

LAKE BOONDOOMA REVIEW 2024

INFORMATION RATING



Stocking group: Boondooma Dam Fish Stocking and Management Association Inc

Species stocked: Australian Bass, Golden Perch, Silver Perch

Stocking timeframe: 2013-2020

Fish timeframe: 2015-2024

Fisher timeframe: 2020-2024

Competition timeframe: 2023-2024

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

Up to 2020 Lake Boondooma has been stocked with over 1,425,500 Bass, over 1,340,800 Golden Perch, and over 92,000 Silver Perch with funding from SIPS.

Kingaroy is the main town within local distance however it is mostly a visitor fishery with fishers recapturing fish coming from central and southern Queensland. Fishing activity occurs throughout the year while weekends see more activity than weekdays. The fishery is mostly experiential although there is a modest level of harvest.

Tagging in Boondooma has been at a low level for the past few years so the data here should be treated as indicative only.

The lake level fell steadily during the past decade until 2022 when it spilled for much of the year. Due to the low numbers of tagged fish, there were no recaptures recorded from below the dam since then. However, following previous spills there have been 4 Bass recaptured below the dam from 2015-2021 as far down as Splitters Creek at Bundaberg, a distance of 340km.

The lake spilled again at the end of Dec this year.

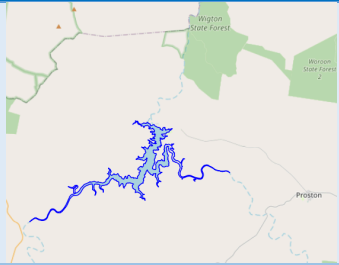

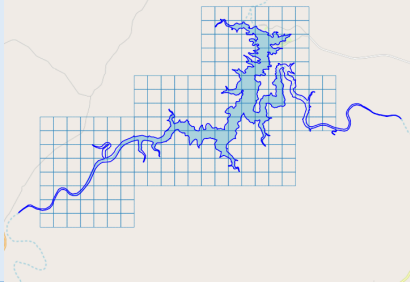
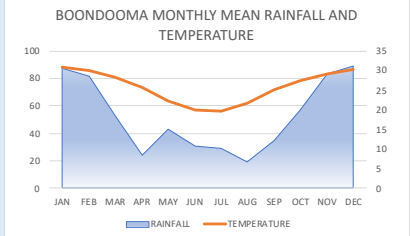
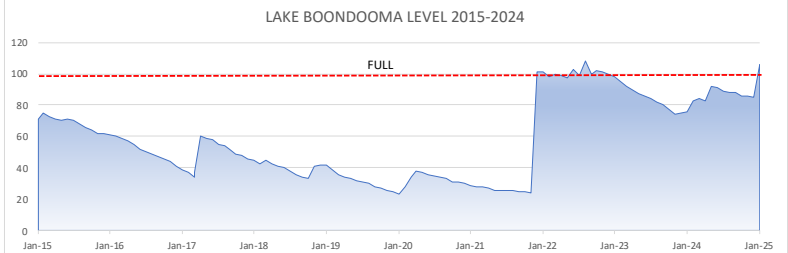
Freshwater Fishing Festival of the Dams competitions in 2023 and 2024 provide additional information on fish sizes and catch rates. Overall catch rates fell from 2023 to 2024 from 4.2 to 1.8 fish/day.



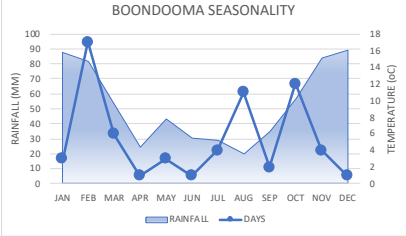
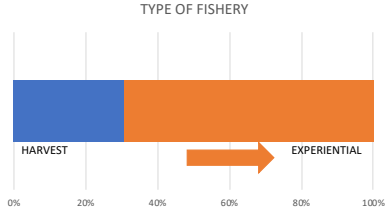
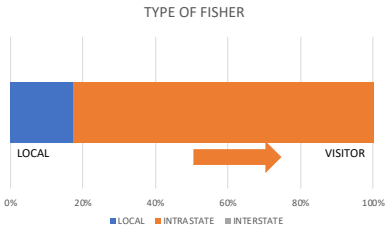
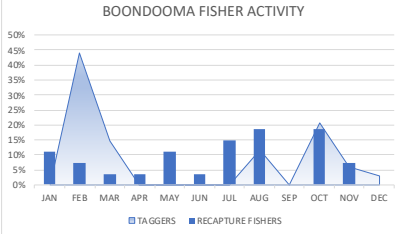
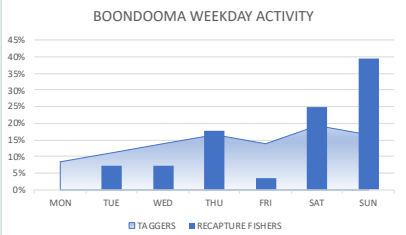


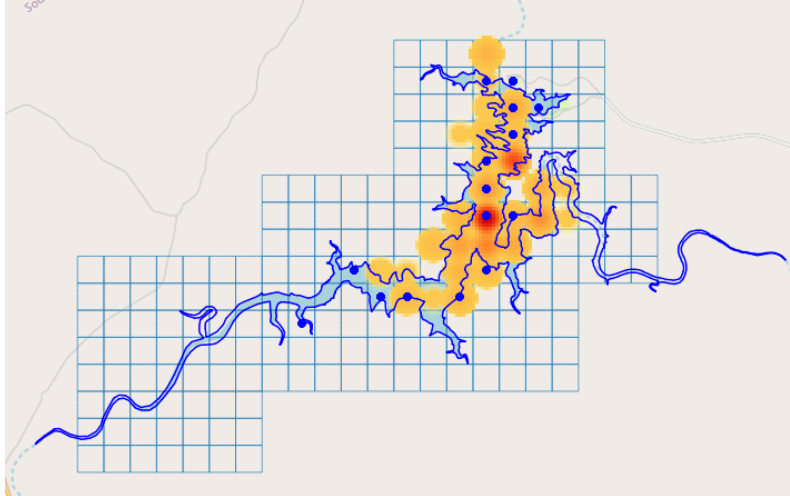
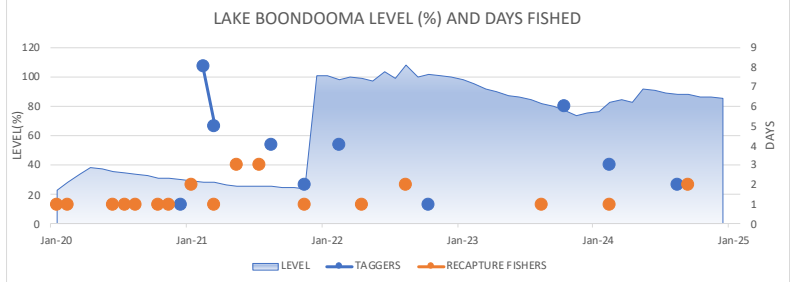
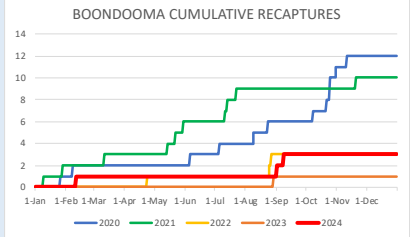
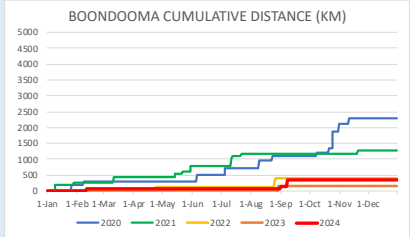
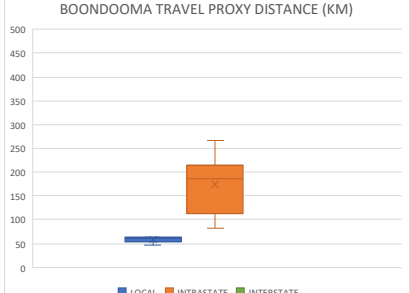
Product of Infofish Australia



Supported by Suntag, Fishing Freshwater, and
FFSAQ

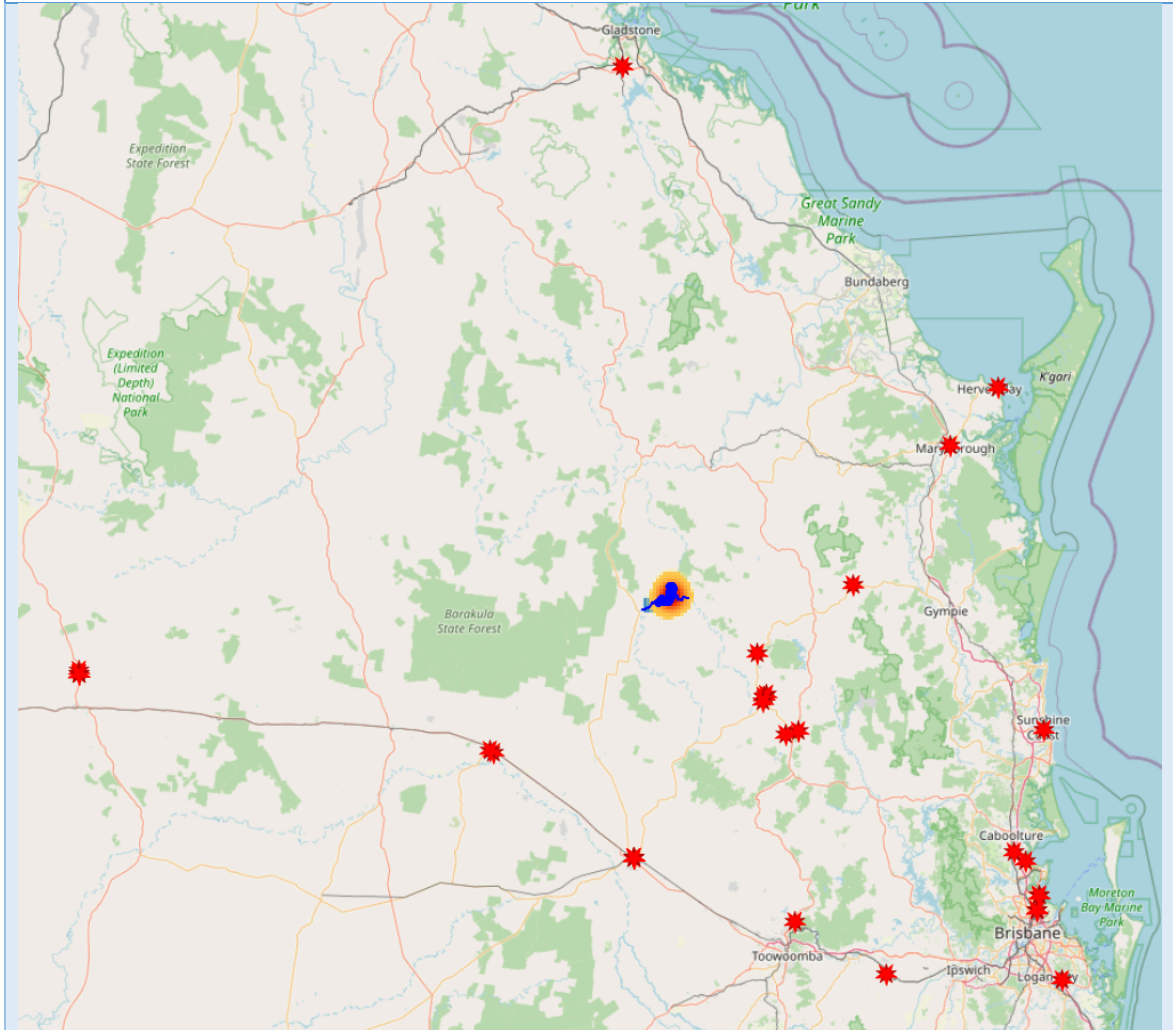
LAKE BOONDOOMA		LOCATION																		
	Lake Boondooma 26.1°S 151.4°E																			
IMPOUNDMENT	ACTUAL	GRAPH or MAP																		
Grid map Lake Boondooma LBP Surface area	Surface area 18.15km ² at Full Surface Level																			
ENVIRONMENTAL																				
Mean monthly rainfall (mm) Mean monthly air temperature (oC)	<table> <tr> <td>Rainfall</td><td>Month</td><td>mm</td></tr> <tr> <td>High</td><td>Dec</td><td>89</td></tr> <tr> <td></td><td>Jan</td><td>88</td></tr> <tr> <td>Temperature</td><td>Month</td><td>oC</td></tr> <tr> <td>High</td><td>Jan</td><td>31</td></tr> <tr> <td></td><td>Dec</td><td>30</td></tr> </table>	Rainfall	Month	mm	High	Dec	89		Jan	88	Temperature	Month	oC	High	Jan	31		Dec	30	
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High	Dec	89																		
	Jan	88																		
Temperature	Month	oC																		
High	Jan	31																		
	Dec	30																		
Lake level 2015-2024 Spills 2022 max Aug 108% 2024 max Dec 106%																				





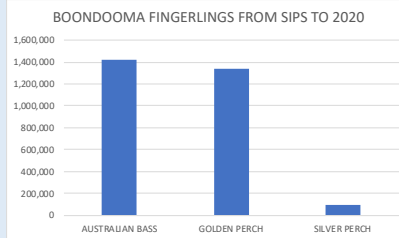
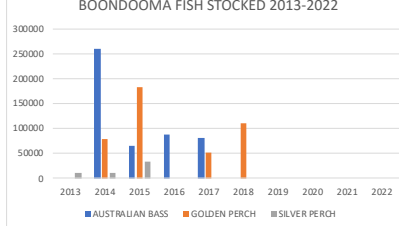
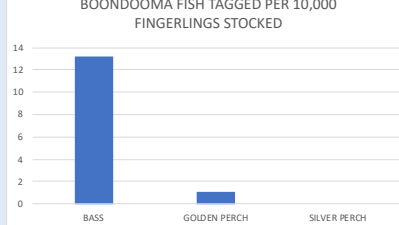
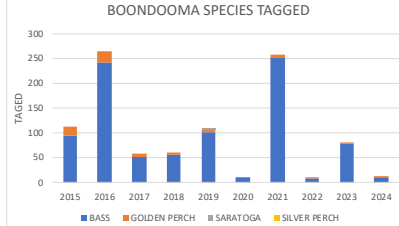
FISHERS	ACTUAL		GRAPH or MAP																					
DATA RELIABILITY																								
Sample size (days fished) Tag days (blue arrow) Recaptures (orange arrow) Confidence % Error % 2020-2024	<table border="1"> <tr> <td>Reliability level</td><td>LOW</td><td>MODERATE</td><td>MODERATE</td><td>HIGH</td></tr> <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> </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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Samples	10	41	68	271																				
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Error	20%	10%	5%	5%																				
TYPE OF FISHERY																								
Seasonality Mean monthly rainfall (mm) Days fished Taggers and recapture fishers combined 2020-2024	Months most effort Taggers/recap fishers Feb Oct																							
Harvest or experiential fishery Release rate of recaptured legal Bass (ex-taggers) 2020-2024	Bass legal fish kept rate Legal fish 23 Kept 7 (30%) Released 16 (70%)																							
Local or visitor fishery Where recapture fishers live 2020-2024	Recapture fishers 29 Local 5 (17%) Visitor 24 (83%)																							
ACTIVITY																								
Monthly activity Days fished Taggers (34) Recapture fishers (28) 2020-2024	Taggers Recaps	Month Feb Oct Aug Oct	% 44% 21% 19% 19%																					
Weekday activity Days fished Taggers (34) Recapture fishers (28) 2020-2024	Taggers Recaps	Day Weekend Weekdays Weekend Weekdays	% 36% 64% 64% 36%																					


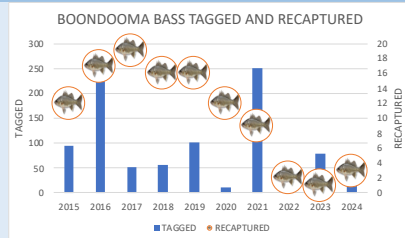
<div>Location activity</div> <div>Tagged fish (red-orange heat map)</div> <div>Recaptured (blue dots)</div> <div>2020-2024</div>														
EFFORT														
<div>Lake level</div> <div>Days fished</div> <div>Taggers</div> <div>Recapture fishers</div> <div>2020-2024</div>	<div>LAKE BOONDOOMA LEVEL (%) AND DAYS FISHED</div> 													
<div>Cumulative recaptures</div> <div>2020-2024</div>	<table><tr><th>Year</th><th>Recaptures</th></tr><tr><td>2020</td><td>12</td></tr><tr><td>2021</td><td>10</td></tr><tr><td>2022</td><td>3</td></tr><tr><td>2023</td><td>1</td></tr><tr><td>2024</td><td>3</td></tr></table>	Year	Recaptures	2020	12	2021	10	2022	3	2023	1	2024	3	<div>BOONDOOMA CUMULATIVE RECAPTURES</div> 
Year	Recaptures													
2020	12													
2021	10													
2022	3													
2023	1													
2024	3													
TRAVEL														
<div>Cumulative distance (km) home to recapture location</div> <div>2020-2024</div>	<table><tr><th>Year</th><th>Km</th></tr><tr><td>2020</td><td>2289</td></tr><tr><td>2021</td><td>1270</td></tr><tr><td>2022</td><td>414</td></tr><tr><td>2023</td><td>154</td></tr><tr><td>2024</td><td>337</td></tr></table>	Year	Km	2020	2289	2021	1270	2022	414	2023	154	2024	337	<div>BOONDOOMA CUMULATIVE DISTANCE (KM)</div> 
Year	Km													
2020	2289													
2021	1270													
2022	414													
2023	154													
2024	337													
<div>Proxy travel distance (km) home to recapture location</div> <div>Local</div> <div>Intrastate</div> <div>Interstate</div> <div>2020-2024</div>	<table><tr><td>Trips</td><td>29</td></tr><tr><td>Range (km)</td><td></td></tr><tr><td>Local</td><td>47-64</td></tr><tr><td>Intrastate</td><td>81-267</td></tr><tr><td>Interstate</td><td>-</td></tr></table>	Trips	29	Range (km)		Local	47-64	Intrastate	81-267	Interstate	-	<div>BOONDOOMA TRAVEL PROXY DISTANCE (KM)</div> 		
Trips	29													
Range (km)														
Local	47-64													
Intrastate	81-267													
Interstate	-													

<div>Proxy travel distance (km) home to recapture location each year</div> <div>Local Intrastate Interstate 2020-2024</div>		<div>DISTANCE HOME TO RECAPTURE LOCATION 2020-2024 (KM)</div>
<div>Proxy travel average distance (km) home to recapture location 2020-2024</div>	<div>Trips29</div> <div>Average distance (km)</div> <div>Local59</div> <div>Intrastate174</div> <div>Interstate-</div>	<div>RECAPTURE FISHER'S AVERAGE TRAVEL PROXY (KM)</div>
DEMOGRAPHICS		
<div>Gender of recapture fishers (ex-taggers) 2020-2024</div>	<div>Recaptures29</div> <div>Male25 (86%)</div> <div>Female4 (14%)</div>	<div>GENDER OF RECAPTURE FISHERS</div>
<div>Where recapture fishers live 2020-2024</div>	<div>Trips29</div> <div>Local5 (17%)</div> <div>Intrastate24 (83%)</div> <div>Interstate-</div>	<div>WHERE RECAPTURE FISHERS LIVE</div>

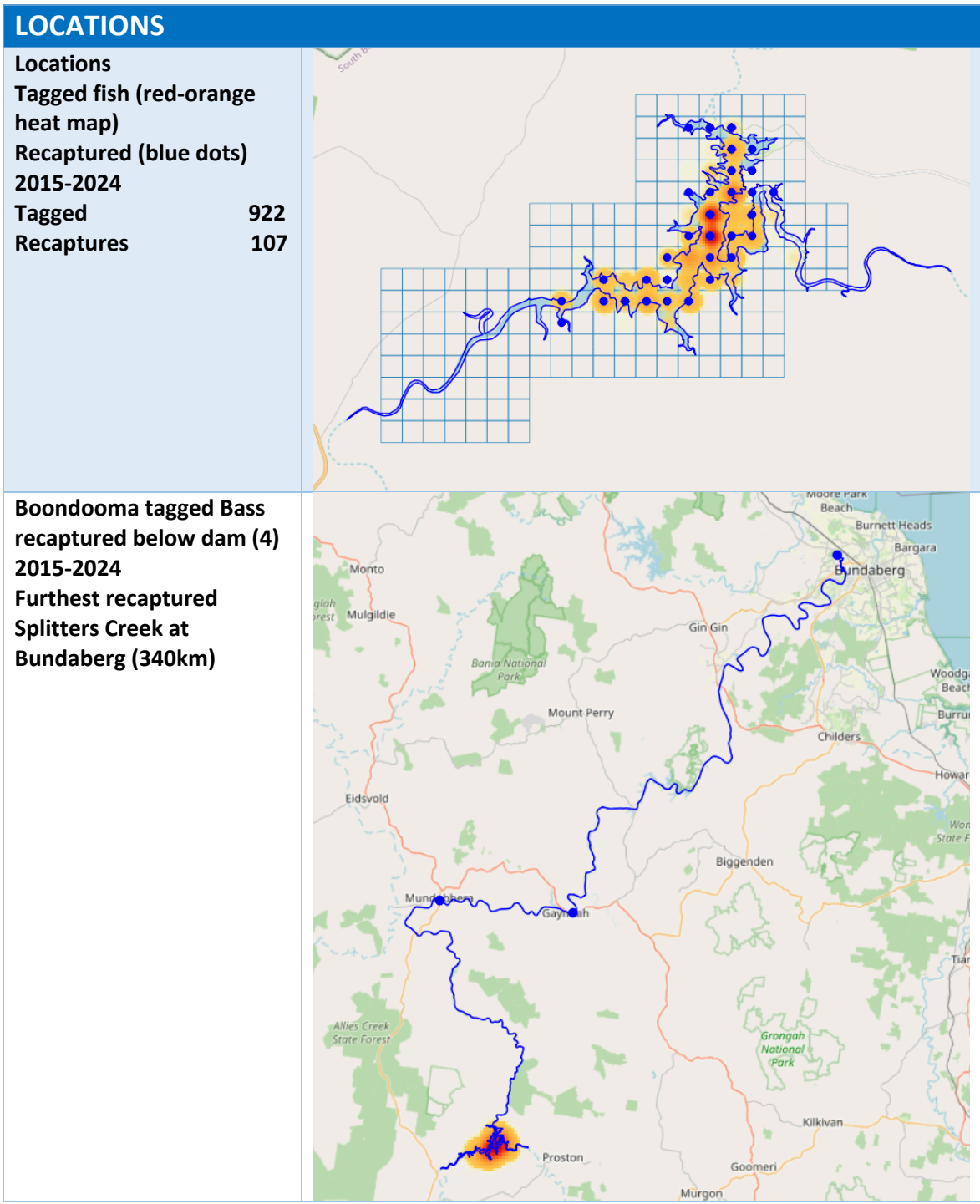
**Where recapture fishers
live (red stars)
Local
Intrastate
2020-2024**


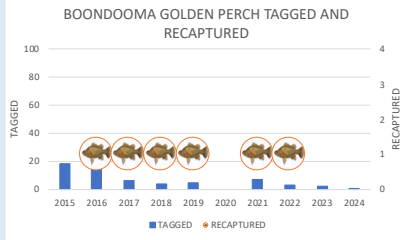
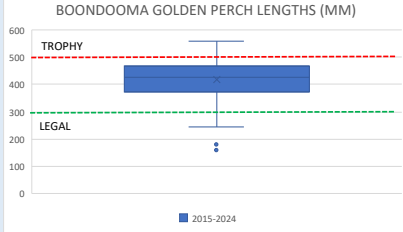
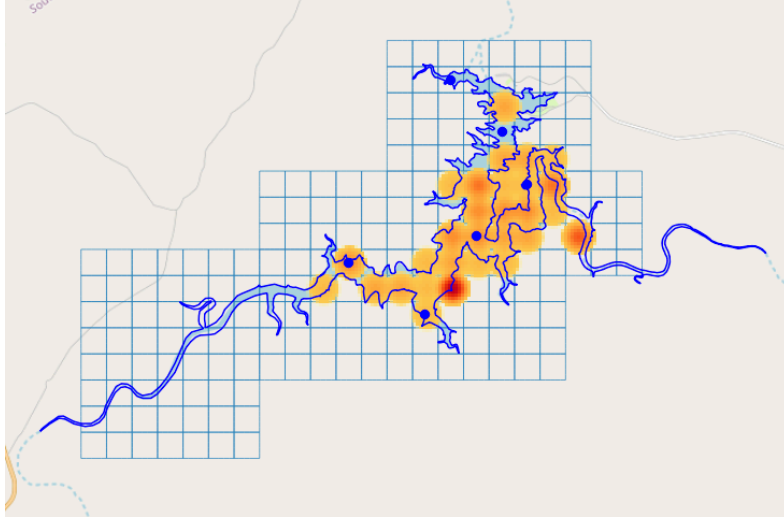



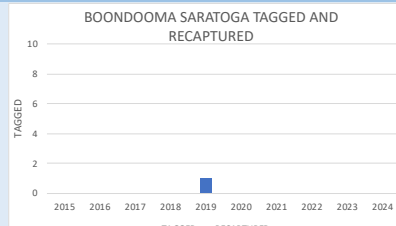
STOCKING			
AUSTRALIAN BASS	GOLDEN PERCH		SOUTHERN SARATOGA
			
SILVER PERCH			
			
Fingerlings stocked from SIPS to 2020	Bass Golden Perch Silver Perch	Fingerlings 1,425,500 1,340,800 92,000	
Fingerlings stocked each year 2013-2018 (no records from 2019-2022)			
Fish tagged 2015-2024 per 10,000 fingerlings stocked 2013-2022 (size that could be tagged)	Bass Golden Perch Silver Perch	13 1 0	
Species tagged 2015-2024	Bass Golden Perch Saratoga Silver Perch	911 68 1 0	


BASS	ACTUAL		GRAPH or MAP																				
																							
DATA RELIABILITY																							
Sample size (av fish/year)	<table><tr><td>Reliability level</td><td>LOW</td><td>MODERATE</td><td>MODERATE</td><td>HIGH</td></tr><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></table>			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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Recaptures (orange arrow)																							
Confidence %																							
Error %																							
2020-2024																							
TAGGED																							
Bass tagged and recaptured in lake	Tagged	Recaptured																					
2015-2024	922	107																					
	Recapture rate																						
	11.6%																						
	Tagged 2024																						
	23																						
EFFORT																							
Tag and effort taggers	High	Low	Now																				
Fish	Catch																						
Days fished	2021	2020	2024																				
2015-2024	251	12	23																				
	Days																						
	2021	2020	2024																				
	19	1	3																				


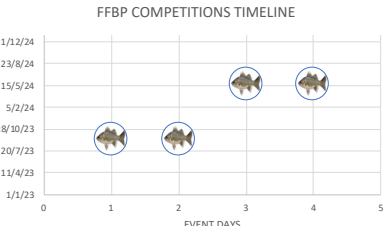
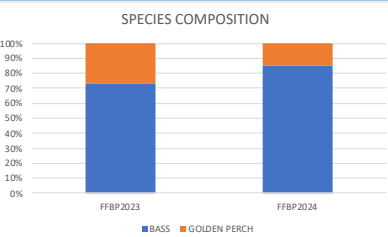
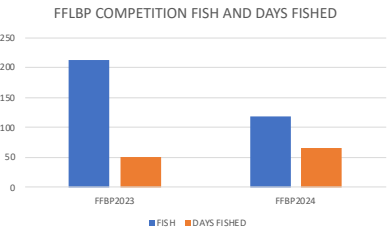
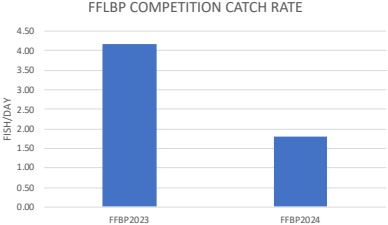
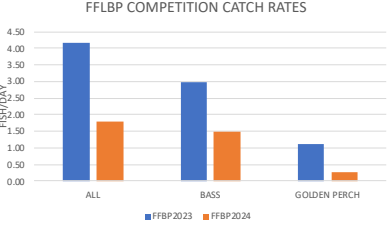
LENGTHS				
Average length (mm) Bars show length range Dots show outliers 2015-2024	High	Low	Now	
	Average			
	2018	2021	2024	
	330	285	297	
Fish lengths percentage Undersize <300mm Legal 300-499mm Trophy 500+mm 2015-2024	Largest			
	2022	2020	2024	
	600	470	380	
FATE				
Legal Bass recaptured by recfishers (ex-taggers) 2015-2024	Recaptures		27	
	Kept		7 (26%)	
	Released		20 (74%)	
GROWTH				
Bass growth at the end of each year based on recaptures of fish 2015-2024	Recaptures		98	
	Growth (mm)			
	Year 1		41	
	Year 2		71	
	Year 3		88	
	Year 4		100	
	Year 5		109	
MOVEMENT				
Bass movement in lake recaptures of fish 2015-2024	Recaptures		100	
	Same area		22(22%)	
	Down lake		56 (56%)	
	Up lake		18 (18%)	
	Below lake		4 (4%)	



GOLDEN PERCH		ACTUAL		GRAPH or MAP	
					
DATA RELIABILITY					
Sample size (av fish/year)		Reliability level		LOW	
Tagged (blue arrow)		Samples		10	
Recaptures (orange arrow)		Confidence		80%	
Confidence %		Error		20%	
Error %		Tagged		69	
2020-2024		Recaptured		6	
		Recapture rate		8.7%	
		Tagged 2024		2	
TAGGED					
Golden Perch tagged and recaptured		Tagged		69	
2015-2024		Recaptured		6	
		Recapture rate		8.7%	
		Tagged 2024		2	
		BOONDOOMA GOLDEN PERCH TAGGED AND RECAPTURED			
LENGTHS					
Fish lengths (mm)		Length		mm	
Undersize <300mm		Average		417	
Legal 300-499mm		Largest		560	
Trophy 500+mm		BOONDOOMA GOLDEN PERCH LENGTHS (MM)			
2015-2024					
LOCATIONS					
Locations					
Tagged fish (red-orange heat map)					
Recaptured (blue dots)					
2015-2024					
Tagged		69			
Recaptured		6			
					

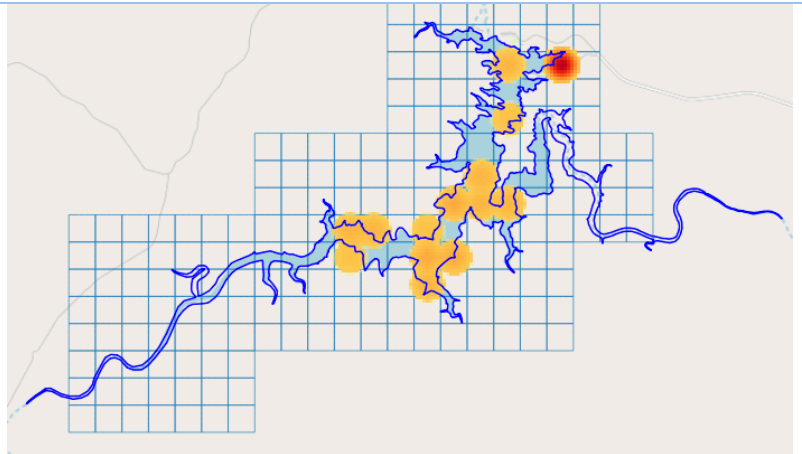
SARATOGA	ACTUAL		GRAPH or MAP																																	
																																				
TAGGED																																				
<div>Saratoga Tagged Recaptured 2015-2024</div>	<div>Tagged 1</div>	<div>Recaptured 0</div>	<div><div>BOONDOOMA SARATOGA TAGGED AND RECAPTURED</div><table><thead><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>0</td><td>0</td></tr><tr><td>2019</td><td>1</td><td>0</td></tr><tr><td>2020</td><td>0</td><td>0</td></tr><tr><td>2021</td><td>0</td><td>0</td></tr><tr><td>2022</td><td>0</td><td>0</td></tr><tr><td>2023</td><td>0</td><td>0</td></tr><tr><td>2024</td><td>0</td><td>0</td></tr></tbody></table></div>	Year	Tagged	Recaptured	2015	0	0	2016	0	0	2017	0	0	2018	0	0	2019	1	0	2020	0	0	2021	0	0	2022	0	0	2023	0	0	2024	0	0
Year	Tagged	Recaptured																																		
2015	0	0																																		
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2021	0	0																																		
2022	0	0																																		
2023	0	0																																		
2024	0	0																																		

SILVER PERCH	ACTUAL		GRAPH or MAP
			
TAGGED			
Silver Perch Tagged Recaptured 2015-2024	Tagged 0	Recaptured 0	

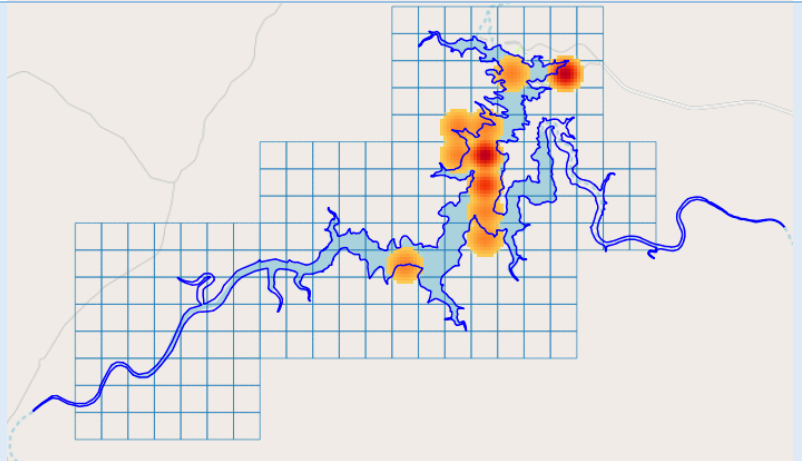
COMPETITIONS		ACTUAL	GRAPH or MAP
Freshwater Fishing Events Festival of the Dams FFLBP2023 FFLBP2024		Target species Australian Bass Golden Perch	
COMPETITION DATES			
Timeline of events Competitors FFLBP2023 FFLBP2024	Dates 9-10/9/2023 (1.5 days) 7-8/5/2024 (1.5 days) Competitors FFLBP2023 FFLBP2024	34 44	
SPECIES			
Species composition FFLBP2023 FFLBP2024	Event FFLBP2023 FFLBP2024	Bass 73% 85% GP 27% 15%	
EFFORT			
Days fish Catch FFLBP2023 FFLBP2024	Event FFLBP2023 FFLBP2024	Days 51 66 Fish 213 119	
CATCH RATES			
Catch rates all fish Fish/day (legal fish only)	Event FFLBP2023 FFLBP2024	Catch rate 4.2 1.8	
Catch rates Bass Golden Perch Fish/day (legal fish only)	Event FFLBP2023 FFLBP2024	Bass 3.0 1.5 GP 1.1 0.3	

LENGTHS			
Bass lengths (mm) Bars show length range Dots show outliers	Event FFLBP2023 FFLBP2024	Average 355 361	Max 450 580
Golden Perch lengths (mm) Bars show length range Dots show outliers	Event FFLBP2023 FFLBP2024	Average 423 384	Max 550 460
LOCATIONS			
Heat map Bass caught during FFLBP competition Bass 152 2023			
Heat map Bass caught during FFLBP competition Bass 98 2024			

**Heat map
Golden Perch caught
during FFLBP competition
Golden Perch 57
2023**



**Heat map
Golden Perch caught
during FFLBP competition
Golden Perch 17
2024**



Data sources

Data used in the Lake Boondooma Crystal Bowl are:

- Tag records and recapture records for the impoundment at <http://crystalbowl.infofishaustralia.com.au/>.
- Dam level data from Sunwater at <https://www.sunwater.com.au/water-data/historical-dam-capacity/>.
- Stocked fish records from <https://www.data.qld.gov.au/dataset/queensland-freshwater-fish-stocking-records/> and <https://www.daf.qld.gov.au/rsa/sips-dams-and-weirs/profile?dam=boondooma-dam>.
- Rainfall from station 040722 Boondooma Dam and temperature from station 040922 Kingaroy Airport from <http://www.bom.gov.au/climate/data>.
- Freshwater Fishing Festival of the Dams competition data from Infofish Trackmyfish from <http://tournaments.trackmy.fish>.

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 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 LBP 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 distance between where the fisher lives (address, suburb, town or postcode) and the recapture location. Local <70km, intrastate Qld elsewhere, interstate other than Qld.