



# LAKE BOONDOOMA AUSTRALIAN BASS AND GOLDEN PERCH 2011-2020 2020 REVIEW

AVAILABLE		AVAILABLE	
Dam capacity	$\checkmark$	Storage level	V
Stocked fish numbers	$\overline{\checkmark}$	Bathymetry	
Tagged fish	V	Recaptures	$\checkmark$
Postcodes	$\overline{\mathbf{V}}$	Competitions	$\checkmark$
Species		Australian Bass	
Catch rates	$\overline{V}$	Fish sizes	$\overline{V}$
Growth	$\overline{\mathbf{V}}$	Survival	$\checkmark$
Tag locations	$\overline{\checkmark}$	Fish Movement	$\checkmark$
Species		Golden Perch	
Catch rates	$\overline{\mathbf{V}}$	Fish sizes	$\overline{\mathbf{V}}$
Growth		Survival	
Tag locations	<b>V</b>	Fish Movement	<b>V</b>

### **Summary**

- Dam level on 31 Dec 2020 was 29%
- From 2011-2018 there were 691.1k Bass and 606.0K Golden Perch fingerlings released
- Over the past 10 years there were 575 Bass tagged for 63 recaptures (11.0%) and 119 Golden Perch tagged for 6 recaptures (5.0%)
- There were no catch data for 2020 while the 10 year average historic catch rate for Bass was 3.8 fish/fisher day and for Golden Perch it was 0.9 fish/fisher day
- The average length for Bass in 2019 was 264mm with 25.5% of tagged fish legal
- Longest time out for a Bass after tagging was around 15 years however 1 fish was recaptured after 18.9 years
- Of the 63 Bass and 6 Golden Perch recaptured over the past 10 years and tagged since 2011 none have been recaptured outside the impoundment
- For Bass tagged prior to 2011 and recaptured since there were 8 fish recaptured downstream below the dam
- There were 2 fish recaptured in Splitters Creek (near Bundaberg) 340km below the dam and after going over 2 dam walls and 4 weirs
- Over the past 10 years most postcodes of fishers recapturing fish were 4610 (Kingaroy), 4405 (Dalby) and 4606 (Wondai)
- There were 5 recaptures by fishers with NSW postcodes and 2 by fishers from VIC
- Catch rates in Fishing Freshwater competitions from 2018-2020 ranged from 1.8 in 2019 to 2.7 fish/fisher day in 2018

Infofish Australia March 2021



LAKE BOONDOOMA	LOCATION	BATHYMETRY	
	QUEENSLAND  Brisbane		
MEASURE	ACTUAL	GRAPH or MAP	
Surface area Lake capacity	Surface area 18.15km² Level at 31 Dec 2020 29% For latest level https://www.sunwater.com. au/water-data/historical- dam-capacity/	FULL 2010 2012 2014 2016 2018 2020	
Fingerlings stocked 2011-2018	HIGHEST LOWEST TOTAL BASS 2014 2018 260.0K 0 691.1K GOLDEN PERCH 2015 2016 183.4K 0 606.0K	BOONDOOMA FISH STOCKED  300000  00 250000  00 250000  00 2011 2012 2013 2014 2015 2016 2017 2018  ■ AUSTRALIAN BASS ■ GOLDEN PERCH	
Bass tagged and recaptured 2011-2020	TAGGED RECAPTURED 575 63 RECAPTURE RATE 11.0%	BOONDOOMA BASS TAGGED AND RECAPTURED  120 100 118 116 119 119 119 119 119 119 119 119 119	
Golden Perch tagged and recaptured 2011-2020	TAGGED RECAPTURED 119 6 RECAPTURE RATE 5.0%	BOONDOOMA GOLDEN PERCH TAGGED AND  RECAPTURED  5  4  8  8  8  8  8  8  8  8  8  8  8  8	
Recapture fishers from region 2011-2020	REGION FISHERS LOCAL 35 (28%) DARLING DOWNS 43 (35%) SEQ 30 (24%) FRASER-BURNETT 8 (7%) INTERSTATE 7 (6%)	BOONDOOMA RECAPTURE FISHER POSTCODES FRASER-INTERSTATE BUNNETT 6% LOCAL 28%  SEQ 24%  DARLING DOWNS 35%	
infofish Product of Infofis	CRYSTALBOWL sh Australia Suppo	FFSAQ orted by Suntag and FFSAQ	

# LAKE BOONDOOMA

## **AUSTRALIAN BASS**



oneden A				
MEASURE	ACTUAL			GRAPH or MAP
Bass catch and effort number of fish fisher days T20 fishers 2011-2020	HIGHEST CATCH 2011 110 EFFORT 2011 32	2012 47 2019 12	NOW 2020 NA 2020 NA	BOONDOOMA BASS  120 100 80 25 20 15 40 20 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020
Bass catch rate Fish/fisher day 2011-2020	HIGHEST CATCH RA 2019 8.3 10 YEAR A	2014 2.5	2020 NA 3.8	8.0 7.0 VO 6.0 1.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2
Average length (mm) Bars show smallest and largest fish 2011-2020	HIGHEST AVERAGE 2015 365 LARGEST 2013 555	LOWEST LENGTH 2018 237 2018 410	2020 NA 2020 NA	BOONDOOMA BASS LENGTHS (MM)  TROPHY  LEGAL  2011  2012  2014  2015  2020  2020  2030  2044  2015
Fish lengths percentage Undersize <300mm Legal 300-499mm Trophy 500+mm 2011-2020	HIGHEST LEGAL 2011 84.8 TROPHY 2016 4.2	2017 19.2 2018 0	2020 NA 2020 NA	BOONDOOMA BASS LENGTHS  100% 90% 80% 70% 60% 50% 40% 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020
Bass growth based on all recaptures 2011-2020	Recapture ANNUAL O Year 1 Year 2 Year 3 Year 4 Year 5		n n im	BOONDOOMA BASS GROWTH  350 300  V = 46.131ln(x) - 226.44  V = 46.131ln(x) - 226.44  DAYS OUT

Sass survival based on recaptures by years out Year Recaptures  1 1038 5 263 10 39 15 2 Longest time out (years) 18.9 1  Grid locations of fish 2011-2020  GRID E15 77 F15 61 G15 52 H21 46 H12 43  Gass movements from recaptures since 2011  Recaptures 2011  Recaptures 2011  Recaptures 36 (63.2%)  Figure Recaptures 1 1038 5 263 10 39 15 2 10 1038 5 263 10 39 15 2 10 1038 5 263 10 39 15 2 10 1038 5 263 10 10 39 15 2 10 10 10 10 10 10 10 10 10 10 10 10 10
## 1038   5   263   10   39   15   2   200   1   2   3   4   5   6   7   8   9   10   11   12   13   14   15   16   17   18   19   18   19   19   19   19   19
Longest time out (years)  18.9  Grid locations of fish  2011-2020  GRID  FISH  E15  77  F15  61  G15  52  H21  46  I12  43  Bass movements from  Recaptures  Recaptured same area
Longest time out (years)  18.9  Grid locations of fish  2011-2020  GRID  FISH  E15  77  F15  61  G15  52  H21  46  I12  43  Bass movements from  Recaptures  Recaptured same area
Longest time out (years)  18.9  Grid locations of fish  2011-2020  GRID  FISH  E15  77  F15  61  G15  52  H21  46  I12  43  Bass movements from  Recaptures  Recaptured same area
Longest time out (years)  18.9  Grid locations of fish  CO11-2020  GRID  FISH  E15  77  F15  61  G15  52  H21  46  I12  43  Bass movements from  Recaptures  Recaptures  Recaptured same area
18.9 1  Grid locations of fish 2011-2020  GRID FISH E15 77 F15 61 G15 52 H21 46 I12 43  Bass movements from Recaptures 57 Recaptures since  Recaptured same area
Grid locations of fish 2011-2020  GRID FISH E15 77 F15 61 G15 52 H21 46 I12 43  GRECaptures FRECaptures FRECaptured same area
GRID FISH E15 77 F15 61 G15 52 H21 46 I12 43  Bass movements from Recaptures 57 Recaptures since Recaptured same area
E15 77 F15 61 G15 52 H21 46 I12 43  Recaptures 57 Recaptures since  Recaptured same area
F15 61 G15 52 H21 46 I12 43  Recaptures 57 Recaptures since  Recaptured same area
G15 52 H21 46 I12 43  Bass movements from Recaptures 57 Recaptures since Recaptured same area
H21 46 I12 43  Bass movements from Recaptures 57 Recaptures since Recaptured same area
Bass movements from Recaptures 57 Recaptures since Recaptured same area
Bass movements from Recaptures 57 BOONDOOMA BASS MOVEMENT SINCE 2011 Recaptures since Recaptured same area
recaptures since Recaptured same area
recaptures since Recaptured same area
recaptures since Recaptured same area
2011 14 (24.6%)  Down lake Up lake
Down lake Up lake
36 (63.2%) 7 (12.3%) \[ \begin{pmatrix} \frac{3}{2} & 5 & 0 & 3650 & 730 & 1005 & 1460 & 1825 & 2190 & 2555 & 2920 \\ \frac{3}{2} & 0 & 0 & 0 & 0 & 0 \end{pmatrix} \]
Outside lake
O • UPLAKE • DOWNLAKE
Bass recaptured outside Recaptures 9 BASS RECAPTURED OUTSIDE LAKE
maguadment Above lake Polovi lake
Tagged before 2011  Recaptured after 2011  Burnett River  8
Recaptured after 2011 Burnett River
8
0 1000 2000 3000 4000 5000 6000
DAYS OUT  • Distance • ABOVE DAM
Bass recaptured outside Max distance (km)
mpoundment Splitters Creek (2 fish) near
Bundaberg
340km over 2 dam walls and
4 weirs

# LAKE BOONDOOMA

### **GOLDEN PERCH**

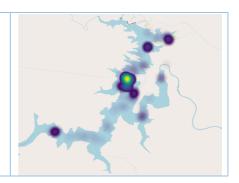


Shingfra				
MEASURE	ACTUAL			GRAPH or MAP
Golden Perch catch and effort number of fish fisher days T20 fishers 2011-2020	HIGHEST CATCH 2013 31 EFFORT 2011 31	2019 5 2012 11	NOW 2020 NA 2020 NA	BOONDOOMA GOLDEN PERCH FISH AND DAYS  35  46  67  67  67  67  67  67  67  67  67
Golden Perch catch rate Fish/fisher day 2011-2020	HIGHEST CATCH RA 2013 1.1 10 YEAR A	2019 0.4	NOW 2020 NA 0.9	BOONDOOMA GOLDEN PERCH CATCH RATE  1.4  1.2  1.0  1.0  1.0  1.0  1.0  1.0  1.0
Average length (mm) Bars show smallest and largest fish 2011-2020	HIGHEST AVERAGE 2016 456 LARGEST 2016 560	LOWEST LENGTH 2012 401 2012 435	2020 NA 2020 NA	BOONDOOMA GOLDEN PERCH LENGTHS (MM)  TROPHY  LEGAL  2011 2012 2013 2014 2015 2016 2017 2018 2019 2020
Fish lengths percentage Undersize <300mm Legal 300-499mm Trophy 500+mm 2011-2020	HIGHEST LEGAL 2014-16 100 TROPHY 2016 17.6	LOWEST  2013 96.8  2011-12 0	NOW 2020 NA 2020 NA	BOONDOOMA GOLDEN PERCH LENGTHS  100% 90% 80% 70% 60%
Golden Perch growth and survival from recaptures	Recaptures 6 Insufficient recaptures Longest time out (years) 10.3			
Grid locations of fish 2011-2020	Grids whe GRID E18 G15 F16	re most fisi FISH 25 19 11		

<b>Golden Perch movements</b>	Recaptures 4	BOONDOOMA GOLDEN PERCH MOVEMENT
from recaptures since	Recaptured same area	10 8
2011	2	6 (KW) 6 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
	Down lake Up lake	30 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	1 1	-4 -4 -6 -6 -6 -6 -6 -6 -6 -6 -6 -6 -6 -6 -6
	Outside lake	-10
	0	DAYS OUT (YEARS)  • UPLAKE • DOWN LAKE

COMPETITIONS	ACTUAL		GRAPH or MAP
Event Fishing Freshwater 2018 Yellowbelly C&R 2019 Fishing Freshwater 2019 Yellowbelly C&R 2020 Festival of Dam 2020 Timeline of events	Code FF18 YFF19 FF19 YFF20 FF20		Targets All species Golden Perch All species Golden Perch All species
FF18 YFF19 FF19 YFF20 FF20	20-21/10/202 9-10/2/2019 18-19/5/2019 8-9/2/2019 (2 15-18/8/2020	(2 days) 9 (2 days) 2 days)	BOONDOOMA COMPETITIONS TIMELINE  26/9/20 18/6/20 10/3/20 11/3/19 23/8/19 47/19 27/10/18 0 2 4 6 8 10 12 DAYS  • FF18 • YFF19 • YFF20 • YFF20
Fishers Fishing Freshwater 2018 Fishing Freshwater 2019 Fishing Freshwater 2020	Fishers 90 108 90	Catching fish 43 24 38	FISHING FRESHWATER COMPETITION BOATS  120  100  80  90  40  2018  2019  2020  BITOTAL FISHERS  BICATCHING FISHERS
Catch rate Legal fish Fishers catching fish (FCF) T20 fishers (T20)	FCF 2018 2.7 2019 1.8 2020 2.5	T20 5.6 3.9 6.8	FISHING FRESHWATER COMPETITION BASS  8.0 7.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2
Catch rates T20 Taggers Competition fishers Legal fish	T20 (Tag) 2019 2.8	T20 (comp) 3.9	BOONDOOMA BASS CATCH RATE LEGAL FISH  8 7 7 7 7 8 6 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9
Competition Bass Median length (mm) Bars show largest and smallest fish Dots show outlier FF18-20 legal fish only	Highest YFF19 373 Largest fish YFF20 530	Lowest FF19 330	BOONDOOMA COMPETITION BASS LENGTHS  TROPHY  LEGAL  HF2018 FF2019 FF2019 FF2020 FF2020
Competition Golden Perch Median length (mm) Bars show largest and smallest fish Dots show outlier FF18-20 legal fish only	Highest FF19 430 Largest fish FF18 590	Lowest FF20 410	BOONDOOMA COMPETITION GOLDEN PERCH LENGTHS  TROPHY  TR

Fishing heat map Competitions FF 2018 FF 2019 FF2020



#### **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 <a href="https://www.sunwater.com.au/water-data/historical-dam-capacity/">https://www.sunwater.com.au/water-data/historical-dam-capacity/</a>
- Fishing Freshwater competitions in Lake Boondooma
- Competition dashboard for 2018 at https://tournaments.trackmy.fish/public/reports/217/ff.golden.lure.2018.html
- Competition dashboard for 2019 at https://tournaments.trackmy.fish/public/reports/217/ff.boondooma.open.2019.html
- Competition dashboard for 2019 at https://tournaments.trackmy.fish/public/reports/217/ff.festivalofthedams.2020.html
- Bathymetric data from Infofish Biosonics surveys or other sources

#### **BASIS FOR ANALYSIS**

- Catch rates calculated as number of fish tagged/fisher/day for taggers
- Catch rates calculated as number of fish registered through Trackmyfish/fisher/day
- 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 for the impoundment and for other grid maps where fish left the impoundment
- Distance moved calculated using Google Earth as the shortest distance by water between the tag and recapture location