



LAKE BORUMBA
AUSTRALIAN BASS, GOLDEN PERCH AND SOUTHERN SARATOGA 2011-2020
2020 REVIEW

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

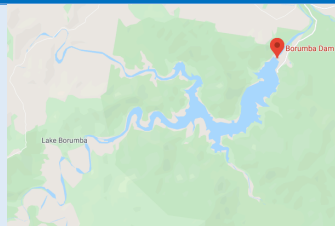
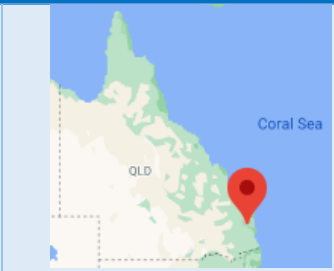
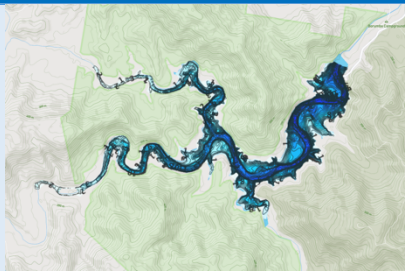
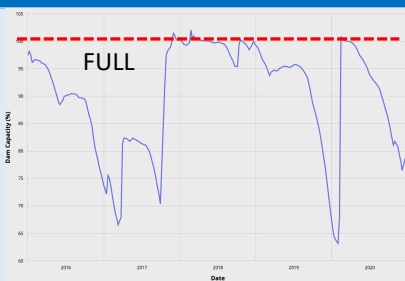
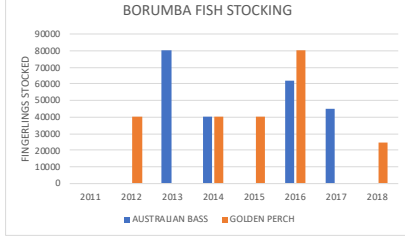
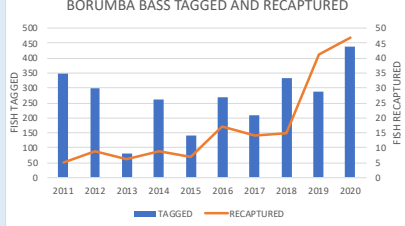
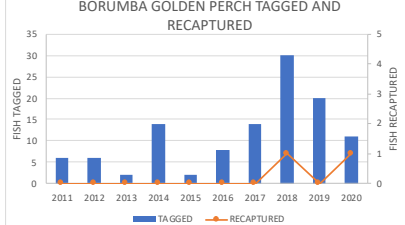
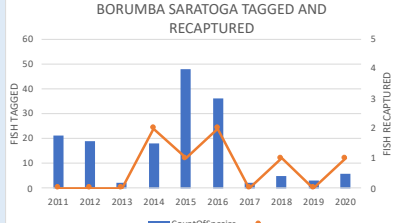
The following dashboard provides a summary of Australian Bass, Golden Perch and Southern Saratoga for Lake Borumba covering the past 10 years.

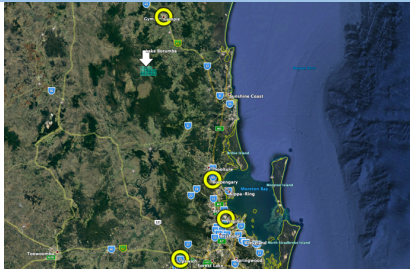
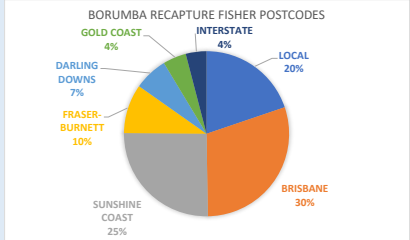


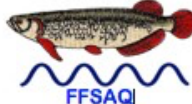

Summary

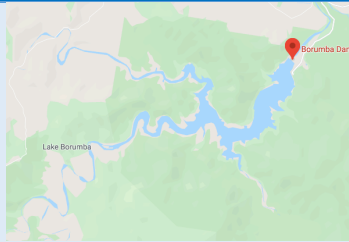

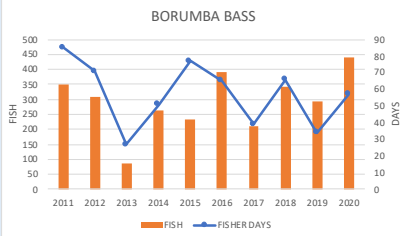
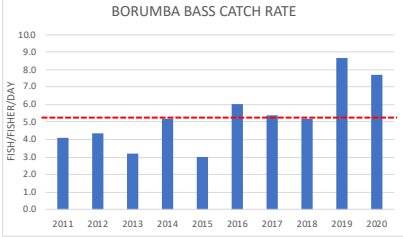
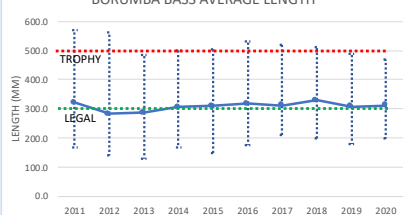
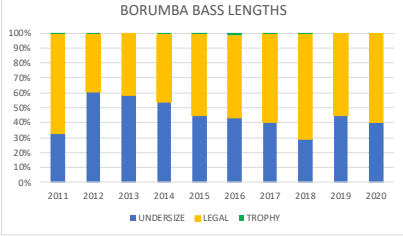
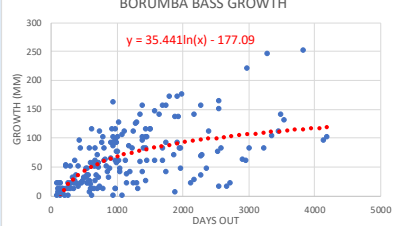
- Dam level at the 31 Dec was 78.3%
- From 2011-2018 there were 227K Bass and 225K Golden Perch fingerlings released
- Over the past 10 years there have been 2,671 Bass tagged for 170 recaptures (6.4%), 113 Golden Perch for 2 recaptures (1.8%) and 160 Southern Saratoga for 7 recaptures (4.4%)
- The Bass catch rate in 2020 was 7.7 fish/fisher day which was above the 10 year average of 5.1 fish/fisher day while for Golden Perch it was 0.2 fish/fisher day and for Saratoga it was 0.1 fish/fisher day
- The average length of Bass in 2020 was 315mm and range from 200-470mm
- The percentage of legal Bass in 2020 was 62.6% with 0% trophy fish 500mm and over
- The longest time out for a tagged Bass is 11.5 years but that is expected to be longer as tagging has only been significant since 2008
- Annual Bass growth calculated from tag recaptures at the end of year 1 is 32mm and at the end of year 5 is 89mm
- Over the past 10 years most Bass and Golden Perch have been tagged in LBY map grids E34, D34 and F34 while most Saratoga have been tagged in D34 and E33
- Of the Bass recaptured over the past 10 years 22 have been recaptured below the dam with 11 caught in Yabba Creek and 10 in Mary River
- Over the past 10 years most postcodes of fishers recapturing fish are 4570 (Gympie), 4014 (Virginia area), 4505 (Burpengary) and 4305 (Ipswich area)
- There have been 6 fish recaptured by fishers with postcodes outside Queensland with 4 from NSW, 1 from VIC and 1 from WA

Infotish Australia

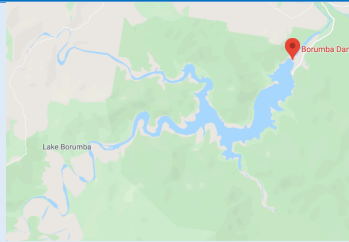

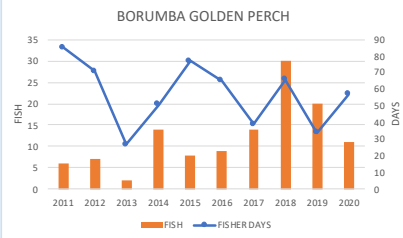
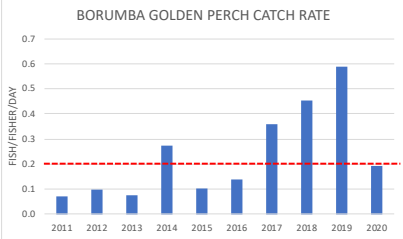
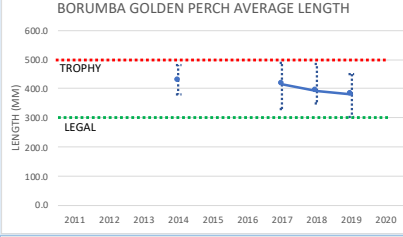
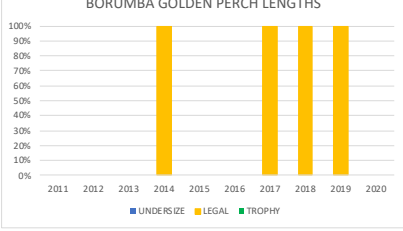
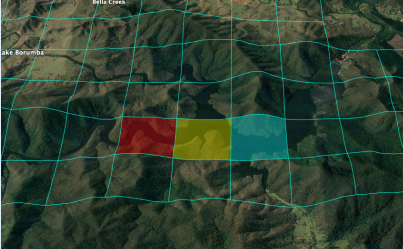
January 2021

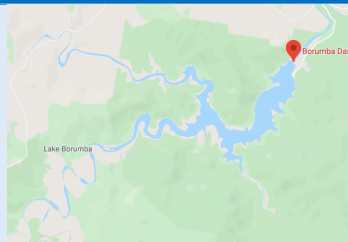

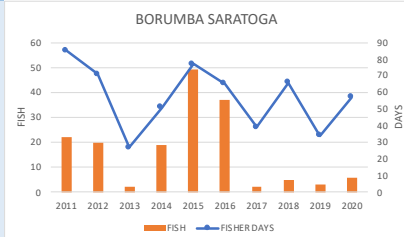
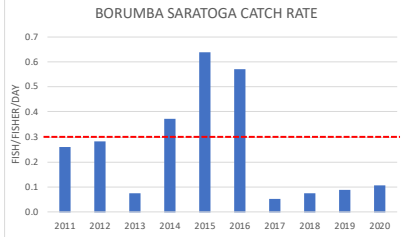
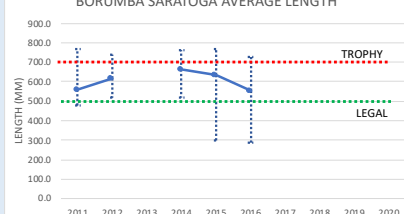
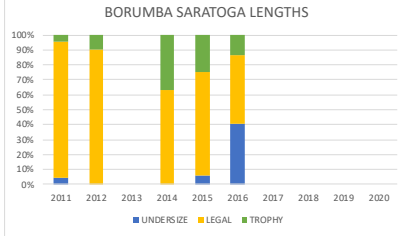
LAKE BORUMBA		LOCATION	BATHYMETRY																					
																								
MEASURE	ACTUAL	GRAPH																						
Surface area Lake level	Surface area 4.8km ² Level at 31 Dec 2020 78.3% For latest level https://www.seqwater.com.au/historic-dam-levels																							
Fingerlings stocked 2011-2018	<table><tr><td>HIGHEST</td><td>LOWEST</td><td>TOTAL</td></tr><tr><td colspan="3">BASS</td></tr><tr><td>2013</td><td>2018</td><td></td></tr><tr><td>80K</td><td>0</td><td>227K</td></tr><tr><td colspan="3">GOLDEN PERCH</td></tr><tr><td>2016</td><td>2017</td><td></td></tr><tr><td>80K</td><td>0</td><td>225K</td></tr></table>	HIGHEST	LOWEST	TOTAL	BASS			2013	2018		80K	0	227K	GOLDEN PERCH			2016	2017		80K	0	225K		
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Bass tagged and recaptured 2011-2020	<table><tr><td>TAGGED</td><td>RECAPTURED</td></tr><tr><td>2671</td><td>170</td></tr><tr><td colspan="2">RECAPTURE RATE</td></tr><tr><td colspan="2">6.4%</td></tr></table>	TAGGED	RECAPTURED	2671	170	RECAPTURE RATE		6.4%																
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Saratoga tagged and recaptured 2011-2020	<table><tr><td>TAGGED</td><td>RECAPTURED</td></tr><tr><td>160</td><td>7</td></tr><tr><td colspan="2">RECAPTURE RATE</td></tr><tr><td colspan="2">4.4%</td></tr></table>	TAGGED	RECAPTURED	160	7	RECAPTURE RATE		4.4%																
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Postcodes of recapture fishers 2011-2020	<table><tr><td>Recaptures</td><td>228</td></tr><tr><td>POSTCODE</td><td>FISHERS</td></tr><tr><td>4570</td><td>39 (17.1%)</td></tr><tr><td>4014</td><td>6</td></tr><tr><td>4505</td><td>6</td></tr><tr><td>4305</td><td>5</td></tr><tr><td>No code</td><td>31</td></tr></table>	Recaptures	228	POSTCODE	FISHERS	4570	39 (17.1%)	4014	6	4505	6	4305	5	No code	31	
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Recapture fishers from region 2011-2020	<table><tr><td>REGION</td><td>FISHERS</td></tr><tr><td>LOCAL</td><td>39 (20%)</td></tr><tr><td>BRISBANE</td><td>59 (30%)</td></tr><tr><td>SUNSHINE COAST</td><td>50 (25%)</td></tr><tr><td>FRASER-BURNETT</td><td>19 (10%)</td></tr><tr><td>GOLD COAST</td><td>9 (4%)</td></tr><tr><td>INTERSTATE</td><td>8 (4%)</td></tr></table>	REGION	FISHERS	LOCAL	39 (20%)	BRISBANE	59 (30%)	SUNSHINE COAST	50 (25%)	FRASER-BURNETT	19 (10%)	GOLD COAST	9 (4%)	INTERSTATE	8 (4%)	
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<div></div> <p>Product of Infish Australia</p>		<div></div> <p>Supported by Suntag and FFSAQ</p>														

LAKE BORUMBA			AUSTRALIAN BASS	
				
MEASURE	ACTUAL			GRAPH
Catch and effort number of fish fisher days T20 fishers (taggers) 2011-2020	HIGHEST	LOWEST	NOW	
	CATCH			
	2016	2013	2020	
	393	87	439	
	EFFORT			
	2011	2013	2020	
	85	27	57	
Catch rate Fish/fisher day 2011-2020	HIGHEST	LOWEST	NOW	
	CATCH RATE			
	2019	2015	2020	
	8.6	3.2	7.7	
	10 YEAR AVERAGE		5.1	
Average length (mm) Bars show smallest to largest fish 2011-2020	HIGHEST	LOWEST	NOW	
	2018	2012	2020	
	330	284	315	
	LARGEST			
Fish lengths percentage Undersize <300mm Legal 300-499mm Trophy 500+mm 2011-2020	2011		2020	
	66.6	38.1	62.6	
	TROPHY			
	2016	2019	2020	
Bass growth at the end of each year Based on recaptures since 2011	1.5	0	0	
	Recaptures	184		
	GROWTH			
	YEAR 1	32mm		
	YEAR 2	57mm		
	YEAR 3	71mm		
	YEAR 4	81mm		
	YEAR 5	89mm		

Bass survival based on recaptures by years out after tagging	<div>Survival rate by years out</div> <table><thead><tr><th>Year</th><th>Recaptures</th></tr></thead><tbody><tr><td>1</td><td>274</td></tr><tr><td>5</td><td>56</td></tr><tr><td>10</td><td>8</td></tr><tr><td>11</td><td>2</td></tr></tbody></table> <div>Longest time out (years)</div> <table><tbody><tr><td>11.5</td><td>1</td></tr></tbody></table>	Year	Recaptures	1	274	5	56	10	8	11	2	11.5	1	<div>BASS SURVIVAL BORUMBA</div> <table><caption>Bass Survival Data (from text)</caption><thead><tr><th>Years Out</th><th>Recaptures</th></tr></thead><tbody><tr><td>1</td><td>274</td></tr><tr><td>5</td><td>56</td></tr><tr><td>10</td><td>8</td></tr><tr><td>11</td><td>2</td></tr></tbody></table>	Years Out	Recaptures	1	274	5	56	10	8	11	2
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Grid locations of tagged fish (map LBY) 2011-2020	<div>Grids where most fish caught</div> <table><thead><tr><th>GRID</th><th>FISH</th></tr></thead><tbody><tr><td>E34</td><td>854</td></tr><tr><td>D34</td><td>303</td></tr><tr><td>F34</td><td>240</td></tr></tbody></table>	GRID	FISH	E34	854	D34	303	F34	240															
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Bass recaptured outside impoundment 2011-2020	<div>Recaptures 138</div> <div>Recaptured same area 74 (53.6%)</div> <table><thead><tr><th>Up lake</th><th>Down lake</th></tr></thead><tbody><tr><td>18</td><td>43</td></tr><tr><td>Below lake</td><td></td></tr><tr><td>8</td><td></td></tr></tbody></table>	Up lake	Down lake	18	43	Below lake		8		<div>BORUMBA BASS MOVEMENTS</div>														
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Bass recaptured outside impoundment All years	<table><thead><tr><th>Above lake</th><th>Below lake</th></tr></thead><tbody><tr><td>0</td><td>21</td></tr><tr><td>Yabba Creek</td><td>Mary River</td></tr><tr><td>11</td><td>10</td></tr></tbody></table>	Above lake	Below lake	0	21	Yabba Creek	Mary River	11	10															
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LAKE BORUMBA			GOLDEN PERCH	
				
MEASURE	ACTUAL			GRAPH
Catch and effort number of fish fisher days T20 fishers (taggers) 2011-2020	HIGHEST	LOWEST	NOW	
	CATCH			
	2018	2013	2020	
Catch rate Fish/fisher day 2011-2020	30	2	11	
	EFFORT			
	2011	2013	2020	
Average length (mm) Bars show smallest to largest fish 2011-2020	85	27	57	
Fish lengths percentage Undersize <300mm Legal 300-499mm Trophy 500+mm 2011-2020	HIGHEST	LOWEST	NOW	
	LEGAL			
	2017-19			
Grid locations of tagged fish (map LBY) 2011-2020	100			
	TROPHY			
	2017-19			
Grid locations of tagged fish (map LBY) 2011-2020	0			
Grid locations of tagged fish (map LBY) 2011-2020	Grids where most fish caught			
	GRID	FISH		
	D34	31		
Grid locations of tagged fish (map LBY) 2011-2020	E34	25		
	F34	11		

LAKE BORUMBA			SOUTHERN SARATOGA	
				
MEASURE	ACTUAL			GRAPH
Catch and effort number of fish fisher days T20 fishers (taggers) 2011-2020	HIGHEST CATCH 2015 49 EFFORT 2011 85	LOWEST 2017 2 2013 27	NOW 2020 6 2020 57	
Catch rate Fish/fisher day 2011-2020	HIGHEST 2015 0.6	LOWEST 2017 0.1	NOW 2020 0.1	
Average length (mm) Bars show smallest to largest fish 2011-2020	HIGHEST 2014 661	LOWEST 2016 553	NOW 2020 NA	
Fish lengths percentage Undersize <500mm Legal 500-699mm Trophy 700+mm 2011-2020	HIGHEST LEGAL 2011 90.9 TROPHY 2014 36.8	LOWEST 2016 45.9 2011 4.5	NOW 2020 NA 2020 NA	
Grid locations of tagged fish (map LBY) 2011-2020	Grids where most fish caught GRID FISH D34 59 E33 23			

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 Bass and Golden Perch are <300mm, legal fish are ≥300 and <500mm and trophy fish are ≥500mm
- Undersized Southern Saratoga are <500mm, legal fish are ≥500 and <700mm and trophy fish are ≥700mm
- 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 LBY for the impoundment and other grid maps where fish were recaptured outside the impoundment
- Distance moved was the shortest distance by water between the tag and recapture location measured in Google Earth