



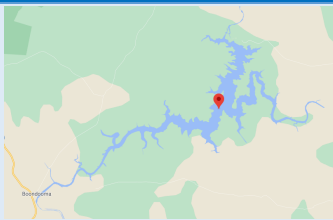
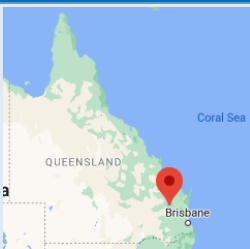
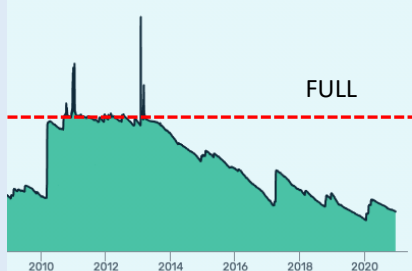
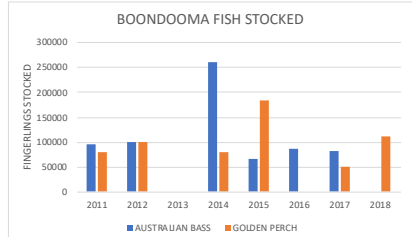
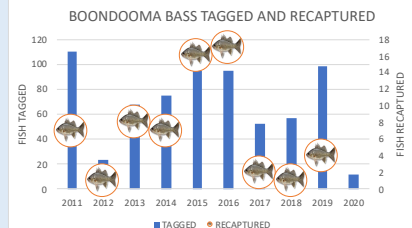
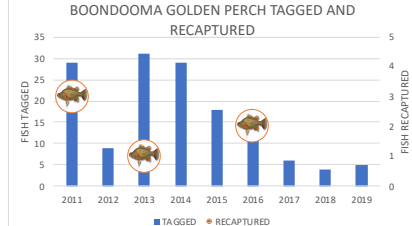
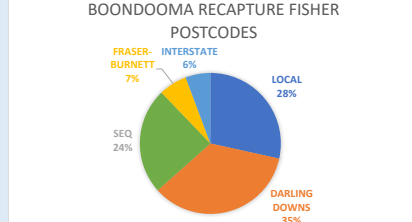



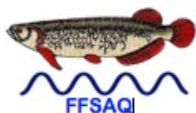
LAKE BOONDOOMA
AUSTRALIAN BASS AND GOLDEN PERCH 2011-2020
2020 REVIEW



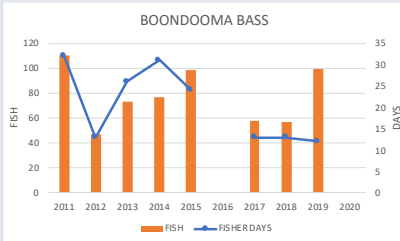
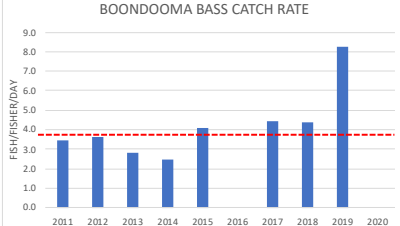
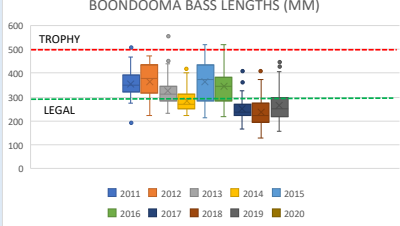
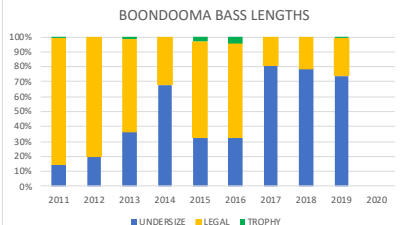
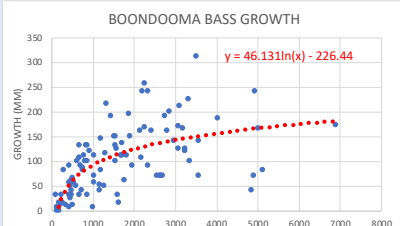
AVAILABLE		AVAILABLE	
Dam capacity	✓	Storage level	✓
Stocked fish numbers	✓	Bathymetry	
Tagged fish	✓	Recaptures	✓
Postcodes	✓	Competitions	✓
Species		Australian Bass	
Catch rates	✓	Fish sizes	✓
Growth	✓	Survival	✓
Tag locations	✓	Fish Movement	✓
Species		Golden Perch	
Catch rates	✓	Fish sizes	✓
Growth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

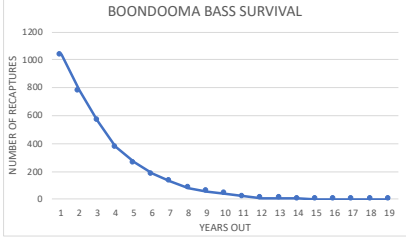
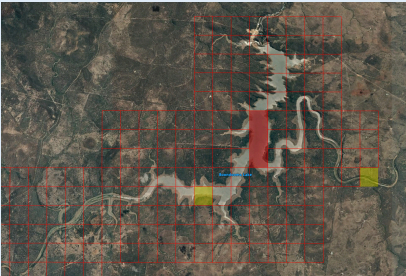
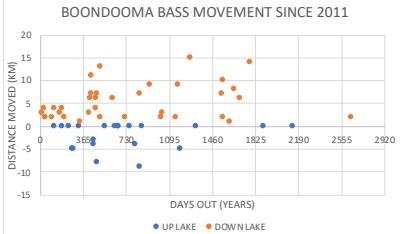
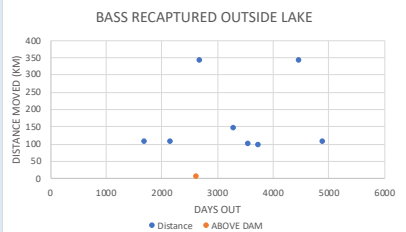
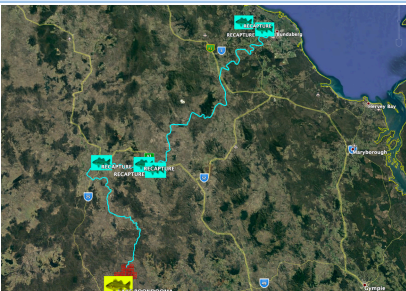
Summary



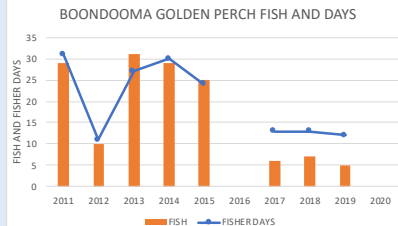
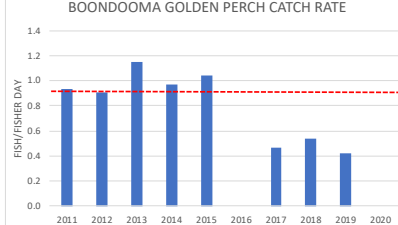
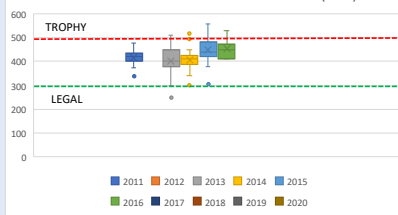
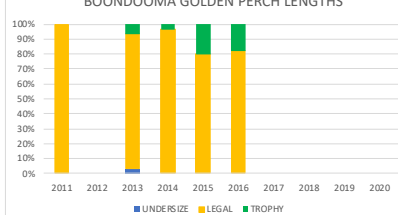
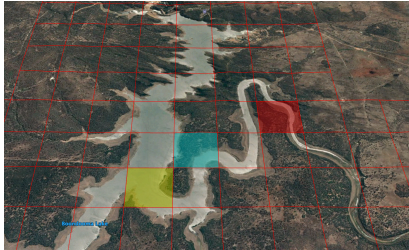
- Dam level on 31 Dec 2020 was 29%
- From 2011-2018 there were 691.1k Bass and 606.0K Golden Perch fingerlings released
- Over the past 10 years there were 575 Bass tagged for 63 recaptures (11.0%) and 119 Golden Perch tagged for 6 recaptures (5.0%)
- There were no catch data for 2020 while the 10 year 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

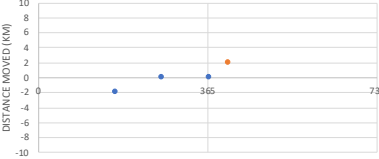
Infofish Australia
 March 2021

LAKE BOONDOOMA	LOCATION	BATHYMETRY																										
																												
MEASURE	ACTUAL	GRAPH or MAP																										
Surface area Lake capacity	Surface area 18.15km ² Level at 31 Dec 2020 29% For latest level https://www.sunwater.com.au/water-data/historical-dam-capacity/																											
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>2018</td><td></td><td></td></tr><tr><td>260.0K</td><td>0</td><td>691.1K</td></tr><tr><td>GOLDEN PERCH</td><td></td><td></td><td></td></tr><tr><td>2015</td><td>2016</td><td></td><td></td></tr><tr><td>183.4K</td><td>0</td><td>606.0K</td></tr></table>		HIGHEST	LOWEST	TOTAL	BASS				2014	2018			260.0K	0	691.1K	GOLDEN PERCH				2015	2016			183.4K	0	606.0K	
	HIGHEST	LOWEST	TOTAL																									
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Bass tagged and recaptured 2011-2020	<table><tr><th></th><th>TAGGED</th><th>RECAPTURED</th></tr><tr><td>575</td><td></td><td>63</td></tr><tr><td>RECAPTURE RATE</td><td></td><td></td></tr><tr><td>11.0%</td><td></td><td></td></tr></table>		TAGGED	RECAPTURED	575		63	RECAPTURE RATE			11.0%																	
	TAGGED	RECAPTURED																										
575		63																										
RECAPTURE RATE																												
11.0%																												
Golden Perch tagged and recaptured 2011-2020	<table><tr><th></th><th>TAGGED</th><th>RECAPTURED</th></tr><tr><td>119</td><td></td><td>6</td></tr><tr><td>RECAPTURE RATE</td><td></td><td></td></tr><tr><td>5.0%</td><td></td><td></td></tr></table>		TAGGED	RECAPTURED	119		6	RECAPTURE RATE			5.0%																	
	TAGGED	RECAPTURED																										
119		6																										
RECAPTURE RATE																												
5.0%																												
Recapture fishers from region 2011-2020	<table><tr><th></th><th>REGION</th><th>FISHERS</th></tr><tr><td>LOCAL</td><td></td><td>35 (28%)</td></tr><tr><td>DARLING DOWNS</td><td></td><td>43 (35%)</td></tr><tr><td>SEQ</td><td></td><td>30 (24%)</td></tr><tr><td>FRASER-BURNETT</td><td></td><td>8 (7%)</td></tr><tr><td>INTERSTATE</td><td></td><td>7 (6%)</td></tr></table>		REGION	FISHERS	LOCAL		35 (28%)	DARLING DOWNS		43 (35%)	SEQ		30 (24%)	FRASER-BURNETT		8 (7%)	INTERSTATE		7 (6%)									
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  Product of Infish Australia		  Supported by Suntag and FFSAQ																										

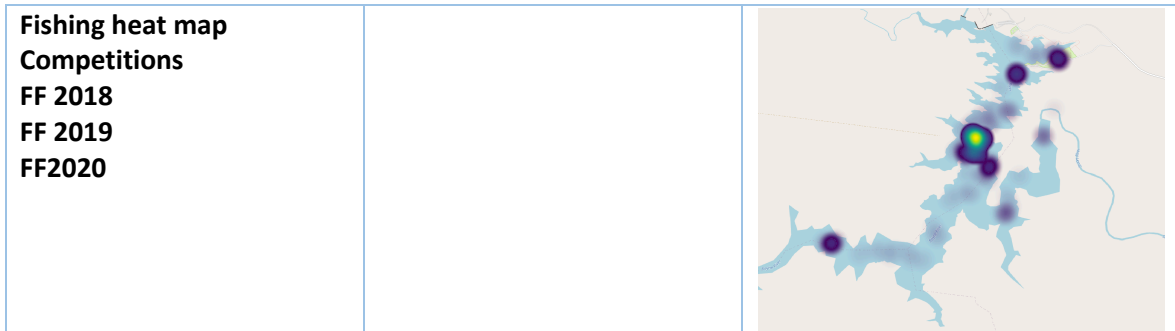
LAKE BOONDOOMA			AUSTRALIAN BASS	
				
MEASURE	ACTUAL			GRAPH or MAP
Bass catch and effort number of fish fisher days T20 fishers 2011-2020	HIGHEST	LOWEST	NOW	
	CATCH			
	2011	2012	2020	
	110	47	NA	
	EFFORT			
2011	2019	2020		
32	12	NA		
Bass catch rate Fish/fisher day 2011-2020	HIGHEST	LOWEST	NOW	
	CATCH RATE			
	2019	2014	2020	
	8.3	2.5	NA	
	10 YEAR AVERAGE		3.8	
Average length (mm) Bars show smallest and largest fish 2011-2020	HIGHEST	LOWEST	NOW	
	AVERAGE LENGTH			
	2015	2018	2020	
	365	237	NA	
	LARGEST			
2013	2018	2020		
555	410	NA		
Fish lengths percentage Undersize <300mm Legal 300-499mm Trophy 500+mm 2011-2020	HIGHEST	LOWEST	NOW	
	LEGAL			
	2011	2017	2020	
	84.8	19.2	NA	
	TROPHY			
2016	2018	2020		
4.2	0	NA		
Bass growth based on all recaptures 2011-2020	Recaptures	100		
	ANNUAL GROWTH			
	Year 1	45mm		
	Year 2	78mm		
	Year 3	96mm		
	Year 4	110mm		
	Year 5	120mm		

Bass survival based on recaptures 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>1038</td></tr><tr><td>5</td><td>263</td></tr><tr><td>10</td><td>39</td></tr><tr><td>15</td><td>2</td></tr><tr><td colspan="2">Longest time out (years)</td></tr><tr><td>18.9</td><td>1</td></tr></table>	Survival rate by years out		Year	Recaptures	1	1038	5	263	10	39	15	2	Longest time out (years)		18.9	1	
Survival rate 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	<table><tr><th colspan="2">Grids where most fish tagged</th></tr><tr><th>GRID</th><th>FISH</th></tr><tr><td>E15</td><td>77</td></tr><tr><td>F15</td><td>61</td></tr><tr><td>G15</td><td>52</td></tr><tr><td>H21</td><td>46</td></tr><tr><td>I12</td><td>43</td></tr></table>	Grids where most fish tagged		GRID	FISH	E15	77	F15	61	G15	52	H21	46	I12	43			
Grids where most fish tagged																		
GRID	FISH																	
E15	77																	
F15	61																	
G15	52																	
H21	46																	
I12	43																	
Bass movements from recaptures since 2011	<table><tr><td>Recaptures</td><td>57</td></tr><tr><td>Recaptured same area</td><td>14 (24.6%)</td></tr><tr><td>Down lake</td><td>Up lake</td></tr><tr><td>36 (63.2%)</td><td>7 (12.3%)</td></tr><tr><td>Outside lake</td><td></td></tr><tr><td>0</td><td></td></tr></table>	Recaptures	57	Recaptured same area	14 (24.6%)	Down lake	Up lake	36 (63.2%)	7 (12.3%)	Outside lake		0						
Recaptures	57																	
Recaptured same area	14 (24.6%)																	
Down lake	Up lake																	
36 (63.2%)	7 (12.3%)																	
Outside lake																		
0																		
Bass recaptured outside impoundment Tagged before 2011 Recaptured after 2011	<table><tr><td>Recaptures</td><td>9</td></tr><tr><td>Above lake</td><td>Below lake</td></tr><tr><td>1</td><td>8</td></tr><tr><td>Burnett River</td><td></td></tr><tr><td>8</td><td></td></tr></table>	Recaptures	9	Above lake	Below lake	1	8	Burnett River		8								
Recaptures	9																	
Above lake	Below lake																	
1	8																	
Burnett River																		
8																		
Bass recaptured outside impoundment	<p>Max distance (km)</p> <p>Splitters Creek (2 fish) near Bundaberg</p> <p>340km over 2 dam walls and 4 weirs</p>																	

LAKE BOONDOOMA			GOLDEN PERCH	
				
MEASURE	ACTUAL			GRAPH or MAP
Golden Perch catch and effort number of fish fisher days T20 fishers 2011-2020	HIGHEST	LOWEST	NOW	
	CATCH			
	2013	2019	2020	
	31	5	NA	
	EFFORT			
2011	2012	2020		
31	11	NA		
Golden Perch catch rate Fish/fisher day 2011-2020	HIGHEST	LOWEST	NOW	
	CATCH RATE			
	2013	2019	2020	
	1.1	0.4	NA	
	10 YEAR AVERAGE		0.9	
Average length (mm) Bars show smallest and largest fish 2011-2020	HIGHEST	LOWEST	NOW	
	AVERAGE LENGTH			
	2016	2012	2020	
	456	401	NA	
	LARGEST			
2016	2012	2020		
560	435	NA		
Fish lengths percentage Undersize <300mm Legal 300-499mm Trophy 500+mm 2011-2020	HIGHEST	LOWEST	NOW	
	LEGAL			
	2014-16	2013	2020	
	100	96.8	NA	
	TROPHY			
2016	2011-12	2020		
17.6	0	NA		
Golden Perch growth and survival from recaptures	Recaptures 6 Insufficient recaptures Longest time out (years) 10.3			
Grid locations of fish 2011-2020	Grids where most fish tagged GRID FISH E18 25 G15 19 F16 11			

Golden Perch movements from recaptures since 2011	Recaptures 4 Recaptured same area 2 Down lake Up lake 1 1 Outside lake 0	<div data-bbox="986 197 1388 430"> <div data-bbox="1050 206 1334 224">BOONDOOMA GOLDEN PERCH MOVEMENT</div>  <div data-bbox="1157 403 1241 416">DAYS OUT (YEARS)</div> <div data-bbox="1133 421 1252 434"> ● UP LAKE ● DOWN LAKE </div> </div>
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COMPETITIONS	ACTUAL		GRAPH or MAP
Event Fishing Freshwater 2018 Yellowbelly C&R 2019 Fishing Freshwater 2019 Yellowbelly C&R 2020 Festival of Dam 2020	Code FF18 YFF19 FF19 YFF20 FF20		Targets All species Golden Perch All species Golden Perch All species
Timeline of events FF18 YFF19 FF19 YFF20 FF20	20-21/10/2018 (2 days) 9-10/2/2019 (2 days) 18-19/5/2019 (2 days) 8-9/2/2019 (2 days) 15-18/8/2020 (2 days)		
Fishers Fishing Freshwater 2018 Fishing Freshwater 2019 Fishing Freshwater 2020	Fishers 90 108 90	Catching fish 43 24 38	
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	
Catch rates T20 Taggers Competition fishers Legal fish	T20 (Tag) 2019 2.8	T20 (comp) 3.9	
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	
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	



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/>
- 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