Alaska's Nonresident Anglers, 2009-2013

For:

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By:

Southwick Associates

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Introduction

This is an analysis of Alaska's nonresident anglers who purchased a fishing license in Alaska between 2009 and 2013. It relies on three sources of data. The Alaska Department of Fish and Game's (ADF&G) license sales records, guide/charter logbooks, and the Statewide Harvest Survey (SWHS). The objectives of this analysis were to determine the following:

- Nonresident angler gender breakdown.
- Nonresident angler age breakdown.
- A ranking of the states and countries that provide the most nonresident license buyers.
- Number/percentage of licenses sold in each nonresident license category (1-day licenses, 3-day, 7-day, 14-day, and annual) to determine how often visitors fished, and whether anglers are buying several shorter-term licenses, instead of one longer-term license.
- Percentage of guided vs. unguided fishing trips taken by nonresidents.
- Frequency of nonresident youth (under the age of 16) participation in guided trips, as a proxy for whether the fishing trip was family-oriented.
- Nonresident angler guided saltwater vs. freshwater participation rates and breakdown of effort corresponding to Statewide Harvest Survey areas.
- Number/percentage of nonresident guided trips by time period, from April through September, in two week intervals to help determine when people are coming to fish.
- Number of repeat nonresident anglers, frequency of their visits, and common characteristics of these anglers as determined by ESRI Tapestry data.
- To determine if nonresident anglers, or nonresident angler households, who catch fish are more likely to return to fish again in later years.

License sales records form the core of the analysis of nonresident angler license purchasing histories, demographics, and place of origin. The guide/charter logbook data were joined to the license record data by license number to determine nonresident participation rates in guided/charter trips. Statewide Harvest Survey data indicated whether a respondent caught a fish, harvested a fish, the area they fished, the number of anglers in the household who fished, and whether they were guided or unguided. The 2013 Statewide Harvest Survey was not yet complete at the time of analysis, but data covering 2009-2012 were joined by license number and household address to the license sales records to determine whether nonresident anglers in households who reported catching a fish were more likely to return to Alaska to fish.

Overview of Findings

- Nearly one-quarter (24%) of nonresident anglers are female.
- The average age of a nonresident angler is 49.
- The vast majority of nonresident anglers come from other U.S. states (93.3%). Roughly one-quarter of these come from California (14.1%) and Washington (11.5%).
- Canada accounts for 3% of nonresident anglers with over one-third of these (36.1%) from the Yukon Territory.
- Over half (55.9%) of nonresident anglers participate in a guided or charter fishing trip. Only 11.4% of guided/charter trips include youth under the age of 16.
- Southcentral Alaska accounts for the majority of freshwater guided trips by nonresidents (82.1%) while Southeast Alaska accounts for the majority of nonresident saltwater trips (60.1%).
- Only 6.3% of nonresident anglers purchase an annual license. Only 2.9% purchase more than one short term license.
- Only 12.6% of all 2009-2013 nonresident anglers were repeat anglers during that time, purchasing a license in two or more years.
- Repeat anglers were more likely to be older and male and to have participated in a guided trip compared to one-time anglers.
- There was no significant difference between one-time and repeat anglers based on ESRI Tapestry lifestyle segmentation of nonresident anglers.
- Nonresident anglers in households that reported catching a fish to the Statewide Harvest Survey were twice as likely to be repeat anglers compared to those that did not catch a fish (22.2% vs. 10.6%).

Gender and Age

Alaska sport fishing licenses require anglers to provide information that includes full name, mailing address, physical address, citizenship or residency, driver's license or official identification number and state, gender, and birthdate. License sales records from 2009-2013 were used to determine nonresident angler demographics. When sport fishing in Alaska, anglers under the age of 16 are not required to purchase a license regardless of residency; thus, the exact number of nonresident anglers under the age of 16 cannot be determined.

- Nearly one-quarter (24%) of nonresident anglers were female in the years from 2009 to 2013 (Table 1).
- Nearly 60% were 45 years of age or older (Table 2).
- Less than one in ten (9.4%) licensed nonresident anglers were between the age of 16 and 25.

Table 1: Gender of Nonresident Anglers (2009-2013 Annual Average).

	2009		2013		Annual Average 2009-2013	
Gender*	#	%	#	%	#	%
Female	47,248	23.1%	54,085	25.2%	51,265	24.0%
Male	157,114	76.9%	160,433	74.8%	161,988	76.0%

** Where gender is given in license record. Gender was missing for roughly 3% of angler records.*

Table 2: Age Distribution of Licensed Anglers, Average 2009-2013.

Age	2009 #	2009 %	2013 #	2013 %	Annual Average 2009-2013 #	Annual Average 2009-2013 %
Under 18	4,217	2.0%	4,310	2.0%	4,352	2.0%
18 to 24	15,725	7.4%	16,154	7.3%	16,123	7.4%
25 to 34	26,955	12.8%	29,336	13.3%	28,762	13.1%
35 to 44	30,765	14.6%	29,973	13.6%	30,482	13.9%
45 to 54	49,874	23.6%	46,801	21.2%	48,992	22.4%
55 to 64	48,218	22.8%	51,607	23.4%	50,858	23.2%
65 and Over	35,441	16.8%	42,245	19.2%	39,358	18.0%
Total	211,195	100.0%	220,426	100.0%	218,926	100.0%
Average Age	***48.6***		***49.3***		***49.0***	

Country and State of Residence

License sales records from 2009-2013 were used to determine nonresident angler license purchasing place of origin.

Overview of Nonresident Anglers' Country and State of Residence

- 93.3% of nonresident anglers come from other U.S. states (
- Table 3).
- Canada accounted for 3% of nonresident anglers.
- Switzerland and Germany were the second and third largest sources of international anglers after Canada with an average of over 1,000 anglers annually visiting from these countries.

Country of Residence

- The 20 countries (including the United States) account for 99.4% of nonresident anglers.

Table 3: Top 20 Countries of Origin of Nonresident Anglers (Annual Average, 2009-2013).

Country	#	%	Rank
United States	206,216	93.3%	1
Canada	6,731	3.0%	2
Switzerland	1,171	0.5%	3
Germany	1,143	0.5%	4
Australia	845	0.4%	5
Great Britain	677	0.3%	6
Japan	551	0.2%	7
France	352	0.2%	8
New Zealand	293	0.1%	9
Austria	270	0.1%	10
Mexico	229	0.1%	11
Norway	226	0.1%	12
Italy	173	0.1%	13
Denmark	152	0.1%	14
Russia	141	0.1%	15
Spain	132	0.1%	16
Sweden	111	0.1%	17
China	109	0.0%	18
Netherlands	109	0.0%	19
Czech Republic	97	0.0%	20
Top 20 Total	***219,728***	***99.4%***	
Total (160 countries)	**221,057**	**100.0%**	

State of Residence

- California, Washington, and Texas were the top three states of origin for nonresident anglers from other parts of the United States (Table 4).
- The top 20 states accounted for 78.8% of nonresident anglers from the United States.

Table 4: Top 20 States of Origin for Nonresident Anglers (Annual Average, 2009-2013).

State	#	%	Rank
California	29,138	14.1%	1
Washington	23,631	11.5%	2
Texas	15,231	7.4%	3
Oregon	10,766	5.2%	4
Colorado	9,565	4.6%	5
Minnesota	8,702	4.2%	6
Florida	7,813	3.8%	7
Utah	6,897	3.3%	8
Arizona	6,182	3.0%	9
Idaho	5,836	2.8%	10
Michigan	4,683	2.3%	11
Montana	4,579	2.2%	12
Wisconsin	4,486	2.2%	13
Pennsylvania	4,373	2.1%	14
New York	4,150	2.0%	15
Illinois	3,693	1.8%	16
Georgia	3,549	1.7%	17
Nevada	3,097	1.5%	18
Ohio	3,057	1.5%	19
Virginia	3,040	1.5%	20
Top 20 Total	***162,468***	***78.8%***	
Total US	**206,216**	**100.0%**	

Canadian Province of Residence

- The Yukon Territory accounted for over one-third of nonresident anglers from Canada.
    - 86.8% of the licenses purchased by Yukon residents were Yukon Reciprocal Sport Fishing Licenses
    - 13.1% were short-term licenses.
- Between them, the provinces of British Columbia and Alberta also accounted for just over one-third of Canadians (Table 5).

Table 5: Canadian Province of Origin of Nonresident Anglers (Annual Average, 2009-2013).

State	#	%	Rank
Yukon Territory	2,429	36.1%	1
British Columbia	1,190	17.7%	2
Alberta	1,168	17.3%	3
Ontario	934	13.9%	4
Quebec	365	5.4%	5
Saskatchewan	222	3.3%	6
Manitoba	129	1.9%	7
Nova Scotia	61	0.9%	8
New Brunswick	37	0.5%	9
Northwest Territories	26	0.4%	10
Newfoundland and Labrador	24	0.4%	11
Prince Edward Island	7	0.1%	12
Nunavut	1	0.0%	13
Total	**6,731**	**100.0%**	

License Types

License sales records from 2009-2013 were used to determine the types of licenses nonresident anglers purchase most frequently, and whether nonresident anglers are buying several short-term licenses, instead of one longer-term or annual license. Short-term licenses were defined as those which do not convey annual fishing privileges (which cover an entire calendar year). In addition to a traditional annual nonresident sport fishing license, Alaska offers nonresident military annual sport fishing licenses, nonresident military annual hunting and sport fishing combination licenses, and nonresident annual Yukon Territory Reciprocal sport fishing licenses.

Overview of License Purchases by Nonresident Anglers

- Only 6.3% of nonresident anglers purchase an annual fishing license (Table 6). This includes Yukon reciprocal and military sportsmen licenses.
- The seven-day nonresident license is the second most popular license (32.4%) after the one-day license (35.4%).
- Less than one percent on nonresident anglers purchased one of the combination hunting and fishing licenses.
- Only 2.9% of nonresidents purchased more than one fishing license.

Table 6: License Types Purchased by Nonresident Anglers (Annual Average, 2009-2013)

License Type	Anglers	% Anglers	# Licenses	Licenses per Angler
1 Day Sport Fishing	78,302	35.4%	84,023	1.07
3 Day Sport Fishing	44,027	19.9%	45,066	1.02
7 Day Sport Fishing	71,770	32.4%	72,612	1.01
14 Day Sport Fishing	19,644	8.9%	19,764	1.01
Annual Sport Fishing	13,845	6.3%	13,872	1.00
Combination Hunting and Fishing	***2,021***	***0.9%***	***2,024***	***1.00***
Multi-License Buyers	***6,329***	***2.9%***	***14,076***	***2.22***
Total	**221,261**	**100.0%**	**235,337**	**1.06**

Short-Term License Purchases by Nonresident Anglers

- The average number of short-term licenses purchased was 1.07 per angler (Table 7).
- The average short-term license buyer purchased 4.8 days' worth of fishing privileges.

Table 7: Short-Term Licenses Purchased by Nonresident Anglers (Annual Average, 2009-2013).

Short-term License Type	Short-term Anglers	% Short-term Anglers	# Licenses	Licenses per Angler
1 Day Sport Fishing	78,302	37.7%	84,023	1.07
3 Day Sport Fishing	44,027	21.2%	45,066	1.02
7 Day Sport Fishing	71,770	34.5%	72,612	1.01
14 Day Sport Fishing	19,644	9.5%	19,764	1.01
All Short-term Anglers	**207,765**	**100.0%**	**221,465**	**1.07**
Average Short-term License Days:	***4.84***			

Guided/Charter Trip Participation

This section uses data from the guide/charter logbooks in conjunction with license records. The guide/charter logbooks provided to Southwick Associates show anglers associated with each trip by license number, the Statewide Harvest Survey Area in which the trip took place, and the time period in which the trip took place. Youth under the age of 16 were identified in the logbook data with a notation in place of a license number. License numbers were matched to angler data from the license sales records through the license number to gain further insights about the type of anglers taking guided/charter trips. The license sales database did not include a unique identifier for each angler; therefore unique, individual anglers in the license sales database were distinguished by name and date of birth. Because some license sales records did not include a date of birth, the results shown in Table 8 may undercount the number of anglers who took a guided trip[1].

Overall guide/charter participation by nonresidents

- More than one-half (56%) of nonresident anglers participate in at least one guided fishing trip during their visit to Alaska.
- Fewer than one in five anglers (17.2%) took a freshwater guided trip while nearly one-half (45.5%) take a saltwater charter/guided trip.

Table 8: Nonresident Licensed Angler Participation in Guided Fishing Trips (Annual Average, 2009-2013)

Trip Type	# of Unique Anglers*	Participation Rate%
Guided Freshwater Trip	37,952	17.2%
Guided Saltwater Trip	100,595	45.5%
Any Guided Trip	123,639	55.9%
Unguided	97,621	44.1%

**Excludes youth. Some anglers were not counted due to absence of a unique customer identification number.*

Nonresident youth guide/charter participation

Because anglers under the age of 16 are not required to purchase a license regardless of residency, the exact number of nonresident anglers under the age of 16 cannot be determined. The charter/guide logbooks, however, do contain records of 'youth anglers'. This section is based on guide/chart logbook data where a trip contained at least one case where the license entry indicated the presence of an unlicensed youth. These anglers generally are not included in other parts of the analysis since they do not appear in the license sales records.

- Youth were present on 11.9% of guided trips (Table 9).
- Youth participation was greater on saltwater trips than freshwater trips (14.6% vs. 8.3%).

Table 9: Nonresident Angler Youth on Guided Trips (Annual Average, 2009-2013).

	Freshwater Trips	Saltwater Trips	All Trips
Total Guided Trips	36,492	46,997	83,488
Trips with Youth	3,029	6,869	9,898
% with Youth	8.3%	14.6%	11.9%
Avg. # Youth per trip*	1.34	1.49	1.44

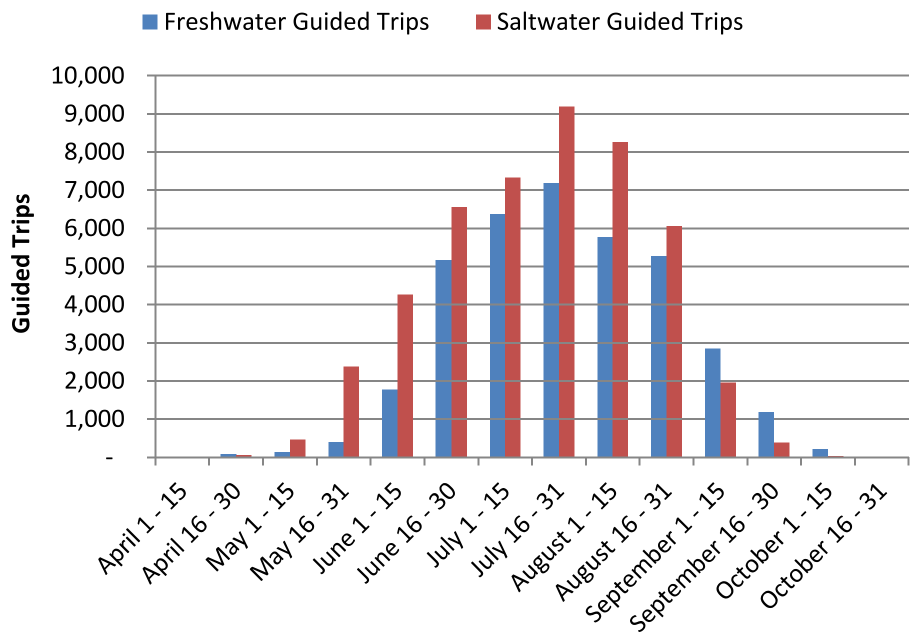
** On trips where youth were present*

[1] Subsequent investigations suggest the number of guided anglers may be undercounted by approximately 7.2%

Peak timeframes for guide/charter participation by non-residents

- July 16 through 31 is the peak time for both saltwater and freshwater guide trips (Figure 1).
- Freshwater trips outnumber saltwater trips during the later parts of the season beginning in September.

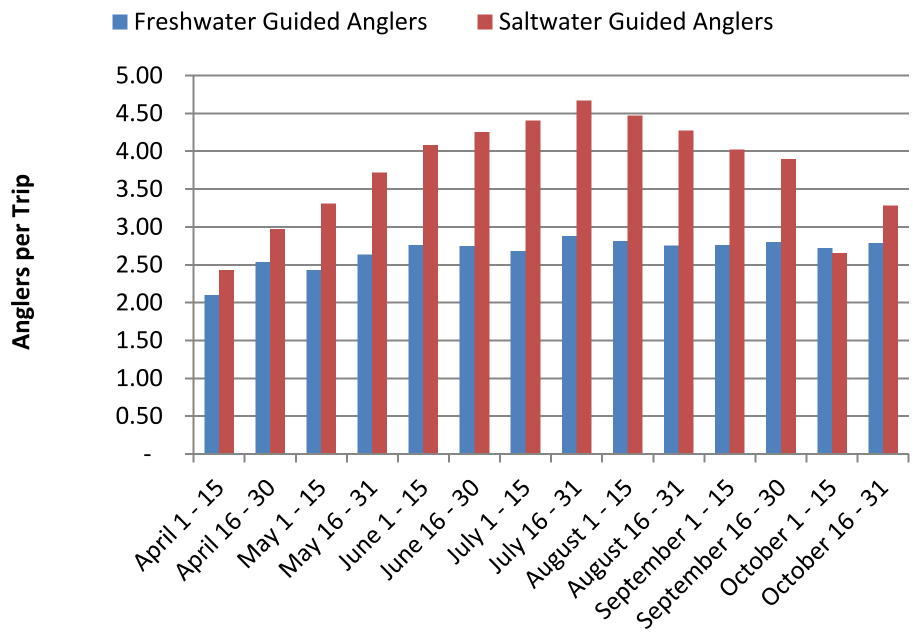
Figure 1: Number of Guided Trips Taken by Nonresident Anglers, by Two-Week Time Periods (Average 2009-2013).



Peak timeframes for numbers of nonresident anglers per guided or chartered trip

- The number of nonresident anglers per saltwater trip shows a definite peak during mid-season. Trips range in average size from 2.43 nonresident anglers per trip in early April to 4.67 nonresident anglers per trip during the second half of July.
- The number of nonresident anglers per freshwater trip remains fairly stable throughout the season ranging from 2.1 in early April to 2.9 in early July.

Figure 2: Number of Nonresident Anglers per Guided Trip, by Two-Week Time Period (Average 2009-2013).



Nonresident Freshwater and Saltwater Guided/Chartered Trips by Region: Overview

- The vast majority of nonresident guided freshwater trips were in Southcentral Alaska, accounting for 82.1% of freshwater trips.
- The Arctic-Yukon-Kuskokwim region accounted for 11.1% of nonresident trips but only 8.6% of guided freshwater anglers.
- Guided trips in Southeast Alaska were the largest in terms of the number of nonresident anglers per trip (3.5).

Nonresident Guided/Chartered Trips by Region: Freshwater

- Most guided freshwater trips occurred in the Southcentral region (82.8%), with the Kenai Peninsula accounting for one-third of all freshwater guided trips in the state.
- The Southeast region had the fewest number of trips but the highest average number of angler-days.

Table 10: Nonresident Angler Freshwater Trips, by Region (Annual Average, 2009-2013).

Region	Freshwater Trips #	Freshwater Trips %	Guided Angler Days #	Guided Angler Days %	Avg. Number of Angler Days
Ketchikan	127	0.3%	358	0.4%	2.8
Prince of Wales Island	125	0.3%	281	0.3%	2.2
Kake, Petersburg, Wrangell, Stikine	61	0.2%	195	0.2%	3.2
Sitka	361	1.0%	1,221	1.2%	3.4
Juneau	378	1.0%	1,658	1.6%	4.4
Skagway/Haines	56	0.2%	231	0.2%	4.1
Glacier Bay	103	0.3%	481	0.5%	4.7
Yakutat	1,288	3.5%	4,228	4.2%	3.3
Total Southeast Alaska	***2,500***	***6.9%***	***8,653***	***8.5%***	***3.5***
Prince William Sound	92	0.3%	390	0.4%	4.2
Knik Arm	242	0.7%	669	0.7%	2.8
Anchorage	27	0.1%	79	0.1%	3.0
Susitna River drainage	2,923	8.0%	8,442	8.3%	2.9
West Cook Inlet drainages	1,979	5.4%	7,100	7.0%	3.6
Kenai Peninsula	11,392	31.2%	34,095	33.7%	3.0
Kodiak	1,129	3.1%	3,801	3.8%	3.4
Alaska Peninsula/Aleutian Islands	3,723	10.2%	9,490	9.4%	2.5
Kvichak River drainage	4,242	11.6%	9,918	9.8%	2.3
Nushagak, Wood River and Togiak	4,198	11.5%	9,859	9.7%	2.3
Total Southcentral Alaska	***29,947***	***82.1%***	***83,845***	***82.8%***	***2.8***
Upper Copper River drainage	390	1.1%	1,075	1.1%	2.8
Tanana River drainage	494	1.4%	1,148	1.1%	2.3
Kuskokwim River/Kuskokwim Bay drainages	2,359	6.5%	4,779	4.7%	2.0
Seward Peninsula/Norton Sound	323	0.9%	634	0.6%	2.0
Northwest Alaska	27	0.1%	188	0.2%	7.1
Yukon River drainage	449	1.2%	887	0.9%	2.0
North Slope/Brooks Range	1	0.0%	4	0.0%	2.7
Total Arctic-Yukon-Kuskokwim	***4,042***	***11.1%***	***8,714***	***8.6%***	***2.2***
Unknown	3	0.0%	9	0.0%	3.4
TOTAL	**36,492**	**100.0%**	**101,220**	**100.0%**	**2.8**

Nonresident Guided/Chartered Trips by Region: Saltwater

- Southeast Alaska accounted for 60.1% of nonresident guided saltwater trips.
- Saltwater trips in Southcentral Alaska were larger with five nonresident anglers per trip compared to 3.9 per trip in Southeast Alaska.

Table 11: Nonresident Angler Saltwater Trips, by Region (Annual Average, 2009-2013).

Region	Saltwater Trips		Guided Angler Days		Avg. Number of Angler Days
	#	%	#	%	
Ketchikan	6,631	14.1%	25,335	12.4%	3.8
Prince of Wales Island	5,218	11.1%	19,393	9.5%	3.7
Kake, Petersburg, Wrangell, Stikine	916	1.9%	3,431	1.7%	3.7
Sitka	7,626	16.2%	30,000	14.7%	3.9
Juneau	3,433	7.3%	13,729	6.7%	4.0
Skagway	358	0.8%	1,287	0.6%	3.6
Haines	122	0.3%	418	0.2%	3.4
Glacier Bay	3,271	7.0%	13,560	6.7%	4.1
Yakutat	651	1.4%	2,617	1.3%	4.0
Total Southeast Alaska	***28,226***	***60.1%***	***109,769***	***53.9%***	***3.9***
Prince William Sound	1,582	3.4%	5,515	2.7%	3.5
North Gulf Coast	4,383	9.3%	24,805	12.2%	5.7
West Cook Inlet drainages	49	0.1%	171	0.1%	3.5
Cook Inlet	10,062	21.4%	52,966	26.0%	5.3
Kodiak	2,544	5.4%	9,878	4.9%	3.9
Alaska Peninsula/Aleutian Islands	151	0.3%	460	0.2%	3.0
Total Southcentral Alaska	***18,770***	***39.9%***	***93,795***	***46.1%***	***5.0***
TOTAL	**46,997**	**100.0%**	**203,564**	**100.0%**	**4.3**

Repeat Anglers

This section looks at differences between repeat nonresident anglers, who purchased a license in Alaska in two or more of the five license years from 2009 to 2013, and those who purchased a license in only one of the five years. The analysis is broken into three sections based on the source of the data. License sales records provide age, gender, and country/state of origin, as well the years in which an angler purchased a license. These records were augmented with the guide/charter logbook records to determine participation in guided trips. ESRI Tapestry data were appended to the sales records of anglers from other U.S. states to provide further demographic information based on a nonresident angler's address. Finally, Statewide Harvest Survey data were joined based on household to determine whether nonresident anglers who report catching a fish are more likely to return. These data are limited to those nonresidents who responded to the survey from 2009 to 2012.

Repeat and One-Time Nonresident Anglers

- Almost nine out of ten (87.4%) nonresident anglers who fished in Alaska from 2009 through 2013 did so during only one of the five years (Table 12). [2]
- 12.6% were repeat nonresident anglers during that period with most of those fishing in Alaska during two of the five years.

Table 12: Years Fished in Alaska by Nonresident Anglers, 2009-2013.

Years	#	%
1	803,769	87.4%
2	72,543	7.9%
3	24,005	2.6%
4	12,212	1.3%
5	7,317	0.8%
Repeat Anglers	116,077	12.6%
Total	919,846	100.0%

Repeat and One-Time Nonresident Anglers by Gender

- Repeat nonresident anglers are more likely to be men, who accounted for 81.7% of repeat anglers compared to 73.8% of one-time anglers (Table 13).Repeat nonresident anglers are also more likely to be older than one-time anglers (Table 14)

Table 13: Repeat vs. One-time Nonresident Anglers by Gender, 2009-2013.

Gender*	One-time**		Repeat	
	#	%	#	%
Female	160,043	26.2%	20,875	18.3%
Male	450,647	73.8%	93,420	81.7%

Chi-square test of independence, sig. p = 0.000
** Where gender is given in license record. Gender was missing for roughly 3% of nonresident anglers.*
*** Excludes 2013 anglers because it is not possible to know if they purchased again.*

[2] It is possible that some of these may be repeat anglers from before 2009.

Repeat and One-Time Nonresident Anglers by Age

- Repeat anglers are generally older than one-time anglers.

Table 14: Repeat vs. One-time Nonresident Anglers by Age, 2009-2013.

Age	One-time*		Repeat	
	#	%	#	%
Under 18	15,627	2.5%	983	0.8%
18 to 24	53,487	8.5%	5,796	5.0%
25 to 34	90,543	14.4%	12,156	10.5%
35 to 44	90,213	14.3%	15,697	13.5%
45 to 54	141,317	22.4%	27,126	23.4%
55 to 64	138,155	21.9%	29,978	25.8%
65 and Over	100,364	15.9%	24,341	21.0%
Total	**629,706**	**100%**	**116,077**	**100%**
Avg. Age	***47.6***		***51.9***	

Chi-square test of independence, sig. p = 0.000

Repeat and One-Time Nonresident Anglers by State of Origin

- Washington, California, and Oregon are the top three states for repeat anglers (Table 16).

Table 15: Top 10 States of Origin of Repeat and One-Time Anglers, 2009-2013.

One-time*			Repeat	
Tapestry	%**		Tapestry	%**
California	12.4%		Washington	15.7%
Washington	8.6%		California	14.9%
Texas	7.3%		Oregon	6.6%
Colorado	4.2%		Texas	5.8%
Oregon	4.2%		Colorado	4.7%
Minnesota	4.1%		Minnesota	3.5%
Florida	3.9%		Utah	3.5%
Utah	3.0%		Idaho	3.4%
Arizona	2.7%		Arizona	3.0%
Idaho	2.4%		Florida	2.6%

Chi-square test of independence, sig. p = 0.000

**Excludes 2013 anglers.*

*** Percent all 2009-2012 anglers.*

Repeat and One-Time Nonresident Anglers by Use of Guides

- Anglers who took at least one guided fishing trip between 2009 and 2013 were slightly more likely to be repeat anglers.

Table 16: Repeat vs. One-Time Nonresident Anglers by Guided or Unguided, 2009-2013.

Guided/ Unguided*	One-time Anglers**		Repeat Anglers	
	#	%	#	%
Unguided	261,330	41.5%	41,856	36.1%
Guided	368,376	58.5%	74,221	63.9%
Total	**629,706**	**100.0%**	**116,077**	**100.0%**

Chi-square test of independence, sig. p = 0.000
**Any guide trip 2009-2013.*
***Excludes 2013 anglers.*

Lifestyle Analysis of Repeat and One-Time Nonresident Anglers

This analysis is based on ESRI Tapestry data that were appended to the license records based on address of residence. These are available only for U.S. addresses; therefore Canadian and other international anglers are excluded from this section. Overall, there are not large differences between repeat and one-time anglers based on ESRI Tapestry data. For a brief explanation and comparison of Alaska's Tapestry segments, please see Appendix A.

Repeat Anglers: Urban Classification

- There is no difference between repeat and one-time anglers based on urban/rural characteristic of their home neighborhood (Table 17).

Table 17: Repeat vs. One-Time Anglers by Urban/Rural Classification, 2009-2013.

Urban/ Rural*	One-time**		Repeat	
	#	%	#	%
Urban	168,061	28.9%	31,892	28.9%
Suburban	255,206	43.8%	48,052	43.6%
Rural	159,165	27.3%	30,284	27.5%
Total	**582,432**	**100%**	**110,228**	**100%**

Chi-square test of independence, sig. p = 0.371
**Nonresidents from other U.S. States where address could be matched to ESRI Tapestry.*
***Excludes 2013 anglers.*

Repeat Anglers: Household Income

- Repeat anglers are slightly more likely than one-time anglers to come from neighborhoods with higher household income (Table 18).

Table 18: Repeat vs. One-time Anglers by Median Household Income of Neighborhood, 2009-2013.

ESRI Household Income*	One-time**		Repeat	
	#	%	#	%
Under $10,000	40	0.0%	17	0.0%
$10,000 - $24,999	7,905	1.4%	1,234	1.1%
$25,000 - $49,999	179,317	30.8%	32,180	29.2%
$50,000 - $74,999	194,121	33.3%	37,379	33.9%
$75,000 - $99,999	102,813	17.7%	20,522	18.6%
$100,000 or More	98,246	16.9%	18,896	17.1%
Total	**582,442**	**100.0%**	**110,228**	**100.0%**

Chi-square test of independence, sig. p = 0.000

**Nonresidents from other U.S. States where address could be matched to ESRI Tapestry.*

***Excludes 2013 anglers.*

Repeat Anglers: Tapestry Segments

- There are small differences in the rank ordering of the top ten Tapestry segments when comparing repeat vs. one time anglers (Table 19).

Table 19: Top 10 Tapestry Segments of Repeat and One-Time Anglers, 2009-2013.

One-time*			Repeat	
Tapestry	%**		Tapestry	%**
Green Acres	5.6%		Exurbanites	6.4%
Exurbanites	5.3%		Green Acres	6.1%
Up and Coming Families	5.0%		Rural Resort Dwellers	5.3%
Rural Resort Dwellers	4.1%		Up and Coming Families	5.1%
Boomburbs	4.1%		Sophisticated Squires	4.0%
Sophisticated Squires	4.0%		Midland Crowd	3.9%
Midland Crowd	3.8%		Boomburbs	3.9%
Suburban Splendor	3.6%		Suburban Splendor	3.6%
Connoisseurs	2.9%		Connoisseurs	3.6%
In Style	2.7%		Urban Chic	3.5%

Chi-square test of independence, sig. p = 0.000

**Excludes 2013 anglers.*

***Nonresidents from other U.S. States where address could be matched to ESRI Tapestry.*

Repeat and One-Time Nonresident Anglers Based on Fishing Success

The ADF&G Sport Fish Division annually conducts the Statewide Harvest Survey (SWHS), a mail survey to estimate the total harvest (fish kept) and total catch (fish kept plus fish released) for all sport fishing across the state. The SWHS is a household-based survey. To determine the sample for the survey, license sales records are grouped into households based on combinations of names, addresses, birth dates, and sequential license numbers. For each household, one representative license number is selected while the others are removed. From these households a random sample of 47,000 (about 10%) is drawn. On average, about 35-40% of households who receive the survey will fill it out and return it. Responses include households who did not fish, or did not report their harvest data. Thus, SWHS survey data are a small sub-set of the entire sport license file in a given year.

This section of the analysis includes only nonresident anglers who were in households that responded to the SWHS between 2009 and 2012. The 2013 Statewide Harvest Survey was not yet complete at the time of analysis. The SWHS data has guided/unguided information only for the years 2011-12 because that information was not captured for all SWHS records prior to 2011. The SWHS data used for the analysis included whether respondents reported catching a fish, harvesting a fish, the area they fished, and, for 2011 and 2012, whether they were guided or unguided. These data were joined to the license sales records by license number, and then applied to all nonresident anglers in the household by mailing address. This was done to identify which nonresident anglers, or angler households, had success which was defined as having caught fish (but not necessarily harvesting a fish). These data were used to determine whether success had an effect on who returns to fish again in Alaska in later years.

Fishing Success and Purchase Frequency

- Most nonresident respondents reported catching a fish (36,817 successful compared to 2,404 unsuccessful).
- Nonresident respondents who reported catching a fish were more than twice as likely to return to Alaska to fish during the five-year study period compared to anglers who reported catching no fish.
    - 22.2% vs. 10.6% for all 2009-2012 respondents (Table 20)
    - 33.8% vs. 16.5% for 2009 respondents (Table 21)
- A comparison of anglers who harvested a fish and anglers who caught but did not keep a fish showed no statistically significant difference in return rates.

Table 20: Fishing Success and Purchase Frequency by all 2009-2012 Nonresident Statewide Harvest Survey Respondents.

Years Purchased Alaska Fishing License	Unsuccessful		Successful*	
	#	%	#	%
1	2,148	89.4%	28,645	77.8%
2	192	8.0%	4,602	12.5%
3	48	2.0%	1,866	5.1%
4	14	0.6%	995	2.7%
5	2	0.1%	709	1.9%
All Repeat Anglers**	256	10.6%	8,172	22.2%
Total	2,404	100.0%	36,817	100.0%

- =

** Success defined as catching a fish, but not necessarily harvesting a fish they caught.*

***Purchased a license 2 or more years, 2009-2013*

Table 21: Fishing Success and Purchase Frequency by 2009 Nonresident Statewide Harvest Survey Respondents

Years Purchased Alaska Fishing License	Unsuccessful		Successful*	
	#	%	#	%
1	619	83.5%	8,837	66.2%
2	82	11.1%	1,968	14.7%
3	28	3.8%	1,096	8.2%
4	10	1.3%	747	5.6%
5	2	0.3%	709	5.3%
All Repeat Anglers**	122	16.5%	4,520	33.8%
Total	741	100.0%	13,357	100.0%

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** Success defined as catching a fish but not necessarily harvesting a fish they caught.*

***Purchased a license 2 or more years, 2009-2013*

Fishing Success and Purchase Frequency by Guided and Unguided 2011 SWHS Nonresident Angler Respondents

2011 SWHS respondents were categorized as guided or unguided, successful or unsuccessful, and it was again determined whether they purchased a nonresident sport fishing license in the subsequent year. Prior to 2011, guided/unguided trip breakdown was not captured for all SWHS records.

- Guided nonresident respondents who reported catching a fish were almost four times more likely to return than guided respondents who did not catch a fish (Table 22).
- Unguided nonresident respondents were more likely to be repeat anglers compared to guided nonresident anglers, whether or not they caught something. However, successful unguided nonresident anglers were much more likely to return than unsuccessful ones. (Table 23).

Table 22: Guided Nonresident 2011 Survey Respondents by Fishing Success.

Guided Survey Respondents	Unsuccessful		Successful*	
	#	%	#	%
One-Time Anglers	257	96.6%	4,716	87.6%
Repeat Anglers**	9	3.4%	670	12.4%
Total	266	100.0%	5,386	100.0%

- =

***Purchased a license 2 or more years, 2009-2013*

Table 23: Unguided Nonresident 2011 Survey Respondents by Fishing Success.

Unguided Survey Respondents	Unsuccessful		Successful*	
	#	%	#	%
One-Time Anglers	176	87.1%	1,709	79.7%
Repeat Anglers**	26	12.9%	436	20.3%
Total	202	100.0%	2,145	100.0%

- =

***Purchased a license 2 or more years, 2009-2013*

Appendix: Short descriptions of Tapestry Lifestyle Segments

ESRI's Tapestry segmentation system provides a robust and powerful portrait of the U.S. consumer markets divided into 65 segments. Following is a brief description of the Tapestry segments that describe Alaska's nonresident anglers. A single PDF document with the complete descriptions of all 65 segments can be found at the following link: http://www.esri.com/library/brochures/pdfs/tapestry-segmentation.pdf

2. Suburban Splendor

These successful suburbanites are the epitome of upward mobility, just a couple of rungs below the top, situated in growing neighborhoods of affluent homes with a median value of $473,602. Most households are composed of two-income, married-couple families with or without children. The population is well educated and well employed, with a median age of 41.2 years. Home improvement and remodeling are a main focus of Suburban Splendor residents. Their homes feature the latest amenities and reflect the latest in home design. Residents travel extensively in the United States and overseas for business and pleasure. Leisure activities include physical fitness, reading, visiting museums, or attending the theater. This market is proactive in tracking investments, financial planning, and holding life insurance policies.

3. Connoisseurs

Second in wealth to Top Rung but first for conspicuous consumption, Connoisseurs residents are well educated and somewhat older, with a median age of 46.9 years. Although residents appear closer to retirement than child rearing age, many of these married couples have children who still live at home. Their neighborhoods tend to be older bastions of affluence where the median home value is $772,844. Growth in these neighborhoods is slow. Residents spend money for nice homes, cars, clothes, and vacations. Exercise is a priority; they work out weekly at a club or other facility, ski, play golf, snorkel, play tennis, practice yoga, and jog. Active in the community, they work for political candidates or parties, write or visit elected officials, and participate in local civic issues.

4. Boomburbs

The newest additions to the suburbs, Boomburbs communities are home to younger families who live a busy, upscale lifestyle. The median age is 33.8 years. This market has the highest population growth at 4.6 percent annually-more than four times the national figure. The median home value is $360,631, and most households have two earners and two vehicles. This is the top market for households to own projection TVs, MP3 players, scanners, and laser printers as well as owning or leasing full-sized SUVs. It is the second-ranked market for owning flat-screen or plasma TVs, video game systems, and digital camcorders as well as owning or leasing minivans. Family vacations are a top priority. Popular vacation destinations are Disney World and Universal Studios, Florida. For exercise, residents play tennis and golf, ski, and jog.

6. Sophisticated Squires

Sophisticated Squires residents enjoy cultured country living in newer home developments with low density and a median home value of $286,622. These urban escapees are primarily married-couple families, educated, and well employed. They prefer to commute to maintain their semirural lifestyle. The median age is 38.3 years. They do their own lawn and landscaping work as well as home improvement and remodeling projects such as installing carpet or hardwood floors and interior painting. They like to barbeque on their gas grills and make bread with their bread-making machines. This is the top market for owning three or more vehicles. Vehicles of choice are minivans and full-sized SUVs. Family activities include playing volleyball, bicycling, playing board games and cards, going to the zoo, and attending soccer and baseball games.

7. Exurbanites

Open areas with affluence define these neighborhoods. Empty nesters comprise 40 percent of these households; married couples with children occupy 32 percent. Half of the householders are between the ages of 45 and 64 years. The median age is 44.6 years. Approximately half of those who work hold professional or managerial positions. The median home value is approximately $302,435; the median household income is $88,195. Financial health is a priority for the Exurbanites market; they consult with financial planners and track their investments online. They own a diverse investment portfolio and hold long-term care and substantial life insurance policies. Residents work on their homes, lawns, and gardens. Leisure activities include boating, hiking, kayaking, playing Frisbee, photography, and bird-watching. Many are members of fraternal orders and participate in civic activities.

9. Urban Chic

Urban Chic residents are well-educated professionals living an urban, exclusive lifestyle. Most own expensive single-family homes with a median value of $723,596. Married-couple families and singles comprise most of these households. The median age is 41.6 years. Urban Chic residents travel extensively, visit museums, attend dance performances, play golf, and go hiking. They use the Internet frequently to trade or track investments or to shop, buying concert and sports tickets, clothes, flowers, and books. They appreciate a good cup of coffee while reading a book or newspaper and prefer to listen to classical music, all-talk, or public radio programs. Civic minded, many residents would probably volunteer in their communities.

12. Up and Coming Families

Up and Coming Families represents the second highest household growth market and, with a median age of 32.0 years, is the youngest of Community Tapestry's affluent family markets. The profile for these neighborhoods is young, affluent families with young children. Approximately half of the households are concentrated in the South, with another half in the West and Midwest. Neighborhoods are located in suburban outskirts of midsized metropolitan areas. The homes are newer, with a median value of $221,956. Because family and home priorities dictate their consumer purchases, they frequently shop for baby and children's products and household furniture. Leisure activities include playing softball, going to the zoo, and visiting theme parks (generally SeaWorld or Disney World). Residents enjoy watching science fiction, comedy, and family-type movies on VHS or DVD.

13. In Style

In Style residents live in affluent neighborhoods of metropolitan areas. More suburban than urban, they nevertheless embrace an urban lifestyle. Townhome ownership is more than double that of the national level; however, more than half of the households live in traditional single-family homes. Labor force participation is high, and professional couples predominate. The median household income is $72,112. Nearly one-third of these households include children. The median age is 40.2 years. In Style residents are computer savvy; they use the Internet daily to research information, track investments, or shop. They own a diverse investment portfolio, contribute to retirement savings plans, and hold long-term care and life insurance policies. They enjoy going to the beach, snorkeling, playing golf, casino gambling, and domestic travel.

17. Green Acres

A "little bit country," Green Acres residents live in pastoral settings of developing suburban fringe areas, mainly in the Midwest and South. The median age is 40.5 years. Married couples with and without children comprise most of the households and live in single-family dwellings. This upscale market has a median household income of $63,922 and a median home value of $205,460. These do-it-yourselfers maintain and remodel their homes, painting, installing carpet, or adding a deck, and own all the necessary tools to accomplish these tasks. They also take care of their lawn and gardens, again, with the right tools. Vehicles of choice are motorcycles and full-sized pickup trucks. For exercise, residents ride their bikes and go water skiing, canoeing, and kayaking. Other activities include bird-watching, power boating, target shooting, hunting, and attending auto races.

26. Midland Crowd

Approximately 10.8 million people represent Midland Crowd, Community Tapestry's largest market. The median age of 36.9 years matches the U.S. median. Most households are composed of married-couple families, half with children and half without. The median household income is $49,748. Housing developments are generally in rural areas throughout the United States (more village or town than farm), mainly in the South. Home ownership is at 84 percent. Two-thirds of households are single-family structures; 28 percent are mobile homes. This is a somewhat conservative market politically. These do-it-yourselfers take pride in their homes, lawns, and vehicles. Hunting, fishing, and woodworking are favorite pursuits. Pet ownership, especially birds or dogs, is common. Many households have a satellite dish, and TV viewing includes various news programs as well as shows on CMT and Outdoor Life Network.

31. Rural Resort Dwellers

Favoring milder climates and pastoral settings, Rural Resort Dwellers residents live in rural, nonfarm areas. These small, growing communities mainly consist of single-family and mobile homes, with a significant inventory of seasonal housing. This somewhat older market has a median age of 46.0 years. Most households consist of married couples with no children living at home or singles who live alone. A higher-than-average proportion of residents is self-employed and work from home. The median household income is $47,311. Modest living and simple consumer tastes describe this market. The rural setting calls for more riding lawn mowers and satellite dishes. Lawn maintenance and gardening is a priority, and households own a plethora of tools and equipment. Many households own or lease a truck. Residents enjoy boating, hunting, fishing, snorkeling, canoeing, and listening to country music.