

# Results of the 2023 ICAS Air Show Spectator Survey

## Putting Statistics to Work for Your Air Show Business

The 2023 ICAS Spectator Survey was conducted between June and October of 2023. The survey results include responses to 20 different questions from 1,047 air show spectators at seven different U.S. air shows. As it has been for more than 30 years, the principal goal of the survey was to develop a demographic profile of the “average” air show spectator.

But we were combatting a number of unique challenges in the 2023 survey. Due to pandemic-related complications, it was the first U.S. spectator survey we had conducted since 2018; for 30+ years before that, the spectator survey had been conducted biennially. Although we still

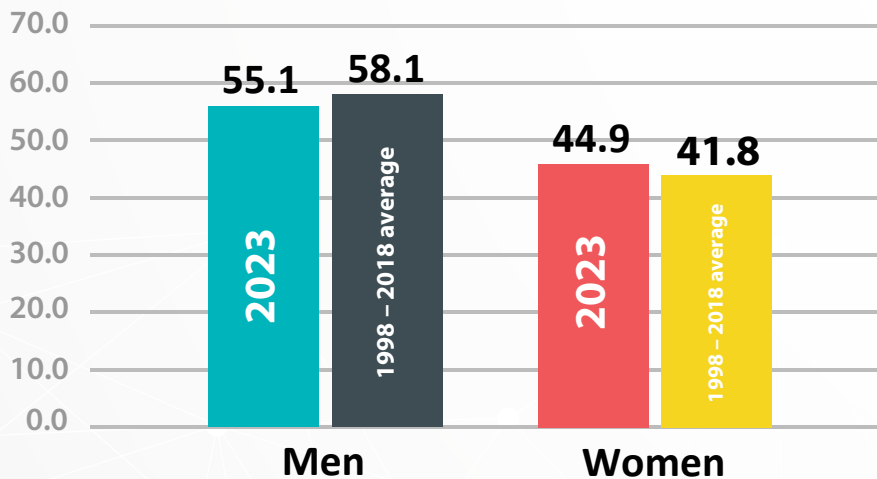
had a sufficient number or responses from a sufficiently representative cross section of air shows, weather and other complications limited the total number of responses as compared to past spectator surveys.

The survey instrument and methodology were reviewed by a statistician. With a couple of exceptions that will be highlighted in the review of individual questions, the responses were consistent with past ICAS Spectator Surveys. Importantly, air show spectators invited to provide survey responses are selected using a system specifically designed to help ensure that the respondents represent

a random sample of adult spectators leaving the show grounds at or near the end of the show.

We’ve offered some light analysis of the statistics, but – because the numbers can be used and interpreted in so many different ways – we’ll leave you to draw your own conclusions about these new survey results, how they compare to historic trends in our business, and what it all means to the air show community and your own air show business.

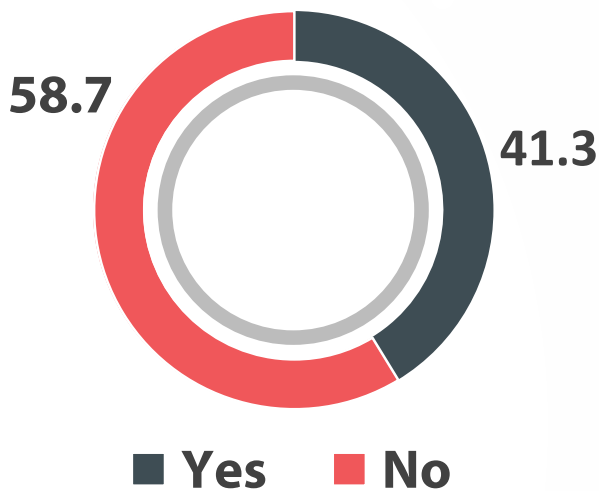
### Gender of Air Show Spectators 2023 vs. 1998-2018 average



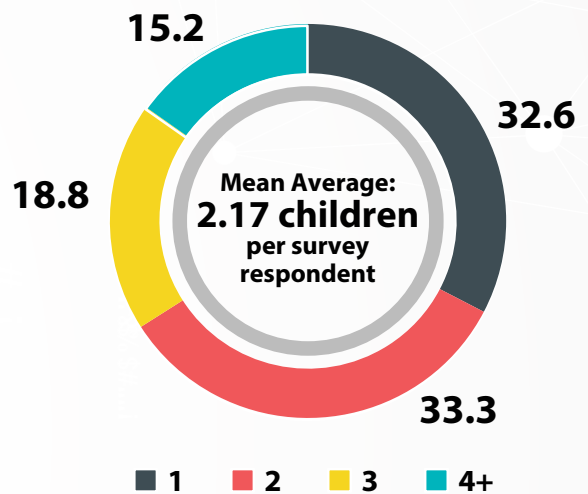
Over time, the gender distribution of adult spectators has varied very little. The percentage of males has never been higher than 61.1% and never lower than 56.0%.

In part because the balance of males and females for air show audiences has been consistent over many years and in part because air shows attract a comparatively high percentage of women, our male/female percentages make our events more attractive to most sponsors.

## Did you attend today's show with a child under 18 years of age?



## If yes, how many children were in your group?

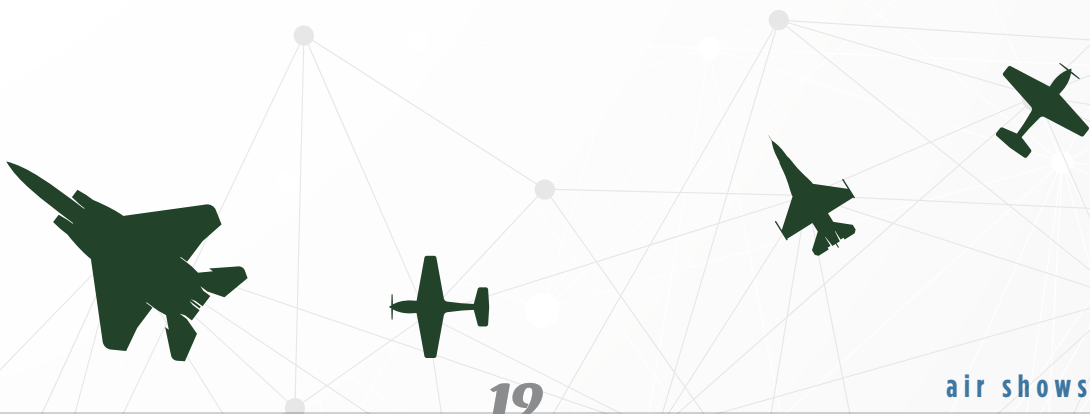


During the past several years, when we have asked air show spectators if they attended the show with one or more children under the age of 18, we've seen a curious trend. In 2016, 47.4% reported that they were accompanied by children. In 2018, that percentage dropped to 44.3%. And this year, that percentage dropped again to 41.3%.

Among those reporting that they did come with one or more children, the number of children accompanying each adult has been very consistent: an average of 2.20 children in 2016, 2.17 in 2018 and 2.17 again in 2023.

What does it mean? As we'll see later in our review of survey results, the number of young adults has been increasing slightly, but steadily over that same period. It could be that a smaller percentage of adults are attending with children because a larger percentage of young adults – presumably young adults without children or with children not yet old enough to attend an air show – are now finding their way to our events.

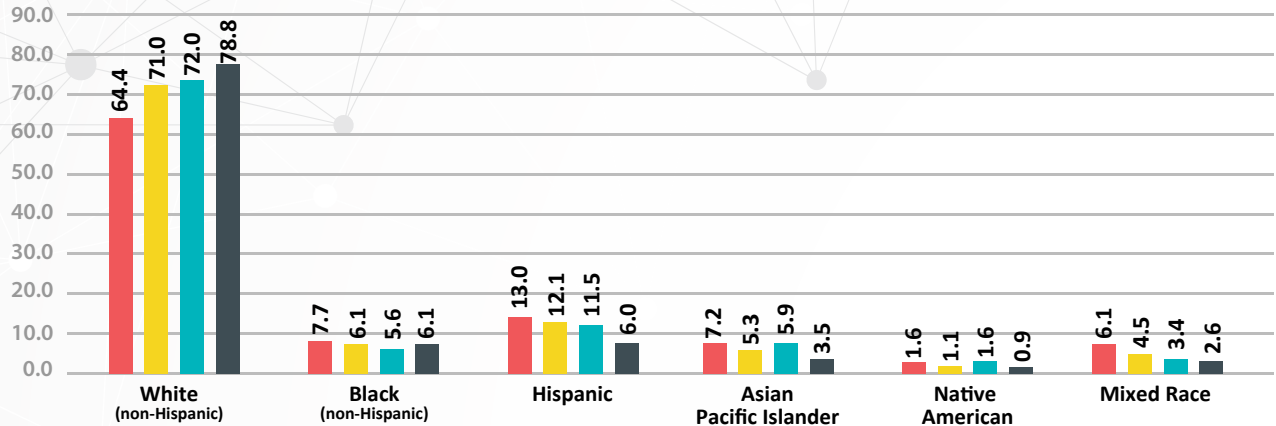
We will monitor this situation in our next spectator survey to see if the two mini-trends are related to one another and if they continue in future surveys.





## Air Show Spectator Ethnicity

2023 vs. 2018 vs. 2016 vs. 2014

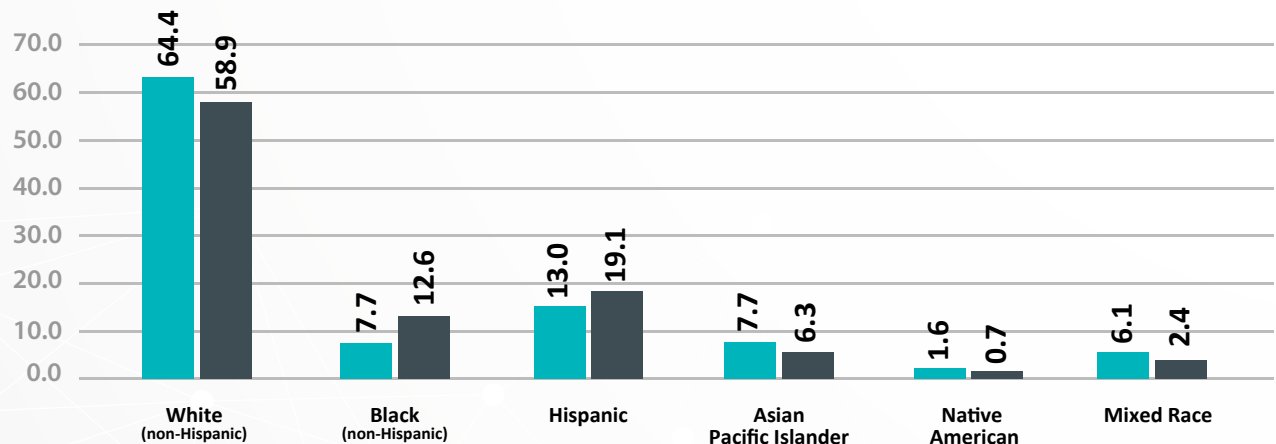


Mirroring similar trends in the population at large, the percentage of white air show spectators has been steadily decreasing during the last ten years, from 78.8% in 2014 to 64.4% in 2023. At the same time, the percentages of blacks, Hispanics, Asian/Pacific Islanders and people identifying as mixed race have been slowly increasing.

That said, the make-up of our air show audiences is still not as diverse as it is for the country, overall. Although the percentage of white people attending air shows has decreased by more than 14 percentage points during the last decade, when compared to the general U.S. population, non-whites continue to be under-represented on our air show ramps.

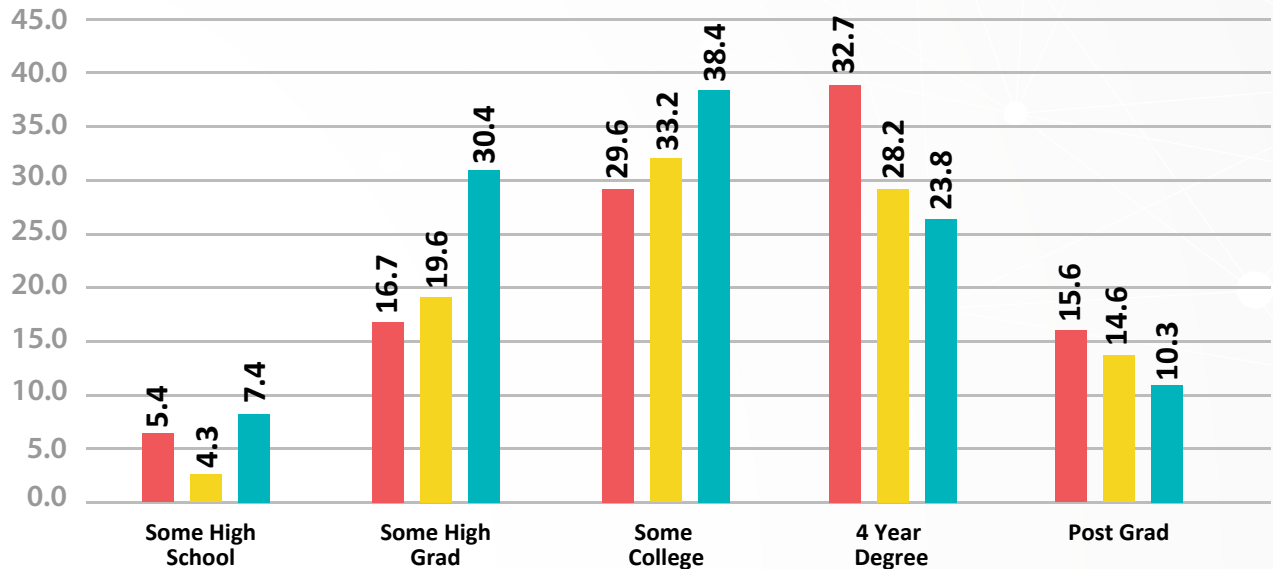
## Air Show Spectator Ethnicity

2023 Responses vs. General Population (U.S.)



# Education Level of Spectators

2023 Air Show Responses vs.  
1998 - 2018 Air Shows Average vs. NFL



You'll see two things in this graph.

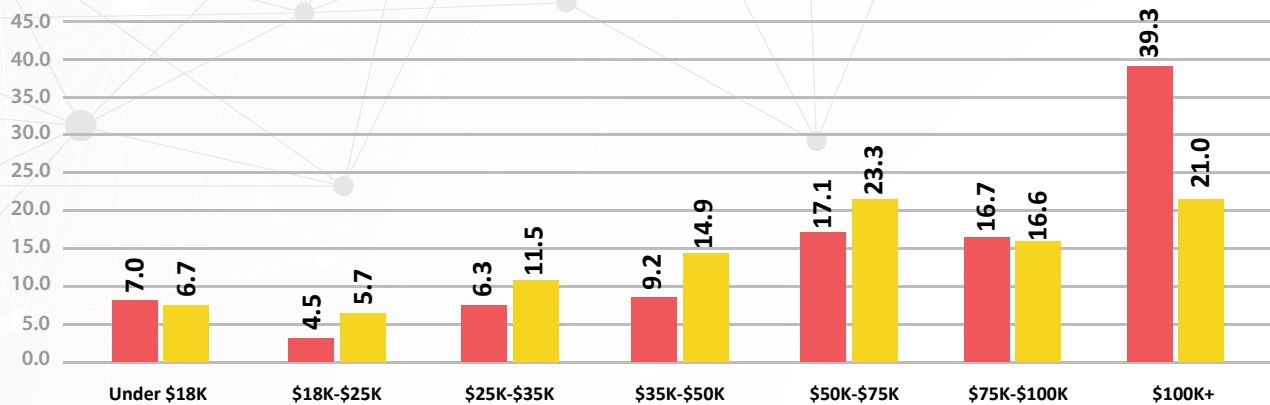
First, the educational levels of our air show spectators continues to increase. In 2023, when compared to the previous 22-year average for air show spectators, we have a small increase in the number of adult survey respondents with less than a high school diploma, but lower percentages with a high school diploma or some college and higher percentages with a four-year college degree or some post-graduate studies.

Second: despite the much higher ticket prices at professional football games, air shows attract a significantly more educated audience than the NFL. As you can see from the graph, air shows have significantly fewer spectators at the lower education levels and significantly more spectators at the higher education levels. Nearly half (48.3%) of air show spectators have at least a four-year college degree, compared to a little more than a third (34.1%) for NFL spectators.



## Household Income of Air Show Spectators

2023 vs 1998-2018 average



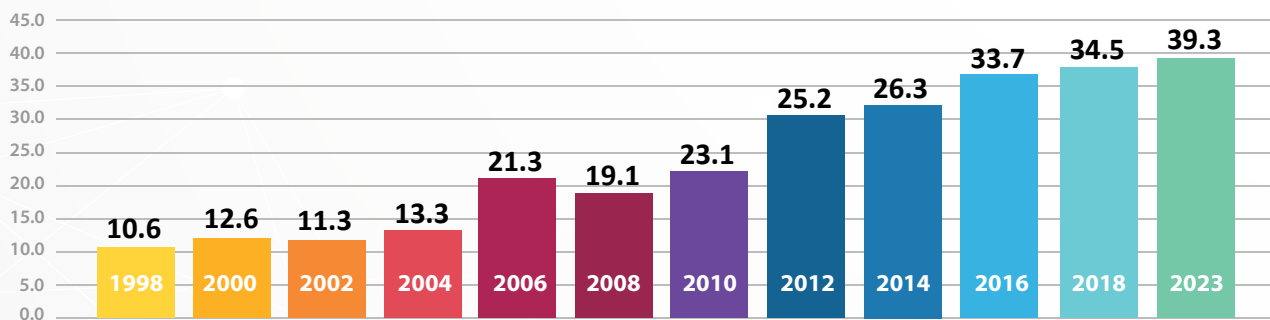
Even more than the education levels, statistics for average household income are a clear indication that air show audiences are growing ever more affluent.

Just as we had a slight increase in the number of survey respondents with “some high school” education, we saw a small increase in the number of adult spectators who reported household income of less than \$18,000 per year. But, other than that, every other income category below \$75,000 was down, sometimes sharply. The percentage of respondents with household income of \$75,000-\$100,000 was essentially flat vs. our historic average, and the percentage of spectators reporting household income in excess of \$100,000 per year nearly doubled compared to our historic average.

Increasingly and especially in this example, our historic averages for household income are becoming less useful. For example, our 1998-2018 average shows that 21.0% of survey respondents report income in excess of \$100,000. But, when you look at where that average comes from, this percentage has been steadily increasing from a low of 10.6% in 1998 to a high of 39.3% in 2023. We haven’t had a year with only 21.0% of respondents reporting household income in excess of \$100,000 per year since 2008, more than 15 years ago. For this and some other questions in our survey, the historic average is less important and less relevant than the trends that have developed over the last 25 years.

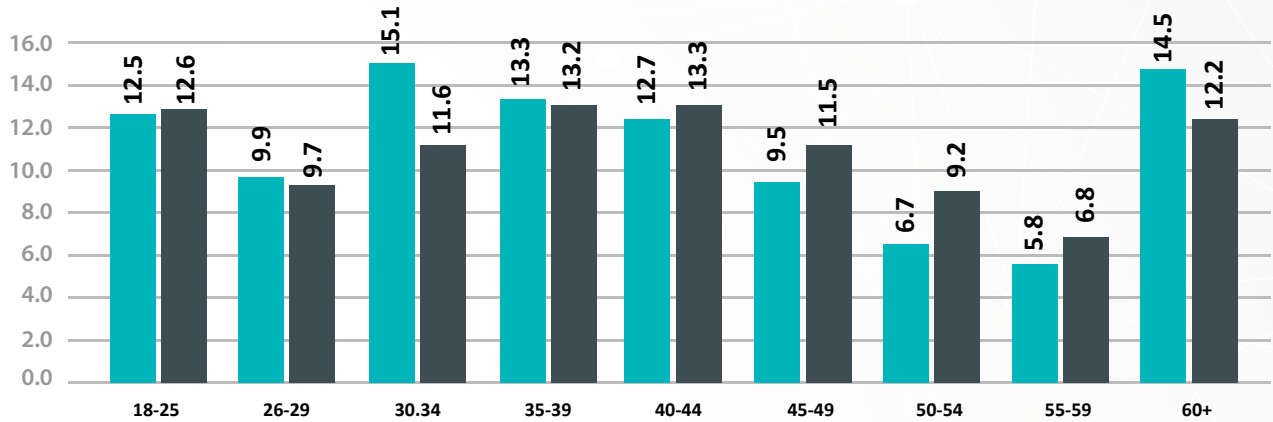
## Air Show Spectator Households Reporting Income of \$100,000+

1998 – 2023



# Age of Adult Air Show Spectators

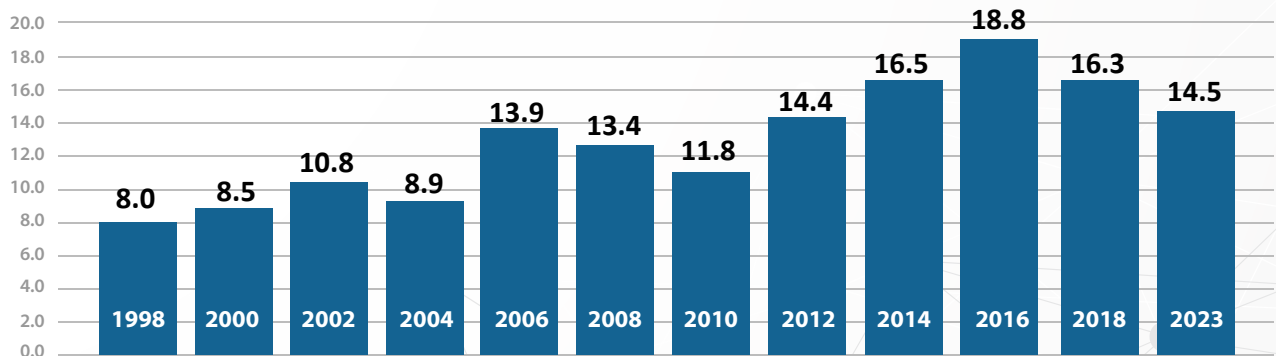
## 2023 vs. 1998-2018 Average



The responses to our questions on the age of adult air show spectators in our 2023 survey produced some surprising results. For example, the percentage of adults in the 30-34 age bracket increased dramatically vs. the historic average. The percentage of adults in the 50-54 age group dropped significantly vs. the 22-year average. And, in these cases, the changes were not the product of slow and steady changes over multiple surveys during the last several years; they were one-time spikes with no discernible cause. This could be a one-time anomaly or it could be a product of the comparatively small sample size in this year's survey. But, in either case, it is not indicative of some larger trend, as best we can tell.

From a broader perspective, there was also some good news in the responses to this question. For the second consecutive survey, we saw a drop in the percentage of survey respondents over 60 years of age. If this trend continues in our 2025 survey and beyond, it will mark a reversal in a continuous increase in the age of our spectator base that had been occurring for more than 25 years. Together with other hints in the survey data, it suggests that our industry is succeeding in its efforts to attract younger demographics.

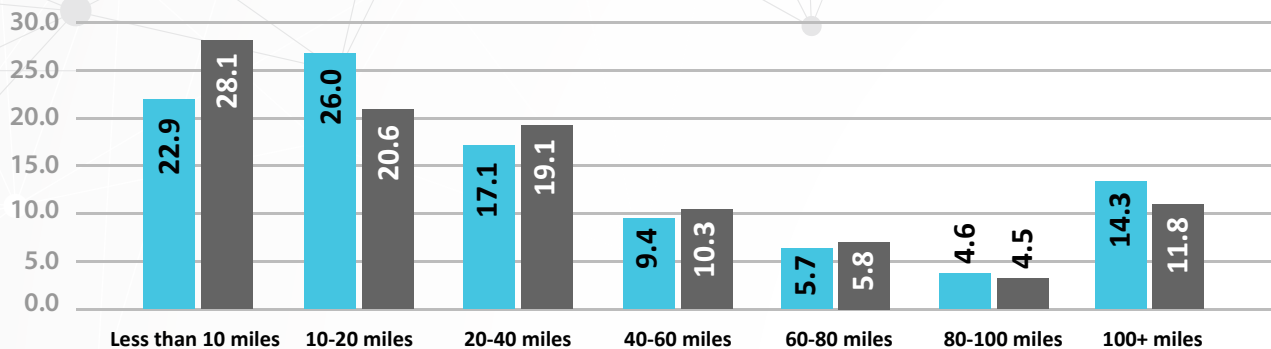
## Air Show Spectators Reporting Age of 60+ 1998 - 2023





## Distance Traveled to Attend the Air Show by Air Show Spectators

2023 vs. 2008-2018 average

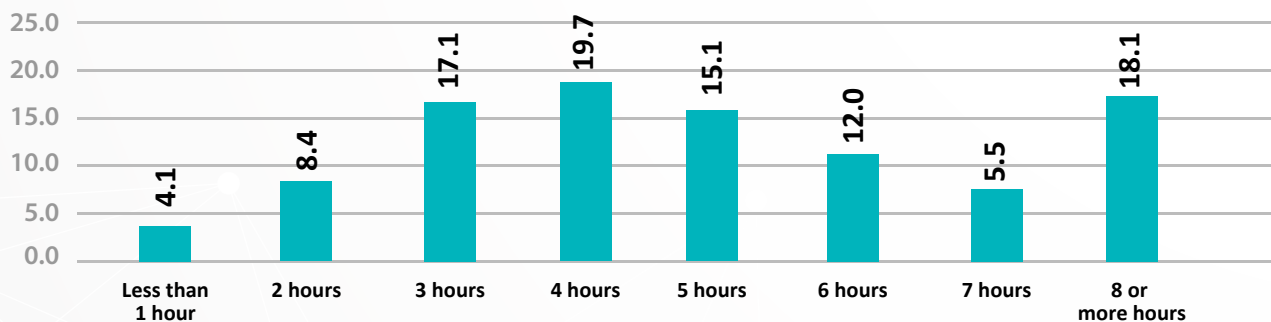


Although there is some difference in the percentage of spectators traveling shorter distances as compared to our historic averages, the overall message remains unchanged: approximately three-quarters of our spectators travel 60 miles or less to attend the show. This general rule of thumb has not changed in nearly 40 years.

Combined with the power of social media and its ability to very precisely target prospective ticket buyers, this information on distance traveled has the capacity to help pinpoint the outreach efforts and marketing of shows hoping to attract new visitors to their events.

## How much time did you spend at the air show today?

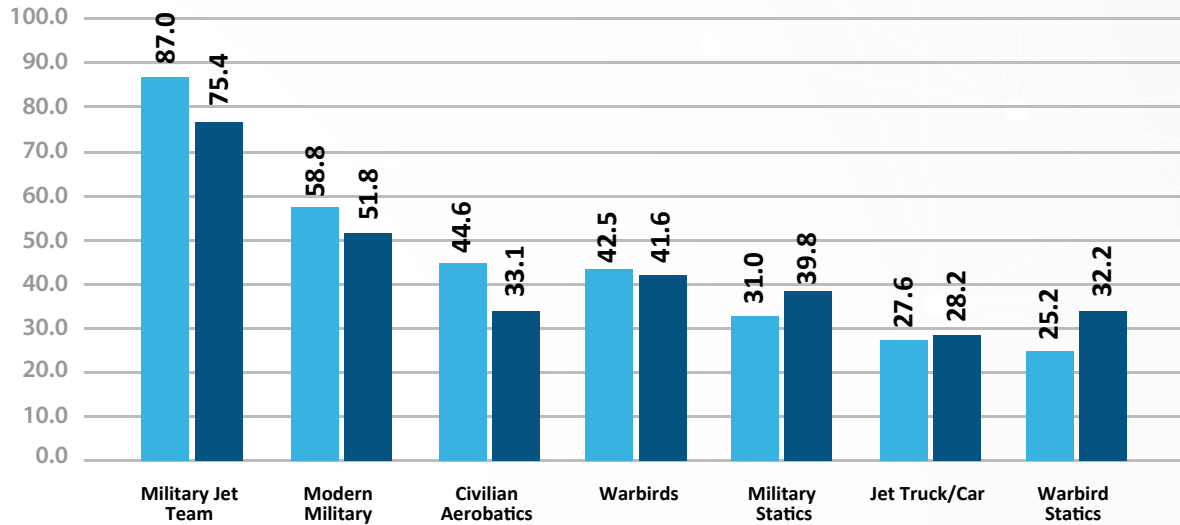
2023 Only



Air show audiences linger at our events. And this matters to certain prospective sponsors. In 2023, more than 70% of

survey respondents reported that they remained on the show grounds for four hours or more.

## What were the main attractions for you at this air show? 2023 vs. 2000-2018 Average



This is the question on which we saw the most change in responses vs. historically consistent results in past ICAS Spectator Surveys. The three clearest examples is the significant increase in how many more respondents identified “civilian aerobatics” as a main attraction for them, and the decreases in how many people listed “military statics” and “warbird statics” as important attractions.

These changes could represent a change in air show spectator preferences, a one-time deviation due to circumstances unique to last year’s survey or a combination of the two.

In any case, it’s important to understand that the interests and preferences of the people making the hiring decisions

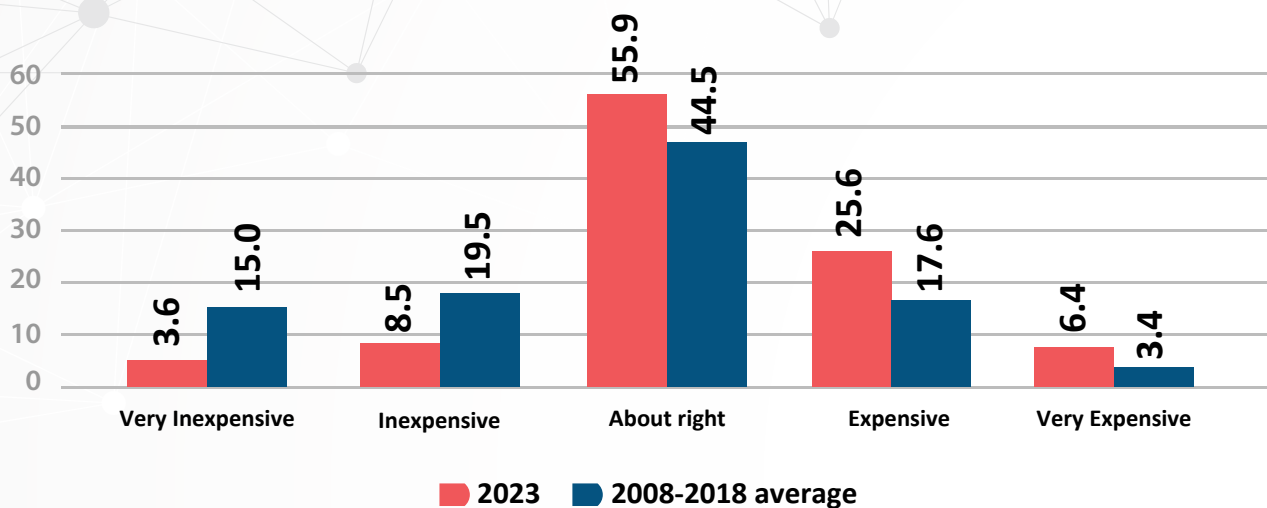
for civilian performers does not always match the interests of the spectators actually attending the event. Every air show management team will do well to periodically refresh their perspective by looking at the responses to this question and remembering that their first obligation is to provide the air show that their customers have told them they want to see.

In the meantime, we will watch with more than the usual interest to see if the changes in responses to this question are repeated when we survey U.S. air show spectators again in 2025.





## How would you describe the cost of your air show admission ticket?



There is perhaps no area of air show management that is as topical and important as ticket pricing. And this series of graphs confirms both that we are seeing some change and that there is room for even more change and more dramatic change.

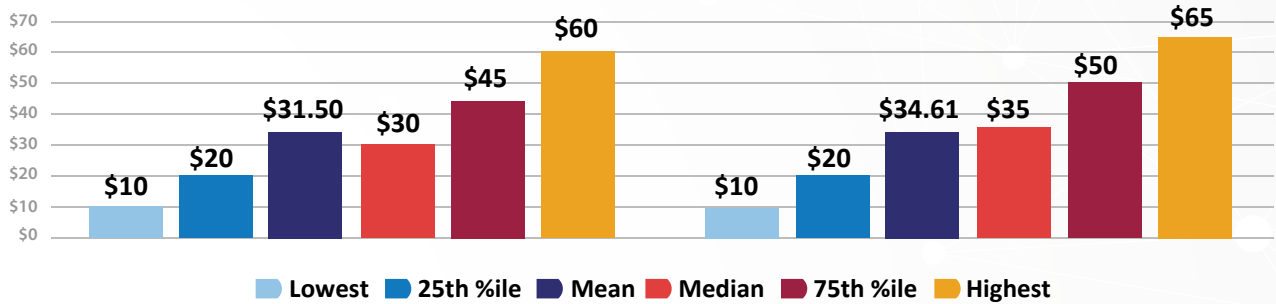
As compared to our historic averages, fewer people are saying that ticket prices are very inexpensive or inexpensive which is a big step in the right direction of increasing historically low ticket prices. But with 55.9% saying that ticket prices are “about right” and only 6.4% saying that ticket prices are “very expensive,” it’s clear that there is still room for additional increases.

Last summer, nearly 100 ICAS member air shows responded to a survey on ticket price and told us that the average price for an air show ticket (non-discounted, general admission purchased on the day of the show) is \$31.50 with at least one show charging as little as \$10 and at least one other show charging \$60. And it is about those ticket prices that 56% of spectators are saying, “about right” and less than a third are saying “expensive” or “very expensive.”

Conclusion: There is still room to increase ticket prices, perhaps even significantly increase. In the last five years, at a time when prices for nearly everything – and especially professional sports and other live events like concerts and amusement parks -- have gone up dramatically, air show ticket prices have increased at less than five percent per year.

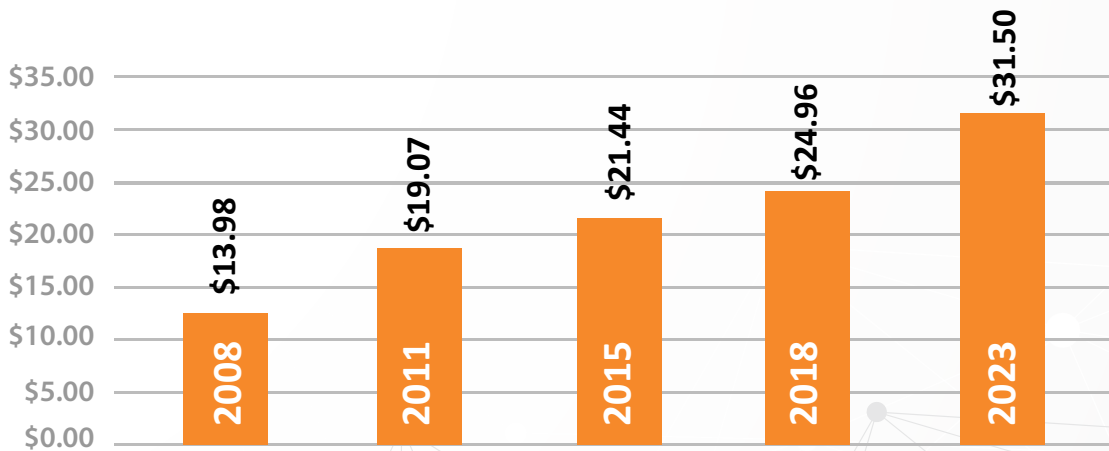
Air show ticket prices do not yet reflect the value and uniqueness of the entertainment we offer, the cost and work required to stage an air show, and the perspective clearly expressed by our customers that we have not yet gotten anywhere close to a ticket price that would impact their decision to go to an air show. The challenges our industry faces are on the “customer experience” side of the ledger, not the cost of entry. And there is broad agreement that an increase in ticket revenue is one of the best methods to generate the additional revenue needed to improve that customer experience for our air show spectators.

## Air Show Ticket Prices \* (U.S. only)



\* The survey questions used to produce these statistics asked that respondents provide the price for a non-discounted, non-upgraded, one-day, general admission adult ticket purchased on-site on the day of the show.

## U.S. Air Show Ticket Prices, 2008-2023 \* (Adult, On-Site, Non-Discounted Tickets)



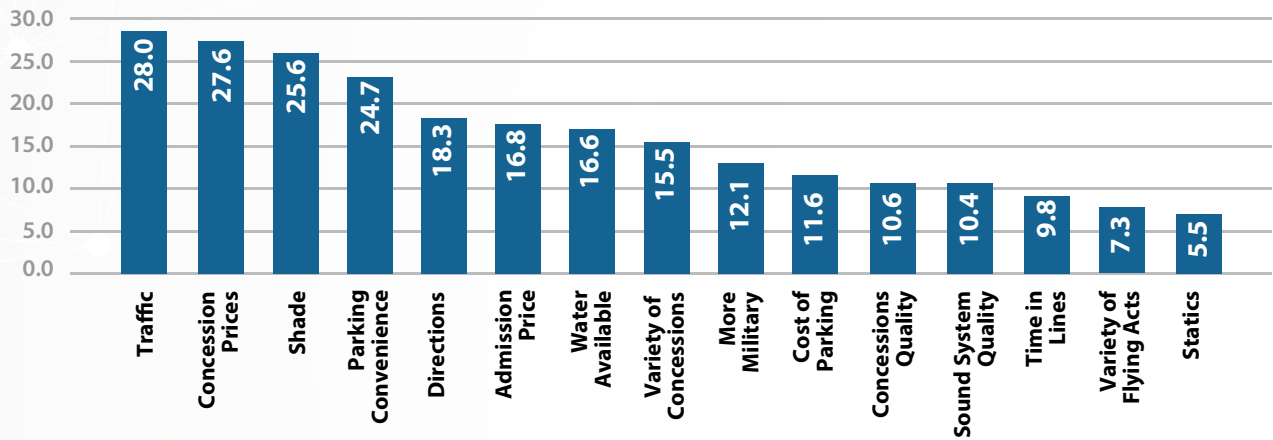
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## Areas of the show that could benefit most from improvement

2023 only



During the last several years, both within and outside of the air show community, there has been a renewed focus on improving the customer experience. In our business, the process of improving the customer experience can and should begin with eliminating or mitigating some of the things with which our fans have told us they are unsatisfied.

This graph is a roadmap to identifying what those things are. And they segregate themselves very clearly into major and minor annoyances. Traffic, parking and shade have been the biggest concerns for spectators for many years. Concession prices have been inching up on the list, but not until 2023 did they break into the top five.

Obviously, it is not practical to solve all of these challenges all at once. But our ultimate customers – the air show spectators – have been telling us about the areas of their air show experience most in need of improvement for many years. As an industry, we owe it to them and to ourselves to take that constructive criticism seriously and work to make the changes they've asked for.

# Conclusion

As digital analytics and other information capabilities provided by the internet become a bigger and bigger part of the air show manager's toolbox, it is helpful from time to time to return to the analog world and take a fresh look at the make-up of the audiences for whom we plan and conduct our events.

ICAS has been gathering some version of this same information for nearly 40 years. In many ways, it is the accumulation and consistency of this historic data that make it both relevant and authentic.

More to the point, the absence of this key demographic material during the last several years as a result of COVID and its aftermath have made it even clearer how important it is to have access to updated demographic information.

There is no substitute for having a reliable, practical demographic portrait of who are audiences are, what they want, what they like about our events and what they think could benefit from improvement. Event organizers who ignore this information, minimize its importance or dismiss it as obsolete or old-fashioned do so at their own peril.

Our audiences have taken the time and gone to the trouble to speak to us. The questions now are: Will we listen and what will we do with the information? ✈️



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