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MONTANA RESIDENT REPORT, Q2 2026

Understanding the impact of air quality and wildfire smoke on travel and outdoor recreation in Montana.

Carter Bermingham, Megan Schultz, Melissa Weddell | October 2026



The mission of the Institute for Tourism & Recreation Research (ITRR) is to conduct rigorous and impartial research that empowers the tourism and recreation industries in Montana to make informed decisions in planning, marketing, policy, and management. As part of the W.A. Franke College of Forestry and Conservation at the University of Montana, ITRR is committed to the highest academic integrity, ensuring transparency and excellence in all research efforts.

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OVERVIEW

WILDFIRE SMOKE INFLUENCES TRAVEL AND RECREATION DECISIONS

57% of respondents said expected wildfire smoke causes them to change their summer travel plans. Of those who said it did, 46% reported choosing different destinations, 39% avoided peak fire season, and 38% created backup plans.

RESIDENTS RESPOND TO VARYING LEVELS OF SMOKE

One-third of respondents (33%) begin adjusting outdoor activities at heavy smoke levels (AQI 101-200), while 26% make changes at moderate levels (AQI 51-100). However, 23% reported that no level of smoke would alter their plans.

SMOKE HAS ALREADY DISRUPTED TRAVEL

Roughly 40% of respondents reported having changed, delayed, or canceled a summer trip because of wildfire smoke in the past. Among those respondents, canceling a trip (44%) and changing destinations (34%) were the most common responses.

TRAVEL COMMITMENTS AND THE LIMITS TO CHANGING PLANS

Over half of respondents (58%) said that traveling for a specific event was the most difficult factor they encountered when considering their ability to change plans as a result of wildfire smoke. Traveling with others (38%), booking trips in advance (30%), and limited indoor alternatives (25%) were also reported as difficulties by respondents.

GENDER AND REGIONAL DIFFERENCES

Women were more likely than men to say they check smoke conditions before traveling (45% vs. 35%, respectively) and to adjust outdoor activities at moderate levels of smoke (35% vs. 18%, respectively). Differences across travel regions were also evident, with residents in Yellowstone Country being the most likely to check conditions (48%) compared with 18% of respondents in Missouri River Country.

INTRODUCTION

Wildfire smoke has become an increasingly prevalent part of Montana's summer landscape, affecting air quality, outdoor recreation, travel, and daily life statewide. Air quality conditions in Montana can vary substantially by location and time, particularly during periods when smoke from wildfires accumulates in valleys and communities or moves across state lines or even international boundaries. These changes can occur quickly, making air quality an important consideration for residents planning outdoor activities and summer travel. Resources like AirNow.gov provide current and historical air quality information for locations throughout the country, illustrating how conditions can range from good to unhealthy to hazardous depending on concentrations of fine particulate matter and other pollutants.

FIGURE 1: AQI BASICS FOR OZONE AND PARTICLE POLLUTION

AQI Basics for Ozone and Particle Pollution

Daily AQI Color	Levels of Concern	Values of Index	Description of Air Quality
Green	Good	0 to 50	Air quality is satisfactory, and air pollution poses little or no risk.
Yellow	Moderate	51 to 100	Air quality is acceptable. However, there may be a risk for some people, particularly those who are unusually sensitive to air pollution.
Orange	Unhealthy for Sensitive Groups	101 to 150	Members of sensitive groups may experience health effects. The general public is less likely to be affected.
Red	Unhealthy	151 to 200	Some members of the general public may experience health effects; members of sensitive groups may experience more serious health effects.
Purple	Very Unhealthy	201 to 300	Health alert: The risk of health effects is increased for everyone.
Maroon	Hazardous	301 and higher	Health warning of emergency conditions: everyone is more likely to be affected.

AQI Basics for Ozone and Particle Pollution, Air Quality Index (AQI) Basics (AirNow.gov, 2026), https://www.airnow.gov/aqi/aqi-basics/.

Poor air quality associated with wildfire smoke is especially relevant for Montana's tourism and recreation economy. The presence of wildfire smoke can reduce visibility, diminish the quality of outdoor experiences, and create health concerns for residents and visitors. Understanding how Montanans respond to changing levels of smoke and air quality conditions can provide valuable insight for tourism and recreation managers, communities, and businesses planning for the future. Although wildfire smoke is a familiar environmental condition for many Montana residents, its influence on decisions about when, where, and how people travel and recreate is less well understood.

STUDY PURPOSE

This study was designed to better understand how residents respond to wildfire smoke in their community, and the associated impacts it has on their travel and outdoor recreation behavior (if any at all). The Institute for Tourism and Recreation Research (ITRR) conducts resident studies quarterly to better understand current topics across the state. In a year marked by a lack of winter snowpack and warm spring temperatures, 2026 was an ideal time to broach the topic of wildfire smoke in Montana.[1]

Respondents were asked whether they check current smoke conditions before leaving for a trip and at what level of smoke (e.g., a certain air quality index rating) they begin to adjust their outdoor recreation activities. In addition, respondents were asked if the expectation of wildfire smoke would cause them to adjust their summer travel plans, if they had canceled or changed trips because of wildfire smoke, and what in particular makes it difficult to change their travel plans due to smoke.

METHODS

Data were collected by trained surveyors who asked questions to Montanans as they filled up their vehicle with fuel at gas stations or when they stopped at rest areas around the state. ITRR has permission from over 100 gas stations across Montana to talk to residents during the time it takes them to fill their tank. From April 1st, 2026, to June 30th, 2026, any Montanan 18 years of age or older at these locations had an opportunity to be surveyed about their attitudes toward tourism within the state. Topics included how often residents check current air quality conditions and changes to travel plans as a result of wildfire smoke, among other topics. The respondent data were weighted by the county of residence and gender from the US Census, thus providing a representative sample reflecting the geographic population and gender of the state.

SURVEY DESIGN

Survey questions were developed by ITRR staff and focused on a topic of current interest to tourism partners across the state: wildfire smoke. Stakeholders have consistently reported lost revenue during smoke events, particularly when fires in or near their region draw sustained media attention. Considerably less is known about how recreationists themselves alter their plans in response to smoke, including whether they cancel travel altogether or simply shift destinations. The questions in this survey were designed to begin addressing that gap.

[1] U.S. Department of Agriculture, Natural Resources Conservation Service, Montana Water Supply Outlook Report (Bozeman, MT: Snow Survey and Water Supply Forecasting Program, April 1, 2026), 3.

The survey was administered on tablets by ten surveyors located in different areas of the state and was short by design, with seven questions in total, reflecting the limited time available while respondents fuel their vehicles. The instrument also served as a preliminary gauge for a larger five-year study funded by the USDA National Institute of Food and Agriculture (NIFA): *STEWARD Communities: Sustaining Tourism and Rural Economies through Wildfire Adaptation and Research-driven Development in Communities across the Northern Rockies and Northern Plains*. That study will examine how smoke-driven changes in travel behavior redistribute visitor movement and spending across the region, and what those shifts mean for communities whose economies depend on nonresident visitation by researchers at the University of Montana.

LIMITATIONS

This study was limited to Montana residents 18 years of age and older who either drove or were a passenger in a vehicle during the survey period. Staffing shortages (particularly in the Central Montana area) also made it difficult to obtain larger samples in the Shelby and Havre areas, as well as Browning (located in Glacier Country). In addition, because data were collected from April through June, before peak smoke season, the findings may not fully reflect residents' experiences during the months when smoke is most prevalent.

RESPONSE RATE

The response rate was 77%, with 4,464 Montana residents participating in the survey.

RESULTS

GENDER AND AGE

Respondents' ages ranged from 18 to 102 years, with an average age of 51 years. Those between the ages of 60-69 made up the largest percentage of respondents, at 19%. The unweighted gender split was 64% male and 36% female. The number of respondents by age category is shown in Table 1, and the unweighted gender breakdown is shown in Table 2.

TABLE 1: RESPONDENT AGE

		N	%
Respondent Age	18 - 29	610	14%
	30 - 39	698	16%
	40 - 49	756	17%
	50 - 59	720	16%
	60 - 69	861	19%
	70 +	782	18%
	Total	**4,427**	**100%**

TABLE 2: RESPONDENT GENDER

		N	%
Gender	Male	2,858	64%
	Female	1,599	36%
	Total	**4,457**	**100%**

AIR QUALITY AND CHECKING CURRENT CONDITIONS

Respondents were asked whether they check current smoke conditions before leaving for a trip and if the level of smoke adjusts their outdoor activities while traveling. Just over half of respondents (55%) said they do not check current smoke conditions before leaving for a trip, followed by 40% who said yes, and 5% who said they do not travel. While traveling, 33% of respondents said they begin to adjust their outdoor activities when smoke levels are heavy and air quality is unhealthy for sensitive groups (e.g., AQI of 101 to 200). Roughly one quarter of respondents (26%) said they begin to adjust outdoor activities when smoke levels are moderate (AQI 51 to 100), followed by 18% of respondents who begin to adjust outdoor activities at very heavy levels of smoke (AQI of 200+).

The remaining 23% of respondents said there is no amount of smoke that will alter their plans while traveling.

FIGURE 2: DO YOU CHECK CURRENT SMOKE CONDITIONS BEFORE LEAVING FOR A TRIP? (N=4,459)

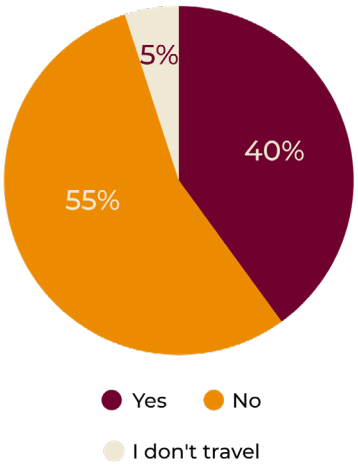
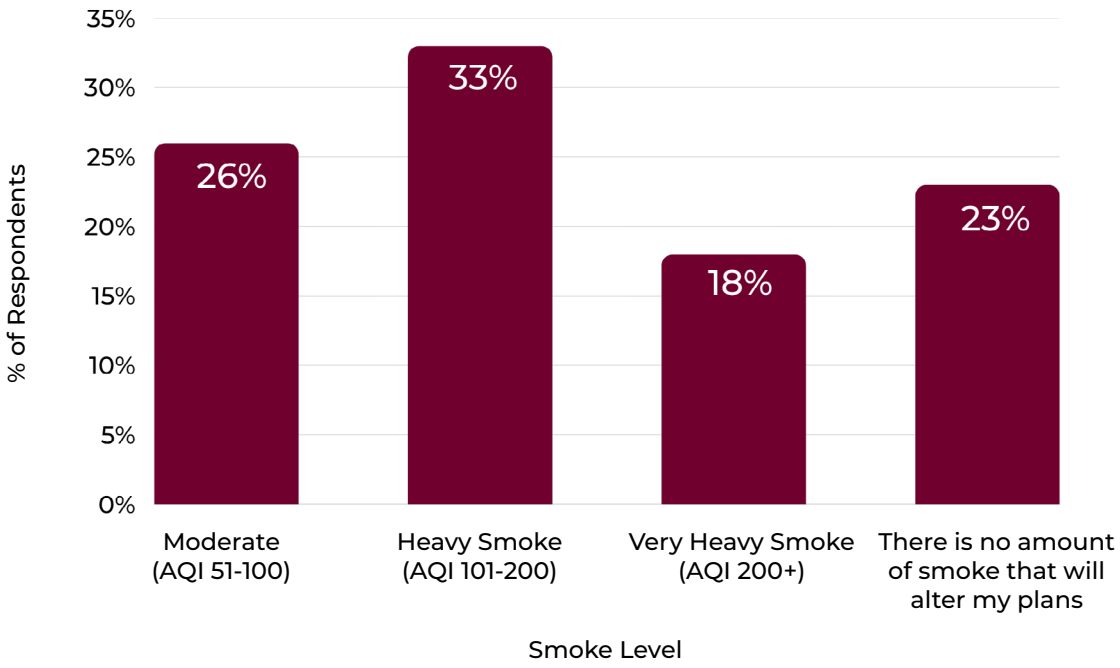


FIGURE 3: AT WHAT LEVEL OF SMOKE DO YOU BEGIN TO ADJUST YOUR OUTDOOR ACTIVITIES WHILE TRAVELING? (N=4,421)

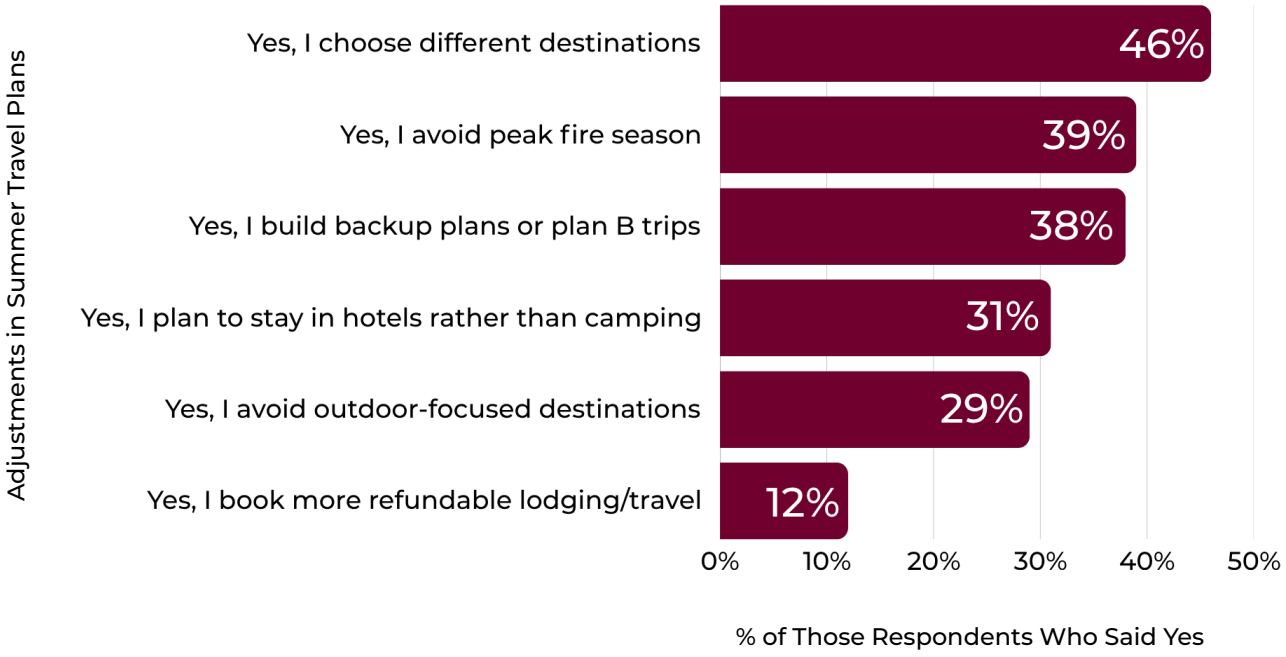


Differences for the previous two questions were most pronounced between different areas of the state, with 18% of respondents from Missouri River Country saying they check current smoke conditions before leaving for a trip, compared to 48% of respondents from Yellowstone Country. In addition, women were more likely to report that they check current conditions before leaving for a trip compared to their male counterparts (45% compared to 35%, respectively). For more results on the differences between gender and Travel Regions across the state, see the Appendices at the end of the report.

WILDFIRE SMOKE: EXPECTATIONS, DELAYS, AND CHANGES IN PLANS

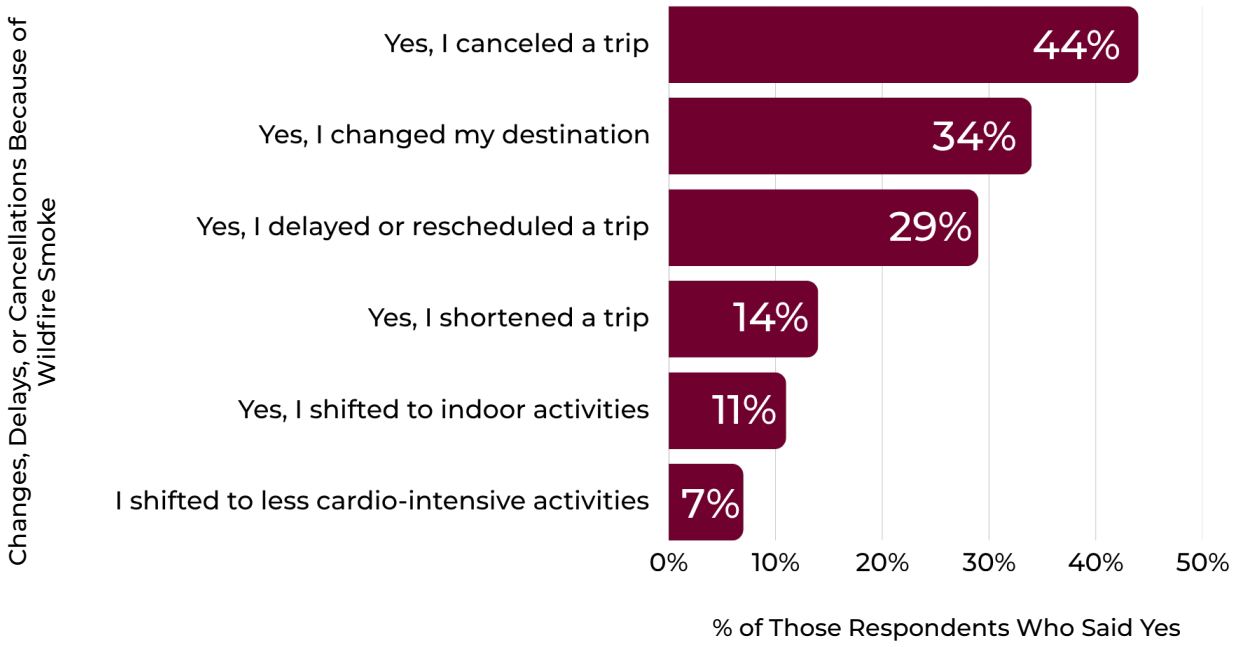
Respondents were then asked several questions related to adjustments in their travel plans, both hypothetically and in the past. Respondents were asked if the expectation of wildfire smoke causes them to adjust their summer travel plans, particularly those that include outdoor activities. Overall, 43% of respondents said that the expectation of wildfire smoke does not change how they plan. Of those respondents who said that the expectation of wildfire smoke causes them to adjust their summer travel plans, 46% said they choose different destinations, followed by 39% who said they plan trips to avoid peak fire season, and 38% of respondents who said they build backup plans or have Plan B trips in place. Another 31% of respondents said they plan to stay in hotels rather than camping, while 29% said they avoid outdoor-focused destinations, and 12% said they book more refundable lodging and travel due to the expectation of wildfire smoke.

FIGURE 4: DOES THE EXPECTATION OF WILDFIRE SMOKE CAUSE YOU TO ADJUST YOUR SUMMER TRAVEL PLANS THAT INCLUDE OUTDOOR ACTIVITIES? (N=2,401)



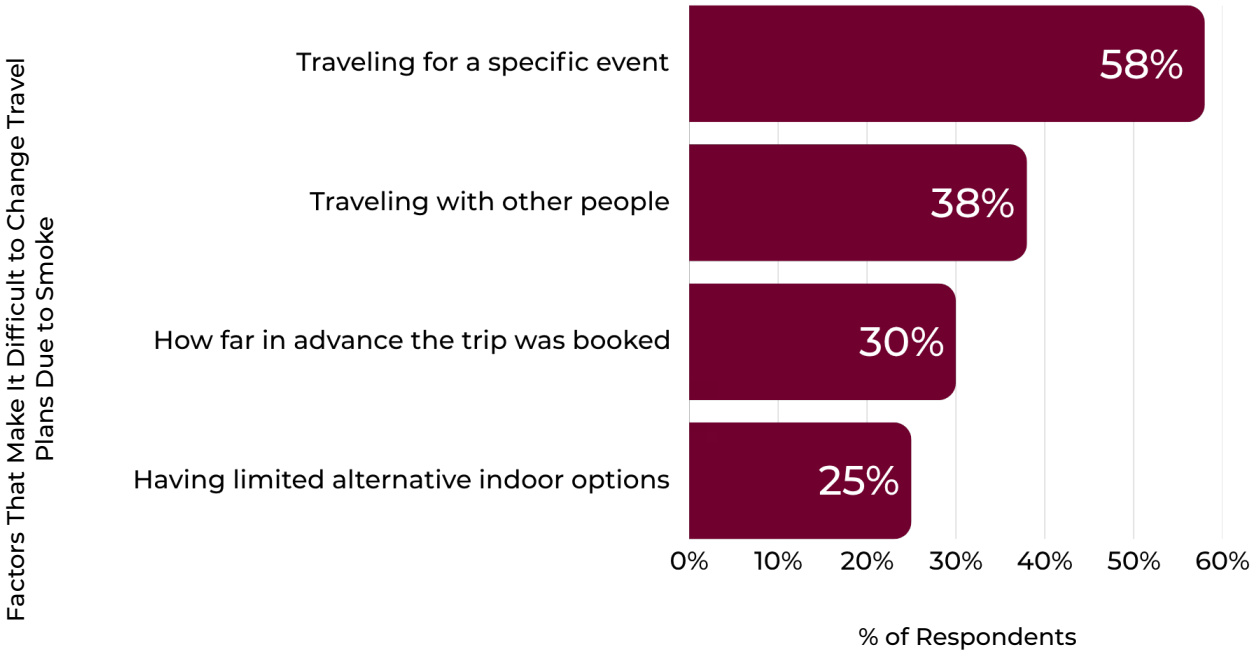
Respondents were then asked to retrospectively report if they've ever changed, delayed, or canceled a summer trip because of wildfire smoke. Overall, 60% of respondents reported that they hadn't changed, delayed, or canceled a trip because of wildfire smoke. Of the 40% of respondents who said they had, 44% said they had canceled a trip, followed by 34% who said they changed their destination, and 29% who delayed or rescheduled a prior trip. Another 14% of respondents said they had shortened a summer trip because of wildfire smoke, while 11% said they shifted to indoor activities, and 7% said they shifted to less cardio-intensive activities.

FIGURE 5: IN THE PAST, HAVE YOU CHANGED, DELAYED, OR CANCELED A SUMMER TRIP BECAUSE OF WILDFIRE SMOKE?(N=1,711)



Finally, respondents were asked to comment on different factors (if any) that make it difficult to change their summer travel plans due to smoke. The most common choice respondents reported having difficulty with was the need to travel for a specific event, with 58% of respondents selecting that factor. Another 38% of respondents said having travel planned with others made it difficult to change plans, while 30% said how far in advance they booked their trip was a factor as well. Respondents also reported that having limited alternative indoor options was a factor as well, with 25% selecting that as an option.

FIGURE 6: WHICH OF THE FOLLOWING FACTORS (IF ANY) MAKE IT DIFFICULT TO CHANGE YOUR TRAVEL PLANS DUE TO SMOKE? (N=2,498)



CONCLUSION

The findings from this study demonstrate that wildfire smoke is an important consideration for a substantial portion of Montana residents when making decisions about summer travel and outdoor recreation, although its influence varies among individuals and across the state. Most notably, 55% of respondents reported that they do not check current smoke conditions before leaving for a trip, suggesting that monitoring air quality is not yet a routine part of travel preparation for many residents. At the same time, 40% reported checking conditions, and many respondents indicated that they modify outdoor activities once smoke reaches moderate or heavy levels.

Findings from this study also indicated that the expectation of wildfire smoke can influence travel decisions before a trip begins. Among respondents who indicated that smoke affects their summer travel plans, choosing a different destination, avoiding peak fire season, and developing backup or “Plan B” trips were among the most common responses. Past experiences show that these adjustments can have more substantial consequences, with 40% of respondents reporting having changed, delayed, or canceled a summer trip because of wildfire smoke. Among those respondents, canceling a trip and changing destinations were the most frequently reported actions.

The findings also highlight that residents do not have complete flexibility when responding to wildfire smoke. Traveling for a specific event was the most commonly identified barrier to changing plans, followed by traveling with others, booking trips far in advance, and having limited alternative indoor activities. These constraints may help explain why some residents continue with planned travel despite poor air quality.

Finally, differences by gender and travel region indicate that responses to wildfire smoke are not uniform across Montana. Women were more likely than men to monitor smoke conditions and to adjust activities at lower smoke levels, while travel regions differed substantially in monitoring and travel-planning behaviors. Together, these findings underscore the importance of recognizing wildfire smoke as a factor that can shape recreation and travel behavior in Montana, while also acknowledging that residents respond to these conditions in different ways.

APPENDIX A - COMPARISONS BY GENDER

TABLE 3: DO YOU CHECK CURRENT SMOKE CONDITIONS BEFORE LEAVING FOR A TRIP? - MALE VS. FEMALE

		Female	Male
Do you check current smoke conditions before leaving for a trip?	Yes	45%	35%
	No	49%	62%
	Don't Travel	6%	3%

TABLE 4: AT WHAT LEVEL OF SMOKE DO YOU BEGIN TO ADJUST YOUR OUTDOOR ACTIVITIES WHILE TRAVELING? - MALE VS. FEMALE

		Female	Male
At what level of smoke do you begin to adjust your outdoor activities while traveling?	There is no amount of smoke that will alter my plans	15%	31%
	Very Heavy Smoke (AQI 201 +)	16%	20%
	Heavy Smoke (AQI 101 to 200)	35%	31%
	Moderate Smoke (AQI 51 to 100)	35%	18%

TABLE 5: DOES THE EXPECTATION OF WILDFIRE SMOKE CAUSE YOU TO ADJUST YOUR SUMMER TRAVEL PLANS THAT INCLUDE OUTDOOR ACTIVITIES? - MALE VS. FEMALE

		Female	Male
Does the expectation of wildfire smoke cause you to adjust your summer travel plans that include outdoor activities? (Select all that apply for any "yes" statements.)	Yes, I choose different destinations	41%	46%
	Yes, I avoid peak fire season	38%	35%
	Yes, I build backup plans or Plan B trips	36%	37%
	Yes, I avoid outdoor-focused destinations	30%	24%
	Yes, I plan to stay in hotels rather than camping	20%	17%
	Yes, I book more refundable lodging/travel	13%	10%

TABLE 6: IN THE PAST, HAVE YOU CHANGED, DELAYED, OR CANCELED A SUMMER TRIP BECAUSE OF WILDFIRE SMOKE? - MALE VS. FEMALE

		Female	Male
In the past, have you changed, delayed, or canceled a summer trip because of wildfire smoke? (Select all that apply for any "yes" statements that apply.)	Yes, I canceled a trip	43%	47%
	Yes, I changed my destination	31%	39%
	Yes, I delayed or rescheduled a trip	30%	29%
	Yes, I shortened a trip	14%	13%
	Yes, I shifted to indoor activities	14%	9%
	I shifted to less cardio-intensive activities	7%	6%

TABLE 7: WHICH OF THE FOLLOWING FACTORS (IF ANY) MAKE IT DIFFICULT TO CHANGE YOUR TRAVEL PLANS DUE TO SMOKE? - MALE VS. FEMALE

		Female	Male
Which of the following factors (if any) make it difficult to change your travel plans due to smoke?	Traveling for a specific event	62%	53%
	Traveling with other people	40%	37%
	How far in advance the trip was booked	33%	27%
	Having limited alternative indoor options	29%	21%

APPENDIX B: COMPARISONS BY TRAVEL REGION

TABLE 8: DO YOU CHECK CURRENT SMOKE CONDITIONS BEFORE LEAVING FOR A TRIP? - TRAVEL REGION COMPARISON

		Glacier	Southwest	Central	Yellowstone	Missouri River	Southeast
Do you check current smoke conditions before leaving for a trip?	Yes	42%	44%	41%	48%	18%	29%
	No	52%	51%	54%	48%	77%	68%
	I Don't Travel	6%	5%	5%	4%	5%	3%

TABLE 9: AT WHAT LEVEL OF SMOKE DO YOU BEGIN TO ADJUST YOUR OUTDOOR ACTIVITIES WHILE TRAVELING? - TRAVEL REGION COMPARISON

		Glacier	Southwest	Central	Yellowstone	Missouri River	Southeast
At what level of smoke do you begin to adjust your outdoor activities while traveling?	Moderate Smoke (AQI 51 to 100)	28%	22%	27%	27%	26%	25%
	Heavy Smoke (AQI 101 to 200)	32%	34%	32%	40%	28%	29%
	Very Heavy Smoke (AQI 201 +)	17%	25%	22%	15%	19%	13%

		Glacier	Southwest	Central	Yellowstone	Missouri River	Southeast
	There is no amount of smoke that will alter my plans	23%	19%	19%	19%	27%	33%

TABLE 10: DOES THE EXPECTATION OF WILDFIRE SMOKE CAUSE YOU TO ADJUST YOUR SUMMER TRAVEL PLANS THAT INCLUDE OUTDOOR ACTIVITIES? - TRAVEL REGION COMPARISON

		Glacier	Southwest	Central	Yellowstone	Missouri River	Southeast
Does the expectation of wildfire smoke cause you to adjust your summer travel plans that include outdoor activities? (Select all that apply for any "yes" statements.)	Yes, I choose different destinations	49%	43%	41%	39%	28%	42%
	Yes, I avoid peak fire season	53%	31%	28%	18%	46%	33%
	Yes, I build backup plans or Plan B trips	25%	52%	46%	37%	39%	39%
	Yes, I avoid outdoor-focused destinations	29%	32%	24%	25%	19%	27%
	Yes, I plan to stay in hotels rather than camping	14%	20%	21%	15%	34%	28%
	Yes, I book more refundable lodging/travel	6%	20%	16%	8%	14%	14%

TABLE 11: IN THE PAST, HAVE YOU CHANGED, DELAYED, OR CANCELED A SUMMER TRIP BECAUSE OF WILDFIRE SMOKE? - TRAVEL REGION COMPARISON

		Glacier	Southwest	Central	Yellowstone	Missouri River	Southeast
In the past, have you changed, delayed, or canceled a summer trip because of wildfire smoke? (Select all that apply for any "yes" statements that apply.)	Yes, I canceled a trip	50%	47%	42%	40%	33%	39%
	Yes, I changed my destination	41%	36%	26%	27%	24%	35%
	Yes, I delayed or rescheduled a trip	24%	30%	24%	38%	52%	35%
	Yes, I shortened a trip	11%	21%	13%	12%	17%	16%
	Yes, I shifted to indoor activities	11%	12%	10%	15%	11%	10%
	I shifted to less cardio-intensive activities	6%	10%	5%	8%	9%	7%

TABLE 12: WHICH OF THE FOLLOWING FACTORS (IF ANY) MAKE IT DIFFICULT TO CHANGE YOUR TRAVEL PLANS DUE TO SMOKE? - TRAVEL REGION COMPARISON

		Glacier	Southwest	Central	Yellowstone	Missouri River	Southeast
Which of the following factors (if any) make it difficult to change your travel plans due to smoke?	Traveling for a specific event	52%	60%	65%	64%	57%	53%
	Traveling with other people	38%	42%	39%	39%	36%	35%
	How far in advance the trip was booked	33%	34%	33%	27%	27%	22%
	Having limited alternative indoor options	20%	25%	22%	35%	22%	30%