Fishing, Hunting, and Wildlife-Associated Recreation in Washington

Participation and Expenditures in 2022



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Executive Summary

Millions of residents and visitors from other states enjoy Washington's fish and wildlife through participation in wildlife-related recreation. Such recreational activity supports a robust recreation economy, generating revenue for businesses and taxes to support the services provided by WDFW and other public agencies. For nearly seven decades, the National Survey of Fishing, Hunting, and Wildlife-Associated Recreation has measured wildlife-related recreational activity, providing a snapshot of who participates and what they spend to do so. This report describes the results of the 2022 Survey for Washington.

In 2022, 4.4 million Washington residents aged 16 years or older participated in at least one wildlife-related recreation activity in 2022 - 72% of the state's population - and 2.5 million took trips away from their homes to do so. Between residents and non-residents, the Survey found that 1.2 million people fished, 292,000 people hunted, and 6.2 million people watched wildlife, including 4 million who took trips farther than a mile from their homes to do so.

These anglers, hunters, and wildlife watchers spent over \$9 billion on equipment and trip-related expenses, spending associated with an estimated \$630 million in taxes contributing to the State General Fund. Expenditures associated with wildlife-related recreation exceeded consumer expenditures by Washington residents on other major product categories in 2022, including telecommunication services, new motor vehicles, and accommodations (e.g., hotels). Tax revenues associated with this spending exceeded general fund contributions to fish and wildlife management four-fold.

The Washingtonians who participated in wildlife-related recreation were as diverse as the population of the state overall. Many participants took part in more than one activity; fishers and hunters were far more likely to participate in wildlife watching than those who do not participate in these activities. The percentage of Washington residents aged 16 years or older who participated in fishing in 2022 was 17%, while the participation rates for hunting, away-from-home wildlife watching, and around-the-home wildlife watching were 4%, 35%, and 71% respectively. Participation rates exceeded national averages in all activities apart from hunting, though the hunting participation rate among women was double the national rate.

While the Survey helps us understand the scale and scope of wildlife-related recreation, more research is needed to fully understand the drivers of recreational behavior, barriers to participation, and other ways that Washingtonians interact with and value wildlife. The results delivered in this report will support the implementation of the Washington Hunting and Angling Recruitment, Retention, and Reactivation (R3) Plan and the 10-Year Recreation Strategy for WDFW-Managed Lands, as well as the agency's 25-Year Strategic Plan. These findings emphasize just many ways Washington residents opt to enjoy the outdoors and wildlife-related recreation. With something for everyone, Washington's diverse wildlife-related recreation opportunities offer a place for all in fish and wildlife conservation.

Introduction

Providing sustainable recreational opportunities is core to the mission and business of Washington Department of Fish and Wildlife (WDFW). Residents and visitors alike enjoy many opportunities for fishing, hunting, and wildlife watching across the state, creating lasting memories, bonding with nature, and fueling local economies.

This report presents results from thousands of interviews with Washington and U.S. residents about their fishing, hunting, and wildlife watching activity across Washington in 2022. Included are estimates of participation, measured in numbers of individuals, days, and trips, in each activity among persons 16 years of age and older, as well as profiles of their demographics and expenditures associated with participation.

These interviews were conducted as part of the 2022 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation¹, referred to in this report as the Survey, a project of the U.S. Fish and Wildlife Service (USFWS) and the Association of Fish and Wildlife Agencies (AFWA). Since 1955, the Survey has served as the nation's authoritative data source on wildlife-related recreation. The Survey relies on state-of-the-art sampling methods and survey design to provide consistent and rigorous estimates across states and activities in ways that state license databases and activity-specific surveys do not.

In 2021, USFWS and AFWA partnered with the National Opinion Research Center at the University of Chicago (NORC) to redesign the 2022 Survey to better capture hard-to-reach demographics, take advantage of modern survey methods, and ensure financial sustainability of the project. In 2022, fifteen states opted in to receive specific state-level data as part of the Survey, with Washington representing the only state in the western United States to do so. While the changes to the Survey resulted in a more rigorous and affordable model, the redesign limits comparability between the results presented here and results from previous surveys.

The 2022 Survey results paint a rich picture of the diverse communities that participate in wildlife-related recreation and the role these activities play in supporting local economies across the state. The results in this report allow WDFW to better understand the constituents who enjoy and benefit from wildlife the agency is charged with protecting. With a better understanding of who hunts, fishes, and watches wildlife, WDFW and partners across Washington can identify opportunities to tailor services and organized opportunities to best serve residents. Expenditure estimates demonstrate that the value of these activities extends beyond enjoyment and memories, providing the foundation for a robust statewide recreation economy.

¹ U.S. Department of the Interior, U.S. Fish and Wildlife Service, <u>2022 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation</u>

Results

Highlights

Millions of people participated in wildliferelated recreation in Washington in 2022. Between residents and non-residents, the Survey found that 1.2 million people fished, 292,000 people hunted², and 6.2 million people watched wildlife, including 4 million who took trips farther than a mile from their homes to do so.

The volume of wildlife-related recreational activity was vast. Across all three activities, participants spent 67.2 million days recreating away from home. The average wildlife watcher participated in wildlife watching on 13 days in 2022; the average angler and average hunter participated in these activities 11 days and 9 days respectively. Washington residents also frequently enjoy observing wildlife around their homes; an estimated 4.3 million Washingtonians did so in 2022 on an average of 74 days throughout the year.

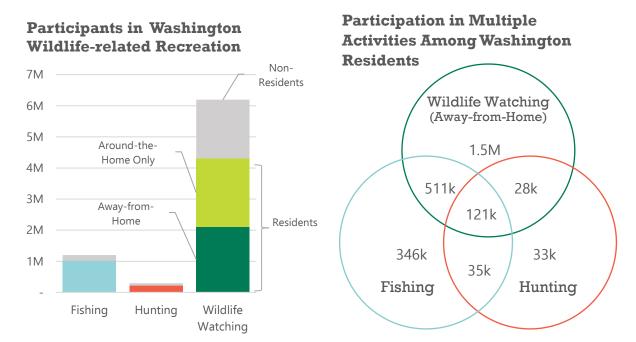
In total, 4.4 million Washington residents aged 16 years or older participated in at least one wildlife-related recreation activity in

Wildlife-Related Recreation in Washingt	on
Expenditures	\$9 billion
Trip-related	
Equipment	
Fishing and Hunting	
Anglers	1.2 million
Hunters	291,000
Total days	. 15.2 million
Fishing	. 12.6 million
Hunting	2.6 million
Total expenditures	\$3.2 billion
Fishing	\$2.1 billion
Hunting	
Wildlife Watching	
Total participants	6.2 million
Around the home	4.3 million
Away from home	4.0 million
Total days	370 million
Around the home	318 million
Away from home	
Total expenditures	\$5.8 billion
* Estimates represent spending and participation b	

2022 - 72% of the state's population - and 2.5 million took trips away from their homes to do so. It is important to note that many Washingtonians participate in multiple types of wildlife-related recreation activities. Majorities of anglers and hunters both participated in wildlife watching, and 31% of wildlife watchers participated in either fishing, hunting, or both. In fact, 56% of hunters participated in both fishing and wildlife watching as well hunting in 2022.

non-residents unless otherwise noted

² Throughout this report, participation and expenditure estimates are rounded to at least the nearest thousand to roughly convey the statistical precision of the results.



Anglers, hunters, and wildlife watchers spent \$9 billion in support of their recreational pursuits in 2022. This spending reflects both participants' willingness to invest in these activities and the importance of Washington wildlife in supporting the recreation economy. Amongst these expenditures, participants spent \$1.9 billion on trip-related items such as transportation, food, and lodging and \$7.2 billion on equipment.

Assuming that these expenditures are subject to the standard state sales and retail taxes, this economic activity contributed roughly \$630 million to the state general fund in 2022. The remaining \$8.4 billion reflects revenues for businesses and local governments across the state.

Expenditures on Wildlife-related Recreation

The Survey found that \$9 billion was spent in Washington on trips and equipment related to fishing, hunting, and wildlife watching in 2022. Special attention is given to the relative spending on equipment and trips. Trip expenditures are of particular importance to recreational economies, as they bring in revenues for local businesses from across and outside the state. Spending on trips is also closely tied to the volume of participation, i.e., number of trips or days of participation, whereas equipment expenditures are more often driven by one-time or infrequent purchases for each recreationalist and are more likely to occur at or near the recreationalist's home.

Expenditures on Wildlife-related	Rec	reation

	Fishing	Hunting	Wildlife Watching	All Activities
Equipment	\$1,275M	\$831M	\$5,063M	\$7,170M
Trip-related	\$858M	\$241M	\$774M	\$1,873M
Total	\$2,134M	\$1,072M	\$5,837M	\$9,043M
		Estimated St	\$630M	
		Estimated Bu	\$8,412M	

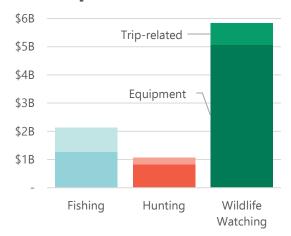
Washington anglers spent \$2.1 billion in 2022, including \$1.3 billion on equipment such as rods, reels, and tackle; specialized equipment like fish finders, tackle bags, coolers, and waders; watercraft, and more. Anglers spent an additional \$858 million on trip-related expenses, including food, lodging (including campgrounds), transportation costs (including fuel), moorage or boat launch fees, guide or charter packages, and land access. Trip expenses represented 40% of total spending; anglers spent more on trips relative to equipment when compared to hunters and wildlife watchers.

Hunters in Washington spent \$1.1 billion in 2022, including \$831 million on equipment, including weapons, ammunition, sights, decoys cases, packs, camping equipment, specialized hunting clothing, and processing equipment. Expenditures also included boats, vehicles, and other high-value items. Hunters spent \$241 million on trips, representing 22% of overall spending.

In 2022, wildlife watchers spent \$5.8 billion in support of their activities. \$5.1 billion was spent on equipment, including binoculars, camera equipment and lenses, scopes or viewing devices, field guides, bird feed, and structures that like bird houses or bird baths that attract wildlife. Expenditures also included camping gear, hiking equipment, and other field gear, and kayaks, canoes, boats, scuba diving equipment, paddleboards, and other special equipment used to view wildlife. Wildlife watching trip-related expenses comprised only 13% of total spending relative to equipment, representing \$774 million. Lower spending on trips reflects the fact that most wildlife viewing activity occurs at or around the home.

WDFW used data collected by the Survey to calculate the average spending on a per-trip basis for each activity. Hunters spent the most per trip, at \$133 in trip-related expenses for each trip. Anglers spent \$92 per trip and wildlife watchers spent \$26 per trip. The

Expenditures by Activity



Trip-related Expenditures per Trip



Expenditures per Participant

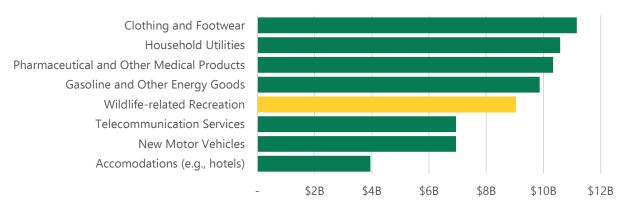


agency and others can use these figures to estimate the marginal economic impact of changes in the number of trips to a community.

The patterns in relative expenses per trip are also present in the estimated total expenditures per participant. Hunters in Washington spent on average \$3,688 each on trips and equipment in 2022, while anglers and wildlife watchers spent \$1,781 and \$937 respectively. It is important to note that high-spending individuals skew average spending estimates and that many participants in each activity did not have any expenditures related to their participation in 2022. The median hunter spent \$1,246, the median angler spent \$619, and the median wildlife watcher spent \$564. Among anglers, 94% were estimated to have expenses related to participation, compared to 95% of hunters and 54% of wildlife watchers. Hunters in Washington spent approximately twice as much on equipment than hunters in other states, while trip expenses were about average. Washington wildlife watchers had average annual trip expenditures about half the national average, a result possibly driven by the abundant viewing opportunities Washingtonians often have close to home.

Finally, comparing expenditures measured in the Survey to consumer expenditures on other products provides context for the scale of economic activity tied to wildlife-related recreation. The U.S. Bureau of Economic Analysis regularly produces estimates of consumer expenditures by state and by product. In 2022, Consumers in Washington spent considerably more on wildlife-related recreation than they spent on products such as telecommunication services (\$6.9 billion), new cars (\$6.9 billion), or accommodations like hotels (\$4.0 billion). Spending on wildlife-related recreation was similar in scale as spending on gasoline and other energy goods (\$9.9 billion), pharmaceutical and other medical products (\$10.3 billion), household utilities (\$10.6 billion), and clothing and footwear (\$11.2 billion).

Consumer Expenditures in Washington by Product



Source: U.S. Bureau of Economic Analysis, "<u>SAPCE3 Personal consumption expenditures (PCE) by state by type of product</u>" (accessed Friday, December 8, 2023).

Fishing

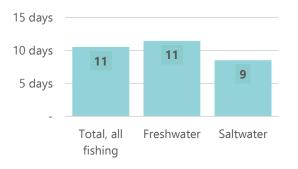
The Survey found that 1.2 million individuals fished in Washington waters in 2022. Of these anglers, 812,000 fished in freshwater, 388,000 fished in saltwater, and 222,000 fished in both environments. Anglers took a combined 9.3 million fishing trips in Washington in 2022, spending 12.6 million days fishing. The average angler went fishing 11 days in 2022, with 74% of their fishing activity in freshwater.

Among Washington residents 16 years old and older, the overall participation rate in fishing was 17% in 2022. Most anglers in Washington were Washington residents, with 15% of anglers visiting from out of state. The share of anglers from out of state was significantly lower than the share of hunters (25%) and wildlife watchers (30%).

While approximately 313,000 women and 20,000 individuals identifying as another gender fished in Washington in 2022, about two-in-three anglers in Washington were men. Approximately 23% of men in Washington fished at least once, while only 10% of women in the state did so. The gender gap in fishing participation is significantly wider than the gender gap in hunting or wildlife watching, consistent with patterns observed in the national data.

Anglers skewed younger than the overall population of Washington, with participation rates higher among residents in the younger age brackets. While the participation rate was approximately 19% among

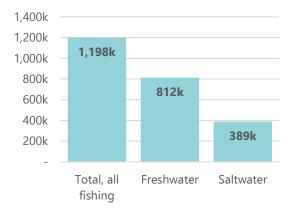
Days per Angler



Total Fishing

Total Histing	
Anglers	1.2 million
Freshwater	
Saltwater	
Resident	1 0 million
Non-resident	185,000
Days	12.6 million
Freshwater	
Saltwater	3.3 million
Trips	9.3 million
Freshwater	6.5 million
Saltwater	
Salewater	
Expenditures	\$2.2 billion
Trip-related	
Equipment	
* Estimates represent spending an	
residents and non-residents unless oth	nerwise noted.

Anglers by Type



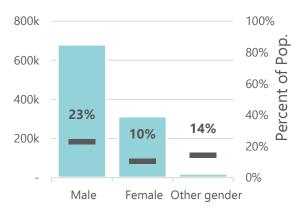
Trips per Angler



residents 16 to 34 years old, the participation rate was only 15% among those 35 years old and older. However, it is important to note that the majority of anglers (63%) were 35 years old and older. Fishing was most popular among Washingtonians with less formal education. Those who had not completed high school participated at 22%, while those with bachelor's degrees participated at only 14%.

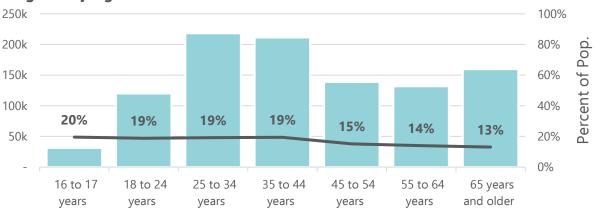
While the majority of Washington anglers in 2022 were non-Hispanic and white (61%), the fishing population was more racial and ethnically diverse than the population overall. Nearly one quarter of

Anglers by Gender

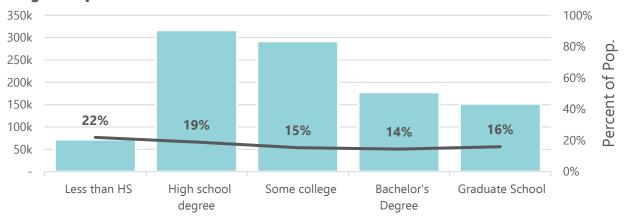


Hispanic-identifying Washingtonians fished in 2022, as did nearly one-in-five residents who identified as Asian. Participation among Black Washingtonians was lower than the statewide participation rate, at 13%. Among those in the "All others" category, which includes Native Americans, Pacific Islanders, and those of mixed race, the Survey found 15% fished in 2022.

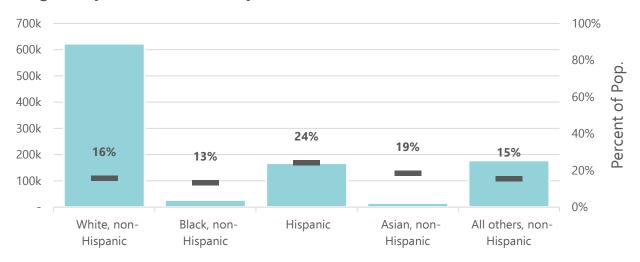
Anglers by Age



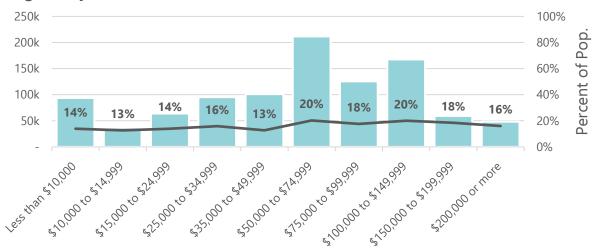
Anglers by Education



Anglers by Race and Ethnicity



Anglers by Annual Household Income



Despite skewing younger and less educated, the participation rate in fishing was higher among higher income Washington households than among lower earning households. Among members of households earning less than \$75,000 per year, the participation rate was 14%, versus 19% among households earning over \$75,000 per year. However, this pattern is less pronounced than the relationship between income and participation observed among hunters and wildlife watchers.

Finally, while participation rates in fishing were considerably higher in rural areas and smaller communities, most anglers resided in larger Metropolitan Statistical Areas (MSAs). The participation rate was lowest among residents of the state's largest MSAs (Seattle-Tacoma-Bellevue and Portland-Vancouver-Hillsboro MSAs), at only 15%. However, over 50% of anglers resided in one of these MSAs. Participation in mid-sized and small MSAs ranged between 18% and 21%, while the participation rate was highest among those living outside an MSA, at 24%.

Anglers by Metro Population

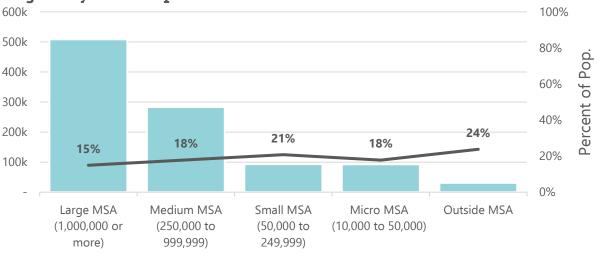




Photo by Daniel Hennagir.

Hunting

In 2022, the Survey found that 291,000 U.S. residents hunted in Washington, of which 217,000, or 75%, were Washington residents. The majority of hunters (74%) targeted big game in 2022, while about one-third targeted small game.

Approximately 50,000 hunters each targeted migratory birds and other animals. There was considerable overlap between big game hunters and those who targeted other categories. Two-thirds of those who hunted for small game also hunted for big game, while 81% of those who hunted for migratory birds also hunted for big game. Only 19% of big game hunters targeted big game exclusively.

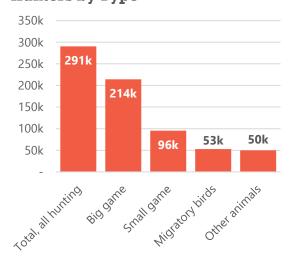
Washington hunters spent a combined 2.6 million days afield in 2022 across 1.8 million trips, for an average of 1.4 days per trip. Big game hunting's popularity was reflected not only in the number of participants, but also in the avidity of those hunters, who hunted an average of seven days for big game each, versus six days for small game and five days for migratory birds and other animals respectively. Big game and small game trips were each 1.5 days long on average, while migratory bird hunting trips and trips targeting o ther species were only 1.1 days on average.

The overall participation rate in hunting among Washington residents was 4% in 2022, compared to a national participation rate of 6%. Approximately 57% of Washingtonians who hunted identified as male, while 41% identified as female and 2% identified as another gender. The gender gap in hunting participation is much narrower in Washington than the gap measured at the national level; only 22% of hunters across the country identified as female. Men in Washington were half as likely to participate in hunting than men nationwide (4% among Washington residents versus 9% nationally).

Total Hunting

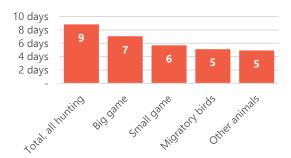
Hunters	291,000
Big game	214,000
Small game	
Migratory birds	
Other animals	
Resident	217.000
Non-resident	
Wolf resident	
Days	2.6 million
Big game	1.5 million
Small game	
Migratory birds	
Other animals	
Tring	1 0 million
Trips	
Big game	
Small game	
Migratory birds	
Other animals	213,000
Expenditures	\$1.1 billion
Trip-related	•
Equipment	
* Estimates represent spending and part	
g and part	

Hunters by Type



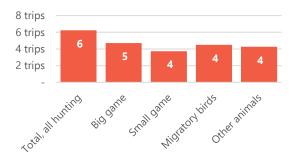
residents and non-residents unless otherwise noted.

Days per Hunter

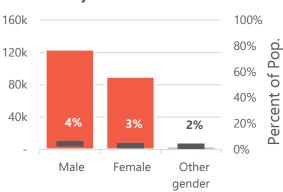


Most hunters were 35 to 64 years old, with lower participation in early adulthood (18 to 34 years old). Youth 16 and 17 years old were more likely to hunt, participating at a 5% rate, and seniors 65 years and older were the least likely to hunt, participating at a 2% rate, suggesting that hunters often lapse during early adulthood, return in middle age, then lapse again later in life. Participation was consistent across education levels, with the lowest participation rate among those with less than a high school education (2%) and the highest among those with some college coursework (4%).

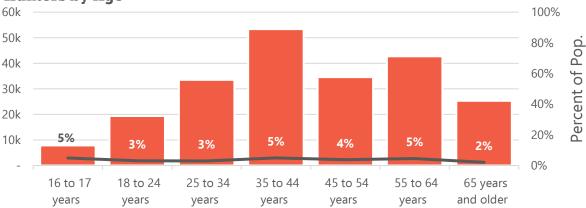
Trips per Hunter



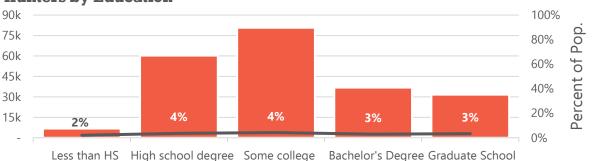
Hunters by Gender



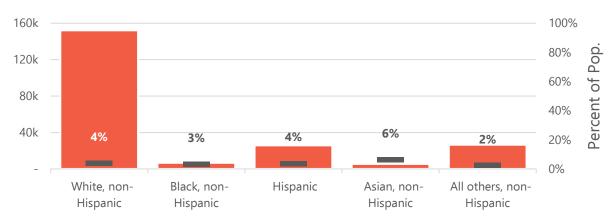
Hunters by Age



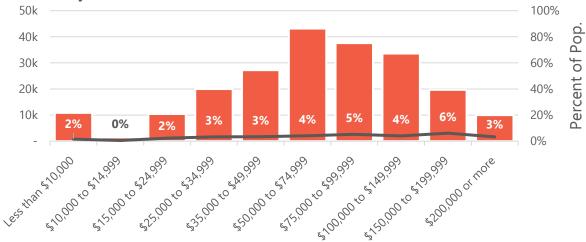
Hunters by Education



Hunters by Race and Ethnicity



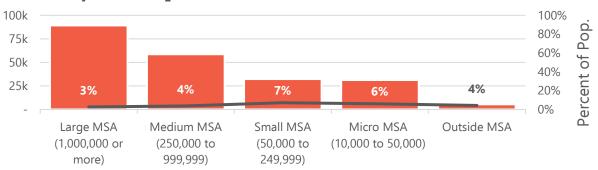
Hunters by Annual Household Income



Hunting was most popular among Washingtonians who identified as Asian; 6% of these residents participated in 2022. Among Hispanic and White, non-Hispanic residents, the participation rate was 4%, followed by 2% among Black, non-Hispanic and all other non-Hispanic residents. The elevated participation rate among Asian residents and lower participation rate among Black residents is consistent with national patterns. While the participation rate among Hispanic Washington residents was in-line with the national average, the participation rate among non-Hispanic residents of all races (3%) was about half the national average for that group.

Participation rates varied considerably across household income levels, with members of higher-earning households participating at a higher rate. While the participation rate among households earning \$50,000 or more annually was approximately 4%, the participation rate for those earning less than that threshold was only 2%. The participation rate was especially low among households earning less than \$25,000 per year, at less than 2%. This pattern reflects findings from the national data.

Hunters by Metro Population



Just as most residents of Washington live in larger cities, the majority of hunters (68%) did so as well. That said, the hunting participation rate among residents of these cities was considerably lower. While 7% of residents of MSAs with populations lower than 250,000 hunted in 2022, only 3% of residents of larger MSAs did so. Put differently, while the typical hunter is more than twice as likely to reside in a larger MSA, the typical resident of a smaller MSA is more than twice as likely to hunt.



Photo by Duane Dixon.

Wildlife Watching

Millions enjoyed watching Washington wildlife in 2022. The Survey defined "wildlife watching" as closely observing, feeding, or photographing wildlife; trips to parks or public lands (e.g., WDFW Wildlife Areas) to view wildlife, and maintaining plantings and natural areas around the home for the benefit of wildlife. In total, 6.2 million people from across the U.S. watched wildlife in Washington, including 4.3 million participating around their homes and 4 million taking trips away from home to do so. Over 30% of these wildlife watchers travelled from out of state, demonstrating the power of Washington's wildlife in drawing tourism activity to the state. Notably, the Survey only counts U.S. residents; international travelers likely contribute a considerable amount of additional wildlife watching activity not measured by the Survey.

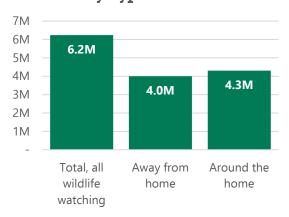
The overall participation rate in wildlife watching among Washington residents 16 years old or older was 71% in 2022, 14 percentage points higher than the national rate. Of these resident wildlife watchers, 35% did so away from their home at least once in 2022. Nearly all wildlife watchers, over 99%, watch around the home, with fewer than 1% participating exclusively away from home.

Observing wildlife around the home is a regular pastime for most Washingtonians. Residents observed wildlife around the home a combined 318 million days in 2022, an average of 74 days per participant. In other words, the typical Washingtonian engages in wildlife watching 1.4 times per week. Wildlife watchers took 30 million trips across the state. The average away-from-home wildlife watching trip lasted 1.7 days, driven in part by the large number of watchers visiting from other states.

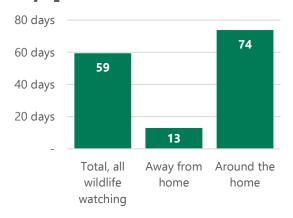
Total Wildlife Watching

Wildlife watchers	6.2 million
Around the home	4.3 million
Away from home	4.0 million
Resident	
Non-resident	1.9 million
Days	370 million
Around the home	318 million
Away from home	52 million
Trips	30 million
Expenditures	\$2.2 billion
Trip-related	\$885 million
Equipment	\$1.3 billion
* Estimates represent spending	and participation by
residents and non-residents unless	otherwise noted.

Watchers by Type

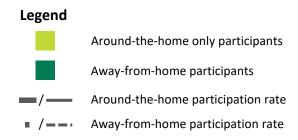


Days per Watcher

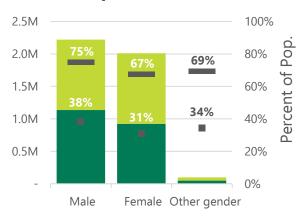


In 2022, 51% of Washington residents who watched wildlife were male, 46% were female, and 2% identified as another gender. Among those who watched away from home, 54% were male, 44% were female, and 2% identified as another gender. The participation rate in away-from-home wildlife watching was higher among men than women, at 38% and 31% respectively. The participation rate for residents who identified as neither male nor female was in between at 34%.

Washington youth 16 and 17 years old watched wildlife at a remarkable rate in 2022. Among this cohort, 96% participated in wildlife watching and 53% participated away-from-home, the highest among age cohorts. Adult residents watched wildlife at rates ranging from 64% among those 25 to 34 years old to 74% among those 35 to 44 years old. Seniors 65 years old and older represented a plurality of wildlife watchers overall. Away-from-home watching rates

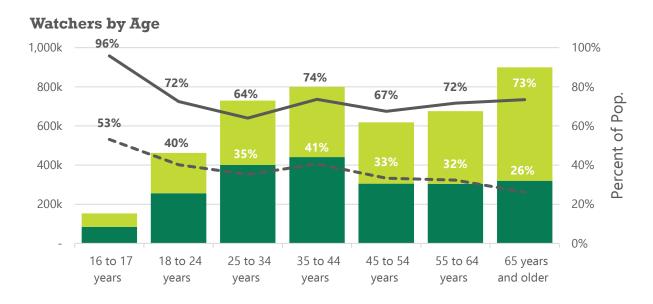


Watchers by Gender

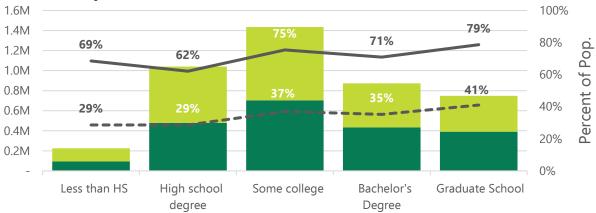


declined somewhat with age, with the lowest participation rates observed among seniors 65 years and older (26%). This pattern suggests that older Washingtonians may be substituting away-from-home viewing for opportunities closer to home.

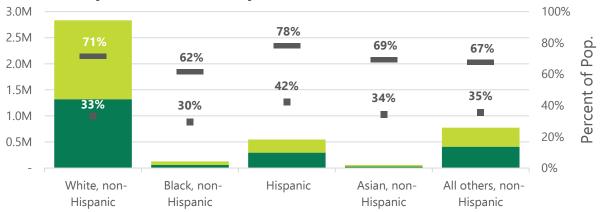
Washingtonians with more formal education were more likely to have watched wildlife in 2022, both around and away from their homes. Among Washington residents with graduate degrees, 79% watched wildlife and 41% watched away from home, the highest rate among education cohorts. Only 29% of







Watchers by Race and Ethnicity

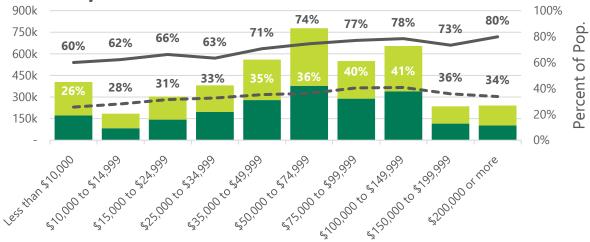


those whose highest degree earned was a high school diploma watched wildlife away-from-home, and 63% watched around their home. This pattern is consistent with the pattern observed nationally, though Washingtonians across education levels watched wildlife at a higher rate than others within their education cohort in other states.

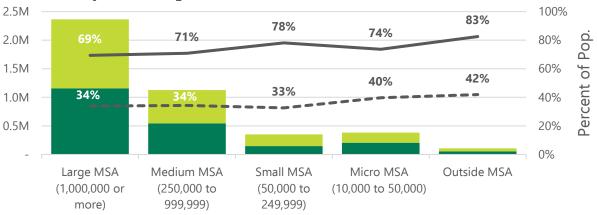
Wildlife watching participation rates varied considerably across race and ethnicity. Wildlife watching was most popular among Hispanic Washingtonians; 78% participated in 2022 and 42% watched wildlife away from home. Black Washingtonians watched wildlife at the lowest rate, with 62% participating overall and 30% watching away-from-home. Residents who identify as white, Asian, or another race participated in wildlife watching at similar rates, between 67% and 71% overall and away from home at rates between 33% and 35%.

Higher income Washingtonians were more likely to have watched wildlife than lower income Washingtonians, both around the home and away from home. Those earning less than \$35,000 annually watched wildlife at rates between 60% and 66%, while those earning more than \$100,000 annually participated at rates between 73% and 80%. The positive association between income and wildlife watching participation is consistent with national patterns and with patterns observed in fishing and hunting.

Watchers by Annual Household Income



Watchers by Metro Population



As with other activities,

Washingtonians living in larger cities were less likely to watch wildlife. In the largest MSAs, 69% of residents participated and 34% participated away from home. Despite participating at a lower rate, these residents represented the majority, 54%, of all wildlife watchers in the state. Those living outside MSAs participated at the highest rate; 42% watched wildlife away from home and 83% watched in any setting.



Photo by WDFW.

2021-2023 Biennium Operating Budget \$654.1 million

Business Management and Obligations
\$96.7 million

Preserve, Protect, and Perpetuate Fish, Wildlife, and Ecosystems \$205.4 million

Provide Recreational and Commercial Opportunities \$352.0 million

Manage fishing opportunities \$166.1 million

Produce hatchery fish \$139.8 million

Manage hunting opportunities \$44.2 million

Manage nonconsumptive recreational opportunities \$1.9 million

Agency Support for Wildlife-related Recreation

The mission of WDFW is to preserve, protect, and perpetuate fish, wildlife, and ecosystems while providing sustainable fish and wildlife recreational and commercial opportunities. Washington residents, through agency investments supported by a variety of revenue sources, advance this mission and provide the foundation for the recreational activity and downstream economic activity measured by the Survey.

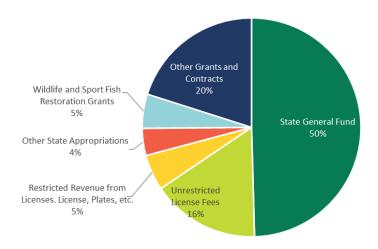
The WDFW operating budget shows the scale of these investments in the 2021-2023 biennium, the two-year budget period that coincided with the period covered by the Survey. WDFW invested \$205.4 million into the preservation, protection, and perpetuation of fish, wildlife, and ecosystems. These investments included habitat restoration projects, acquiring and managing lands, monitoring and controlling invasive species, and partnering with businesses, local governments, and landowners to support conservation. These activities are fundamental to conserving the fish and wildlife that Washingtonians enjoy through their recreational endeavors.

The agency invested a further \$352 million in the provision, management, and support of recreational and commercial opportunities. These activities included setting sustainable seasons, enforcing regulations, selling licenses, producing hatchery fish, providing hunter education, promoting wildlife viewing opportunities, and supporting Washingtonians in providing habitat for wildlife at their homes. It is important to note that many of the activities supporting one activity benefit other activities as well. For example, hatchery-produced salmon provide significant recreational harvest opportunities for

anglers while also providing valuable viewing opportunities when adult salmon return en masse to spawn each year.

A combination of license fees, federal excise taxes on hunting and fishing equipment, other federal grants, and state tax revenues fund these investments. In the 2021-2023 Biennium, \$139.2 million, 19% of WDFW's operating budget, was supported by revenues from fishing and hunting licenses, special design license plates, Discover Pass, and

2021-2023 Biennium Agency Expenditure Categories



similar projects. 54% was supported through appropriations directed from the State Legislature, including \$324.2 million from the General Fund and \$26.3 million from Other State Appropriations. Grants from the USFWS Wildlife and Sport Fish Restoration Fund, which allocates revenue from excise taxes on hunting and fishing equipment and small engine fuels through the Pittman-Robertson and Dingell-Johnson Acts, brought in \$33.0 million in revenue, 4% of the operating budget. \$131.4 million, or 19% of the budget, was supported through other Federal grants and contracts with other agencies. Through license sales, excise taxes, and sales taxes paid in support of their activities, wildlife-related recreationalists continue to contribute to the conservation of Washington's fish, wildlife, and ecosystems.

The \$630M in estimated State General Fund revenues generated via sales and business taxes on expenditures on wildlife-related recreation in Washington in 2022 alone is nearly double the State General Fund contribution to the WDFW operating budget for the full biennium. Supporting recreational opportunities is only one of many services WDFW provides residents, so the ratio of tax revenues on recreation-associated economic activity to general fund appropriations represents on a portion of the full return-on-investment of tax dollars into the agency.

Conclusion

The results of the Survey provide a detailed snapshot of the varied ways that diverse communities of Washingtonians and visitors from other states enjoy wildlife-related recreation, and how their activities contribute to Washington's economy. Washington residents who participate in wildlife-related recreation are as diverse as the residents of the state overall. Many participants took part in more than one activity; anglers and hunters were far more likely to participate in wildlife watching than those who do not participate in these activities. Wildlife watchers, hunters, and anglers spent over \$9 billion, contributing an estimated \$630 million to the Washington treasury through sales and business taxes. Spending on equipment like bait, ammunition, and binoculars supported Washington businesses, as did

over \$1.8 billion spent at restaurants, hotels, gas stations, and other businesses that support travel to wildlife-related recreation destinations.

While the Survey helps us understand the scale and scope of wildlife-related recreation, more research is needed to fully understand the drivers of recreational behavior, barriers to participation, and other ways that Washingtonians interact with and value wildlife. The number of recreationalists, how often they recreate, and how much they spend when doing so are all functions of both the supply of recreation opportunities available and demand in the form of recreational preferences. Economics and other social sciences can provide deeper insights into recreational preferences that can guide sustainable management of opportunities.

The \$9 billion in expenditures on wildlife-related recreation trips and equipment is one signal of the immense importance of Washington's fish and wildlife to the state's economy. However, expenditures are not a sufficient measure of the total economic benefits fishing, hunting, and wildlife watching opportunities bring to the state's residents and visitors. Consumer surplus, or what participants in wildlife-related recreation would be willing to pay beyond their actual expenses, is the most widely accepted measure of the economic value of a recreational opportunity. Modern economic methods can be used to estimate these values and the role management, regulatory, and environmental changes can play in shaping quality opportunities.

Furthermore, recreational opportunities are only one of many ways fish and wildlife provide value to the people of Washington. Beyond recreation, fish and wildlife provide commercial opportunities, support well-functioning ecosystems, and hold immense cultural and spiritual value. Ongoing and future research will shed light on the diverse ways Washingtonians value the state's fish and wildlife.

As Washington's population continues to grow, continued research and monitoring of recreation activity and the preferences of recreationalists is critical to advancing WDFW's mission. The results delivered in this report will support the implementation of the Washington Hunting and Angling Recruitment, Recruitment, and Reactivation (R3) Plan and the 10-Year Recreation Strategy for WDFW-Managed Lands, as well as the agency's 25-Year Strategic Plan. With insights from the 2022 Survey, other human dimensions research, and from future iterations of the National Survey of Fishing, Hunting, and Wildlife-Associated Recreation, WDFW will be well equipped to support inclusive and diverse wildlife-related recreation opportunities.

Methods

The Survey aimed to measure participation in fishing, hunting, and wildlife watching among a representative sample of the U.S. population, and of the population of states that participated in the state-level program. The Survey relies on data collected through a multi-stage collection process over the course of 15 months. Data collection and weighting methods were developed and implemented by NORC under the guidance of USFWS staff and a committee of AFWA representatives.

A high-level overview of the survey methodology is presented here, and more detailed documentation is available in the national report. Note that there were significant methodological changes in the 2022 Survey relative to previous years, meaning that results from this Survey should not be directly compared to past surveys. Of the over approximately 105,000 interviews completed across the country, 4,403 Washingtonians participated in the Survey. Responses from both Washington residents and residents of other states who participated in wildlife-related recreation in Washington contribute to the estimates presented in this report.

Respondents were recruited from three sample sources including a traditional address-based probability sample, NORC's AmeriSpeak panel, and several non-probability panels. Respondents had the opportunity to respond via a web questionnaire, mail questionnaire, or telephone interview. All options were offered in both English and Spanish.

Respondents were first recruited into the survey sample via a "screener" wave to determine the likelihood that respondents would participate in each activity in 2022, based on participation in the respondent's household over the previous five years. To reduce response burden, respondents were then randomly assigned detail surveys for one of the three activities. All respondents were asked about overall participation in each activity, while the more detailed questions on each activity allow estimates of participation rates and volume, as well as expenditures in support of participation. The detail surveys were conducted three separate times between the spring of 2022 and early 2023 to minimize recall bias. NORC constructed survey weights for each respondent to allow representative estimates of participation among the larger population. Weights account for the probability of selection into the sample, nonresponse, and population characteristics across sample sources.

For expenditures, this report presents spending estimates for only equipment and trip-related items while the national report additionally includes estimates for spending on land, licensing, and other items. Therefore, readers should not make direct comparisons between the overall spending estimates in the national report and this report, though the estimates for equipment and trip-related categories are directly comparable. Readers should also note that the estimated general fund tax revenues are based on preliminary calculations; further research on the full economic impacts of wildlife-related recreation expenditures in Washington is ongoing and results from those methods will supersede those reported here.

Appendix – Definitions

Around-the-home wildlife watching – Activity within one mile of home with one of six primary purposes: (1) taking special interest in or trying to identify birds or other wildlife, (2) photographing wildlife, (3) feeding birds or other wildlife, (4) maintaining natural areas of at least one-quarter acre for the benefit of wildlife, (5) maintaining plantings (such as shrubs and agricultural crops) for the benefit of wildlife, and (6) visiting parks and natural areas to observe, photograph, or feed wildlife.

Away-from-home wildlife watching – Trips or outings at least one mile from home for the primary purpose of observing, photographing, or feeding wildlife. Trips to zoos, circuses, aquariums, and museums are not included.

Dingell-Johnson Act — Federal legislation providing state fish and wildlife agencies funding from a 10 percent excise tax on sport fishing tackle; a 3 percent excise tax on fish finders and electric trolling motors; import duties on fishing tackle, yachts and pleasure craft; interest on the account; and a portion of powered boat fuel tax revenues and small engine fuel taxes.

Equipment expenditures – Expenditures (see definition below) on items owned primarily for fishing, hunting or wildlife watching:

- Rods, reels, and rod-making components
- Lines and leaders
- Artificial lures, flies, baits, and dressing for flies or lines
- Hooks, sinkers, swivels, and other items attached to a line, except lures and baits
- Tackle boxes
- Creels, stringers, fish bags, landing nets, and gaff hooks
- Minnow traps, seines, and bait containers
- Depth finders, fish finders, and other electronic fishing devices
- Ice fishing equipment
- Rifles, shotguns, muzzleloaders, and handguns
- Archery equipment
- Telescopic sights
- Decoys and game calls
- Ammunition
- Hand loading equipment
- Hunting dogs and associated costs
- Binoculars and spotting scopes
- Cameras, video cameras, special lenses, and other photographic equipment
- Film and developing
- Commercially prepared and packaged wild bird food
- Other bulk food used to feed wild birds
- Food for other wildlife
- Nest boxes, bird houses, feeders, and baths
- Day packs, carrying cases, and special clothing

- Other items such as field guides and maps
- Motorboats
- Canoes and other types of non-motorboats
- Boat motors, boat trailers, hitches, and other boat accessories
- Pickups, campers, vans, travel or tent trailers, motor homes, house trailers, recreational vehicles (RVs)
- Cabins
- Offroad vehicles such as trail bikes, all-terrain vehicles (ATVs), dune buggies, four-wheelers, 4x4
 vehicles, and snowmobiles
- Sleeping bags, packs, duffel bags, tents, tarps, frame packs, backpacking and other camping equipment
- Blinds
- Special fishing and hunting clothing
- Foul weather gear
- Boots and waders
- Maintenance and repair of equipment
- Processing and taxidermy costs
- Global positioning systems

Expenditures – Money spent in 2022 for wildlife-related recreation trips in the U. S., wildlife-related recreational equipment purchased in the U. S., and other items. The "other items" were books and magazines, membership dues and contributions, land leasing or owning, hunting and fishing licenses, and plantings, all for the purpose of wildlife-related recreation. Expenditures included both money spent by participants for themselves and the value of gifts they received.

Fishing – The catching or attempting to catch fish with a hook and line, bow and arrow, or spear; it also includes catching or gathering shellfish (clams, crabs, etc.); and the noncommercial seining or netting of fish, unless the fish are for use as bait. For example, seining for smelt is fishing, but seining for bait minnows is not included as fishing.

Hunting – The shooting or attempting to shoot wildlife with firearms or archery equipment. Hunting as defined by the Survey does not include occasions when an individual only participated in scouting or observing others hunt.

Metropolitan Statistical Area (MSA) – An MSA is a county or group of contiguous counties containing at least one city of 10,000 or more inhabitants or twin cities (i.e., cities with contiguous boundaries and constituting, for general social and economic purposes, a single community) with a combined population of at least 10,000. Also included in an MSA are contiguous counties that are socially and economically integrated with the central city. Each MSA must include at least one central city. The MSAs of Washington are:

 Large MSAs (1,000,000 or more): Seattle-Tacoma-Bellevue, WA MSA; Portland-Vancouver-Hillsboro, OR-WA MSA

- Medium MSAs (250,000 to 999,999): Olympia-Lacey-Tumwater, WA MSA; Bremerton-Silverdale-Port Orchard, WA MSA; Spokane-Spokane Valley, WA MSA; Kennewick-Richland WA MSA; Yakima, WA MSA
- Small MSAs (50,000 to 249,999): Mount Vernon-Anacortes, WA MSA; Oak Harbor, WA MSA;
 Shelton, WA MSA; Centralia, WA MSA; Longview, WA MSA; Walla Walla, WA MSA; Bellingham,
 WA MSA; Wenatchee, WA MSA; Moses Lake, WA MSA; Port Angeles, WA MSA; Aberdeen, WA MSA; Lewiston, ID-WA MSA
- Micro MSAs (10,000 to 49,999): Othello, WA MSA; Ellensburg, WA MSA; Pullman, WA MSA

Other contracts and grants – This category includes any receivable contract that the WDFW manages whether it's from a federal source, a local source, or an interagency source. This category specifically excludes the Wildlife and Sport Fish Restoration Grants.

Pittman-Robertson Act – Federal legislation providing state fish and wildlife agencies funds raised through hunting equipment and ammunition excise taxes.

State General Fund – The revenue in support of this category is general tax revenues from broad-based constituents.

Trip expenditures – Expenditures on items or services consumed in the pursuit of an outing involving fishing, hunting, or wildlife watching:

- Food, drink or refreshments
- Lodging at motels, cabins, lodges, campgrounds etc.
- Airfare
- Transportation costs for a private vehicle, such as gas, parking, or highway tolls
- Other transportation costs, such as for train, bus, or taxi rides, or car rentals
- Charter, guide, package, or pack trips
- Public or private land use or access fees
- Bait, either live, cut, or prepared
- Ice
- Heating or cooking fuel
- Equipment rental such as boats or fishing or camping equipment
- Boating expenses such as fuel or insurance, or fees for registration, launching, boat mooring, storage, maintenance, or pumpout

Wildlife watching – There are six types of wildlife watching: (1) closely observing, (2) photographing, (3) feeding, (4) visiting public parks or areas, (5) maintaining plantings, and (6) maintaining natural areas. These activities must be the primary purpose of the trip or the around-the-home undertaking. Scouting for the purposes of hunting or fishing is not included in this definition of wildlife watching.

Wildlife and Sport Fish Restoration Grants – US Fish and Wildlife Service grants authorized through the Pittman-Robertson Act and the Dingell-Johnson Act.

Appendix – Statistical Tables

The charts, tables, and analysis contained in this report are based on statistical tables which present point estimates of participation and expenditures by activity for Washington residents and participating residents of other U.S. states aged 16-years-old and older. The tables presented in this Appendix are analogous to similar tables presented in the National report, with the exception of the expenditures table (Table 3) as described in the Methods.

Table 1. Anglers, Hunters and Wildlife Watchers 16 Years Old and Older, Days of Participation, and Trips: 2022

This table comes from the National data collection and represents state residents and non-residents who did activities in Washington.

	Participants Days of Participation			Trips		
Type of activity	Number	Percent	Number	Percent	Number	Percent
FISHING						
Total, all fishing	1,198,109	100	12,612,417	100	9,316,755	100
Freshwater	812,378	68	9,302,997	74	6,548,148	70
Saltwater	388,834	32	3,309,420	26	2,768,606	30
HUNTING						
Total, all hunting	290,593	100	2,567,757	100	1,813,167	100
Big game	214,208	74	1,510,414	59	1,006,421	56
Small game	95,506	33	542,358	21	356,740	20
Migratory birds	52,813	18	270,195	11	237,312	13
Other animals	49,845	17	244,790	10	212,694	12
WILDLIFE WATCHING						
Total, all wildlife watching	6,230,969	100	370,155,067	100	30,021,290	100
Away from home	4,002,207	64	52,092,265	14	30,021,290	100
Around the home	4,306,999	69	318,062,802	86	NA	NA

Table 2. Selected Characteristics of Anglers, Hunters, and Wildlife Watchers: 2022

This table represents residents who did activities in Washington.

Characteristic	State Popula	ation	Fishing		3	Hunting			Wildlife Wat	ching	
				Percent			Percent			Percent	
	Number	Percent	Number	who participated	Percent	Number	who participated	Percent	Number	who participate	Percent
Total persons	6,113,919	100	1,013,202	17	100	216,852	4	100	4,343,760	71	100
Population Density of Residence											
Urban	5,045,729	83	762,233	15	75	140,554	3	65	3,478,552	69	80
Rural	1,052,702	17	246,939	23	24	76,298	7	35	853,626	81	20
Population Size of Residence											
Metropolitan Statistical Area (MSA)											
1,000,000 or more	3,407,173	56	508,442	15	50	89,239	3	41	2,363,965	69	54
250,000 to 999,999	1,589,974	26	283,409	18	28	58,610	4	27	1,125,604	71	26
50,000 to 249,999	450,807	7	93,614	21	9	32,259	7	15	352,012	78	8
10,000 to 49,999	520,145	9	92,695	18	9	31,245	6	14	383,021	74	9
Outside MSA	130,331	2	31,011	24	3	5,500	4	3	107,576	83	2
Age											
16 to 17 years	159,833	3	31,255	20	3	7,859	5	4	153,124	96	4
18 to 24 years	638,449	10	120,145	19	12	19,377	3	9	462,595	72	11
25 to 34 years	1,139,201	19	218,195	19	22	33,545	3	15	729,253	64	17
35 to 44 years	1,086,509	18	211,380	19	21	53,394	5	25	799,667	74	18
45 to 54 years	916,592	15	138,897	15	14	34,565	4	16	618,093	67	14
55 to 64 years	943,298	15	131,702	14	13	42,759	5	20	675,626	72	16
65 years and older	1,224,178	20	159,720	13	16	25,354	2	12	899,546	73	21
65 to 74 years	776,474	13	112,615	15	11	13,438	2	6	591,439	76	14
75 and older	447,704	7	47,106	11	5	11,916	3	5	308,107	69	7
Gender											
Male	2,969,889	49	680,015	23	67	123,556	4	57	2,222,113	75	51
Female	2,989,184	49	312,828	10	31	89,917	3	41	2,012,798	67	46
Other gender	142,692	2	20,152	14	2	3,379	2	2	98,776	69	2
Race & Ethnicity											
White, non-Hispanic	3,969,340	65	623,109	16	61	152,224	4	70	2,833,863	71	65
Black, non-Hispanic	206,296	3	27,517	13	3	6,755	3	3	126,968	62	3
Hispanic	699,952	11	168,108	24	17	25,863	4	12	546,759	78	13
Asian, non-Hispanic	87,316	1	16,164	19	2	5,491	6	3	60,452	69	1
All others, non-Hispanic	1,151,014	19	178,304	15	18	26,519	2	12	775,718	67	18

Table 2. Selected Characteristics of Anglers, Hunters, and Wildlife Watchers: 2022 (cont.)

	State Popul	ation									
Characteristic	(16+)		Fishing			Hunting			Wildlife Wat	ching	
				Percent			Percent			Percent	
				who			who			who	
	Number	Percent	Number	participated	Percent	Number	participated	Percent	Number	participated	Percent
Annual Household											
Income											
Less than \$10,000	673,454	11	93,742	14	9	10,853	2	5	403,914	60	9
\$10,000 to \$14,999	295,099	5	37,297	13	4	1,471	0	1	183,660	62	4
\$15,000 to \$24,999	457,903	7	63,956	14	6	10,376	2	5	302,978	66	7
\$25,000 to \$34,999	601,748	10	95,228	16	9	19,955	3	9	380,718	63	9
\$35,000 to \$49,999	792,508	13	101,095	13	10	27,202	3	13	560,075	71	13
\$50,000 to \$74,999	1,045,589	17	211,630	20	21	43,129	4	20	778,370	74	18
\$75,000 to \$99,999	714,057	12	125,430	18	12	37,559	5	17	550,396	77	13
\$100,000 to	835,352	14	167,614	20	17	33,559	4	15	654,472	78	15
\$149,999 \$150,000 to \$199,999	320,996	5	59,227	18	6	19,686	6	9	235,515	73	5
\$200,000 or more	301,643	5	48,150	16	5	9,951	3	5	240,779	80	6
Not reported	75,570	1	9,832	13	1	3,110	4	1	52,884	70	1
Education											
Less than HS	327,730	5	71,771	22	7	6,715	2	3	224,634	69	5
High school degree	1,674,391	27	316,495	19	31	60,293	4	28	1,040,435	62	24
Some college	1,902,350	31	291,791	15	29	80,664	4	37	1,434,998	75	33
Bachelor's Degree	1,229,916	20	177,480	14	18	36,849	3	17	872,681	71	20
Graduate School	951,074	16	152,032	16	15	31,612	3	15	748,221	79	17

Table 3. Expenditures for Fishing, Hunting, and Wildlife Watching: 2022 (dollars)

This table represents spending by state residents and non-residents who did activities in Washington.

	Fishing Hunting		Wildlife Watching	All Activities
Equipment	1,275,497,828	830,739,263	5,063,267,023	7,169,504,114
Trip-related	858,387,391	240,871,379	773,848,868	1,873,107,638
Total	2,133,885,219	1,071,610,642	5,837,115,891	9,042,611,752

Table 4. Selected Characteristics of Wildlife Watchers: 2022

This table represents residents who did activities in Washington.

Characteristic	State Population	on (16+)	Away from Home			Around the Home			
	Number	Percent	Number	Percent who participated	Percent	Number	Percent who participated	Percent	
Total persons	6,113,919	100	2,114,998	35	100	4,306,999	70	100	
Population Density of Residence									
Urban	5,045,729	83	1,718,061	34	81	3,444,467	68	80	
Rural	1,052,702	17	391,025	37	18	850,950	81	20	
Population Size of	, , , ,					,			
Residence									
Metropolitan Statistical									
Area (MSA) 1,000,000 or more	3,407,173	56	1,155,374	34	55	2,341,869	69	54	
250,000 to 999,999	1,589,974	26	545,291	34	26	1,112,398	70	26	
50,000 to 249,999	450,807	7	147,036	33	7	351,702	78	8	
10,000 to 49,999	520,145	9	206,742	40	10	382,267	73	9	
Outside MSA	130,331	2	54,642	42	3	107,181	82	2	
Age	130,331		34,042	72		107,101			
Age									
16 to 17 years	159,833	3	84,901	53	4	145,090	91	3	
18 to 24 years	638,449	10	256,362	40	12	461,381	72	11	
25 to 34 years	1,139,201	19	400,510	35	19	727,999	64	17	
35 to 44 years	1,086,509	18	440,898	41	21	788,389	73	18	
45 to 54 years	916,592	15	305,216	33	14	611,305	67	14	
55 to 64 years	943,298	15	304,771	32	14	674,402	71	16	
65 years and older	1,224,178	20	320,041	26	15	892,576	73	21	
65 to 74 years	776,474	13	241,774	31	11	585,061	75	14	
75 and older	447,704	7	78,267	17	4	307,515	69	7	
Gender									
Male	2,969,889	49	1,136,830	38	54	2,198,362	74	51	
Female	2,989,184	49	924,590	31	44	2,001,202	67	46	
Other gender	142,692	2	48,761	34	2	97,360	68	2	
Race & Ethnicity									
White, non-Hispanic	2 060 240	65	1,320,668	33	62	2,821,619	71	66	
Black, non-Hispanic	3,969,340 206,296	3	60,860	30	3	126,968	62	3	
Hispanic	699,952	11	295,148	42	14	543,097	78	13	
Asian, non-Hispanic	87,316	1	29,865	34	14	60,452	69	13	
All others, non-Hispanic	1,151,014	19	408,457	35	19	754,863	66	18	
Annual Household	1,131,014		400,437	33		734,803		10	
Income									
Less than \$10,000	673,454	11	172,102	26	8	403,914	60	9	
\$10,000 to \$14,999	295,099	5	82,703	28	4	182,820	62	4	
\$15,000 to \$24,999	457,903	7	143,469	31	7	300,216	66	7	
\$25,000 to \$34,999	601,748	10	196,065	33	9	377,677	63	9	
\$35,000 to \$49,999	792,508	13	278,362	35	13	544,956	69	13	
\$50,000 to \$74,999	1,045,589	17	377,373	36	18	775,777	74	18	
\$75,000 to \$99,999	714,057	12	288,585	40	14	544,239	76	13	
\$100,000 to \$149,999	835,352	14	340,030	41	16	649,094	78	15	
\$150,000 to \$199,999	320,996	5	114,918	36	5	235,160	73	5	
\$200,000 or more	301,643	5	101,691	34	5	240,262	80	6	
Not reported	75,570	1	19,700	26	1	52,884	70	1	
Education									
Less than HS	327,730	5	93,906	29	4	222,621	68	5	
High school degree	1,674,391	27	479,316	29	23	1,031,062	62	24	
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	1.902.350	31	703.518	37	33	1,420,100	75	33	
Some college Bachelor's Degree	1,902,350 1,229,916	31 20	703,518 433,472	37 35	33 20	1,420,100 866,538	75 70	33 20	