employees in operations; both subs and employees perform the operational activities.	9.9%	7
I am an employer primarily and the employees perform the bulk of operational activities, but we rely on subcontractors to perform some aspects of our daily operation.	31.0%	22
I am an employer primarily and the employees perform nearly all operational work, although we may use subs to help with non-operational portions of the business.	40.9%	29
Total Responses		71

11. Have you or your employees learned about safety practices from these sources?

Source	Never		Seldom		Sometimes		Regularly		Always		N
	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	
Safety/Training staff at your own company	12	7.4	6	3.7	22	13.5	71	43.6	52	31.9	163
Peers	3	1.9	10	6.3	63	39.9	65	41.1	17	10.8	158
Arborist professional organizations	5	3.0	10	6.0	67	40.4	62	37.3	22	13.3	166
UGA Research/Extension	37	22.7	35	21.5	56	34.4	28	17.2	7	4.3	163
Printed trade magazines, trade reports, or trade press	6	3.6	27	16.4	70	42.4	51	30.9	11	6.7	165
Online publications/Trade website	13	7.9	35	21.2	72	43.6	35	21.2	10	6.1	165
Trade shows	35	21.5	53	32.5	55	33.7	18	11.0	2	1.2	163
Workshops	12	7.2	32	19.2	82	49.1	35	21.0	6	3.6	167
Social Media	45	27.4	55	33.5	38	23.2	21	12.8	5	3.0	164
Commercial representatives	51	32.1	64	40.3	36	22.6	6	3.8	2	1.3	159
Third party training solution (for examples, NATS, ACRT, TCI)	47	29.0	49	30.2	43	26.5	19	11.7	4	2.5	162
Onsite work experience (“hands-on”) on the job training	15	9.1	7	4.3	33	20.1	56	34.1	53	32.3	164
OSHA resources	39	23.9	45	27.6	44	27.0	25	15.3	10	6.1	163
Other; please name	30	75.0	5	12.5	3	7.5	1	2.5	1	2.5	40

12. Where would you prefer to learn about safety practices?

Source of information	Do not prefer		Prefer slightly		Prefer a moderate amount		Prefer a lot		Prefer a great deal		N
	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	
Safety/Training staff at your own company	11	7.0	16	10.2	37	23.6	45	28.7	48	30.6	157
Peers	11	7.1	27	17.4	52	33.5	46	29.7	19	12.3	155
Arborist professional organizations	4	2.5	10	6.3	46	29.1	68	43.0	30	19.0	158
UGA Research/Extension	10	6.5	25	16.1	60	38.7	45	29.0	15	9.7	155
Printed trade magazines, trade reports, or trade press	10	6.5	44	28.6	54	35.1	35	22.7	11	7.1	154
Online publications/Trade website	15	9.9	41	27.0	56	36.8	28	18.4	12	7.9	152
Trade shows	27	17.5	50	32.5	47	30.5	19	12.3	11	7.1	154
Workshops	8	5.1	16	10.2	48	30.6	68	43.3	17	10.8	157
Social Media	59	38.3	51	33.1	30	19.5	8	5.2	6	3.9	154
Commercial representatives	38	24.4	55	35.3	42	26.9	15	9.6	6	3.8	156
Third party training solution (for examples, NATS, ACRT, TCI)	23	14.8	37	23.9	51	32.9	24	15.5	20	12.9	155
Onsite work experience ("hands-on") on the job training	7	4.5	10	6.4	32	20.5	53	34.0	54	34.6	156
OSHA resources	32	20.9	36	23.5	42	27.5	29	19.0	14	9.2	153
Other; please name	28	66.7	4	9.5	4	9.5	1	2.4	5	11.9	42

13. What is your level of agreement with the statement: The following workers have expressed a preference to be paid as contract labor, rather than hourly labor:

Employee position	Strongly disagree		Disagree		Neither agree, nor disagree		Agree		Strongly agree		Don't know		Not applicable or do not have this position		N
	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	
Climber	31	19.0	16	9.8	22	13.5	22	13.5	19	11.7	12	7.4	41	25.2	163
Ground worker	31	19.3	39	24.2	20	12.4	10	6.2	10	6.2	12	7.5	39	24.2	161
Arborist	35	21.5	19	11.7	29	17.8	25	15.3	14	8.6	14	8.6	27	16.6	163
Marketing	28	17.4	16	9.9	29	18.0	18	11.2	16	9.9	18	11.2	46	28.6	161
Technician/Plant health care	32	19.8	29	17.9	34	21.0	9	5.6	5	3.1	17	10.5	36	22.2	162
Sales	31	19.3	21	13.0	29	18.0	14	8.7	11	6.8	14	8.7	41	25.5	161
Clerical	36	22.4	34	21.1	27	16.8	8	5.0	2	1.2	15	9.3	39	24.2	161
Management	41	25.6	31	19.4	25	15.6	14	8.8	5	3.1	10	6.3	35	21.9	160

14. Does your company employ a Certified Tree Care Safety Professional (CTSP)?

Yes	56	35.0%
No	97	60.6%
Don't Know	7	4.4%
Total	160	

15. Does your company employ an arborist certified by the International Society of Arboriculture?

Yes	147	88.6%
No	19	11.4%
Total	166	

16. a. Does your company produce wood chipping?

Yes	101	59.8%
No	68	40.2%
Don't Know	0	0%
Total	169	

16.b. What does your company do with wood chippings?

Action	Almost never		Seldom		Neither often nor seldom		Often		Very often		Don't know		N
	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	
Give to another company	41	49.4	14	16.9	6	7.2	11	13.3	11	13.3	0	0	83
Sell to another company	54	63.5	7	8.2	7	8.2	5	5.9	12	14.1	0	0.0	85
Sell for energy generation	53	62.4	8	9.4	6	7.1	3	3.5	13	15.3	2	2.4	85
Give to discrete locations	16	18.8	18	21.2	11	12.9	17	20.0	21	24.7	2	2.4	85
Use myself to produce mulch products	44	50.6	11	12.6	5	5.7	11	12.6	15	17.2	1	1.1	87
Keeps chips for other use	34	38.2	24	27.0	11	12.4	13	14.6	6	6.7	1	1.1	89
Composting company	45	52.9	8	9.4	9	10.6	11	12.9	9	10.6	3	3.5	85
Dispose at landfill	53	61.6	16	18.6	5	5.8	7	8.1	4	4.7	1	1.2	86
Pay to dispose	33	38.4	19	22.1	4	4.7	12	14.0	18	20.9	0	0.0	86
Other; please name	11	61.1	0	0.0	2	11.1	2	11.1	2	11.1	1	5.6	18

17. What types of specific services do you offer?

Service	Almost never		Seldom		Neither often, nor seldom		Often		Very often		N
	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	
Tree trimming	33	22.0	11	7.3	7	4.7	30	20.0	69	46.0	150
Tree removal	38	25.5	7	4.7	9	6.0	27	18.1	68	45.6	149
Crane work	67	45.3	30	20.3	12	8.1	16	10.8	23	15.5	148
Consulting Services	16	10.6	23	15.2	29	19.2	39	25.8	44	29.1	151
PHC-fertilizers or sprays	55	37.4	20	13.6	17	11.6	21	14.3	34	23.1	147
Utility clearing	95	65.1	27	18.5	8	5.5	5	3.4	9	6.2	146
Tree consultations	16	10.7	16	10.7	32	21.5	42	28.2	43	28.9	149
Tree appraisals	45	30.4	39	26.4	27	18.2	21	14.2	16	10.8	148
DOT work	93	64.6	26	18.1	14	9.7	6	4.2	5	3.5	144
Clearing and/or grubbing	65	44.5	32	21.9	24	16.4	15	10.3	10	6.8	146
Planting	52	35.1	29	19.6	31	20.9	20	13.5	16	10.8	148
Landscaping	83	57.2	21	14.5	14	9.7	17	11.7	10	6.9	145
Soil amendment production	76	52.1	27	18.5	19	13.0	11	7.5	13	8.9	146
Stump grinding	61	40.9	12	8.1	17	11.4	24	16.1	35	23.5	149
Sell equipment	112	78.3	20	14.0	10	7.0	1	0.7	0	0.0	143
Other	27	19.4	0	0.0	4	2.9	0	0.0	8	5.8	139

18. In the next 12 months, my company plans to add the following service:

Service	Not likely		Neither likely nor unlikely		Likely		Very likely		Don't know		N
	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	
Tree trimming	62	55.4	13	11.6	4	3.6	25	22.3	8	7.1	112
Tree removal	64	57.7	11	9.9	8	7.2	22	19.8	6	5.4	111
Crane work	81	71.7	9	8.0	6	5.3	11	9.7	6	5.3	113
Consulting Services	41	37.6	12	11.0	18	16.5	26	23.9	12	11.0	109
PHC-fertilizers or sprays	63	55.8	19	16.8	5	4.4	18	15.9	8	7.1	113
Utility clearing	89	77.4	12	10.4	3	2.6	4	3.5	7	6.1	115
Tree consultations	42	39.3	14	13.1	18	16.8	22	20.6	11	10.3	107
Tree appraisals	55	50.9	17	15.7	14	13.0	10	9.3	12	11.1	108
DOT work	84	69.4	14	11.6	14	11.6	4	3.3	5	4.1	121
Clearing and/or grubbing	86	74.8	9	7.8	9	7.8	6	5.2	5	4.3	115
Planting	63	54.3	17	14.7	13	11.2	16	13.8	7	6.0	116
Landscaping	41	36.3	18	15.9	5	4.4	14	12.4	5	4.4	113
Soil amendment production	77	67.5	13	11.4	8	7.0	8	7.0	8	7.0	114
Stump grinding	76	69.1	9	8.2	8	7.3	10	9.1	7	6.4	110
Sell equipment	102	86.4	6	5.1	3	2.5	1	0.8	6	5.1	118

Other	32	71.1	1	2.2	2	4.4	4	8.9	6	13.3	45
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19. Please indicate the frequency with which the following safety practices are used by your employees (or by yourself if you are consulting or self-employed).

Practice	Always		Most of the time		About half the time		Sometimes		Never		Don't know		N
	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	
Use chainsaw-protective leg chaps when operating a chainsaw	78	51.3	20	13.2	3	2.0	13	8.6	11	7.2	27	17.8	152
Use hardhats when out of the vehicle	84	55.3	22	14.5	6	3.9	21	13.8	3	2.0	16	10.5	152
Use double tie-in when making cuts aloft	80	52.6	13	8.6	0	0.0	6	3.9	5	3.3	48	31.6	152
Use ear protection when operating equipment	90	59.2	30	19.7	3	2.0	5	3.3	3	2.0	21	13.8	152
Use eye protection when operating equipment	99	65.1	25	16.4	5	3.3	5	3.3	2	1.3	16	10.5	152
Use traffic control devices (cones, barriers, etc.) when working near or in a street	101	66.4	15	9.9	3	2.0	7	4.6	3	2.0	23	15.1	152
Use command-response techniques during operations	82	53.9	20	13.2	4	2.6	8	5.3	2	1.3	36	23.7	152

20. Please indicate the degree of your own familiarity with:

Standard/certification	Not familiar at all		Not familiar		Neither familiar, nor unfamiliar		Familiar		Very familiar		N
	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	
ANSI Z133.1	11	7.3	10	6.6	20	13.2	52	34.4	58	38.4	151
ANSI Z475.5	19	13.0	41	28.1	37	25.3	36	24.7	13	8.9	146
ANSI A300	10	6.7	11	7.4	15	10.1	55	36.9	58	38.9	149
OSHA 1910.266	19	13.3	43	30.1	36	25.2	35	24.5	10	7.0	143
OSHA 1910.269	20	13.9	44	30.6	38	26.4	31	21.5	11	7.6	144
OSHA 1995 General	21	14.6	39	27.1	38	26.4	33	22.9	13	9.0	144
OSHA 1926.1400	21	14.6	42	29.2	41	28.5	33	22.9	7	4.9	144
OSHA 1910.180	21	14.7	42	29.4	41	28.7	33	23.1	6	4.2	143

21. Please indicate how often do you find yourself in the following situation:

Statement	Less than 20% of the time		21-40% of the time		41-60% of the time		61-80% of the time		More than 81% of the time		Don't know		N
	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	
I am out-bid by less qualified companies or individuals	22	14.8	27	18.1	33	22.1	14	9.4	7	4.7	46	30.9	149
I am out-bid by qualified companies or individuals	53	35.6	30	20.1	11	7.4	4	2.7	3	4.7	48	32.2	149

22. Please indicate your opinion as a person/firm in the tree care service industry with regard to the following statements.

Statement	Strongly disagree		Disagree		Neither agree, nor disagree		Agree		Strongly agree		Don't know/Not applicable		N
	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	
Competition for customers is strong in my area	4	2.6	8	5.3	16	10.5	62	40.8	36	23.7	26	17.1	152
My competitors are providing quality service	8	5.3	33	21.7	37	24.3	37	24.3	4	2.6	33	21.7	152
My competitors follow well-known safety rules	10	6.6	51	33.6	32	21.1	19	12.5	1	0.7	39	25.7	152
My competitors have experienced personnel	4	2.6	17	11.3	52	34.4	41	27.2	4	2.6	33	21.9	151
The competitors' compliance with written standards is inadequate	3	2.0	15	9.9	37	24.3	33	21.7	13	8.6	51	33.6	152
I have problems communicating in Spanish	7	4.6	21	13.8	21	13.8	56	36.8	26	17.1	21	13.8	152
Lack of mandatory licensing fosters lack of professionalism	6	3.9	10	6.6	16	10.5	42	27.6	54	35.5	24	15.8	152

Lack of mandatory licensing keeps wages to a minimum	11	7.2	18	11.8	34	22.4	43	28.3	23	15.1	23	15.1	152
Lack of mandatory licensing results in devaluation of the industry	4	2.6	7	4.6	23	15.1	47	30.9	50	32.9	21	13.8	152
Lack of mandatory licensing means companies fail to enforce safety rules	4	2.6	14	9.2	25	16.4	46	30.3	43	28.3	20	13.2	152
The tree companies in my market area uphold industry standards	13	8.6	38	25.2	54	35.8	13	8.6	2	1.3	31	20.5	151
On average tree companies are getting safer and more compliant every year in GA	8	5.3	30	20.0	46	30.7	33	22.0	2	1.3	31	20.7	150
GA law ensures that tree companies take responsibility for the safety of their workers	13	8.6	34	22.5	44	29.1	26	17.2	3	2.0	31	20.5	151
Newly formed tree companies quickly implement best practices and quickly come into compliance with ANSI regulations	32	21.2	62	41.1	21	13.9	2	1.3	3	2.0	31	20.5	151

23. What would you consider necessary to establish the professionalism in tree care services?

Necessary item	Strongly disagree		Disagree		Neither agree nor disagree		Agree		Strongly agree		Don't know		N
	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	
Adequate insurance	4	2.6	6	3.9	7	4.6	46	30.3	85	55.9	4	2.6	152
Safety Training Program	4	2.6	1	0.7	4	2.6	44	29.1	94	62.3	4	2.6	151
Use of Personal Protection of Equipment	4	2.6	1	0.7	3	2.0	37	24.3	104	68.4	3	2.0	152
Adherence to ANSI standards	4	2.6	2	1.3	5	3.3	47	30.9	89	58.6	5	3.3	152
Certified Arborist on staff	6	3.9	4	2.6	14	9.2	41	27.0	84	55.3	3	2.0	152
Limited use of contract employees	1	0.7	23	15.2	53	35.1	30	19.9	33	21.9	11	7.3	151
Mandatory licensing	8	5.3	8	5.3	27	17.9	40	26.5	63	41.7	5	3.3	151

24. Would you support mandatory licensing?

Definitely yes		Probably yes		Might or might not		Probably not		Definitely not		N
Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	
64	43.5	38	25.9	28	19.0	10	6.8	7	4.8	147

25. What do you think would be a reasonable annual license fee for a tree care company to pay if the company were the same size as your tree care company?

	Obs.	Min.	Mean	Std. dev.	Max
Fee	122	0.00	978.67	4375.06	47000.00

26. My position in the company is?

Architect/Planner	4
Marketing/Sales	8
Municipal/Urban Forrester	14
Owner/Manager	86
Researcher	1
Trainer	4
Climber	2
Other	11
Consulting arborist	22
Total	152

27. How many years of experience do you have in the business area of your company?

Range	Mean	STD
0-50 years	18.85	11.78

28. What is the highest degree or level of school you have completed? If currently enrolled, highest degree received.

Some high school	0
High school	19
Some college	41
College/Bachelor	61

College/Postgraduate 33

29. How old are you?

Range	Mean	STD
25-75	51.38	12.16

30. Please indicate your gender.

Male: 130 Female: 23

31. Please note which organization your company is affiliated with.

Title	Yes		No		Don't know		N
	Frequency	%	Frequency	%	Frequency	%	
ISA (International Society of Arboriculture)	138	93.2	9	6.1	1	0.7	148
Tree Care Industry Association	67	54.031	53	42.7	4	3.3	124
ASCA (American Society of Consulting Arborists)	12	11.6	85	82.5	6	5.8	103
GTC (Georgia Tree Council formerly GUFC)	62	52.5	44	37.3	12	10.2	118
Southern Chapter ISA	111	80.4	27	19.6	0	0	138
GAA (Georgia Arborists Association)	132	92.3	9	6.3	2	1.4	143
GGIA (Georgia Green Industry Association)	19	18.3	73	70.2	12	11.5	104
Georgia Urban Agriculture Council	30	28.0	70	65.4	7	6.5	107
Women's Arborist of the Southeast	13	12.7	80	78.4	9	8.8	102
Coastal Arborist Association	10	9.8	84	82.3	8	7.8	102
Trees Atlanta	33	30.5	69	63.9	6	5.5	108

Appendix B: Characteristics of State Licensing in Other States.

	Maine	Connecticut	New Jersey	Louisiana	Maryland
Title	First Class Landscape Arborist, First Class Utility Arborist, Master Arborist	Arborist License	Licensed tree care operator (LTCO) or Licensed Tree Experts (LTE)	Arborist License & Utility Arborist License	Maryland Tree Experts
Applies to the Following:	Arboriculture work: leaving the ground for pruning or trimming, installing cabling or bracing, diagnosing and evaluating conditions of trees, and felling or taking down trees in developed areas.	Tree Health Care (does not apply to tree removal)	Tree pruning, repairing, brush cutting or removal, tree removal, stump grinding or removal, tree establishment, fertilization, cabling and bracing, lightning protection, consulting, diagnosis, and treatment of tree problems or diseases, tree management during site planning and development, tree assessment and risk management, and application of pesticides or any other form of tree maintenance.	Make recommendations or execute tree surgery type work including tree removal, pruning, trimming, cabling, fertilization and cavity work.	Anyone who receives compensation for making diagnoses, prescribing, and supervising the treatment for trees; or trimming, pruning, thinning, cabling, shaping, removing, or reducing the crown of trees.
Overseen by:	Department of Agriculture, Conservation and Forestry	Dept. of Energy and Environmental Education	New Jersey Board of Tree Expert under the Environmental Protection Department	Louisiana Horticulture Commission	Maryland Department of Natural Resources
License by:	Individuals	Individuals	Individuals and Business	Individuals	Individuals
Obligatory	Yes	Yes	Yes	Yes	Yes
Exam	Yes	Yes	Yes	Yes	Yes
CEU Requirements	None noted	12 within 5 years	32 per 2 years	Attendance of continuing education seminar annually	8 every 2 years

Safety Component	Exam	Exam	Exam. Develop and establish a written comprehensive safety policy. Submit Mandatory Training - A Model Tree Safety Training Checklist Form annually. Submit Safety Training Attendance Form annually to document the annual employee training requirement.	Exam	Exam
Insurance Requirement	Yes	No	yes	yes	
Fees	\$60-\$110 for Exam	\$200 for Exam, \$240 Annual Registration	Exam-\$100-\$175, License Renewal Fee \$150 per two years, Business Registration Fee \$200 per 2 years	Exam Fee-\$114, License Fee \$100 per year	Exam Fee: \$30 License Fee: \$30 per year
Advertising Requirements	no	no	Must display registration	Must be written into contracts	no
Ethical Requirements	no	no	yes	no	no

Appendix C: Model Tree Safety Training Checklist

The Model Tree Safety Training Checklist is a document that is filed annually with the Board of Tree Experts and identifies the type of safety training a Registered Business has provided for its employees. A Registered Business shall submit to the Board of Tree Experts its safety training completed during the preceding year to the Board of Tree Experts by January 31st of the following year. The Model Tree Safety Training Checklist is due to the Board on or before January 31, 2018 after the Business has registered in 2017. Employee safety training may be done either in-house or by an outside company or organization. If an outside company or organization is used, details of that training shall also be submitted with this form. This **Model Tree Safety Training Checklist** should be submitted with the **Employee Attendance Form** that set forth the names of employees attending each training, and the **Training Course Information Form** that sets forth the subject matter and format of each training.

Company Name: _____ Company NJTC # _____

Name and Contact Information of Training Coordinator:				
Training Topics	Tailgate* Session(s)	Date	Date	Date
Training required for all employees regardless of job duties				
ANSI Z133 general awareness	1, 2			
Back safety – proper lifting, etc.	11, 28, 36			
CPR/first aid/bloodborne pathogens awareness training	10, 29, 30, 31			
Emergency preparedness & response, aerial rescue	16, 20, 21, 37			
Job site setup and traffic control	34, 35, 38			
Personal protective equipment: eye and face, hands, feet, head	4, 5, 7, 8, 9			
Slip, trip & fall avoidance	25			
Struck-by avoidance	22, 23, 24			
Vehicle Safety	17, 18, 58			
Job-specific training required prior to exposure, periodically, and/or post-incident				
Aerial lift inspection, maintenance and use	40, 42, 54, 66, 67			
Brush chipper safety	19, 75, 81			
Cabling & Bracing	70			
Chain saw operation & maintenance	12, 13, 15, 71, 72, 78, 80			
Climbing	41, 45, 55, 62, 63, 64, 65, 69, 74, 76, 77			
CDL/defensive driver training	48, 49, 50, 51, 56, 57			
Crane operations	68, 79, 85			
Drugs & alcohol	33			
Electrical hazards, general awareness	3			
Electrical hazards, advanced training	39, 44, 60, 61, 83			
Electrical equipment safety	43			
Hand and small power tool safety	14			
Hazard Communication/Employee Right-to-Know				
Hydraulic dump body safety	84			
Lockout/Tagout				
Operator's manual review – as needed				
Pesticide application, spill prevention and response	52, 53			
Protection from the elements – hot and cold	26, 27			
Respirators: fit testing, use and maintenance	6			
Rigging & Removal	46, 47, 59, 82			
Rope use, knot tying and line handling				
Stump cutter safety	73			
Workplace violence	32			
Other:				

This Checklist was developed using TCIA's Illness and Injury Prevention Program. The tailgate references sessions are from Tailgate Safety, 6th Edition, © 2013, Tree Care Industry Association. For this and other training materials please visit TCIA.org

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Appendix D: New Jersey Canons of Professional Ethics and Standards of Conduct for Registered Businesses

A Registered Business shall abide by the following Canons of Professional Ethics:

1. Adhere to established standards of advertising and selling;
2. Honestly represent products and services;
3. Conduct business in an honest manner and abide by the law;
4. Openly identify the principal office, any branch office, and the ownership of the business;
5. Abide by all written agreements and verbal representations;
6. Address marketplace disputes quickly, professionally, and in good faith;
7. Protect any data collected against mishandling and fraud;
8. Approach all business dealings, marketplace transactions, and commitments with integrity, and conduct business in a fair and just manner;
9. Provide for the safety and training of employees to ensure a healthy work environment;
10. Stay current and educate employees and clients in the most current research and practices available to the industry;
11. Comply with all applicable laws and rules including quarantine restrictions established by a State or Federal agency having jurisdiction in New Jersey;
12. Adhere to the industry standards set forth at N.J.A.C. 7:3A-8.1(a).