Lake McLarty, a hidden gem

Lake McLarty is an internationally important wetland located in the Peel Region, south-west Australia and an integral part of the Peel-Yalgorup wetland system, Ramsar 482.

The 163 hectare wetland provides habitat for an abundance and diversity of waterbirds and regularly attracts over 30,000 waterbirds each summer. This includes migratory waterbirds that travel many thousands of kilometres each year to south-west Australia to escape the northern hemisphere winter in Siberia, China, Korea and Japan.

The lake's environmental, social and cultural values are of importance to the lake's Traditional Owners, the Noongar People, and the wider community who use the lake for bird-watching, nature study and scientific research.

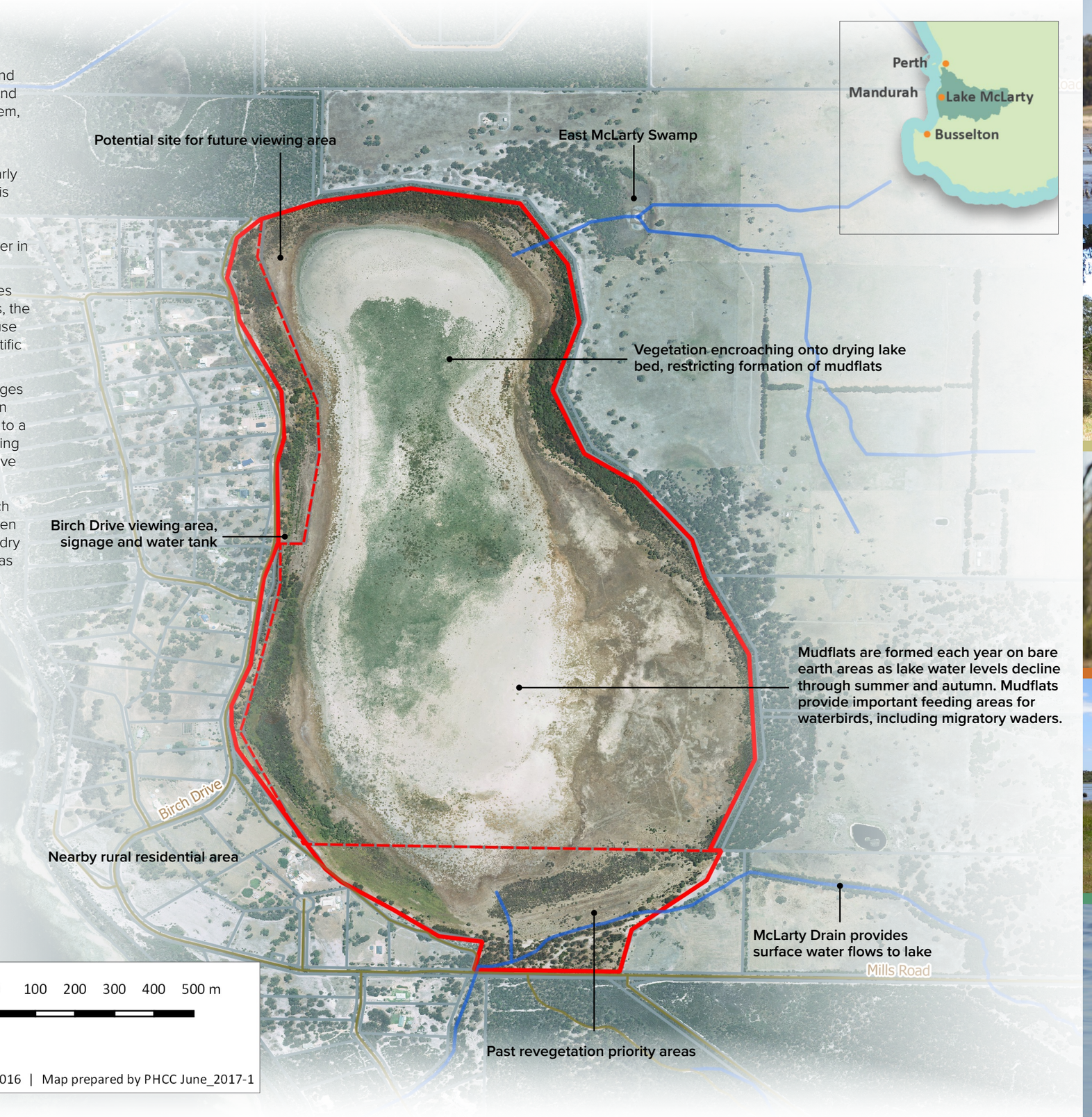
Over the past decade a number of dramatic changes have occurred. Most significant of these has been reduced water levels and longer dry periods due to a decline in rainfall. Annual rainfall has been declining across the South-west of Australia over the past five decades.

Whereas the lake once provided shallow, food-rich mudflats for waterbirds into autumn each year when most needed by migratory waterbirds, it is now a dry lake bed by the middle of summer. A drier lake has also led to changes in the wetland's water quality, soils and vegetation.

The lake's declining condition, including changes to habitat and water quality, have become of critical concern to government, researchers and the community. This action plan addresses these concerns.

".....there are very few wetlands (freshwater, brackish or marine) that have so many birds packed into such a small area. At peak times, Lake McLarty is a world-class birdwatching spectacle. It is well worth saving."

~ Dr Mike Craig, University of Western Australia ~




Red-necked Stints


Red Knots

Lake McLarty Nature Reserve
Action Plan 2017—2027

Australian Government | National Landcare Programme | Ramsar | Friends of Lake McLarty | Parks and Wildlife

This project is supported by PHCC through funding from the Australian Government's National Landcare Programme

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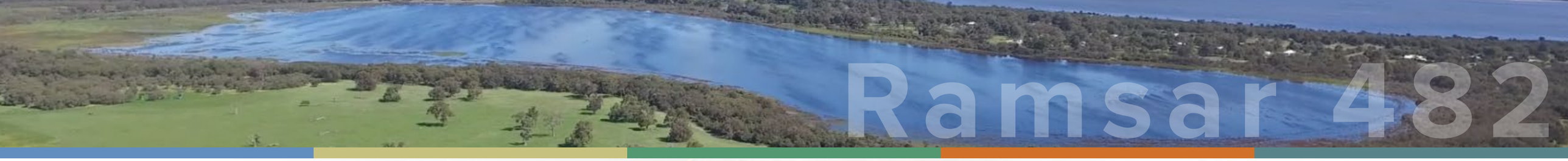
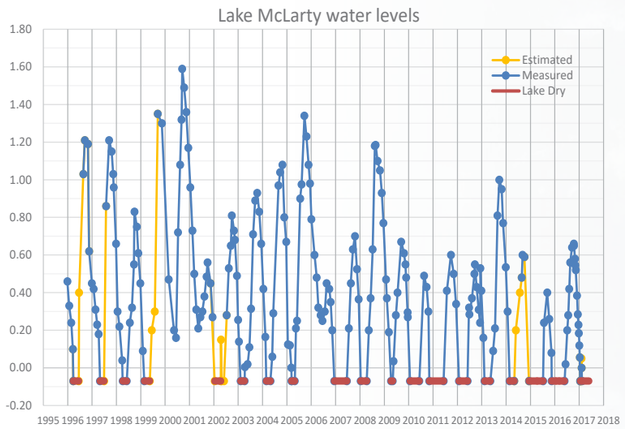


The Lake's Catchment

Lake McLarty is primarily a groundwater-fed wetland, with a small surface water catchment to the south east. Surrounding land use is predominately rural, rural residential and conservation.

A drying lake

With declining annual rainfall in the south-west of Australia since the 1970's, less groundwater and surface water enters the lake. In the 1996–2006 period the lake dried out for 2–3 months each year, and since 2006 the lake was dry between 3 and 8 months per year. This has a significant effect on waterbird habitats and food availability, especially for migratory waders who have to feed up in the March–April period before their long flight back to the northern hemisphere summer.



For more information on Lake McLarty or to join FoLM:
www.lakemclartyreserve.wordpress.com/

The Action Plan has been developed by the Friends of Lake McLarty (FoLM), Department of Parks and Wildlife (DPaW), PHCC and researchers and was endorsed by the Lake McLarty Technical Advisory Group (TAG) on 22 June 2017. Implementation of each action will be guided by DPaW, who have management responsibility for Lake McLarty Nature Reserve, and the Lake McLarty TAG.

Planned Actions 2017-2027

		LEAD	SUPPORT	PRIORITY	WITHIN 2 YRS (2019)	WITHIN 3—5 YRS (2022)	WITHIN 5—10 YRS (2027)
GOAL 1: Water, hydrology and catchment management - Surface and groundwater is actively managed to support the Lake's Ramsar values, habitats for significant flora and fauna and improve water quality							
W1	Continue water monitoring program - lake levels, rainfall and water quality parameters	DPaW	FoLM	1	■		
W2	Hydrology Strategy: Phase 1 Study - Hydrological review of Lake McLarty (already commenced)	DPaW	FoLM	1	■		
W3	Review water monitoring program to match future information needs	DPaW	TAG/DoW	1	■		
W4	Reach agreement on water quantity and water quality objectives for the lake	DPaW	TAG	1	■		
W5	Identify potential priority actions using Phase 1 study and other work which could increase water flow and availability in the Lake (commenced)	DPaW	FoLM	1	■		
W6	Assess impacts of priority actions, including proposed modifications to McLarty Drain to enhance water flow (incl. nutrient stripping, approvals)	DPaW	TAG	1	■		
W7	Implement priority actions to achieve water quantity and water quality objectives	DPaW	FoLM	1	■		
W8	Propose, assess and potentially implement other potential actions (incl links to vegetation, fauna and people components)	DPaW	TAG	2		■	
W9	Phase 2 Study -Hydrogeology - Part 1: Piezometer network, approvals, drilling program, stratigraphy analysis & report, ongoing monitoring program	DPaW	TAG/DoW	2		■	■
W10	Phase 2 Study - Hydrogeology - Part 2: Regular review (2 yearly, then 5yr, 10yr etc) and initial stratigraphy report on findings after 2 years data collection	DPaW	FoLM	2		■	
W11	Phase 2 Study - Hydrogeology - Part 3 - Long-term monitoring of piezometers network. Report after 5 & 10yrs of data collection	DPaW	FoLM	2	■	■	■
W12	Review and assess potential additional options arising from all monitoring and works at 2, 5 and 10yr periods	DPaW–>TAG	FoLM	2		■	■
W13	Conduct feasibility assessments of proposed major works to modify the lake's hydroperiod, and undertake necessary planning and approvals processes	DPaW	TAG/DoW	2		■	■
W14	Gain funding and construct major works if feasible	DPaW	FoLM	2		■	■
GOAL 2: Vegetation, flora and weed management - Vegetation provides habitats for significant flora and fauna and supports the Nature Reserve's Ramsar values							
V1	Main weed surveillance program for new problematic infestations, or critical new threats	DPaW	FoLM	1	■	■	■
V2	Ensure all flora and vegetation surveys gather data to the methodology of Keighery (1994) or otherwise agreed by DPaW	DPaW	TAG/FoLM/PHCC	0*	■	■	■
V3	Carry out baseline vegetation assessment - vegetation structural units and condition, including description of aquatic vegetation	DPaW	FoLM	1	■		
V4	Assess and map priority weeds to support a three-yearly rolling weed management plan and restoration, rehabilitation and revegetation	DPaW	FoLM	2	■	■	■
V5	Establish vegetation management zones to guide restoration, revegetation and weed control. Prioritise work areas as Priority A, B or C	DPaW	FoLM	2	■		
V6	Plan and implement onground restoration, rehabilitation and revegetation in Priority A areas (Highest Priority)	DPaW	FoLM	2		■	
V7	Plan and implement onground restoration, rehabilitation and revegetation in Priority B areas (Medium Priority)	DPaW	FoLM	3		■	■
V8	Plan and implement onground restoration, rehabilitation and revegetation in Priority C areas (Lowest Priority)	DPaW	FoLM	3			■
V9	Carry out post-restoration vegetation survey to evaluate success of program	DPaW	FoLM	L*			■
GOAL 3: Fauna, including waterbirds, feral animals - Habitats are managed to support viable populations of significant fauna, including migratory waders, and maintain the Lake's Ramsar values.							
F1	Conduct or support research into impact of changing vegetation on habitat for migratory waders and other fauna, including vegetation on lake bed	DPaW	TAG	1	■	■	
F2	Maintain baseline waterbird surveys, including Shorebirds 2020	PHCC/Birdlife	DPaW	0*	■	■	■
F3	Continue monitoring of problematic feral animals in and around the Nature Reserve. Carry out feral animal control as determined through monitoring	DPaW	FoLM	2	■	■	■
F4	Consider need and feasibility of targeted waterbird monitoring program for the Mealup-McLarty wetland system, and implement if necessary and feasible	DPaW	PHCC/Birdlife	2	■	■	
F5	Continue surveys of water-borne macroinvertebrates in the water column of lake (already commenced)	DPaW	FoLM	2	■	■	■
F6	Conduct baseline surveys of benthic in-fauna (e.g. polychaetes, crustaceans)	DPaW	FoLM/TAG	2	■	■	■
GOAL 4: People, facilities and infrastructure - People are provided access and facilities to support and enjoy the Lake's environmental, scientific, landscape and cultural values.							
P1	Work with local Aboriginal People to understand and promote connections to Lake McLarty and its immediate surrounds	FoLM	PHCC	1			
P2	Update / construct website to promote and embrace the values of the lake	FoLM	DPaW	1			
P3	Investigate potential for interpretative trails that highlight Aboriginal and European cultural significance and environmental values. Implement if feasible	FoLM	DPaW	2			
P4	Consider temporary public access and viewing area near water tank site, and construct if feasible	FoLM	DPaW	2			
P5	Construct public access and waterbird viewing boardwalk and platform	FoLM	DPaW	3			
GOAL 5: Coordinated and collaborative management - All key stakeholders are involved and consulted to arrive at key management decisions, and major actions are broadly supported.							
M1	Provide support for coordination and implementation of Action Plan	PHCC	DPaW/FoLM	1	■	■	■
M2	Support the Lake McLarty TAG / ensure the TAG is sustainable through appropriate representation according to expertise	DPaW	PHCC/FoLM	1	■	■	■
M3	Review and adapt Action Plan at Years 2, 5 and 10	PHCC	DPaW/FoLM	1	■	■	■

0 Ongoing L* Linked to V6, V7 and V8*