LAKE SAMSONVALE REVIEW JUNE 2025

INFORMATION RATING

Stocking group: Pine Rivers Fish Management Association
Species stocked: Australian Bass, Golden Perch, Silver Perch, Southern Saratoga, Mary River Cod
Stocking timeframe: 2014-15-2023-24
Fish timeframe: 2016-2025 Jan-Jun
Fisher timeframe: 2021-2025 Jan-Jun
DPI link: https://www.daf.qld.gov.au/rsa/sips-dams-and-weirs/profile?dam=north-pine-dam
PRFMA link: https://prfma.com.au/

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

Fishing is limited to the PRFMA permit area accessed from the Boral Landing boat ramp (yellow area on map) and public access areas around McGavin View, Forgan Cove, and Bullocky Rest. Boating is limited to electric or manually power boats.

Lake Samsonvale is mostly an experiential fishery with a harvest rate of 7% for legal Bass recaptured by recfishers (ex-taggers). As fishing in the PRFMA permit area is limited to members and public access is also limited it is not surprising that this is a local fishery with 99% of those recapturing fish living within 60km of the lake.

Tagging of Bass was discontinued in 2019 however recommenced in 2023 following the spilling of fish in 2022. The tag rate, recaptures and PRFMA Bass catch that year suggest there was a significant exodus of Bass from the lake during the 2022 spill. The average lengths of fish recaptured below the dam in 2022-23 was 340mm compared with tagged fish in the lake at 298mm. Trophy length fish over 500mm were recorded in the lake in all years from 2016-2021 and none have been recorded since. This suggests that it was mainly larger fish that left the lake in the 2022 spill.

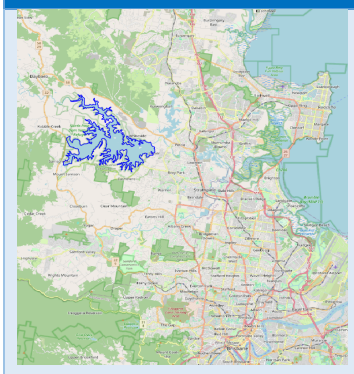
Tagged Bass that spilled from the lake were well scattered with fish being recaptured in the North Pine River, South Pine River, Kedron Brook, Caboolture River at Caboolture, Brisbane River as far up as Mt Crosby Weir, and Bremer River at Ipswich. The furthest distance moved was 142km.

Following the spill there was a shift in fishing effort throughout 2022 to below the dam and to the South Pine River however since 2023 this has reduced back to a lower more normal level.

Product of Infofish Australia

Supported by Suntag and FFSAQ

LAKE SAMSONVALE



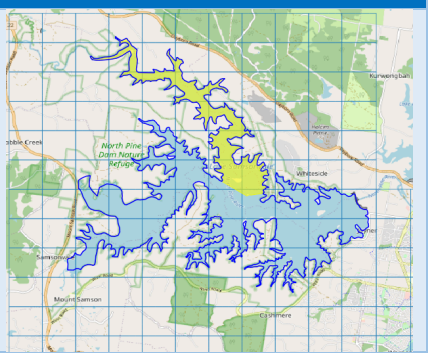
Lake Samsonvale
27.26°S
152.9°E

LOCATION

LAKE

Grid map
Lake Samsonvale SAM

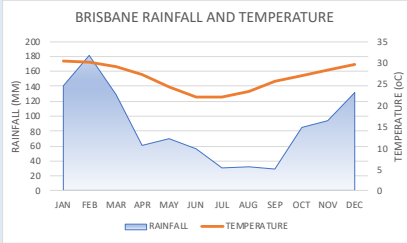
Surface area
22km^2
PRFMA permit fishing area (yellow)



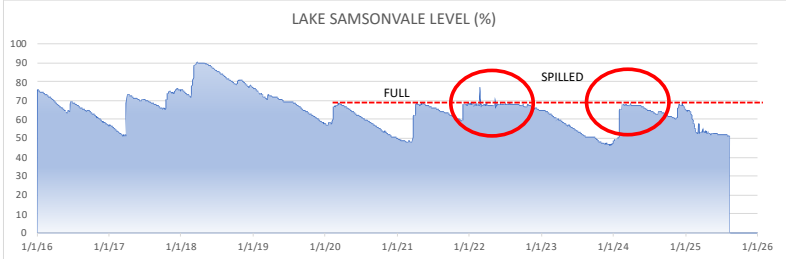
ENVIRONMENTAL

Mean monthly rainfall (mm)
Mean monthly air temperature (oC)

Rainfall	Month	mm
High	Feb	182
	Jan	141
Temp	Month	oC
	Dec-Feb	30



Lake capacity
Full supply level reduced to 68% from Dec 2019
Spilled
Dec 2021-Jul 2022
Dec 2024



FISHERS

DATA RELIABILITY

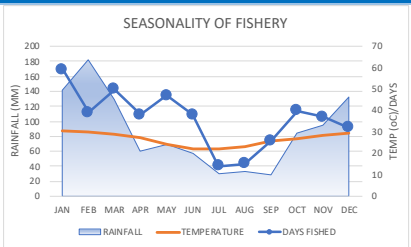
Sample size (days fished)
Tag days (blue arrow)
Recaptures (orange arrow)
Confidence %
Error %
2021-2025

Reliability level	LOW		MODERATE	MODERATE		HIGH
Samples	10	41	68	271	384	664
Confidence	80%	80%	90%	90%	95%	99%
Error	20%	10%	10%	5%	5%	5%

TYPE OF FISHERY

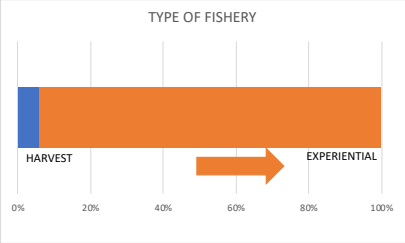
Seasonality
Mean monthly rainfall (mm)
Days fished combined
Taggers
Recapture fishers
2021-2025

	Months most effort
Days	Jan
	Mar
	May



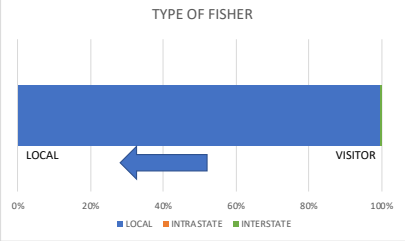
Harvest or experiential fishery
Release rate of recaptured legal Bass
2021-2025
2025 Jan-Jun

Legal fish kept rate Bass	
Legal fish	105
Kept	7 (7%)
Released	98 (93%)



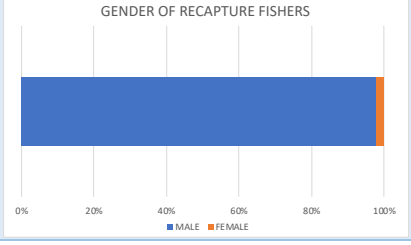
Local or visitor fishery
Where recapture fishers live
2021-2025
2025 Jan-Jun

Recapture fishers	167
Local	166 (99%)
Visitor	1 (1%)



Gender of recapture fishers (ex-taggers)
2021-2025
2025 Jan-Jun

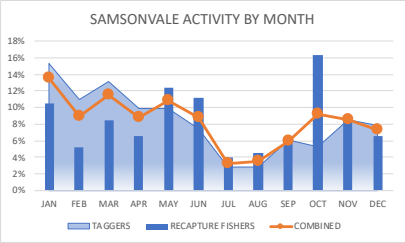
Fishers	130
Male	127 (98%)
Female	3 (2%)



ACTIVITY

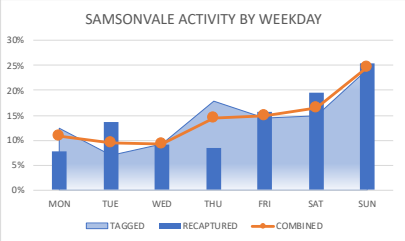
Monthly activity
Days fished
Taggers (282)
Recapture fishers (153)
2021-2025
2025 Jan-Jun

	Month	%
Taggers	Jan	15%
	Mar	13%
	Feb	11%
Recaps	Oct	16%
	May	12%
	Jun	11%



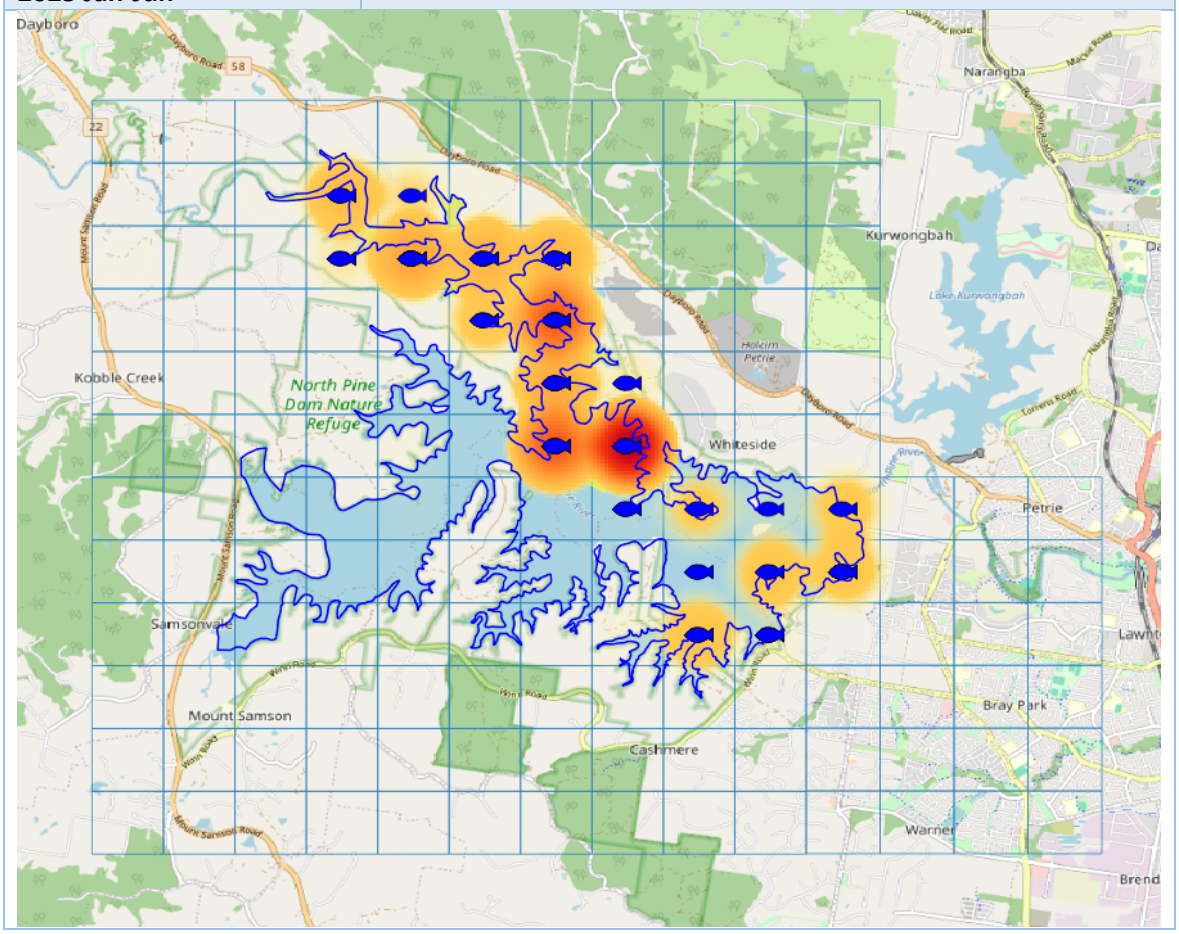
Weekday activity
Days fished
Taggers (282)
Recapture fishers (153)
2021-2025
2025 Jan-Jun

	Day	%
Taggers	Weekend	39%
	Weekdays	61%
Recaps	Weekend	45%
	Weekdays	55%



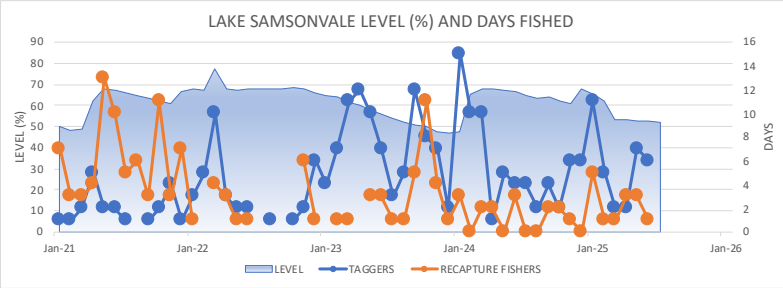
Location activity
Tagged fish (red-orange heat map)
Recaptures (blue fish)
2021-2025
2025 Jan-Jun

Tagged (1065)
Recaptured (181)

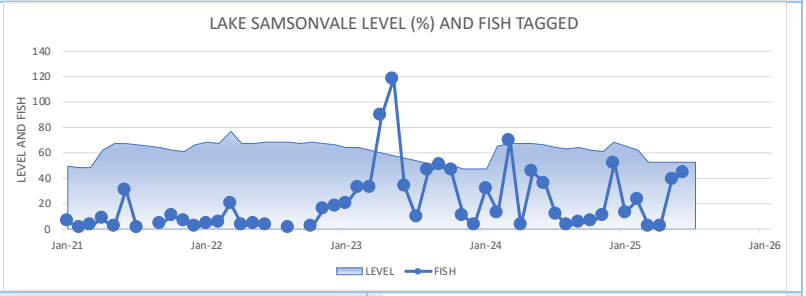


EFFORT

Lake level (%)
Taggers effort
Recapture fishers effort
Days fished
2021-2025
2025 Jan-Jun

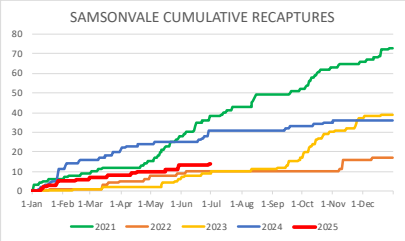


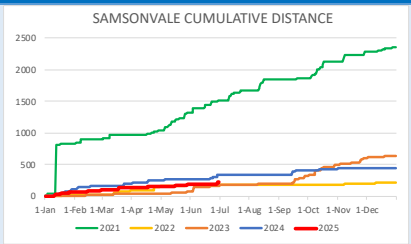
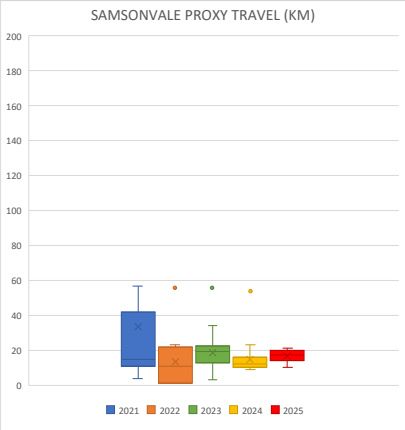
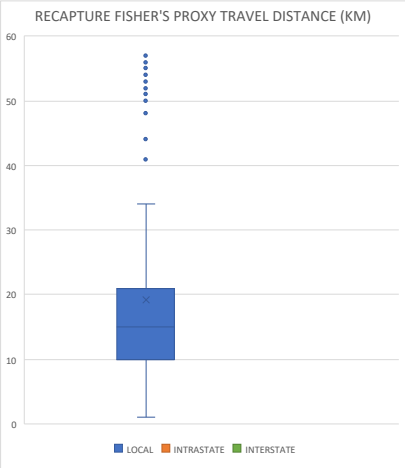
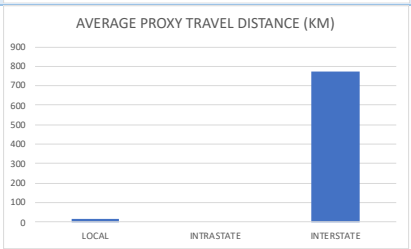
Lake level (%)
Fish tagged
2021-2025
2025 Jan-Jun



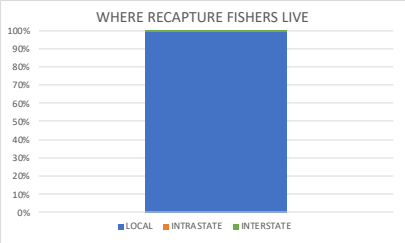
Cumulative recaptures
2021-2025
2025 Jan-Jun

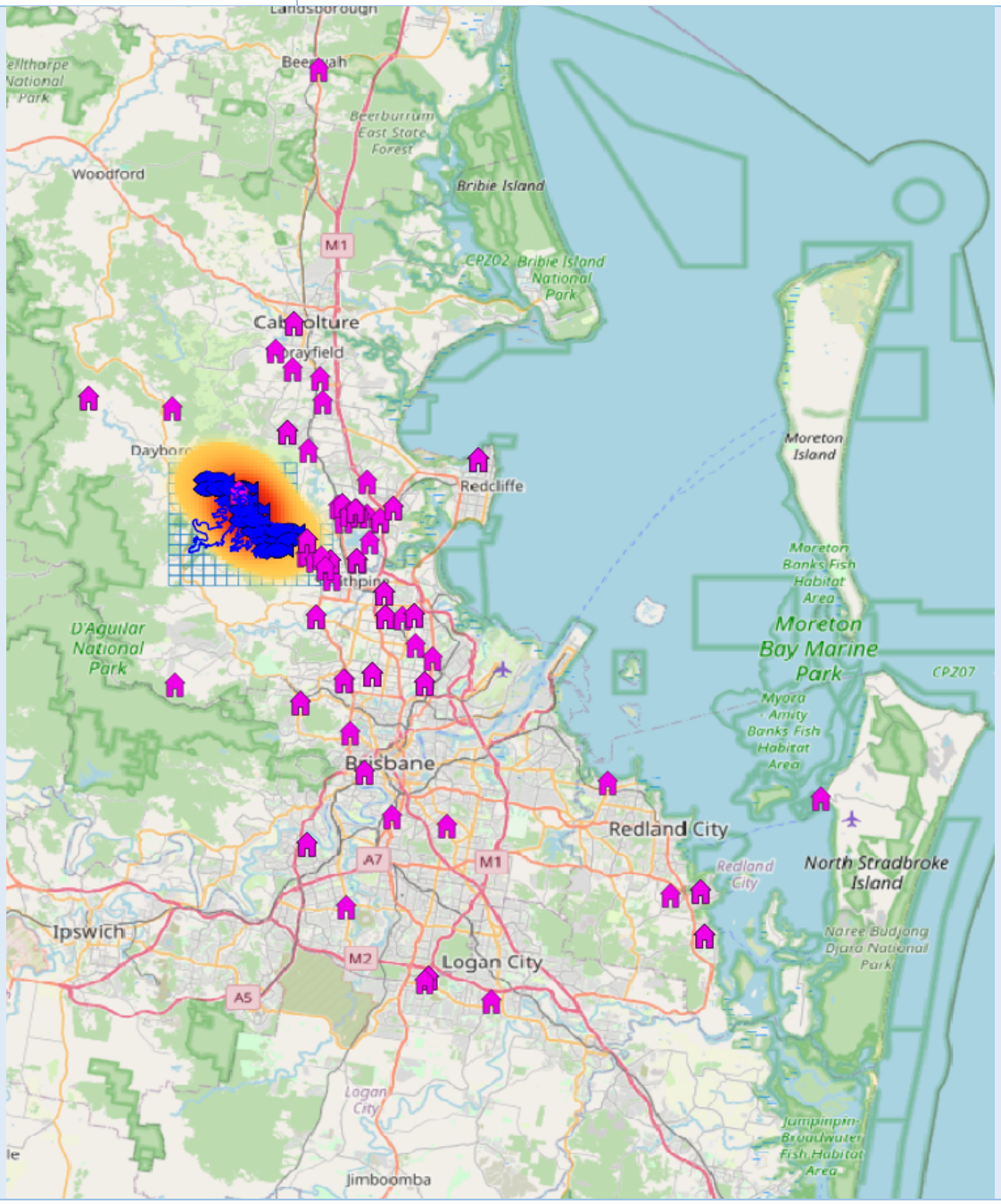
Year	Recaps
2021	73
2022	17
2023	31
2024	17
2025 Jan-Jun	14



TRAVEL		
Cumulative distance (km) address to recapture location **2021-2025** **2025 Jan-Jun**	Year Kms 2021 2345 2022 216 2023 641 2024 445 2025 Jan-Jun 232	
Distance (km) address to recapture location **Bars show distance range** **Dots show outliers** **2021-2025** **2025 Jan-Jun**		
Distance (km) home to recapture location **Local** **Intrastate** **Interstate** **2021-2025** **2025 Jan-Jun**	Trips 167 Range (km) Local 1-57 Intrastate - Interstate 772 (not shown on graph)	
Proxy average travel distance (km) home to recapture location **2021-2025** **2025 Jan-Jun**	Trips 167 Average distance (km) Local 19 Intrastate - Interstate 772	

WHERE RECAPTURE FISHERS LIVE

Where recapture fishers live **2021-2025** **2025 Jan-Jun**	Fishers 167 Local 166 (99%) Intrastate 0 (0%) Interstate 1 (1%)	
Where recapture fishers live (pink houses) **Local** **2021-2025** **2025 Jan-Jun**	Local (166) Interstate (1 from Sydney not shown)	



FISH

AUSTRALIAN BASS

GOLDEN PERCH

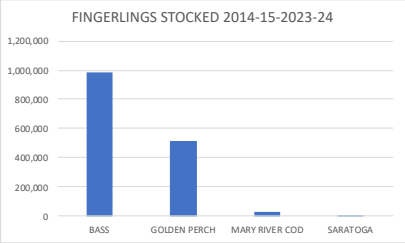
MARY RIVER COD

SOUTHERN SARATOGA

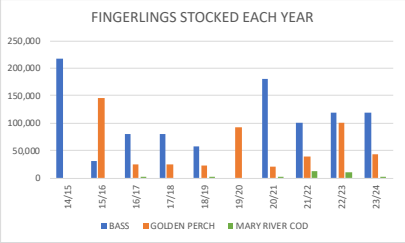
STOCKING

Fingerlings stocked
2014-15-2023-24
Able to be tagged
2016-2025

Bass	987,000
Golden Perch	513,000
Mary River Cod	26,920
Saratoga	210



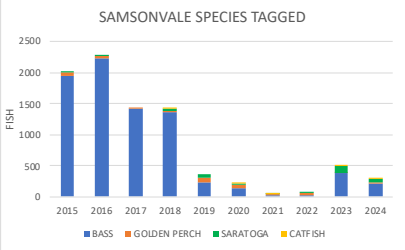
Fingerlings stocked by year
2014-15-2023-24



SPECIES TAGGED

Species tagged
2016-2025
2025 Jan-Jun

	Tagged
Bass	6124
Golden Perch	297
Southern Saratoga	341
Eeltail Catfish	22
Silver Perch	0
Mary River Cod	0



AUSTRALIAN BASS

DATA RELIABILITY

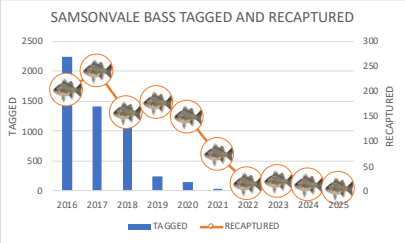
Sample size (av fish/year)
Tagged (blue arrow)
Recaptures (orange arrow)
Confidence %
Error %
2021-2025

Reliability level	LOW		MODERATE	MODERATE		HIGH
Samples	10	41	68	271	384	664
Confidence	80%	80%	90%	90%	95%	99%
Error	20%	10%	10%	5%	5%	5%

TAGGED AND TAG RATE

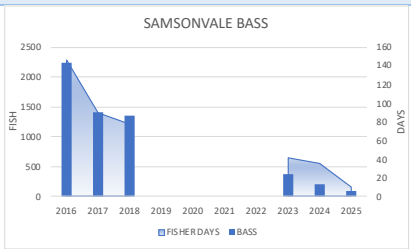
Bass tagged and recaptured in lake recaptured below dam 2016-2025 2025 Jan-Jun

Tagged	6124
Recaptured in lake	1048
Recapture rate	17.1%
Recaptures below dam	115
Recapture rate	1.9%
Tagged 2025 Jan-Jun	85



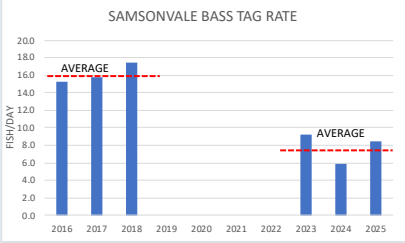
Tag and effort
Taggers
Fish tagged
Days fished
2016-2025
2025 Jan-Jun

	High	Low	Now
Taggers	Tagged		
Fish tagged	2016	2024	2025
Days fished	2236	210	85
	Days		
	2016	2024	2025
	146	36	10



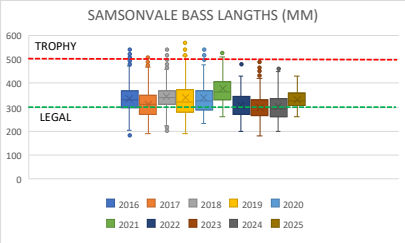
Tag rate
Fish/day
2016-2025
2025 Jan-Jun Data 2018-2022 not suitable for tag rate

	High	Low	Now
Tag rate	Tag rate		
	2018	2024	2025
	17.4	5.8	8.5
	Average 2016-2018		16.0
	Average 2023-2025		7.7

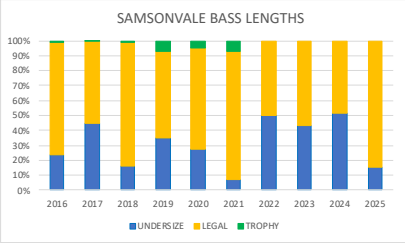


LENGTHS

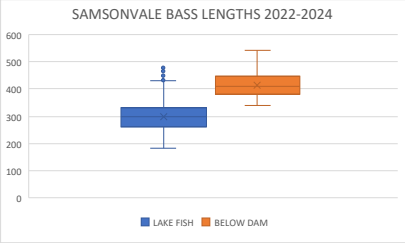
Average length (mm)	High	Low	Now
Bars show length range	Average length (mm)		
Dots show outliers	2021	2023	2025
2016-2025	378	298	332
2025 Jan-Jun	Largest		
	2019	2024	2025
	570	465	430



Fish lengths percentage	High	Low	Now
Undersize <300mm	Legal-trophy		
Legal 300-499mm	2021	2024	2025
Trophy 500+mm	86%	48%	84%
2016-2025	Trophy		
2025 Jan-Jun	2021	22-24	2025
	7%	0%	0%

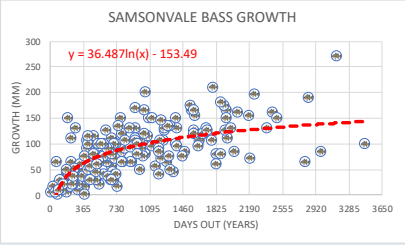


Comparing lengths (mm)		In lake	Below
of fish tagged in lake and	Average	298	415
those recaptured below	Min	180	340
following 2022 spill	Max	490	545
2022-2023			



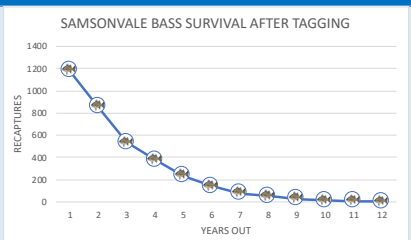
GROWTH

Bass growth at the end of	Recaptures	199
each year	Annual growth (mm)	
based on recaptures	Year 1	62
fish tagged <300mm	Year 2	87
2016-2025	Year 3	102
2025 Jan-Jun	Year 4	112
	Year 5	121

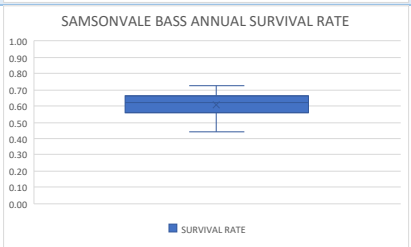


SURVIVAL

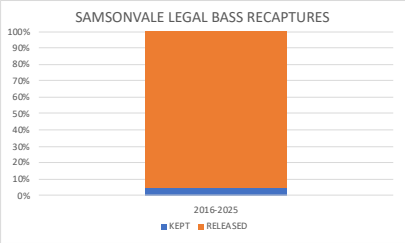
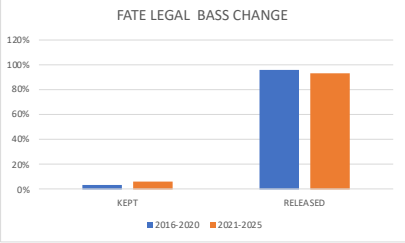
Bass survival	Survival rate by years out	
based on recaptures by	Year	Recaptures
years out after tagging	1	1183
2000-2025	5	234
	10	12
	Longest out (years)	11.7



Survival rates each year	Average	0.61 (61%)
after tagging	Range	0.44-0.72
2000-2025		

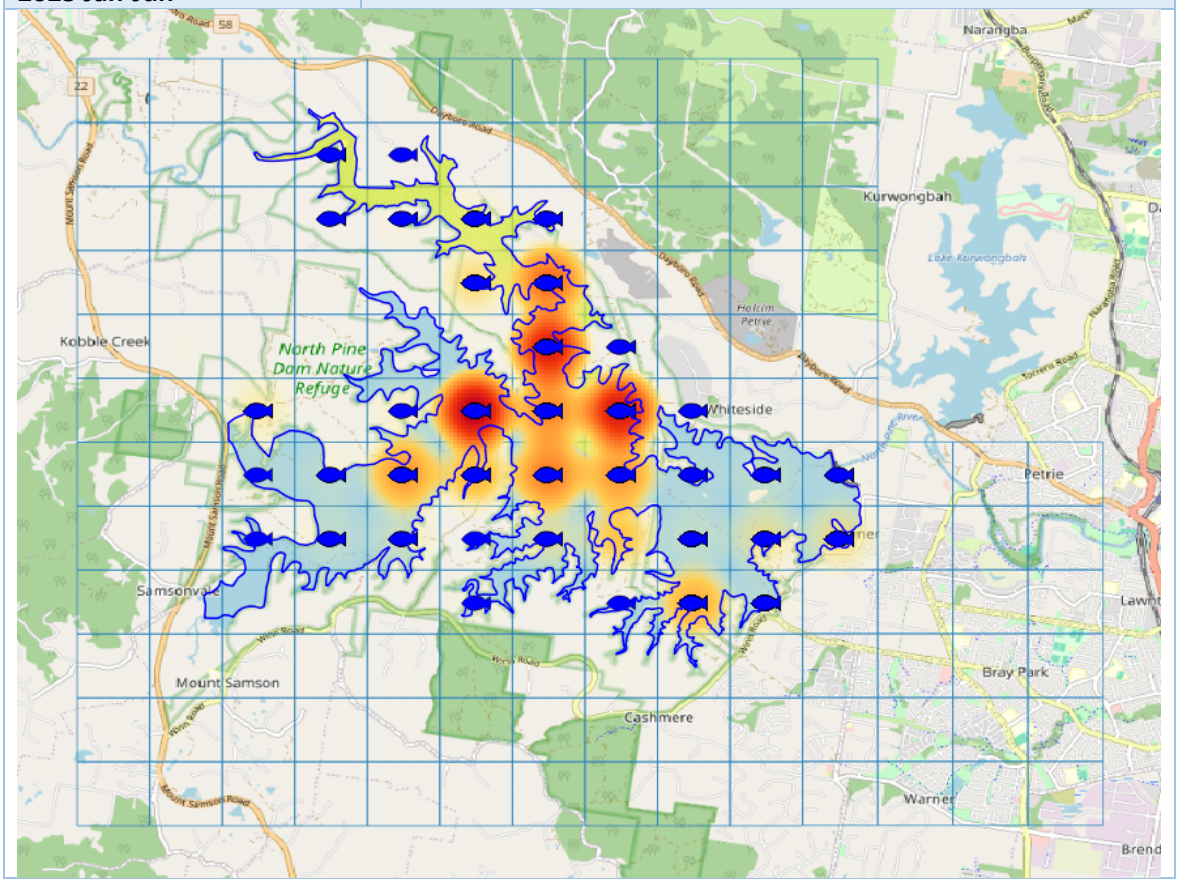


FATE

Legal Bass recaptures kept and released by recfishers (ex-taggers) **Legal length 300mm** **2016-2025** **2025 Jan-Jun**	Recaptures 656 Kept 29 (4%) Released 627 (96%)	
Change in legal Bass fate **2016-2020** **2021-2025** **2025 Jan-Jun**	Recaptures 2016-2020 551 Recaptures 2021-2025 105 Kept 2016-2020 22 (4%) Kept 2021-2025 7 (7%)	

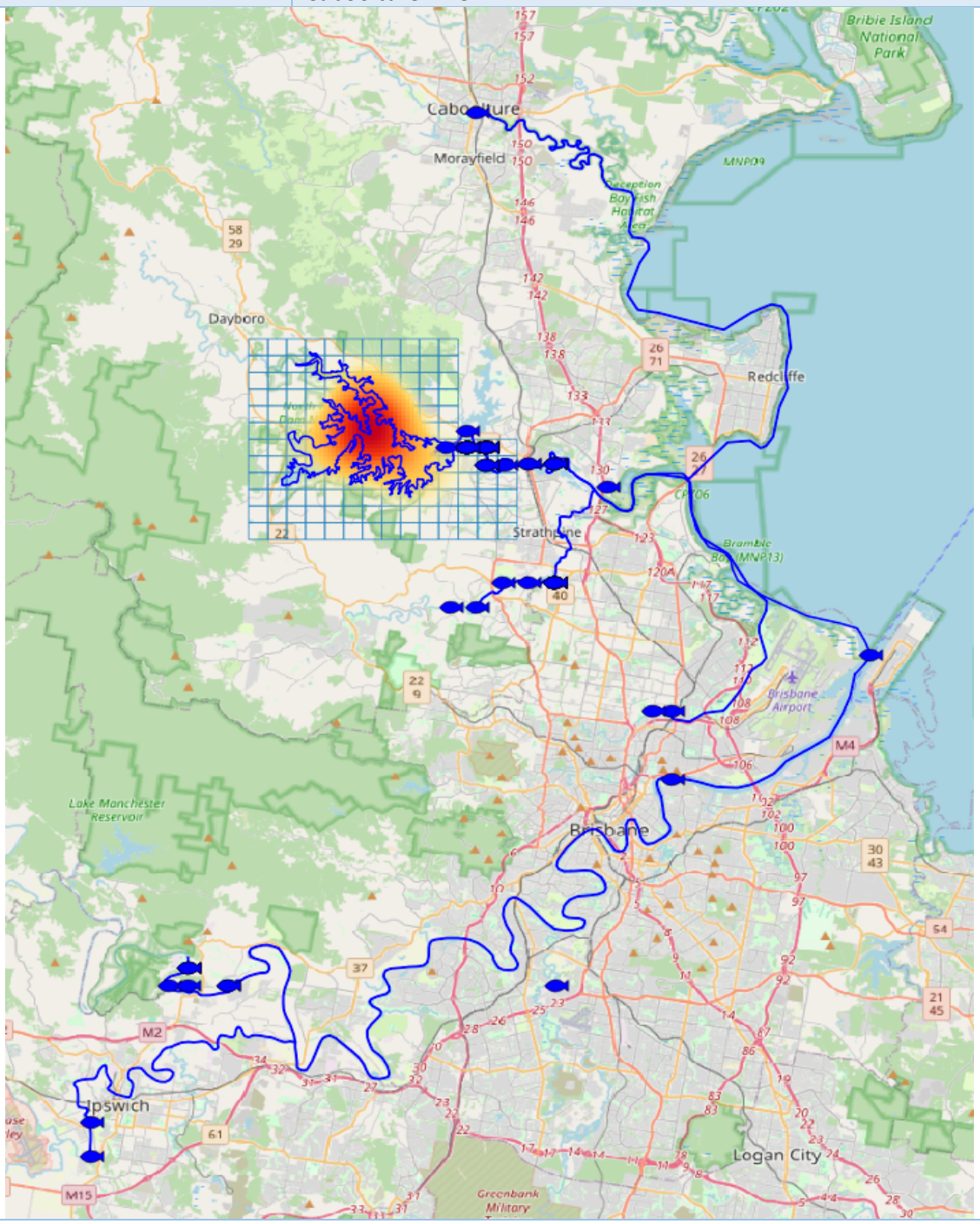
LOCATIONS

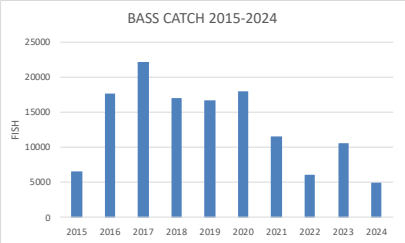
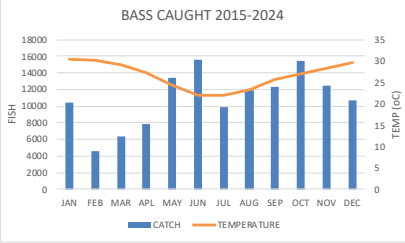
Locations **Tagged fish (red-orange heat map)** **Recaptures (blue fish)** **2016-2025** **2025 Jan-Jun**	Tagged (6116) Recaptured (1048)



RECAPTURES BELOW DAM

Bass after the 2022 spill	Tagged Bass spilled and recaptured below dam	102
Tagged in Samsonvale	Recaptured	
(red-orange heatmap)	North Pine River	64
Recaptures (blue dots)	South Pine River	17
2022-2025	Pine River	3
2025 Jan-Jun	Kedron Brook	3
	Brisbane River (up to Mt Crosby Weir)	12
	Bremer River (max movement 142km)	2
	Caboolture River	1



CATCH	PRFMA CATCH CARDS			
Catch by year 2015-2024	High 2017 22095	Low 2022 6089	Now 2024 5014	
Seasonality of Golden Perch catch Catch (number of fish) Temperature (oC) 2015-2024	High Oct	Low Jul		

GOLDEN PERCH

DATA RELIABILITY

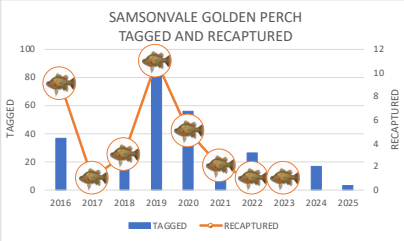
Sample size (av fish/year)
Tagged (blue arrow)
Recaptures (orange arrow)
Confidence %
Error %
2021-2025

Reliability level	LOW		MODERATE	MODERATE		HIGH
Samples	10	41	68	271	384	664
Confidence	80%	80%	90%	90%	95%	99%
Error	20%	10%	10%	5%	5%	5%

TAGGED AND TAG RATE

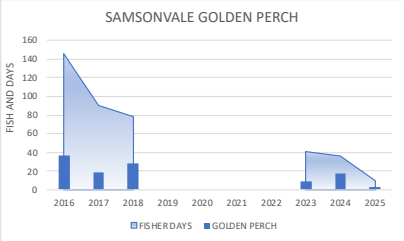
Golden Perch tagged and recaptured
2016-2025
2025 Jan-Jun

Tagged	297
Recaptured in lake	33
Recapture rate	11.1%
Recaptures below dam	2
Tagged 2025 Jan-Jun	3



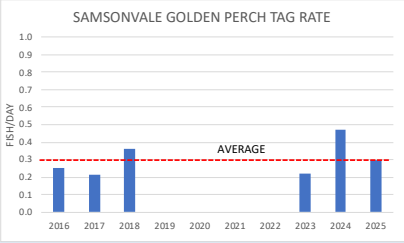
Tag and effort
Taggers
Fish tagged
Fisher days
2016-2025
2025 Jan-Jun

High	Low	Now
Tagged		
2016	2023	2025
37	9	3
Days		
2016	2024	2025
146	36	10

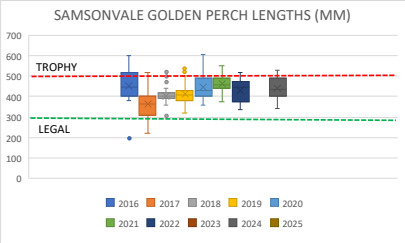
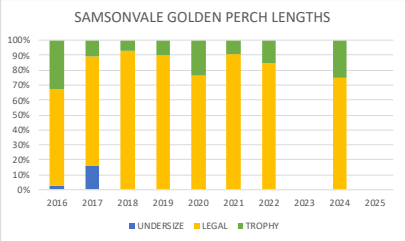


Tag rate
Fish/day
2016-2025
2025 Jan-Jun
Data 2018-2022 not suitable for tag rate

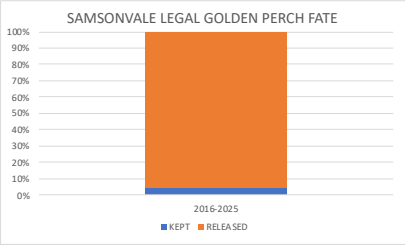
High	Low	Now
Tag rate		
2024	2023	2025
0.5	0.2	0.3
Average		0.3



LENGTHS

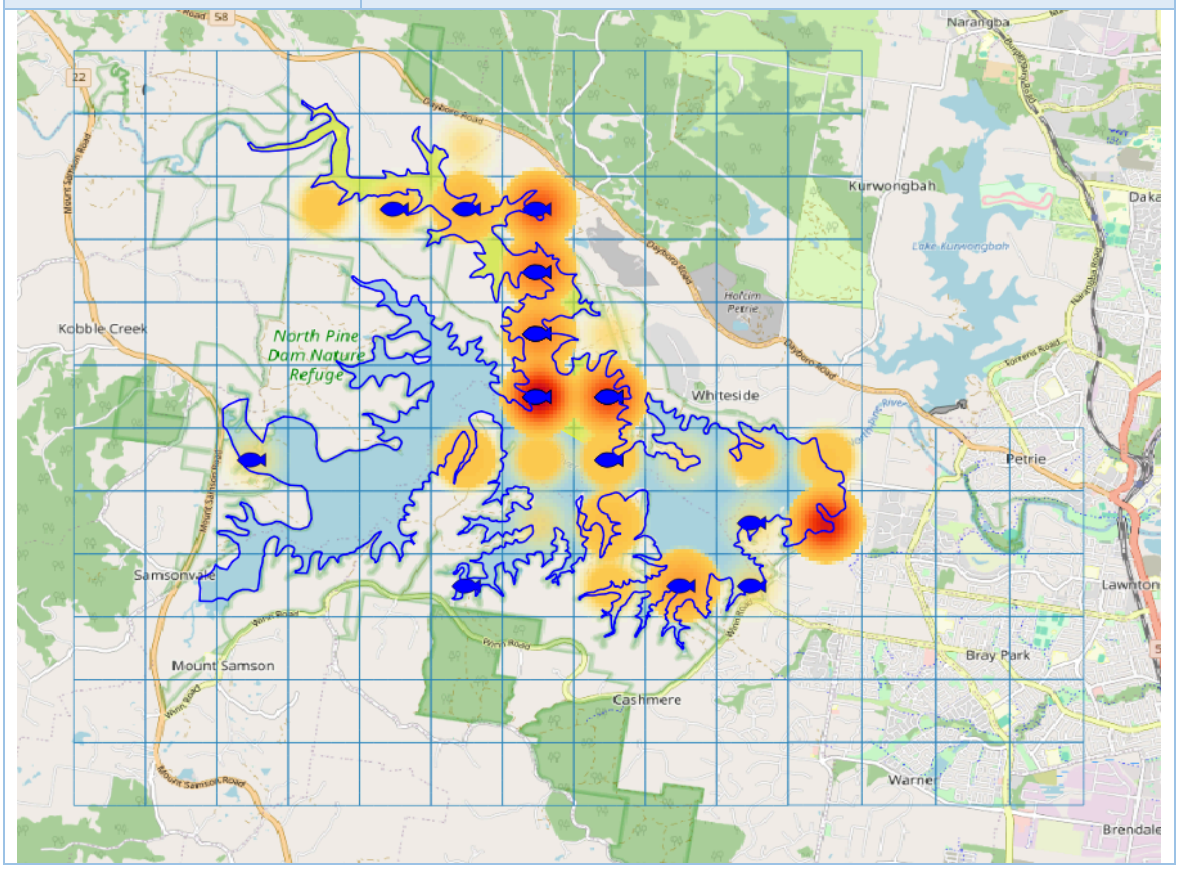
Average length (mm)	High	Low	Now	
Bars show length range	Average length			
Dots show outliers	2014	2017	2025	
2016-2025	470	366	NA	
2025 Jan-Jun	Largest			
	2020	2018	2025	
	610	520	NA	
Fish lengths percentage	High	Low	Now	
Undersize <300mm	Legal-trophy			
Legal 300-499mm	2018	2015	2025	
Trophy 500+mm	93%	62%	NA	
2016-2025	Trophy			
2025 Jan-Jun	2015	2018	2025	
	37%	7%	NA	

FATE

Legal Golden Perch recaptures fate by recfishers (ex-taggers)	Recaptures	21	
Legal length 300mm	Kept	1 (5%)	
2016-2025	Released	20 (95%)	
2025 Jan-Jun			

LOCATIONS

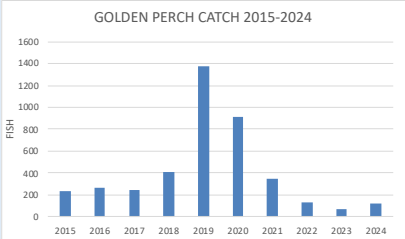
Location **Tagged fish (red-orange heat map)** **Recaptures (blue fish)** **2016-2025** **2025 Jan-Jun**	Tagged (260) Recaptured (33)



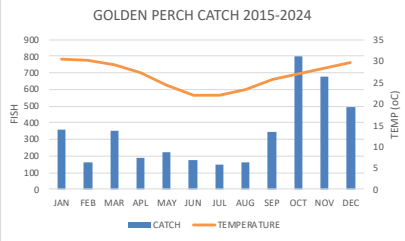
CATCH

PRFMA CATCH CARDS

Catch by year 2015-2024	High 2019 1376	Low 2023 65	Now 2024 117



Seasonality of Golden Perch catch **Catch (number of fish)** **Temperature (oC)** **2015-2024**	High Oct	Low Jul



SOUTHERN SARATOGA

TAGGED

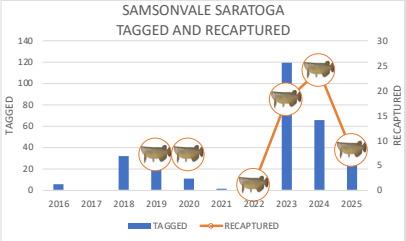
Sample size (av fish/year)
Tagged (blue arrow)
Recaptured (orange arrow)
Confidence %
Error %
2021-2025

Reliability level	LOW		MODERATE	MODERATE		HIGH
Samples	10	41	68	271	384	664
Confidence	80%	80%	90%	90%	95%	99%
Error	20%	10%	10%	5%	5%	5%

TAGGED

Saratoga tagged and recaptured
2016-2025
2025 Jan-Jun

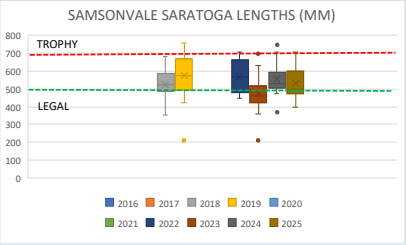
Tagged	341
Recaptured	65
Recapture rate	19.1%
Tagged 2025 Jan-Jun	43



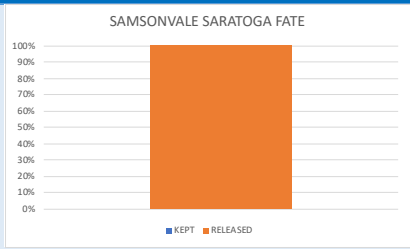
LENGTHS

Average length (mm)
Bars show smallest and largest fish
Dots show outliers
2016-2025
2025 Jan-Jun

High	Low	Now
Average length		
2019	2018	2024
573	526	552
Largest		
2019	2018	2023
760	680	750

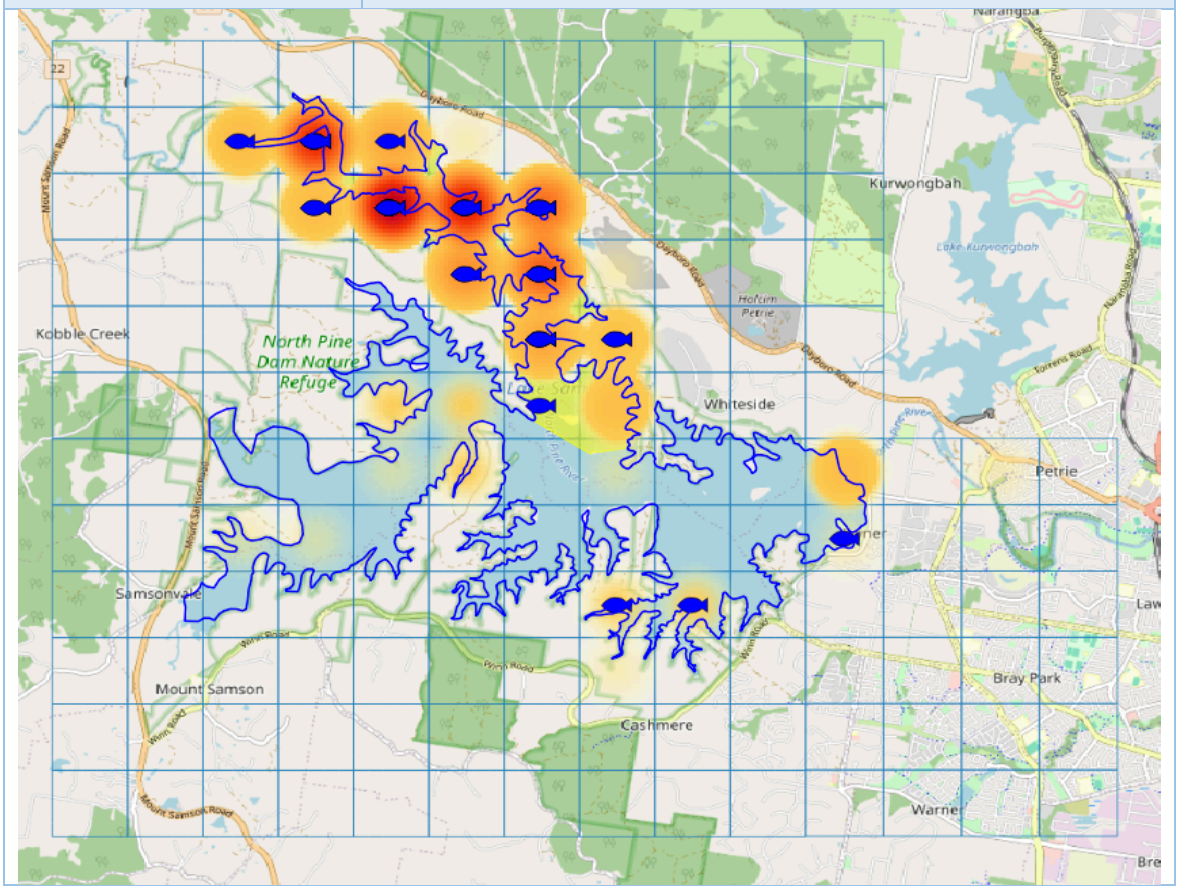


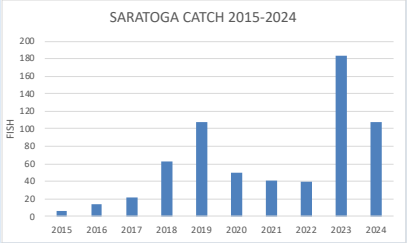
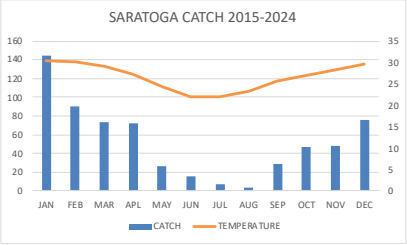
FATE

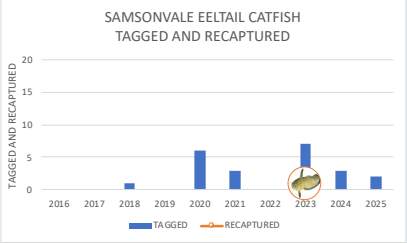
Legal Saratoga recaptures fate by recfishers (ex-taggers) **Legal length 300mm** **2016-2025** **2025 Jan-Jun**	Recaptures 23 Kept 0 (0%) Released 23 (100%)	

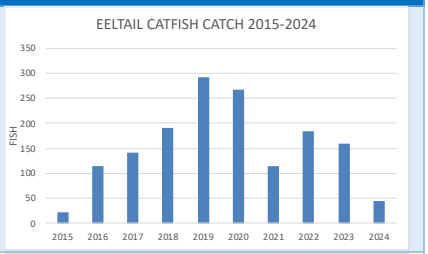
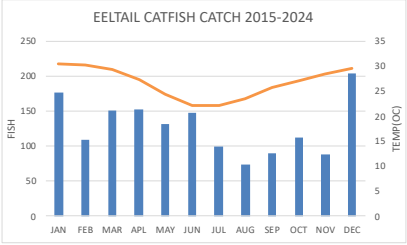
LOCATIONS

Locations **Tagged fish (red-orange heat map)** **Recaptures (blue fish)** **2016-2025** **2025 Jan-Jun**	Tagged (341) Recaptured (65)



CATCH	PRFMA CATCH CARDS			
Catch by year **2015-2024**	High 2023 183	Low 2015 6	Now 2024 107	
Seasonality of Saratoga catch **Catch (number of fish)** **Temperature (oC)** **2015-2024**	High Jan	Low Aug		

EELTAIL CATFISH		
TAGGED		
Catfish tagged and recaptured **2016-2025** **2025 Jan-Jun**	Tagged 22 Recaptured 1 Recapture rate 4.5% Tagged 2025 Jan-Jun 2	

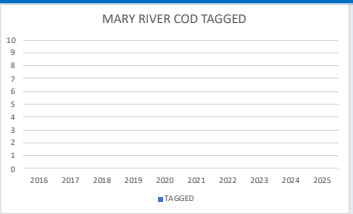
CATCH	PRFMA CATCH CARDS			
Catch by year **2015-2024**	High 2023 183	Low 2015 6	Now 2024 107	
Seasonality of Catfish catch **Catch (number of fish)** **Temperature (oC)** **2015-2024**	High Dec	Low Aug		

MARY RIVER COD

CATCH

Tagged by year
Catch by year
2016-2025
2025 Jan-Jun

SUNTAG



PRFMA

No fish recorded

Data sources

Data used in the Lake Samsonvale Crystal Bowl are:

- Tag records and recapture records for the lake at http://crystalbowl.infofishaustralia.com.au/.
- Dam level data from SEQ Water https://www.seqwater.com.au/dam-levels.
- Stocked fish and catch records Pine Rivers Fish Management Association.
- Rainfall and temperature data from Station 040913 Brisbane 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/fisher 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.
- Growth calculated using logarithmic curve from recaptures where fish were less than 300mm when tagged, out for 90 days or more and had positive growth.
- Locations based on Infofish grid map SAM for the impoundment and other grid maps where fish were recaptured outside the impoundment.
- Survival rates are calculated based on a model that uses the reduction in the number of recaptures each year after tagging.
- 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.