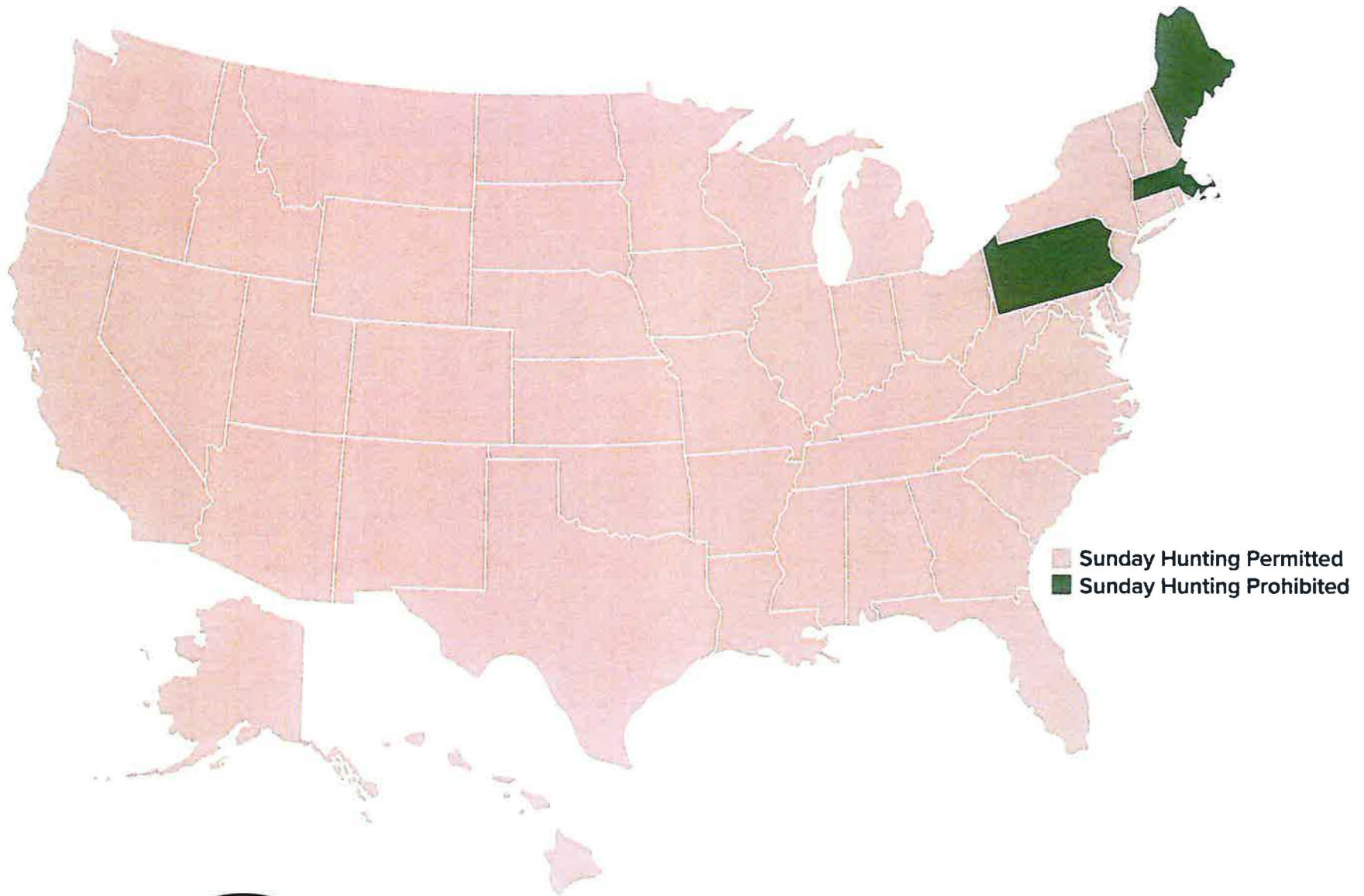


ONLY THREE STATES BAN SUNDAY HUNTING: MA, ME AND PA



THE FIREARMS INDUSTRY TRADE ASSOCIATION

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Preserving Pennsylvania's
Footpaths
Since 1956

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KEYSTONE TRAILS ASSOCIATION
46 E. MAIN STREET
MECHANICSBURG, PA 17055
(717) 766-9690
KTAADMIN@KTA-HIKE.ORG

Good afternoon Chairman Gillespie, Chairman Kortz and members of the committee. I'm Joe Neville, Executive Director of the Keystone Trails Association.

Formed in 1956, the Keystone Trails Association represents and advocates for the interests and concerns of the Pennsylvania hiking community. We currently represent over 44 hiking clubs and conservation organizations as well as thousands of individual Pennsylvanians who hike and enjoy the Commonwealth's outdoor resources. We are NOT an anti-hunting organization, in fact, many of our members are hunters, but we do oppose any expansion of Sunday hunting.

Among the people we represent, most of their activities during prime hunting seasons are focused on Sundays, days that are largely free of gunfire in Penns Woods. Safety is a paramount concern of these people, especially when on any Sunday, many thousands of Pennsylvania hikers, backpackers, trail maintainers, mountain bikers, equestrians, trail runners, bird watchers, geocachers, wildlife watchers and their families are in the woods. Add hunters to this mix, and it is just a matter of time before tragic accidents could occur. The Game Commission has made great strides in reducing shooting accidents from hunting, but Pennsylvania still averages about 25-30 shooting accidents per year. Since 2008, 48 of these accidents were described by the Game Commission as mistaking victims for game including several where the victims were wearing fluorescent orange. In two separate incidents in 2002 and 2003, hikers were shot and seriously injured on the Appalachian Trail (not in Pennsylvania) when they were mistaken for deer. This is hardly reassuring to hikers and others who are being asked to share the woods with hunters the one day when there currently is little concern of being a shooting victim.

In fact, many hikers wary of the potential safety concerns of hunting might be reluctant to share the woods, and instead decrease their recreation on hunting Sundays. Given the size of the hiking population, along with other non-hunter user groups, this potential impact can't be overlooked. Outdoor recreation surveys conducted for DCNR indicate there are far more Pennsylvanians who engage in the outdoors through hiking and other non-hunting pursuits than hunting. This is also evident in the trends outlined in the Outdoor Industry Association's 2018 Outdoor Participation Report showing that youth hunters make up only 6.2% of the population while youth hikers represent 15.9% of the population. Over the last decade you can see that youth hunting numbers have remained relatively flat while hiking numbers continue to increase (appendix #1).

Sunday hunting advocates claim Sunday hunting is a panacea that will reverse declining numbers and will be an economic boon. Pennsylvania's hunting population peaked in 1983 and has since been in slow decline. This mirrors hunting participation in the rest of the country, including states that have long allowed Sunday hunting. Michigan, for example, has 100,000 fewer hunters today than 10 years ago. In reality, changing demographics, changing attitudes and loss of habitat are largely responsible for hunting's decline, not the Sunday hunting ban. This decline in hunting is unfortunate, and true remedies should be explored, but lifting the ban is not one of them.

Some proponents of Sunday hunting have made wildly optimistic claims that it could inject \$800 million into the state economy and create 7000 new jobs. However, any realistic economic gain from Sunday hunting could likely be offset from the economic loss of other user groups who would choose to stay home.

The Power of Outdoor Recreation Spending in Pennsylvania: How hunting, fishing, and outdoor activities help support a healthy state economy of November, 2018 By Southwick Associates and the Theodore Roosevelt Conservation Partnership showed that trail users outnumbered hunters 3 to 1 and their average economic impact was higher than hunters' by 2.5 to 1. Trail users spent \$2574 per participant according to the analysis compared to \$1048 for hunters (appendix #2). Our membership believes that clearly the non-hunting public needs to have significant input into the issue of Sunday hunting since their economic impact is so substantial. Any expansion of Sunday hunting could have a very detrimental economic impact on our economy if trail users discontinue their activities to avoid hunters. We suspect the potential economic loss through reduced participation of non-consumptive outdoor recreation users could be substantial, but we still await a scientific study on that topic. It would be irresponsible to move ahead without such data for consideration

Hunters themselves are not united on Sunday hunting. In fact, a recent PA Game Commission study shows that **only 53% of hunters support** legalizing Sunday hunting in Pennsylvania (appendix #3). Many hunters fear Sunday hunting may prompt the closure of private lands, where 80 percent of hunting occurs in the state. Other hunters are concerned about the added pressure on wildlife. There is also concern that Sunday hunting is a divisive issue that will result in a loss of support for hunting. People currently neutral to hunting might well become anti-hunting as a consequence.

Some people have called the hiking community hypocrites and other less desirable terms for scheduling hiking events and trail care during hunting seasons. "How can you be so afraid but still go out on Saturdays?" they ask. First, I'd like to point out that we represent many hunters as well as other outdoor recreationists who are non-hunters. In fact, our Board of Directors is made up of 20% hunters – more than triple the state's percentage of hunters in the population. Next, consider what trail care entails. Most of our crews use chain saws to cut down blowdowns, brushcutters (a weed eater on steroids) to cut brush along the trail or a DR walk-behind mower (appendix #4). It is incredibly unlikely that anyone would confuse these machines or the sounds they make with a huntable species. Finally, our weekend events are composed of large numbers of hikers (450+ last Saturday) hiking through the woods with guides. Guides talk, they call to those at the end of the lines, participants laugh and carry on, hold conversations etc. A large

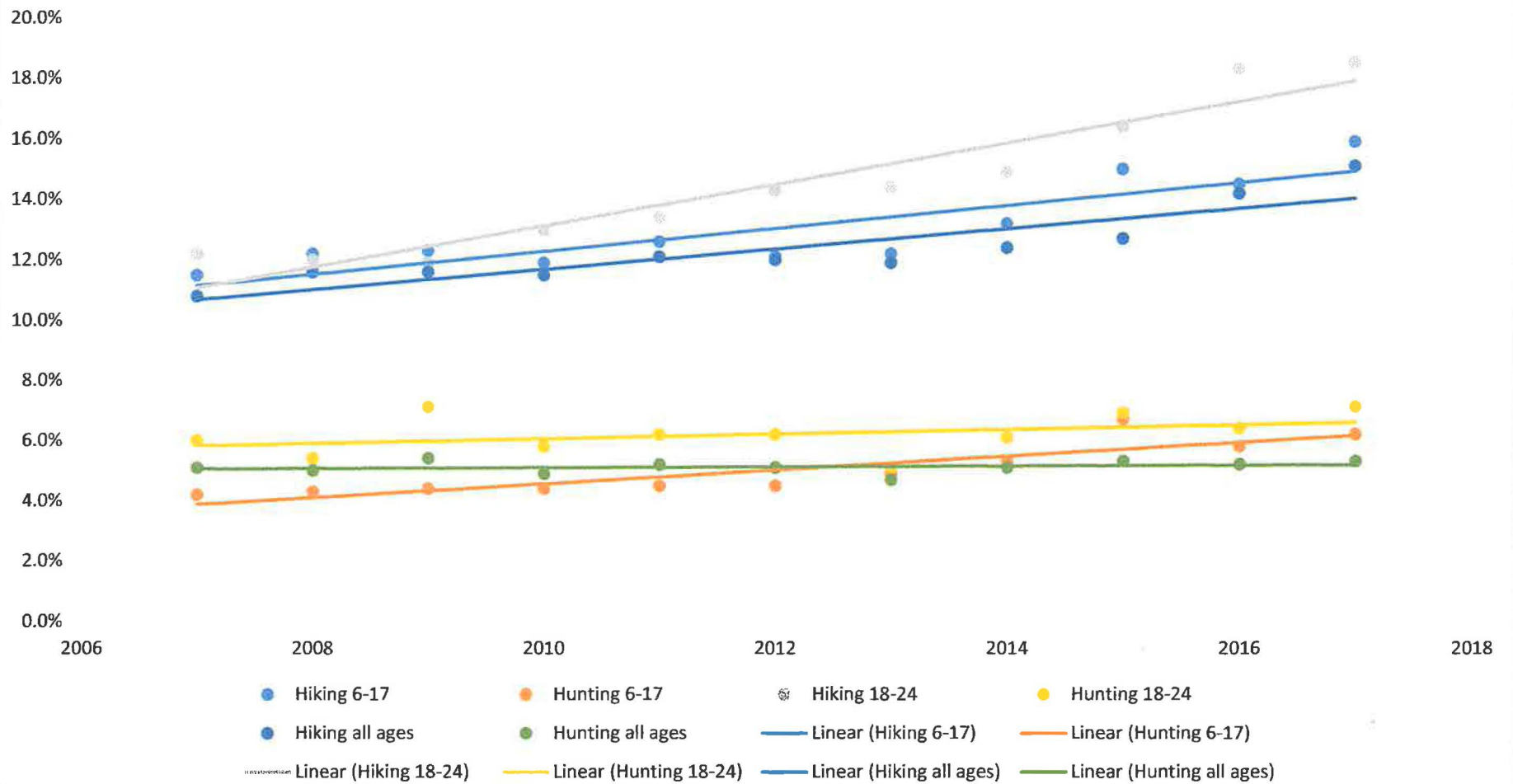
hiking group going through the woods is not a quiet group, a herd of elephants would be more appropriate and again, they can feel safe in the assumption that they would in no way be mistaken for game.

However, outside of such large events, many solitary or small groups of hikers do not feel as secure. Pennsylvania families and residents specifically plan their trips on Sundays to avoid conflicts with hunters and to enjoy wild places with peace of mind. Hunting may be safer than ever, but accidents are still inevitable. Putting greater numbers of hunters out on the landscape when others are enjoying the outdoors may lead to unintended and tragic consequences.

Hunting has a long and honored tradition in our state. Hunters, hikers, and other outdoors people all share a deep appreciation for Penn's Woods and all have a right to pursue their passion. With the continued ban on Sunday hunting, hunters are still free to hunt six days of the week as they have for over 144 years and everyone will continue to have one day a week where they can enjoy the woods free from hunting pressure. Let's keep the ban on Sunday hunting.

Thank you Mr. Chairman and I'd be happy to answer any questions the committee may have.

Participation Rates - Hiking and Hunting



Participation in Outdoor Activities, All Americans Ages 6+

	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017		% of Pop.	
	In 000's	% of Pop.	In 000's	% of Pop.	In 000's	% of Pop.	In 000's	% of Pop.	In 000's	% of Pop.	In 000's	% of Pop.	In 000's	% of Pop.	In 000's	% of Pop.	In 000's	% of Pop.	In 000's	% of Pop.	In 000's	% of Pop.		
Adventure Racing	698	0.3%	920	0.3%	1,089	0.4%	1,339	0.5%	1,045	0.4%	2,170	0.8%	2,095	0.7%	2,368	0.8%	2,864	1.0%	2,999	1.0%	2,529	0.8%		
Backpacking (Overnight)	6,637	2.4%	7,867	2.8%	7,647	2.7%	8,349	2.9%	7,095	2.5%	8,771	3.1%	9,069	3.1%	10,101	3.5%	10,100	3.4%	10,151	3.4%	10,975	3.7%		
Bicycling (BMX)	1,887	0.7%	1,904	0.7%	1,811	0.6%	2,349	0.8%	1,547	0.5%	2,175	0.8%	2,168	0.7%	2,350	0.8%	2,690	0.9%	3,104	1.0%	3,413	1.1%		
Bicycling (Mountain/Non-Paved Surface)	6,892	2.5%	7,592	2.7%	7,142	2.5%	7,161	2.5%	6,816	2.4%	7,714	2.7%	8,542	2.9%	8,044	2.8%	8,316	2.8%	8,615	2.9%	8,609	2.9%		
Bicycling (Road/Paved Surface, Mountain/Non-Paved Surface, BMX)	42,126	15.2%	41,548	14.9%	43,265	15.4%	42,347	14.9%	42,970	15.0%	42,336	14.7%	46,603	16.1%	44,014	15.1%	43,073	14.6%	45,827	15.5%	47,535	16.0%		
Bicycling (Road/Paved Surface)	38,940	14.1%	38,114	13.6%	40,140	14.3%	39,320	13.9%	40,348	14.1%	39,790	13.9%	40,888	14.1%	39,725	13.6%	38,280	13.0%	38,365	13.0%	38,866	13.0%		
Birdwatching	13,476	4.9%	14,399	5.2%	13,294	4.7%	13,339	4.7%	12,794	4.5%	13,535	4.7%	14,152	4.9%	13,179	4.5%	13,092	4.5%	11,589	3.9%	12,206	4.1%		
Boardsailing/Windsurfing	1,118	0.4%	1,307	0.5%	1,128	0.4%	1,617	0.6%	1,151	0.4%	1,372	0.5%	1,324	0.5%	1,562	0.5%	1,766	0.6%	1,737	0.6%	1,573	0.5%		
Camping (Within 1/4 Mile of Vehicle/Home)	31,375	11.3%	33,486	12.0%	34,338	12.2%	30,996	10.9%	32,925	11.5%	29,982	10.4%	29,269	10.1%	28,660	9.8%	27,742	9.4%	26,467	8.9%	26,262	8.8%		
Camping (Car, Backyard, Backpacking or RV)	41,691	15.1%	44,664	16.0%	46,231	16.4%	42,300	14.9%	44,757	15.7%	40,518	14.1%	40,094	13.8%	40,500	13.9%	40,015	13.6%	40,518	13.7%	41,768	14.1%		
Camping (Recreational Vehicle)	16,168	5.8%	16,517	5.9%	17,436	6.2%	15,865	5.6%	16,698	5.8%	15,108	5.3%	14,556	5.0%	14,633	5.0%	14,699	5.0%	15,855	5.4%	16,159	5.4%		
Canoeing	9,797	3.5%	9,935	3.6%	10,058	3.6%	10,553	3.7%	9,787	3.4%	9,839	3.4%	10,153	3.5%	10,044	3.5%	10,236	3.5%	10,046	3.4%	9,720	3.1%		
Climbing (Sport/Boulder)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2,103	0.7%	
Climbing (Indoor)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5,045	1.7%
Climbing (Traditional/Ice/Mountaineering)	2,084	0.8%	2,288	0.8%	1,835	0.7%	2,198	0.8%	1,609	0.6%	2,189	0.8%	2,319	0.8%	2,457	0.8%	2,571	0.9%	2,790	0.9%	2,527	0.8%		
Fishing (Fly, Freshwater/Other or Saltwater)	51,836	18.7%	48,206	17.2%	48,046	17.0%	45,394	16.0%	46,178	16.2%	47,049	16.4%	45,854	15.8%	46,045	15.8%	45,687	15.5%	47,151	15.9%	49,081	16.6%		
Fishing (Fly)	5,765	2.1%	5,941	2.1%	5,568	2.0%	5,478	1.9%	5,683	2.0%	6,012	2.1%	5,878	2.0%	5,842	2.0%	6,089	2.1%	6,456	2.2%	6,791	2.3%		
Fishing (Freshwater/Other)	43,859	15.8%	40,331	14.4%	40,961	14.5%	38,660	13.7%	38,868	13.6%	39,135	13.6%	37,796	13.0%	37,821	12.9%	37,682	12.8%	38,121	12.9%	38,366	12.9%		
Fishing (Saltwater)	14,437	5.2%	13,004	4.9%	12,303	4.4%	11,809	4.2%	11,993	4.2%	12,017	4.2%	11,790	4.1%	11,817	4.0%	11,975	4.1%	12,266	4.1%	13,062	4.4%		
Hiking	29,965	10.8%	32,511	11.6%	32,572	11.6%	32,496	11.5%	34,492	12.1%	34,519	12.0%	34,378	11.9%	36,222	12.4%	37,232	12.7%	42,128	14.2%	44,000	15.1%		
Hunting (All)	14,128	5.1%	13,900	5.0%	15,273	5.4%	14,007	4.9%	14,887	5.2%	14,705	5.1%	13,526	4.7%	14,947	5.1%	15,526	5.3%	15,467	5.2%	15,628	5.3%		
Kayak Fishing	n/a	n/a	n/a	n/a	n/a	n/a	1,044	0.4%	1,201	0.4%	1,409	0.5%	1,799	0.6%	2,074	0.7%	2,265	0.8%	2,373	0.8%	2,803	0.9%		
Kayaking (Recreational)	5,070	1.8%	6,240	2.2%	6,212	2.2%	6,468	2.3%	8,229	2.9%	8,144	2.8%	8,716	3.0%	8,855	3.0%	9,499	3.2%	10,017	3.4%	10,533	3.5%		
Kayaking (Sea/Touring)	1,485	0.5%	1,780	0.6%	1,771	0.6%	2,144	0.8%	2,029	0.7%	2,446	0.9%	2,694	0.9%	2,912	1.0%	3,079	1.0%	3,124	1.1%	2,955	1.0%		
Kayaking (Whitewater)	1,207	0.4%	1,247	0.4%	1,369	0.5%	1,842	0.6%	1,546	0.5%	1,878	0.7%	2,146	0.7%	2,351	0.8%	2,518	0.9%	2,552	0.9%	2,500	0.8%		
Rafting	4,340	1.6%	4,651	1.7%	4,318	1.5%	4,460	1.6%	3,821	1.3%	3,690	1.3%	3,836	1.3%	3,781	1.3%	3,883	1.3%	3,428	1.2%	3,479	1.2%		
Running (Running/Jogging or Trail Running)	41,957	15.2%	42,103	15.1%	44,732	15.9%	50,370	17.8%	51,495	18.0%	53,214	18.5%	57,545	19.8%	53,700	18.4%	51,515	17.5%	52,325	17.7%	55,922	18.9%		
Running/Jogging	41,044	14.8%	41,130	14.7%	43,892	15.6%	49,408	17.4%	50,713	17.7%	52,187	18.2%	54,188	18.7%	51,127	17.5%	48,496	16.5%	47,384	16.0%	50,770	17.0%		
Sailing	3,786	1.4%	4,226	1.5%	4,342	1.5%	3,869	1.4%	3,725	1.3%	3,841	1.3%	3,915	1.3%	3,924	1.3%	4,099	1.4%	4,095	1.4%	3,974	1.3%		
Scuba Diving	2,965	1.1%	3,216	1.2%	2,723	1.0%	3,153	1.1%	2,579	0.9%	2,781	1.0%	3,174	1.1%	3,145	1.1%	3,274	1.1%	3,111	1.1%	2,874	1.0%		
Skateboarding	8,429	3.0%	7,807	2.8%	7,352	2.6%	6,808	2.4%	5,827	2.0%	6,227	2.2%	6,350	2.2%	6,682	2.3%	6,436	2.2%	6,442	2.2%	6,382	2.1%		
Skiing (Alpine/Downhill)	10,362	3.7%	10,354	3.7%	10,346	3.7%	10,919	3.8%	11,504	4.0%	10,201	3.6%	8,243	2.8%	9,004	3.1%	9,378	3.2%	9,267	3.1%	9,876	3.3%		
Skiing (Cross-Country)	3,530	1.3%	3,689	1.3%	3,848	1.4%	4,157	1.5%	4,530	1.6%	4,318	1.5%	4,516	1.6%	4,291	1.5%	4,146	1.4%	4,640	1.6%	5,059	1.7%		
Skiing (Freestyle)	2,817	1.0%	2,764	1.0%	2,711	1.0%	2,950	1.0%	3,647	1.3%	3,641	1.3%	3,923	1.4%	4,061	1.4%	4,465	1.5%	4,635	1.6%	5,353	1.8%		
Snorkeling	9,294	3.4%	10,276	3.7%	9,358	3.3%	9,305	3.3%	9,318	3.3%	8,664	3.0%	8,700	3.0%	8,752	3.0%	8,874	3.0%	8,717	2.9%	8,384	2.8%		
Snowboarding	6,841	2.5%	7,000	2.5%	7,159	2.5%	7,421	2.6%	8,196	2.9%	7,579	2.6%	7,351	2.5%	7,399	2.5%	7,676	2.6%	7,602	2.6%	7,557	2.5%		
Snowshoeing	2,400	0.9%	2,661	1.0%	4,922	1.7%	3,431	1.2%	3,823	1.3%	4,111	1.4%	4,029	1.4%	3,603	1.2%	3,885	1.3%	3,533	1.2%	3,711	1.2%		
Stand Up Paddling	n/a	n/a	n/a	n/a	n/a	n/a	1,050	0.4%	1,242	0.4%	1,542	0.5%	1,993	0.7%	2,751	0.9%	3,020	1.0%	3,220	1.1%	3,325	1.1%		
Surfing	2,206	0.8%	2,607	0.9%	2,403	0.9%	2,767	1.0%	2,195	0.8%	2,545	0.9%	2,658	0.9%	2,721	0.9%	2,701	0.9%	2,793	0.9%	2,680	0.9%		
Telemarking (Downhill)	1,173	0.4%	1,304	0.5%	1,435	0.5%	1,482	0.5%	1,821	0.6%	2,099	0.7%	2,766	1.0%	2,503	0.9%	2,569	0.9%	2,848	1.0%	2,532	0.8%		
Trail Running	4,216	1.5%	4,857	1.7%	4,833	1.7%	5,136	1.8%	5,610	2.0%	6,003	2.1%	6,792	2.3%	7,531	2.6%	8,139	2.8%	8,582	2.9%	9,169	3.1%		
Triathlon (Non-Traditional/Off Road)	483	0.2%	602	0.2%	666	0.2%	929	0.3%	709	0.2%	1,442	0.5%	1,390	0.5%	1,411	0.5%	1,744	0.6%	1,705	0.6%	1,878	0.6%		
Triathlon (Traditional/Road)	798	0.3%	1,087	0.4%	1,208	0.4%	1,978	0.7%	1,393	0.5%	2,184	0.8%	2,262	0.8%	2,203	0.8%	2,498	0.8%	2,374	0.8%	2,162	0.7%		
Wakeboarding	3,521	1.3%	3,544	1.3%	3,577	1.3%	3,645	1.3%	3,389	1.2%	3,368	1.2%	3,316	1.1%	3,125	1.1%	3,226	1.1%	2,912	1.0%	3,005	1.0%		
Wildlife Viewing	22,974	8.3%	24,113	8.6%	21,291	7.6%	21,025	7.4%	21,964	7.7%	22,482	7.8%	21,359	7.4%	21,110	7.2%	20,718	7.0%	20,746	7.0%	20,351	6.8%		

Youth Participation in Outdoor Activities, Ages 6-17

	2007	%	2008	%	2009	%	2010	%	2011	%	2012	%	2013	%	2014	%	2015	%	2016	%	2017	%		
	In	of Pop.	In	of Pop.	In	of Pop.	In	of Pop.	In	of Pop.	In	of Pop.	In	of Pop.	In	of Pop.	In	of Pop.	In	of Pop.	In	of Pop.		
	000's		000's		000's		000's		000's		000's		000's		000's		000's		000's		000's			
Adventure Racing	104	0.2%	125	0.3%	147	0.3%	183	0.4%	144	0.3%	352	0.7%	341	0.7%	525	1.0%	1,002	1.9%	939	1.6%	866	1.7%		
Backpacking (Overnight)	1,786	3.6%	2,067	4.2%	1,849	3.7%	2,228	4.4%	1,778	3.5%	2,219	4.4%	2,536	5.0%	2,729	5.3%	2,994	5.8%	2,739	5.4%	2,467	4.8%		
Bicycling (BMX)	935	1.9%	1,045	2.1%	726	1.5%	1,165	2.3%	783	1.5%	940	1.9%	1,014	2.0%	1,261	2.5%	1,526	3.0%	1,650	3.2%	1,609	3.1%		
Bicycling (Mountain/Non-Paved Surface)	1,775	3.5%	2,083	4.2%	1,793	3.6%	1,927	3.8%	1,567	3.1%	1,612	3.2%	1,877	3.7%	1,736	3.4%	1,975	3.8%	1,889	3.7%	2,029	3.9%		
Bicycling (Road/Paved Surface, Mountain/Non-Paved Surface, BMX)	15,550	30.9%	14,716	29.6%	14,652	29.3%	13,657	27.1%	13,283	26.2%	13,421	26.5%	13,498	26.6%	12,953	25.4%	12,461	24.2%	12,889	25.2%	12,535	24.3%		
Bicycling (Road/Paved Surface)	14,336	28.5%	13,325	26.8%	13,652	27.3%	12,442	24.7%	12,330	24.3%	12,397	24.5%	12,363	24.4%	11,610	22.7%	10,696	20.8%	10,995	21.5%	10,731	20.8%		
Birdwatching	1,194	2.4%	1,320	2.7%	1,473	2.9%	1,619	3.2%	1,661	3.3%	1,813	3.6%	1,967	3.9%	1,893	3.7%	1,616	3.1%	1,557	3.0%	1,525	3.0%		
Boardsailing/Windsurfing	228	0.5%	236	0.5%	200	0.4%	221	0.4%	109	0.2%	215	0.4%	322	0.6%	495	1.0%	790	1.5%	673	1.3%	650	1.3%		
Camping (Within 1/4 Mile of Vehicle/ Home)	9,627	19.1%	9,012	18.1%	9,252	18.5%	8,779	17.4%	9,147	18.0%	8,065	15.9%	8,046	15.9%	7,490	14.7%	6,769	13.2%	6,505	12.7%	6,135	11.9%		
Camping (Car, Backyard, Backpacking or RV)	12,230	24.3%	11,583	23.3%	11,917	23.8%	11,559	23.0%	12,170	24.0%	10,734	21.4%	10,994	21.7%	10,452	20.5%	10,860	21.1%	10,661	20.8%	10,656	20.7%		
Camping (Recreational Vehicle)	4,284	8.5%	3,783	7.6%	4,045	8.1%	3,810	7.6%	3,941	7.8%	3,732	7.4%	3,815	7.5%	3,623	7.1%	3,592	7.0%	3,785	7.4%	3,954	7.7%		
Canoeing	2,564	5.1%	2,497	5.0%	2,416	4.8%	2,811	5.6%	2,435	4.8%	2,735	5.4%	2,543	5.0%	2,523	4.9%	2,454	4.8%	2,249	4.4%	2,029	3.9%		
Climbing (Sport/Boulder)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	655	1.3%	
Climbing (Indoor)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1,612	3.1%
Climbing (Traditional/Ice/Mountaineering)	510	1.0%	441	0.9%	282	0.6%	354	0.7%	272	0.5%	436	0.9%	477	0.9%	708	1.4%	780	1.5%	762	1.5%	649	1.3%		
Fishing (Fly, Freshwater/Other or Saltwater)	12,394	24.7%	11,282	22.7%	11,240	22.5%	10,254	20.4%	10,330	20.4%	9,945	19.7%	10,307	20.3%	10,566	20.7%	10,685	20.8%	10,974	21.4%	11,596	22.5%		
Fishing (Fly)	711	1.4%	734	1.5%	880	1.8%	834	1.7%	735	1.4%	715	1.4%	913	1.8%	938	1.8%	1,267	2.5%	1,229	2.4%	1,419	2.8%		
Fishing (Freshwater/Other)	10,932	21.7%	9,912	20.0%	9,987	20.0%	8,984	17.8%	9,038	17.8%	8,962	17.7%	9,020	17.8%	9,135	17.9%	9,546	18.6%	8,936	17.5%	9,191	17.8%		
Fishing (Saltwater)	2,579	5.1%	2,257	4.5%	2,029	4.1%	1,816	3.6%	1,926	3.8%	1,933	3.8%	1,858	3.7%	2,004	3.9%	2,221	4.3%	2,160	4.2%	2,376	4.6%		
Hiking	5,800	11.5%	6,078	12.2%	6,128	12.3%	5,976	11.9%	6,391	12.6%	6,114	12.1%	6,196	12.2%	6,749	13.2%	7,719	15.0%	7,446	14.5%	8,219	15.9%		
Hunting (All)	2,088	4.2%	2,138	4.3%	2,225	4.4%	2,236	4.4%	2,296	4.5%	2,294	4.5%	2,463	4.9%	2,685	5.3%	3,423	6.7%	2,969	5.8%	3,212	6.2%		
Kayak Fishing	n/a	n/a	n/a	n/a	n/a	n/a	96	0.2%	181	0.4%	220	0.4%	295	0.6%	234	0.5%	295	0.6%	280	0.5%	270	0.5%		
Kayaking (Recreational)	1,056	2.1%	1,227	2.5%	1,199	2.4%	1,152	2.3%	1,388	2.7%	1,743	3.4%	1,628	3.2%	1,771	3.5%	2,083	4.0%	1,988	3.9%	1,864	3.6%		
Kayaking (Sea/Touring)	241	0.5%	178	0.4%	164	0.3%	358	0.7%	228	0.4%	333	0.7%	388	0.8%	536	1.0%	890	1.7%	743	1.5%	718	1.4%		
Kayaking (Whitewater)	197	0.4%	165	0.3%	312	0.6%	256	0.5%	151	0.3%	432	0.9%	422	0.8%	628	1.2%	819	1.6%	661	1.3%	772	1.5%		
Rafting	993	2.0%	869	1.7%	1,064	2.1%	966	1.9%	750	1.5%	793	1.6%	859	1.7%	989	1.9%	1,086	2.1%	869	1.7%	819	1.6%		
Running (Running/Jogging or Trail Running)	11,223	22.3%	9,552	19.2%	10,048	20.1%	11,360	22.6%	11,728	23.1%	12,133	24.0%	12,049	23.8%	11,289	22.1%	10,505	20.4%	11,002	21.5%	11,038	21.4%		
Running/Jogging	11,102	22.1%	9,377	18.9%	9,999	20.0%	11,176	22.2%	11,557	22.9%	11,951	23.6%	11,871	23.4%	10,873	21.3%	9,855	19.2%	10,396	20.3%	10,447	20.3%		
Sailing	526	1.0%	603	1.2%	664	1.3%	580	1.2%	382	0.8%	562	1.1%	663	1.3%	736	1.4%	909	1.8%	811	1.6%	742	1.4%		
Scuba Diving	278	0.6%	323	0.6%	277	0.6%	306	0.6%	243	0.5%	379	0.7%	494	1.0%	487	1.0%	577	1.1%	520	1.0%	505	1.0%		
Skateboarding	5,783	11.5%	5,469	11.0%	4,968	9.9%	4,377	8.7%	3,736	7.4%	3,797	7.5%	3,481	6.9%	3,294	6.5%	3,084	6.0%	3,222	6.3%	2,943	5.7%		
Skiing (Alpine/Downhill)	2,236	4.4%	2,417	4.9%	2,350	4.7%	2,442	4.8%	2,348	4.6%	1,879	3.7%	2,198	4.3%	2,348	4.6%	2,147	4.2%	2,007	3.9%	1,896	3.7%		
Skiing (Cross-Country)	568	1.1%	628	1.3%	641	1.3%	739	1.5%	635	1.3%	579	1.1%	855	1.7%	1,273	2.5%	1,063	2.1%	1,139	2.2%	1,028	2.0%		
Skiing (Freestyle)	582	1.2%	649	1.3%	646	1.3%	1,062	2.1%	700	1.4%	996	2.0%	1,214	2.4%	1,270	2.5%	1,107	2.2%	1,045	2.0%	901	1.7%		
Snorkeling	1,610	3.2%	1,700	3.4%	1,315	2.6%	1,211	2.4%	1,480	2.9%	1,194	2.4%	1,597	3.2%	1,485	2.9%	1,665	3.2%	1,541	3.0%	1,441	2.8%		
Snowboarding	2,396	4.8%	2,267	4.6%	2,370	4.7%	2,561	5.1%	2,025	4.0%	1,676	3.3%	1,985	3.9%	2,093	4.1%	2,032	4.0%	2,236	4.4%	2,171	4.2%		
Snowshoeing	400	0.8%	474	1.0%	599	1.2%	615	1.2%	528	1.0%	681	1.3%	824	1.6%	838	1.6%	716	1.4%	619	1.2%	519	1.0%		
Stand Up Paddling	n/a	n/a	n/a	n/a	n/a	n/a	242	0.5%	186	0.4%	290	0.6%	550	1.1%	570	1.1%	823	1.6%	621	1.2%	622	1.2%		
Surfing	465	0.9%	520	1.0%	589	1.2%	547	1.1%	523	1.0%	715	1.4%	664	1.3%	684	1.3%	703	1.4%	780	1.5%	703	1.4%		
Telemarking (Downhill)	172	0.3%	234	0.5%	217	0.4%	286	0.6%	286	0.6%	539	1.1%	646	1.3%	643	1.3%	521	1.0%	502	1.0%	360	0.7%		
Trail Running	657	1.3%	618	1.2%	501	1.0%	676	1.3%	689	1.4%	810	1.6%	858	1.7%	1,148	2.2%	1,583	3.1%	1,555	3.0%	1,514	2.9%		
Triathlon (Non-Traditional/ Off Road)	90	0.2%	80	0.2%	155	0.3%	93	0.2%	72	0.1%	221	0.4%	255	0.5%	297	0.6%	601	1.2%	404	0.8%	370	0.7%		
Triathlon (Traditional/Road)	113	0.2%	240	0.5%	136	0.3%	328	0.7%	168	0.3%	415	0.8%	440	0.9%	434	0.9%	616	1.2%	426	0.8%	453	0.9%		
Wakeboarding	1,437	2.9%	1,084	2.2%	1,096	2.2%	1,089	2.2%	1,126	2.2%	998	2.0%	1,029	2.0%	838	1.6%	997	1.9%	824	1.6%	736	1.4%		
Wildlife Viewing	2,967	5.9%	3,213	6.5%	2,775	5.5%	3,035	6.0%	3,351	6.6%	3,197	6.3%	3,128	6.2%	3,354	6.6%	3,289	6.4%	3,221	6.3%	2,992	5.8%		

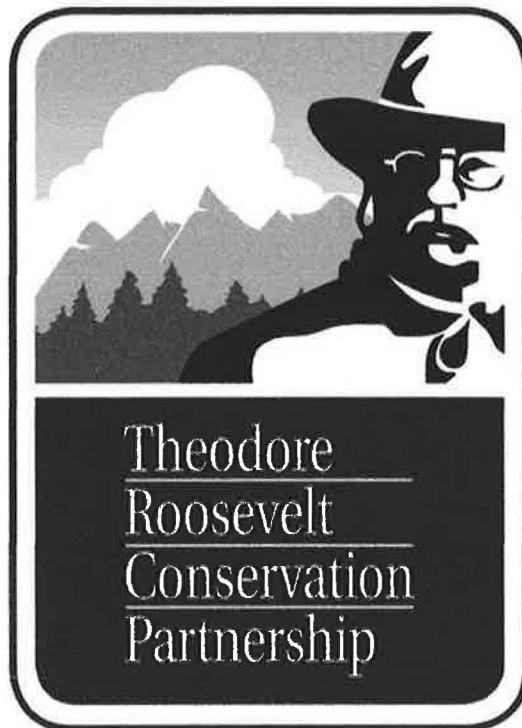
Young Adult Participation in Outdoor Activities, Ages 18-24

	2007 In 000's	% of Pop.	2008 In 000's	% of Pop.	2009 In 000's	% of Pop.	2010 In 000's	% of Pop.	2011 In 000's	% of Pop.	2012 In 000's	% of Pop.	2013 In 000's	% of Pop.	2014 In 000's	% of Pop.	2015 In 000's	% of Pop.	2016 In 000's	% of Pop.	2017 In 000's	% of Pop.	
Adventure Racing	227	0.8%	224	0.8%	217	0.8%	252	0.9%	178	0.6%	419	1.4%	472	1.6%	595	1.9%	847	2.8%	537	1.8%	628	2.1%	
Backpacking (Overnight)	1,262	4.4%	1,132	4.0%	1,358	4.7%	1,295	4.5%	1,065	3.7%	1,070	3.7%	1,249	4.1%	1,412	4.6%	1,513	4.9%	1,208	4.1%	1,677	5.7%	
Bicycling (BMX)	401	1.4%	305	1.1%	266	0.9%	311	1.1%	256	0.9%	231	0.8%	345	1.1%	401	1.3%	647	2.1%	491	1.7%	559	1.9%	
Bicycling (Mountain/Non-Paved Surface)	1,019	3.6%	776	2.7%	781	2.7%	955	3.3%	776	2.7%	995	3.4%	1,214	4.0%	1,068	3.5%	1,005	3.3%	953	3.3%	901	3.1%	
Bicycling (Road/Paved Surface, Mountain/Non-Paved Surface, BMX)	3,882	13.7%	3,657	13.0%	3,935	13.7%	4,106	14.2%	4,179	14.4%	4,361	15.0%	4,764	15.7%	4,347	14.2%	4,096	13.3%	4,225	14.5%	4,375	14.9%	
Bicycling (Road/Paved Surface)	3,335	11.7%	3,297	11.6%	3,594	12.6%	3,818	13.2%	3,872	13.3%	4,002	13.7%	4,304	14.2%	3,946	12.9%	3,475	11.3%	3,712	12.7%	3,700	12.6%	
Birdwatching	670	2.4%	793	2.8%	676	2.4%	669	2.3%	777	2.7%	928	3.2%	982	3.2%	781	2.6%	641	2.1%	608	2.1%	634	2.2%	
Boardsailing/Windsurfing	269	0.9%	341	1.2%	228	0.8%	385	1.3%	284	1.0%	250	0.9%	218	0.7%	552	1.8%	716	2.3%	460	1.6%	497	1.7%	
Camping (Within 1/4 Mile of Vehicle/Home)	3,862	13.6%	3,739	13.2%	4,004	14.0%	3,463	12.0%	3,896	13.4%	3,478	11.9%	3,611	11.9%	3,167	10.4%	2,796	9.1%	2,721	9.3%	2,561	8.7%	
Camping (Car, Backyard, Backpacking or RV)	5,002	17.6%	4,879	17.2%	5,274	18.4%	4,489	15.6%	5,175	17.8%	4,396	14.4%	4,710	15.5%	4,162	13.6%	4,118	13.4%	4,293	14.7%	4,526	15.4%	
Camping (Recreational Vehicle)	1,589	5.6%	1,558	5.5%	1,444	5.0%	1,228	4.3%	1,749	6.0%	1,209	4.1%	1,300	4.3%	1,282	4.2%	1,474	4.8%	1,691	5.8%	1,563	5.3%	
Canoeing	1,521	5.4%	1,295	4.6%	1,154	4.0%	1,474	5.1%	1,357	4.7%	1,279	4.4%	1,620	5.3%	1,738	5.7%	1,903	6.2%	1,524	5.2%	1,322	4.5%	
Climbing (Sport/Boulder)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	406	1.4%
Climbing (Indoor)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1,282	4.4%
Climbing (Traditional/Ice/Mountaineering)	510	1.8%	387	1.4%	381	1.3%	431	1.5%	390	1.3%	339	1.2%	488	1.6%	520	1.7%	730	2.4%	691	2.4%	592	2.0%	
Fishing (Fly, Freshwater/Other or Saltwater)	4,809	16.9%	4,382	15.4%	4,337	15.2%	4,287	14.9%	4,647	16.0%	4,328	14.8%	4,581	15.1%	4,398	14.4%	4,097	13.3%	4,152	14.2%	4,427	15.1%	
Fishing (Fly)	695	2.4%	718	2.5%	454	1.6%	643	2.2%	742	2.6%	691	2.4%	830	2.7%	729	2.4%	722	2.3%	660	2.3%	654	2.2%	
Fishing (Freshwater/Other)	4,069	14.3%	3,549	12.5%	3,757	13.1%	3,683	12.8%	3,911	13.5%	3,600	12.4%	3,602	11.9%	3,598	11.8%	4,097	13.3%	3,387	11.6%	3,357	11.4%	
Fishing (Saltwater)	1,410	5.0%	1,302	4.6%	1,017	3.6%	1,074	3.7%	1,162	4.0%	1,166	4.0%	1,173	3.9%	1,056	3.5%	930	3.0%	1,005	3.4%	1,177	4.0%	
Hiking	3,465	12.2%	3,399	12.0%	3,392	11.9%	3,741	13.0%	3,894	13.4%	4,180	14.3%	4,376	14.4%	4,555	14.9%	5,043	16.4%	5,327	18.3%	5,436	18.5%	
Hunting (All)	1,707	6.0%	1,522	5.4%	2,025	7.1%	1,686	5.8%	1,796	6.2%	1,809	6.2%	1,551	5.1%	1,876	6.1%	2,115	6.9%	1,862	6.4%	2,096	7.1%	
Kayak Fishing	n/a	n/a	n/a	n/a	n/a	n/a	204	0.7%	205	0.7%	165	0.5%	296	1.0%	226	0.7%	284	0.9%	233	0.8%	248	0.8%	
Kayaking (Recreational)	795	2.8%	889	3.1%	790	2.8%	988	3.4%	1,392	4.8%	1,181	4.1%	1,671	5.5%	1,634	5.3%	1,781	5.8%	1,814	6.2%	1,710	5.8%	
Kayaking (Sea/Touring)	241	0.8%	345	1.2%	221	0.8%	227	0.8%	413	1.4%	323	1.1%	462	1.5%	548	1.8%	662	2.2%	586	2.0%	488	1.7%	
Kayaking (Whitewater)	223	0.8%	259	0.9%	217	0.8%	342	1.2%	357	1.2%	316	1.1%	528	1.7%	540	1.8%	640	2.1%	482	1.7%	463	1.6%	
Rafting	789	2.8%	775	2.7%	668	2.3%	674	2.3%	618	2.1%	494	1.7%	717	2.4%	636	2.1%	635	2.1%	529	1.8%	519	1.8%	
Running (Running/Jogging or Trail Running)	8,583	30.2%	8,061	28.4%	8,554	29.9%	9,033	31.3%	9,186	31.6%	10,430	35.8%	11,705	38.6%	9,617	31.5%	8,808	28.6%	9,170	31.4%	9,202	31.3%	
Running/Jogging	8,441	29.7%	7,944	27.9%	8,404	29.4%	8,898	30.9%	9,022	31.1%	10,281	35.3%	10,548	34.8%	9,238	30.2%	8,313	27.0%	8,796	30.2%	8,805	29.9%	
Sailing	455	1.6%	595	2.1%	416	1.5%	337	1.2%	498	1.7%	388	1.3%	464	1.5%	424	1.4%	427	1.4%	384	1.3%	296	1.0%	
Scuba Diving	523	1.8%	570	2.0%	294	1.0%	384	1.3%	275	0.9%	358	1.2%	424	1.4%	547	1.8%	567	1.8%	433	1.5%	372	1.3%	
Skateboarding	1,377	4.8%	1,011	3.6%	958	3.3%	999	3.5%	953	3.3%	1,153	4.0%	1,232	4.1%	1,064	3.5%	1,186	3.9%	1,027	3.5%	1,399	4.8%	
Skating (Alpine/Downhill)	1,826	6.4%	1,522	5.4%	1,431	5.0%	1,707	5.9%	1,524	5.2%	1,072	3.7%	1,574	5.2%	1,371	4.5%	1,201	3.9%	1,093	3.7%	1,104	3.8%	
Skating (Cross-Country)	452	1.6%	496	1.7%	457	1.6%	586	2.0%	602	2.1%	453	1.6%	1,375	4.5%	885	2.9%	498	1.6%	566	1.9%	381	1.3%	
Skating (Freestyle)	596	2.1%	575	2.0%	533	1.9%	661	2.3%	585	2.0%	825	2.8%	444	1.5%	828	2.7%	588	1.9%	544	1.9%	409	1.4%	
Snorkeling	1,168	4.1%	1,144	4.0%	969	3.4%	1,251	4.3%	982	3.4%	985	3.4%	1,028	3.4%	970	3.2%	913	3.0%	880	3.0%	701	2.4%	
Snowboarding	1,896	6.7%	2,006	7.1%	2,049	7.2%	1,874	6.5%	1,874	6.5%	1,492	5.1%	1,410	4.7%	1,474	4.8%	1,222	4.0%	1,206	4.1%	1,029	3.5%	
Snowshoeing	429	1.5%	358	1.3%	383	1.3%	477	1.7%	552	1.9%	451	1.5%	361	1.2%	454	1.5%	301	1.0%	390	1.0%	228	0.8%	
Stand Up Paddling	n/a	n/a	n/a	n/a	n/a	n/a	171	0.6%	281	1.0%	259	0.9%	349	1.2%	356	1.2%	504	1.6%	551	1.9%	537	1.8%	
Surfing	663	2.3%	590	2.1%	450	1.6%	607	2.1%	434	1.5%	504	1.7%	487	1.6%	418	1.4%	333	1.1%	382	1.3%	472	1.6%	
Telemarking (Downhill)	310	1.1%	295	1.0%	269	0.9%	310	1.1%	366	1.3%	343	1.2%	125	0.4%	579	1.9%	505	1.6%	352	1.2%	279	0.9%	
Trail Running	796	2.8%	939	3.3%	1,003	3.5%	969	3.4%	1,175	4.0%	1,201	4.1%	1,603	5.3%	1,683	5.5%	2,070	6.7%	1,911	6.6%	2,051	7.0%	
Triathlon (Non-Traditional/Off Road)	113	0.4%	198	0.7%	128	0.4%	185	0.6%	97	0.3%	251	0.9%	288	1.0%	519	1.7%	683	2.2%	435	1.5%	373	1.3%	
Triathlon (Traditional/Road)	173	0.6%	266	0.9%	254	0.9%	216	0.7%	236	0.8%	360	1.2%	396	1.3%	568	1.9%	662	2.1%	483	1.7%	424	1.4%	
Wakeboarding	1,040	3.7%	809	2.8%	794	2.8%	798	2.8%	805	2.8%	680	2.3%	717	2.4%	743	2.4%	617	2.0%	572	2.0%	615	2.1%	
Wildlife Viewing	1,587	5.6%	1,859	6.5%	1,501	5.2%	1,351	4.7%	1,799	6.2%	1,679	5.8%	1,846	6.1%	1,739	5.7%	1,818	5.9%	1,688	6.4%	1,865	6.3%	

The Power of Outdoor Recreation Spending in Pennsylvania:

How hunting, fishing, and outdoor activities help support a
healthy state economy

November, 2018



Prepared for the Theodore Roosevelt Conservation Partnership
by Southwick Associates



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Executive Summary

Across Pennsylvania, millions of residents and nonresidents participated in outdoor recreation activities, generating substantial contributions to the state's economy. During 2016, there were more than 390,000 jobs supported by outdoor recreation activities in Pennsylvania (Table 1). More Pennsylvania jobs were supported by outdoor recreation than the production of durable goods (about 356,000 jobs).¹ Collectively, the economic contributions generated by outdoor recreation in Pennsylvania accounted for almost \$17 billion in salaries and wages paid to employees and over \$300 million in federal, state, and local tax revenue.

Table 1. Economic Contributions of All Outdoor Recreation and Hunting & Fishing

Economic Measure	All Outdoor Recreation	Hunting & Fishing
Jobs	391,813	20,470
Salaries and Wages	\$16,849,129	\$783,377
GDP	\$28,144,966	\$1,238,158
Total Output	\$46,151,950	\$2,259,540
State and Local Taxes	\$4,084,058	\$123,396
Federal Taxes	\$3,156,715	\$182,657

**All dollar figures are reported in the thousands of dollars (\$000s).*

Each outdoor recreation activity affects Pennsylvania's economy in a significant manner, fostering jobs and wages, generating tax revenue, and contributing to the state's GDP. These economic contributions are all fueled by the ability of participants to find ample natural settings within Pennsylvania where they can participate in their chosen form of recreation. For these outdoor recreation activities to continue to be a part of Pennsylvania's economy, adequate conservation of natural resources is imperative.

While greater economic activity may be generated throughout Pennsylvania by other outdoor recreation activities, conservation efforts by the state's fish and wildlife agencies and their partners are largely supported by hunting and fishing activities. In 2016, Pennsylvania hunters and anglers contributed \$33.5 million to fish and wildlife conservation and restoration efforts through excise taxes on hunting and fishing equipment. Additional revenue for conservation is generated by the sale of Pennsylvania hunting and fishing licenses, permits, and tags. These revenues provide the foundational funding for the Pennsylvania Fish and Boat Commission and Pennsylvania Game Commission to operate, maintain public lands, and provide public programs, thereby opening a channel for economic contributions to flow from other types of

¹ Bureau of Labor Statistics. 2016.

recreation activities. In order for Pennsylvania's rich tradition of outdoor recreation to continue, hunting and fishing activities must be understood as cornerstone activities on which many conservation efforts rest.

Introduction

Hunting, fishing, and other outdoor recreation activities have played a large part in Pennsylvania's history. Access to lands and waterways in Pennsylvania to support these activities is an important topic as many rural communities rely on the economic contributions generated by these activities. Many residents and nonresidents engage in fishing, hunting, and other outdoor recreation activities in Pennsylvania and spend significant amounts of money on travel, equipment, and supplies to support these pursuits. Collectively, these expenditures create positive contributions to the communities where the spending takes place. Sound economic analyses are needed in order to understand the contributions of these outdoor recreation activities.

This study quantifies the 2016 economic contributions associated with fishing, hunting, and other forms of outdoor recreation within Pennsylvania by providing several key economic measures: participant expenditures, job totals, total economic output, salaries and wages, and contributions to the state's gross domestic product (GDP). Furthermore, the economic contributions made by Pennsylvania residents living within the Delaware River watershed are highlighted in order to approximate the overall effect of outdoor recreation in the watershed.

Methods

Region of Study

The economic contributions of the outdoor recreational activities analyzed here are limited to the state of Pennsylvania. Only activities that took place in 2016 are considered in this report, including activity and spending by residents and nonresidents. While Pennsylvania residents likely ventured out of the state to participate in fishing, hunting, and other outdoor recreation activities, their activity and spending are not estimated in this analysis.

Definitions

In the following paragraphs we define a number of terms and concepts key to this analysis.

Participation includes the estimated number of individuals who participated in a given type of outdoor recreation activity in Pennsylvania during 2016. These figures were estimated using data from the National Survey of Fishing, Hunting, and Wildlife Associated Recreation (FHWAR) made available by the U.S. Fish & Wildlife Service (USFWS). To provide greater context, we will define the concept in more depth in the 'Data Overview' section.

Expenditures can be broken up into two different categories: trip expenses and durable goods expenditures. Trip expenses include the retail spending made by participants to directly support a trip to engage in a given type of outdoor recreation (e.g., fuel, food, lodging). Durable goods expenditures include activity-specific equipment and accessories (e.g., firearms, decoys, fishing rods, tackle) purchased by hunters and anglers. It also includes multi-purpose equipment that has been allocated to specific types of activity based on the distribution of the reported days that hunters or anglers participate in each activity (e.g., boats, tents, ATVs).

Input-output economic modelling describe how spending in one industry affects other industries within an economy. For example, once a consumer makes a purchase, the retailer buys more merchandise from wholesalers, who buy more from manufacturers, who, in turn, purchase new inputs and supplies. In addition, the salaries and wages paid by these businesses stimulate more economic activity as workers spend their incomes. Simply, the first purchase creates numerous rounds of purchasing. Input-output analysis tracks the flow of dollars from the consumer through all of the businesses that are affected, either directly or indirectly.

Specific to this research, dollars spent by anglers and hunters, referred to as their **direct spending**, cycles through the economy generating additional spending by businesses who provide supporting services and goods. This is known as the multiplier effect and includes **indirect contributions** arising from spending by businesses supporting those who serve anglers

and hunters as well as **induced contributions** generated by household spending of wages earned by employees of directly or indirectly affected businesses. The total economic contribution from fishing and hunting as provided in this report is the sum of the direct effects of anglers' and hunters' retail spending plus the measurable effects of indirect and induced spending.

All economic contributions in this study were estimated using a 2015 model of the Pennsylvania economy available from IMPLAN[®] with inflation adjustments to reflect 2016 spending.² Five types of economic activity are measured and reported:

Jobs: The number of full and part-time jobs created or supported as a result of hunting, fishing, and other outdoor recreation activities within the state;

Salaries and wages: Total payroll, including salaries, wages, and benefits paid to employees and proprietors;

GDP: The contribution to the state or regional economy from hunting, fishing, and other outdoor recreation activities net of spending on intermediate inputs;

Total output: The total value of all sales, including both the final purchase as well as the sale of intermediate inputs, by businesses throughout the economy that are associated with hunting, fishing, and other forms of outdoor recreation ; and

Tax Revenue: All local, state, and federal taxes generated as a result of the economic activity associated with hunting, fishing, and other outdoor recreation activities within the state.

To apply direct spending for each recreational activity to the IMPLAN[®] model, each specific expenditure was matched to the appropriate industry sector that received the initial purchase. For each set of estimates, the results report economic contributions that occurred within the state. The results do not include any economic activity or indirect contributions that flow out of the state; because of this, it is possible that the overall effect of these activities is greater than the state-level estimates reported.

The IMPLAN[®] model estimates local, state, and federal tax revenues based on the economic activity within Pennsylvania. The summary estimates provided in this report represent the total

² IMPLAN[®] is a platform that combines a set of extensive databases, economic factors, and demographic statistics with a customizable modeling system to measure economic contributions within a given area. This platform allows for an understanding of how participants' expenditures contribute to the local, regional, and state economies.

taxes estimated by the IMPLAN model including all income, sales, property, and other taxes and fees that accrue to the various local, state, and federal taxing authorities.

Data Overview

This report makes use of two different data sources. The economic contributions of fishing and hunting activities were estimated for the purpose of this report from the FHWAR dataset. Economic contributions from “other outdoor recreation activities” were taken from a 2016 report produced by Southwick Associates for the Outdoor Industry Association (OIA).³

Fishing and Hunting Activities

The economic contributions of fishing and hunting activities were calculated using estimates of expenditures and participation derived from multiple sources, including the 2016 FHWAR, 2011 FHWAR, USFWS Historical Fishing License Data, and USFWS Historical Hunting License Data.

Spending profiles

Unlike past surveys, the 2016 FHWAR survey did not contain adequate detailed data at the state level to provide reliable estimates.⁴ Instead, state-level estimates were produced by adjusting the national and regional estimates based on how the state’s expenditures related to the national or regional average in the 2011 FHWAR.⁵ This approach assumes that these proportions have remained constant since 2011. Using this assumption, we estimated the average trip expenditures and durable good expenditures for each type of recreation within the state of Pennsylvania.

For example, in 2011, spending per trip to participate in fishing in Pennsylvania was approximately 36% of the regional (Northeast Region) average according to the 2011 FHWAR. This proportion (36%) was then used to scale the 2016 regional average to estimate state-level expenditures for fishing in Pennsylvania in 2016.

³ This report can be accessed here: https://outdoorindustry.org/wp-content/uploads/2017/04/OIA_RecEconomy_FINAL_Single.pdf

⁴ The 2016 National Survey of Hunting, Fishing, and Wildlife-Associated Recreation contained insufficient sample size to generate state-level estimates of hunting and angling expenditures and participation for many states, including Pennsylvania.

⁵ Due to insufficient sample size in the New England and Middle-Atlantic census divisions used to calculate the Northeast Region average, the national average expenditures were utilized for hunting. Expenditures for fishing made use of the average expenditures at the regional level.

Participation estimates

The 2011 estimates of the number of participants in Pennsylvania were adjusted based on the observed patterns of certified fishing and hunting license sales from the U.S. Fish and Wildlife Service (USFWS). The proportional change in license sales from 2011 to 2016 is applied to the 2011 estimates of participation reported in the 2011 FHWAR. For example, USFWS reported an increase in Pennsylvania’s certified fishing license sales of 14.36% from 2011 to 2016. This scalar is applied to the 2011 estimate of total PA anglers (1,101,173) to arrive at the estimated 2016 PA anglers (1,259,274).

All Other Outdoor Recreation Activities

Secondary Data Source – Outdoor Recreation Survey

Estimates of the economic contributions of trail sports, biking, camping, snow sports, water sports, wildlife watching, motorcycle riding, and off roading were gathered from a 2016 report for the Outdoor Industry Association (OIA) by Southwick Associates.

Economic Impact of Outdoor Recreation in the Delaware River Watershed

This study is also interested in showing the economic impact of outdoor recreation on the Delaware River watershed. The limited data availability at this smaller geographic scale required Southwick Associates to define the scope of study differently for these estimates. The existing OIA data do not indicate the places in Pennsylvania where people participated in outdoor recreation and a survey to elicit that information was beyond the scope of this study. The OIA Congressional District level results include only statewide spending on outdoor recreation by residents of Pennsylvania based on where participants live and not on where the activity takes place. The CD-level estimates do not include participation or spending by non-residents of Pennsylvania.⁶ Because of this, the effort of outdoor recreation activities are higher than the CD-level estimates show.

⁶ Because of this, the total estimate of economic contributions to all congressional districts will equal an amount less than the total economic contributions to the state of Pennsylvania. The difference between the two sums equals the economic contributions made by nonresidents.

Results

Total Economic Contributions of Outdoor Recreation

All of the results presented in this sub-section include results from OIA which account for hunting, fishing, and other outdoor recreation activities.⁷

Statewide Results

In 2016, outdoor recreation activities attracted millions of participants to Pennsylvania whose expenditures collectively supported over 390,000 jobs providing almost \$17 billion in salaries and wages. More jobs within Pennsylvania were supported by outdoor recreation than the production of all durable goods (381,103 jobs).⁸ Altogether, outdoor recreation accounted for 4.3% of Pennsylvania's GDP during 2016.⁹

The table below (Table 2) describes the 2016 economic contributions to Pennsylvania's economy made by residents and nonresidents participating in fishing, hunting, and other outdoor recreation activities, including trail sports, biking, camping, snow sports, water sports, wildlife watching, motorcycle riding, and off-roading.¹⁰

Table 2. Total Economic Contribution of All Outdoor Recreation Activities

Economic Measure	Economic Contribution
Jobs	391,813
Salaries and Wages	\$16,849,129
GDP	\$28,144,966
Total Output	\$46,151,950
State and Local Taxes	\$4,084,058
Federal Taxes	\$3,156,715

**All dollar figures are reported in the thousands of dollars (\$000s).*

Economic Contributions to the Delaware River Watershed Region

Forms of outdoor recreation such as fishing, hunting, boating, and camping are immensely popular among residents of the Delaware River Watershed, and the economic contributions of outdoor recreation by residents of the Delaware River Watershed are greater than those who live elsewhere in the state. Outdoor recreation by residents of the Delaware River Watershed

⁷ While the OIA report used updated fishing and hunting data from the 2011 FHVAR to account for 2016 participation and expenditures, those results are slightly different from the results of this analysis. All fishing and hunting results in the Statewide Results sub-section are taken directly from OIA results, while the Detailed Activity Results section presents the results of the analysis carried out specifically for the purpose of this report.

⁸ Includes wood product manufacturing, primary metal manufacturing, fabricated metal product manufacturing, and more. Bureau of Economic Analysis. 2016.

⁹ Bureau of Economic Analysis. 2016.

¹⁰ A full list of other outdoor recreation activities by category can be found in Appendix 1.

supported more than 160,000 jobs across Pennsylvania, compared to approximately 109,000 jobs supported by residents who live outside of the region.

All CD-level participation estimates were obtained from the 2016 Outdoor Recreation Economy report by Southwick Associates and represent statewide activity and spending by residents of each CD. The congressional districts that contain at least some part of the Delaware River Basin are depicted in green in Figure 1.¹¹

Figure 1. Pennsylvania Congressional Districts

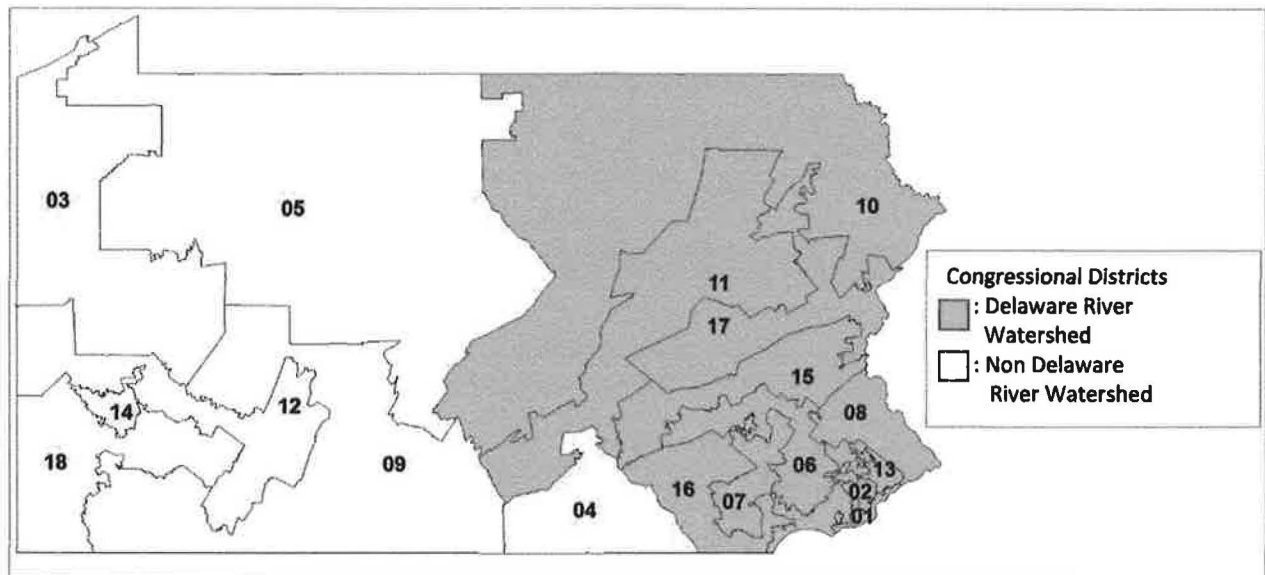


Table 3. Economic Contributions of All Outdoor Recreation by Residents of the Delaware River Watershed Region

	Jobs	Salaries and Wages	GDP	Total Output	State and Local Taxes	Federal Taxes
Delaware River Watershed	162,497	\$7,064,753	\$11,821,418	\$19,320,457	\$1,298,912	\$1,740,235
Non-Watershed	108,922	\$4,758,786	\$7,957,549	\$13,014,100	\$870,769	\$1,171,677
Total	271,419	\$11,823,540	\$19,778,967	\$32,334,557	\$2,169,681	\$2,911,912

¹¹ The congressional districts in which the Delaware River Watershed is located include the following districts: 1, 2, 6, 7, 8, 10, 11, 13, 15, 16, and 17.

The Impact of Hunting and Fishing: An In-Depth Look at Fishing and Hunting Activities
 Hunting and fishing remain incredibly popular outdoor recreation activities with nearly 1.3 million anglers and 780,000 hunters across the state, accounting for over 10% of the state’s 2016 population.¹² Collectively, hunters and anglers spent almost \$1.3B to pursue their passion.

All estimates of fishing and hunting activities presented in this sub-section are the result of primary research conducted for the purpose of this analysis, as described in the Fishing and Hunting section of the Data Overview chapter of this report.

The total number of participants, the total statewide expenditures, and the expenditures per participant for the study year (2016) are summarized below. The types of hunting participants (big game, small game, migratory bird, and other hunting activities) add up to a higher number than “all hunting”, because many hunters participated in multiple types of hunting.

Table 4. 2016 Fishing and Hunting Expenditures and Participation

	Participants	Expenditures (\$000s)	Expenditures per Participant
Fishing	1,259,301	\$470,356	\$374
All Hunting	780,462	\$817,721	\$1,048
Big Game	760,584	\$707,552	\$930
Small Game	205,344	\$74,270	\$362
Migratory Bird	47,599	\$24,139	\$507
Other Hunting	41,629	\$11,761	\$283

Spending by hunters and anglers supported more than 20,000 jobs which paid almost \$800M in salaries and wages and generated over \$300M in local, state, and federal tax revenue (Table 5). Hunting and fishing activities supported almost as many jobs as were supported by oil and gas extraction in Pennsylvania during the same year (21,798 jobs).¹³

As noted in the Executive Summary, the excise taxes, hunting and fishing licenses, permits, and hunting tags provide substantial funding for conservation and restoration efforts, in turn providing support for other forms of outdoor recreation.

Table 5. Total Economic Contributions of Fishing and Hunting Activities

	Jobs	Salaries and Wages	GDP	Total Output	State and Local Taxes	Federal Taxes
Fishing	6,938	\$283,132	\$450,298	\$831,157	\$50,102	\$66,366
All Hunting	13,532	\$500,245	\$787,860	\$1,428,383	\$73,294	\$116,291

¹² U.S. Census Bureau. 2016.

¹³ Bureau of Labor Statistics. 2016.

Big Game	11,667	\$434,249	\$678,677	\$1,239,574	\$62,948	\$100,504
Small Game	1,140	\$41,821	\$72,623	\$125,436	\$6,834	\$10,262
Migratory Bird	411	\$15,289	\$23,600	\$42,592	\$2,399	\$3,522
Other Hunting	314	\$8,886	\$12,960	\$20,781	\$1,113	\$2,003
Total	20,470	\$783,377	\$1,238,158	\$2,259,540	\$123,396	\$182,657

**All dollar figures are reported in the thousands of dollars (\$000s).*

Other Outdoor Recreation Activities

Millions of individuals participated in outdoor recreation in Pennsylvania during 2016, with camping (3.1 million), trail sports (2.5 million) and water sports (2.4 million) being some of the most popular activities (Table 6). While fewer participants engaged in snow sports than any other type of activity, the average expenditures per participant were greatest for this activity (\$3,854 per participant).

Estimates of the economic contributions of other outdoor recreation activities were generated by Southwick Associates as a part of a 2016 study for the Outdoor Industry Association. The following activity categories represent 2016 participation and expenditures.

Table 6. 2016 Outdoor Recreation Participation and Expenditures

	Participants	Expenditures (\$000s)	Expenditures per Participant
Biking	1,846,403	\$2,835,265	\$1,536
Camping	3,109,934	\$6,541,305	\$2,103
Motorcycle Riding	1,393,068	\$2,548,985	\$1,830
Off Roading	1,482,920	\$1,621,989	\$1,094
Snow sports	796,928	\$3,071,326	\$3,854
Trail sports	2,530,120	\$6,513,627	\$2,574
Water sports	2,369,249	\$3,881,957	\$1,638
Wildlife Watching	1,179,645	\$655,016	\$555

In 2016, there were more than 370,000 jobs in Pennsylvania supported by resident and nonresident outdoor recreation activities, not including hunting and fishing. These jobs paid more than \$16 billion in salaries and wages and generated almost \$7 billion in tax revenue at the local, state, or federal level. The total value of economic contributions to the state’s GDP made by these outdoor recreation activities (\$26.9 billion) is greater than the value of GDP contributed by all construction activities¹⁴ in the state during the same year (\$24.7 billion).¹⁵

¹⁴ Includes the construction of buildings, heavy and civil engineering construction, and specialty trade contractors.

¹⁵ Bureau of Labor Statistics. 2016.

Table 7. 2016 Total Economic Contributions of Other Outdoor Recreation Activities

	Jobs	Salaries and Wages	GDP	Total Output	State and Local Taxes	Federal Taxes
Biking	38,320	\$1,610,439	\$2,715,825	\$4,493,593	\$398,211	\$296,254
Camping	89,547	\$3,819,926	\$6,399,199	\$10,447,556	\$941,941	\$709,274
Motorcycle Riding	30,939	\$1,444,238	\$2,420,609	\$4,021,665	\$356,105	\$247,035
Off Roding	19,778	\$955,489	\$1,582,262	\$2,581,398	\$234,041	\$164,442
Snow sports	44,706	\$1,886,863	\$3,149,335	\$5,009,472	\$465,236	\$368,429
Trail sports	87,868	\$3,729,601	\$6,283,387	\$10,273,479	\$922,068	\$704,831
Water sports	52,218	\$2,283,364	\$3,808,953	\$6,177,019	\$561,468	\$424,831
Wildlife Watching	8,020	\$336,910	\$548,624	\$889,369	\$81,779	\$59,174
Total	371,396	\$16,066,830	\$26,908,194	\$43,893,551	\$3,960,849	\$2,974,270

**All dollar figures are reported in the thousands of dollars (\$000s).*

Appendix 1: Activities by Category

The following activities are included in the activity categories detailed in the OIA report.

Camping: RV-ing, camping in a tent/lodge

Fishing: fishing

Hunting: hunting

Motorcycle Riding: motorcycle riding off-road, motorcycle riding on a road

Off Roding: driving off-road trucks/jeeps, riding ATVs, riding dune/swamp buggies, riding ROVs

Snow Sports: snowmobiling, downhill skiing, snowboarding, Telemark skiing, cross-country/Nordic skiing, snowshoeing

Trail Sports: day hiking, horseback riding, backpacking, mountaineering, rock or ice climbing, trail/road running

Water Sports: cruising/sightseeing in a power boat, knee boarding, tubing, wakeboarding, waterskiing, canoeing, kayaking, rafting, stand-up paddle boarding, surfing, sailing, scuba

Wheel Sports: bicycling off road, bicycling on a paved road, skateboarding

Wildlife Watching: wildlife viewing