

## LAKE CRESSBROOK REVIEW 2024

### INFORMATION RATING



Stocking group: Toowoomba and District Fish Stocking Association

Species stocked: Australian Bass, Golden Perch, Silver Perch, Mary River Cod

Stocking timeframe: 2014-2024

Fish timeframe: 2015-2024

Fisher timeframe: 2020-2024

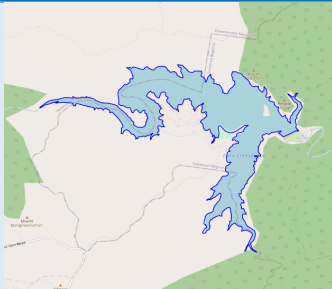

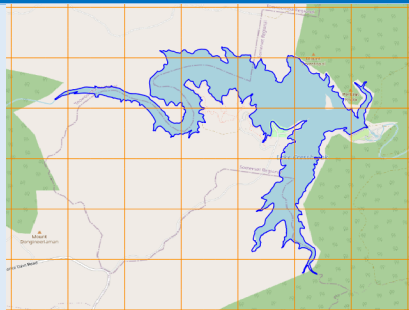
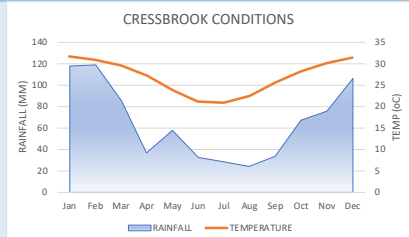
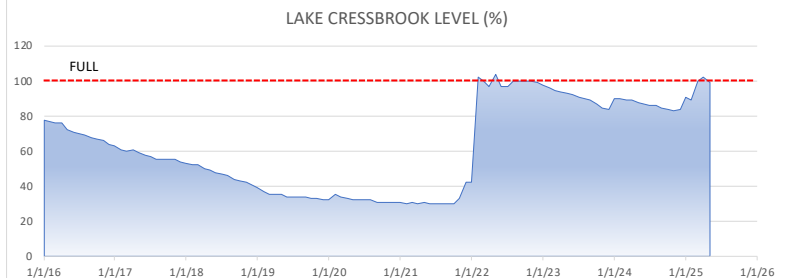
DPI link: <https://www.dpi.qld.gov.au/rsa/sips-dams-and-weirs/profile?dam=cressbrook-dam>.

Lake Cressbrook has been regularly stocked with Australian Bass and Golden Perch and some limited stocking of Mary River Cod.

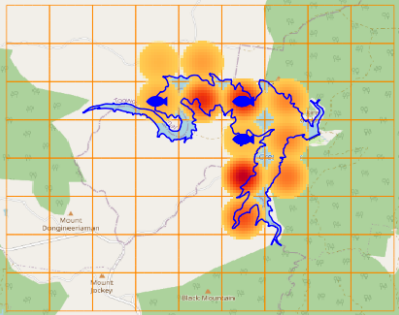
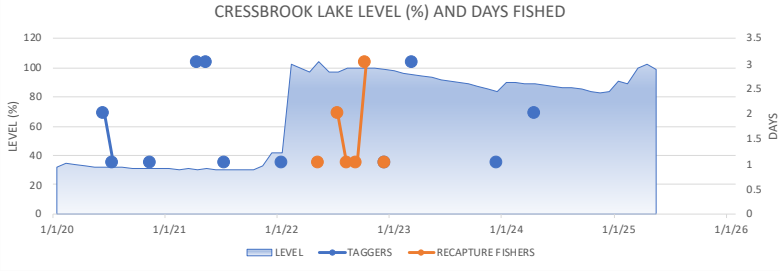
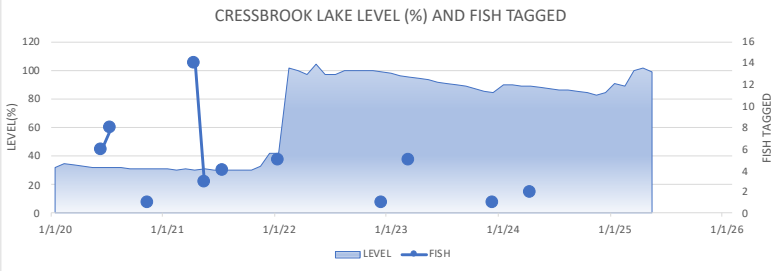
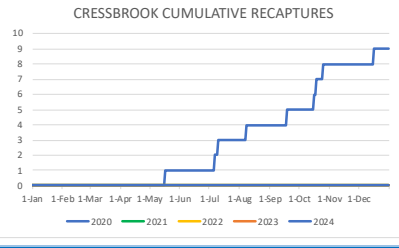
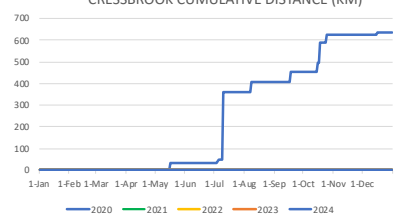
There were 4,816 fish tagged in the lake from 1994-2014 with 569 recaptures (11.8%). However, tagging has fallen away in the last decade, mostly due to low catch rates. Other lakes in the area have higher catch rates which attract the tagging effort. This has resulted in a gradual decline in the available data and that is currently at a very low level. All data in this dashboard needs to be viewed with caution due to the low levels of confidence.

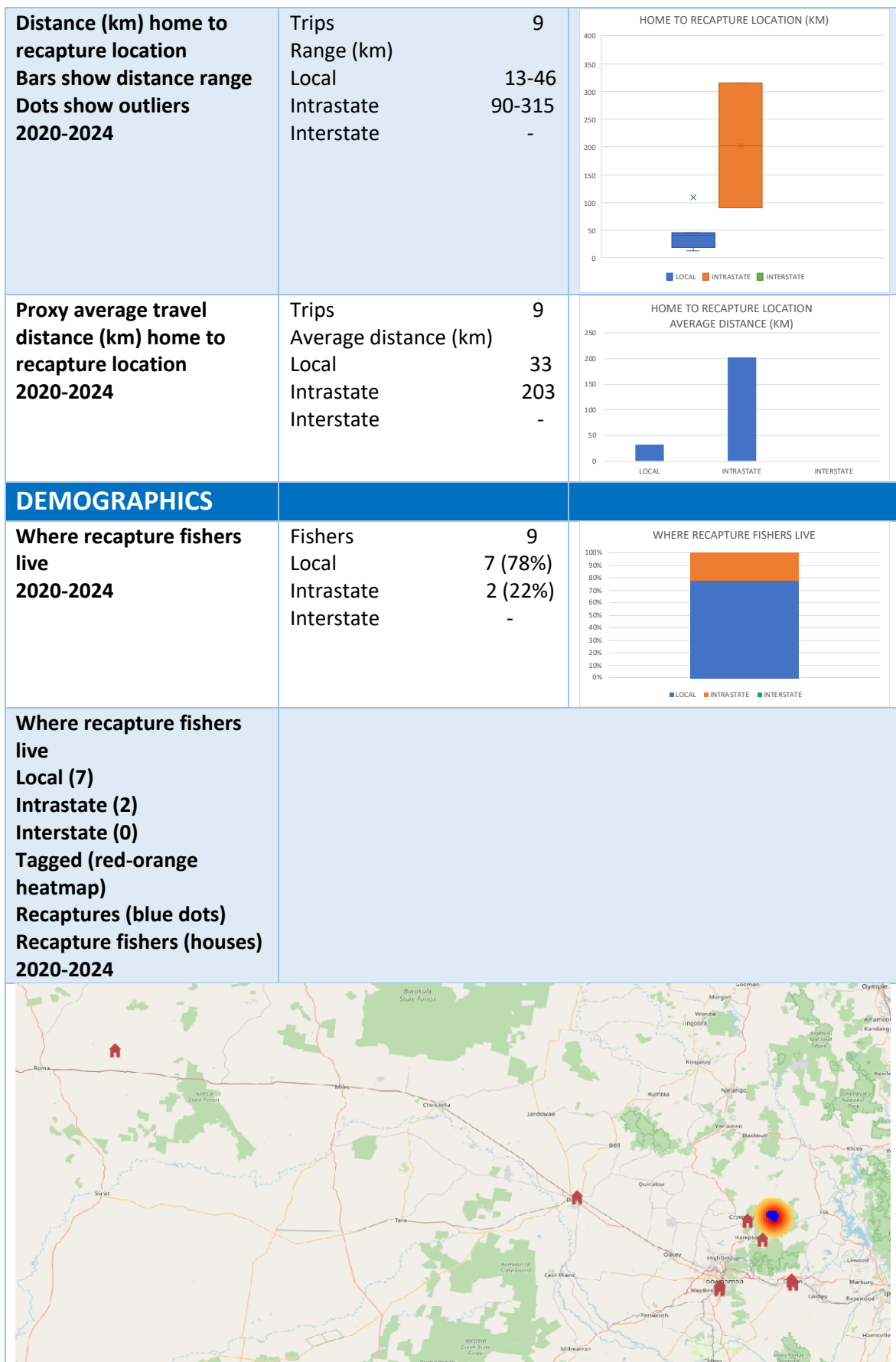
Bass growth rates were derived from historical tag and recapture data from 2000-2024 and indicates a slow growth rate of 19mm in the first year and 54mm by the end of year 5. This is one of the slowest growth rates for Bass in stocked lakes.




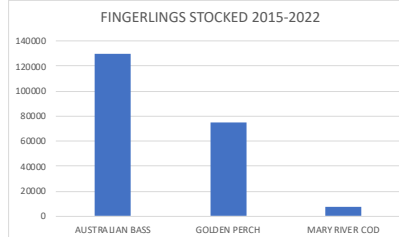
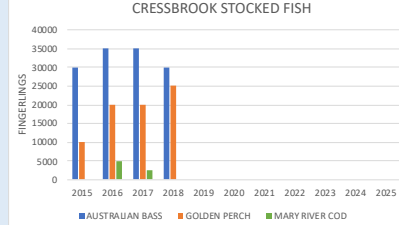
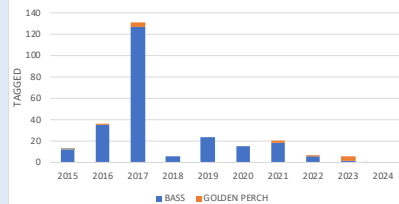
There have been 2 recaptures of Bass tagged in Cressbrook that were recaptured in Lake Wivenhoe.




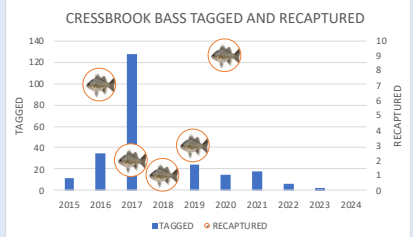
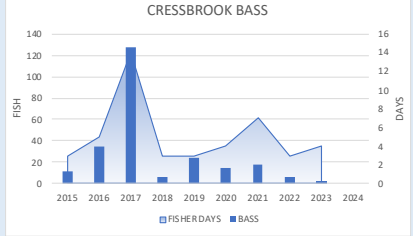
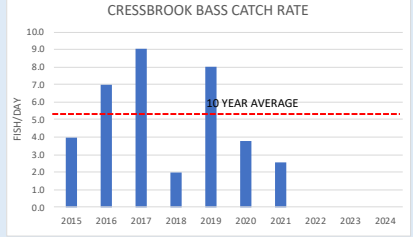
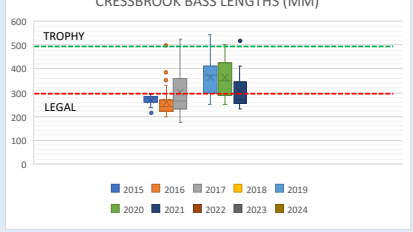
LAKE CRESSBROOK			LOCATION
	Lake Cressbrook 27.26°S 152.2°E		
IMPOUNDMENT	ACTUAL	GRAPH or MAP	
Grid map Lake Cressbrook LCB	Surface area 5.34km <sup>2</sup> at FSL		
ENVIRONMENTAL			
Mean monthly rainfall (mm)	Rainfall	Month	mm
	High	Feb	119
Mean monthly air temperature (oC)		Jan	118
	Temp	Month	oC
		Dec-Feb	31
		Jun-Jul	21
			
Lake capacity (%) 2016-2025 Spilled 2022 2025 Apr			

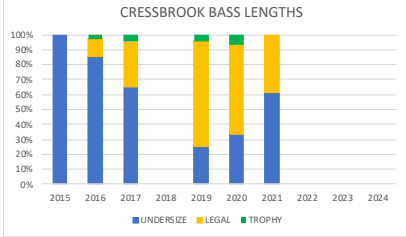
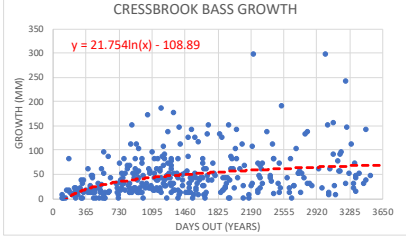
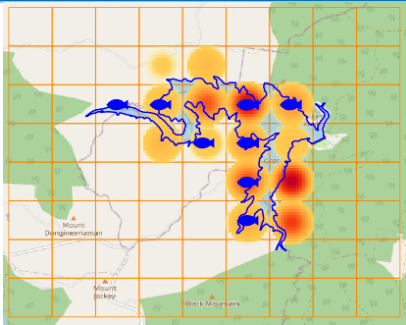
FISHERS		ACTUAL		GRAPH or MAP	
DATA RELIABILITY					
Sample size (days fished)		Reliability level		MODERATE	
Tag days (blue arrow)		Samples		MODERATE	
Recaptures (orange arrow)		Confidence		MODERATE	
Confidence %		Error		HIGH	
Error %					
2020-2024					
TYPE OF FISHERY					
Seasonality		Months most effort		CRESSBROOK SEASONALITY	
Mean monthly rainfall (mm)		Taggers		Apr	
Days fished combined		Recapture fishers		Oct	
Taggers					
Recapture fishers					
2020-2024					
Harvest or experiential fishery		Legal fish kept rate		TYPE OF FISHER	
Release rate of recaptured legal Bass		Legal fish		HARVEST	
2015-2024		Kept		EXPERIENTIAL	
		Released			
Local or visitor fishery		Recapture fishers		TYPE OF FISHER	
Where recapture fishers live		Local		LOCAL	
2020-2024		Visitor		VISITOR	
ACTIVITY					
Monthly activity		Month		CRESSBROOK ACTIVITY BY MONTH	
Days fished		Taggers		JAN	
Taggers (45)		May		FEB	
Recapture fishers (23)		Jul		MAR	
2015-2024		Aug		APR	
				MAY	
				JUN	
				JUL	
				AUG	
				SEP	
				OCT	
				NOV	
				DEC	
Weekday activity		Day		CRESSBROOK ACTIVITY BY WEEKDAY	
Days fished		Weekend		MON	
Taggers (45)		Weekdays		TUE	
Recapture fishers (23)		Weekend		WED	
2015-2024		Weekdays		THU	
				FRI	
				SAT	
				SUN	

<b>Heatmap (red-orange) of tagged fish locations and recaptures (blue fish) 2020-2024</b>	<div>Tagged</div> <div>Recaptured</div> <div>50</div> <div>9</div>	
<b>EFFORT</b>		
<b>Lake level (%)</b> <b>Days fished</b> <b>Taggers</b> <b>Recapture fishers</b> <b>2020-2024</b>	<div>CRESSBROOK LAKE LEVEL (%) AND DAYS FISHED</div> 	
<b>Lake level (%)</b> <b>Fish tagged</b> <b>Taggers</b> <b>2020-2024</b>	<div>CRESSBROOK LAKE LEVEL (%) AND FISH TAGGED</div> 	
<b>Cumulative recaptures</b> <b>2020-2024</b>	<div>Year</div> <div>2020</div> <div>2021</div> <div>2022</div> <div>2023</div> <div>2024</div> <div>Recaps</div> <div>9</div> <div>0</div> <div>0</div> <div>0</div> <div>0</div>	<div>CRESSBROOK CUMULATIVE RECAPTURES</div> 
<b>TRAVEL</b>		
<b>Cumulative distance (km) home to recapture location</b> <b>2020-2024</b>	<div>Year</div> <div>2020</div> <div>2021</div> <div>2022</div> <div>2023</div> <div>2024</div> <div>Km</div> <div>636</div> <div>0</div> <div>0</div> <div>0</div> <div>0</div>	<div>CRESSBROOK CUMULATIVE DISTANCE (KM)</div> 

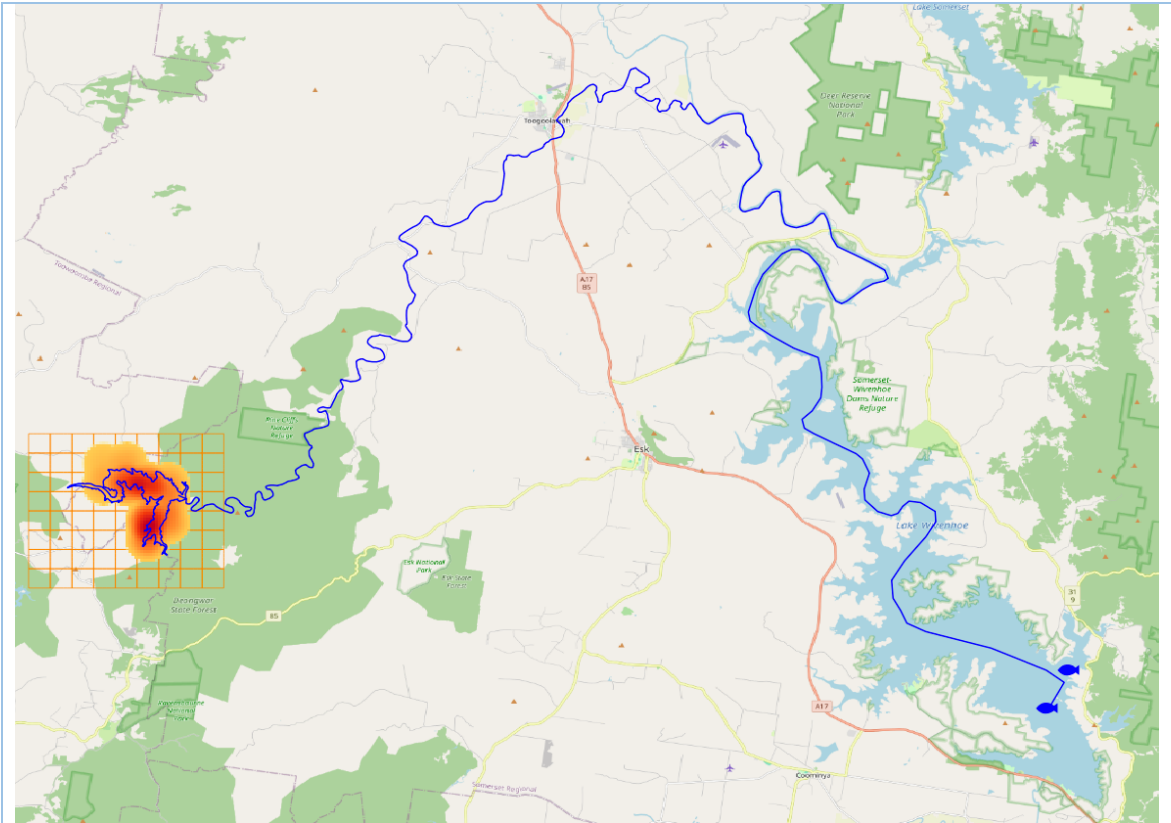



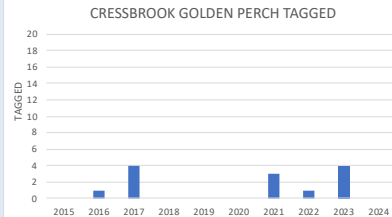
FISH	ACTUAL		MAP or GRAPH																																																
AUSTRALIAN BASS	GOLDEN PERCH		MARY RIVER COD																																																
																																																			
STOCKING																																																			
<b>Fingerlings stocked 2015-2022</b>	Australian Bass Golden Perch Mary River Cod	130,000 75,000 7,500	 <table><caption>FINGERLINGS STOCKED 2015-2022</caption><tr><th>Species</th><th>Fingerlings Stocked</th></tr><tr><td>Australian Bass</td><td>130,000</td></tr><tr><td>Golden Perch</td><td>75,000</td></tr><tr><td>Mary River Cod</td><td>7,500</td></tr></table>	Species	Fingerlings Stocked	Australian Bass	130,000	Golden Perch	75,000	Mary River Cod	7,500																																								
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<b>Fingerlings stocked by year 2015-2022 (no records after 2018)</b>			 <table><caption>CRESSBROOK STOCKED FISH</caption><tr><th>Year</th><th>Australian Bass</th><th>Golden Perch</th><th>Mary River Cod</th></tr><tr><td>2015</td><td>30000</td><td>10000</td><td>0</td></tr><tr><td>2016</td><td>35000</td><td>20000</td><td>5000</td></tr><tr><td>2017</td><td>35000</td><td>20000</td><td>5000</td></tr><tr><td>2018</td><td>30000</td><td>25000</td><td>0</td></tr><tr><td>2019</td><td>0</td><td>0</td><td>0</td></tr><tr><td>2020</td><td>0</td><td>0</td><td>0</td></tr><tr><td>2021</td><td>0</td><td>0</td><td>0</td></tr><tr><td>2022</td><td>0</td><td>0</td><td>0</td></tr><tr><td>2023</td><td>0</td><td>0</td><td>0</td></tr><tr><td>2024</td><td>0</td><td>0</td><td>0</td></tr><tr><td>2025</td><td>0</td><td>0</td><td>0</td></tr></table>	Year	Australian Bass	Golden Perch	Mary River Cod	2015	30000	10000	0	2016	35000	20000	5000	2017	35000	20000	5000	2018	30000	25000	0	2019	0	0	0	2020	0	0	0	2021	0	0	0	2022	0	0	0	2023	0	0	0	2024	0	0	0	2025	0	0	0
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<b>Species tagged 2015-2024</b>	Bass Golden Perch Mary River Cod	Tagged 245 13 0	 <table><caption>CRESSBROOK SPECIES TAGGED</caption><tr><th>Year</th><th>Bass</th><th>Golden Perch</th></tr><tr><td>2015</td><td>10</td><td>0</td></tr><tr><td>2016</td><td>35</td><td>0</td></tr><tr><td>2017</td><td>125</td><td>0</td></tr><tr><td>2018</td><td>5</td><td>0</td></tr><tr><td>2019</td><td>20</td><td>0</td></tr><tr><td>2020</td><td>15</td><td>0</td></tr><tr><td>2021</td><td>15</td><td>0</td></tr><tr><td>2022</td><td>5</td><td>0</td></tr><tr><td>2023</td><td>5</td><td>0</td></tr><tr><td>2024</td><td>0</td><td>13</td></tr></table>	Year	Bass	Golden Perch	2015	10	0	2016	35	0	2017	125	0	2018	5	0	2019	20	0	2020	15	0	2021	15	0	2022	5	0	2023	5	0	2024	0	13															
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AUSTRALIAN BASS	ACTUAL			GRAPH or MAP																				
																								
<b>DATA RELIABILITY</b>																								
Sample size (av fish/year) Tagged (blue arrow) Recaptures (orange arrow) Confidence % Error % 2020-2024	<table border="1"> <thead> <tr> <th>Reliability level</th><th>LOW</th><th>MODERATE</th><th>MODERATE</th><th>HIGH</th></tr> </thead> <tbody> <tr> <td>Samples</td><td>10</td><td>41</td><td>68</td><td>271</td></tr> <tr> <td>Confidence</td><td>80%</td><td>80%</td><td>90%</td><td>95%</td></tr> <tr> <td>Error</td><td>20%</td><td>10%</td><td>5%</td><td>5%</td></tr> </tbody> </table> <div>   </div>			Reliability level	LOW	MODERATE	MODERATE	HIGH	Samples	10	41	68	271	Confidence	80%	80%	90%	95%	Error	20%	10%	5%	5%	
Reliability level	LOW	MODERATE	MODERATE	HIGH																				
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<b>TAGGED</b>																								
Bass tagged and recaptured including recaptures from below dam 2015-2024	Tagged Recaptured Recapture rate Tagged 2024	245 22 9.0% 0																						
<b>EFFORT</b>																								
Catch and effort Taggers Fish tagged Days fished 2015-2024	High Tagged 2017 127 Days 2017 14	Low 2023 2 2018 3	Now 2024 0 2024 0																					
<b>TAG RATE</b>																								
Tag rate Fish/day 2015-2024 (2024 no days)	High Tag rate 2017 9.1 10 year average	Low 2018 2.0	Now 2024 NA 5.2																					
<b>LENGTHS</b>																								
Average length (mm) Bars show length range Dots show outliers 2015-2024	High Average length (mm) 2020 362 Largest 2021 520	Low 2016 259 2015 295	Now 2024 NA 2024 NA																					

<b>Fish lengths percentage</b> <b>Undersize &lt;300mm</b> <b>Legal 300-499mm</b> <b>Trophy 500+mm</b> <b>2015-2024</b>	High Legal-trophy 2019 71% Trophy 2017 5%	Low 2015 0%	Now 2024 NA 2024 NA	
<b>GROWTH</b>				
<b>Growth at end of each year (mm/year)</b> <b>2000-2024</b>	Recaptures Year 1 Year 2 Year 3 Year 4 Year 5	354 19 35 43 50 54		
<b>LOCATIONS</b>				
<b>Locations</b> <b>Tagged fish (red-orange heat map)</b> <b>Recaptures (blue fish)</b> <b>2015-2024</b>	Tagged Recaptured	245 23		
<b>Bass after spills</b> <b>Tagged in Cressbrook</b> <b>Recaptured in Lake Wivenhoe (blue fish)</b> <b>2022-2024</b>	Recaptured Lake Wivenhoe	2		





GOLDEN PERCH	ACTUAL	GRAPH or MAP																						
																								
TAGGED																								
<b>Golden Perch tagged and recaptured 2015-2024</b>	<div>Tagged13</div> <div>Recaptured0</div> <div>Recapture rate0%</div> <div>Tagged 20240</div>	<div><div>CRESSBROOK GOLDEN PERCH TAGGED</div><table><thead><tr><th>Year</th><th>Tagged</th></tr></thead><tbody><tr><td>2015</td><td>0</td></tr><tr><td>2016</td><td>1</td></tr><tr><td>2017</td><td>4</td></tr><tr><td>2018</td><td>0</td></tr><tr><td>2019</td><td>0</td></tr><tr><td>2020</td><td>0</td></tr><tr><td>2021</td><td>3</td></tr><tr><td>2022</td><td>1</td></tr><tr><td>2023</td><td>4</td></tr><tr><td>2024</td><td>0</td></tr></tbody></table></div>	Year	Tagged	2015	0	2016	1	2017	4	2018	0	2019	0	2020	0	2021	3	2022	1	2023	4	2024	0
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2024	0																							

MARY RIVER COD	ACTUAL	GRAPH or MAP
		
<b>TAGGED</b>		
<b>Mary River Cod tagged and recaptured 2015-2024</b>	Tagged 0 Recorded 0	

## Data sources

Data used in the Lake Cressbrook Crystal Bowl are:

- Tag records and recapture records for the impoundment at <http://crystalbowl.infofishaustralia.com.au/>.
- Dam level data from Toowoomba Regional Council <https://www.tr.qld.gov.au/environment-water-waste/water-sources-supply-storage-levels/water-sources-supply-storage-levels>.
- Stocked fish records from <https://www.data.qld.gov.au/dataset/queensland-freshwater-fish-stocking-records/>.
- Rainfall records for Station 040808 Cressbrook Dam and Temperature records for Station 040082 University of Queensland gatton from <http://www.bom.gov.au/climate/data/>.

## Basis for analysis

- Data reliability for fishers based on the sample size over the past 5 years for days fished by taggers and by fishers recapturing fish.
- Data reliability for fish based on average number of fish tagged and recaptured per year over the past 5 years.
- Catch rates calculated as number of fish tagged/day for 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.
- Locations based on Infofish grid map LCB 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.
- Travel proxy distance is the straight-line distance between where the fisher lives (address, suburb, town or postcode) and the recapture location. Local <60km, intrastate >=60km and postcode starting with 4, interstate not Qld.