



LAKE SOMERSET
AUSTRALIAN BASS AND GOLDEN PERCH 2011-2020
2020 REVIEW



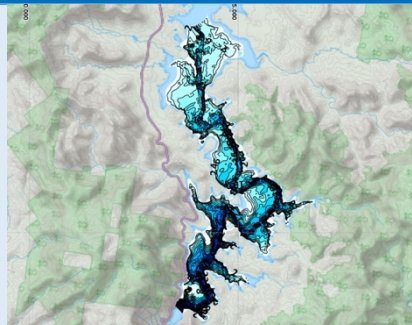


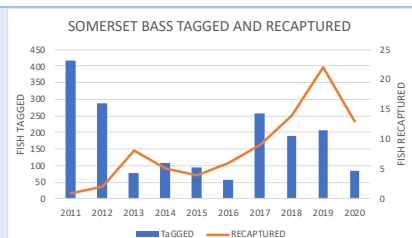
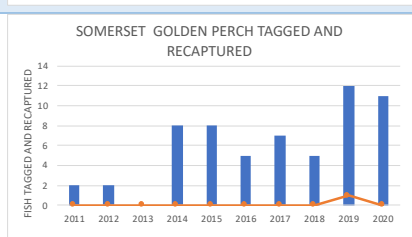
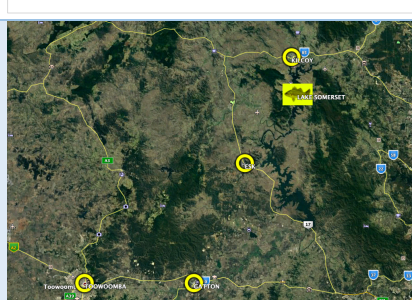
Stocked fish numbers, tagged and recaptured fish, catch rates, fish sizes, growth, survival, locations and recapture fisher postcodes



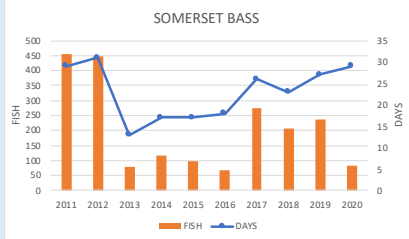
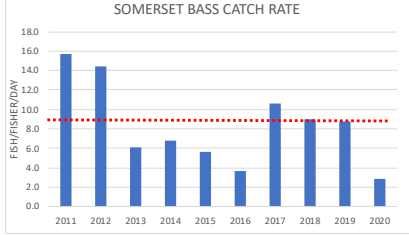
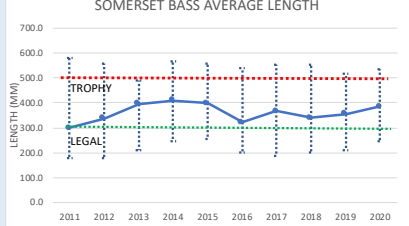
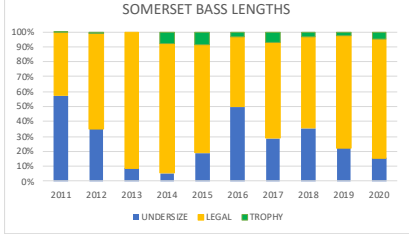
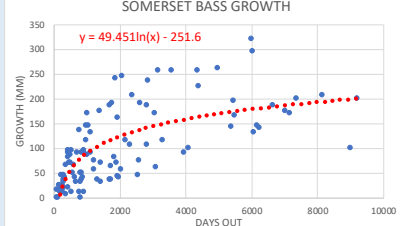
The following dashboard provides a summary of Australian Bass and Golden Perch data from Lake Somerset covering the past 10 years.

Summary



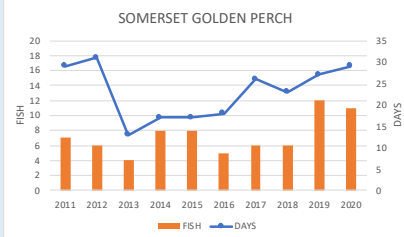
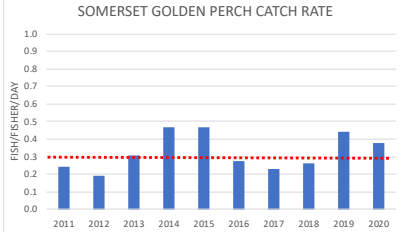
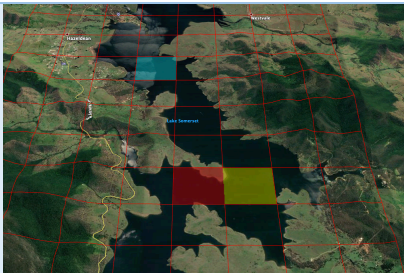
- Dam level on 31 Dec 2020 was 74.9%
- From 2011-2018 there were 1.08M Bass and 611.8K Golden Perch fingerlings released
- From 2011- 2020 there were 1,781 Bass tagged for 84 recaptures (4.7%) while there 60 Golden Perch tagged for 1 recapture (1.7%)
- The catch rate for Bass in 2020 was 2.9 fish/fisher day well below the 10 year average historic catch rate of 9.0 fish/fisher day while for Golden Perch it was 0.4 fish/fisher day just above the long term average of 0.3 fish/fisher day
- The catch rate for Bass has declined over the past 4 years from 10.6 to 2.9 fish/fisher day
- The average length of Bass in 2020 was 384mm and ranged from 245-535mm
- The percentage of legal Bass in 2020 was 79.5% with 4.8% trophy fish 500mm and over
- Over the past 10 years most Bass have been tagged in LS01 map grids N6, N4, M6 and N5 while most Golden Perch were tagged in grids N5, N6 and J4
- Annual Bass growth calculated from tag recaptures at the end of year 1 is 40mm and at the end of year 5 is 120mm
- Longest time out for a tagged Bass is 25.25 years with 3 fish out for over 20 years
- There were 50 Bass recaptured below the dam with 11 in Lake Wivenhoe and 39 in the Brisbane River with almost all tagged before the 2011 flood and recaptured after
- Over the past 10 years most postcodes of fishers recapturing fish in the lake are 4343 (Gatton area), 4350 (Toowoomba) and 4515 (Kilcoy area)
- There have been 4 fish recaptured by fishers with postcodes outside Queensland with 3 from NSW and 1 from VIC



Infofish Australia
January 2021

LAKE SOMERSET	LOCATION	BATHYMETRY																										
																												
MEASURE	ACTUAL	GRAPH																										
Surface area Lake level	Surface area 42.1km ² Level at 31 Dec 2020 74.9% For latest level https://www.segwater.com.au/historic-dam-levels																											
Fingerlings stocked 2011-2018	<table><tr><th></th><th>HIGHEST</th><th>LOWEST</th><th>TOTAL</th></tr><tr><td>BASS</td><td></td><td></td><td></td></tr><tr><td>2014</td><td>2017</td><td></td><td></td></tr><tr><td>238.0K</td><td>0</td><td>1.08M</td></tr><tr><td>GOLDEN PERCH</td><td></td><td></td><td></td></tr><tr><td>2011</td><td>2017</td><td></td><td></td></tr><tr><td>161.5K</td><td>0</td><td>611.8K</td></tr></table>		HIGHEST	LOWEST	TOTAL	BASS				2014	2017			238.0K	0	1.08M	GOLDEN PERCH				2011	2017			161.5K	0	611.8K	
	HIGHEST	LOWEST	TOTAL																									
BASS																												
2014	2017																											
238.0K	0	1.08M																										
GOLDEN PERCH																												
2011	2017																											
161.5K	0	611.8K																										
Bass tagged and recaptured 2011-2020	<table><tr><th></th><th>TAGGED</th><th>RECAPTURED</th></tr><tr><td>1781</td><td>84</td><td></td></tr><tr><td>RECAPTURE RATE</td><td></td><td>4.7%</td></tr></table>		TAGGED	RECAPTURED	1781	84		RECAPTURE RATE		4.7%																		
	TAGGED	RECAPTURED																										
1781	84																											
RECAPTURE RATE		4.7%																										
Golden Perch tagged and recaptured 2011-2020	<table><tr><th></th><th>TAGGED</th><th>RECAPTURED</th></tr><tr><td>60</td><td>1</td><td></td></tr><tr><td>RECAPTURE RATE</td><td></td><td>1.7%</td></tr></table>		TAGGED	RECAPTURED	60	1		RECAPTURE RATE		1.7%																		
	TAGGED	RECAPTURED																										
60	1																											
RECAPTURE RATE		1.7%																										
Postcodes of recapture fishers 2011-2020	<table><tr><th></th><th>Recaptures</th><th>132</th></tr><tr><th>POSTCODE</th><th>FISHERS</th><th></th></tr><tr><td>4343</td><td>13</td><td></td></tr><tr><td>4515</td><td>11</td><td></td></tr><tr><td>4350</td><td>10</td><td></td></tr><tr><td>NSW</td><td>3</td><td></td></tr><tr><td>VIC</td><td>1</td><td></td></tr><tr><td>No code</td><td>11</td><td></td></tr></table>		Recaptures	132	POSTCODE	FISHERS		4343	13		4515	11		4350	10		NSW	3		VIC	1		No code	11				
	Recaptures	132																										
POSTCODE	FISHERS																											
4343	13																											
4515	11																											
4350	10																											
NSW	3																											
VIC	1																											
No code	11																											



LAKE SOMERSET			AUSTRALIAN BASS		
					
MEASURE	ACTUAL		GRAPH		
Catch and effort number of fish fisher days T20 fishers (taggers) 2011-2020	HIGHEST	LOWEST			
	CATCH				
	2011	2016			2020
	454	66			83
	EFFORT				
2011	2013	2020			
	29	13	29		
Catch rate Fish/fisher day 2011-2020	HIGHEST	LOWEST			
	CATCH RATE				
	2011	2016			2020
	15.7	3.7			2.9
	10 YEAR AVERAGE				9.0
Average length (mm) Bars show smallest and largest fish 2011-2020	HIGHEST	LOWEST			
	AVERAGE LENGTH				
	2014	2011			2020
	409	300			384
	LARGEST				
2011	2013	2020			
	580	490	535		
Fish lengths percentage Undersize <300mm Legal 300-499mm Trophy 500+mm 2011-2020	HIGHEST	LOWEST			
	LEGAL				
	2013	2011			2020
	91.3	42.1			79.5
	TROPHY				
2015	2013	2020			
	8.4	0	4.8		
Bass growth based on recaptures (lake fish only) 2011-2020	Recaptures	103			
	ANNUAL GROWTH				
	Year 1	40mm			
	Year 2	74mm			
	Year 3	94mm			
	Year 4	109mm			
	Year 5	120mm			

Bass survival based on recaptures (802) by years out after tagging	<table><tr><th colspan="2">Survival rate by years out</th></tr><tr><th>Year</th><th>Recaptures</th></tr><tr><td>1</td><td>802</td></tr><tr><td>5</td><td>368</td></tr><tr><td>10</td><td>130</td></tr><tr><td>20</td><td>3</td></tr><tr><td colspan="2">Longest time out (years)</td></tr><tr><td>25.25</td><td>1</td></tr></table>	Survival rate by years out		Year	Recaptures	1	802	5	368	10	130	20	3	Longest time out (years)		25.25	1	
Survival rate by years out																		
Year	Recaptures																	
1	802																	
5	368																	
10	130																	
20	3																	
Longest time out (years)																		
25.25	1																	
Grid locations of tagged fish (map LS01) 2011-2020	<table><tr><th colspan="2">Grids where most fish caught</th></tr><tr><th>GRID</th><th>FISH</th></tr><tr><td>N6</td><td>434</td></tr><tr><td>M6</td><td>240</td></tr><tr><td>N4</td><td>236</td></tr><tr><td>N5</td><td>190</td></tr></table>	Grids where most fish caught		GRID	FISH	N6	434	M6	240	N4	236	N5	190					
Grids where most fish caught																		
GRID	FISH																	
N6	434																	
M6	240																	
N4	236																	
N5	190																	
Bass movement inside impoundment 2011-2020	<table><tr><td>Recaptures</td><td>69</td></tr><tr><td>Recaptured same area</td><td>32 (46.4%)</td></tr><tr><td>Up lake</td><td>28</td></tr><tr><td>Down lake</td><td>10</td></tr><tr><td>Outside lake</td><td>3</td></tr></table>	Recaptures	69	Recaptured same area	32 (46.4%)	Up lake	28	Down lake	10	Outside lake	3							
Recaptures	69																	
Recaptured same area	32 (46.4%)																	
Up lake	28																	
Down lake	10																	
Outside lake	3																	
Bass recaptured outside impoundment All years	<table><tr><td>Outside impoundment</td><td>51</td></tr><tr><td>Above lake</td><td>1</td></tr><tr><td>Below lake</td><td>50</td></tr><tr><td>Lake Wivenhoe</td><td>11</td></tr><tr><td>Brisbane River</td><td>39</td></tr></table>	Outside impoundment	51	Above lake	1	Below lake	50	Lake Wivenhoe	11	Brisbane River	39							
Outside impoundment	51																	
Above lake	1																	
Below lake	50																	
Lake Wivenhoe	11																	
Brisbane River	39																	
Bass recaptured outside impoundment All years																		

LAKE SOMERSET			GOLDEN PERCH	
				
MEASURE	ACTUAL		GRAPH	
Catch and effort number of fish fisher days T20 fishers (taggers) 2011-2020	HIGHEST	LOWEST		
	CATCH			
	2019	2013		
	2020			
	12	4		
11				
EFFORT				
2011	2013	2020		
29	13	29		
Catch rate Fish/fisher day 2011-2020	HIGHEST	LOWEST		
	CATCH RATE			
	2015	2012		
	2020			
	0.5	0.2		
0.4				
10 YEAR AVERAGE		0.3		
Grid locations of tagged fish (map LS01) 2011-2020	Grids where most fish caught			
	GRID	FISH		
	N5	11		
	N6	9		
	J4	6		



Product of Infotech Australia



Supported by Suntag and FFSAQ

Data sources

Data used in the Impoundment Crystal Bowl are:

- Tag records and recapture records for the impoundment at <http://crystalbowl.infofishaustralia.com.au/>
- Dam level data from SEQwater at <https://www.seqwater.com.au/historic-dam-levels>
- Stocked fish records from <https://www.data.qld.gov.au/dataset/queensland-freshwater-fish-stocking-records/>
- Bathymetric data from Infofish surveys or other sources

Basis for analysis

- Catch rates calculated as number of fish tagged/fisher/day for T20 fishers (taggers) with a minimum of 12 fisher days (at least 1 per month) to provide a reliable catch rate
- Undersized fish are <300mm, legal fish are ≥300 and <500mm and trophy fish are ≥500mm
- Growth calculated using logarithmic curve from recaptures where fish were out for 90 days or more and had positive growth
- Locations based on Infofish grid map LS01 for the impoundment and f other grid maps where fish were recaptured outside the impoundment