



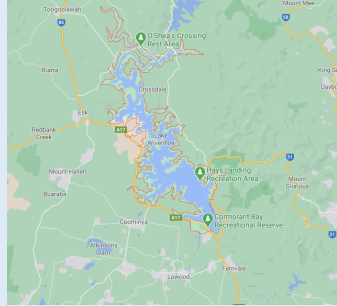

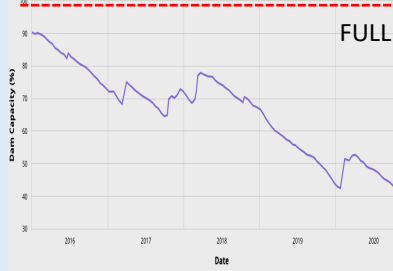
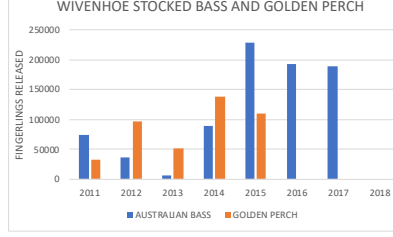
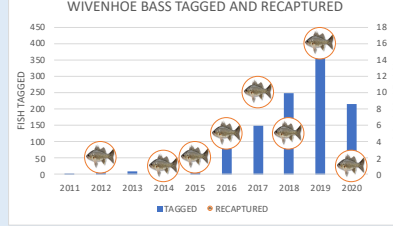
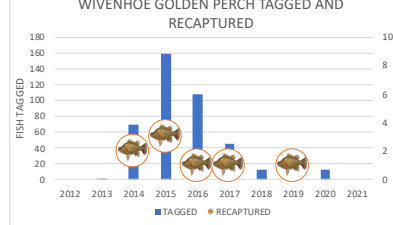
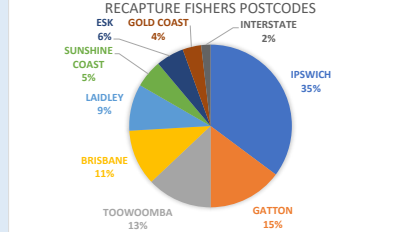
**LAKE WIVENHOE**  
**AUSTRALIAN BASS AND GOLDEN PERCH 2011-2020**  
**2020 REVIEW**

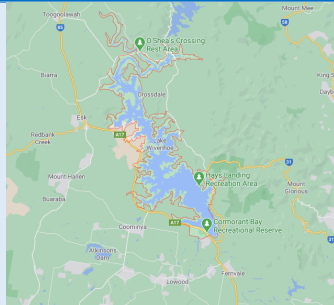

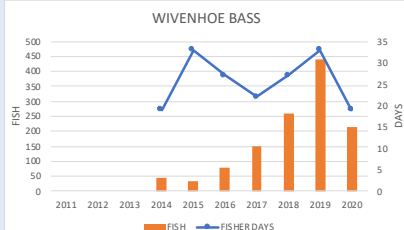
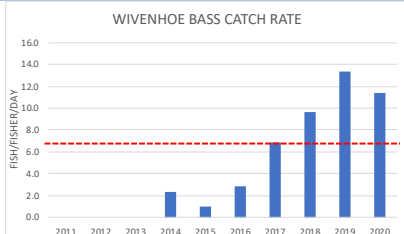
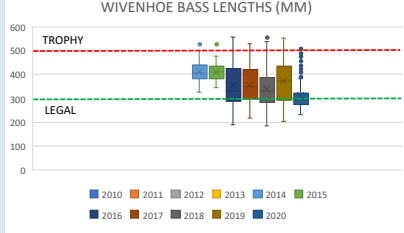
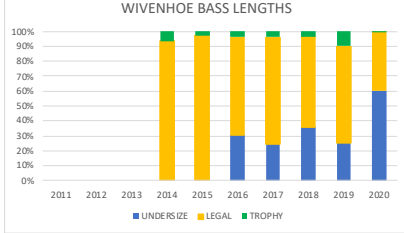
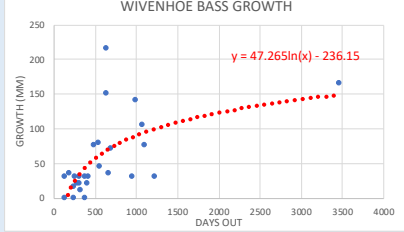
AVAILABLE		AVAILABLE	
Dam capacity	✓	Storage level	✓
Stocked fish numbers	✓	Bathymetry	
Tagged fish	✓	Recaptures	✓
Postcodes	✓	Competitions	✓
Species		Australian Bass	
Catch rates	✓	Fish sizes	✓
Growth	✓	Survival	✓
Tag locations	✓	Fish Movement	✓
Species		Golden Perch	
Catch rates	✓	Fish sizes	✓
Growth		Survival	
Tag locations	✓	Fish Movement	✓

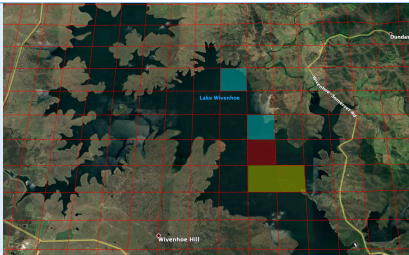
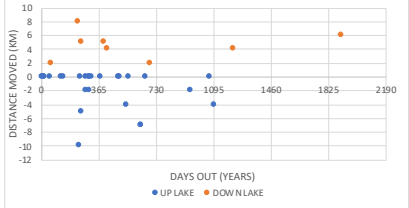
## Summary

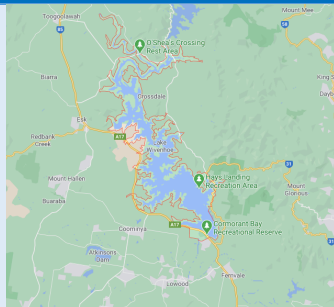

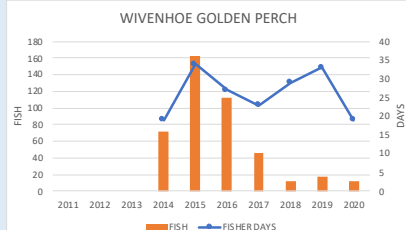
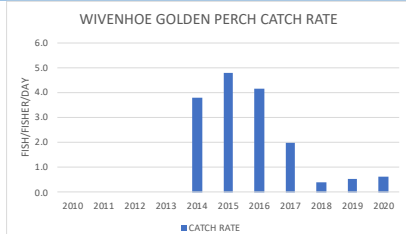
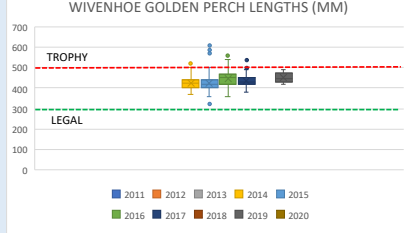
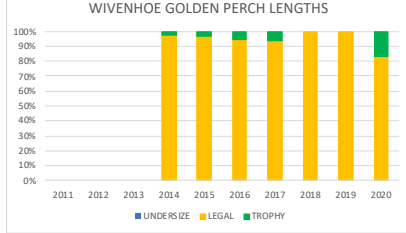
- From 2011-2018 there have been 816.7K Bass and 428.8K Golden Perch fingerlings stocked
- Over the past 10 years there have been 1,230 Bass tagged for 42 recaptures (3.4%) and 427 Golden Perch tagged for 8 recaptures (1.9%)
- The historic catch rate for taggers for Bass was 6.8 fish/fisher day and for Golden Perch was 2.4 fish/fisher day while in 2020 it was 11.4 for Bass and 0.8 for Golden Perch
- The catch rate for Bass rose from 2014 to 2019 when it peaked at 13.4 fish/fisher day while for Golden Perch it peaked in 2015 at 4.8 and fell since then to 0.6 in 2020
- The average Bass length ranged from a high of 413mm in 2015 to a low of 312mm in 2020 and for Golden Perch it ranged from a high of 464mm in 2020 to a low of 424mm in 2015
- Over the past 10 years most Bass were tagged in LWH map grids P30, P31, Q31, O27 and P29 close to Billies Bay while most Golden Perch were tagged in grids L8, J10 and F18 up the top end of the lake
- Of the 34 recaptured of Bass tagged over the past 10 years 1 was recaptured below the dam in the Brisbane River and of the 8 recaptures of Golden Perch tagged 1 was recaptured in the Brisbane River 38km above where it was tagged
- Based on postcodes of fishers recapturing fish most were from Ipswich (35%), Gatton (15%), Toowoomba (13%) and Brisbane (11%)
- Reel Wivenhoe Classic competitions were held in 2018 (64 teams) and 2019 (81 teams) targeting all species

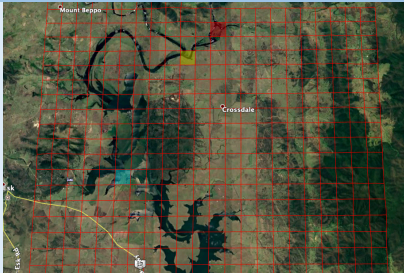
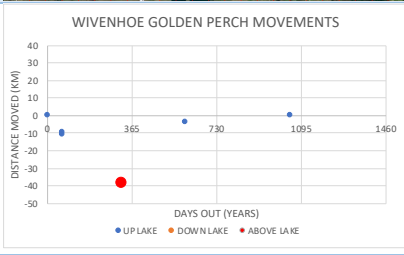
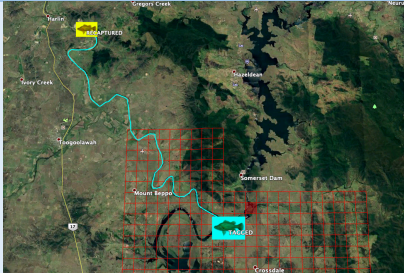


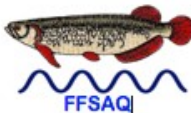

Infotish Australia  
 March 2021

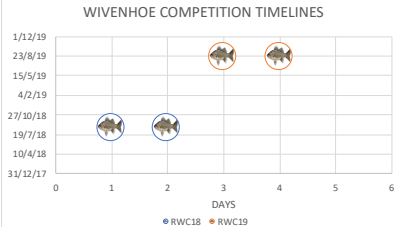
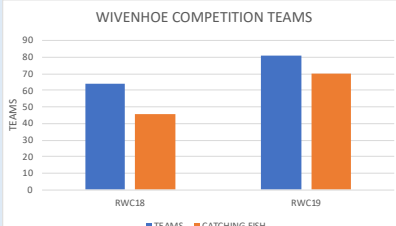
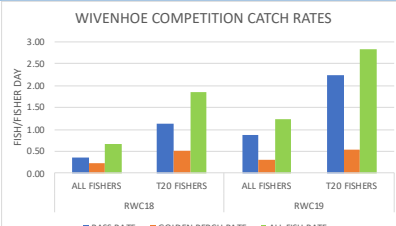
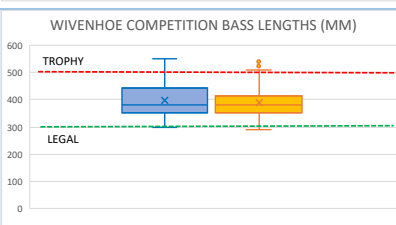
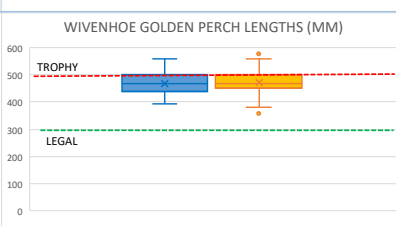
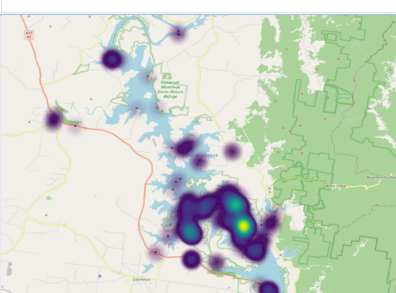
LAKE WIVENHOE	AUSTRALIAN BASS	BATHYMETRY																										
																												
MEASURE	ACTUAL	GRAPH																										
<b>Surface area</b> <b>Lake level</b>	Surface area 109.4km <sup>2</sup> Level at 31 Dec 2020 38.5% For latest level <a href="https://www.seqwater.com.au/historic-dam-levels">https://www.seqwater.com.au/historic-dam-levels</a>																											
<b>Fingerlings stocked</b> <b>2011-2018</b>	<table><tr><th></th><th>HIGHEST</th><th>LOWEST</th><th>TOTAL</th></tr><tr><td>BASS</td><td></td><td></td><td></td></tr><tr><td>2015</td><td>2018</td><td></td><td></td></tr><tr><td>227.8K</td><td>0</td><td>816.7K</td></tr><tr><td>GOLDEN PERCH</td><td></td><td></td><td></td></tr><tr><td>2014</td><td>2018</td><td></td><td></td></tr><tr><td>138.1K</td><td>0</td><td>428.8K</td></tr></table>		HIGHEST	LOWEST	TOTAL	BASS				2015	2018			227.8K	0	816.7K	GOLDEN PERCH				2014	2018			138.1K	0	428.8K	
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<b>Bass tagged and recaptured</b> <b>2011-2020</b>	<table><tr><th>TAGGED</th><th>RECAPTURED</th></tr><tr><td>1230</td><td>42</td></tr><tr><td colspan="2">RECAPTURE RATE</td></tr><tr><td colspan="2">3.4%</td></tr></table>	TAGGED	RECAPTURED	1230	42	RECAPTURE RATE		3.4%																				
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<b>Golden Perch tagged and recaptured</b> <b>2011-2020</b>	<table><tr><th>TAGGED</th><th>RECAPTURED</th></tr><tr><td>427</td><td>8</td></tr><tr><td colspan="2">RECAPTURE RATE</td></tr><tr><td colspan="2">1.9%</td></tr></table>	TAGGED	RECAPTURED	427	8	RECAPTURE RATE		1.9%																				
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<b>Postcodes of recapture fishers</b> <b>2011-2020</b>	<table><tr><th>Postcodes</th><th>54</th></tr><tr><th>Region</th><th>Fishers</th></tr><tr><td>Ipswich</td><td>35%</td></tr><tr><td>Gatton</td><td>15%</td></tr><tr><td>Toowoomba</td><td>13%</td></tr><tr><td>Brisbane</td><td>11%</td></tr></table>	Postcodes	54	Region	Fishers	Ipswich	35%	Gatton	15%	Toowoomba	13%	Brisbane	11%															
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LAKE WIVENHOE			AUSTRALIAN BASS	
				
MEASURE	ACTUAL			GRAPH
Catch and effort number of fish fisher days T20 fishers 2011-2020	HIGHEST	LOWEST	NOW	
	CATCH			
	2019	2015	2020	
	441	34	216	
	EFFORT			
2019	2014	2020		
33	19	19		
Catch rate Fish/fisher day 2011-2020	HIGHEST	LOWEST	NOW	
	CATCH RATE			
	2019	2015	2020	
	13.4	1.0	11.4	
	10 YEAR AVERAGE		6.8	
Average length (mm) Bars show smallest and largest fish 2011-2020	HIGHEST	LOWEST	NOW	
	AVERAGE LENGTH			
	2015	2018	2020	
	413	342	312	
	LARGEST			
2016	2017	2020		
560	530	520		
Fish lengths percentage Undersize <300mm Legal 300-499mm Trophy 500+mm 2011-2020	HIGHEST	LOWEST	NOW	
	LEGAL			
	2015	2018	2020	
	97.1	60.7	39.4	
	TROPHY			
2019	2015	2020		
9.8	2.9	0.5		
Bass growth based on recaptures (limited data) 2011-2020	Recaptures	29		
	ANNUAL GROWTH			
	Year 1	45mm		
	Year 2	66mm		
	Year 3	79mm		
	Year 4	88mm		
Year 5	95mm			
Bass survival based on recaptures by years out	Insufficient data as tagging has not continued for a long enough time and the number of recaptures is too low			

<b>Grid locations of tagged fish (map LWH) 2011-2020</b>	<table><tr><th colspan="2">Grids where most fish caught</th></tr><tr><th>GRID</th><th>FISH</th></tr><tr><td>P30</td><td>191</td></tr><tr><td>P31</td><td>121</td></tr><tr><td>Q31</td><td>118</td></tr><tr><td>O27</td><td>69</td></tr><tr><td>P29</td><td>52</td></tr></table>	Grids where most fish caught		GRID	FISH	P30	191	P31	121	Q31	118	O27	69	P29	52	
Grids where most fish caught																
GRID	FISH															
P30	191															
P31	121															
Q31	118															
O27	69															
P29	52															
<b>Bass movements 2011-2020</b>	<table><tr><td>Recaptures</td><td>34</td></tr><tr><td>Recaptured same area</td><td>18 (52.9%)</td></tr><tr><td>Moved down lake</td><td>8 (23.5%)</td></tr><tr><td>Moved up lake</td><td>9 (26.5%)</td></tr><tr><td>Outside lake</td><td>0</td></tr></table>	Recaptures	34	Recaptured same area	18 (52.9%)	Moved down lake	8 (23.5%)	Moved up lake	9 (26.5%)	Outside lake	0	<p>WIVENHOE BASS MOVEMENT</p> 				
Recaptures	34															
Recaptured same area	18 (52.9%)															
Moved down lake	8 (23.5%)															
Moved up lake	9 (26.5%)															
Outside lake	0															

LAKE WIVENHOE				GOLDEN PERCH	
					
MEASURE		ACTUAL			GRAPH
<b>Catch and effort</b> <b>number of fish</b> <b>fisher days</b> <b>T20 fishers</b> <b>2011-2020</b>	HIGHEST	LOWEST	NOW		
	CATCH				
	2015	2018	2020		
	163	12	12		
	EFFORT				
2019	2014	2020			
33	19	19			
<b>Catch rate</b> <b>Fish/fisher day</b> <b>2011-2020</b>	HIGHEST	LOWEST	NOW		
	CATCH RATE				
	2015	2 018	2020		
	4.8	0.4	0.6		
	10 YEAR AVERAGE	2.4			
<b>Average length (mm)</b> <b>Bars show smallest and largest fish</b> <b>2011-2020</b>	HIGHEST	LOWEST	NOW		
	AVERAGE LENGTH				
	2019	2015	2020		
	451	424	464		
	LARGEST				
2015	2018	2020			
610	480	520			
<b>Fish lengths percentage</b> <b>Undersize &lt;300mm</b> <b>Legal 300-499mm</b> <b>Trophy 500+mm</b> <b>2011-2020</b>	HIGHEST	LOWEST	NOW		
	LEGAL				
	2014-19		2020		
	100.0	NIL	100.0		
	TROPHY				
2017	2018-19	2020			
6.5	0	16.7			
<b>Golden Perch growth</b> <b>based on recaptures</b> <b>2011-2020</b>	Insufficient data Recaptures			8	
<b>Golden Perch survival</b> <b>based on recaptures by</b> <b>years out</b>	Insufficient data as tagging has not continued for a long enough time and the number of recaptures is too low				

<b>Grid locations of tagged fish (map LWH) 2011-2020</b>	<table><tr><th>GRID</th><th>FISH</th></tr><tr><td>L8</td><td>66</td></tr><tr><td>J10</td><td>44</td></tr><tr><td>F18</td><td>30</td></tr></table>	GRID	FISH	L8	66	J10	44	F18	30			
GRID	FISH											
L8	66											
J10	44											
F18	30											
<b>Golden Perch movements 2011-2020</b>	<table><tr><td>Recaptures</td><td>8</td></tr><tr><td>Recaptured same area</td><td>2 (33.3%)</td></tr><tr><td>Up lake</td><td>2</td></tr><tr><td>Down lake</td><td>0</td></tr><tr><td>Above lake</td><td>1</td></tr></table>	Recaptures	8	Recaptured same area	2 (33.3%)	Up lake	2	Down lake	0	Above lake	1	
Recaptures	8											
Recaptured same area	2 (33.3%)											
Up lake	2											
Down lake	0											
Above lake	1											
<b>Golden Perch recaptured above lake</b>	<table><tr><td>Recaptures</td><td>1</td></tr><tr><td>Moved up Brisbane River</td><td>38km</td></tr></table>	Recaptures	1	Moved up Brisbane River	38km							
Recaptures	1											
Moved up Brisbane River	38km											
<div></div> <p>Product of Infofish Australia</p>		<div></div> <p>Supported by Suntag and FFSAQ</p>										

COMPETITIONS	ACTUAL		GRAPH or MAP
Event Reel Wivenhoe Classic 2018 Reel Wivenhoe Classic 2019	Code RWC18 RWC19	Targets All species All species	
Timeline of events RWC18 RWC19	18-19/8/2018 (2 days) 17-18/8/2019 (2 days)		
Teams (2 fishers) RWC18 RWC19	Teams 64 81	Catching fish 46(72%) 70(86%)	
Catch rate (fish/fisher day) Legal fish All fishers (ALL) T20 fishers (T20)	All fish ALL 2018 0.7 2019 1.2	T20  1.9  2.8	
Competition Bass Median length (mm) Bars show largest and smallest fish Dots show outlier Legal fish only	Median length (mm) RWC18 380 Largest fish RWC18 550	RWC19 380	
Competition Golden Perch Median length (mm) Bars show largest and smallest fish Dots show outlier Legal fish only	Median length (mm) RWC18 470 Largest fish RWC19 580	RWC19 470	
Fishing heat map Competitions RWC18 RWC19			

## Data sources

Data used in the Impoundment Crystal Bowl are:

- Tag records and recapture records for the impoundment at <http://crystalbowl.infofishaustralia.com.au/>
- Competition data from Freshwater Fishing competitions with dashboards at <https://tournaments.trackmy.fish/public/reports>
- 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 fish are <300mm, legal fish are ≥300 and <500mm and trophy fish are ≥500mm
- 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 LWH 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