

TEXAS CHAPTER OF THE WILDLIFE SOCIETY RELEVANCY AND ENGAGEMENT STRATEGIC PLAN



Version December 2021

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2020-2022 cohort under the leadership of the 2020-2021 Executive Board*

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INTRODUCTION

The relevancy of wildlife-related recreation and the wildlife profession across all social, economic, racial, etc. groups has been declining in recent decades, as demonstrated in a decrease in hunters (Adams et al., 2004 and Johnson et al., 2012) and time children spend outdoors (Hofferth and Sandberg, 2001). Additionally, minorities and women have historically been underrepresented in science and engineering fields (National Science Foundation, 2015). The goal of wildlife professionals is to uphold the Public Trust Doctrine and maintain natural resources for the public. To be most effective in this goal, the perspectives, and values of the many diverse groups in the state of Texas should be represented in the profession. In 2013, Texas Parks and Wildlife Department surveyed their employees and found that all minority groups and women were underrepresented (Office of the State Demographer, 2018 and TPWD, 2013). This disparity shows a lack of representation in the wildlife field, and this is shown across other agencies and organizations in Texas. Additionally, a disconnection with the outdoors is intrinsically tied to disconnection between wildlife professionals and the general public. As populations have become more urbanized and entertained by technology, the amount of time spent outdoors has decreased. Other factors, such as a lack of access, fear, distractions, and lack of time, have also been noted as disconnection factors (Kellert et al., 2017). Increasing communication between the public and wildlife professionals, as well as increasing communication between wildlife professionals themselves, can help break down these barriers. Improving communication with disconnected peoples can change how we value, manage, and engage with wildlife and natural resources.

The Texas Chapter of The Wildlife Society (TCTWS) can be a leading example of modern communication in the wildlife profession, by taking advantage of new engagement strategies that increase wildlife knowledge and relevancy with the public. To accomplish this goal, we propose focusing efforts on both internal and external audiences, because without our own professional buy-in, we cannot effectively and whole-heartedly reach others.

The TCTWS's Diversity, Equity, and Inclusion (DEI) committee's involvement in planning and executing new strategies is also key, as consideration and incorporation of underrepresented groups is critical to maintaining relevancy. Inclusion of the DEI committee will ensure diverse perspectives are heard, as TCTWS works to reach its goal of increased engagement within- and outside of- the organization to improve the relevancy of the wildlife profession.

VISION

To make wildlife and conservation relevant to current and future generations and have equal representation by all groups. Adapt natural resources engagement to reach changing demographics and evolving environmental ethos, while engaging previously under-served and/or under-represented groups.

MISSION

To increase engagement with TCTWS members, increase connection to wildlife in our communities, and diversify those engaged in the wildlife field.

VALUES

We value our Texas community in ways which prioritize collegiality, cooperation, trust, and mutual support. We believe in fostering while improving a culture that welcomes diverse people and ideas across Texas. We hold the utmost respect for Texans and are committed to treating them with dignity, kindness,

and fairness. We value integrity and do our best to be honest, reliable, and ethical. We value collaboration in ways to work together to achieve shared goals and priorities. We value excellence by committing ourselves to exemplary work even during times of adversity.

BARRIERS AND OPPORTUNITIES TO OVERCOME

Texas demographics are rapidly evolving, and a vital focus of the TCTWS’s efforts to remain relevant includes evolving with the population and membership they serve. TCTWS has identified improving chapter diversity, inclusion, and equity as imperative to ensure chapter relevance and growth. Additionally, the need to maintain, develop and implement strategies to meaningfully engage a disconnected yet rapidly growing urban voting demographic about Texas natural resources and involvement is critical. As the past James G. Teer Conservation Leadership Institute (JGTCLI) cohort class of 2016 stated, “Increasing human diversity in the TCTWS is as valuable as maintaining biodiversity in healthy ecosystems” (Appendix A). Thus, the TCTWS has a vital role in the future of wildlife conservation and the diversity of those who manage and participate in Texas natural resources.

The white paper “Overcoming the Gender and Ethnic Diversity Gap in the Natural Resource Profession” by the TCTWS JGTCLI 2016 cohort examined the chapter’s past efforts, identified barriers within the chapter and profession, and suggested actions for the TCTWS to take to improve diversity (Appendix A). Barriers recognized by TCTWS include lack of exposure to natural resources, knowledge of the profession, lack of mentors, and social barriers. This whitepaper was used to facilitate an examination of Strengths, Weaknesses, Opportunities, and Threats (SWOT) regarding diversity, equity, and inclusion within the chapter (Figure 1).

Strengths (internal, positive factors)	Weaknesses (internal, negative factors)
Strengths describe the positive attributes, tangible and intangible, of the chapter. These are within TCTWS control.	Weaknesses are aspects of the chapter that detract from the value of TCTWS or place TCTWS at a competitive disadvantage.
<ul style="list-style-type: none"> ● Early recruitment through the Wildlife Conservation Camp ● Membership willing to acknowledge and invest in chapter diversity, inclusion, and equity 	<ul style="list-style-type: none"> ● Low urban representation within the chapter, conservation camp, etc. ● Minority and women underrepresentation ● Low organizational diversity
Opportunities (external, positive factors)	Threats (external, negative factors)
Opportunities are external attractive factors that represent reasons for the chapter to exist and prosper.	Threats are external factors beyond control that could put the chapter at risk. TCTWS may benefit from having contingency plans for them.
<ul style="list-style-type: none"> ● Changing Texas Demographics ● International Wildlife Society’s commitment to diversity ● Virtual literacy ● Media marketing and recruitment 	<ul style="list-style-type: none"> ● Income inequality ● Perceived discrimination ● Social barriers ● Lack of mentors ● Lack of knowledge of the profession ● Lack of exposure to the outdoors

Figure 1. SWOT Analysis

Engagement opportunities, such as events and activities, that provide mentors, scholarship opportunities and training can limit recruitment barriers to potential under-represented natural resource professionals in

academia or otherwise. TCTWS has the opportunity to unify people within the natural resource realm and wildlife profession. Historically, the field of wildlife and conservation has been driven by a traditionally homogeneous demographic. To remain relevant to the public and within the profession, TCTWS efforts should be continually aimed toward recruiting and retaining a diverse workforce and membership and addressing known barriers to the best of their ability. However, it is also essential to ensure that all groups, including groups that have historically been a part of the wildlife profession and community, feel included and have equal opportunities to participate in wildlife and in the TCTWS.

CORE AREA STRATEGIES

Based on literature reviews and interviews with subject matter experts and TCTWS members, focused engagement has been identified as a main component to increasing the relevancy of the TCTWS and the wildlife profession. We suggest the following strategies to achieve improved engagement with both internal and external entities.

Internal Engagement

TCTWS can increase the involvement of society members through professional development, mentorship programs, and updated engagement strategies. These strategies include concepts such as:

- TCTWS led professional development webinars to highlight paths that established professionals have taken to reach their career goals, suggestions for students/young professionals to gain valuable skills, and additional advancements in the wildlife profession.
- TCTWS hosted structured social hours that facilitate and enhance connections with other members. These social hours could include activities and games that get people moving around the room and interacting with individuals outside of their usual social group.
- A year-long formal mentorship program within TCTWS that pairs student members with professionals with similar interests. Structured activities outlined in the program could help maintain the relationship and foster communication.
- TCTWS hosted training opportunities for members over the human dimensions of the wildlife profession. Just as a habitat functions well with a high species diversity, our professional organization functions well with diverse membership.

External Engagement

TCTWS can engage with the public to provide outreach opportunities and to recruit new natural resource professionals and students into the society, as outlined by the Wildlife and Natural Resources Recruitment Pipeline (Table 1). These strategies include concepts such as:

- TCTWS continues engaging with traditional members while also building new relationships with stakeholders and related professionals. TCTWS could increase collaboration opportunities with related natural resource professionals and environmental hobby groups through inclusion at the TCTWS annual meeting, volunteer events, or other partnership events.
- TCTWS can influence and engage with the next generation of natural resource professionals by providing materials for high school guidance counselors for prospective college students, volunteering as guest speakers for K-12 science classrooms, and expanding Conservation Camp outreach to underserved communities.
- TCTWS seeks opportunities to start student chapters and recruit students from Universities with related natural resource programs but that are not currently or traditionally represented within the

chapter. Chapter members could represent TCTWS at university events and be available as guest speakers for classes.

- TCTWS looks for continued improvement and updated strategies to engage the public through new social media strategies and reach a wider audience. TCTWS could create long-form educational media, like podcasts or YouTube series, and expand the TCTWS online presence to new platforms with more frequent engagement.
- Society members offer their eclectic and expansive knowledge of natural resources at local public volunteer events to not only contribute to the public understanding of “human society’s proper relationship with natural resources”, but to encourage the next generation of wildlife scientists (The Wildlife Society, 2019).

Table 1. Wildlife and Natural Resources Recruitment Pipeline

Wildlife and Natural Resources Recruitment Pipeline	
K-12	Enrich educational opportunities through teacher engagement, family-oriented outdoor opportunities, and facilitate more outdoor opportunities in urban and rural environments. Build future diversity by engaging children early and establishing land ethics during early education. Ensure equity by providing Wildlife Conservation Camp scholarships to under-represented or economically disadvantaged students.
Post-secondary	Reach out to historically black colleges and universities (HBCUs) and minority serving institutions that do not have traditional wildlife/fisheries/natural resource management programs.
Early career professional	Maintain relevance by embracing non-traditional professionals, remove economic or geographical barriers to membership, engage with early professionals through multi-modal communication, share stories of underrepresented professionals
Mid- to late-career professional	Same as early career professional

GOALS

The following section outlines goals that were approved by the TCTWS executive board (circa 2021). This outline should be treated as a living document that can and should be amended. This strategic plan should be reviewed annually by applicable committee(s) and objectives and subsequent action items of goals should be updated as the needs and aspirations of the TCTWS change.

GOAL 1	Encouraging recruitment of people from diverse demographics and professional backgrounds.
OBJECTIVE	1.1 Increasing organizational partnerships with private, non-profit, and federal organizations.
ACTIONS:	<ul style="list-style-type: none"> Evaluate, identify, and address barriers to participation with above groups.
ANNUAL ACHIEVEMENTS:	
ACTION ITEMS:	

GOAL 1	Encouraging recruitment of people from diverse demographics and professional backgrounds.
OBJECTIVE	1.2 Increase the number of student chapters at underrepresented institutions of higher education (e.g., historical black colleges and universities, community colleges, non-traditional wildlife/rangeland universities, etc.)
ACTIONS:	<ul style="list-style-type: none"> Engage with professors and staff at institutions to develop professional relationships and assess interest in engagement. Work with institutions to identify student needs that could be met by TCTWS and/or student chapters.
ANNUAL ACHIEVEMENTS:	
ACTION ITEMS:	

GOAL 2	Increasing benefits and resources offered by the TCTWS to its membership to attract and retain a more diversified professional base.
OBJECTIVE	2.1 Promote greater opportunities for TCTWS members to interact and network outside annual meetings.
ACTIONS:	<ul style="list-style-type: none"> • Localized meet-up events (i.e., regional social hours, volunteer events, outreach events, etc.). <ul style="list-style-type: none"> ○ Not implemented to date. • Regularly scheduled “lunchbox” webinar series featuring professionals, research, and/or initiatives relevant to the field. <ul style="list-style-type: none"> ○ Achievements and action items below provided for webinar series only.
ANNUAL ACHIEVEMENTS:	
<ul style="list-style-type: none"> • Host 3-4 webinars per year based on chapter interests. Attendees will include TCTWS members as well as non-members. 	
ACTION ITEMS:	
<ul style="list-style-type: none"> • Develop a webinar series based on chapter interests as indicated by the board. • Identify days/times that have high attendance in order to maximize audience and reach of webinar. • Contact professionals to present on selected topics. • Schedule webinars throughout the year on dates that work for professionals while also trying to maintain times to reach a maximum audience size. • Work with Communications committee to advertise webinars and reach out to partner organizations to request advertising space as well (e.g., re-tweets, re-sharing Facebook posts, etc.). • Work with IT committee to host webinars, edit webinars for sharing afterwards, and host recordings on an online platform. • Write document that outlines the structure of webinars and provides planning guidelines and includes clear timelines. • Establish a chair within a committee to carry on webinars into the future. 	

GOAL 2	Increasing benefits and resources offered by the TCTWS to its membership to attract and retain a more diversified professional base.
OBJECTIVE	2.2 Address and increase training and certification opportunities for members.
ACTIONS:	<ul style="list-style-type: none"> • Share and promote educational opportunities from various entities. • Offer continuing education credit courses.
ANNUAL ACHIEVEMENTS:	
ACTION ITEMS:	

GOAL 2	Increasing benefits and resources offered by the TCTWS to its membership to attract and retain a more diversified professional base.
OBJECTIVE	2.3 Connect students to professional members to develop and promote fellowship and learning.
ACTIONS:	<ul style="list-style-type: none"> • Develop and implement a year-long mentorship program that connects students to professional members. • Revisit design of mixers at annual meetings to improve engagement of professional members and students (e.g., incorporate games, special events, etc.).
ANNUAL ACHIEVEMENTS:	
ACTION ITEMS:	

GOAL 2	Increasing benefits and resources offered by the TCTWS to its membership to attract and retain a more diversified professional base.
OBJECTIVE	2.4 Increase accessibility and communication options (e.g., translations into other languages, ASL interpreter for presentations, virtual meeting options, etc.)
ACTIONS:	<ul style="list-style-type: none"> • ASL translators at the annual meeting. • Add a virtual option to the annual meeting. • Translate publications to Spanish. • Translate TCTWS website and materials into Spanish (e.g., newsletter, email updates, etc.).
ANNUAL ACHIEVEMENTS:	
ACTION ITEMS:	

GOAL 3	Engage broader and more diverse constituencies.
OBJECTIVE	3.1 Increasing chapter collaboration with like-minded organizations.
ACTIONS:	<ul style="list-style-type: none"> • Create sessions around forming partnerships with organizations. • Joint volunteer efforts with organizations. • Have a TCTWS representative attend outside organization events. • Invite organizations to the annual meeting.
ANNUAL ACHIEVEMENTS:	
ACTION ITEMS:	

GOAL 3	Engage broader and more diverse constituencies.
OBJECTIVE	3.2 Support member efforts to engage diverse constituencies.
ACTIONS:	<ul style="list-style-type: none"> • Share member success stories. • Share to the membership requests by members for engagement in efforts.
ANNUAL ACHIEVEMENTS:	
ACTION ITEMS:	

GOAL 4	Increase TCTWS outreach with the general public to educate on wildlife and natural resources related topics.
OBJECTIVE	4.1 Educational support and outreach for K-12 audiences.
ACTIONS:	<ul style="list-style-type: none"> • Create print and/or digital resources for advisors, guidance counselors, and teachers. • Work with Texas education staff to incorporate wildlife and natural resources into curriculums.
ANNUAL ACHIEVEMENTS:	
ACTION ITEMS:	

GOAL 4	Increase TCTWS outreach with the general public to educate on wildlife and natural resources related topics.
OBJECTIVE	4.2 Educational support and outreach for adult audiences.
ACTIONS:	<ul style="list-style-type: none"> • Create podcast. • Offer continuing education courses. • Identify education needs of adult audiences and highlight partner opportunities in those areas.
ANNUAL ACHIEVEMENTS:	
ACTION ITEMS:	

GOAL 4	Increase TCTWS outreach with the general public to educate on wildlife and natural resources related topics.
OBJECTIVE	4.3 Educational support and outreach for public and private entities.
ACTIONS:	<ul style="list-style-type: none"> • Identify educational needs of entities and if there are lack of resources for education (e.g., lack of training programs, lack of professionals available to advise entities about questions, etc.). • Develop a database of resources based on common educational needs.
ANNUAL ACHIEVEMENTS:	
ACTION ITEMS:	

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Appendix A

White Paper: Overcoming the Gender and Ethnic Diversity Gap in the Natural Resource Profession

**WHITE PAPER: OVERCOMING THE GENDER AND ETHNIC DIVERSITY GAP
IN THE NATURAL RESOURCE PROFESSION**

The Texas Chapter of The Wildlife Society, James G. Teer Conservation Leadership Institute 2016

Stephanie George, Penny Wilkerson, Michelle Wood-Ramirez

Increasing human diversity in the Texas Chapter of The Wildlife Society is as valuable as maintaining biodiversity in healthy ecosystems. Species richness is directly correlated to the amount of productivity in the environment (Waide 1999), and having a diverse workforce may prove to be just as advantageous. Our environment and management techniques are constantly evolving, and as natural resource professionals we must adapt to those changes in our workforce and constituency. Some of the most complex human adaptations have to do with the cultural and technological advances humans use (Stock 2008). As globalization increases, the need for more interaction among people with diverse backgrounds becomes apparent. The purpose of wildlife professionals in Texas is to conserve public trust and natural resources for future generations. The National Wildlife Society's goal is to promote excellence in wildlife stewardship through science and education. This paper recognizes that the public to which those resources belong is changing. How can resource professionals stay relevant to changing stakeholders and an increasingly urbanized, unengaged population?

Minorities and women are historically underrepresented in all science, technology, engineering, and math (STEM) professions. The National Science Foundation (2015) reports that only 22% of women, 17% of Asian, 6% Hispanic, and 5% African American are employed in science and engineering. Minorities and women are underrepresented in leadership and advanced positions in a broad range of professional fields. Women's "presence in top leadership positions—as equity law partners, medical school deans, and corporate executive officers—remains at a low 10 to 20%". Efforts to increase gender and ethnic diversity in STEM and other professions have been ongoing since the implementation of national policies that began with the Civil Rights Act of 1964 (Pub.L. 88–352, 78 Stat. 241, enacted July 2,

1964) and Title IX of the Education Amendments Act of 1972 (20 U.S.C. Â§1681). Such national policies seem to have had little impact on diversity in many natural resource professions. For instance, in 1994, female representation among resource professionals in both white and minority groups in the southeast was 20% or less (Adams & Moreno 1998). These national statistics shows a dismal view of diversity in the scientific fields, but this paper will address common questions and solutions about natural resource professional diversity in Texas. A survey of the Texas Chapter of the Wildlife Society (TCTWS) membership is underway to help quantify minority and female representation in professional and academic realms, and the results of which will be presented in a future supplement to this white paper and at the 2017 meeting of the Texas Chapter of the Wildlife Society.

NEED FOR DIVERSITY IN THE WILDLIFE PROFESSION

Challenges to natural resource management abound globally. Human population growth is associated with changing climates, the expansion of exotic invasive species, urbanization and habitat fragmentation, and these are only a few of the most pressing concerns for the future of wildlife and fisheries management. The key to solving new wildlife and natural resource dilemmas lies in our profession's collective ability to draw on our varying strengths, knowledge bases, and perspectives. Welcoming distinct ideas from women and people of diverse ethnic backgrounds into natural resource professions will allow the members of the TCTWS to achieve the Chapter's first strategic goal: "Anticipate the future to best serve the changing needs of wildlife professionals and society. We are responsive to changes that are occurring in society" (Texas Chapter of The Wildlife Society 2016). Natural resource professionals have a chance to tap into the benefits human population growth, the diversity within our species, to find creative solutions for wildlife management.

CHANGING TEXAS DEMOGRAPHICS

The face of Texas is changing. “Between 2005 and 2013, 4.8 million people moved to Texas from other states” (White *et al* 2016). In 2013 women made up 50.3% of the population in Texas. Minorities in Texas have shown historic growth, with Hispanic populations now at 39.1%, African Americans comprising 11.5% of Texans, and other nationalities in at 6% (Office of the State Demographer 2016). In response to the growing need for diversity in the natural resource profession, the Texas Parks and Wildlife Department (TPWD) conducted an analysis of their own employee demographics in 2013. According to the agency’s Diversity Working Group Final Report (TPWD 2013) only 33% of TPWD’s workforce is female. The agency's workforce also demonstrates ethnic underrepresentation with only 17% Hispanic, 3% African Americans, and 1% Asian and American Indian representation respectively, while the remaining 78% is white (TPWD 2013). According to the Texas Office of the State Demographer (2016) population projections, by 2050 Texas populations are expected to be 50% Hispanic, 10% African American and 6% other minorities. Natural resource managers and educators must continually strive to recruit and retain highly skilled people from diverse backgrounds so that novel traditions, perspectives, and approaches can be introduced into adaptive management. Future challenges professionally and environmentally will be met if decision makers and the workforce more closely reflect their constituents and stakeholders. The Texas Chapter of The Wildlife Society has an important role to play for the future of wildlife conservation and the diversity of those who manage Texas wildlife.

PAST EFFORTS TO INCREASE WORKFORCE DIVERSITY

The National Wildlife Society, the parent organization of TCTWS, has published a standing position statement highlighting the importance of [Workforce Diversity within the Wildlife Profession](#) that states “The Wildlife Society is committed to the identification and removal of barriers to recruitment, effective mentoring, retention of a diverse workforce, and to communicating with a diverse

array of stakeholders” (TWS 2016). Many studies and reports aim to move the needle on professional diversity in STEM industries. Haynes *et al* (2015) analyzed 55 peer reviewed journal articles that examined variables that influence minority recruitment using studies from many STEM careers spanning 32 years. However, few of these studies looked at minority representation in natural resource fields. This study found that more than 20 federal natural resource agency diversity programs exist, all of which focused recruitment to minorities at the high-school level and above (Haynes *et al* 2015). This demonstrates the efforts that have been undertaken to recruit diverse professionals to resource management over the past three decades.

The TCTWS professionals have worked hard in this regard. The Wildlife Conservation Camp has targeted high school age children since 1993 by creating opportunities for outdoor learning and natural resources experiences (Griffin, 2015). The past efforts of TCTWS volunteers have brought many challenges to light, including cross-cultural interactions between urban and rural campers, professionals needing to take time off from work to mentor and teach, and general conflict resolution and scheduling management issues. However, it has also created mentorship opportunities within the chapter, as college students are also receiving hands-on training by TCTWS professionals. This unique learning environment has increased the number of students in the ‘pipeline’ to the wildlife and fisheries profession. The Wildlife Conservation Camp has exposed hundreds of high school students to careers in natural resource professions (Griffin, 2015). Some Wildlife Conservation Camp graduates return in the summers as college students to volunteer back at the Wildlife Conservation Camp or in wildlife internships around the state. More often than not, those who were mentored by TCTWS volunteers return as professionals to teach the skills they’ve learned to the next generation. The next step for these professionals is the James G. Teer Wildlife Conservation Leadership Institute, a new opportunity that the TCTWS has created to pass on knowledge, train the next generation of leaders, and retain the

diversity of people and experiences that is needed for the future of natural resource professionals and wildlife.

BARRIERS TO DIVERSITY IN THE WILDLIFE PROFESSION

Professional wildlife and natural resource managers have been working to discover barriers to gender and ethnic diversity recruitment and retention in our profession for more than two decades. Many factors like income equality, perceived discrimination, and lack of mentors restrict minorities in engaging in educational opportunities (Haynes *et al* 2015), though in general financial restrictions affect most people interested in education. This discussion of barriers is abbreviated and is simply an introduction to new actions which the TCTWS could promote. Haynes *et al.* (2015) define barriers as “negative influences that inhibit recruitment” and they discuss barriers in terms of life stage and type. Barriers, supports, and influences interact with each other in multiple ways. Barriers, recognized in this most recent study, include lack of exposure to the outdoors, no knowledge of the profession, lack of mentors, social barriers, and discrimination. For all age groups, a lack of outdoor experiences was the most cited barrier to potential resource professionals (Haynes *et al.* 2015). Encouraging and facilitating any positive outdoor activity for families of minority populations may lead to more knowledge and support of the wildlife profession and could lead currently underrepresented groups to a path through the ‘pipeline’ to a resource career. Recognition of wildlife and fisheries sciences as a profession and discipline for scientific discovery did not begin until the early 20th century. Providing outdoor experiences using natural resource professionals as mentors could overcome three of the most significant barriers concurrently.

Stereotype threat is a complex social-psychological threat perceived by an individual during a situation where a negative stereotype applies to the actor in that situation (Beasley & Fischer 2012). Stereotype threat is known to influence women, minorities, and even white men leaving science,

technology, engineering, and math majors (Beasley & Fischer 2012). Interactions between discrimination and stereotype threat could influence what Haynes *et al* (2015) refer to as define “self-efficacy.” Self-efficacy is defined as “a dynamic set of self-beliefs that help to determine and individual’s choice of activities as well as his or her effort, persistence, thought and emotions when confronted with obstacles.” Self-efficacy can be influenced by stereotype threat and feelings of discrimination. These real and perceived threats have tangible effects on the hiring and retention of minority groups, especially in the science fields (Adams & Moreno 1998; Beasley & Fisher 2012; Haynes *et al* 2015). Programs that provide mentors, scholarship opportunities and training can build self-efficacy and limit recruitment barriers to potential minority natural resource professionals in academia or otherwise.

It should also be recognized that these barriers are impacted by a time lag between when youth become engaged in natural resources and when these young people enter the field, but that TCTWS efforts should be continually aim toward recruiting and retaining a diverse workforce and membership.

DIVERSITY IN TEXAS WILDLIFE & FISHERIES UNIVERSITY PROGRAMS

The 2012 U.S. Census Bureau projections show that by 2043, the US population is to become a majority-minority nation for the first time. The non-Hispanic white population will remain the largest single group, no one group will make up a majority. This means recruitment and retention to the profession will need to be just as creative and diverse as our constituents. Results from Adams and Moreno (1998) revealed that minority-group respondents became interested in natural resources late in their academic lives, which indicates a gap in outreach to young audiences. Haynes *et al* (2015) surmised that the lack of *institutional* diversity may hinder efforts to recruit diverse populations. Texas higher education institutions have seen increasing enrollment of female and minority students (FAEIS 2016), while only 26.6% of all graduates from Texas fish and wildlife programs were female in 2004 compared to 51.6%

females graduating in 2015 (FAEIS 2016, see Figure 1). Ethnic diversity of Texas fish and wildlife graduates has increased, more than doubling from 10.1% of minority graduates in 2004 to 20.5% in 2015 (FAEIS 2016, see Figure 1).

Natural resource professionals, agencies, and universities need to make changes to their

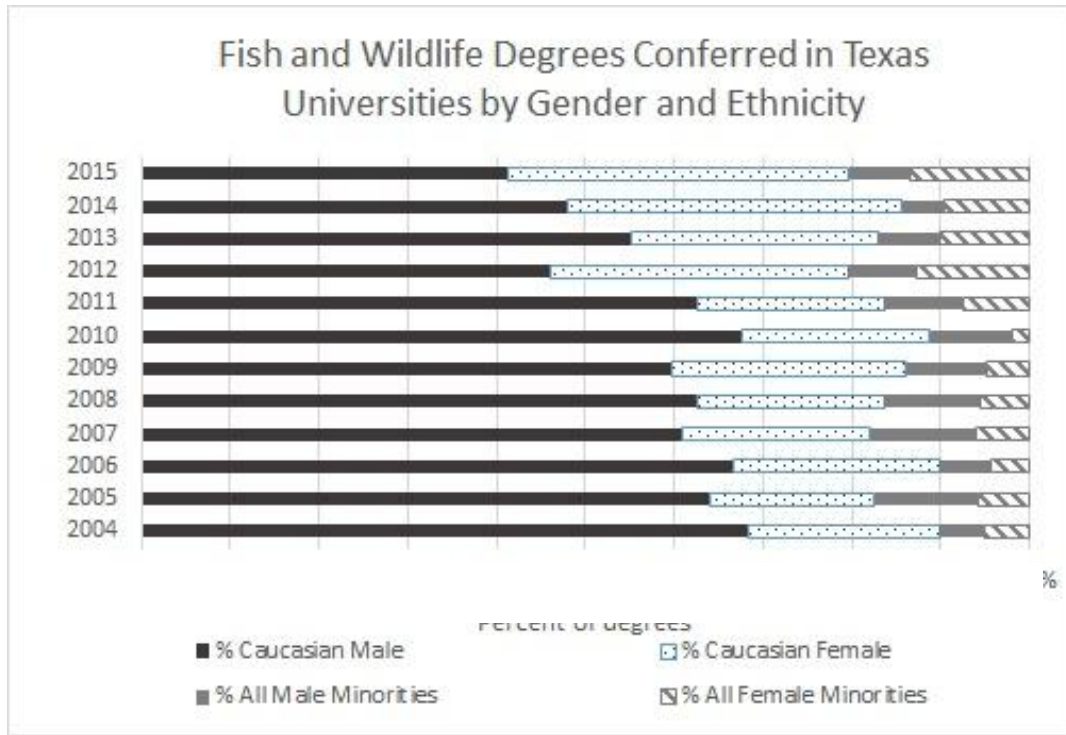


Figure 1. Comparison of minority and Caucasian male and female graduates of Texas Universities from 2004 to 2015 in Fisheries and Wildlife Management (Source FAEIS 2016.)

structure if they are to stay relevant. More advocates for higher wages in the conservation profession from interns to entry-level are needed. Resource management education and training can be arduous and expensive. In order to recruit minorities into this profession, these requirements need to be more readily available to all economic classes. It is difficult to recruit and retain professionals if compensation is not competitive with related fields and justifiable with educational expenses. “For the 2013–14 academic year, annual current dollar prices for undergraduate tuition, fees, room, and board were estimated to be \$15,640 at public institutions, \$40,614 at private nonprofit institutions, and \$23,135 at private for-profit institutions” (US Department of Education 2016). While more jobs are available than

before, the current (2016) annual salary of a Texas Parks and Wildlife Department (TPWD) entry level wildlife biologist is just under \$33,000 per year (Texas State Auditor's Office 2016).

SUGGESTED ACTIONS FOR THE TEXAS CHAPTER OF THE WILDLIFE SOCIETY

The challenge of increasing diversity in natural resource professions does not have a simple solution. The Texas Chapter of The Wildlife Society should employ strategies that address barriers, recruitment and retention of diverse peoples at all levels of natural resource studies and careers. Many efforts outlined herein will address both recruitment into university programs, and professional retention in the natural resource fields. The actions of the Texas Chapter of The Wildlife Society have the potential to unify people within the wildlife profession. Many wildlife agencies and universities look to TCTWS for leadership in the area of professional diversity, as well as resource training. Davis et al (2002) called for "immediate, aggressive, and strategic action to achieve a more-diverse workforce." Texas universities have already seen an improvement in student diversity, now TCTWS stands on the precipice to continue this work through thoughtful and continued action to retain and recruit diverse professional for 21st century challenges.

First, the Texas Chapter of The Wildlife Society should formally adopt the parent society's position statement supporting gender and ethnic diversity in the wildlife profession, entitled "Workforce Diversity in the Wildlife Profession".

Secondly, creating a system of oversight ensures proper accountability to keep the diversity momentum going. Like the Ethnic and Gender Diversity working group of The Wildlife Society, a specialized committee or subcommittee within the TCTWS can focus on the "recruitment, retention, and career-long mentoring of wildlife scientists and managers from ethnic, gender, and socioeconomic backgrounds previously underrepresented in natural science professions" (James G. Teer Cohort

Commission, 2016). This committee could also facilitate professional mentorship programs throughout the state to build partnerships across agencies, universities, and private industry. Additionally, the Ethnic and Gender Diversity committee of TCTWS can highlight stories of successful women and minority members in the chapter through outreach, media, awards, and partnership programs. This committee or subcommittee would also be in charge of maintaining and collecting future survey data for the TCTWS that the 2016 Cohort of the James G. Teer Leadership initiated.

Third, develop recruitment strategies at Historically Black Colleges and Universities (HBCU) and Hispanic Serving Institutions (HSI). Research recognizes the importance of institutional diversity, to allow minority and women biologists to feel a sense of belonging increase recruitment and retention in natural resource careers (Haynes et al 2015). There is a significant need seen by professionals within the TCTWS to develop wildlife and natural resources curriculum compliant with Certified Wildlife Biologist Certification from the parent society (TWS) at most state universities. Simultaneous with the curriculum expansion is the need to create regional student chapters of The Wildlife Society in areas with the highest minority populations. Adams & Moreno (1998) suggest using professionals as visiting instructors, mentors and advisors at minority institutions. It is also posited that recruitment to natural resource disciplines can be effective when reaching out to other science disciplines. Targeting outreach to environmental science groups at community colleges, technical schools and small universities in urban, east, and south Texas will reach more minority individuals than targeting traditional large universities. Strategically increasing the interactions between professionals and students will allow increased mentorship opportunities and exposure to the wildlife and fisheries realm.

Fourth, increase marketing and outreach of the profession through increased partnership with schools at all levels, outdoor and conservation organizations (Boy Scouts, 4H, etc.), and community groups by taking the 'pipeline' approach to expose students of all ages to natural resources (Adams & Moreno 1998; Davis *et al* 2002; Haynes *et al* 2015). These positive partnerships with resource professionals can increase outdoor experiences, family support and exposure to the profession at young ages, which addresses a recognized gap in outreach to minority populations. TCTWS can facilitate this partnership through the creation of Wildlife Society Ambassadors, members of TCTWS that would serve in outreach capacities to these communities and organizations. Regional ambassadors could be recruited from professionals in public and private resource agencies and higher education. Ambassadors should be those already involved with Wildlife Conservation Camp and James G. Teer Conservation Leadership Initiatives or other professional leadership activities.

The role of media is also important to mention. Confusion abounds when it comes to the public's perception of wildlife and fisheries biologists. Mass marketing strategies that clarify misconceptions about the profession can begin by developing a specific, representative logo for the TCTWS that combines and represents the multifaceted interests of the membership. Figure 2 is a previous logo that TCTWS could use to represent the many interests of the membership. Along with the membership newsletter, media could be developed for mass markets to explain the wildlife and

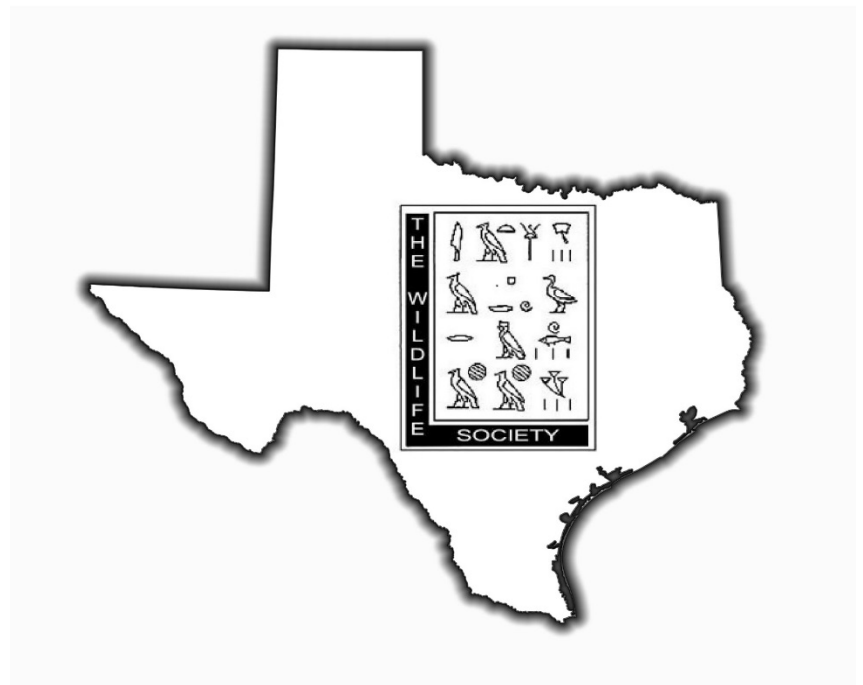


Figure 2. Texas Chapter of the Wildlife Society logo.

fisheries profession including our daily tasks, the North American Model of Conservation, public trust, conservation, etc. Targeting younger age groups through social media and podcasts could help recruit people that are comfortable with technology.

Fifth and finally, addressing known barriers attributed to social factors of limited finances, discrimination, stereotype threat, and self-efficacy can be much more challenging. Initial efforts can include sensitivity training for admissions counselors and hiring professionals to describe the barriers in retaining minorities in natural resources. The TCTWS could offer training on recognizing and reducing discrimination and stereotype threat in work environments, or among the constituents and clients we have. As many professionals realize, wildlife management is people management. Many studies also advocate for recognition, incentives, and scholarships for natural resource professionals and students (Adams and Moreno 1998; Davis et al 2002; Haynes et al 2015). The Wildlife Society council established an annual ethnic and gender award in 2001 that “recognizes an individual or organization for outstanding efforts in promoting ethnic and gender diversity in the natural resource professions, especially wildlife conservation and education (The Wildlife Society 2016).” Awards, like the one created by The Wildlife Society, will advance the knowledge of the wildlife profession as a whole and specifically make strides to bridge the minority gap. Scholarships, specifically for underrepresented populations, can also overcome some barriers to students who lack financial support.

Overall, the Texas Chapter of the Wildlife Society is robust enough to overcome obstacles dealing with conserving our natural resources, and engaging in the predicted models for the changing demographics of Texas. The Texas Chapter has supported youth and collegiate education and training for almost 25 years with professional volunteers and resources directed at the Wildlife Conservation Camp, and now also the James G. Teer Conservation Leadership Institute. The National Wildlife Society has also dedicated career resource trainings for retaining a diverse workforce for the future of wildlife. However, while these efforts are strides toward ending discrimination, creating opportunities, and

meeting the needs of our constituents, they are currently not enough to meet the rate of change that is predicted for Texas. More dedicated and concerted efforts can and should be implemented now within the TCTWS to secure the future of our wildlife and natural resources.

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