CRYSTALBOWL

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

AVAILABLE		AVAILABLE	
Dam capacity	✅	Storage level	✅
Stocked fish numbers	✅	Bathymetry	
Tagged fish	✅	Recaptures	✅
Postcodes	✅	Competitions	
Species		Australian Bass	
Catch rates	✅	Fish sizes	✅
Growth	✅	Survival	✅
Tag locations	✅	Fish Movement	✅
Species		Golden Perch	
Catch rates		Fish sizes	
Growth		Survival	
Tag locations		Fish Movement	

Summary

- From 2011-2018 there were 228.8K Bass and 225.1K Golden Perch fingerlings released
- The number of fingerlings released was roughly the same but there were 2,404 Bass tagged for 133 recaptures (5.5%) while there were just 87 Golden Perch tagged for 0 recaptures
- The historic catch rate for Bass was 9.1 fish/fisher day while the catch rate in 2020 was 4.1 and reached a high of 15.3 in 2019
- The average length of tagged Bass ranged from a high of 373mm in 2016 to a low of 280mm in 2011 while in 2020 it was 349mm
- The percentage of legal Bass ranged from a high of 92.8% in 2016 to a low of 34.4% in 2011 and was 76.4% in 2020
- Over the past 10 years most Bass have been tagged in LCG map grids G8, E11 and D10
- Annual growth for Bass calculated from tag recaptures at the end of year 1 is 32mm and at the end of year 5 is 94mm
- The longest time out for a Bass after tagging is 11.8 years
- Of the 90 fish recaptured over the past 10 years 2 have been recaptured below the dam in 3 Moon Creek in the Monto area
- Based on postcodes of fishers recapturing fish most were from Bundaberg (21%), Rockhampton (15%), South East Qld (13%), Central Qld (13%) and Interstate (10%)
- There were 13 fish recaptured by fishers with postcodes outside Queensland with 8 from NSW, 2 from VIC and 3 from SA

Infofish Australia

March 2021

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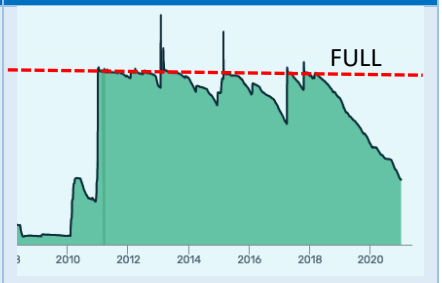
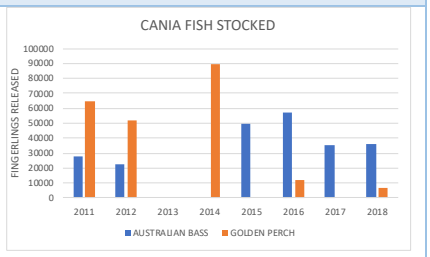
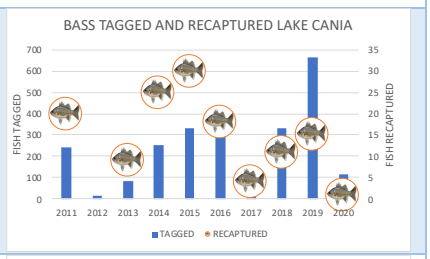
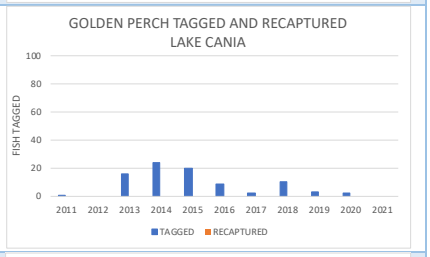
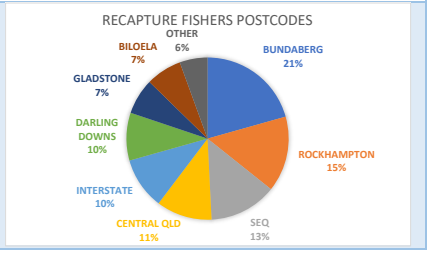
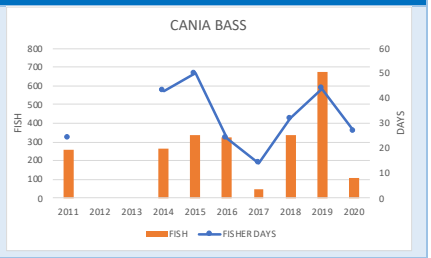
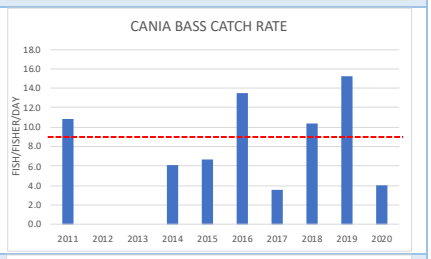
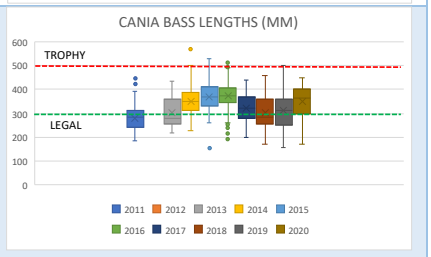
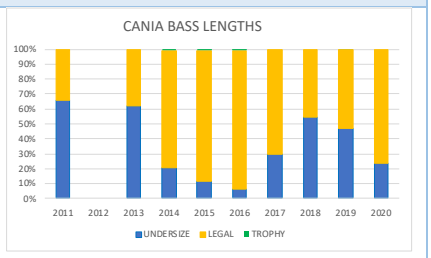
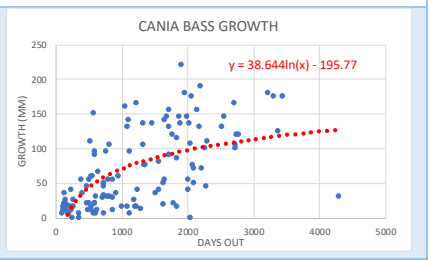
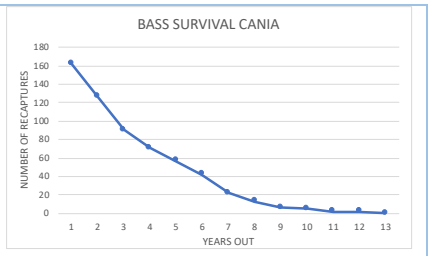
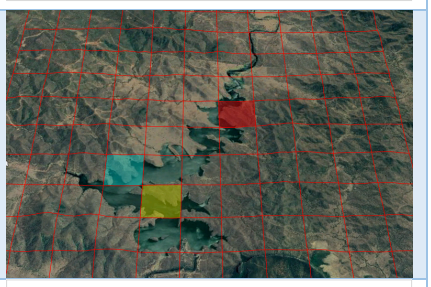
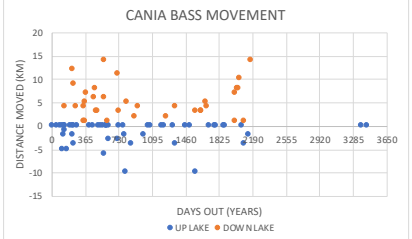
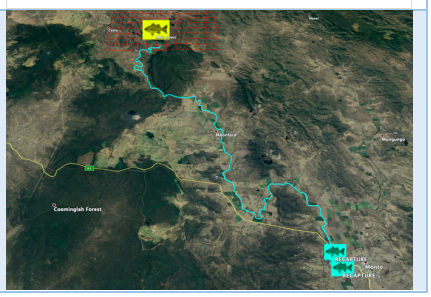
LAKE CANIA	LOCATION	BATHYMETRY
		

MEASURE	ACTUAL	GRAPH
Surface area **Lake capacity**	Surface area 7.2km^2 Level at 31 Dec 2020 39% For latest level https://www.sunwater.com.au/water-data/historical-dam-capacity/	
Fingerlings stocked **2011-2018**	HIGHEST LOWEST TOTAL BASS 2016 2014 56.8K 0 228.6K GOLDEN PERCH 2014 2017 89.2K 0 225.1K	
Bass tagged and recaptured **2011-2020**	TAGGED RECAPTURED 2404 133 RECAPTURE RATE 5.5%	
Golden Perch tagged and recaptured **2011-2020**	TAGGED RECAPTURED 87 0 RECAPTURE RATE 0%	
Postcodes of recapture fishers **2011-2020**	Region Fishers Bundaberg 21% Rockhampton 15% South East Qld 13% Central Qld 11% Interstate 10%	

LAKE CANIA

AUSTRALIA BASS

MEASURE	ACTUAL	GRAPH
Catch and effort **number of fish** **fisher days** **T20 fishers** **2011-2020**	HIGHEST LOWEST NOW CATCH 2019 2017 2020 672 50 110 EFFORT 2015 2017 2020 50 14 27	
Catch rate **Fish/fisher day** **2011-2020**	HIGHEST LOWEST NOW CATCH RATE 2019 2017 2020 15.3 3.6 4.1 10 YEAR AVERAGE 9.1	
Average length (mm) **Bars show smallest and** **largest fish** **2011-2020**	HIGHEST LOWEST NOW AVERAGE LENGTH 2016 2011 2020 373 280 349 LARGEST 2014 2017 2020 570 440 450	
Fish lengths percentage **Undersize <300mm** **Legal 300-499mm** **Trophy 500+mm** **2011-2020**	HIGHEST LOWEST NOW LEGAL 2016 2011 2020 92.8 34.4 76.4 TROPHY 2015 2018 2020 0.9 0 0	
Bass growth at the end of each year **based on recaptures all years**	Recaptures 127 ANNUAL GROWTH Year 1 32mm Year 2 59mm Year 3 75mm Year 4 86mm Year 5 94mm	

Bass survival based on recaptures by years out after tagging	Survival rate by years out Year Recaptures 1 162 5 57 10 5 Longest time out (years) 11.8	
Grid locations of tagged fish (map LCG) 2011-2020	Grids where most fish caught GRID FISH G8 488 E11 269 D10 260	
Bass movements (km) 2011-2020	Recaptures 90 Recaptured same area 36 (40.0%) Up lake Down lake 17 35	
Bass recaptured outside impoundment	Recaptures below lake 2 Below dam in 3 Moon Creek near Monto 48km 55km Recaptures above lake 0	

LAKE CANIA		GOLDEN PERCH
		
MEASURE	**ACTUAL**	**GRAPH or MAP**
All measures **2011-2020**	Insufficient data Fish recorded 87	
Product of Infofish 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 Sunwater https://www.sunwater.com.au/water-data/historical-dam-capacity/
- Stocked fish records from https://www.data.qld.gov.au/dataset/queensland-freshwater-fish-stocking-records/

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 Bass and Golden Perch 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 LCG for the impoundment and other grid maps where fish were recaptured outside the impoundment
- Survival rates are calculated based on a model that uses the reduction in the number of recaptures each year after tagging
- Distance moved was the shortest distance by water between the tag and recapture location measured in Google Earth