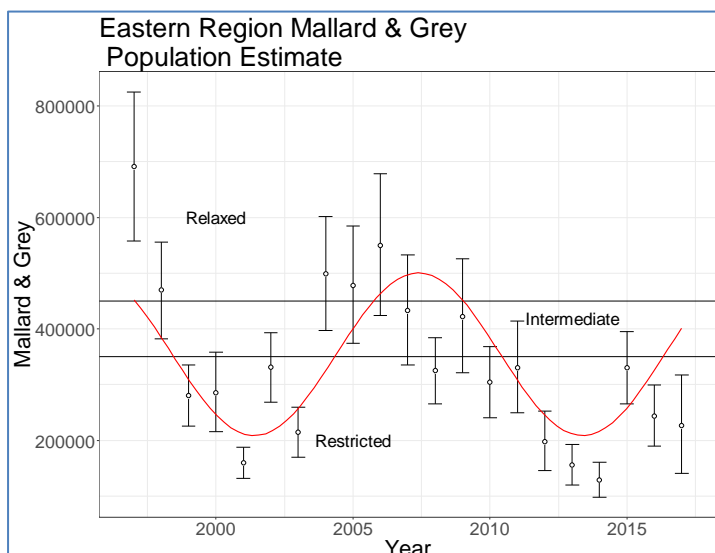


## Eastern Region

### Mallard monitoring.

Mallard trap results to date agree with model estimates (**Error! Reference source not found.**) that duck numbers are on the rise. Numbers trapped are on par with some of the highest trap years with the Reporoa-Broadlands trapping still not finished.



**Figure 1. Population estimates (mean  $\pm$ 95% credible interval<sup>1</sup>) of mallard and grey duck in the Eastern Region 1997-2017 with the three levels of regulation constraint: relaxed, intermediate, and restricted. The population levels (or thresholds) that separate these regulation constraints are shown by the two black solid lines (350,000 and 450,000).**

Recommended mallard and grey duck regulation are in the main the same as previous years (see *Appendix 1* and supporting meeting minutes *Appendix 2*) with one exception; the Council have proposed a special swan season (Management Area A1 and, a special pukeko season for the weekend of February 23 to 24 2019) to try and reduce numbers (refer do further discussion below).

The Council also wish to continue with the restricted mallard and grey duck regulations introduced last year for the Reporoa Area (Figure 2) following random aerial transect counts in this area showing the population is still low compared with other areas (**Figure 3**).

<sup>1</sup> Credible interval is a Bayesian statistic that is similar, but not the same as, a confidence limit. There is a 95% chance that the mean (in this instance) is within the interval.

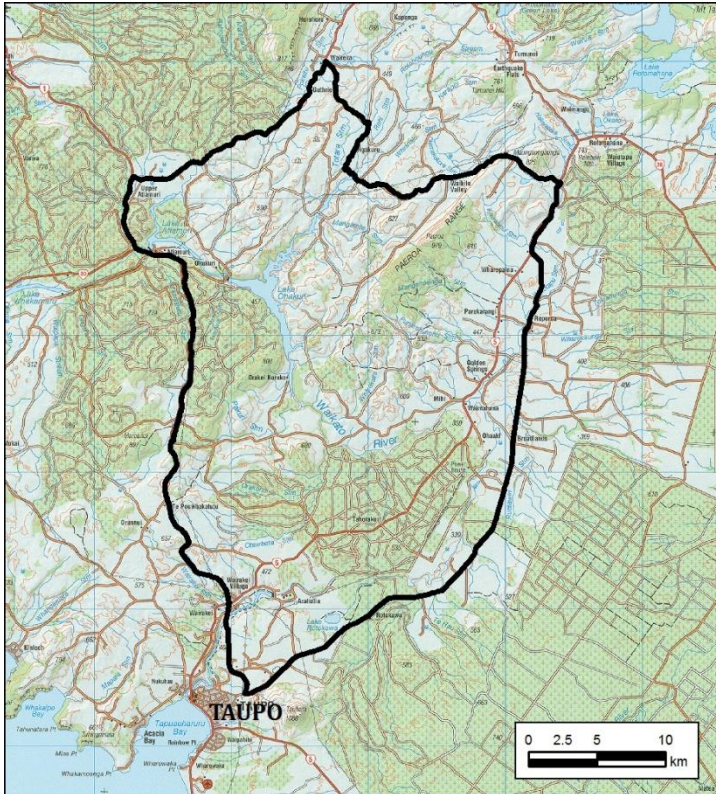


Figure 2. Map of Reporoa Area where a four week four mallard and grey duck limit will apply for the 2017 game season.

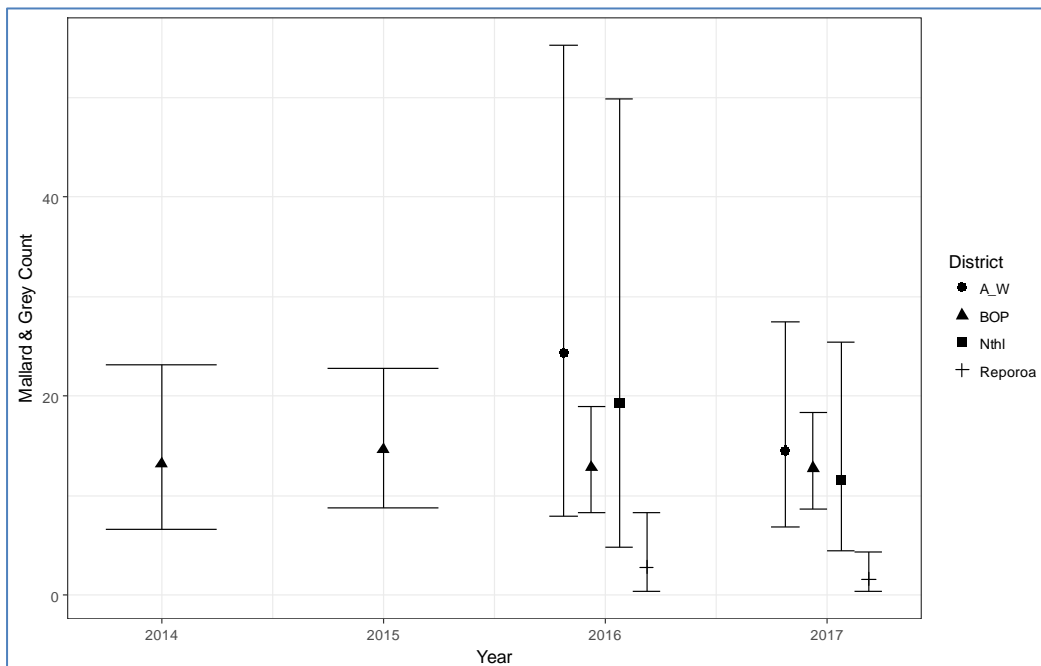


Figure 3. Mallard and grey duck counts (mean  $\pm$  95% credible interval) from aerial transects flown at 100m AGL 2014 –2017. AW=Auckland/Waikato Region, BOP=Bay of Plenty sub- region, NI= Northland Region, Re=Reporoa sub-region.

## Paradise shelduck monitoring

Long term (16 years) trend counts indicate the population of paradise shelduck are stable in all management units although A2 may be showing a small decline (Table 3). Regulation criteria and recommended regulations are given in Table 1 to Table 4. Season regulations are the same as the 2017 season.

**Table 1 Paradise shelduck level of regulation constraint for an assessed population trend.**

Paradise Long term trend	CONSTRAINT
Negative i.e. population declining	Restricted
Zero i.e. population stable	Intermediate
Positive i.e. population growing.	Relaxed

**Table 2: Paradise shelduck regulations for a given level of constrain**

Constraint	Area	Season Length (weeks)	Bag Limit
Restricted	A1 & A2	4	4
	B2 & B1 South of true right bank Uawa River Mouth	4	4
Intermediate	A1, A2	8	6
	B2 & B1 South of the true right bank Uawa River Mouth	8	10
Relaxed	A1, A2, B2 & B1 South of the true right bank Uawa River Mouth	10	10
Fixed Season condition	B1 North of the true right bank Uawa River Mouth	10	20

Table 3: Paradise shelduck monitoring results showing percentage change (trends) over the last 16 years.

AREA	A1	A2	B1	B2
MEAN	-7.4%	-7.7%	-7.9%	-1.4%
95% CI	-16.2%	-14.4%	-19.6%	-12.8%
95% CI	2.4%	-0.4%	5.4%	11.4%
N	24	7	20	8
TOTAL 2017	5399	2326	3445	1658
TOTAL 2018	4590	1545	3365	1019

Table 4. Recommended paradise shelduck regulations for the 2018 game season.

	A1	A2	B1	B2	B1 North of the true right bank Uawa River Mouth
Population Trend	Stable	Stable	Stable	Stable	Fixed
Season Length		8	8	8	10
Bag Limit		6	6	10	20

## Black swan

Monitoring of black swan indicate the population is fundamentally the same as last year (Table 7) resulting in the same regulations. Criteria and results are given in Table 5 to Table 7.

The summer population of black swan in management area A1 has increased in the last few years particularly on Tauranga Harbour (>6000), probably following the collapse of the macrophyte beds in many of the Waikato lakes. Some locals and the Regional Council have expressed concerns around the impact swan are having on the sea grass beds (*Zostera sp.*)<sup>2</sup>. Fish and Game believe there is a genuine concern around the state of the *Zostera* beds but consider other factors such as sedimentation from the harbours catchment are probably playing a major part. Irrespective of this it is probably pertinent to take short term measures to alleviate the impact and reducing swan numbers is the easiest option.

The Eastern Council therefore are proposing the weekend of February 23 to 24 2019 for a special swan shoot.

<sup>2</sup> *Zostera* beds provide habitat for a large variety of marine life and are particularly important rearing habitat for commercial and recreational species such as snapper.

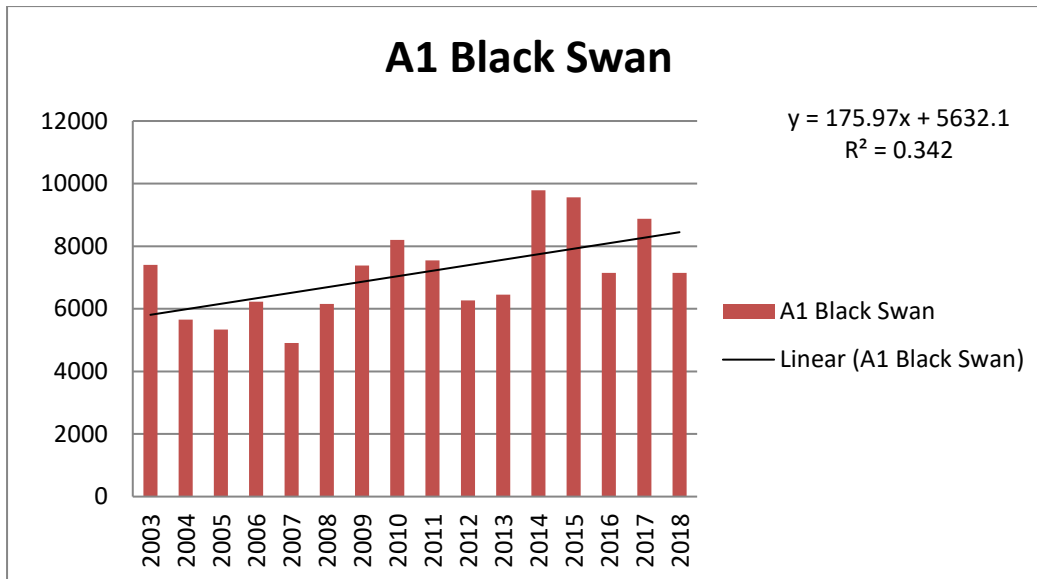


Figure 4. Black swan counts 2003 - 2018

Table 5. Black swan level of regulation constraint for the population size and trend.

Black swan Population Size	Trend	Season Conditions
Low (below 1000)	Negative	Restricted
Low (below 1000)	Zero	Restricted
Low (below 1000)	Positive	Restricted
Moderate (between 1000 and 3000)	Negative	Intermediate
Moderate (between 1000 and 3000)	Zero	Intermediate
Moderate (between 1000 and 3000)	Positive	Relaxed
Greater than 3000	Negative	Relaxed
Greater than 3000	Zero	Relaxed
Greater than 3000	Positive	Relaxed

**Table 6. Black swan regulations for a given level of constrain**

Constraint	Area	Season Length (weeks)	Bag Limit
Restricted	All Areas	Nil	Nil
Intermediate	A1, A2 & B1	8	2
	B2	6	4
Relaxed	All Areas	16	No Limit

**Table 7. Black swan monitoring results showing percentage change (trends) over the last 15 years.**

	A1	A2	B1	B2
<b>MEAN</b>	-2.64%	-2.02%	5.49%	-3.13%
<b>95% CI</b>	-6.39%	-6.94%	-2.03%	-10.78%
<b>95% CI</b>	1.26%	3.15%	13.58%	5.17%
<b>N</b>	27	12	5	9
<b>TOTAL 2017</b>	8872	2404	282	733
<b>TOTAL 2018</b>	8358	2264	162	261

**Table 8. Recommended black swan regulations for the 2018 game season.**

Area	A1	A2	B1	B2
Season Condition	Relaxed	Intermediate	Restricted	Restricted
Season Length	16	8	Nil	Nil
Bag Limit	No Limit	2	Nil	Nil

## Pukeko

The Eastern Fish and Game Sports Fish and Game Management Plan (SFGMP) sets out to mitigate the impact of game birds on agriculture and horticulture. The SFGMP also states that the Council will endeavour to increase opportunity for hunters. Pukeko are a common species in the Eastern Region that is often reported to damage crops. In this last year we issued approximately 20 permits to disturb pukeko. The 2017 annual game bird harvest survey for the Eastern region estimates that 400 - 1500 pukeko were shot. This is well below the estimated 23,000 mallard which are probably in similar numbers to the pukeko.

The Council believe and recommend a one weekend season (23 to 24 February 2019) for the whole of the Region on the grounds that it is sustainable and meets two of the objectives of the SFGMP.

## Appendix 1

### EASTERN FISH AND GAME REGION<sup>3</sup>

#### 1 Game That May be Hunted or Killed—Duration of 2018/2019 Season

Species	Season Duration (dates inclusive)	Daily Bag Limit	Hunting Area
Grey/mallard duck	5 May to 17 Jun 2017	8	All areas except the Reporoa Area
	5 May to 3 Jun 2018	4	The Reporoa Area
NZ shoveler duck	5 May to 3 Jun 2018	2	All areas
Paradise shelduck	5 May to 1 Jul 2018	6	Area A1, A2
	5 May to 1 Jul 2018	10	Area B2 and that part of B1, which lies south of the true right bank of the Uawa River Mouth, Tolaga Bay
	5 May to 15 Jul 2018	20	That part of B1, which lies north of the true right bank of the Uawa River Mouth, Tolaga Bay
Pukeko	5 May to 26 Aug 2018	10	All areas
	23 and 24 Feb 2019	No limit	All areas
Black swan	5 May to 26 Aug 2018	No limit	Area A1
	23 and 24 Feb 2019	No limit	Area A1
	5 May to 1 July 2018	2	Area A2
	Closed season	0	Area B1 & B2
Bobwhite (Virginian) quail	5 May to 26 Aug 2018	No limit	All areas
Brown quail	5 May to 26 Aug 2018	5	All areas
California quail	5 May to 26 Aug 2018	No limit	Area A1 & A2
	5 May to 26 Aug 2018	5	Area B1 & B2
Cock pheasant	5 May to 26 Aug 2018	5	All areas excluding upland game properties with special conditions specified in clause 6 for this Region
Pheasant, both sexes	5 May to 26 Aug 2018	No limit	Upland game properties with special conditions specified in clause 6 for this Region
Cock pheasant	27 Aug to 16 Sep 2018	No limit	Upland game properties with special conditions specified in clause 6 for this Region (junior hunters only)

<sup>3</sup>Reference to Description: *Gazette*, No. 83, of 27 May 1990, at page 1861

Red legged partridge      5 May to 26 Aug 2018      No limit      Upland game properties with special conditions specified in clause 6 for this Region

## 2 Definition of Areas

The following descriptions refer to Local Authority Boundaries described on the Infomap 242B-2 Land Information New Zealand for the Eastern Fish and Game region.

- (1) **Area A1:** Tauranga District, Western Bay of Plenty District, that part of the South Waikato District within the Eastern Fish and Game region and east of State Highway 1, Rotorua District, Kawerau District, Whakatane District and Opotiki District.
- (2) **Area A2:** Those parts of the South Waikato District west of State Highway 1 within the Eastern Fish and Game region, Taupo District and Ruapehu District, which lie within the Eastern Fish and Game region.
- (3) **Area B1:** Gisborne District.
- (4) **Area B2:** That part of Wairoa District within the Eastern Fish and Game region.
- (5) **Reporoa Area:** That area bounded by Waikite Valley Road (Waiotapu) to SH 5 to Settlers Road which becomes Broadlands Roads to SH 1 (Taupo Bypass) to SH 30 to Whirinaki Valley Road (Ngakuru) to Waikite Valley Road.

## 3 Shooting Hours

6.15am to 6.15pm in all areas for all species during their respective seasons.

## 4 Decoy Limit

No limit.

## 5 Special Conditions

- (1) No person may hunt or kill game birds, as specified, within the Eastern region with any magazine shotgun unless the shotgun:
  - (a) has a magazine of any type adjusted with a one piece filler which is incapable of removal without disassembling the gun; or
  - (b) the magazine is pinned in accordance with Regulations made under this Act; so that the magazine shotgun is incapable of holding more than 2 shells in the magazine, with no more than 3 shells in the magazine and chamber combined, at any one time.
- (2) No maimai shall impede the use of navigable channels in the Tauranga Harbour, Ohiwa Harbour, Little Waihi Estuary, Lake Aniwhenua and Lake Taupo.
- (3) Maimais erected in the Little Waihi Estuary, Lake Aniwhenua, Ohiwa Harbour, Stump and Waihi bays of Lake Taupo must be dismantled and removed within 2 weeks of the close of the season (ie by 9 September 2018).
- (4) Any licensed game bird hunter who has a Department of Conservation permit to take or kill wildlife for the purpose of hawking may hunt with an Australasian Harrier (*Circus approximans*) to take game birds. This is subject to the season length and bag limit for game birds specified in clause 1 of this notice for this Region and subject to any condition imposed by the Director-General of Conservation under such a permit.

## 6 Upland Game Properties with Special Conditions



- (1) **Pirini Family Trust:** The property is located 8 kilometres up the Bush Road from Pongokawa. It is bounded by Pongakawa River, Rotoehu Forest and Bush Road, Sections 4, 5 and 7 SO 7437 Block IX Waihi South Survey District. The property is leased by N. Raven.
- (2) **Equine and Cropp Farms:** The property is located approximately 6 kilometres in a north-west direction from Lake Rotoehu with Rotoehu Road and Fletcher Challenge's Rotoehu Forest on the main boundaries. It is made up of 283 hectares being entirely enclosed within deer fence, DPS 17091. The property is owned by Equine Estate Limited. Also the "Cropp Farm" (C A Cropp), 1410 Rotoehu Road; being 316ha Sec 17 SO 17091 Secs 22 23 SO 49960 Blk 1 Rotoma SD described as seven kilometres in a north-west direction from Lake Rotoehu and is bounded by Rotoehu road to the east and Christophers Forest to the North, with the western boundary formed by the Pongakawa stream.
- (3) **Prime Pine:** The property is located on the Matata Highway and consists of some 120 hectares of pine forest. DPS 58240. It is bounded by Hingston, Fraser, Prinz and Knight properties. The property is owned by Prime Pine Partnership.
- (4) **Totara Lodge Taupo:** 1093 State Highway 1, RD 1, Wairakei, being 1,478 hectares in total and consisting of Tatua East No 17 Blocks II and IV Tuhingamata West Survey District, Lots 1, 2, 4 and 5 DPS 61926 Tatua East No 18 Block V Tatua Survey District Blocks II and IV Tuhingamata West Survey District, Lot 3 DP 338327. The property is owned by E. F. Deadman Limited.
- (5) **Coates Road Waikite Valley.** The property is located at 123 Coates Road, Waikite Valley, covering an area of 389 hectares, adjacent to and, at the end of, Coates Road described as Lots 1 & 3 DPS 8775 Section 2-5 SO 60470 Lot 2 DPS 476535. The property is owned by M & S Stokman.

## Appendix 2

### 10.0 2018 Game Season Conditions – Extract from unconfirmed November 2017 minutes

- 10.1 Council considered further Game Season Conditions requiring discussion and/or resolutions at this meeting. Andy Garrick pointed out that Recommendation 4.5 relating to the Waewaetutuki wetland had been resolved at the October meeting of Council and did not require further discussion.
- 10.2 Cr Barry Roderick suggested that Council confirms Items 4.3 and 4.4 as recommended before further discussion on items 4.1, 4.2, 4.6 and 4.7.
- 10.3 Agreed (Barry Roderick/Ken Coombes) that the 2018 season conditions for shoveler duck be a two bird bag limit for four weeks. [17/11/10.3]**
- 10.4 Agreed (Barry Roderick/Ken Coombes) that the remaining conditions for the 2018 season are as proposed in Appendix 2. [17/11/10.4]**
- 10.5 Referring to Items 4.6 and 4.7 Cr Lindsay Lyons queried the bag limit of 10 per person and whether this shouldn't be unlimited? Matt McDougall confirmed that Recommendations 4.6 and 4.7 regarding the special seasons should have been written as "unlimited bag limits" and that the limit of 10? per person was presented in error.
- 10.6 Agreed (Ken Coombes/Alan Baird) that a special black swan season be held on one weekend (two days) in February 2019 in Management Area A1 with an unlimited daily bag limit. [17/11/10.6]**

- 10.7** *Agreed (Ken Coombes/Alan Baird) that a special pukeko season be held on the same weekend in February for all of the Eastern Region with an unlimited daily bag limit. [17/11/10.7]*
- 10.8 Council discussed Recommendation 4.1 relating to the restricted season proposed for the Reporoa/Broadlands/upper Waikato River areas. Cr Ken Coombes queried whether the population might have increased as he had seen some good numbers of mallards in places this spring and what appeared to be a lot of breeding occurring? Nigel Simpson confirmed that the area on the corner of Ohaaki Road was a stand out spot but questioned whether this was an isolated example, as the Reporoa area more generally was still showing low numbers. He felt that birds were in prime spots but they were not there in high enough numbers to spread out to secondary locations as had been seen elsewhere. Council supported Nigel's recommendation to extend the restriction for a further year and acknowledged that the change implemented last season was not considered to have been sufficient to make a real difference yet.
- 10.9** *Agreed (Barry Roderick/Peter Storey) that Council reaffirms the restricted season for mallard and grey duck in the Reporoa/Broadlands/upper Waikato River area of 4 weeks/5 weekends with a bag limit of 4. [17/11/10.9]*
- 10.10 Council discussed Recommendation 4.2 relating to the boundaries of the Reporoa area in which restricted conditions will apply, and whether it should also include the Reporoa basin which was omitted from it during the 2017 game season. Matt McDougall provided his reasoning behind the area gazetted for the 2017 season which was that it was easy to describe and captured most sites hunted within the wider area of concern, while Nigel Simpson provided an alternative perspective which included the confusion likely to arise for some hunters in naming the restricted area as the Reporoa Area when it did not actually include Reporoa. Cr Ken Coombes felt that it would be a mistake to alter the boundaries of the area now as most people had adapted to it last season, and Matt McDougall agreed that it might cause additional confusion if it was to be altered for the coming season.
- 10.11** *Agreed (Ken Coombes/Alan Baird) that Council retains the status quo for the description accompanying the gazettal of the Reporoa Area for the 2018 Game Bird Season. [17/11/10.11]*