LAKE GLENLYON
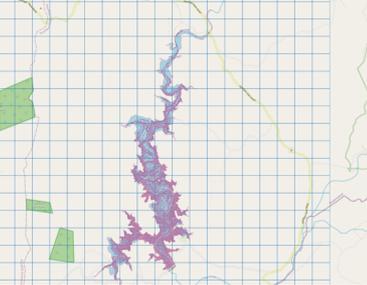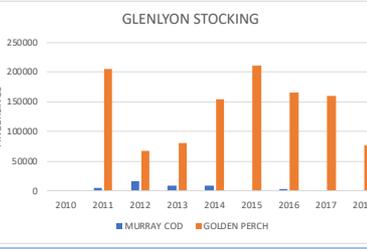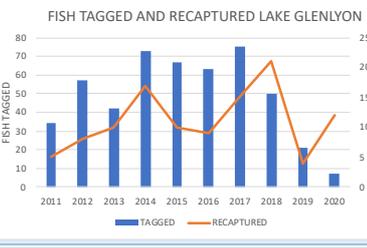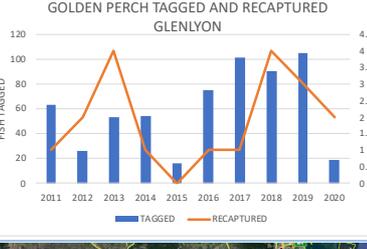# MURRAY COD AND GOLDEN PERCH 2011-2020
2020 ANNUAL UPDATE

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

The following dashboard provides a summary of Murray Cod and Golden Perch data from Lake Glenlyon covering the past 10 years.

Summary

- Dam level at 31 Dec 2020 was 13.8% but reached a low of 3-4% from Oct 2019 – Feb 2020
- From 2011-2018 there were 45,000 Murray Cod and 1.1 million Golden Perch fingerlings stocked with 24.8 times more Golden Perch compared with Murray Cod
- Over the past 10 years there have been 493 Murray Cod tagged for 104 recaptures with a high recapture rate of 21.1% compared with 605 Golden Perch tagged and 19 recaptures for a recapture rate of 3.2%
- The average catch rate over the 10 years was 1.0 fish/fisher day for Murray Cod and was 1.3 for Golden Perch while in 2020 it was 0.7 for Murray Cod and 1.5 for Golden Perch (low catch numbers)
- Over the past 10 years most Murray Cod have been tagged in LGP map grids M14, K17 and M18 while for Golden Perch it was M14, M18, L17 and L14
- Annual growth calculated from tag recaptures for Murray Cod at the end of year 1 is 145mm and at the end of year 5 is 340mm while for Golden Perch there were insufficient recaptures to calculate growth
- Over the past 10 years there were 84 Murray Cod recaptures where movement was calculated with 56 (66.7%) recaptured in the same area as tagged while for Golden Perch there were 15 recaptures with 12 (80%) recaptured in the same area as tagged
- The lake was at 3-4% for 124 days from Oct 2019-Feb 2020 however 11 Murray Cod tagged prior to that time have been recapture since suggesting a high survival rate even at very low water levels
- From postcodes of fishers recapturing fish 65% were from Qld and 35% from NSW
- Most recaptures were by fishers from postcodes 2478 (Ballina area in NSW), 4305 (Ipswich area) and 4207 (Beenleigh area)
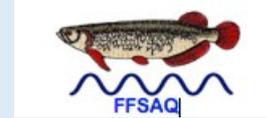
Infofish Australia
January 2021

LAKE GLENLYON	LOCATION	BATHYMETRY

MEASURE	ACTUAL	GRAPH or MAP
Surface area **Lake capacity**	Surface area 18.0km^2 Level at 22 Dec 2020 13.9% For latest level https://realtimedata.waternsw.com.au/	
Fingerlings stocked **2011-2018**	HIGHEST LOWEST TOTAL MURRAY COD 2012 2018 TOTAL 16.8K 0 45.1K GOLDEN PERCH 2015 2018 TOTAL 210K 77.5K 1.1M	
Murray Cod tagged and **recaptured** **2011-2020**	TAGGED RECAPTURED 493 104 RECAPTURE RATE 21.1%	
Golden Perch tagged and **recaptured** **2011-2020**	TAGGED RECAPTURED 605 19 RECAPTURE RATE 3.2%	
Postcodes of recapture **fishers** **2011-2020**	Fishers with postcodes 63 POSTCODE FISHERS 2478 12 (19%) 4305 9 4207 7	

Postcodes of recapture fishers 2011-2020	Most postcodes STATE FISHERS QLD 41 (65%) NSW 22 (35%) No code 49 (42%)	RECAPTURES
Product of Infofish Australia		Supported by Suntag and FFSAQ

LAKE GLENLYON			MURRAY COD	

MEASURE	ACTUAL			GRAPH or MAP
Catch and effort **number of fish** **fisher days** **T20 taggers** **2011-2020** **2020 low fisher days**	HIGHEST CATCH 2017 75 EFFORT 2015 64	LOWEST 2019 22 2019 39	NOW 2020 10 2020 15	
Catch rate **Fish/fisher day** **2011-2020** **2020 low fisher days**	HIGHEST CATCH RATE 2017 1.3 10 YEAR AVERAGE	LOWEST 2019 0.6 	NOW 2020 0.7 1.0	
Average length (mm) **2011-2020** **2020 low fish numbers**	HIGHEST 2015 610 LARGEST 2015 1200	LOWEST 2011 430 2013 630	NOW 2020 765 2020 1120	
Fish lengths percentage **Undersize <600mm** **Legal 600-999mm** **Trophy 1000+mm** **2011-2020** **2020 low fish numbers**	HIGHEST LEGAL 2015 47.1 TROPHY 2016 1.6	LOWEST 2012 5.2 2019 0	NOW 2020 80.0 2020 10.0	
Murray Cod growth at end **of each year based on all** **recaptures since 2011**	Recaptures GROWTH Year 1 Year 2 Year 3 Year 4 Year 5	70 145mm 229mm 278mm 313mm 340mm		
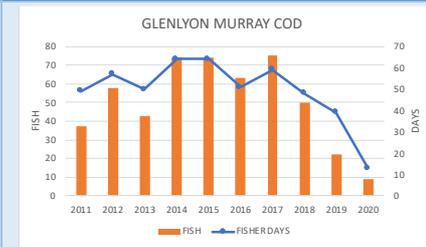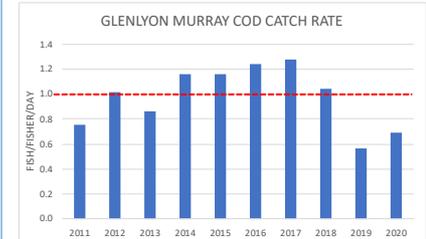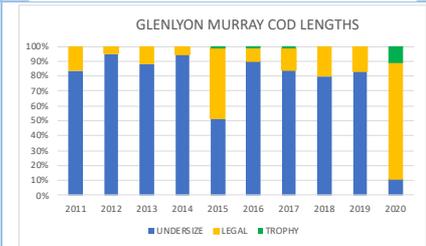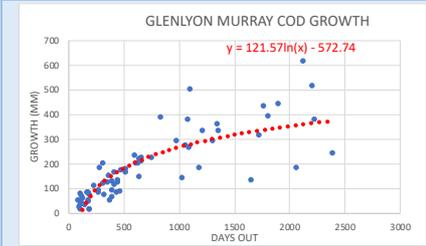
Murray Cod survival based on recaptures by years out after tagging	Survival rate by years out Year Recaptures 1 112 5 12 Longest time out (years) 9.6 1	
Grid locations of tagged fish (map LGP) 2011-2020	Grids where most fish caught GRID FISH M14 130 K17 44 M18 43 M15 38 L17 35	
Murray Cod movement 2011-2020	Recaptures 84 Recaptured same area 56 (66.7%) Longest distance in lake 7 Outside lake 0	
Recaptures after Feb 2020 when lake was at 3-4% for 124 days 8/10/2019-9/2/2020 Fish tagged prior to Oct 2019	Recaptures 11	

LAKE GLENLYON			GOLDEN PERCH

MEASURE	ACTUAL			GRAPH or MAP
Catch and effort **number of fish** **fisher days** **T20 fishers** **2011-2020** **2020 low fisher days**	HIGHEST CATCH 2019 105 EFFORT 2015 63	LOWEST 2015 17 2019 39	NOW 2020 22 2020 15	 GLENLYON GOLDEN PERCH
Catch rate **Fish/fisher day** **2011-2020** **2020 low fisher days**	HIGHEST CATCH RATE 2019 2.7 10 YEAR AVERAGE	LOWEST 2015 0.3	NOW 2020 1.4 1.3	 GLENLYON GOLDEN PERCH CATCH RATE
Average length (mm) **2011-2020** **2020 low fish numbers**	HIGHEST 2015 432 LARGEST 2015 560	LOWEST 2017 313 2013 455	NOW 2020 369 2020 475	 GLENLYON GOLDEN PERCH AVERAGE LENGTH
Fish lengths percentage **Undersize <300mm** **Legal 300-499mm** **Trophy 500+mm** **2011-2020**	HIGHEST LEGAL 2013 98.2 TROPHY 2015 11.8	LOWEST 2017 47.5 2019 0	NOW 2020 81.8 2020 0	 GLENLYON GOLDEN PERCH LENGTHS
Grid locations of tagged **fish (map LGP)** **2011-2020**	Grids where most fish caught GRID FISH M14 237 M18 56 L17 41 L14 39			
Golden Perch movement **2011-2020**	Recaptures 15 Recaptured same area 12 (80%) Longest distance in lake 5 Outside lake 0			 GLENLYON GOLDEN PERCH MOVEMENTS

Data sources

Data used in the Lake Glenlyon Crystal Bowl are:
- Tag records and recapture records for the impoundment at http://crystalbowl.infofishaustralia.com.au/
- Dam level data from WaterNSW at https://realtimedata.waternsw.com.au/
- Stocked fish records from https://www.data.qld.gov.au/dataset/queensland-freshwater-fish-stocking-records/
- Bathymetric data kindly provided by Patrick Murphy

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
- For Murray Cod undersized fish are <600mm, legal fish are >=600 and <1000mm and trophy fish are >=1000mm
- For Golden Perch 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 LGP for the impoundment and other grid maps where fish were recaptured outside the impoundment
- Distance moved was calculated using Google Earth as the shortest distance by water between the tag and recapture location