



Game Report 2020

TABLE OF CONTENTS

3 SUMMARY OF
THE SEASON

4 MONITORING

10 HUNTER
EFFORT
SUMMARY

13 PARTICIPATION

15 WETLAND
DEVELOPMENT

17 COMPLIANCE

18 GENERAL

19 RMA | ACCESS

20 APPENDIX



Summary of the Season

Nau mai, welcome to the 2020 game report - a snapshot of what the Nelson Marlborough Fish & Game office has been up to for the past year.

The 2020 season will always be remembered for its shift away from the traditional Opening Day date of the gamebird season due to covid restrictions, which, in the end, commenced three weeks later than the customary first Saturday of May. There was a good deal of uncertainty due to the fluid nature of the covid situation, things were changing daily regarding the season and a significant amount of time was spent informing our licence-holders and answering their questions and comments. All told, the vast majority were delighted a season was to take place and in the end were complimentary of Fish & Game in its handling of the situation, though there were plenty of negative comments early on as hunters wanted to know exactly what Fish & Game was doing, and who they were speaking to ensure a season would take place.

Despite the delay, it could be said the Opening to the season was fairly typical in the top of the South with clear skies and moderate bags. Para Wetland, this region's most important wetland, was heralded another success with good bags the norm rather than the exception.

While determining the mallard limit for the 2021 season, things were looking fairly poor for mallard breeding success until late October/early November when there was a significant period of rainfall and the SPI (Standard Precipitation Index) for the Tasman region went from moderately wet to extremely wet, and the rest of the region remaining fairly normal. As few mallard broods had been observed up until mid-November, it is thought the mallards were waiting until conditions improved, and we hope to see an increase in mallard broods observed during the latter part of Spring.

Our facilitated hunting at Rabbit Island continues to be popular, and staff are excited about the possibility of a formalised hunting arrangement with a major exotic forestry company, which will hopefully create additional hunting opportunities in this underutilised area. You can read more about this, and more, in the pages following.

Ngā manaakitanga

MONITORING

Annual trend counts are undertaken for mallard, swan, paradise shelduck and shoveler. These use both fixed wing plane and ground based counts.

MALLARD (GREYLARD) DUCKS

Mallards were counted across 65 sites in Nelson/Tasman (36) and Marlborough (29). Four new sites were added this year with the aim to canvas more private farm ponds to give a more diverse range of sites, though only 58 sites are used in the comparison data between years. Due to covid restrictions, mallard monitoring was delayed by a month or so, and was completed at the end of April. It is quite possible the one month delay to counts skewed the data, as normally counts are attempted at the same time of the year.

The table below is a summary of the five sub-regions in which the counts take place. Counts were well down at the Nelson sites, however higher in Golden Bay and Motueka areas with an overall percentage decrease of 16% for this part of the region. In Marlborough, mallard numbers at monitored sites were up 5.9% with minor increases in the Havelock and Blenheim areas. The overall percentage change between this year and the previous years' count was -7.75% (see Appendix for individual site counts).

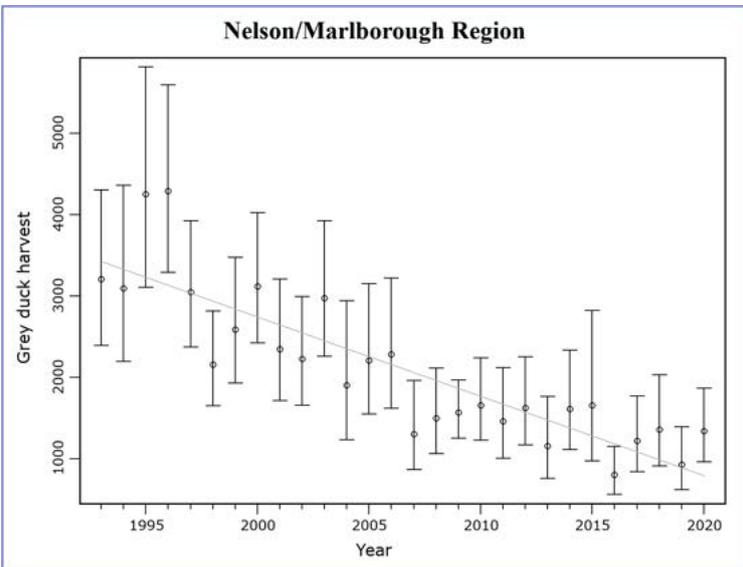
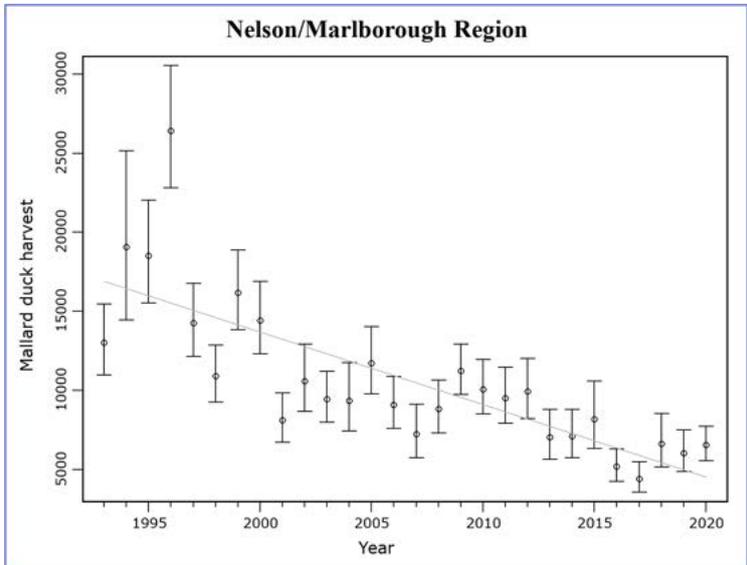
MALLARD MONITORING RESULTS					
	2016	2017	2018	2019	2020
Motueka	376	486	401	274	310
Nelson	947	1024	1258	1447	881
Golden Bay	266	386	472	508	680
TOTAL NELSON/TASMAN	1589	1896	2131	2229	1871 ↓ 16.10%
Havelock	190	251	225	263	314
Blenheim	1320	1368	1586	1441	1451
TOTAL MARLBOROUGH	1510	1619	1811	1704	1765 ↑ 5.90%
TOTAL	3099	3515	3942	3933	3628 ↓ 7.75%

GREYLARD HARVEST

Game harvest data, collected as part of the national game harvest data surveys 100 hunters periodically over the course of the season.

Harvest for greylards this season was fractionally higher than last year, estimated to be 6,553 mallards and 1,341 greys (total greylards 7,894). Interestingly the grey/mallard ratio is around 17% which is lower than the grey harvest from the My Duck Diary results which is consistently around 25%.

Grey duck harvest is slightly higher than the previous years, though, as with mallard, is about average for the past 8 or so years. It must be said that greylard harvest is decreasing overall, which is of real concern for this region. The ducks are not as abundant as they were in the decades before 2000 likely due to extensive loss of grain and pea cropping, which presents a huge challenge for game bird management.



GREYLARD LIMIT FOR 2021

Based on the scoring system below and available data which factors in seasonal wetness/spring breeding success, mallard counts and game harvest data, staff have assigned a score of 11/20 which recommends no change to the current daily bag limit of 8 birds per day.



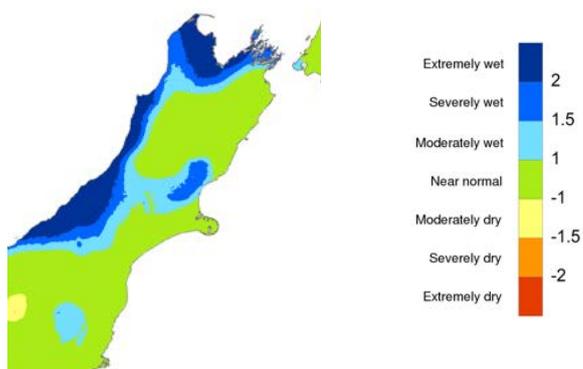
Staff scoring:
 Seasonal wetness/breeding success: 6/10
 Mallard monitoring: 7.75% decrease in N/M: 2.5/5
 Game Harvest Data: slight increase in harvest last season but very small: 2.5/5
 =11/20 – recommend no change to limit

For this process soil moisture maps are used to determine seasonal wetness, as well as staff observations.

In the early part of Spring the area had experienced reasonable rainfall levels, however there were few ephemeral water bodies which are beneficial for mallard breeding success. Resultingly, staff had seen few broods going into November, with the theory that mallards were waiting until a decent amount of rainfall arrived.

Fast forward to mid-November and the soil moisture levels had changed significantly after greater than normal rainfall.

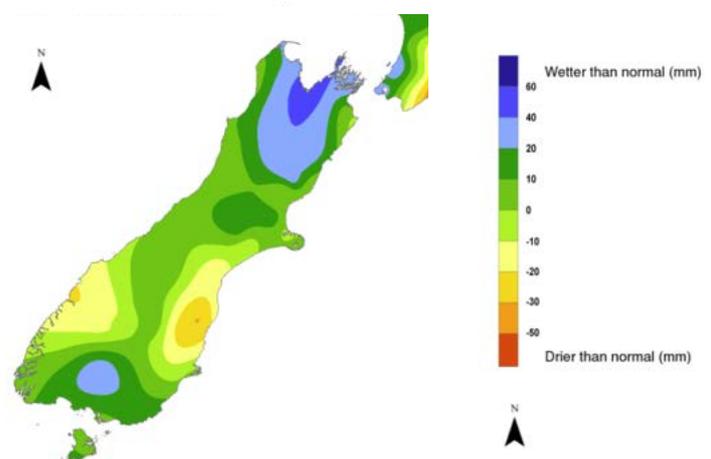
The Standardised Precipitation Index (SPI) is a simple measure of drought or very wet conditions and is based on the accumulated precipitation for a given time period. For the past 30 days (up until 8 November) SPI calculations indicate the Tasman region to be extremely wet or severely wet, with most of the remaining region (with the exception of the Kaikoura area) to be normal - see map below.



^ Standard Precipitation Index shows, as of 9 November, the region to range between near normal and extremely wet.

The Soil Moisture Anomaly shows the difference between the current and historical soil moisture deficits. It can be seen from the map below that it has been far wetter than normal in the Tasman region, while fairly normal or slightly wetter than normal in Marlborough.

Soil moisture anomaly (mm) at 9am on 09/11/2020



^ The Soil Moisture Anomaly indicates the Nelson Marlborough region to be wetter than normal as of 9 November

Hopefully this has boosted the breeding success of the mallard population after the past two years of very dry spring and summer conditions, next years' autumn mallard counts may confirm this.



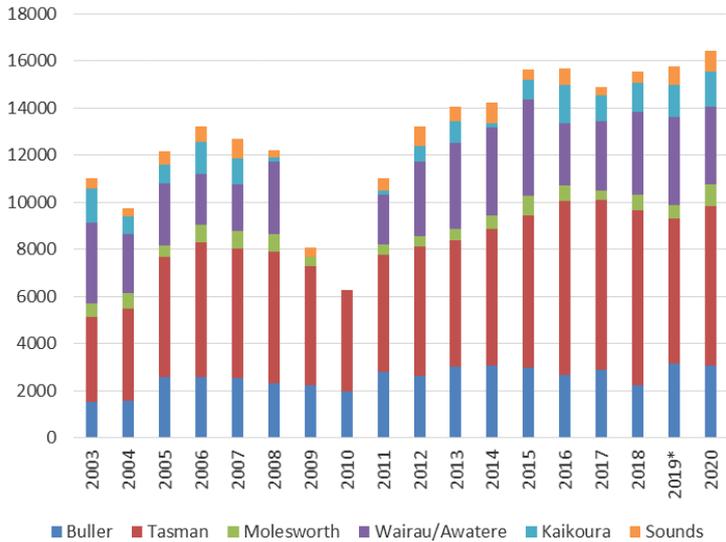
^ Ephemeral waterbodies are important for the breeding success of mallards - this is an example from the Opouri River area.

PARADISE SHELDUCK

Paradise shelduck trend counts were completed in late January using fixed wing aircraft and ground based methods.

It can be seen from the graph below shelduck counts were the highest since at least 2003, with the gains coming from the Tasman region which showed an additional ~600 birds from last years count.

Paradise Shelduck Trend Count by Nelson-Marlborough Sub-region



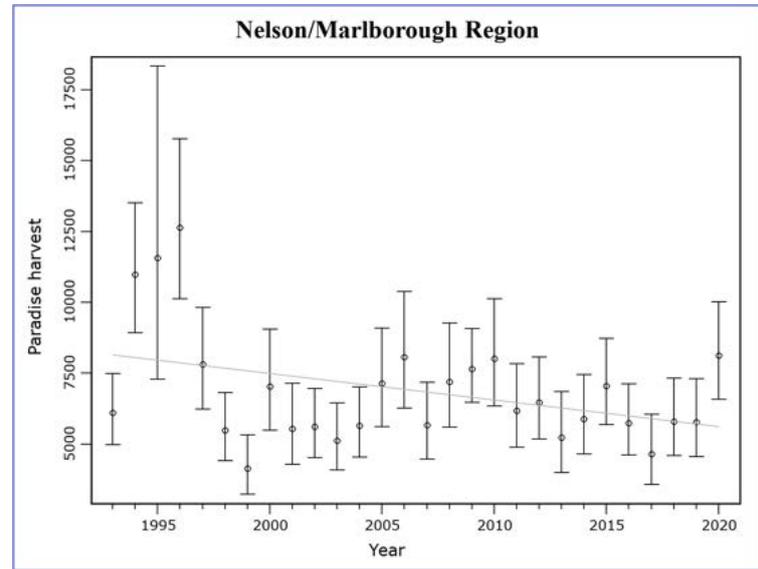
This comes as no surprise as numbers of shelduck complaints are reasonably high, particularly in Golden Bay. The Buller sub-region also experienced above average numbers of birds.



^ Washaway pond moult site in Golden Bay. This is counted on foot as surrounding trees make it difficult to count aerially.

SHELDUCK HARVEST

While greylard harvest is steadily decreasing over time, the trajectory of the paradise shelduck harvest is more stable, particularly since 2000. In fact, if 1994-1996 were not such an anomaly, it could be said shelduck harvest has been very stable since game harvest collection commenced.



Hunters remain an important control tool for shelduck, which was highlighted in the first three weeks of May (while the country was still in Level 3 and unable to hunt) when there was an increase in shelduck complaints by farmers who usually rely on hunters to deal with mobs of birds.



^ Hunters are relied on for dealing with regular shelduck issues that arise on improved pasture and crops

PARADISE SHELDUCK TREND COUNTS

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019*	2020
Buller	1516	1577	2588	2568	2546	2320	2236	1959	2813	2639	3030	3061	2963	2657	2900	2235	3153	3058
Tasman	3603	3898	5100	5709	5509	5588	5052	4329	4947	5476	5343	5826	6457	7398	7187	7447	6167	6783
Molesworth	590	653	494	755	707	724	405	0	458	440	503	554	840	660	410	640	576	909
Wairau/Awatere	3411	2525	2624	2188	2012	3111			2092	3168	3652	3718	4114	2658	2950	3510	3742	3309
Kaikoura	1450	740	775	1340	1102	140			199	666	920	180	810	1625	1096	1220	1350	1495
Sounds	450	372	565	650	805	330	385		516	845	600	900	460	700	370	500	800	880
Total	11020	9765	12146	13210	12681	12213	8078	6288	11025	13234	14048	14239	15644	15698	14913	15552	15788	16434

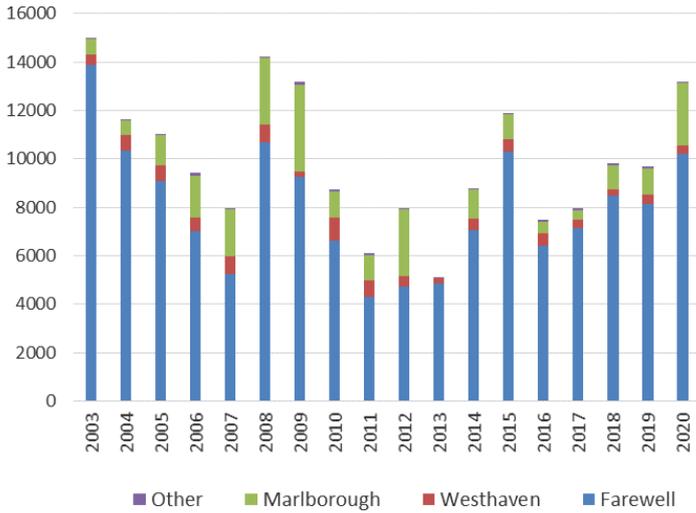
* some ponds not counted

SWAN

Swans counts were undertaken simultaneously with the shelduck counts, using fixed wing and ground based counts.

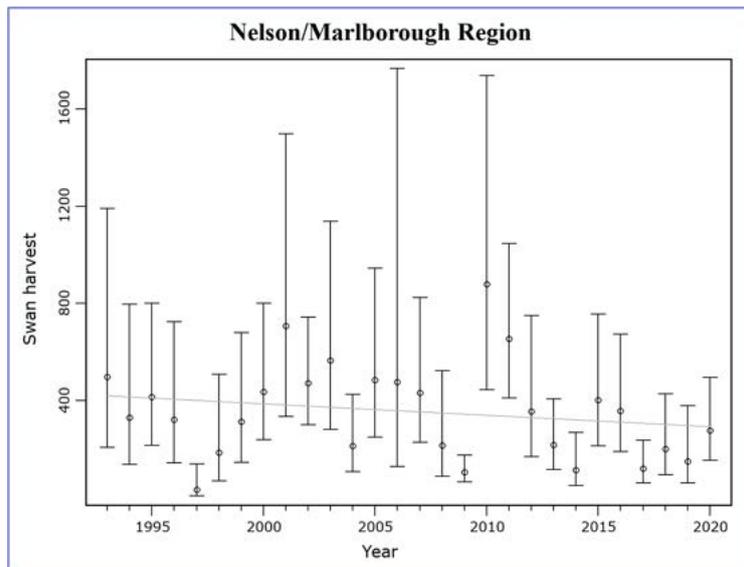
The swan population was the highest in over a decade, with the vast majority of these birds located in Western Golden Bay, which saw an increase of around 2,000 birds. The Marlborough region also saw a more than twofold increase, jumping to around 2,500 birds (~1,500 higher than last year).

Swan Trend Counts for Nelson-Marlborough Sub-region



SWAN HARVEST

For the 2020 game bird season the Nelson Marlborough Fish & Game Council introduced an extended swan season, which ran two weeks after the close of the regular season until the end of August.



The graph shows there was an increase in swan harvest, likely due to the general increase in swan abundance rather than the swan season extension. This is

only mentioned as the random nature of the game harvest hunter selection did not interview anyone who hunted in the extended swan period, though this did occur as evidenced by hunter reports.

All told, game harvest statistics indicate around 276 swans were harvested.

Staff were aware of a number of hunters utilising the extended swan season to very good effect. It is understood most of the hunter effort for the extended season took place in the Wairau Lagoons, a fantastic destination to hunt swan.



^ Some hunters making the most of the extended swan season.

It is of staff opinion that the extended swan season should continue, as it has created hunter opportunity in a completely sustainable way. Swan harvest in this region is still very low, despite reasonably high numbers of birds in certain areas.

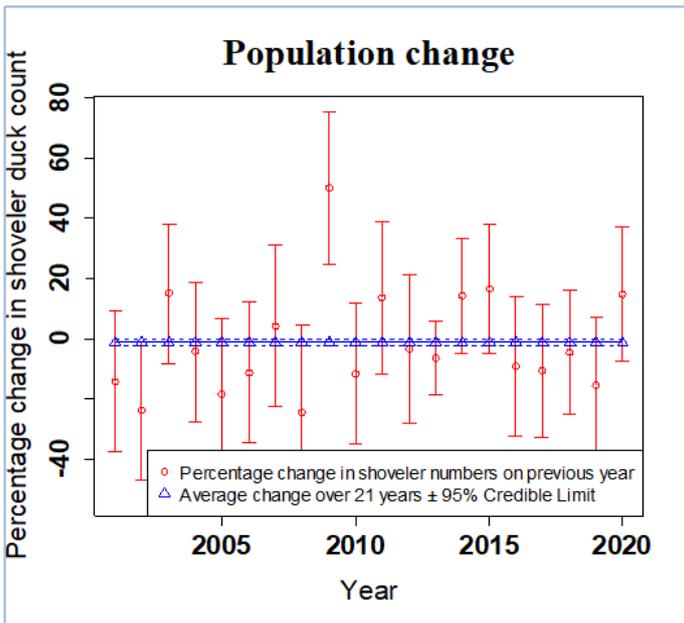
Consumption of swan meat has proven to be highly appealing as evidenced by the game bird food night, and is potentially a bird Fish & Game should be promoting more, given only ~2% of the regional population count is harvested.

SWAN TREND COUNTS																		
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Farewell	13860	10321	9100	7000	5258	10691	9274	6638	4277	4707	4871	7043	10283	6403	7142	8498	8133	10211
Westhaven	455	645	623	572	700	710	199	925	727	464	193	474	525	525	332	260	390	363
Marlborough	629	646	1280	1732	1969	2761	3586	1095	1022	2741		1207	1048	489	404	974	1071	2573
Other	24	20	40	126	46	43	123	96	91	11	12	62	58	86	101	97	81	22
Total	14968	11632	11043	9430	7973	14205	13182	8754	6117	7923	5076	8786	11914	7503	7979	9829	9675	13169

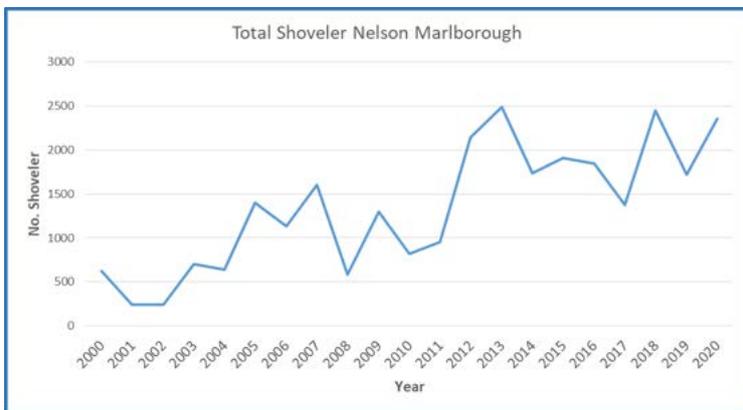
SHOVELER

Fish and Game New Zealand conducted a national count of kuruwhengi, shoveler duck on 3 August 2020. This is the 21st annual count (2000 – 2020) to monitor change in the New Zealand population.

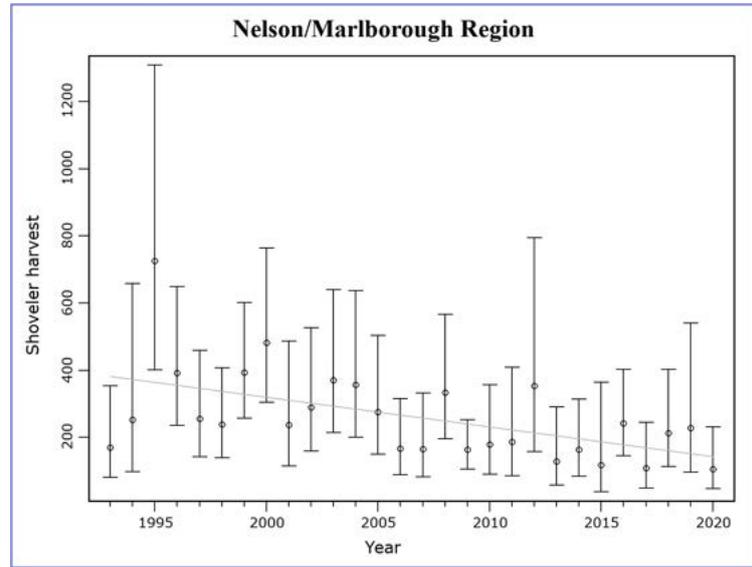
A total of 11,325 shoveler duck were counted at 240 sites. Over the 21 years the population at these sites appears to be stable. The 2020 total count for sites that have been counted every year (n=81) however, was 18% below the average for the period 2000 – 2019 and was down 29% on last year's count. The long-term trend at these 81 sites indicate no linear increase over the last 21 years - see graph below



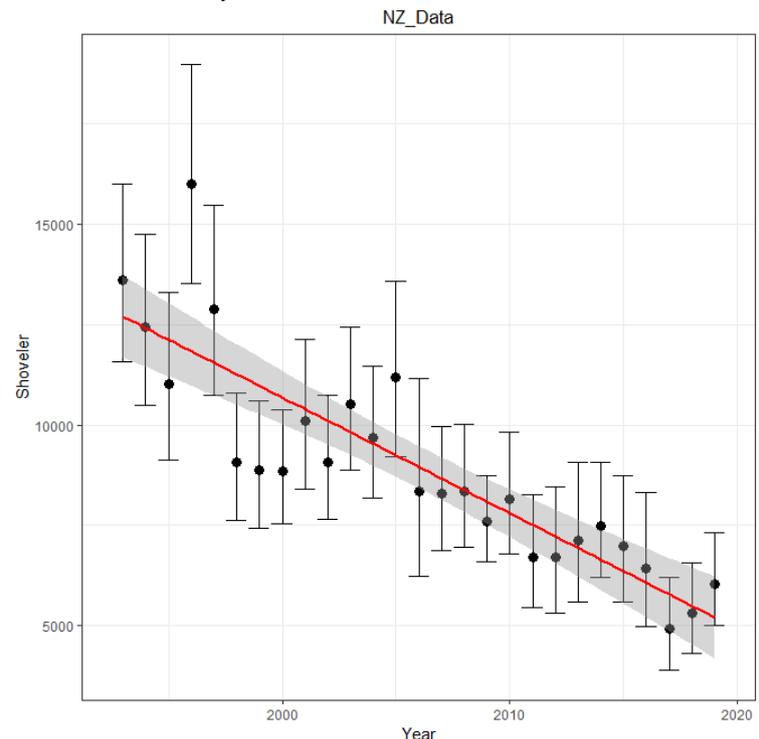
In this region, 2354 shoveler were counted, with the majority of these from the Wairau Lagoons. This is a ~37% increase though a fairly normal fluctuation when monitoring this species.



It was estimated from the game harvest survey that 105 shoveler were harvested in this region - a very low harvest rate considering the population (<5% of total counted regional population).

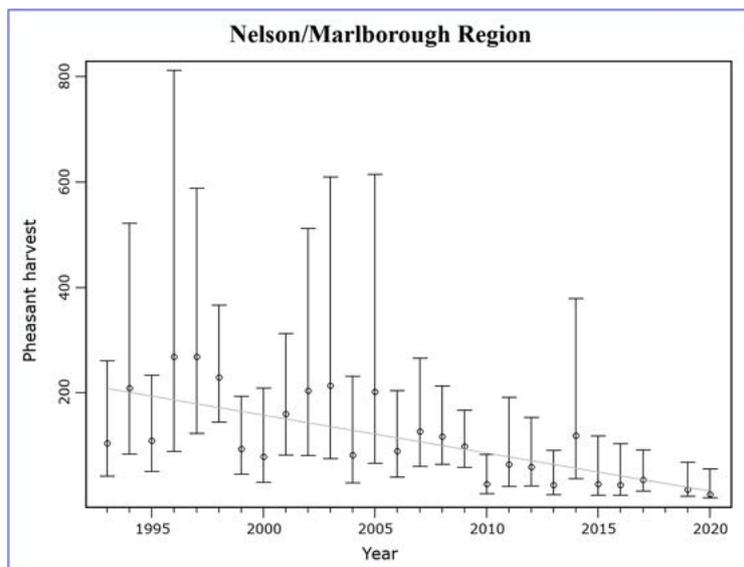
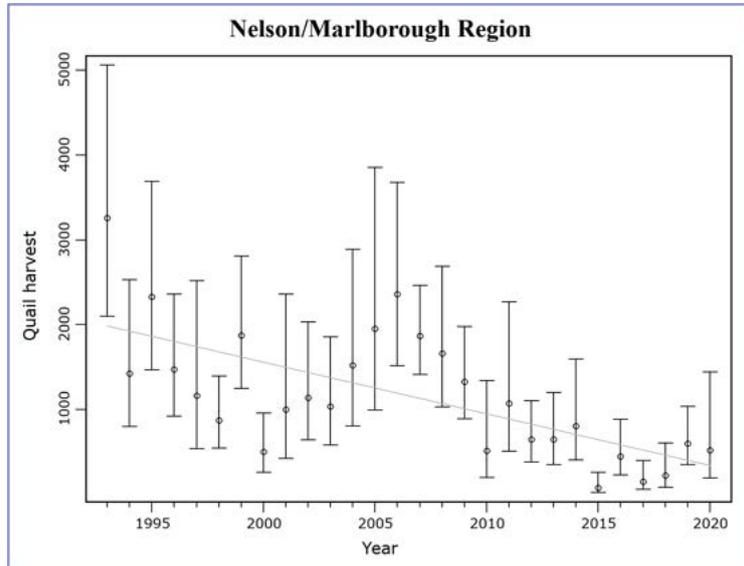


Nationally, harvest of shoveler is declining also - in line with the Nelson Marlborough region. The shoveler duck does not make up a large component of the national hunter bag. Nevertheless, there has been a decrease in harvest since the hunter survey started in 1993 - see figure below, which is consistent with other species such as the mallard. However, unlike the decrease in mallard harvest, which can be explained by a corresponding decrease in annual hours hunting waterfowl, the decrease in shoveler appears to have little to do with decreasing hours hunting waterfowl and more to do with a year effect, or some corresponding change over time such as decreasing daily bag limits/ change in hunter behaviour/ movement away from hunted areas etc.



UPLAND GAME

While no formal monitoring of upland game or pukeko occurs in this region, results from the game harvest data suggest that 478 hours were dedicated towards upland game hunting, with 522 quail harvested and just 8 pheasant.



Anecdotal information on quail numbers in the past two years has been very positive, despite the low harvest. Two successive dry summers has seen the quail population, in Tasman anyway, boom. The main barrier to success is likely then centered around access, or lack thereof.

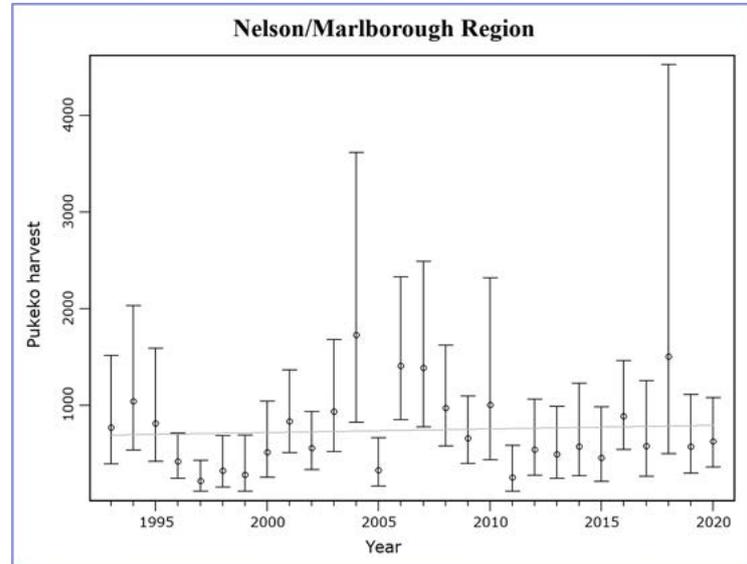
Staff hope to be able to turn this around by facilitated hunting within exotic forest estates, which will hopefully boost quail harvest, and also potentially pheasant harvest if some enhancement work is approved (see page 19 for more information).



> Reice Piggott made the most of the public pheasant weekends

PUKEKO

Pukeko are prolific in this region, with monitoring of these birds based on casual observations while out in the region, as well as crop depredation complaints, which occur on a regular basis. Fish & Game have been actively encouraging hunters to target pukeko in recent years, and as a result, harvest has remained steady as shown by the game harvest statistics below, however ongoing landowner complaints continue indicating hunting has little effect on regional population levels.



The push to encourage hunters to target pukeko has been done for a variety of reasons. A few years ago the pukeko season was extended meaning hunters can target pukeko for 8 months of the year, including a summer season over January and February. Contrary to the belief of some, pukeko also make great table fare as evidenced by the excellent game food dishes served up by Phi Hazeldine at this years Game Food night - see page 14 for more information. Additionally, pukeko provide a great opportunity to introduce new or young hunters to the pursuit as they are an abundant bird, and fairly easy to hunt.



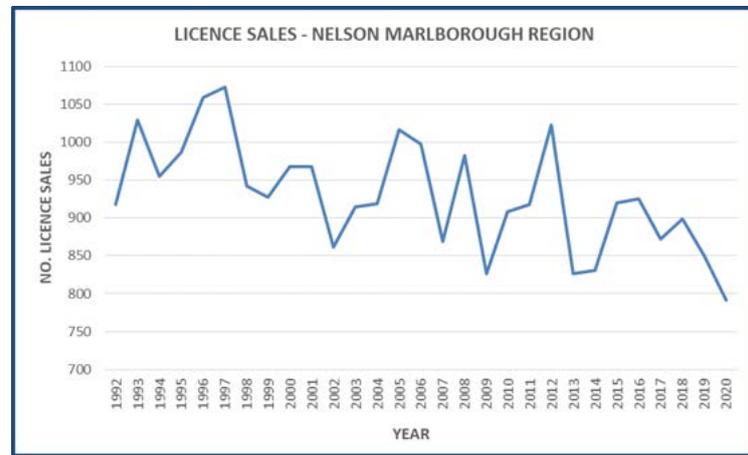
^ Dressing out all of the birds harvested on the Wakapuaka pukeko drive. These birds were all utilised for the Game Food night at Club Waimea.

HUNTER EFFORT SUMMARY

A broad summary of hunter effort/game harvest statistics are presented below. Harvest data on specific birds has been covered in the chapter above.

LICENCE SALES

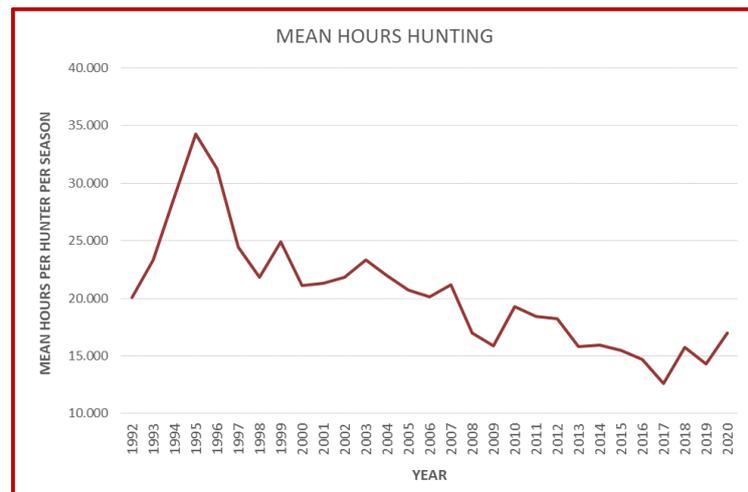
Licence sales fell this year to the lowest since at least 1992 - see graph below. 792 licences were sold for 2020, a reduction of 58 from last year. Covid-19 likely had a part to play in the decline though it is evident there is a general decline in hunting participation in this region over time, despite the population steadily growing here, and there is a big job ahead for Nelson Marlborough Councillors and staff to grow the hunter base in this region



HUNTER EFFORT

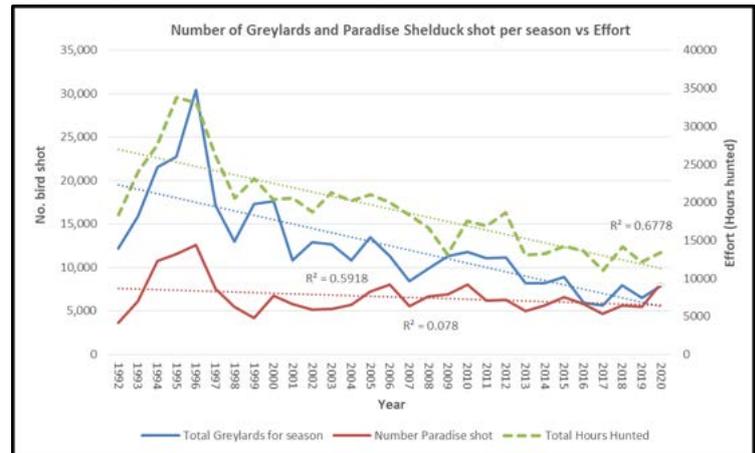
Despite the season being three weeks shorter than other years due to covid, on average the number of hours spent hunting for each licence holder increased to around 17 hours per hunter for the season - the highest average figure since 2012 - see graph below.

While 17 hours per hunter seems low, this is fairly typical across Fish & Game regions, with the exception of some of the known national game strongholds such as Auckland Waikato (~27 hours), Wellington (~24 hours) and Southland (~21 hours).



Though there was a decrease in licence sales, the total number of hours hunting increased also to an estimated 13,474 hours (up from 12,150 in 2019). Staff believe this increase in effort was a result of the shorter season and hunters feeling they needed to make the most of their opportunities. This observation validates the Council's decision to not reduce the season here to try and improve greylard bag limits. Daily bag limits are a much better tool to achieve harvest reduction.

The graph below shows the total hours hunted with the estimated greylard and shelduck harvest, which, typically, follows the same pattern.



It is estimated 7,894 greylards were harvested for the 2020 season, up from 2019 (6,489 greylards) and similar to 2018 (7,972 greylards). Shelduck harvest increased considerably from an estimated 5,489 birds in 2019, to 8,122 birds this season. This means hunters, on average, took home around 10 greylards and 10 paradise shelduck each for the 2020 season - higher than previous years. While the greylard harvest is steadily declining, paradise shelduck is far more stable, which falls into line with the reasonably high numbers of shelduck in this region.

EFFORT BREAKDOWN

Based on results from the game harvest survey, a total of 4,702 hours were spent hunting over Opening Weekend from 530 hunters, and an estimated 2,422 greylards and 2,437 paradise shelduck were harvested. This is no surprise as typically around 25-30% of Nelson Marlborough licence holders hunt in other Fish & Game regions over Opening Weekend.

For the remainder of the regular season it is estimated a total of 8,617 hours was spent hunting, and 5,472 greylards and 5,685 shelduck were taken.



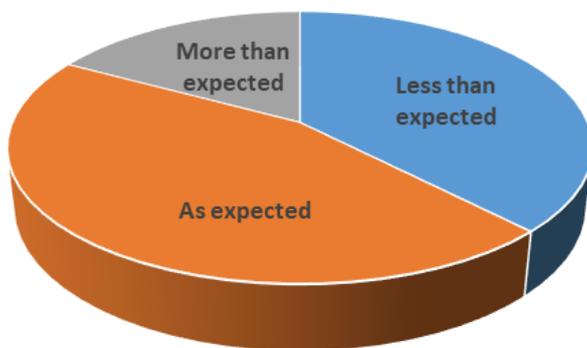
Hunter Diary Initiative

This year was the 4th year the Hunter Diary initiative has been in place and has again delivered some excellent information which is useful for game bird management. The basics of the diary initiative is utilising some of the regions most accomplished and regular hunters to upload their hunt statistics immediately after the hunt. As this group of 13 hunters are very experienced, it is expected that the bird population should correlate with the harvest rate from these hunters. Additionally, the group provides very accurate information on things such as grey/mallard ratio, wounding rates and bird sightings.

For the 2020 season the group went on a total of 135 hunts, totaling 343 hunt hours, and harvesting 1333 birds. Of this 43% were greylards, 46% paradise shelduck and 11% comprised of shoveler, swan and geese. Upland game and pukeko have not been included in these statistics.

This year we we added bird sightings to the diary initiative, that is, was the number of birds seen less than, more than, or as, expected. This year, for around 45% of hunts, numbers of birds seen in the sky were as expected, however on nearly 38% of hunts the number of birds seen was less than expected. On 13% of the hunts more birds were seen than expected.

	2017	2018	2019	2020
Total birds shot	1266	1177	980	1333
Total hunts	150	182	153	135
Total hours	404.5	423	351.5	343
Birds/hr	3.13	2.78	2.79	3.89
Birds/hr/Per person	1.75	1.58	1.52	1.88
Wounding rate	N/C	5.01%	5.04%	5.25%
% grey duck	21%*	25%	26%	24%
Total greylard	548	517	374	567
Total shelduck	639	570	456	614
Total other (excluding pukeko & quail)	79	90	150	152
*2017 limited dataset				
Public/private land split %	69/66	51% / 49%		
Public land birds/hr	381/179.5		2.12	
Private land birds/hr	952/163		5.84	
Blenheim/Tasman hunt %	84/51	62/38		

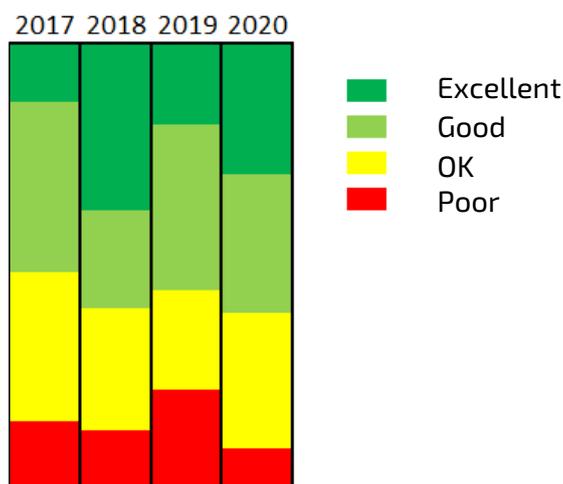


Hunt satisfaction is also monitored, and it can be seen there were less incidences of hunts that were deemed poor, and decent determinations of good and excellent hunts - see graph below.

Though total hunts and total hours hunted were the lowest of the four years, an increase in harvest was evident, and at 3.89 birds/hr was the highest since the group formed. Notably, the greylard harvest was significantly higher than 2019, as was shelduck. One possibility for this increased harvest was the delayed season opening led to changes in bird behaviour, however the result was certainly unexpected.

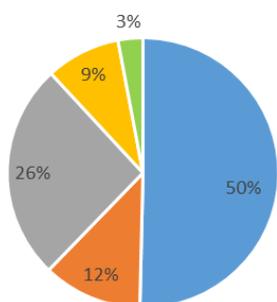
Grey duck remains remarkably similar to previous years at around 25% of the greylard bag.

Wounding rate is also very similar to previous years as you would expect it to be at just over 5% of birds.



The majority of hunts took place in the Marlborough area at 62% of the hunts, and it was more common for Tasman based hunters to travel to Marlborough, rather than the reverse. This is unsurprising given there is significantly more public land hunting opportunity in Marlborough still compared to other sub regions.

HUNTER EFFORT BY SUB-REGION 2020



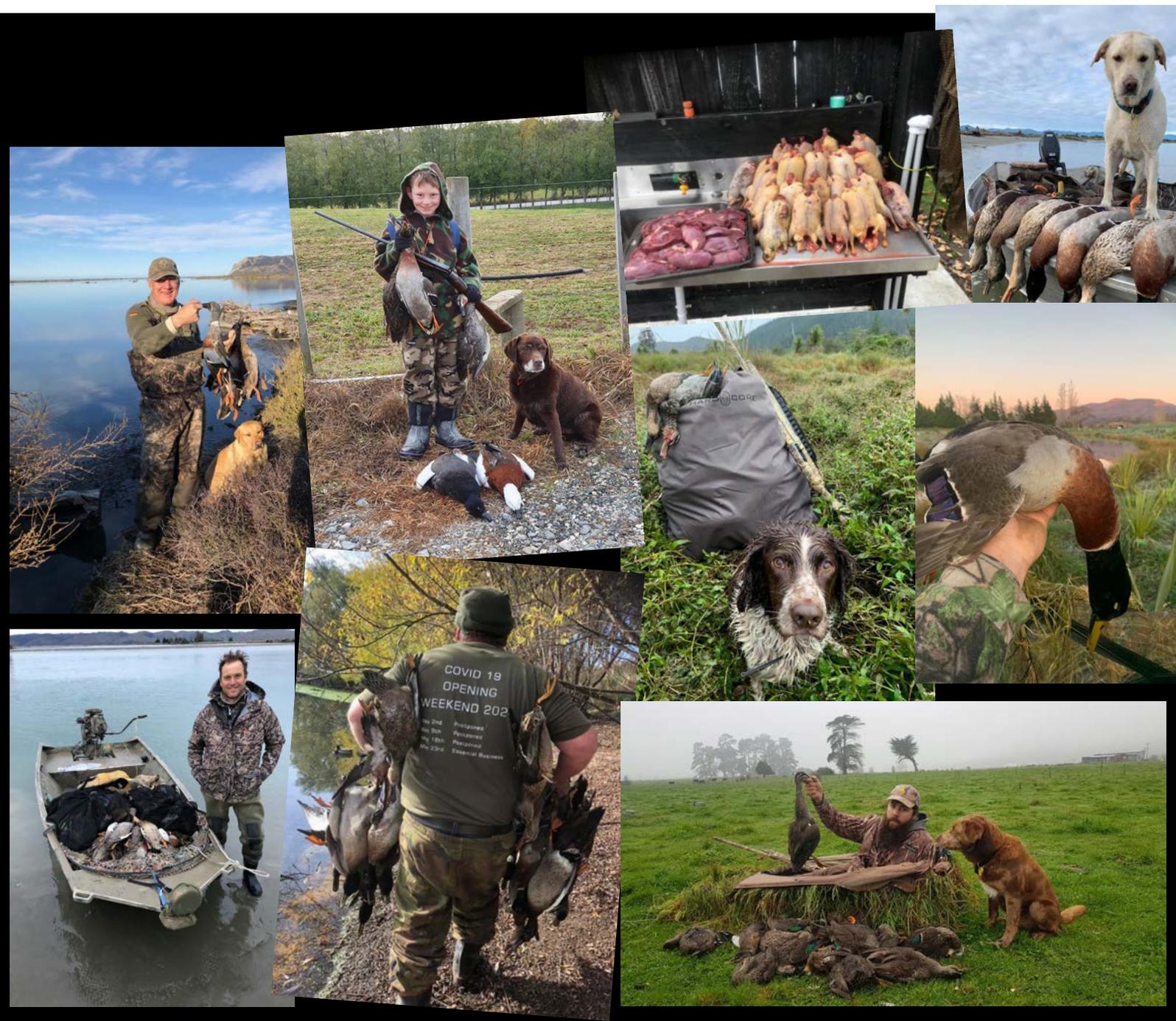
■ Blenheim/Wairau ■ Rai/Pel ■ Nel/Tas ■ Murchison ■ Golden Bay

Though the split between private land and public land hunting was almost even, again, unsurprisingly, birds harvested per hour were higher on private land at 5.84 birds/hour on private land compared to 2.12 birds/hour on public land.

The hunter diary initiative is an excellent method to compare outcomes from the national game harvest data and game bird trend counts, and it is pleasing to have such a great group of hunters involved.

Thanks to MDD team Troy Appleton, Steve Holmes, Reice Piggott, Nev Gane, Marc Jary, Kieran Scott, Justin Weaver, Ian McLeod, Heather Baigent, Guy Gardiner, Cory Jones and Ben Sowry.

MDD IN PICTURES



PARTICIPATION

Fish & Game have been active in the past number of years facilitating organised hunting for licence holders, with a game food night thrown in the mix in recent years.

RABBIT ISLAND UPLAND GAME HUNT

The Rabbit Island upland game hunt went ahead this season, but only just. Covid issues meant Tasman District Councillors could not meet in person to approve the hunts after the three year trial period had ended. Staff approached TDC and asked for a one-off extension, to then be re-examined for the 2021 season, which was thankfully granted so the hunts could proceed, though the first hunt was canned.

Again, the hunts proved popular with around 35 teams putting in for the 6 available spaces. Bird numbers were fairly similar to the previous year with 2-4 pheasants harvested each hunt and quail, again, providing most of the action.



^ Ian Sutherland and Justin Weaver with a mixed bag from the first hunt.

Staff have sent away information to TDC which will be deliberated by Councillors with the expectation that the hunts will be granted permission to continue for another 6 years.

Councillor Gauld has been rearing pheasants for release to enhance bird numbers in popular hunting areas, and is planning on continuing his bird rearing efforts for the 2021 season. Staff wish to thank Councillor Gauld for his considerable efforts on behalf of local upland game hunters.

There is also huge potential for limited bird releases on Tasman Pine Forests land, if we get the green light for facilitated hunting here and TPFL give consent.

WAKAPUAKA PUKEKO DRIVE

The Wakapuaka pukeko drive went ahead in mid-July. As the hunt had not been held for two years (due to farming reasons) it was expected that there would be high number of birds around, and this proved to be the case.

Unfortunately only around 30 hunters turned up which meant the gaps between positioned hunters were too big, and the vast majority of the birds found an easy way through the defensive line to live another day. While over 200 birds were taken, this should have been at least double or more what it could have been with more hunters.



^ Over 200 birds were taken at the hunt but this would have been far higher with more hunters. All birds were dressed out for the Game Food night.

There were some good learnings from this hunt, however, and it would be prudent for staff and the Game Committee to discuss ways to ensure greater participation for this hunt, which really needs at least 50 hunters to be successful, but ideally 60-80 hunters.

It was pleasing to see some new and young hunters participating, and potentially Fish & Game could use this hunt as a R3 marketing initiative to try and increase numbers of hunters in this region, which, as the licence data suggests, is decreasing.

All birds were dressed out and used for the game food night held at Club Waimea.

MOLESWORTH CHUKAR SEASON

The Molesworth chukar season had significant interest again, interestingly from hunters outside of Nelson Marlborough region.

One group of hunters from the North Island enjoyed some good success, with a dozen chukar taken over four days hunting. They also had success with quail which were reasonably abundant in their block. Other teams had a more quiet time of things with few birds harvested.



^ A team of hunters from the North Island enjoyed good chukar hunting during the July season.

It will be interesting to see what happens with the 2021 season with a proposed 1080 drop scheduled for May which has the possibility of curtailing the Molesworth chukar hunting. Already there are a number of blocks booked for next year, however most hunters are not likely to risk potential poisoning of their dogs. 1080 operations are frequently delayed however, and it may be the case that we remain fairly fluid leading up to July 2021.



GAME FOOD NIGHT

Another stellar gamebird food celebration was held at the end of the game season. Club Waimea chef Phil Hazeldine wowed the eighty hunters and their families who turned up to see what masterpieces he could create out of their game birds.

Thirteen options were created by Hazeldine and his team from the organic free-range game provided to him by the hunters. The curve ball thrown at Hazeldine this year was that hunters had provided a lot of pukeko meat but rising to the challenge Hazeldine turned pukeko into the nights champions and created six of the thirteen dishes from Pukeko.

Diners first sampled a canape with pukeko, kumara and a bourbon relish, they then sampled a pukeko filo tart done with heart and livers under a parsnip crisp. This was followed by thin slices of pukeko with a spiced honey sauce. Next was a Pukeko taco which was followed by Hazeldine's own invention of GBD's or Game Bird Dogs, a pukeko and paradise shelduck sausage that was presented in two options: a crumbed sausage with a black pepper crème or as battered as a hotdog on a stick. Diners also feasted on meals created out of mallards, paradise shelduck, pheasant and Canada Geese but it was the humble pukeko that was the star of the night.



We can't say enough about Phil and his incredible feast; his passion for gamebird food cooking is infectious and hopefully provided the 80 strong crowd with plenty of inspiration. The great news is that Phil is keen for Round 4 - and the date is already set for next year.

WETLAND DEVELOPMENT

Below is a summary of some of the wetland work carried out during 2020. Challies Island wetland continues to be maintained, and staff are working on a new wetland proposal at Eves Valley also.

SUPPLEJACK & SUNRISE VALLEY

Annual weed spraying has taken place at both of these forestry wetlands. While visiting during November, greylards were seen on both ponds, and it was evident from the Sunrise pond that ducks had been regularly using the pond as evidenced by loafing sign.

Gorse is a continual problem for both sites, so the herbicide regime will continue for a while here. Oak trees are growing well at both ponds, as well as some of the native trees that survived the drought.



^ Sunrise Valley pond, before and after. Note the pond shown is 1 of the 2 ponds at this site.



^ Supplejack Pond, before and after. Note the extensive weed growth.

GIBBS ROAD WETLANDS

Gibbs Road #1 was well used by hunters for the 2020 season which was pleasing to see, though bags were generally fairly light. For this wetland, we operate a booking system which is working well and ensures there is fair usage.

One of the hunters who frequents the wetland, Phil Madill, has put in some of his own time carrying on the planting here, mainly with manuka and sedges.

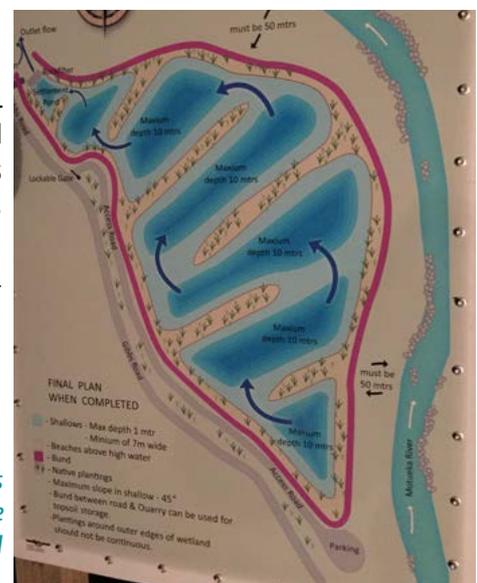


^ A mob of greylards taking off from Gibbs Road #1 pond

Another round of planting was scheduled for Gibbs Road #2 after the second stage of the pond has been excavated (normally initiated by forest management company One Forty One), however this did not eventuate.

OFO have been undertaking annual weed releasing and spraying at Gibbs Road #2, and it is expected that Fish & Game staff will assist annually with planting as each stage is excavated.

> Gibbs Road #2 is going to be a large wetland, with stage 1 of 7 completed.



PARA WETLAND

The past twelve months have been interesting in regard to water levels within the wetland. Last spring through to early summer was unseasonably wet at Para and unusually high water levels were maintained in the wetland until after Christmas. This was good from a waterfowl perspective as a lot of ducks were occupying the wetland and resulted in an extended breeding season with more broods than normal being observed. It was not so good for some of the native plants that prefer to occupy the higher, drier ground in the wetland as they had "wet feet" for an extended period of time. This resulted in a widespread die off of some plants in the wetland particularly lowland lacebark. This was unfortunate as some of these mature lacebarks would have been in excess of 50 years of age, demonstrating just how unusual this event was and we even lost numerous flax plants as well which was surprising. On a more positive note the higher than normal water levels through early summer meant that very little releasing around native plantings was required as weed growth had been suppressed, especially of the climbing convolvulus which is a real nuisance species.



^ Native plantings within Para Wetland are growing well.

From January through April the rainfall reduced significantly and the eastern and northern parts of the wetland dried out. This was good as it enabled foot access into the wetland to undertake the usual summer maintenance works such as ground based willow regrowth control work. That was until Covid-19 and lockdown got in the way. Fortunately, prior to this we managed to eventually get two days of suitable weather to aurally spot spray willow regrowth, from a helicopter, over approximately 40 hectares or one third of the wetland. Follow up ground work this spring showed that a satisfactory result had been achieved. This is good as whilst there is room for improvement, it is likely we will be relying more and more on aerial spot spraying of willow regrowth into the future as it is getting difficult to find contractors who are prepared to do the tough ground based work. The other benefit of aerial control is that it is more cost effective than ground based work. As more of the dead standing willows fall over we will be able to use a helicopter to access a greater area of the wetland for control work.

It is pleasing to note that Fish and Game has negotiated for the Marlborough District Council, as mitigation for the Picton Water Supply take that is connected to the Tuamarina River, to contribute \$5000 per year towards willow control at Para for the next 30 years. This is a real positive from the resource consenting process.



^ Aerial spot spraying of willow regrowth.

Unfortunately lockdown came along when the wetland had just dried out enough to enable digger access so planned earthworks and plantings were delayed along with the opening of the gamebird hunting season. By the time opening weekend arrived in late May the rains had also returned and the wetland had filled up to normal winter time water levels. Opening weekend was largely a success at Para with most hunters achieving good bags of ducks, particularly in the southern and western areas of the wetland that had not dried out in the autumn. Once winter and the hunting season was over the rain again dried up and it has been a pretty dry spring at Para with wetland water levels being low. This has enabled the last of the kahikatea saplings that we had on hand, which were germinated and raised from seeds collected from the mature remnant grove of Kahikatea just downstream of Boat Point last time they fruited (3 years ago), to be planted. In addition the planned upgrade of the ford and culverts at Boat Point, in partnership with the Marlborough District Council, has been completed giving improved access and an ability to better manipulate water levels in the wetland. At the same time the car parking area at Boat Point has been tidied up and this has resulted in a significant reduction in the "fly tipping" of rubbish, which pleasingly has virtually ceased. Also some ground based willow control and weed releasing of native plantings has been achieved. The dry conditions have not been so good for waterfowl breeding and no broods have been observed this spring as at the time of writing (first week of November). However, the rains have arrived again and the wetland is now fill with water, which is encouraging for late waterfowl breeding success. It will be interesting to see what the rainfall patterns will be like over the next 12 months and how they impact our ability to complete work in the wetland and how they affect the waterfowl population.

COMPLIANCE

Fish & Game have a mandate to check 10% of hunters each year. There were 792 game licences sold in this region for the 2020 season, so it is expected that around 80 hunters will be checked over the course of the season.

OPENING DAY 2020

As we know, while the Covid restrictions meant the hunting season was unable to start on the usual first Saturday of May, fortunately we got a game bird season opening in late May, and hunters got their long awaited hunting.

From a ranging point of view Covid affected how Fish & Game could manage and allow rangers to participate, requiring taking all reasonable efforts that everyone was kept as safe as possible from contact with the virus. As a result, rangers had strict protocols when interacting with hunters, and also voluntary rangers were not used, rather just Fish & Game staff rangers.

We only had one compliance team out on Opening Day and concentrated on public land hunting around the Waimea/Motueka area. Mostly this was estuarine areas, though staff did venture up into the Motueka Valley and located a few hunters up there. The weather was in typical Tasman style placing the odds in favour of the ducks and as a result, bags were light.

Staff were surprised at the number of hunters out considering the delay to the season and the very challenging hunting the Waimea has a reputation for. It was good to see though, and all hunters spoken to were completely happy with the delayed start to the season, just glad to have a season of sorts. One or two had chosen really poor areas where ducks were unlikely to venture in to or even come close, and it was of no surprise that they had not even fired a shot.

No offences were detected for the 30 or so hunters that were spoken to, which was pleasing to see though fairly normal for public land compliance in this area.

Rangers also went out on the traditional 'first Saturday of May' to check whether any hunting was taking place due to the delayed start to the season. Pleasingly, zero hunters were detected hunting game birds, however there were reports of hunters targeting Canadian geese or other non-gazetted birds on 2nd May. It seemed that hunters got the message here and indeed around the rest of the country, and the Fish & Game national compliance team were pleased with the high levels of compliance.



^ A great Opening Day setup.

COMPLIANCE TARGET

Besides Opening Day, hunter compliance was also verified at various Fish & Game organised hunts, which, combined with Opening Day checks, saw a total of 76 licences checked for the 2020 season - just a shade under the target of 10% of LEQ's.



^ Lawson Davey ranging around Waimea Estuary on Opening Day.



GENERAL

RABBIT ISLAND TRAPPING GROUP

The Rabbit Island Trapping Group continues its fantastic conservation work in an effort to reduce the impact of predators on native and game birds.

While this year's efforts have also been impacted by covid restrictions, the group comprised of Robert Dodunski, Graeme Ivey and Chris Tonkin have visited the trap line consistently through the year.

Despite the considerable efforts of this group, pest numbers do not seem to diminish with effort, which is likely a result of having large areas of Rabbit Island not being controlled, and acting as feeder areas to the controlled parts of the island.

TOTAL PEST CATCH 2017-2020								
	Mice	Rats	Weasels	Stoat	Ferret	Possum	Hedgehog	Feral Cat
TOTAL	141	83	22	48	2	26	257	22

TOTAL
601

Around 600 pests have been destroyed since the group commenced, with the most abundant pest being hedgehogs, though stoats, rats and weasels are relatively abundant. Feral cats, too, are present in decent numbers however dedicated control of these did not take place this year due to time constraints, though it would be highly beneficial if this took place next winter.

All of this great work is beneficial for upland game on the island, but even more so for native taonga that call this area home, such as weka, kuaka (godwit), tōrea (oyster catchers), mioweka (banded rail), mātātā (fernbird), and kiotareke (marsh crane).

BELLS IS. BIRD MANAGEMENT PLAN

Fish & Game contributed information for the development of the Bells Island Bird Management Plan. For a number of years the build up of swan and geese has become a very real aviation concern, and there is a need to control birds in this location which have been seen in close proximity to the flight path as they travel between here and Wakapuaka.

It is likely that a moult cull will take place for geese and control of swan will occur perhaps annually or whenever a specified trigger is reached.

CROP DEPREDATION

A total of 58 crop depredation permits were issued for the 2019-20 year. A total of 28 were for paradise shelduck, 20 for pukeko, 8 for both shelduck and pukeko and 2 others (swan and mallard).

The delayed start to the season highlighted the importance of hunters in managing gamebird populations. During the three weeks leading up to the new season opener, there were a higher than normal number of crop protection permits issued for shelduck. Some of the farmers spoken to were reminded that early communication with F&G is important to help resolve crop protection issues before they become a serious financial issue.

MALLARD BANDING

Councillor Gauld banded around 50 mallard ducks from Appleton's pond in Brightwater in an attempt to get some data on their movements.

Two banded birds were shot that we know of during the season, one on Opening Day on the lower Waimea River and the other at the Waimea-Waiiti confluence area.



^ Ben Appleton with a banded mallard from Opening Day.

RMA ACTIVITY | ACCESS

RMA ACTIVITY

Advocacy work on behalf of hunters occurred on a number of issues. Our advocacy efforts within the Marlborough Environment Plan to improve wetland and hunting related provisions within the plan, including the legal status of existing maimais, was not addressed in the plan hearings decision. Some of these matters have now therefore been appealed to the Environment Court on behalf of hunters, and we are still awaiting the start of mediation on these matters.

Staff have also been involved with the collaborative Te Hoiere (Pelorus) exemplar catchment project which aims to ultimately improve the health of the Pelorus estuary. A range of organisations including Iwi, Council, landowners, forest and bird and several government agencies are involved with this. There may also be scope within some catchments to ultimately encourage the construction of on-farm wetland areas as part of this project which would benefit waterfowl.

ACCESS

On the hunting access front, staff engaged with a number of processes this year. Dialogue with the Kaikoura - Picton Whale Trail trust continues over their preferred route past Para Wetland.

Engagement with Nelson City Councils Resource Consent consultation process for a Wakapuaka Cycleway occurred, along with engagement with the Grovetown Lagoon Committee over continued safe hunting at the Lagoons now a walkway exists there.

Considerable dialogue between Fish & Game staff and the new Vernon Station manager also occurred, ultimately resulting in a combination lock/permit access for the Southern Wairau Lagoons access track that runs across private station land. While not ideal it is better than no access which was the starting point for the new farm manager.

Tasman District Council liaison over the continuation of hunting at Kainui Dam also took place, along with liaison with the regional Police Arms Officer over the legality of hunting in Golden Bay estuaries after ideologically driven complaints from a local anti-hunting resident.

Staff also engaged with the Overseas Investment Office sales process of Nelson Pine Limited to One Forty One forestry holdings. Staff identified where improved hunting access could potentially occur.

FORESTRY UPLAND GAME ACCESS

Staff submitted a comprehensive Recreational Management Plan for facilitated upland game hunting on Tasman Pine Forests Ltd (TPFL) estate. These forests are located in close proximity to urban areas such as Brightwater, Richmond and Wakefield.

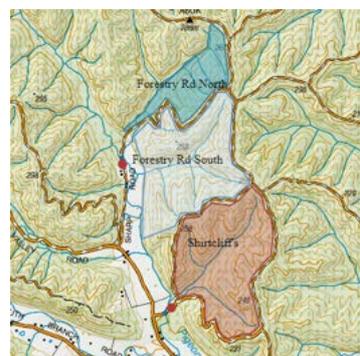
Fish & Game identified a number of good hunting blocks, notably the area affected by the Pigeon Valley fire which is, for the next few years, very good upland game habitat. The suggested arrangement of the hunting access would be for hunters to park at road end locations, and enter into forest areas on foot to hunt catchment sized blocks within a short walk of their vehicle, so no keys were required.

It was suggested that Fish & Game would manage the hunter permit system (including forestry/hunter safety) on behalf of TPFL.



^ Prime quail habitat in the Pigeon Valley. This block has been called Shirtcliffs and is close to road end parking.

While the hope was that a limited season would be held towards the end of the 2020 season, this did not eventuate due to a change in TPFL personnel, however it is expected that a hunting arrangement will be in place for the 2021 season.



^ A regional overview of the proposed hunting blocks, including the Pigeon Valley blocks that have been proposed.

APPENDIX

Location: Marlborough	2016	2017	2018	2019	2020	
Havelock Estuary 1	44	60	22	31	78	↑
Havelock Estuary 2 Kaikumera	33	39	9	8	77	↑
Havelock Estuary 3 Km road	5	2	19	7	12	↑
Havelock Estuary 4 Kaituna arm	25	26	56	74	60	↓
Mahikipawa Wheadon Ck	17	95	7	21	48	↑
Mahikipawa Taylors Ck	38	20	41	6	0	↓
Head of Mahikipawa	28	0	28	50	25	↓
Okiwa Bay	0	0	34	64	14	↓
Ngakuta Bay	0	9	9	2	0	↓
Para Swamp honey pot	5	1	0	9	17	↑
Para Swamp Dbl Mgt	17	1	12	0	0	↓
Bush Rd Pond Tuamarina	18	0	3	5	17	↑
Yealands pond	0	43	0	22	8	↓
Opawa River campground	17	38	54	8	9	↑
Waihopai Cemetary Pon	24	26	5	44	7	↓
PPCS pond	30	110	33	69	44	↓
Old Pond	100	110	144	159	136	↓
New Nth Bubbler	20	0	0	47	0	↓
New Sth Bubbler	20	0	23	0	0	↓
Nth Pond 2b	320	330	249	201	395	↑
Middle Pond 2C	210	230	490	383	302	↓
Sth Overflow/natural ponds	50	0	0	57	0	↓
Taylor DS SH1	26	12	71	69	57	↓
Springlands retirement village	76	57	91	161	131	↓
Bothams Bend	21	15	0	11	6	↓
Grovetown Lagoon (Wharf Rd)	110	172	220	37	74	↑
Grovetown Lagoon (Cemetary)	85	13	38	34	68	↑
Pollard Park	140	130	128	125	157	↑
Wairau Diversion	31	80	25	0*	23	↑
Total	1510	1619	1811	1704	1765	

APPENDIX

Location: Marlborough	2016	2017	2018	2019	2020	
Havelock Estuary 1	44	60	22	31	78	↑
Havelock Estuary 2 Kaikumera	33	39	9	8	77	↑
Havelock Estuary 3 Km road	5	2	19	7	12	↑
Havelock Estuary 4 Kaituna arm	25	26	56	74	60	↓
Mahikipawa Wheadon Ck	17	95	7	21	48	↑
Mahikipawa Taylors Ck	38	20	41	6	0	↓
Head of Mahikipawa	28	0	28	50	25	↓
Okiwa Bay	0	0	34	64	14	↓
Ngakuta Bay	0	9	9	2	0	↓
Para Swamp honey pot	5	1	0	9	17	↑
Para Swamp Dbl Mgt	17	1	12	0	0	↓
Bush Rd Pond Tuamarina	18	0	3	5	17	↑
Yealands pond	0	43	0	22	8	↓
Opawa River campground	17	38	54	8	9	↑
Waihopai Cemetary Pon	24	26	5	44	7	↓
PPCS pond	30	110	33	69	44	↓
Old Pond	100	110	144	159	136	↓
New Nth Bubbler	20	0	0	47	0	↓
New Sth Bubbler	20	0	23	0	0	↓
Nth Pond 2b	320	330	249	201	395	↑
Middle Pond 2C	210	230	490	383	302	↓
Sth Overflow/natural ponds	50	0	0	57	0	↓
Taylor DS SH1	26	12	71	69	57	↓
Springlands retirement village	76	57	91	161	131	↓
Bothams Bend	21	15	0	11	6	↓
Grovetown Lagoon (Wharf Rd)	110	172	220	37	74	↑
Grovetown Lagoon (Cemetary)	85	13	38	34	68	↑
Pollard Park	140	130	128	125	157	↑
Wairau Diversion	31	80	25	0*	23	↑
Total	1510	1619	1811	1704	1765	