

Arboriculture & Urban Forestry 2024 https://doi.org/10.48044/jauf.2024.004



A Review of Diversity, Equity, and Inclusion Themes in Arboriculture Organizations' Codes of Ethics

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Abstract. Codes of ethics (COEs) play an important role in outlining an association's ethical expectations of its membership. Diversity, equity, and inclusion issues in arboriculture have been long-standing, resulting in prevalent systemic inequality and discrimination within the industry. Codes of ethics may provide a means through which to address systemic barriers; however, unlike the forestry industry, there is limited understanding of how arboriculture organizations' codes of ethics approach diversity, equity, and inclusion. This review of 9 national and international arboriculture organizations' codes of ethics examines how equity, diversity, and inclusion are included within the expected ethical conduct of professional members. Through thematic and qualitative content analyses, we found that arboriculture organizations' codes of ethics varied in length and depth, ranging from 7 to 47 statements in codes of ethics. Most ethical codes were positively framed, indicating what members *should* do, rather than the contrasting negative framing which indicates what members *should not* do. Of the 9 arboriculture organizations, 7 included equity, diversity, and inclusion statements. Inclusion codes were the most common (n = 6 COEs), followed by equity (n = 5 COEs) and diversity (n = 3 COEs). In total, 8 codes of ethics referenced adherence to laws and regulations, 4 of which may provide a means for promoting ethical practice in the absence of explicit statements about equity, diversity, and inclusion.

Keywords. Accessibility; Arboriculture Governance; Best Management Practices; DEI; Environmental Governance; Forestry; Integrity; Morals; Principles; Professional Diversity; Standards; Urban Forester.

INTRODUCTION

Occupational demographics in skilled trades show a high degree of segregation and systemic challenges in both recruitment and retention of a more diverse, inclusive workforce (Kelly et al. 2015; Hunte 2016; Torre 2019; Bridges et al. 2020). Arboriculture and urban forestry are not immune to this issue. Minorities, women, and gender diverse people are underrepresented in the profession and face barriers to further involvement in the industry. In the United States, white men comprise a substantial fraction of the professional community of urban foresters (Kuhns et al. 2002). Systemic barriers and discriminatory treatment, whether intentional or inadvertent but present due to continuous social norms, has resulted in an engrained inequality in arboriculture and urban forestry (Bardekjian et al. 2019). This impacts people in different ways, and research has begun to highlight disparities. For example, in order to be respected in the male-dominated industries of arboriculture and urban forestry, individuals who identify as women often experience more pressure to

secure higher education and qualifications than their counterparts in equivalent roles (Day et al. 2022).

In addressing historical underrepresentation and multiple persistent barriers to involvement, a commonly discussed conceptual framework is "Diversity, Equity, and Inclusion" (DEI), a trimodal theory that promotes equal participation and treatment of all peoples. Diversity is defined as a group, organization, or membership with a range of people with different attributes and characteristics, including but not limited to gender identity, ethnicity, immigrants and refugees, language, and sexual orientation (AACN 2017; Dillard-Wright and Gazaway 2021). Equity is defined as recognizing different resources or educational programs required to support individuals' overcoming of obstacles in pursuing just outcomes, as opposed to equal opportunities which do not recognize systemic barriers. Lastly, *inclusion* is defined as creating a welcoming and respectful environment that supports the contributions of others. This is more comprehensive than simply creating a hiring

environment that hires a diverse group of people; instead, the work community or organization supports the involvement of the individuals hired. Within skilled trades occupations, proponents of DEI programs cite several benefits, including creating a culture of workforce diversity, enhancing collaboration, increasing cultural and financial growth, creating a more positive working environment for employees, and adding economic value (Fiori 2003; Contini and Samardzic 2019; Messer 2022).

Diversity, Equity, and Inclusion in Arboriculture

Natural resource management industries, including arboriculture, urban forestry, and industrial forestry, suffer from systemic barriers to enhancing DEI in the workplace. Occupational sociology literature has primarily examined the disproportionately large representation of men in natural resource trades, and the breadth of industrial forestry literature focuses mainly on gender diversity and equity. Attempts from industry stakeholders to explain the segregation in skilled trades often attribute under-representation to lacking interest-citing the high proportion of few demographics—and the physically strenuous nature of the natural resources trades. These arguments rely primarily on the existence of a positive feedback loop, referred to as forestry's catch-22 by Larasatie et al. (2020), describing a hostile work environment, spurred by the perception of lacking interest or physical inabilities, has inhibited retainment and retention of more diverse workforces.

Workers in arboriculture, urban forestry, and industrial forestry face barriers to entry including sexual harassment, gender stereotyping, racial discrimination, systemic issues of a male-benefiting gendered power structure, and the stigmatization of men as being more capable of carrying out skilled trades (Nordh 2018; Gagion 2019; Johnson 2022). Where anti-discrimination laws have been conducive in supporting pathways to career entry, persistent social norms of conduct and operations have perpetuated issues of unequal treatment and created hostile work environments. Sexually explicit comments, persistent unwanted flirting, calendars featuring nude women, the creation and reinforcement of gendered roles, and lack of available personal protective equipment have inhibited the creation of a positive work environment in the industry (Larasatie et al. 2018; Bardekjian et al. 2019; Johnson 2022). These issues explain some of the many barriers faced by those entering arboriculture and urban forestry and may contribute to drivers of the positive feedback loop that exists for recruitment and retainment within the industry.

For members of arboriculture and urban forestry who are not white, systemic racism has limited the diversity of the workforce (Heynen et al. 2007). This issue has been found in multiple studies focused on the United States, where people of colour are underrepresented in arboriculture and urban forestry compared to the overall labour pool (Kuhns et al. 2002; Heynen et al. 2007) and where race may influence hesitancy to join the arboricultural and related work forces (Bal et al. 2020).

Many arboriculture organizations are beginning to actively involve themselves in discussions about alleviating barriers to recruitment and retainment and increasing the extent of DEI programming within the industry. An increasing number of arboriculture conferences throughout North America feature and promote speakers who discuss systemic barriers and support systems (e.g., Johnson 2022), and organizations, such as the Pacific Northwest Chapter of the ISA, are creating DEI committees to provide oversight for organizational governance (Desai 2023). Credentialing organizations could also incidentally address within-industry discrimination by providing a mechanism for career advancement within a predominantly male industry (Day et al. 2022).

In addressing DEI-related issues within organizations and their membership, it is crucial to understand the governance models that exist which could be actionized to promote DEI, including in informal and unregulated professional governance models (Bridges et al. 2020). Unfortunately, anti-discrimination legislation faces numerous barriers or pitfalls to their meaningful application (Schwellnus 2008; Belavusau and Henrard 2019; Eyer 2021; Schneider et al. 2021). This places some onus on arboriculture organizations to address within-industry discrimination through organizational governance. For organizations, a predominant governance tool is a code of ethics (COE). Consequently, understanding the breadth of codes of ethics (COEs) is imperative in understanding the current governance capacity of arboriculture organizations in addressing critical concerns in professional conduct.

Codes of Ethics

To ensure the professionalism of their members or representatives, organizations often develop COEs—documents which outline the expected conduct of a membership group. While there are many ways of defining and perceiving COEs (Wood and Rimmer 2003), the definition that we use to describe COEs is that of Hosmer (1987), which was later cited in additional authoritative works (McDonald and Zepp 1989; Wood and Rimmer 2003):

Ethical codes are statements of the norms and beliefs of an organization ... they are the ways that the senior people in the organization want others to think. This is not censorship. Instead, the intent is to encourage ways of thinking and patterns of attitudes that will lead towards the wanted behavior. (Hosmer 1987)

Outlining the expectations of professional members and representatives, an organization's COE scaffolds the conduct of its affiliates, offering guidance on standards of ethical behavior for new and experienced professionals alike (Adelstein and Clegg 2016; Laas et al. 2022).

Codes of Ethics in Arboriculture

Because of the importance of COEs in organizational structures, there has been interest in what themes or topics are communicated in COEs and how they are communicated. Within the forest industry, there has been a continued interest in reviewing ethical frameworks and codes. The Society of American Foresters' COE has been examined multiple times, published readily by the *Journal of Forestry* (Barnwell 2019; Guldin 2019; Irland 2019; Lewis 2019; Radcliffe 2019). Arboricultural COEs have received comparatively less attention in the literature, despite the commonality of COEs across arboricultural organizations and their capacity to enhance professional practice.

Akin to the *Journal of Forestry* reviews, we set out specific research questions related to arboricultural COEs. Our review shares similar interests with a comparative review of ethical codes published in the *Journal of Forestry* which contrasted the Society of American Foresters' COE with other professional societies (Irland 2019). Our review remains exclusive to arboriculture, defined as the care and management of individual or few trees, whether through maintenance or consulting, within an urban context (Lilly 2010).

By examining how arboriculture organizations address DEI issues, we can improve our understanding of the current capacity of organizations to address DEI-related ethics violations. The rigidity of COEs in

alignment with this imperative could improve the support structure for early career professionals and promote the retainment and retention of a more diverse workforce in arboriculture and urban forestry by means of acting upon discrimination and misconduct. Through our review, arboricultural organizations can compare the breadth of other COEs, which may provide cause for reviewing and updating of existing documents. This study can also serve as a call to action for boards contemplating updates to COEs, bylaws, or policies. For practitioners, this review offers insight into the structured framework for professional conduct and the expectations of governing organizations in arboriculture.

MATERIALS AND METHODS COE Selection and Access

Several national and international arboriculture organizations currently offer professional arborist certifications or designations (O'Herrin et al. 2020). We compiled our list of professional organizations using the International Society of Arboriculture's (ISA) Tree Risk Assessment Qualification (ISA TRAQ) handbook, which lists equivalent designations to the ISA Certified Arborist® credential. We validated this against the lists of industry organizations in recent arboriculture and urban forestry survey studies (Day et al. 2022; Martin and Almas 2022).

In this study, we exclusively examined COEs available in English from organizations representing arborists, such as the ISA, or arboriculture companies, such as the Tree Care Industry Association (TCIA), operating at the national or international scale. The COEs of included organizations were sourced directly from their respective websites. In cases where a COE was not readily accessible on the organization's website, we expanded our search to encompass other related websites and file-hosting databases linked to the organization.

Framework for Review and Coding Methodology

The 4-person research team independently assessed all codes. The first author compiled and assessed the results, and, where discrepancies existed, the research team met to discuss the results. Five discrepancies were identified by the research team and resolved unanimously. Upon completion of the coding, a shared NVivo document was used to record the results for final review by the research team. The final results tables were verified against the NVivo document.

COE Structure and Qualitative Content Analysis

We first examined the structure of the COEs. We documented whether terms and industry jargon were defined within the document, as this reflects whether members of the public or those with limited experience in the industry could understand the COE. We conducted qualitative content analysis per Irland (2019) and Hsieh and Shannon (2005) to quantify the number of COE statements which use positive framing (e.g., "must do"), negative framing (e.g., "must not do"), and statements with dual framing, which include both positive and negative framing within one statement (e.g., "do not do x; instead, do y").

For qualitative content analysis, the number of statements within a COE was counted based on the number of individually numbered statements made within the COE. For COEs with sub-sections for a particular statement (i.e., Statement X-a, X-b), the sub-statements were counted as individual statements if they contained unique information. If the two sub-statements had the same point and were being used as a list, they were counted as one statement.

This was followed by thematic content analysis (Vaismoradi et al. 2016), examining how COE statements are written as either absolutes/prohibitions (e.g., "must do," "shall do," "shall not do") versus suggested actions (e.g., "should not"). While the ordinal ranking of the strength of these terms requires the creation of a ranked list that compares nearly synonymous verbs (e.g., Inkpen and Hirst 2006), we categorized the absolutes/prohibitions and suggested actions using exploratory coding, intended to reflect the phrasing common to the arboriculture standards of the American National Standards Institute (ANSI). The common

phrasing of the ANSI standards provides context for the practicing arborist wherein *shall* indicates a mandatory action and *should* indicates a suggested, but not compulsory, action. This would thusly influence how professional members read and interpret COEs with similar language.

Thematic Analysis of Diversity, Equity, and Inclusion

Our review examines the COEs for statements explicitly connected to DEI. DEI themes were categorized by the 3 pillars: diversity, equity, and inclusion, as defined by the American Association of Colleges of Nursing (AACN 2017) and Dillard-Wright and Gazaway (2021)(see Introduction). The COEs were coded using Braun and Clarke's (2006) 6 phases of thematic analysis with *priori* coding based on Dillard-Wright and Gazaway (2021)(Table 1).

Without explicit DEI concepts within the COEs, arboriculture organizations may resort to statements requiring members to adhere to local laws and regulations. Accordingly, we also conducted qualitative content analyses per Hsieh and Shannon (2005) using the keywords "law," "regulation," and "legal".

RESULTS

Overview

In this study, 9 COEs were reviewed(Table 2)(see Appendix). They are referred to by the organization's name or acronym, where applicable, and the year of publication. All 9 COEs were publicly available online with a simple Google search, although the European Arboricultural Council (EAC 2021) COE was available from a source external to the organization's website.

Table 1. Diversity, equity, and inclusion (DEI) concepts used for priori coding of arboriculture organizations' codes of ethics.

DEI concepts	Definition	Example
Divers* (diverse, diversity)	Statements which explicitly describe fostering a community that is free of discrimination, including not discriminating protected classes, or abiding by social and legal standards regarding conduct amongst peers	"Members must not discriminate on grounds including but not limited to race, nationality, gender, sexual orientation, religion, disability or age" – Arboricultural Association (2018, p. 2)
Equit* (equity, equitable)	Statements that explicitly describe support for the learning and continued education of other members, including disseminating research and other learning opportunities to peers and junior professionals	"Responsibility and commitment to encourage the growth and development of professional associates as colleagues and as mentors" – International Society of Arboriculture BCMA (date unknown, p. 2)
Inclus* (inclusion, inclusive)	Statements that explicitly describe treating other professionals fairly and with respect	"As a General Member, you agree to treat fellow arborists and allied professionals with due respect" — Arboriculture Australia (2019, p. 1)

Table 2. Arboriculture organizations' codes of ethics documents. Number of pages includes title pages.

Organization (acronym)	Membership region	Year	Title of code of ethics	Number of pages
American Society of Consulting Arborists (ASCA)	United States of America	2011	Standards of Professional Practice	6*
Arboricultural Association	United Kingdom	2018	Code of Conduct and Ethics	3
Arboriculture Australia	Australia	2019	Code of Ethics for a General Member	2
Arboriculture Australia	Australia	2013	Registered Member Code of Ethics	3
European Arboriculture Council (EAC)	Europe	2021	Code of Ethics for the European Tree Worker and the European Tree Technician	3 ⁺
Institute of Chartered Foresters (ICF)	United Kingdom	2015	Code of Conduct	6*
International Society of Arboriculture (ISA)	International	n.d.	ISA Board Certified Master Arborist Code of Ethics	3
International Society of Arboriculture (ISA)	International	n.d. ISA Code of Ethics and Agreement of Release Authorization		3
Tree Care Industry Association (TCIA)	United States of America	n.d.	Code of Ethics	1

^{*}Denotes a code of ethics that includes a title page with no codes included on the title page.

Table 3. Within arboricultural organizations' codes of ethics, we examined the length (word count) of the introduction preceding the codes/statements, whether the organization spelled out its acronym (yes/no), and the number of definitions provided for terms used in the codes of ethics.

Code of ethics	Introduction length (word count)	Organization acronym spelled out*	Number of definitions ⁺	
American Society of Consulting Arborists (2011)	87	Yes	6	
Arboricultural Association (2018)	188	N/A	1	
Arboriculture Australia (2019)	223	N/A	0	
Arboriculture Australia (2013)	102	N/A	0	
European Arboriculture Council (2021)	29	No	0	
Institute of Chartered Foresters (2015)	324	N/A	1	
International Society of Arboriculture (BCMA) (date unknown)	114	No	0	
International Society of Arboriculture (date unknown)	116	Yes	0	
Tree Care Industry Association (date unknown)	66	Yes	0	

^{*}If N/A = code of ethics does not use acronyms to refer to the organization.

Excluding the COEs which did not include a date on the document (ISA, TCIA), the oldest COE was the American Society of Consulting Arborists (ASCA) Standards of Professional Practice, published in 2011 (Table 2). The most recent was the EAC, published in 2021. The shortest overall length of a COE was the TCIA's Code of Ethics (date unknown) at one page. Both ASCA (2011) and the

Institute of Chartered Foresters (ICF 2015) had 6-page COEs, although the first pages of both documents were title pages which did not include any codes.

All COEs included an introduction to the codes (Table 3). Acronyms were used for 5 of the organizations, 3 of which were defined or spelled out within the text. Only 3 organizations, ASCA, ICF, and the

^{*}Denotes a code of ethics with an agreement/signatory page on the last page of the code of ethics with no codes included on the last page.

⁺Does not include spelling out the acronym of the organization.

Arboricultural Association, provided definitions of terms that were used within the COEs. ASCA (2011) defined or provided explanation for 6 words/terms: arboricultural, arboricultural consultant, ASCA's *A Consultant's Guide to Writing Effective Reports*, consulting arborist, and continuing education requirements. ICF (2015) only defined what "client" meant in the context of the COE. The Arboricultural Association (2018) only defined "member" in the context of the COE. Unlike ICF and ASCA, the Arboricultural Association defined "member" within the COE itself, rather than preceding the codes.

Positive and Negative Framing

Most statements with the organizations' COEs were written using positive framing (e.g., "members shall" or "members should") versus negative framing (e.g., "members shall not" or "members must avoid") (Table 4). Statements with both positive and negative framing were included in 6 COEs (e.g., "members

shall ... and members shall not ..."). Only the Arboricultural Association (2018) included informational statements as a component of the COE statements.

Absolute Versus Suggested Action Statements

COEs used a diverse number of absolute versus suggested action statements. Absolute statements were ones that used verbs which require compliance (e.g., "members must"), whereas suggested action statements were ones that suggested an appropriate action but did not use a verb which suggested mandatory compliance (e.g., "members should"). Several COEs used absolutes in the introductory sentence preceding the codes. EAC (2021) precedes their statements with a header statement that was meant to apply to all statements, using the phrase "they shall"; however, specific codes also included the phrases "comply to," "be aware that," "must," "shall not," and "should avoid." ISA (date unknown) uses the phrasing "must"

Table 4. Framing of organization's individual codes within the code of ethics (COE). Positively framed codes are those that state preferred behaviour versus negatively framed statements that state behaviour to be avoided or prohibited. Information statements are those which offer information about the ethics process but do not guide membership behaviour. Cells show count (*n*) and proportion of total number of codes (*N*) as a percentage in parentheses. Proportions are rounded to whole numbers and thus may not add up to 100%.

	Statements							
Code of ethics	Total # (N)	Positively framed n (%)	Negatively framed n (%)	Both positive and negative framing $n (\%)$	Informational statements in COEs that do not inform conduct n (%)			
American Society of Consulting Arborists (2011)	36	30 (83%)	0 (0%)	6 (17%)	0 (0%)			
Arboricultural Association (2018)	47	30 (64%)	8 (17%)	3 (6%)	6 (13%)			
Arboriculture Australia (2019)	14	13 (93%)	1 (7%)	0 (0%)	0 (0%)			
Arboriculture Australia (2013)	32	28 (88%)	1 (3%)	3 (9%)	0 (0%)			
European Arboriculture Council (2021)	12	12 11 (92%) 0 (0%) 1 (8%)		0 (0%)				
Institute of Chartered Foresters (2015)	11	7 (64%)	0 (0%)	4 (36%)	0 (0%)			
International Society of Arboriculture (BCMA) (date unknown)	35	27 (77%)	6 (17%)	2 (6%)	0 (0%)			
International Society of Arboriculture (date unknown)	20	17 (85%)	3 (15%)	0 (0%)	0 (0%)			
Tree Care Industry Association (date unknown)	7	7 (100%)	0 (0%)	0 (0%)	0 (0%)			

in the preceding categories, although some codes include "make a reasonable effort to," "recognize and respect," "avoid," "refrain from," and "comply with."

Arboriculture Australia (2019) uses the phrasing "you agree to," "general members must," and "I agree that I will." Arboriculture Australia (2013) uses the phrasing "I agree that I will" and "registered members must." This is similar to the TCIA (date unknown) that uses the phrasing "we pledge to."

ASCA (2011) primarily uses the phrasing "members shall," although some codes use "members should," similar to the Arboricultural Association (2018) phrasing "members must" and "members should."

While ICF (2015) does not use consistent verbs preceding codes, ICF uses absolutes like "always," "at all times," and "all your actions." ISA's COE for the Board Certified Master Arborist (BCMA™)(date unknown) uses the phrase "responsibility and commitment to."

Equity, Diversity, and Inclusion Statements in Codes of Ethics

DEI statements were included in 7 industry COEs (Table 5). Inclusion concepts were identified in 6 COEs, equity concepts were identified in 5 COEs,

and diversity concepts were identified in 3 COEs. The International Society of Arboriculture's BCMA COE (date unknown) included the highest number of DEI statements (n = 9, 26%) and the Tree Care Industry Association COE (date unknown) included the highest proportion of DEI statements to the total number of statements in the COE (n = 3, 43%). Only the International Society of Arboriculture's BCMA COE (date unknown) and the Arboricultural Association COE (2018) included all 3 DEI concepts within their COEs.

Inclusion, the treating of others fairly and with respect, was the most frequently included DEI concept in the COEs, comprising 11 statements within 6 COEs. The most common inclusion concepts were respecting others and not demeaning or belittling other arborists. Inclusion statements occurred most frequently in the International Society of Arboriculture's BCMA COE (date unknown)(n = 3) and Arboriculture Australia's COE for general members (2019) (n = 3), followed by Arboriculture Australia's COE for registered members (2013)(n = 2).

Equity concepts were identified in 10 statements in 5 COEs. The International Society of Arboriculture's

Table 5. Diversity, equity, and inclusion (DEI) statements within the codes of ethics of 9 national and international arboriculture organizations.

	DEI statements,	DEI concepts			
Code of ethics	n (%)*	Divers* (diverse, diversity)¹	Equit* (equity, equitable) ²	Inclus* (inclusion, inclusive) ³	
American Society of Consulting Arborists (2011)	1 (3%)	0	1	0	
Arboricultural Association (2018)	4 (9%)	2	2	1	
Arboriculture Australia (2019)	4 (29%)	0	1	3	
Arboriculture Australia (2013)	2 (6%)	0	0	2	
European Arboriculture Council (2021)	0 (0%)	0	0	0	
Institute of Chartered Foresters (2015)	1 (9%)	1	0	1	
International Society of Arboriculture (BCMA) (date unknown)	9 (26%)	4	3	3	
International Society of Arboriculture (date unknown)	0 (0%)	0	0	0	
Tree Care Industry Association (date unknown)	3 (43%)	0	3	1	
	Totals	7	10	11	

^{*}Some statements included multiple concepts of the terms.

¹Diversity: Explicitly describes fostering a community that is free of discrimination, including not discriminating protected classes, or abiding by social and legal standards regarding conduct amongst peers.

²Equity: Supporting the learning and continued education of other members, including disseminating research and other learning opportunities to peers and junior professionals.

³Inclusion: Treating others fairly and with respect.

BCMA COE (date unknown)(n = 3) and the TCIA COE (date unknown)(n = 3) included the highest number of equity statements. Both these COEs referenced promoting the education and dissemination of information amongst other professionals, especially early-career arborists.

Diversity concepts, which included creating work cultures free of discrimination and abiding by social standards, were discussed in 7 statements across 3 COEs. Akin to equity and inclusion, the International Society of Arboriculture's BCMA COE included the highest number of diversity statements (n = 4).

Similar to the overall framing of COE statements, DEI statements were often framed positively, using statements that described the preferred action of members (Table 6). However, the majority of the ISA BCMA COE's DEI statements were written using negative framing (n = 7, 58%), in contrast to the primarily positive (n = 28, 78%) statements across the extent of the COE. Arboriculture Australia (2013) used 50% (n = 1) positive framing in DEI statements as opposed to 88% (n = 28) positive framing in the overall COE.

The Arboricultural Association (2018) used the absolute adjective "must" in 4 (80%) of their DEI statements. Arboriculture Australia (2019) discussed the expected treatment of fellow arborists in 2 statements (50%) and encouraging and assisting others in a third statement. Arboriculture Australia (2019) also discussed not making disparaging comments against others. Arboriculture Australia (2013) used similar phrasing about not making disparaging statements and treating others with respect.

The Institute of Chartered Foresters (2015) used the adjective "consider" in one statement (50%) and "treat everyone..." in the second DEI statement. The ISA BCMA COE (date unknown) again uses the precondition "responsibility and commitment" to all statements. The verbs used by the ISA BCMA COE were "refrain" (n = 3), "avoid" (n = 2), "maintain professionalism" (n = 2), "encourage" (n = 1), "recognize and respect" (n = 1), "properly use...the credential" (n = 1), "support" (n = 1), and "mutually discuss and exchange" (n = 1). The TCIA used the phrase "pledge to..." (n = 2).

Adherence to Local Laws and Regulations

Only the ICF (2015) did not refer to local laws and regulations within their COE (Table 7). While 5 COEs discussed compliance with laws and regulations related to arboriculture practice and confidentiality, only one COE referred to unlawful discrimination—the International Society of Arboriculture BCMA COE (date unknown).

Compliance with all applicable laws and regulations was found in the COEs for the Arboricultural Association (2018), the International Society of Arboriculture BCMA (date unknown), International Society of Arboriculture (date unknown), and Tree Care Industry Association (date unknown). The International Society of Arboriculture BCMA (date unknown) and International Society of Arboriculture (date unknown) COEs also referred to laws relevant to public health and safety, including reporting activities in violation of public safety laws.

Table 6. Framing of code of ethics (COE) statements of 5 arboriculture organizations that include diversity, equity, and inclusion (DEI) statements within their COEs.

Code of ethics	Framing	g of COE state	DEI statements		
Code of ethics	Positive	Negative	Dual	Positive	Negative
American Society of Consulting Arborists (2011)	30 (83%)	0 (0%)	6 (17%)	1 (100%)	0 (0%)
Arboricultural Association (2018)	30 (73%)	8 (20%)	3 (7%)	4 (80%)	1 (20%)
Arboriculture Australia (2019)	13 (93%)	1 (7%)	0 (0%)	3 (75%)	1 (25%)
Arboriculture Australia (2013)	28 (88%)	1 (3%)	3 (9%)	1 (50%)	1 (50%)
Institute of Chartered Foresters (2015)	7 (64%)	0 (0%)	4 (36%)	2 (100%)	0 (0%)
International Society of Arboriculture (BCMA) (date unknown)	27 (77%)	6 (17%)	2 (6%)	7 (70%)	3 (30%)
Tree Care Industry Association (date unknown)	7 (100%)	0 (0%)	0 (0%)	3 (100%)	0 (0%)

^{*}Proportions exclude informational statements.

DISCUSSION

In professional organizations, codes of ethics outline the expectations of ethical behavior of members. In arboriculture, systemic issues related to the under-regulation of industry practices have increased in professional discourse within industry organizations and research, mainly pushing toward options for increased governance of the profession (Bardekjian 2015; Bardekjian

2016; Rosen 2020). Our review paper on arboricultural organizations' codes of ethics focuses on an area of active, ongoing discourse within professional industries—that of diversity, equity, and inclusion. It is suggested that the DEI framework provides a lens through which to view opportunities for increasing the recruitment and retainment of a more diverse labour pool, providing support for groups which have

Table 7. The content of 9 arboricultural organizations' codes of ethics related to adherence to local laws and regulations.

	G 1	Compliance with laws and regulations related to						
Code of ethics	General adherence to laws and regulations	Arboriculture practice	Confidentiality	Record keeping	Compensation	Information exchange	Public health and safety	Unlawful discrimination
American Society of Consulting Arborists (2011)			x	x	x	x		
Arboricultural Association (2018)	x	X	x					
Arboriculture Australia (2019)			X					
Arboriculture Australia (2013)		x	x					
European Arboriculture Council (2021)		X						
Institute of Chartered Foresters (2015)								
International Society of Arboriculture (BCMA)(date unknown)	x	х					X	х
International Society of Arboriculture (date unknown)	x	X	X				X	
Tree Care Industry Association (date unknown)	x							
Totals	4	5	5	1	1	1	2	1

previously faced systemic barriers to achieving success and support within the profession.

COEs provide an important role for arboriculture organizations in ensuring members' compliance with best practices. The COEs allow organizations to conduct reviews of a professional member's conduct, examining whether the conduct aligned with the COE. The conduct is often reviewed by a committee of one's peers who can assess the complaint and issue disciplinary action, such as revoking a certification, if applicable (e.g., ISA 2021b).

The conventional discussions of COEs have focused on how decisions relate to existing best management practices and industry standards (e.g., ANSI A300, Z133); however, in pursuit of improving the public image of arboriculture, COEs also provide one of the only mechanisms for organizations to influence the conduct of arborists. Consequently, as working professionals, we must understand the breadth and depth of COEs across professional arboriculture organizations and reflect on how COEs could better support ongoing calls for paradigm shifts related to DEI.

Diversity, Equity, and Inclusion

The DEI concepts presented within the COEs do not encapsulate a protective environment for all aspects of the DEI framework. While respecting and treating others fairly (inclusion) and promoting the education of peers and assisting others to advance within the industry (equity) were common statements, reducing discrimination within the workplace (diversity) was the least discussed DEI concept in COEs.

Positively framed statements guide the preferred ethical action of members, but are often vague, discussing respect and equitable treatment and providing guidance, but not indicating how the membership should act. By contrast, negatively framed statements prohibit a specific action which make it clear to the working professional that such action will not be tolerated by the professional organization. In the same manner as legislation, however, this may not be sufficiently broad to exclude all possible avenues of discrimination. Thus, dual framing offers a means to guide expected conduct while explicitly indicating which actions are not to be tolerated.

Similarly, the adjectives used in the COEs can influence how members perceive the required actions. In order to determine how insistent or demanding a

verb is compared to other verbs, one would have to establish a list that ranks verbs based on an agreed upon interpretation. While such methods are used in computational linguistics, referred to as "ordinal ranking of near synonyms," this was beyond the scope of this exploratory review. Instead, this review recognizes the common verb choices of arboriculture standards and best management practices which govern professional practice. For example, the American National Standards Institute (ANSI) A300 standards use the phrases "shall," indicating a compulsory statement, and "should," indicating a suggested action statement. The use of phrases like "members are expected to..." may not provide sufficient clarity about preferred versus compulsory actions, which could be used as a defense to actions which do not align with a COE.

Laws and Regulations

Where explicit guidance is lacking regarding DEI themes, arboriculture organizations may defer to statements requiring members to comply with relevant local laws and regulations. Laws and regulations that prohibit discrimination based on protected classes may thusly allow arboriculture organizations to act upon cases of discrimination; however, adherence to laws that prohibit unlawful discrimination was only expressed in one COE (ISA BCMA [date unknown]). While general adherence to laws and regulations was mentioned in 4 COEs, this would require the organizations to investigate local laws and regulations with relevance to a DEI issue and ensure proper interpretation and implementation of such laws and regulations within the governance of their membership.

Implications for Arboriculture Organizations

This review highlights gaps in COEs across 9 arboriculture organizations operating at the national and international levels. Arboriculture organizations operating at these scales or more locally may wish to address gaps in their COEs to better support DEI within the arboriculture community, protecting members and providing an actionable route for reporting unprofessional conduct and discrimination.

In addition to adding statements related to DEI, using more explicit language could provide additional security, accountability, and structure for COEs. Terms like "shall be *conscious* of..." or "shall be *aware*

that..." could be rephrased to more specific language that expressly prohibits actions which inhibit the accessibility of the profession. Using vague language may provide a means for abuse of the COEs in ethical violation proceedings and hinder the accountability of professionals to DEI imperatives.

However, including relevant, explicit statements within the COEs has little impact on professional conduct if arboriculture organizations are not sufficiently publicizing the COEs and ethics violations procedures for public and peer-to-peer submissions. Many large arboriculture organizations are lacking a reasonable volume of ethics violations submissions relative to the membership volume of the organizations. For example, from 2018 July 1 to 2019 June 30, the ISA received 11 ethics cases (Gutierrez 2019). This increased during 2020–2021, with 29 ethics cases received per the ISA's 2020–2021 Annual Report (ISA 2021a). Despite this increase, the 2020-2021 Annual Report identifies 35,944 ISA Certified Arborist® credentials held by arborists, not including other certifications offered by the ISA. With an estimated 2 arborist-to-client interactions per day and 250 working days in a year, this would amount to 17,972,000 interactions between ISA Certified Arborists® and clients per year. This highlights that, regardless of the content of the COEs, arboriculture organizations must increase the profile of their ethics programs to ensure that COEs are sufficiently recognized, of practical utility, and, ultimately, upheld by the membership. For arboriculture organizations which offer resources geared towards the public (e.g., the ISA's treesaregood.org), this may mean increasing the visible profile of the COEs and ethics submission procedures to ensure that the public recognizes these avenues for submission.

To further elaborate on our research, we intend to examine how the public and industry professionals interact with arborists that have committed ethics violations. A better understanding of how clients and peers approach unprofessional conduct will provide arboriculture organizations with a greater context for governance opportunities within the industry. Additionally, examining professional members' understanding of COEs may indicate opportunities for targeted teaching from arboriculture organizations. If there is a lacking understanding of the existence and content of COEs amongst professional members, increasing the profile of COEs at industry conferences and

through emails and webinars from the respective organizations may help to improve ethical actions of professional members. While there are some existing resources, they are often hosted by external organizations, such as the ISA code of ethics webinar offered by the Canadian TREE Fund (Gutierrez 2022).

CONCLUSION

While some organizations already explicitly address DEI concepts within their COEs, others rely on blanket statements that insist compliance with laws and regulations or use vague, unclear terminology within COEs which may inhibit action from organizations in addressing persistent challenges. As an opportunity for internal governance, improving COEs may be the best answer for promoting the accessibility of professional arboriculture. Based on this review, organizations can first improve their COEs by ensuring that the 3 DEI themes are all included within their COEs. Organizations can also improve their COEs by using more compulsory verbs that provide an actionable opportunity for ethics committees to review and, if appropriate, discipline professional members for unethical behavior.

Accountability and credibility are required for the positive influences of a COE (Barnwell 2019). A 2019 discussion article by D.S. Lewis (2019) in the *Journal of Forestry* queried if the COE of the Society of American Foresters was rigid in its protection of members and the public against unprofessional or harassing behavior. A similar question could be asked of the COEs of arboriculture organizations in promoting diversity, equity, and inclusion. Chapters of the ISA, for example, are spearheading committees to promote diversity within the industry, such as the Pacific Northwest Chapter's Diversity, Equity, and Inclusion Committee.

Members need an excellent reason to accept a change to the COE (Lewis 2019), and comparing COEs in arboriculture can help support decisions to modify or adapt COEs for professional practice. By utilizing inclusive and empowering language, organizations can foster an environment that discourages discrimination and actively promotes DEI. However, it is essential to recognize that the ultimate effectiveness of a COE will depend not only on the strength and usage of their language, but also on their consistent application and enforcement within the organization.

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Conflicts of Interest:

Alexander J.F. Martin reports holding membership with the International Society of Arboriculture and two of its chapters (PNW-ISA and Prairie Chapter), as well as its affiliate organizations, and holding certifications with the International Society of Arboriculture and the Tree Care Industry Association. Lukas G. Olson reports no conflicts of interest.

Appendix on next page.

Appendix.

Code of Ethics Citations

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