

VICTORIAN FISHERIES AUTHORITY

VICTORIAN FISHING
ANALYTICS REPORT



LICENCE HOLDER ANALYSIS

PROJECT OUTLINE

The Victorian Fisheries Authority has undertaken a data and analytics project aimed at the following outcomes:

- Investigating the trends and drivers in fluctuations of the numbers of recreational fishing licence sales over time;
- Estimate the participation rate of recreational fishing of the population in general, and children in particular;
- Understand the views and awareness of the Victorian public on the VFA's Target One Million program.



INSIGHTS: KEY OPPORTUNITIES

- The total licence days per year in 2017 reached its highest level in three years, reversing the downward trend of 2015 and 2016.
- The decline in fishing licences held over the past 5 years is just 2.6%.
- January is the most popular time of year for both casual new and new fishing.
- Easter has the highest annual spike outside the January holiday period.
- The introduction of the Grand Final Friday Public Holiday has seen the fishing season start a month earlier than has traditionally been the case.
- Licences have declined amongst those 18 - 35, remained steady until 50, and increased amongst those over 50.
- 3-year licences are on track to become the most popular category of fishing licence, experiencing sharp growth since 2013.
- 3-day licences last year overtook 28-day licences as the most popular option for short-term fishing on all public holiday periods for the first time.
- Last year (Jan-Dec 2017) online sales accounted for 70% of all licence transactions.

INSIGHTS: KEY CONSIDERATIONS

- The biggest decline in licences held is found among 18-24-year-olds (-13%), with the drop off rate among this age group double the next grouping of 25-34-year-olds (-6%).
- 1-year licences experienced a significant decrease late 2013 with close to one-third of this category lost between December 2013 and December 2016.
- Major decrease in the number of fishers holding 28-day licences from June 2016 to June 2017 following the introduction of 3-day licence on 1 July, 2016.
- Record rainfall and extreme weather events in September, October and November 2016 significantly impacted the number of Victorians fishing in this period, which eliminated the traditional Spring bounce. Victorians did not resume fishing in significant numbers until January 2017.
- Fishing remains a heavily male dominated recreation, with minimal fluctuation in the male (80%) / female (20%) split since 2013.
- Annual interest in fishing is relatively low around the period the VFA currently holds the 'Vic Fish Kids Program' and its 'Gone Fishing Day'.



MEET DAVE: THE 'TYPICAL' VICTORIAN ANGLER

Gender (mode)	Male
Age (median)	37
Name (mode)	David
Licence type (mode)	1 year
Renewal period (mode)	January
Location (mode)	Traralgon
Estimated income (median family income)	\$1663 a week

LICENCE DATA AND TRENDS

TOTAL LICENCE SALES BY YEAR

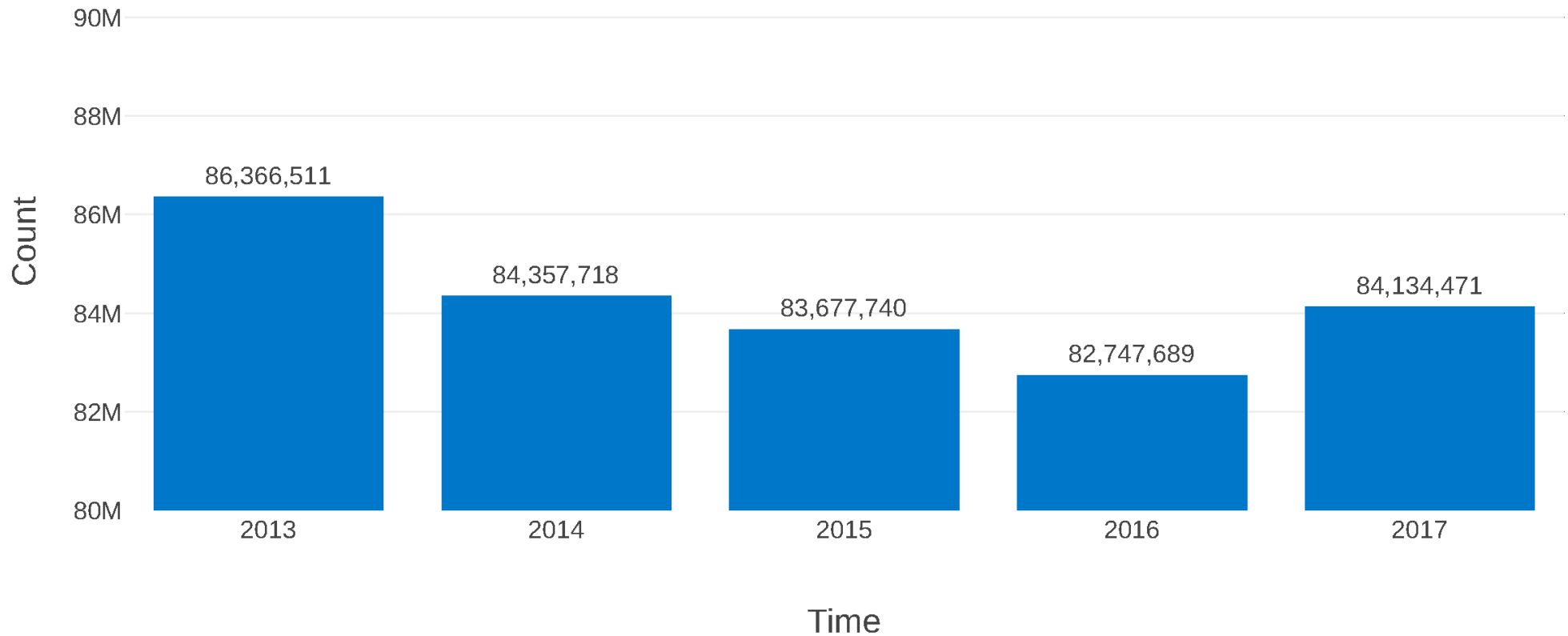
- Analysis of Victorian recreational fishing licence sales provides an annual benchmark of the combined sales of 3-year licences, 1-year licences, 28-day licences, 3-day licences and 2-day licences.

Year	Cost	Number
2010	\$5,823,235	261,422
2011	\$6,458,490	299,395
2012	\$6,655,330	304,876
2013	\$6,538,080	304,579
2014	\$6,363,498	294,800
2015	\$6,352,304	285,951
2016	\$7,239,473	264,491
2017	\$8,308,622	265,544

- This data implies there has been a 12.7% decline in the number of people using fishing licences since 2013.
- However, using licence sales as the sole measure of fishing trends can prove misleading as the same value is placed on the purchase of a 3-day licence and the purchase of a 3-year licence.
- To allow a detailed comparison of trends in fishing licence sales the most accurate measure is analysing total licence days per year, rather than total licence sales. Aggregating the licences held by day removes the variance of licence type from the equation.
- Through analysing total licence days per year, the decline in fishing licences held during this period is 2.6%, rather than 12.7%.

TOTAL LICENCE DAYS BY YEAR

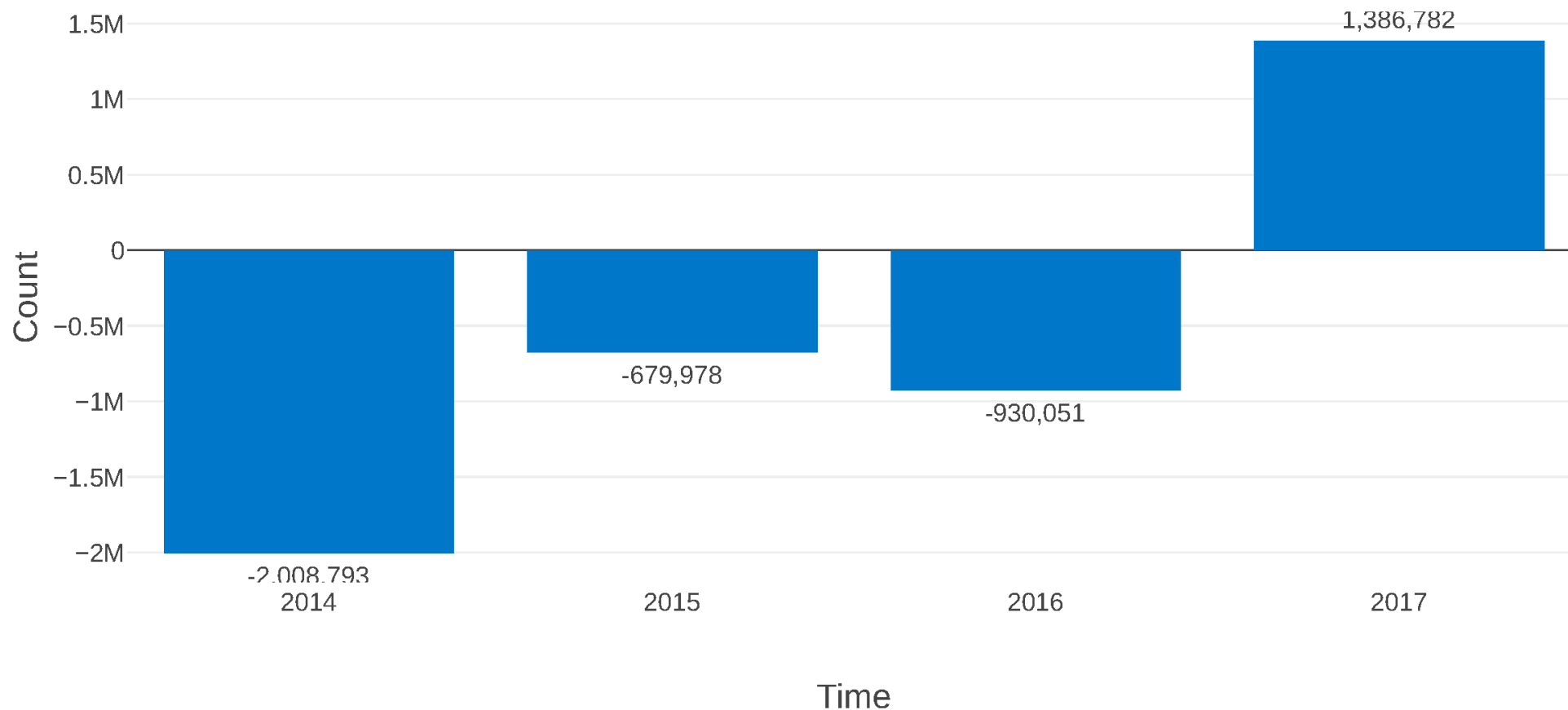
Licence-Days per Year



- The total licence days per year in 2017 reached its highest level in three years, reversing the downward trend since 2013.
- Total licence days were up to 84.13 million in 2017, returning to a similar level of 2014 where 84.35 million licences were held.

CHANGE PER YEAR

Licence-Days per Year - Annual Change



2017 reversed the four-year decline in annual growth of total licence days, which commenced dropping in 2014 when total licence days fell by over 2 million.



VFA LICENCE TRENDS BY CATEGORY

ALL LICENCES BY DAY

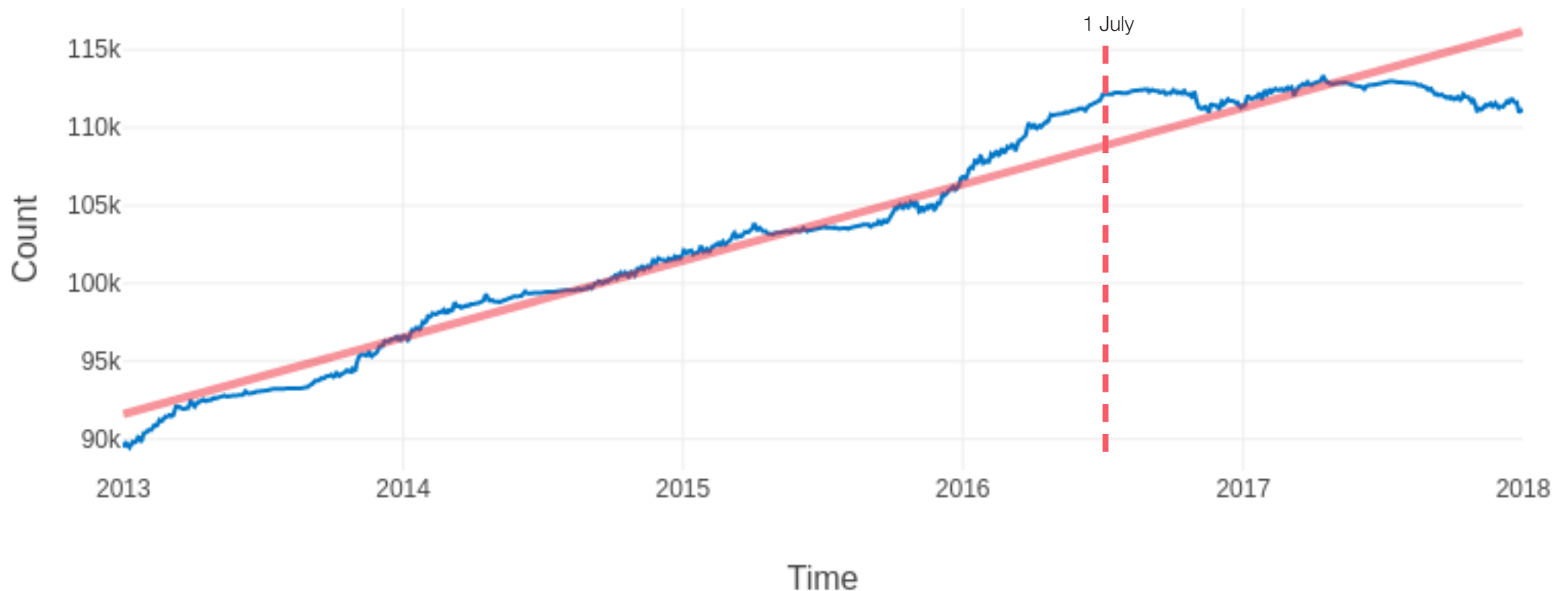
Valid Fishing Licences per Day



- Overall fishing licences held by Victorians experienced growth in 2017 following four years of decline which commenced in late 2013.
- Record rainfall and extreme weather events in September, October and November 2016 significantly impacted the number of Victorians fishing in this period, which eliminated the traditional Spring bounce. Victorians did not resume fishing in significant numbers until January 2017.
- The introduction of three-day licences has proven popular, with it replacing 28-day licences as the short-term category of choice for fishers.
- The number of three-year licences held by Victorians continues to grow strongly, as fishers move to the longer-term preference over the one-year category.
- Licence fee changes which came into effect on 1 July, 2016 do not appear to have impacted on the number of licences held by Victorians, with more Victorians holding licences in 2017 than in the 12 months prior to the fee changes.

3-YEAR LICENCE TRENDS

Valid Fishing Licences per Day - 3 Year Licences



- 3-year licences are on track to become the most popular category of fishing licence, experiencing sharp growth since 2013.
- 3-year licences experienced their biggest period of growth following the announcement in March 2016 of pricing changes to be implemented on 1 July, 2016. Fishers appeared to purchase the long-term commitment before the changes came into effect.
- The number of 3-year licences held remained consistent following the changes.

1-YEAR LICENCE TRENDS

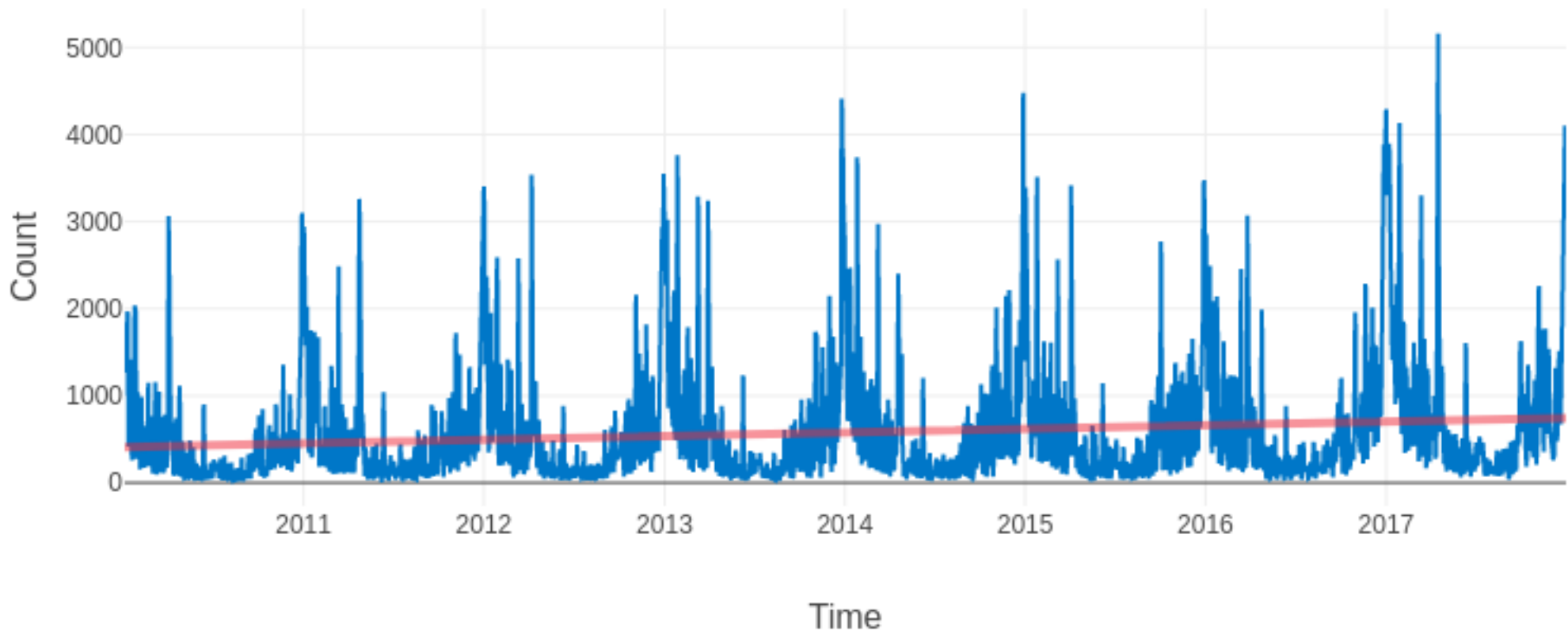
Valid Fishing Licences per Day - 1 Year Licences



- 1-year licences experienced a significant decrease late 2013 with close to one-third of this category lost between December 2013 and December 2016.
- This sharp drop contrasts with a sharp rise in three-year licences held during the same period.
- 2017 saw the first annual increase in one-year licences held since 2011.

2 & 3-DAY LICENCE TRENDS

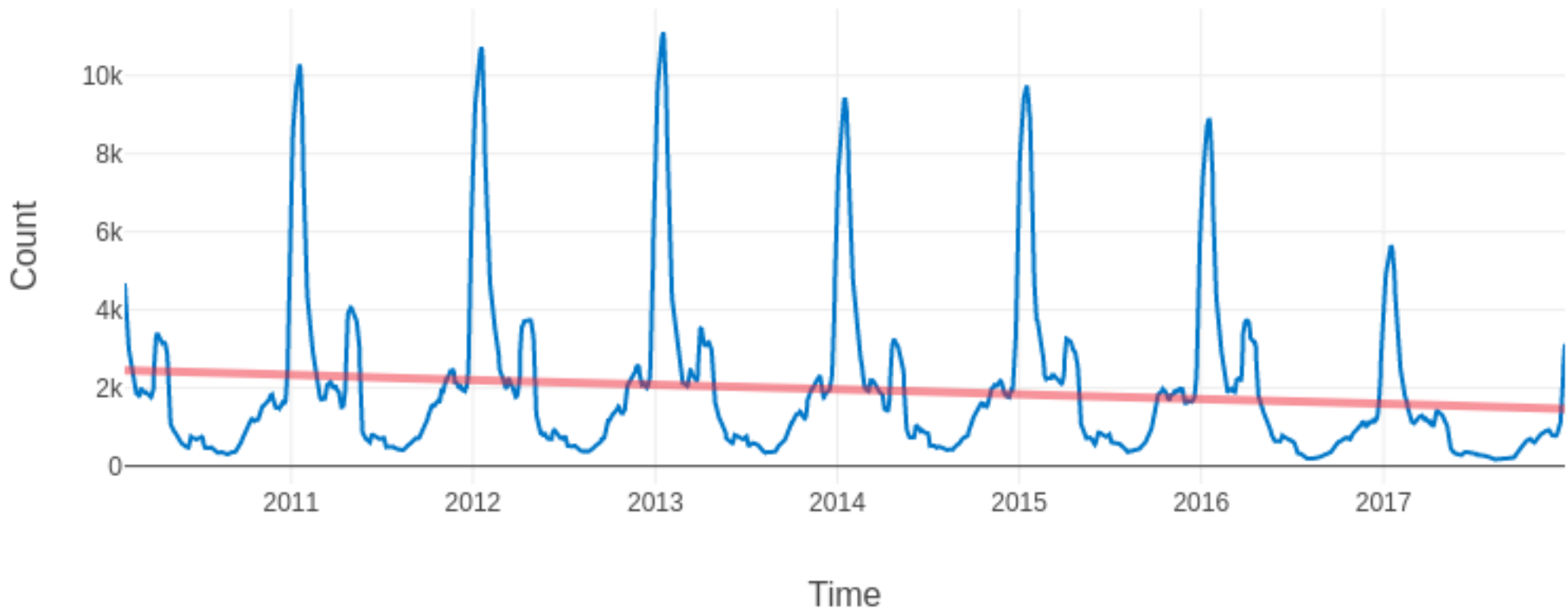
Valid Fishing Licences per Day - 2 & 3 Day Licences



- This category has experienced strong growth since two-day licences were extended to three-day licences.
- In 2017 3-day licences overtook 28-day licences as the most popular option for short-term fishing on all public holiday periods for the first time.

28-DAY LICENCE TRENDS

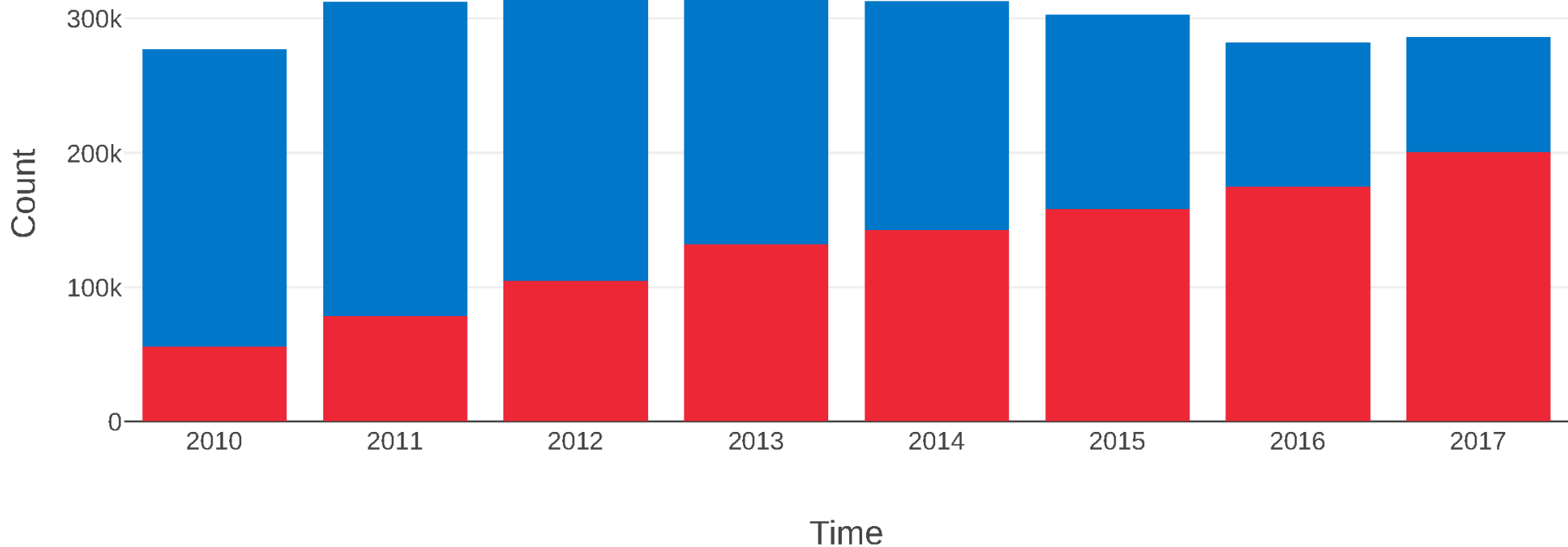
Valid Fishing Licences per Day - 28 Day Licences



- There was a major decrease in the number of fishers holding 28-day licences from June 2016 to June 2017 following the introduction of 3-day licence on 1 July, 2016.
- Public holidays were particularly impacted by the introduction the new category. For example, 2017 saw a sharp decrease in fishers holding a 28-day licence over the Easter and Queens Birthday period, contrasting against a sharp increase in 3-day licences held during the same periods.
- Victoria's record rainfall and extreme weather events in Spring 2016 also likely contributed to the sharp decrease during that period.

LICENCE SALES

Licence Sales - Online v Offline



Licence Transactions	2016	%	2017	%
Retail	107,527	38%	85,356	30%
Online	174,662	62%	200,668	70%
Total	282,189		286,024	

- Online transactions proved immediately popular with licence holders.
- Last year (Jan-Dec 2017) online sales accounted for 70% of all licence transactions.

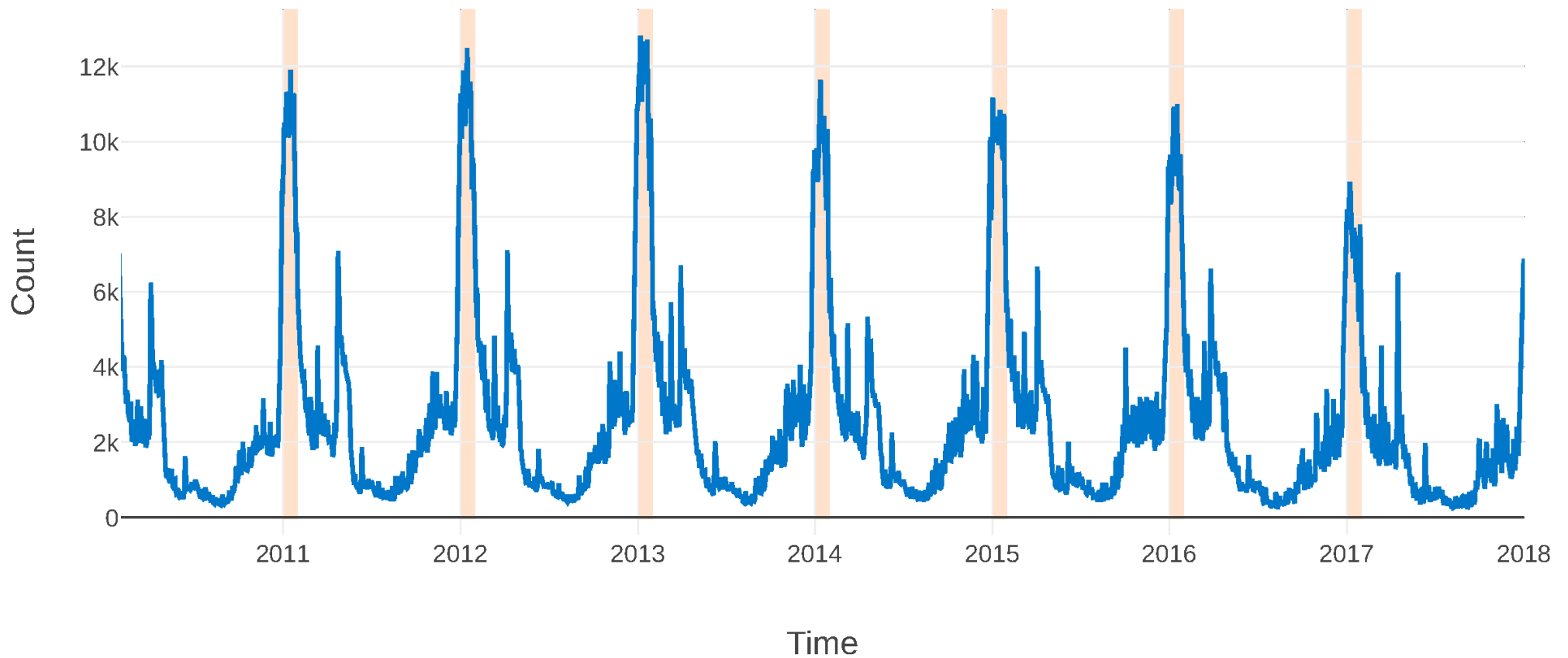


VFA LICENCE TRENDS BY ANNUAL EVENTS

Trends for annual events have been analysed using data from the 28-day and 3-day licence categories.

JANUARY TRENDS

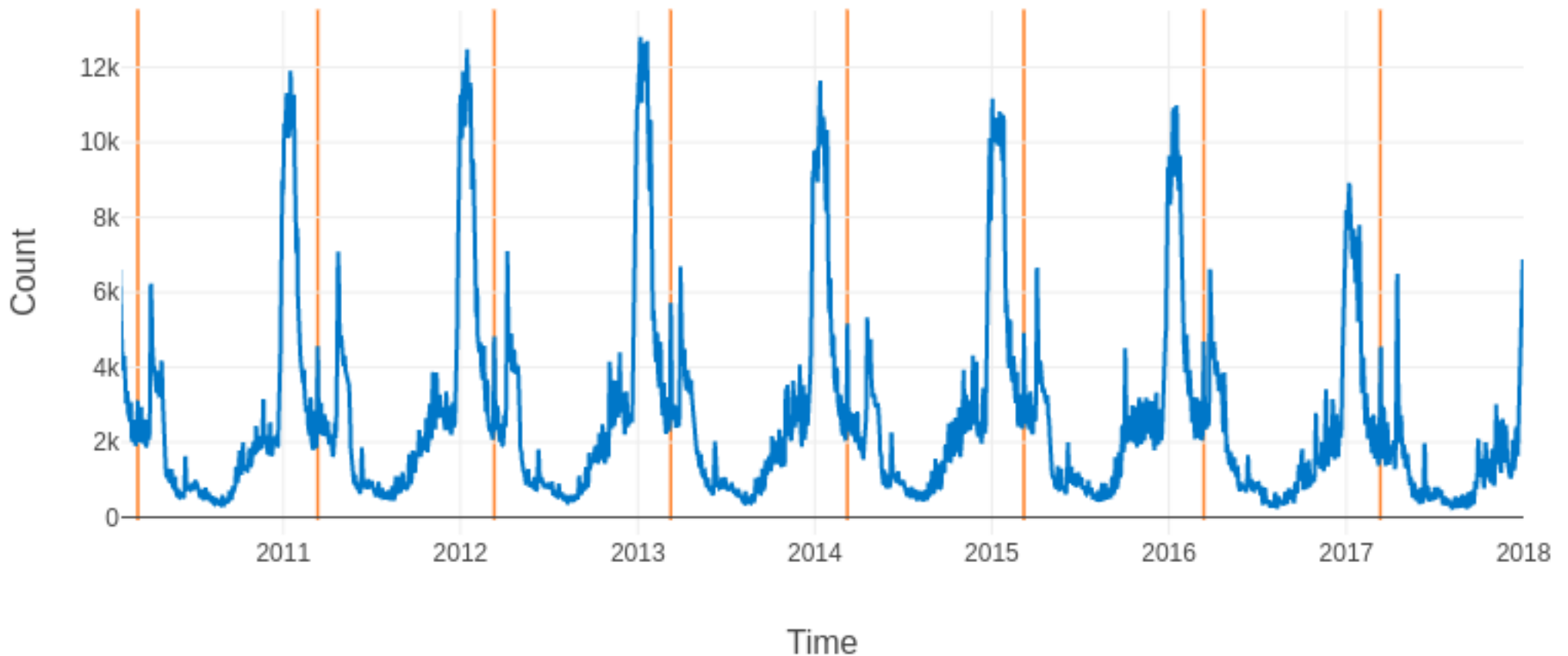
Valid Short-Term Fishing Licences per Day - January



- Most popular time of year for both casual and new fishing.
- However, since 2013, January has experienced a downward trend of short-term licences being held.

LABOUR DAY TRENDS

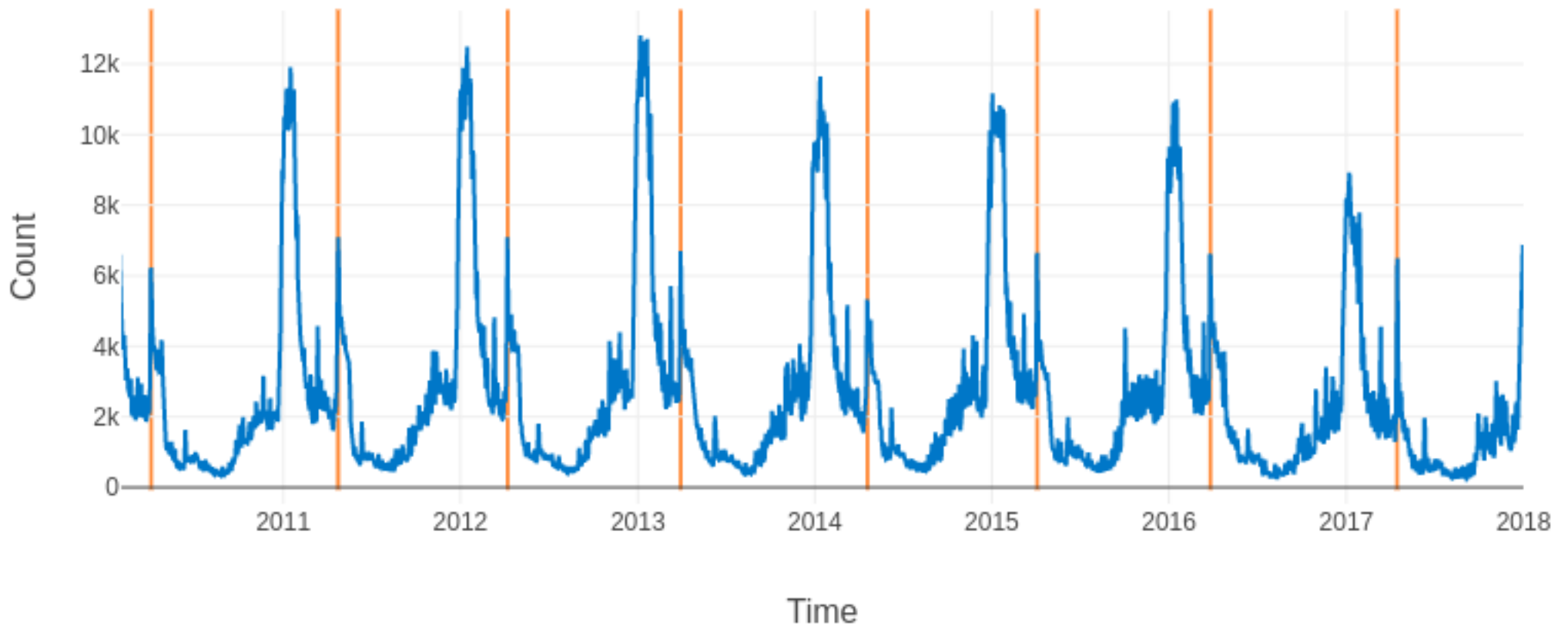
Valid Short-Term Fishing Licences per Day - Labour Day



- Behind Easter as the second highest annual spike for licences held outside the January holiday period.
- The peak does not significantly fluctuate year-on-year suggesting those who fish on Labour Day weekend likely do so as an annual tradition.

EASTER HOLIDAY TRENDS

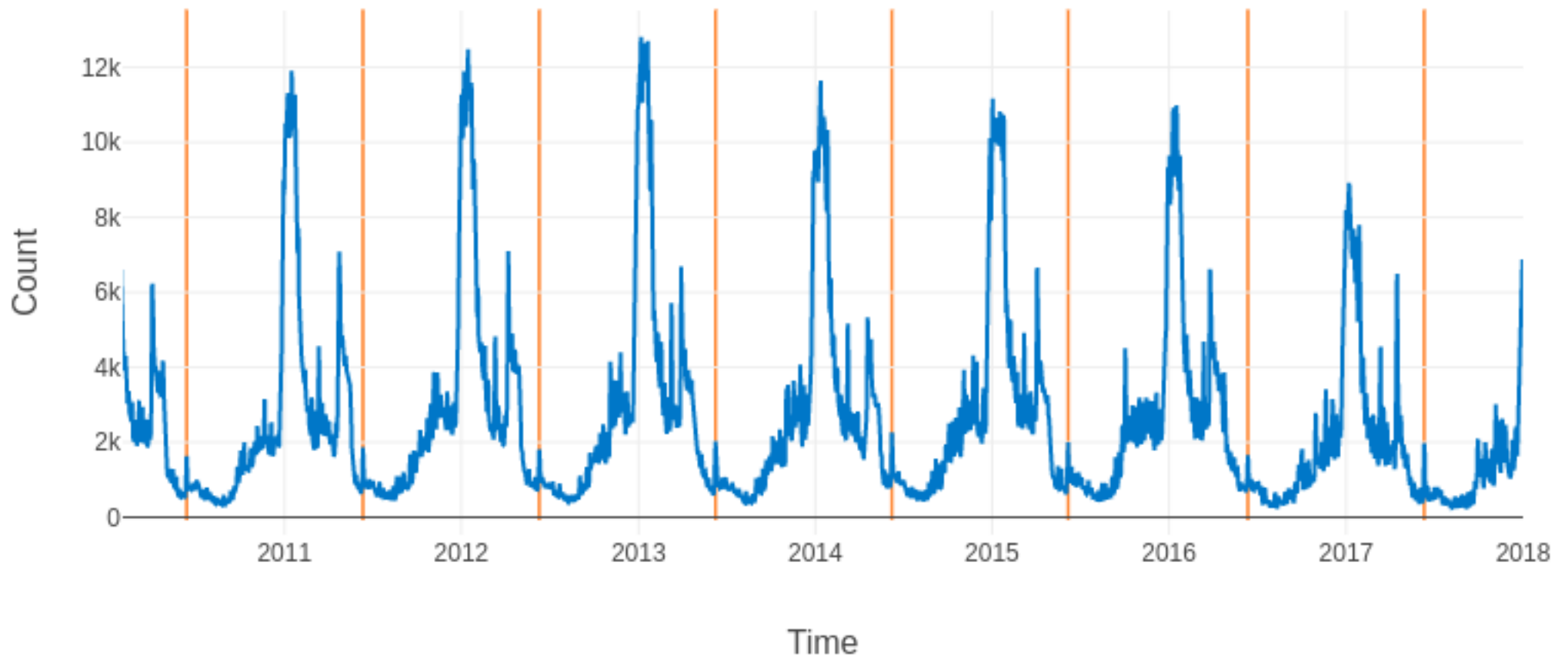
Valid Short-Term Fishing Licences per Day - Easter



- Highest annual spike outside the January holiday period.
- The peak does not significantly fluctuate year-on-year suggesting those who fish across Easter likely do so as an annual tradition.
- Licence holders are increasingly holding a three-day fishing licence for this period rather than the 28-day licence.

QUEENS BIRTHDAY TRENDS

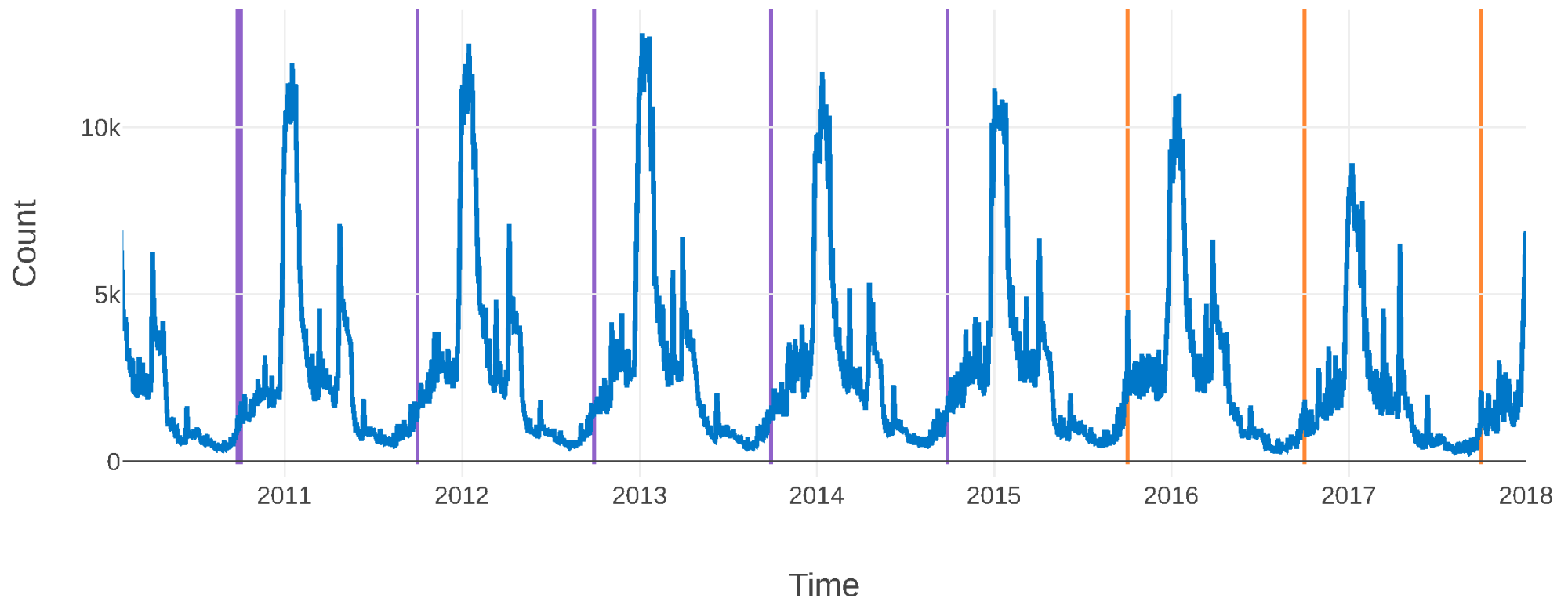
Valid Short-Term Fishing Licences per Day - Queen's Birthday



- Steady annual spike that does not significantly fluctuate year-on-year.
- Those who fish on Queen's Birthday weekend are likely the same people annually who do it as an annual tradition.

GRAND FINAL FRIDAY TRENDS

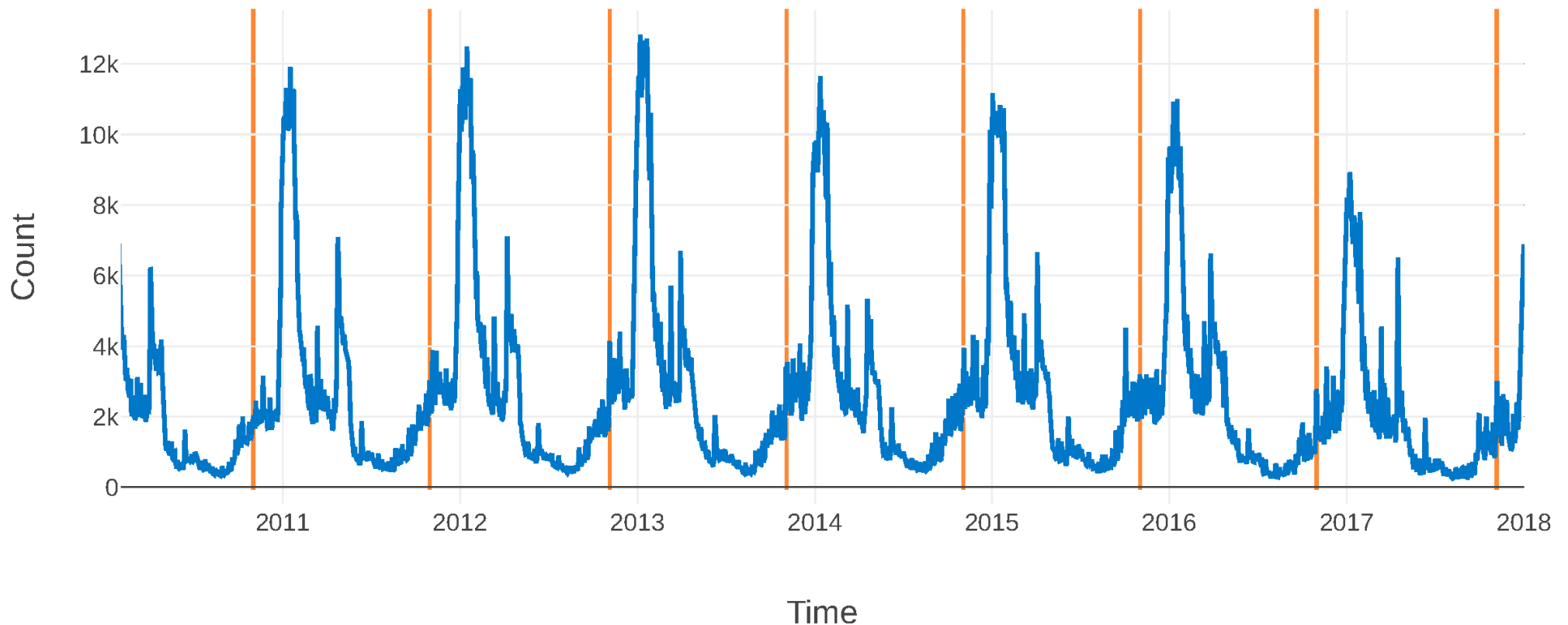
Valid Short-Term Fishing Licences per Day - Grand Final Friday Public Holiday



- Since the introduction of the Grand Final Friday public holiday the fishing season has started a month earlier than has traditionally been the case.
- For the past three years this weekend has seen a higher number of licences held than for the Melbourne Cup Carnival period.
- More data will need to be included for detailed conclusions to be reached, however the level of Victorian interest in the competing Grand Final teams could impact on the number of additional fishing sales.

MELBOURNE CUP CARNIVAL TRENDS

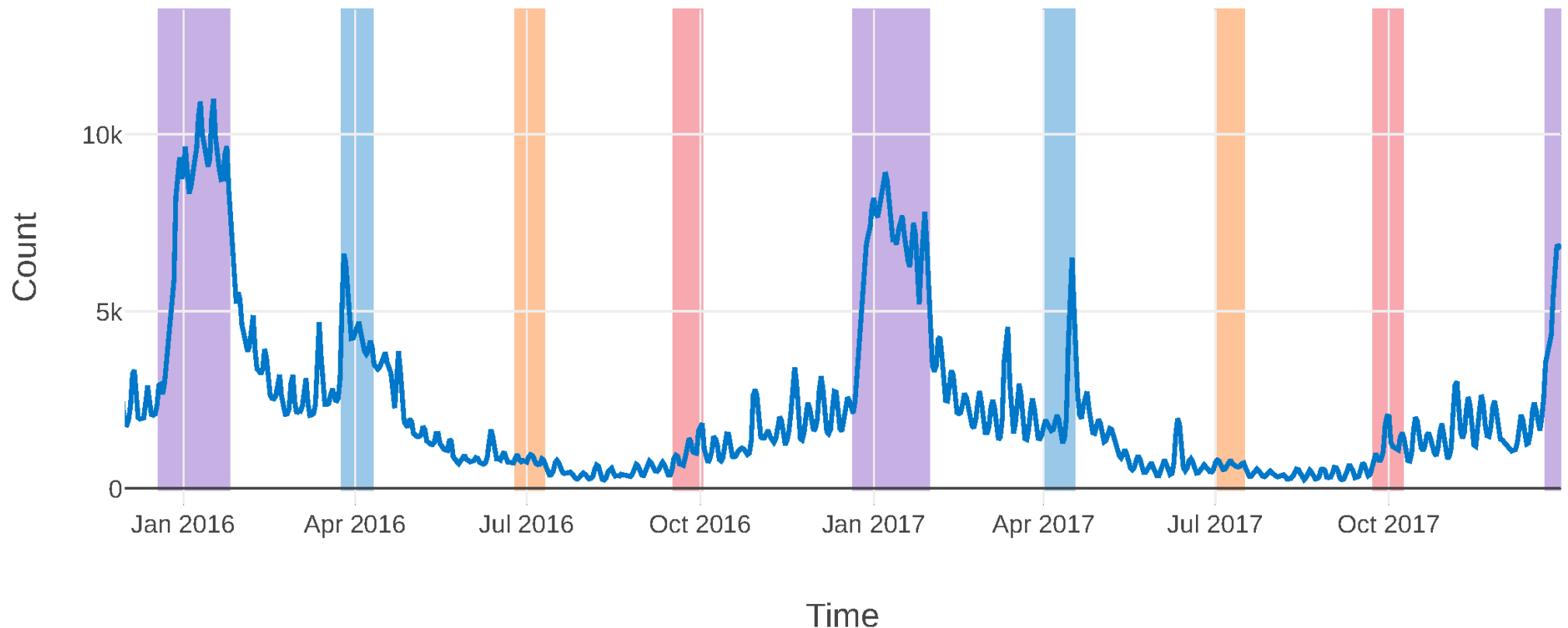
Valid Short-Term Fishing Licences per Day - Melbourne Cup Day



- Traditionally the commencement of the season for fishing as this has been the first spike since Queens Birthday and starts the growth in sales through to the summer holidays.
- Grand Final Friday weekend has now overtaken the Melbourne Cup period as the commencement of the season.

VICTORIAN SCHOOL HOLIDAY TRENDS

Valid Short-Term Fishing Licences per Day - School Holidays

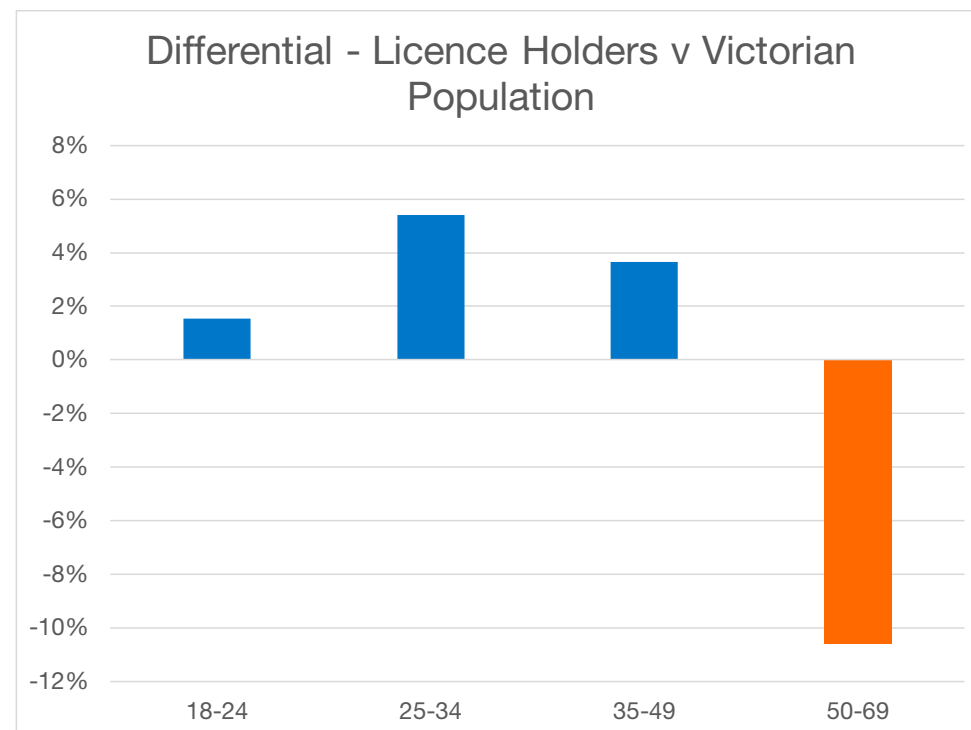
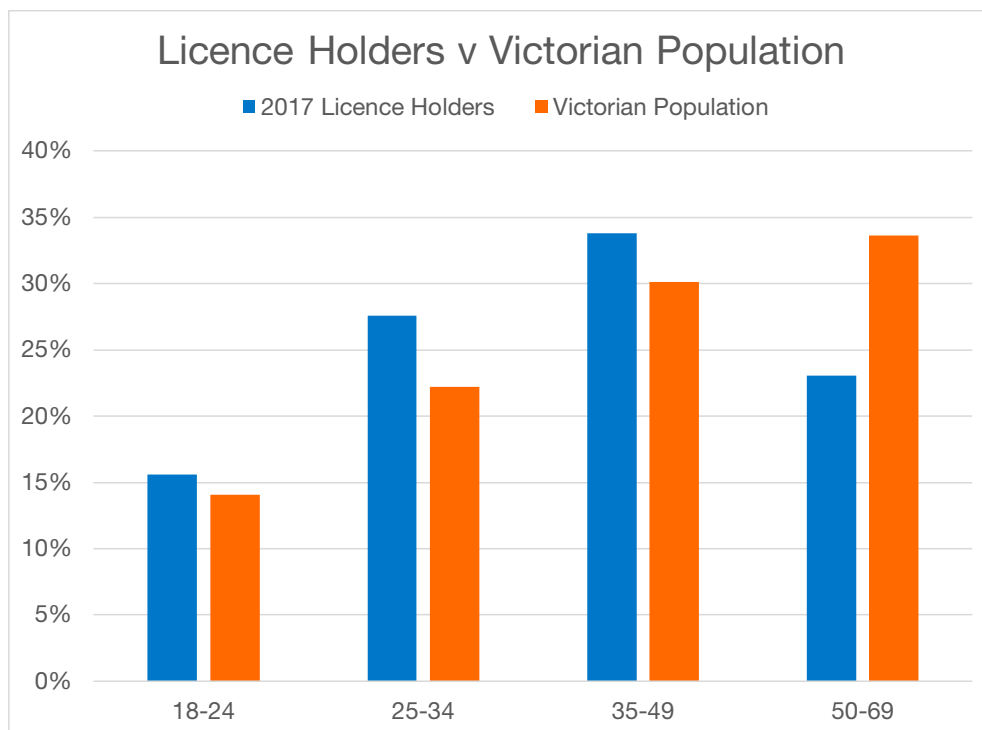


- The summer and first-term holidays are when families are overwhelmingly going fishing, with the number of licences held 3 to 4 times higher than the amount held during the winter and third-term holidays.
- Programs targeted at getting kids into fishing should be considered during January and first-term holiday programs.



LICENCE HOLDER DEMOGRAPHICS

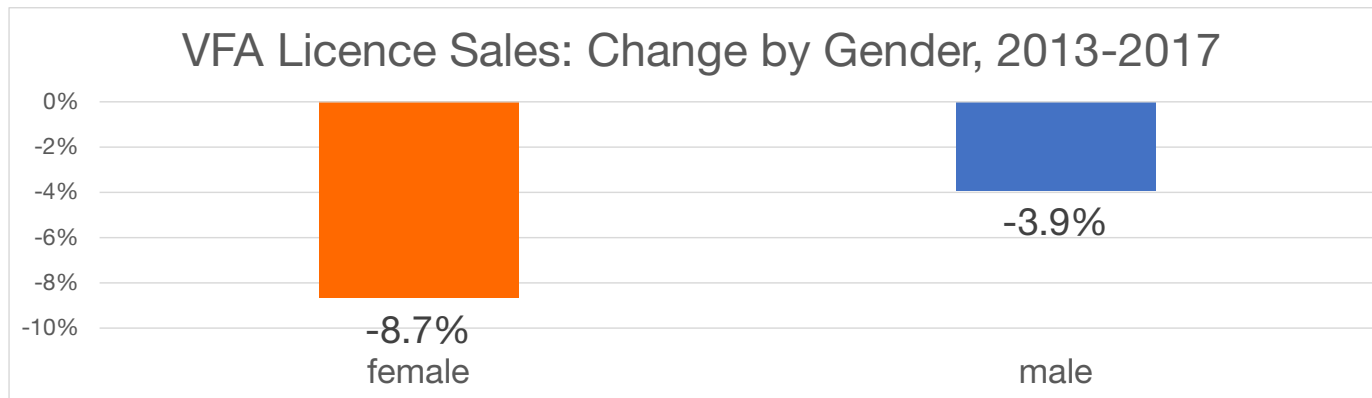
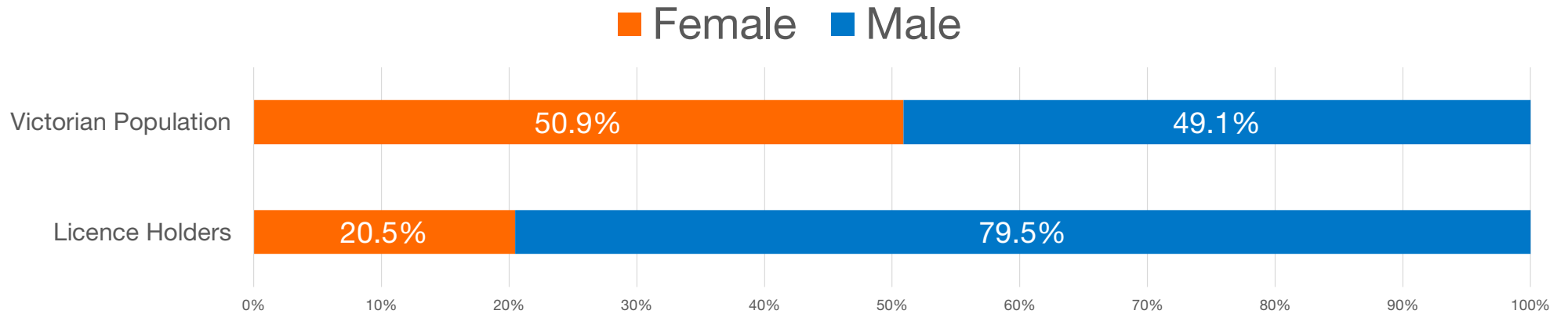
AGE



Age Range	2013	2017	Change	% Change
18-24	50,342	43,593	-6749	-13%
25-34	82,415	77,154	-5261	-6%
35-49	96,795	94,509	-2286	-2%
50-69	61,383	64,472	3089	5%

- The biggest decline in licences held is found among 18-24-year-olds (-13%), with the drop off rate among this age group double the next grouping of 25-34-year-olds (-6%).
- 'Millennials' are responsible for the overwhelming decline in licences held in Victoria over the past five years.
- Licences have remained steady for the population over 35, with an increase in popularity found for those over 50.

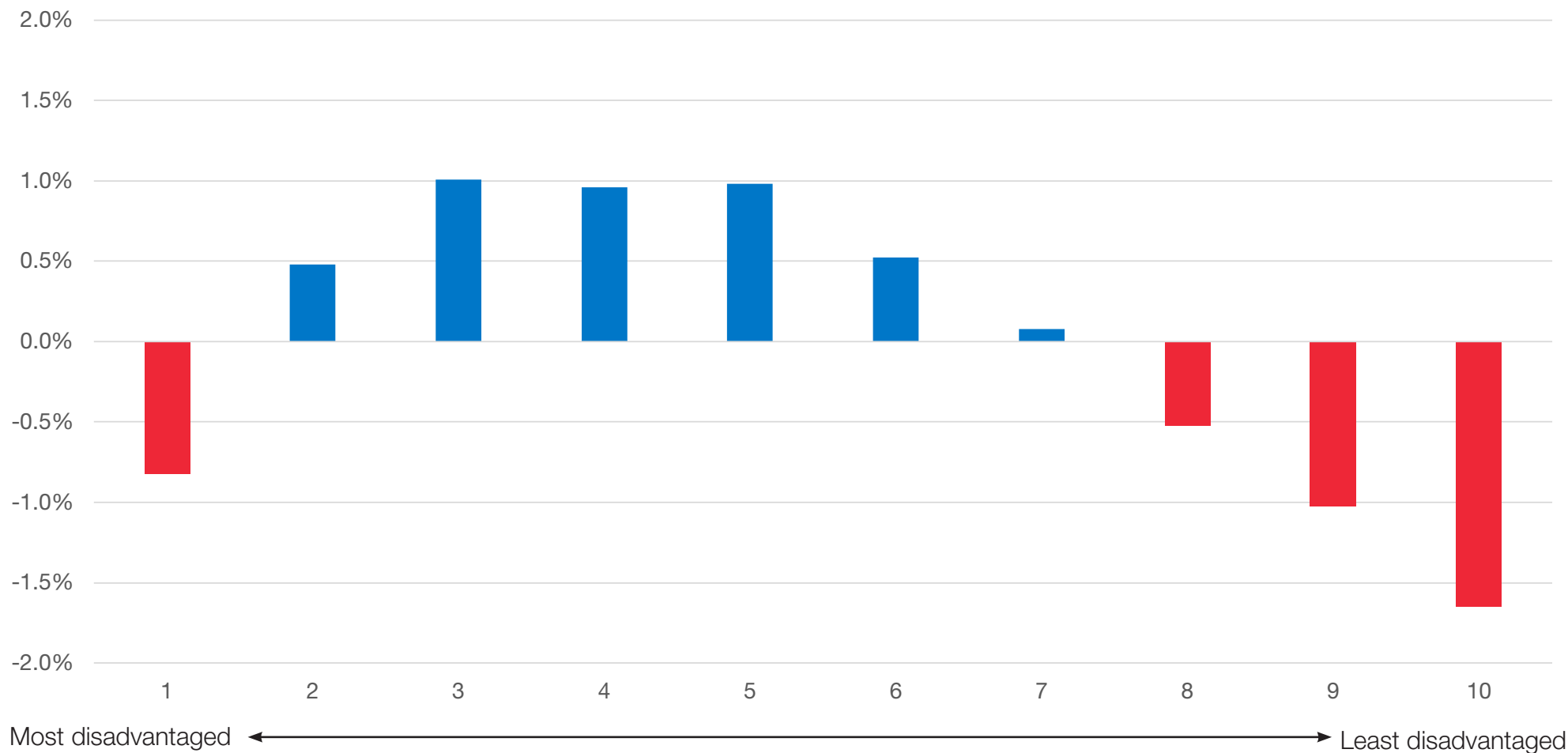
GENDER




- Fishing remains a heavily male dominated recreation, with minimal fluctuation in the male/female split since 2013.
- By way of comparison:
 - Females made up 30% of all AFL participation in 2017
 - Females made up 27% of all cricket participation in 2017
- There has also been an 8.5% drop in the total number of females purchasing licences since 2013, compared to a nearly 4% drop with males.

SOCIO-ECONOMIC PROFILE

2017 Valid Fishing Licences v SEIFA IRSD by Decile



- The Socio-Economic Indexes for Areas (SEIFA) is developed by the ABS and ranks areas in Australia according to relative socio-economic advantage and disadvantage. The indexes are based on information from the five-yearly Census.
- Licence holders are more likely to be low-to-middle income earners who can typically afford to take holidays by the Victorian coast.
- Those who can regularly afford to go on holidays overseas, or who cannot afford holidays at all, are less likely to fish in Victoria.

The background of the slide is a blue-tinted photograph of a city skyline, likely New York City, featuring several prominent skyscrapers and a body of water in the foreground. The text is overlaid on this background.

LICENCE HOLDER LOCATION DATA

CITY VERSUS COUNTRY LICENCES HELD

Top 5 Regional Areas with Licences Held on 1 Jan, 2017

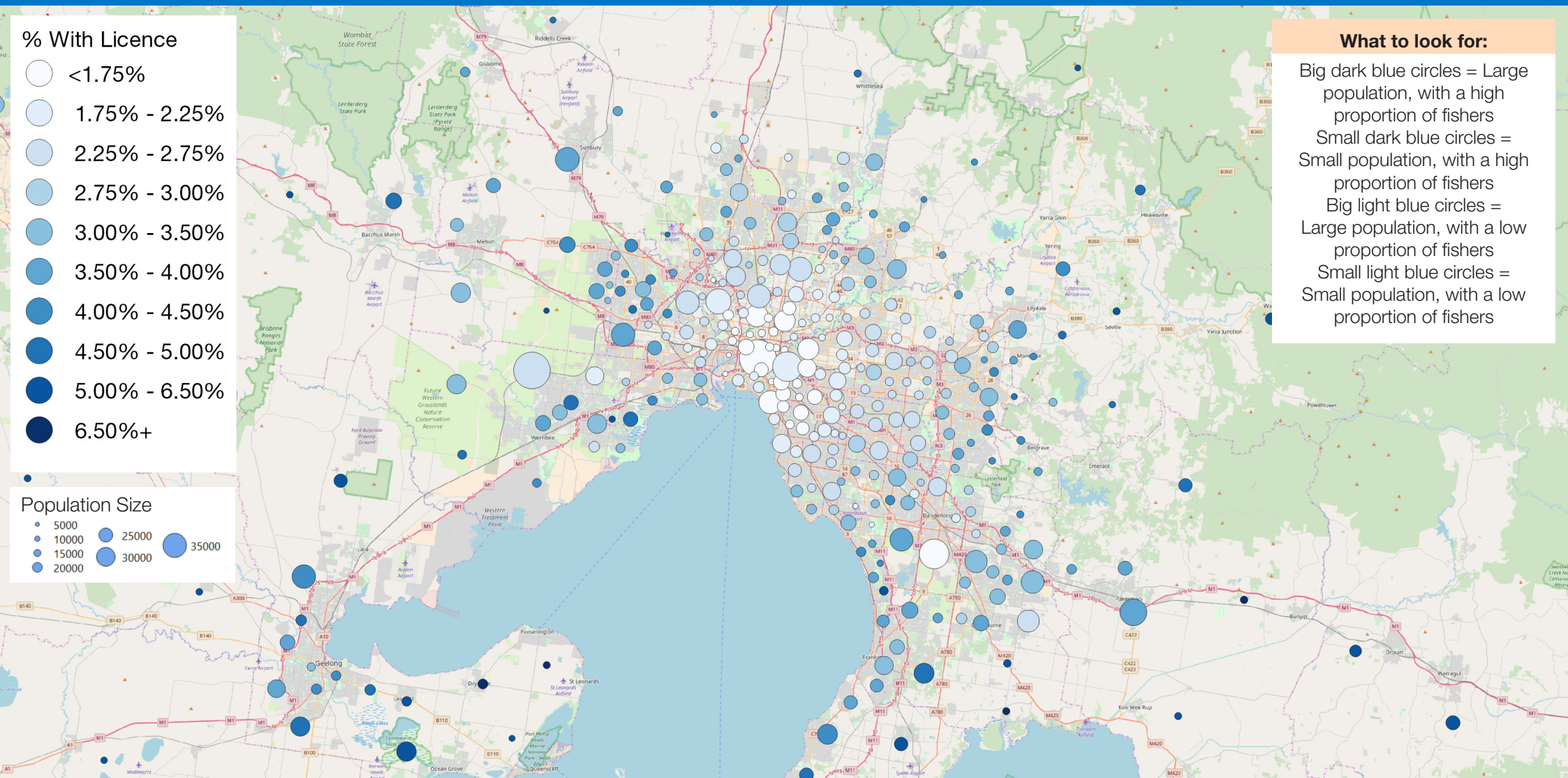
1. Geelong
2. Latrobe Valley
3. Grampians
4. South West Gippsland
5. Bellarine Peninsula

Top 5 Greater Melbourne Areas with Licences Held on 1 Jan, 2017

1. Wyndham
2. Mornington Peninsula
3. Brimbank
4. Whittlesea
5. Yarra Ranges

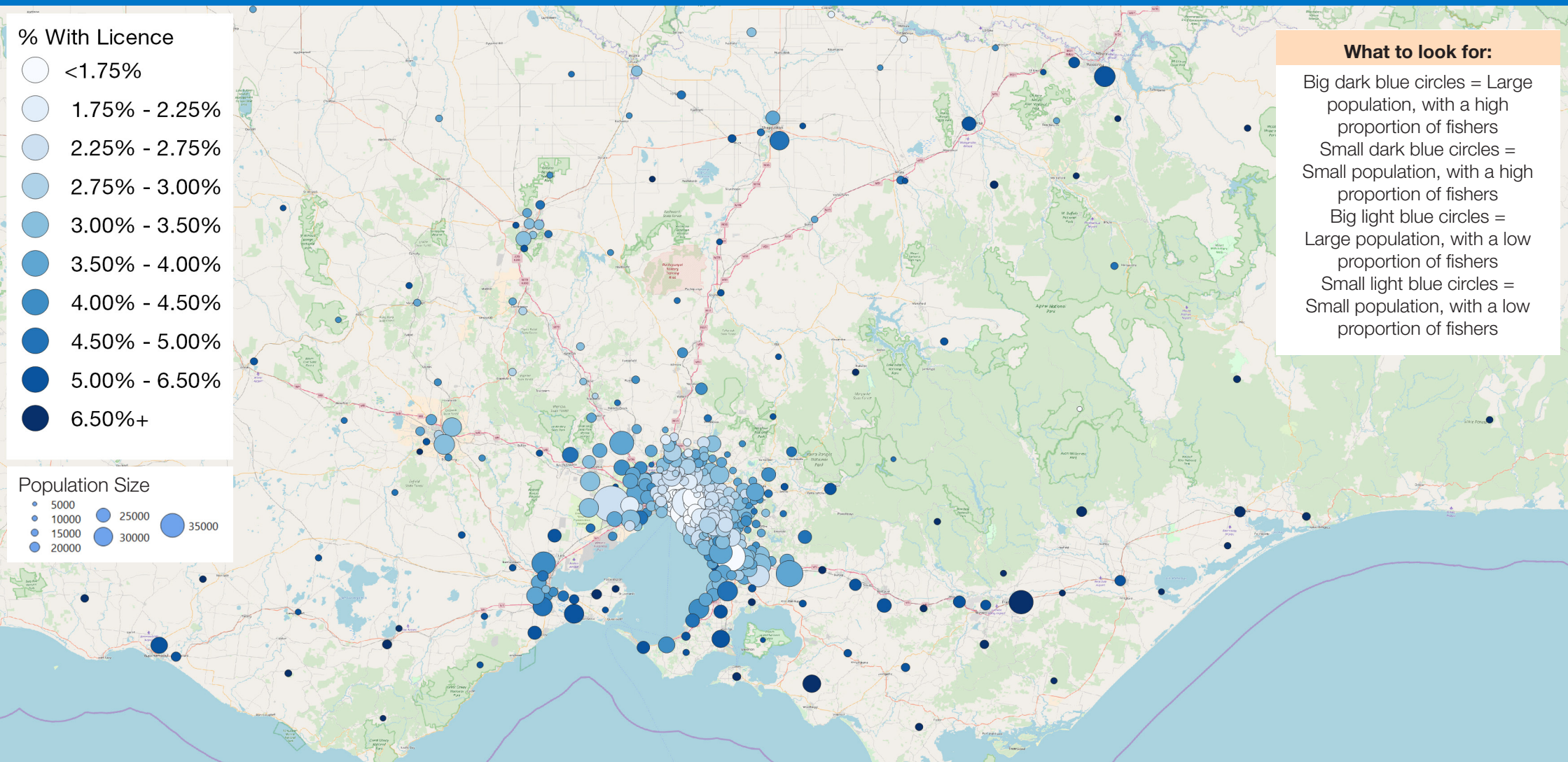
- Licences held in Greater Melbourne: 63% (85% of population).
- Licences held in Regional Victoria: 37% (15% of population).
- Regional Victoria, and in particular Gippsland and the Latrobe Valley is fishing licence holder heartland.
- Allowing for population weighting, the Top 14 areas (via SA3) of Victoria to hold fishing licences are in regional Victoria.
- 6 of the bottom 7 areas of Victoria to hold a fishing licence are Melbourne's inner city.

GREATER MELBOURNE LICENCE HOLDERS



- The outer suburban ring of Melbourne has strong solid representation from Wyndham to Whittlesea across to the Yarra Ranges and Frankston.
- Coverage closely aligns with the Socio-Economic Indexes: the inner north, east and south east have large populations with low numbers of licence holders, while areas of significant disadvantage including the west and the south east have higher numbers of licence holders.

REGIONAL VICTORIA LICENCES HOLDERS



- Regional Victoria is dominated by towns – small and large – with strong numbers of licence holders.
- Bendigo and Ballarat has weaker numbers than the rest of regional Victoria.

**TARGET 1
MILLION CASE
STUDIES**

LAKE TOOLONDO

- In January 2015, 5000-megalitres of water was transferred to Toolondo Reservoir to protect the fishery. This initiative preserved and extended the fishery for at least 12 months creating some exceptional trout fishing opportunities.

HAZELWOOD PONDAGE

- The Target One Million plan committed to stocking barramundi into Hazelwood Pondage in the Latrobe Valley. Thousands were stocked, grew very well, and the fishery opened to anglers in December 2016.
- In August 2015, boating restrictions at Blue Rock Lake, near Moe, were relaxed to allow the use of larger vessels

BEECHWORTH TROUT COD FISHERY

- In January 2015, 5000-megalitres of water was transferred to Toolondo Reservoir to protect the fishery. This initiative preserved and extended the fishery for at least 12 months creating some exceptional trout fishing opportunities.

- Solid increase in valid licence holders year-on-year since the introduction of Target 1 Million initiatives particularly Lake Toolondo and Beechworth.
- Morwell region already experiences some of the highest rates of fishing licences in Victoria so growth in percentage terms is lower.

Location	2015	2016	2017	Change 15-17	Change 16-17
Toolondo	5934	5505	6033	1.7%	9.6%
Morwell	14,297	14,416	14,531	1.6%	0.8%
Beechworth	8819	9035	9432	7.0%	4.4%
Victoria	225,855	233,590	240,679	6.6%	3.0%

A person wearing a blue raincoat is shown from the chest up, holding a fishing rod. The person is looking down at the rod. The background is a solid blue color. The text "PARTICIPATION REPORT" is overlaid in white, bold, sans-serif capital letters.

PARTICIPATION REPORT

METHODOLOGY

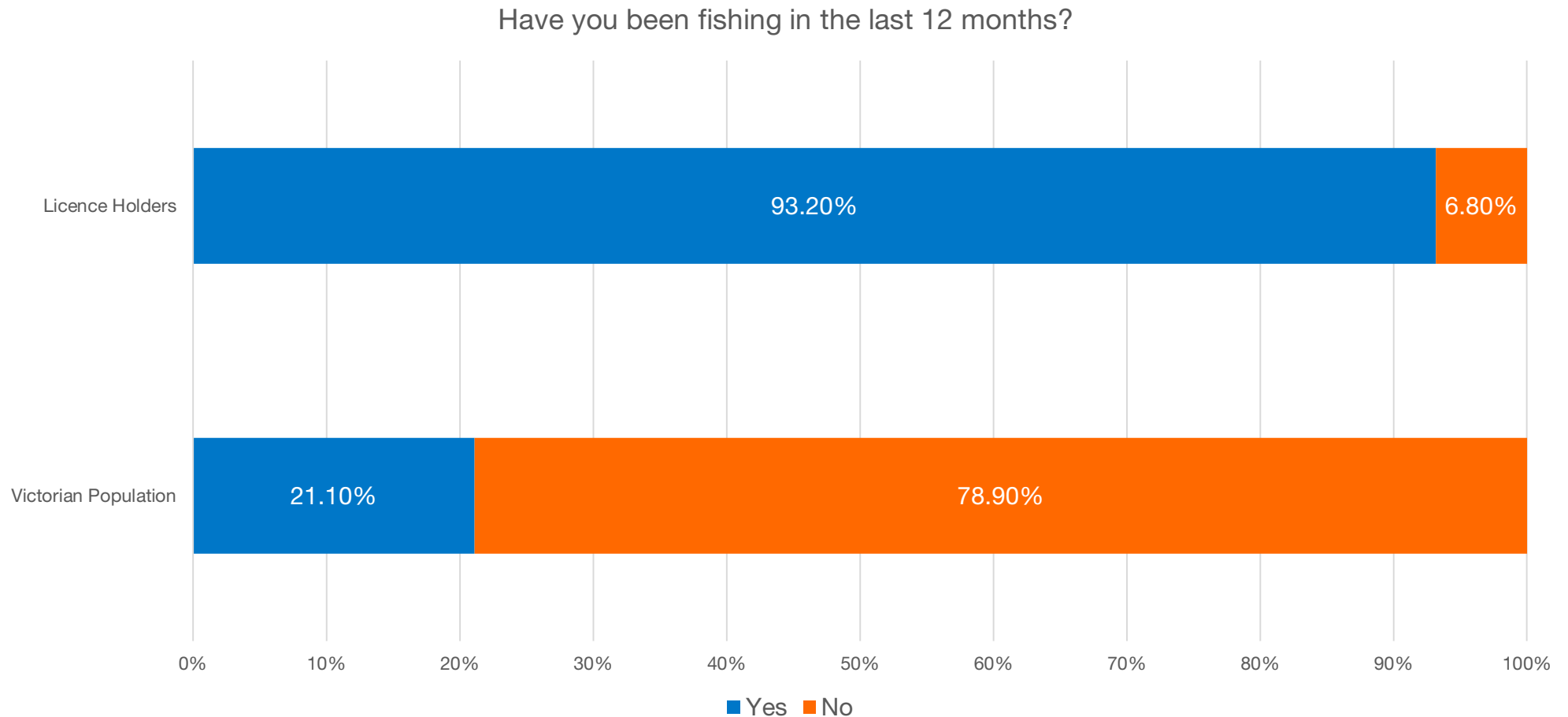
Licence Holders

- This study was conducted via touch-tone response automated phone survey conducted 28 March - 6 April 2018. Surveys are conducted between 17:30 and 20:00 on weekdays, and from 11:00 to 17:00 on Saturdays.
- The number of respondents was $n=1372$ giving a margin of sample error of 2.7%. Telephone numbers called were selected at random from those numbers provided by VFA.
- Following the completion of the surveys, the data was weighted by gender and age to reflect Fishing License holder demographic proportions

Victorian Public

- This study was conducted via two touch-tone response automated phone surveys conducted 28 March - 6 April 2018 and 24 -27 April. Surveys are conducted between 17:30 and 20:00 on weekdays, and from 11:00 to 17:00 on Saturdays.
- The number of respondents in the primary survey was $n=4,018$ giving a margin of sample error of 1.6%. The secondary survey targeted $n=1,021$ respondents giving a margin of sample error of 3.1%.
- This twin-survey methodology allows for a greater degree of accuracy regarding information pertaining to fishers and their children, by increasing their participation in the study - and thus the confidence we can place in their answers - while still providing an accurate assessment of the views of the Victorian population as a whole.
- Telephone numbers called were purchased as a random, geographically proportionate sample of Victoria. Following the completion of the surveys, the data was weighted by gender and age to reflect Victoria demographic proportions.

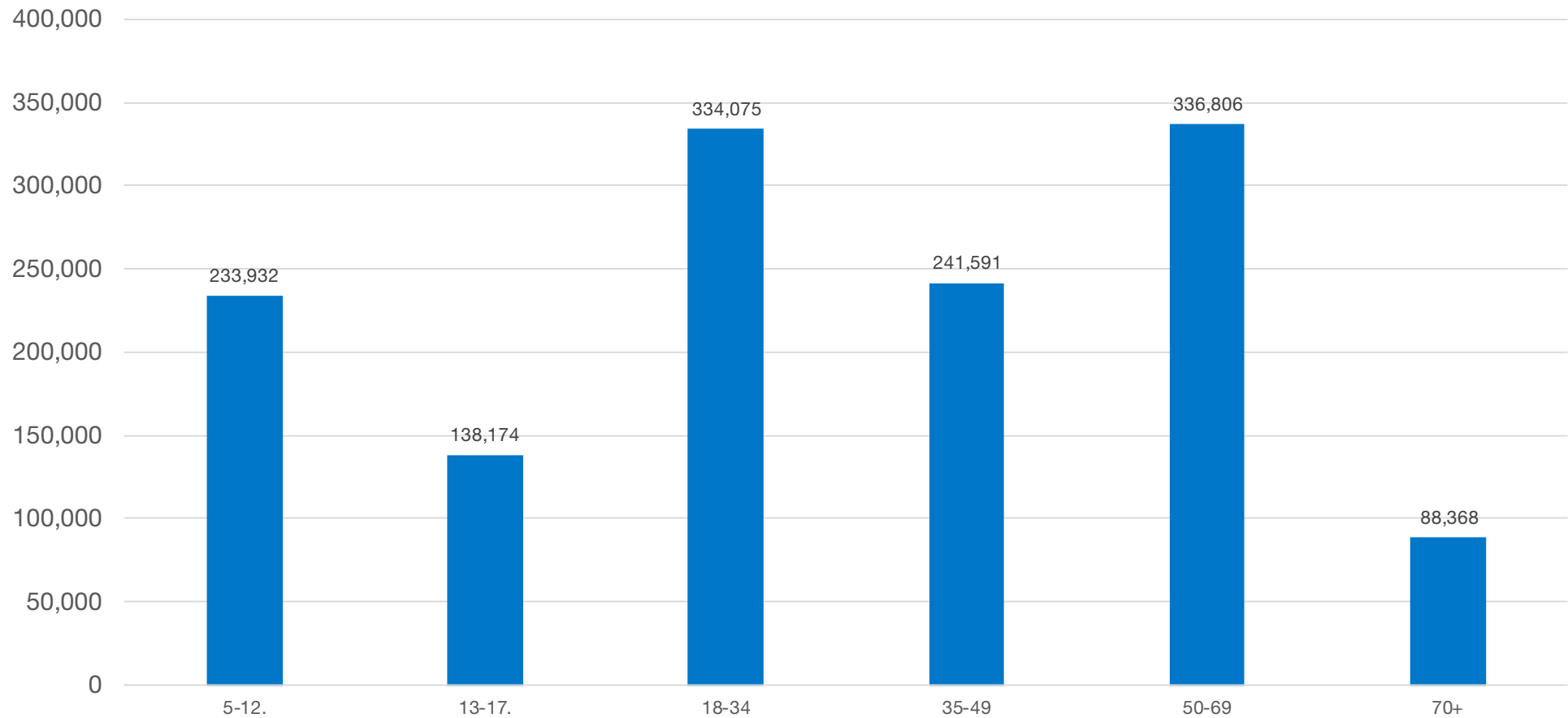
VICTORIA'S RECREATIONAL FISHING PARTICIPATION



- An estimated 1,000,841 adult Victorians recreationally fished in Victoria in the past 12 months.
- The represents a participation rate of 21.1% of Victorian adults.
- Unsurprisingly almost all licence holders reported that they have fished in the past 12 months.

VICTORIA'S RECREATIONAL FISHING PARTICIPATION

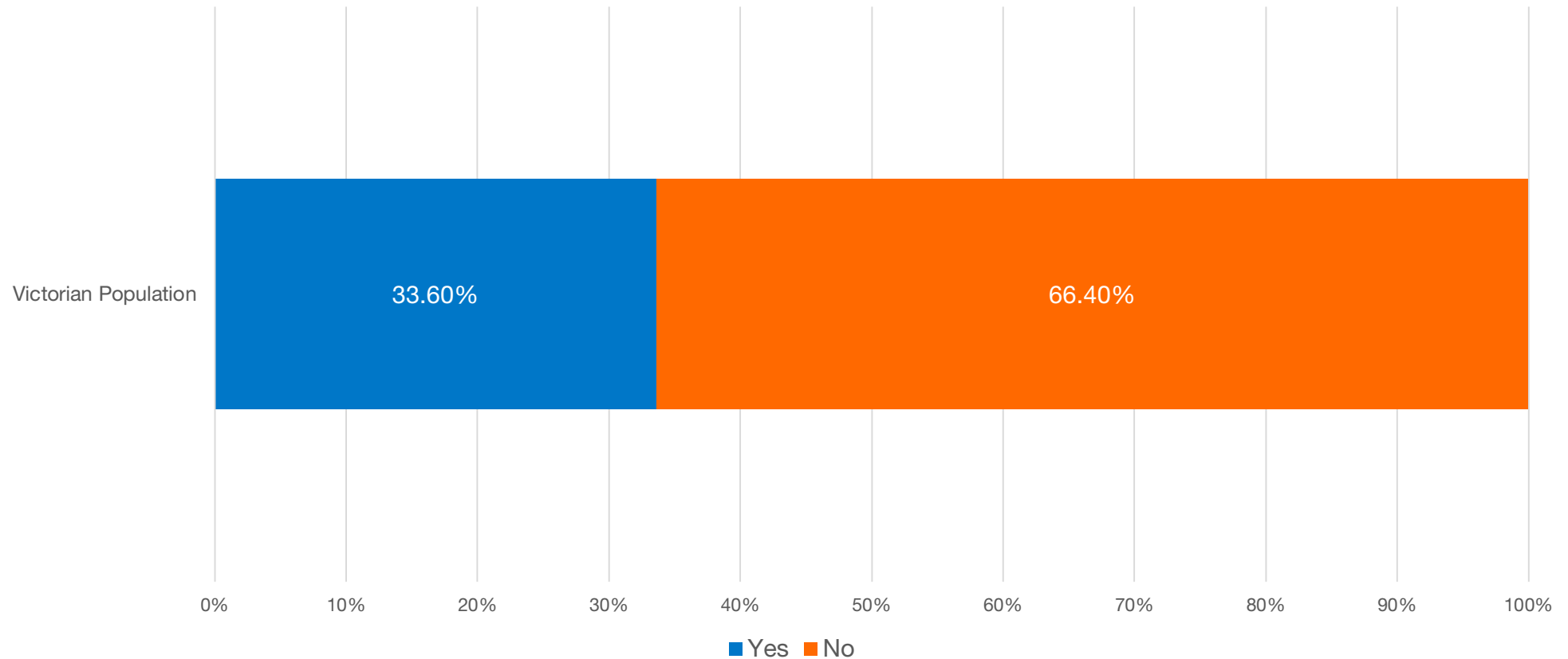
Estimated participation by age



- Fishing is most popular amongst Victorians aged 50-69, with 25% of Victorians in that age group recreationally fishing.
- Recreational fishing numbers are lowest amongst Victorians aged over 70

VICTORIAN'S FISHING OVER THE PAST DECADE

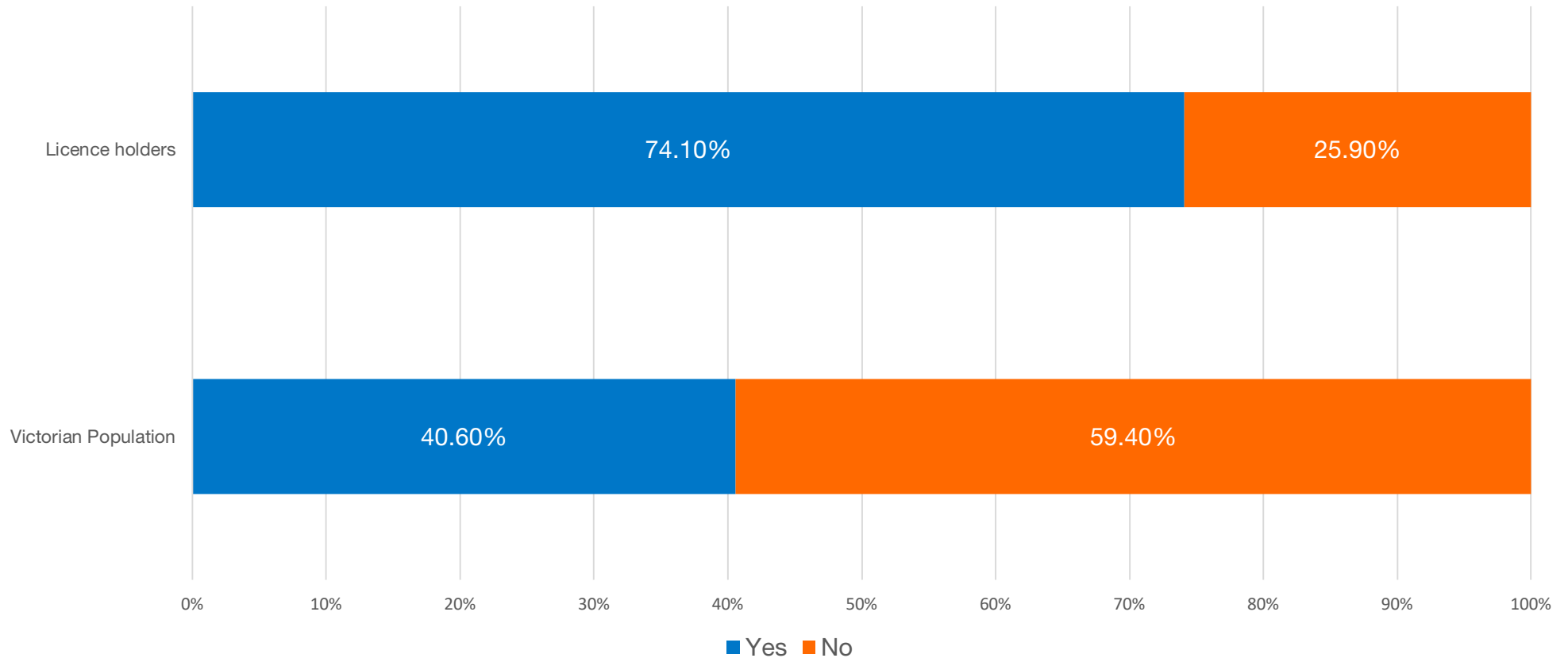
Have you been fishing in Victoria in the last decade?



- A third of the Victorian population have recreationally fished in the past decade.
- This is not a substantial increase of the number of Victorians who fished in the past 12 months, indicating fishing is a recreation with a core demographic.

VICTORIAN KIDS' RECREATIONAL FISHING PARTICIPATION

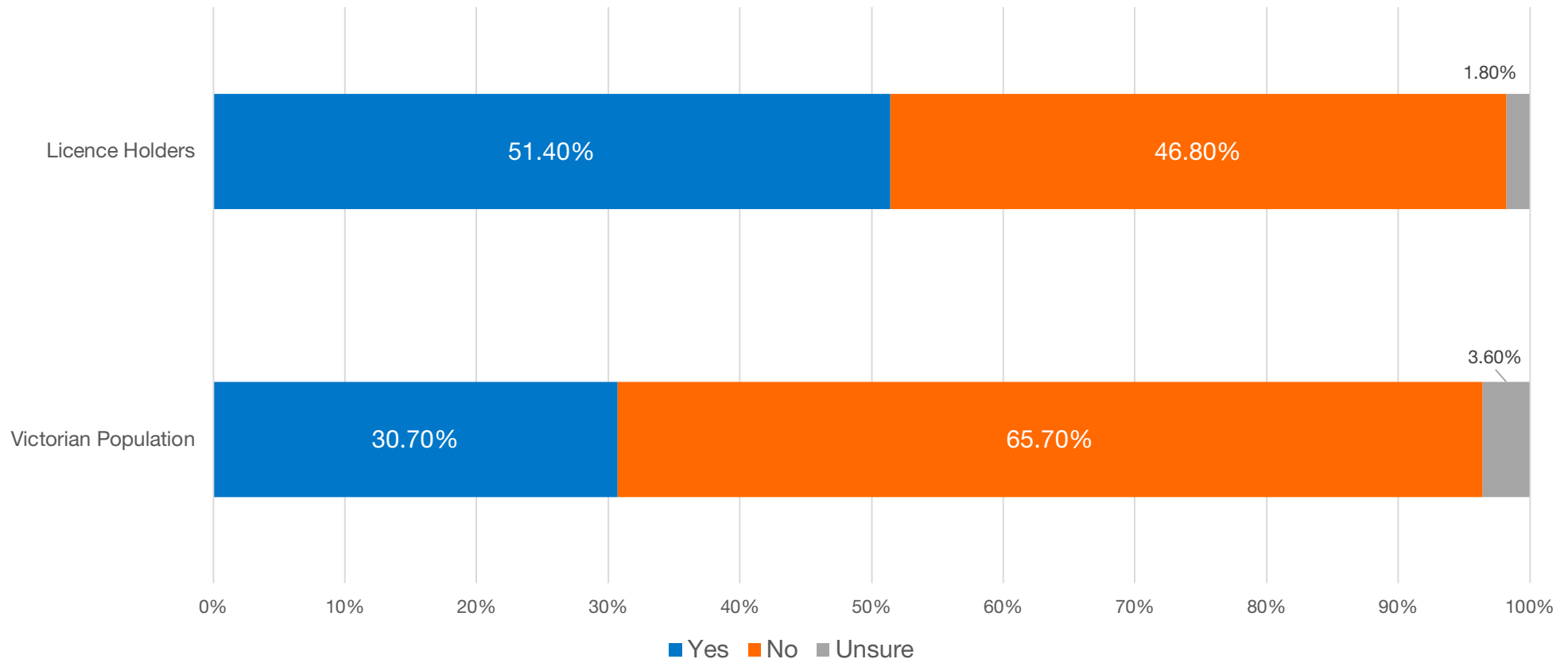
Have your children been fishing in the past 12 months?



- An estimated 233,932 Victorian children (aged 5-12) have recreationally fished in the past 12 months.
- An estimated 138,174 Victorian children (aged 13-17) have recreationally fished in the past 12 months.
- Three quarters of licence holders with children took their kids fishing with them over the past 12 months.

VICTORIAN KIDS' RECREATIONAL FISHING PARTICIPATION

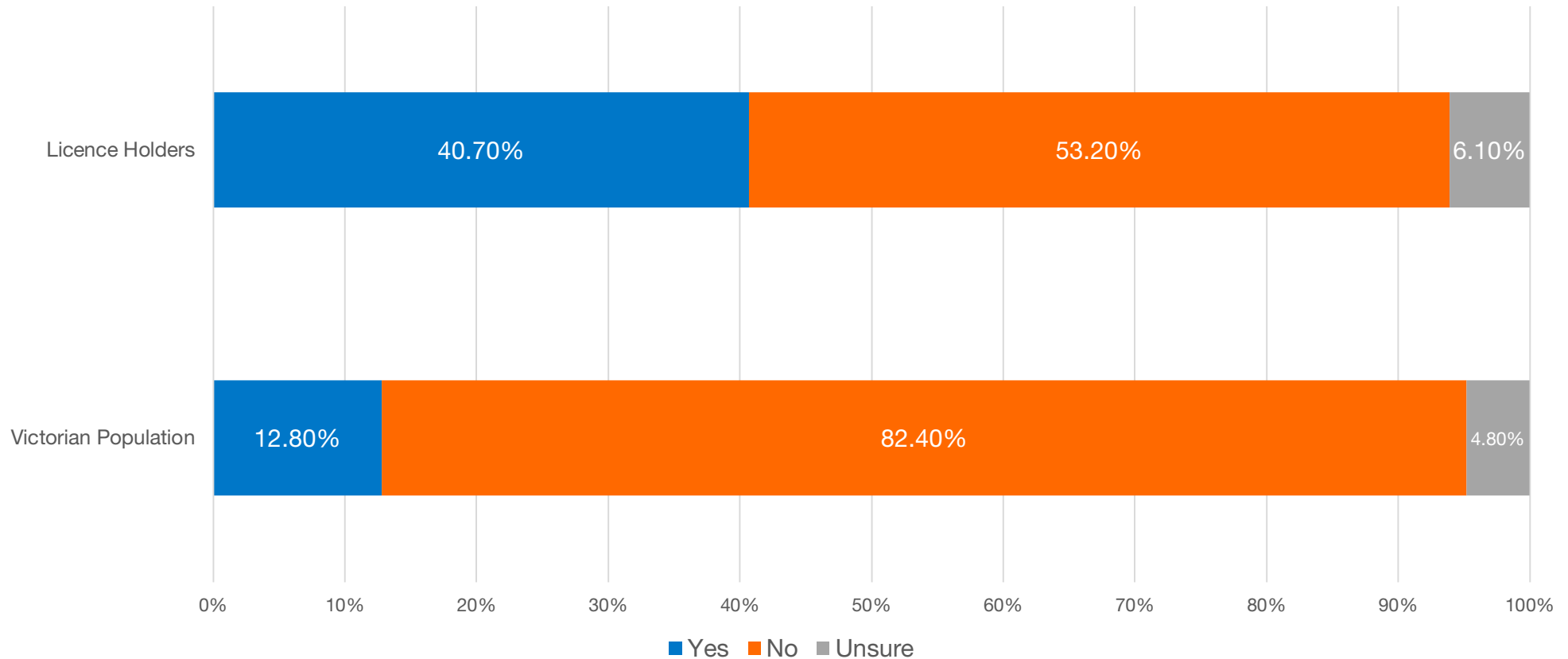
Have any of your children been fishing for the first time in the last 3 years?



- An estimated 176,889 Victorian children (aged 5-12) have fished for the first time in the last three years.
- Therefore since 2015 we can estimate that 58,963 kids (aged 5-12) a year have picked up a rod for the first time.
- An estimated 104,481 Victorian children (aged 13-17) have fished for the first time in the last three years.
- Therefore since 2015 we can estimate that 34,827 kids (aged 13-17) a year have picked up a rod for the first time.

TARGET ONE MILLION

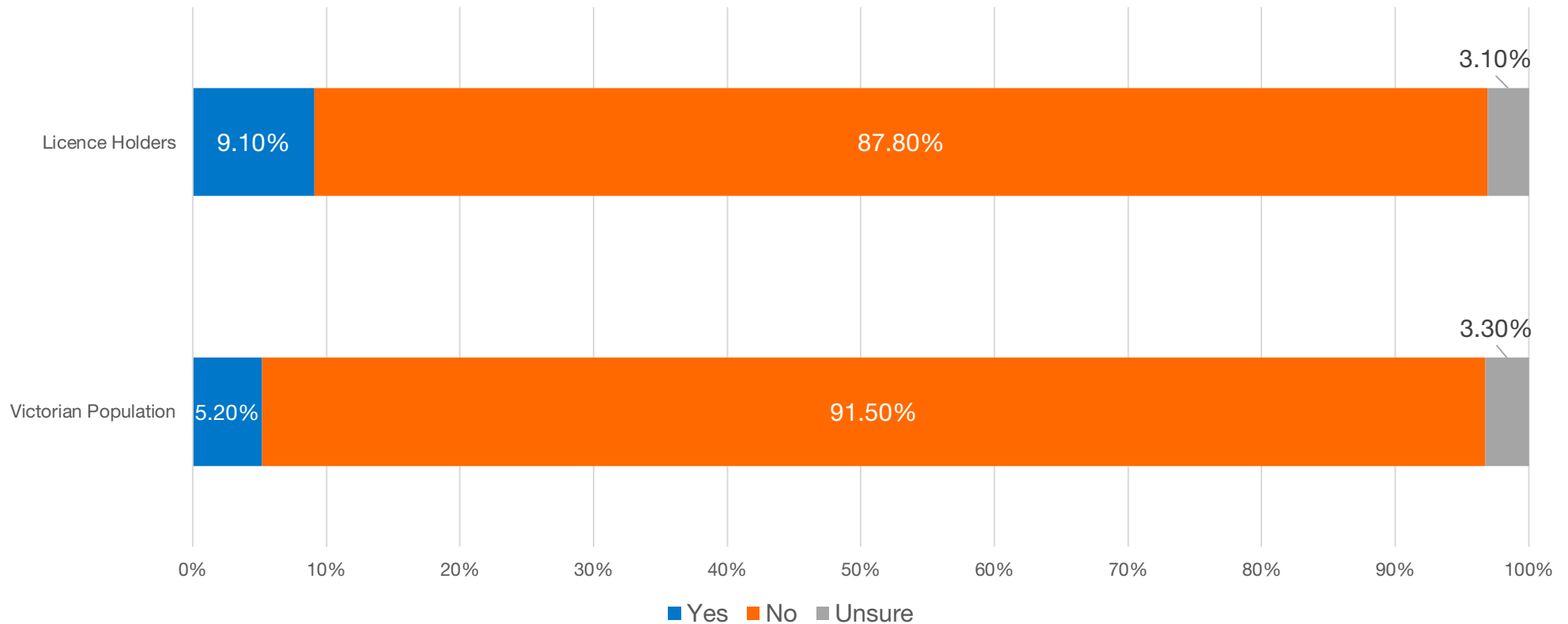
Are you aware of the Government's Target One Million plan?



- Target One Million has low recognition amongst the Victorian community, with just under 13% of Victorians aware of the program.
- Target One Million also has relatively low recognition amongst Victoria's fishing community, with under half of all licence holders aware of the program.

TARGET ONE MILLION EDUCATION PROGRAMS - KIDS

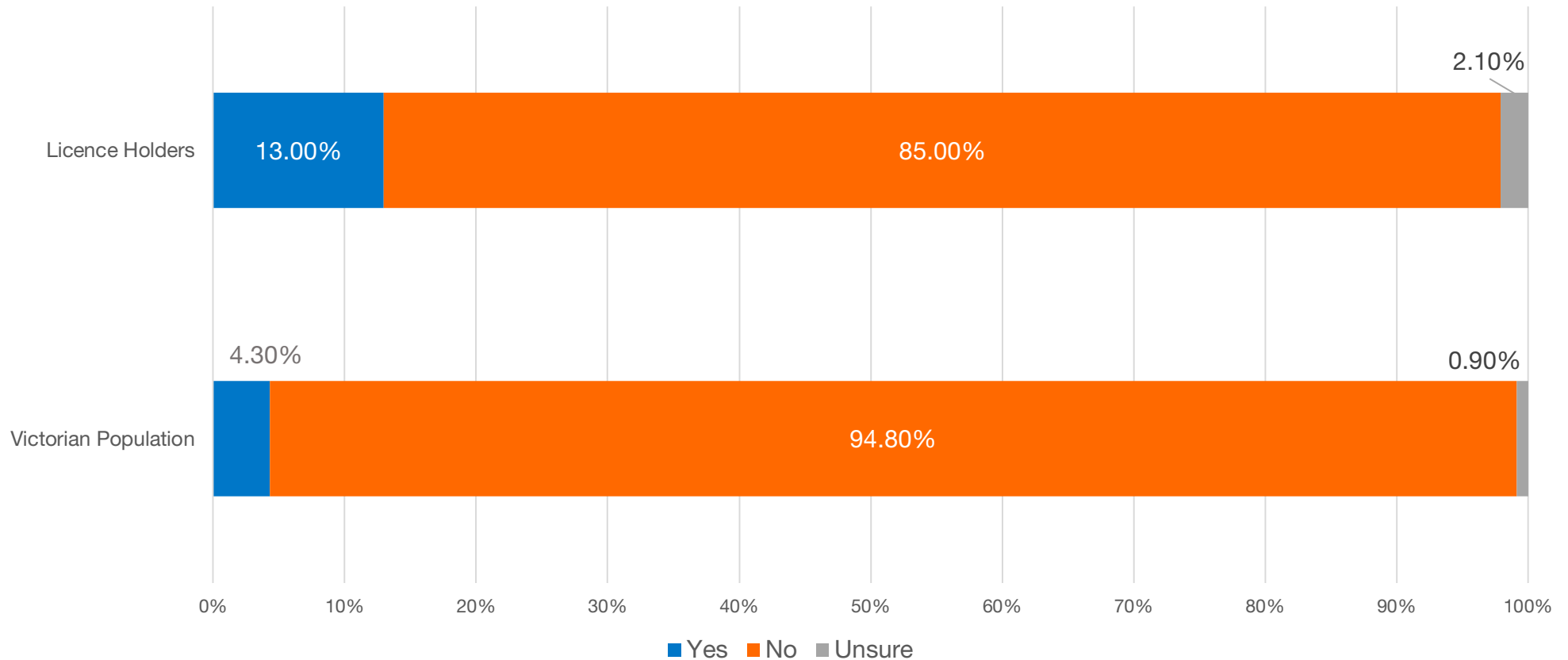
Have your children attended any of the VFA's school education and childrens fishing programs in the last 3 years?



- 5% of Victorian children attended VFA community education events over the past 12 months.
- Only 9% of the children of Victorian licence holders attended VFA community education events over the past 12 months.

TARGET ONE MILLION EDUCATION PROGRAMS - ADULTS

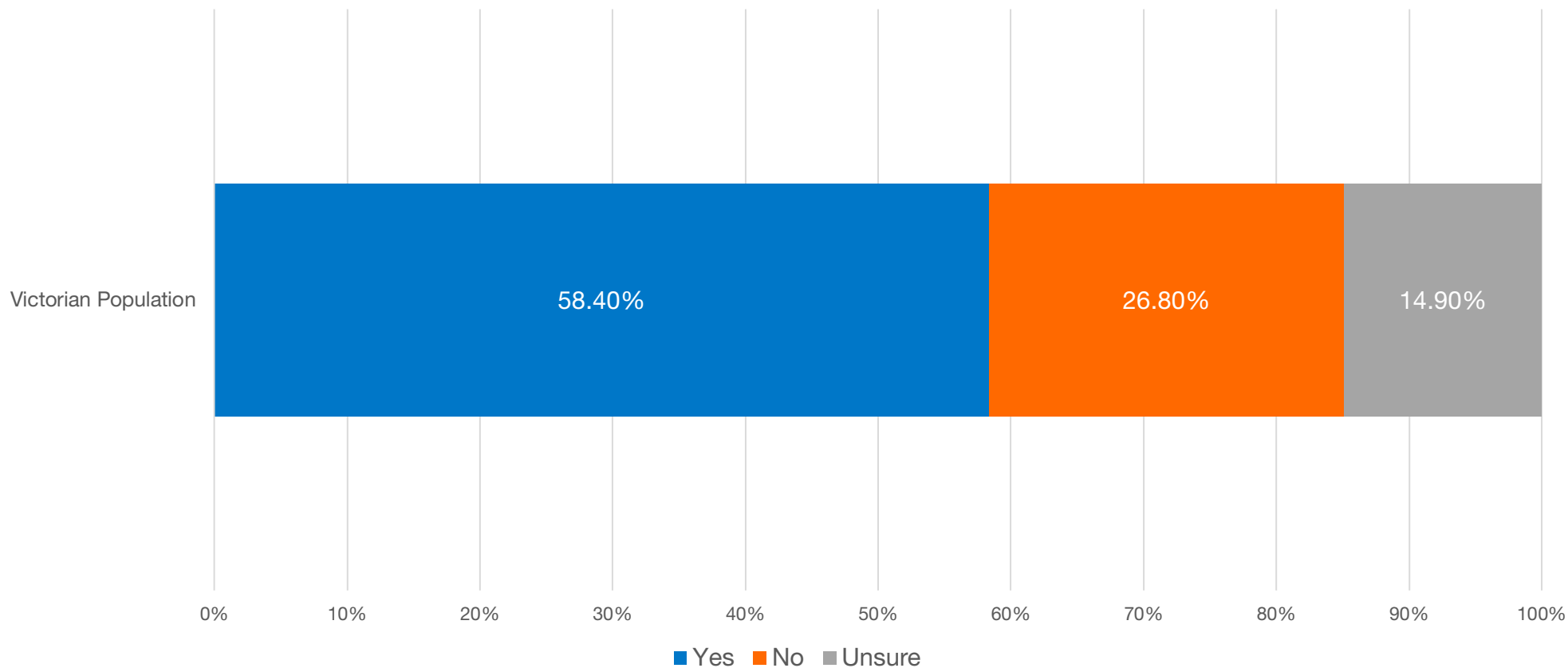
Have you attended any of the VFA's events or programs in the past 3 years?



- 4% of Victorian adults attended VFA community education events over the past 12 months.
- 13% of Victorian licence holders attended VFA community education events over the past 12 months.

FISHING LICENCE AWARENESS

When you go fishing in Victoria are you required to hold a fishing licence?



- Over 40% of the Victorian population are not aware that a licence is needed to recreationally fish in Victoria.
- This number is consistent across Victorians who both fish and do not fish.
- This indicates there are a high level of Victorians currently recreationally fishing without understanding they need a licence to do so.

