

## LAKE KURWONGBAH REVIEW 2024

### INFORMATION RATING



Stocking group: Pine Rivers Fish Management Association

Species stocked: Australian Bass, Golden Perch, Southern Saratoga, Mary River Cod

Stocking timeframe: 2014-2024

Fish timeframe: 2015-2024

Fisher timeframe: 2020-2024

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



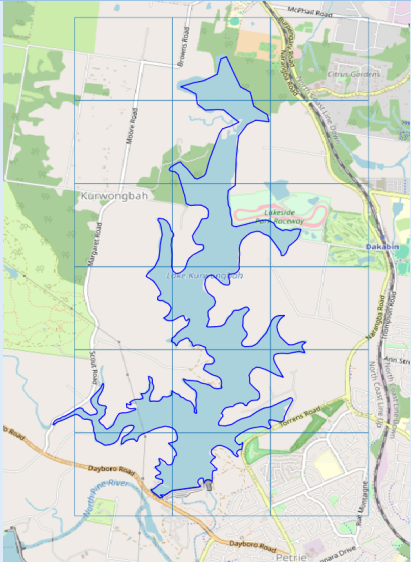
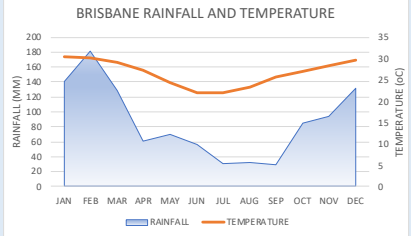
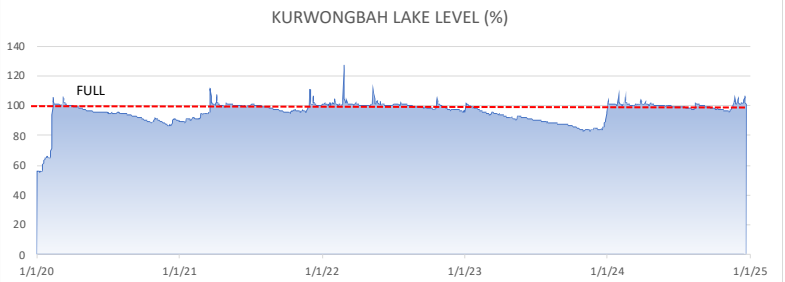
PRFMA link: <https://prfma.com.au/info/fish-stocking-programs/>

Lake Kurwongbah has been regularly stocked with Australian Bass and Golden Perch. There have also been limited stocking of Mary River Cod and Southern Saratoga.

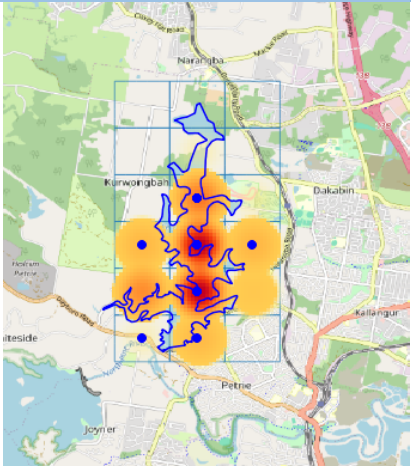
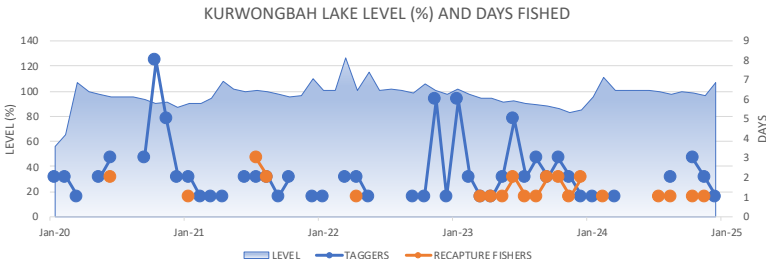
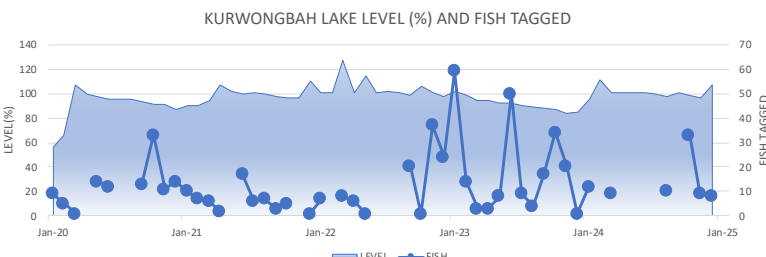
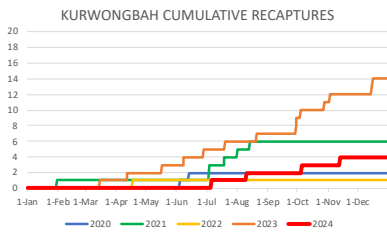
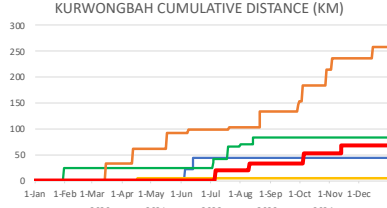
The lake is relatively small and mostly limited to paddle craft and shore-based fishers. It is popular with kayakers. Based on where recapture fishers live Kurwongbah mainly attracts local fishers from the Brisbane area and they live within 60km of the lake. There have not been any recaptures recorded by fishers from outside that area.

Tagging in Lake Kurwongbah has been carried out since 2011 however tagging effort has been lower in 2024 and there have been 4 recaptures this year compared with 14 in 2023. The lake spilled from Jan-Apr and this may have contributed to the lower tag effort. The lake spilled again in Nov and Dec and this may affect effort in early 2025.

Following the spill in 2022 there was a shift in fishing effort to below the dam in the North Pine River. This was largely influenced by fish spilling from Lake Samsonvale. While there were 95 recaptures of tagged fish that spilled from Samsonvale there was only 1 recapture of a fish that spilled from Kurwongbah and that was recaptured in the river not far below the dam.

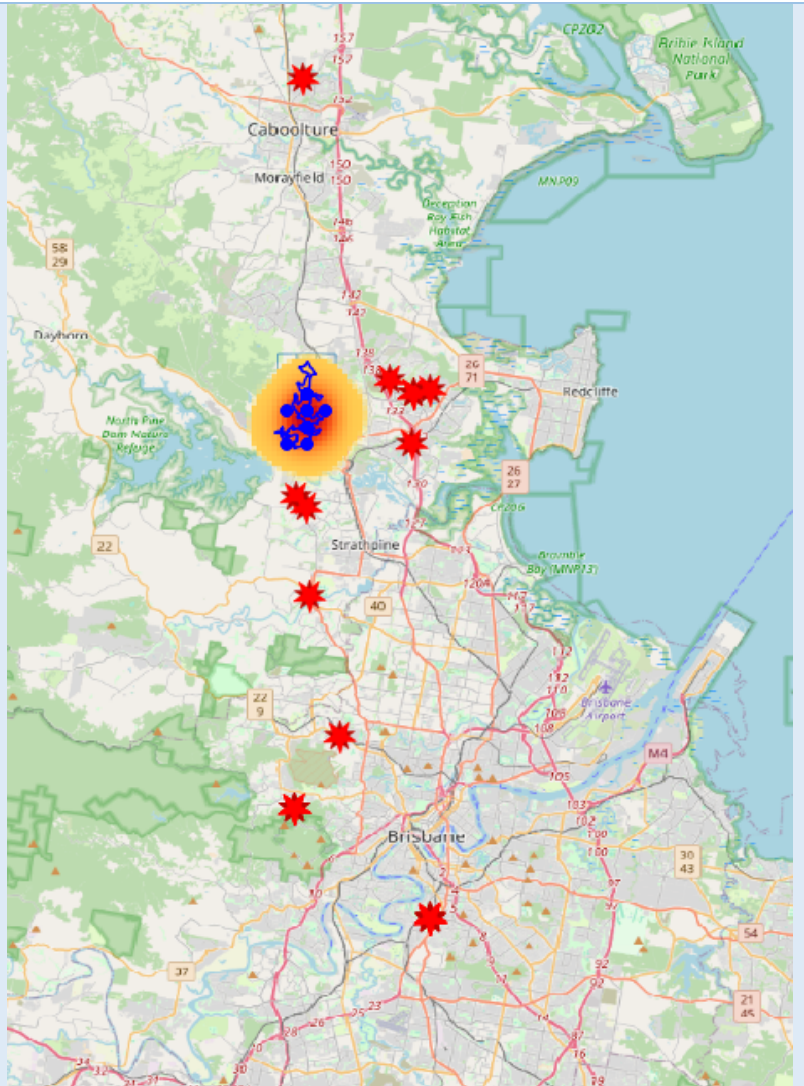
LAKE KURWONGBAH		LOCATION															
	Lake Kurwongbah 27.24°S 152.96°E																
IMPOUNDMENT	ACTUAL	GRAPH or MAP															
<b>Grid map</b> Lake Kurwongbah KUR	Surface area 3.67km <sup>2</sup> at FSL																
ENVIRONMENTAL																	
<b>Mean monthly rainfall (mm)</b> <b>Mean monthly air temperature (oC)</b>	<table> <tr> <td>Rainfall</td><td>Month</td><td>mm</td></tr> <tr> <td>High</td><td>Feb</td><td>182</td></tr> <tr> <td></td><td>Jan</td><td>141</td></tr> <tr> <td>Temp</td><td>Month</td><td>oC</td></tr> <tr> <td></td><td>Dec-Feb</td><td>30</td></tr> </table>	Rainfall	Month	mm	High	Feb	182		Jan	141	Temp	Month	oC		Dec-Feb	30	
Rainfall	Month	mm															
High	Feb	182															
	Jan	141															
Temp	Month	oC															
	Dec-Feb	30															
<b>Lake capacity (%)</b> <b>2020-2024</b> <b>Spilled</b> <b>2020</b> <b>2021 Dec</b> <b>2022 Jan-Aug</b> <b>2024 Jan-Apr, Aug, Nov, Dec</b>																	





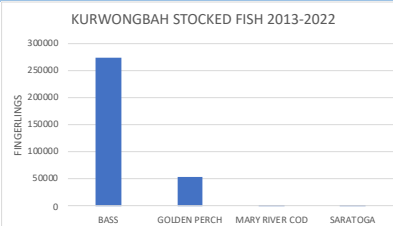
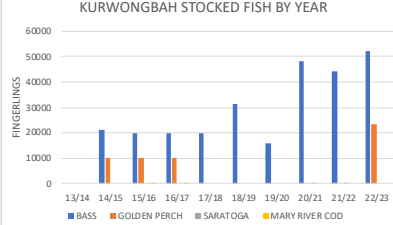
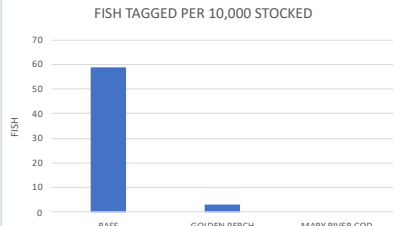
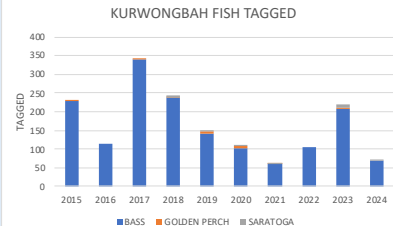
FISHERS		ACTUAL		GRAPH or MAP	
DATA RELIABILITY					
Sample size (days fished)		Reliability level		MODERATE	
Tag days (blue arrow)		Samples		MODERATE	
Recaptures (orange arrow)		Confidence		95%	
Confidence %		Error		5%	
Error %					
2020-2024					
TYPE OF FISHERY					
Seasonality		Months most effort		SEASONALITY OF FISHERY	
Mean monthly rainfall (mm)		Taggers		Oct	
Days fished		Recapture fishers		Nov	
Taggers				Jul	
Recapture fishers				Aug	
2020-2024					
Harvest or experiential fishery		Legal fish kept rate		TYPE OF FISHERY	
Release rate of recaptured legal Bass		Legal fish		HARVEST	
2020-2024		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		KURWONGBAH ACTIVITY BY MONTH	
Days fished		Taggers		Oct	
Taggers (97)		Recaps		Nov	
Recapture fishers (27)				Jun	
2020-2024				May	
				Jul	
Weekday activity		Day		KURWONGBAH ACTIVITY BY WEEKDAY	
Days fished		Taggers		MON	
Taggers (97)		Recaps		TUE	
Recapture fishers (27)				WED	
2020-2024				THU	
				FRI	
				SAT	
				SUN	

Heatmap (red-orange) of tagged fish locations and recaptures (blue dots) 2020-2024		Tagged Recaptured		575 27														
EFFORT																		
Lake level (%) Days fished Taggers Recapture fishers 2020-2024																		
Lake level (%) Fish tagged Taggers 2020-2024																		
Cumulative recaptures 2020-2024		<table><tr><td>Year</td><td>Recaps</td></tr><tr><td>2020</td><td>2</td></tr><tr><td>2021</td><td>6</td></tr><tr><td>2022</td><td>1</td></tr><tr><td>2023</td><td>14</td></tr><tr><td>2024</td><td>4</td></tr></table>		Year	Recaps	2020	2	2021	6	2022	1	2023	14	2024	4			
Year	Recaps																	
2020	2																	
2021	6																	
2022	1																	
2023	14																	
2024	4																	
TRAVEL																		
Cumulative distance (km) home to recapture location 2020-2024		<table><tr><td>Year</td><td>Km</td></tr><tr><td>2020</td><td>43</td></tr><tr><td>2021</td><td>83</td></tr><tr><td>2022</td><td>4</td></tr><tr><td>2023</td><td>258</td></tr><tr><td>2024</td><td>69</td></tr></table>		Year	Km	2020	43	2021	83	2022	4	2023	258	2024	69			
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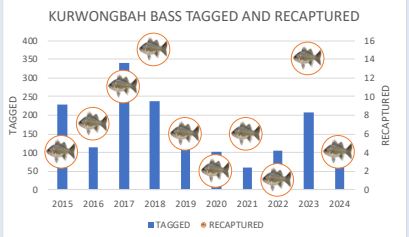
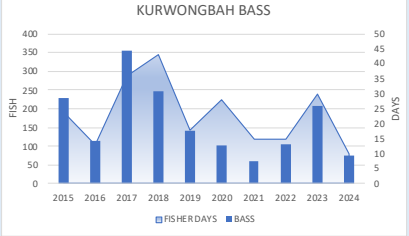
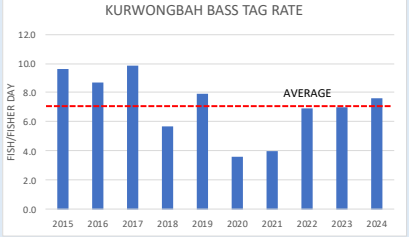
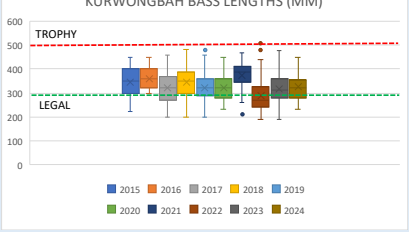
<b>Distance (km) home to recapture location</b> <b>Bars show distance range</b> <b>Dots show outliers</b> <b>2020-2024</b>	Trips 25 Range (km) Local 4-32 Intrastate - Interstate -	<b>RECAPTURE FISHER'S PROXY TRAVEL DISTANCE (KM)</b> 
<b>Distance (km) home to recapture location</b> <b>Bars show distance range</b> <b>Dots show outliers</b> <b>2020-2024</b>		<b>KURWONGBAH PROXY TRAVEL DISTANCE (KM)</b> 
<b>Proxy average travel distance (km) home to recapture location</b> <b>2020-2024</b>	Trips 21 Average distance (km) Local 18 Intrastate - Interstate -	<b>AVERAGE PROXY TRAVEL DISTANCE (KM)</b> 
<b>DEMOGRAPHICS</b>		
<b>Gender of recapture fishers (ex-taggers)</b> <b>2020-2024</b>	Fishers 19 Male 19 Female 0	<b>GENDER OF RECAPTURE FISHERS</b> 
<b>Where recapture fishers live</b> <b>2020-2024</b>	Fishers 25 Local 25 (100%) Intrastate - Interstate -	<b>WHERE RECAPTURE FISHERS LIVE</b> 

Where recapture fishers live  
Local (25)  
Intrastate (0)  
Interstate (0)  
Tagged (red-orange  
heatmap)  
Recaptures (blue dots)  
Recapture fishers (red  
stars)  
2020-2024




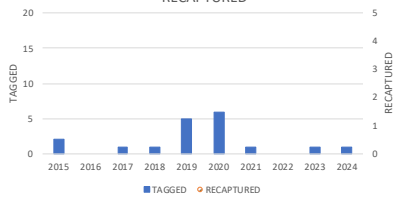
FISH	ACTUAL	MAP or GRAPH
<b>AUSTRALIAN BASS</b>	<b>GOLDEN PERCH</b>	<b>SOUTHERN SARATOGA</b>
		
<b>MARY RIVER COD</b>		
		
<b>STOCKING</b>		
<b>Fingerlings stocked 2013/14-2022/23</b>	Australian Bass 273,300 Golden Perch 53,500 Mary River Cod 700 Southern Saratoga 182	 <p>KURWONGBAH STOCKED FISH 2013-2022</p>
<b>Fingerlings stocked by year 2013/14-2022/23</b>		 <p>KURWONGBAH STOCKED FISH BY YEAR</p>
<b>TAG RATE</b>		
<b>Fish tagged 2015-2024 per 10,000 fish stocked 2013/14-2022/23</b>	Tagged/10,000 fingerlings Bass 59 Golden Perch 3	 <p>FISH TAGGED PER 10,000 STOCKED</p>
<b>SPECIES TAGGED</b>		
<b>Species tagged 2015-2024</b>	Bass 1,613 Golden Perch 18 Southern Saratoga 30 Mary River Cod 0	 <p>KURWONGBAH FISH TAGGED</p>




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%	
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Error	20%	10%	5%	5%																				
<b>TAGGED</b>																								
Bass tagged and recaptured including recaptures from below dam 2015-2024	Tagged Recaptured Recapture rate Tagged 2024	1613 70 4.4% 76																						
<b>EFFORT</b>																								
Catch and effort Taggers Fish tagged Days fished 2015-2024	High Tagged 2017 355 Days 2018 43	Low 2021 60 2016 13	Now 2024 76 2024 9																					
<b>TAG RATE</b>																								
Tag rate Fish/day 2015-2024 (2024 insufficient days)	High Tag rate 2017 9.9 10 year average	Low 2020 3.6	Now 2024 7.6 7.1																					
<b>LENGTHS</b>																								
Average length (mm) Bars show length range Dots show outliers 2015-2024	High Average length (mm) 2021 375 Largest 2022 510	Low 2022 289 2020 450	Now 2024 324 2024 450																					



<b>Fish lengths percentage</b> <b>Undersize &lt;300mm</b> <b>Legal 300-499mm</b> <b>Trophy 500+mm</b> <b>2015-2024</b>	<table><tr><th>High</th><th>Low</th><th>Now</th></tr><tr><td>Legal-trophy</td><td></td><td></td></tr><tr><td>2021</td><td>2022</td><td>2024</td></tr><tr><td>88%</td><td>33%</td><td>64%</td></tr><tr><td>Trophy</td><td></td><td></td></tr><tr><td>2022</td><td>14-21</td><td>2024</td></tr><tr><td>1%</td><td>0%</td><td>0%</td></tr></table>	High	Low	Now	Legal-trophy			2021	2022	2024	88%	33%	64%	Trophy			2022	14-21	2024	1%	0%	0%	<table><caption>KURWONGBAH BASS LENGTHS</caption><thead><tr><th>Year</th><th>Undersize (%)</th><th>Legal (%)</th><th>Trophy (%)</th></tr></thead><tbody><tr><td>2015</td><td>30</td><td>65</td><td>5</td></tr><tr><td>2016</td><td>35</td><td>60</td><td>5</td></tr><tr><td>2017</td><td>38</td><td>58</td><td>4</td></tr><tr><td>2018</td><td>20</td><td>75</td><td>5</td></tr><tr><td>2019</td><td>30</td><td>65</td><td>5</td></tr><tr><td>2020</td><td>35</td><td>60</td><td>5</td></tr><tr><td>2021</td><td>10</td><td>85</td><td>5</td></tr><tr><td>2022</td><td>1</td><td>33</td><td>66</td></tr><tr><td>2023</td><td>0</td><td>64</td><td>36</td></tr><tr><td>2024</td><td>0</td><td>64</td><td>36</td></tr></tbody></table>	Year	Undersize (%)	Legal (%)	Trophy (%)	2015	30	65	5	2016	35	60	5	2017	38	58	4	2018	20	75	5	2019	30	65	5	2020	35	60	5	2021	10	85	5	2022	1	33	66	2023	0	64	36	2024	0	64	36
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<b>Legal Bass recaptures kept and released by recfishers (ex-taggers)</b> <b>Legal length 300mm</b> <b>2015-2024</b>	<table><tr><td>Recaptures</td><td>40</td></tr><tr><td>Kept</td><td>1 (2%)</td></tr><tr><td>Released</td><td>39 (98%)</td></tr></table>	Recaptures	40	Kept	1 (2%)	Released	39 (98%)	<table><caption>KURWONGBAH LEGAL BASS RECAPTURES</caption><thead><tr><th>Category</th><th>Percentage (%)</th></tr></thead><tbody><tr><td>Kept</td><td>2</td></tr><tr><td>Released</td><td>98</td></tr></tbody></table>	Category	Percentage (%)	Kept	2	Released	98																																																					
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<b>Bass after the 2022 spill</b> <b>Tagged in Kurwongbah</b> <b>Recaptured below dam</b> <b>2022-2024</b>	<table><tr><td>Recaptured</td><td>1</td></tr><tr><td>North Pine River</td><td></td></tr></table>	Recaptured	1	North Pine River																																																															
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GOLDEN PERCH	ACTUAL		GRAPH or MAP																																	
																																				
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Golden Perch tagged and recaptured 2015-2024	Tagged Recaptured Recapture rate Tagged 2024	18 0 0% 1	<div><p>KURWONGBAH GOLDEN PERCH TAGGED AND RECAPTURED</p><table border="1"><thead><tr><th>Year</th><th>Tagged</th><th>Recaptured</th></tr></thead><tbody><tr><td>2015</td><td>2</td><td>0</td></tr><tr><td>2016</td><td>0</td><td>0</td></tr><tr><td>2017</td><td>1</td><td>0</td></tr><tr><td>2018</td><td>1</td><td>0</td></tr><tr><td>2019</td><td>5</td><td>0</td></tr><tr><td>2020</td><td>6</td><td>0</td></tr><tr><td>2021</td><td>1</td><td>0</td></tr><tr><td>2022</td><td>0</td><td>0</td></tr><tr><td>2023</td><td>1</td><td>0</td></tr><tr><td>2024</td><td>1</td><td>0</td></tr></tbody></table></div>	Year	Tagged	Recaptured	2015	2	0	2016	0	0	2017	1	0	2018	1	0	2019	5	0	2020	6	0	2021	1	0	2022	0	0	2023	1	0	2024	1	0
Year	Tagged	Recaptured																																		
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SOUTHERN SARATOGA		ACTUAL	GRAPH or MAP																																	
																																				
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Saratoga tagged and recaptured 2015-2024	Tagged Recaptured Recapture rate Tagged 2024	30 2 6.7% 4	<table><caption>KURWONGBAH SARATOGA TAGGED AND RECAPTURED</caption><thead><tr><th>Year</th><th>Tagged</th><th>Recaptured</th></tr></thead><tbody><tr><td>2015</td><td>0</td><td>0</td></tr><tr><td>2016</td><td>0</td><td>0</td></tr><tr><td>2017</td><td>0</td><td>0</td></tr><tr><td>2018</td><td>2</td><td>1</td></tr><tr><td>2019</td><td>3</td><td>0</td></tr><tr><td>2020</td><td>4</td><td>0</td></tr><tr><td>2021</td><td>3</td><td>0</td></tr><tr><td>2022</td><td>0</td><td>0</td></tr><tr><td>2023</td><td>11</td><td>1</td></tr><tr><td>2024</td><td>4</td><td>0</td></tr></tbody></table>	Year	Tagged	Recaptured	2015	0	0	2016	0	0	2017	0	0	2018	2	1	2019	3	0	2020	4	0	2021	3	0	2022	0	0	2023	11	1	2024	4	0
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2024	4	0																																		

## Data sources

Data used in the Lake Kurwongbah Crystal Bowl are:

- Tag records and recapture records for the impoundment at <http://crystalbowl.infofishaustralia.com.au/>.
- Dam level data from SEQ Water <https://www.seqwater.com.au/dam-levels>.
- Stocked fish records from <https://prfma.com.au/info/fish-stocking-programs/>.
- Rainfall records for Station 040186 Samsonvale 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.
- Undersized Saratoga are <500, legal are ≥500 and <800 and trophy fish are >800.
- Locations based on Infofish grid map KUR 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.