

Science & Waterways Project REPORT

PHCC General Meeting – 16 April 2020

Steve Fisher, Program Manager, Science & Waterways

RLP – Wetlands and people: A community restoring the ecological character of the Peel-Yalgorup Ramsar 482 Wetlands (The Ramsar Project) Nov 2018 – June 2023 \$4,996,221

Year 2 Quarter 3 Reporting

Coordinated by Steve Fisher

- **MERIT reporting and invoicing (\$215,153 exc. GST) for Quarter 3 of Year 2 completed 31st March 2020** for the following outputs (numbers shown in parentheses are those outstanding for the remainder of 2019/20:
 - 2 x baseline data sets collected and/or synthesized (2)
 - 22 x communication materials published (0)
 - 0 x conferences / field days (0)
 - 0 x field days (0)
 - 0 on-ground works (6)
 - 9 x training / workshop events (0)
 - 0 x ha controlling access (50 ha)
 - 0 x ha treated for pest animals, initial (74 ha)
 - 0 x ha treated for pest animals, follow up (90 ha)
 - 0 x ha debris removal (0 ha)
 - 3 x agreements established (2)
 - 0 x monitoring regimes established (0)
 - 0 x ha area surveyed for fauna (165)
 - 3 x days maintaining monitoring regimes (0)
 - 1 x fauna survey conducted (0)
 - 0 x flora surveys conducted (0)
 - 1 x negotiation / consultation with Traditional Owners (0)
 - 65 x days of project planning and delivery (65)
 - 3 x planning and delivery documents for delivery of the project services and monitoring (1)
 - 0 x ha of initial weed removal (114 ha)
 - 18 x ha of follow-up weed removal (52 ha)
 - 0 x ha revegetated (30)
 - 0 x ha revegetation maintained (0)
 - 0 x days of site preparation (0)
 - 3 x water quality surveys (0)
 - 0 x ha surveyed for weeds (0)
 - 0 x potential sites identified (0)

Component 1: Science and Collaborative Management

Managed by Rick James, Coordinator Wetlands Science and Management

- **Yalgorup Lakes Surface Water Quality Monitoring (YLSWQM) Program**
 - **19 sites area being assessed** covering the 17 discrete waterbodies that comprise the Yalgorup Lakes system.
 - **Regular monthly monitoring continued** (March round completed and April still scheduled).

- March round included DBCA involvement (Heidi Bucktin assisted with Lake Preston sampling work).
 - **Water quality involved in-situ measurements** of pH, electrical conductivity, dissolved oxygen and temperature and lake surface water level data gathered.
 - The **April round also will include taking samples** to send to a **laboratory for analysis** to determine electrical conductivity, total dissolved solids and major ions
- **Lake Clifton Thrombolites Groundwater Assessment (LCTGA) Program.**
 - **A piezometer groundwater sampling kit and associated accessories has been delivered.** Commonly referred to as a “spear probe” **this portable equipment will be used to assess groundwater movement** at multiple locations along the north-east shoreline.
 - **Results from the spear probe assessment** work will be used to determine the locations for **permanent piezometers that will be installed for long-term monitoring.**
- **Providing Assistance to Deliver the On-ground Component of the Wetlands & People Project**
 - **A lot of work still to do** in the final quarter of the year with respect to the on-ground component of the project. Assisted by:
 - Preparing the contractor Agreement for new weed control work at Lake Preston (Spiny Rush) and at a site along the south-western foreshore of the Harvey Estuary. The contractor Tranen is due to start work on Friday 3 April.
 - Prepared a funding Agreement between PHCC and DBCA to undertake feral animal control at the southern end of Kooljerrenup Nature Reserve (mainly pig control).
- **Annual Ramsar TAG Meeting (#18): Thursday 19 March 2020**
 - A lot of work put into preparing for this meeting which **unfortunately had to be postponed** at the last minute.
 -
- **Unmanned Aerial Vehicle (UAV) Survey of the Lake Clifton Thrombolite Community**
 - Prepared a Request for Quote document to conduct a UAV survey of the Thrombolites at Lake Clifton. This survey will (a) **map the current extent of the thrombolites**, (b) compare this to previous 1980s mapping, and (c) if possible, **identify “active” versus “inactive” thrombolites.**
 - Quotes returned and analysed. **Quote selection paperwork completed.**

Component 2: Wetlands & People (Community Engagement)

Managed by Sharon Meredith, Coordinator, Ramsar Community Engagement supported by Jessie Fenelon

- **Project Re-visioning**
 - **All Community Engagement events for which we’ve been contracted for 2019/20 have been delivered**
 - **Researching and testing different alternatives to traditional modes of community engagement** to adapt and continue to deliver activities for the Ramsar Project e.g. exploring platforms to deliver online workshops, podcasts and live streaming events.
- **Coordinated the Micro Plastic Video Presentation (2 April)**

- Following the Micro Plastic excursion with **Year 12 students from Coodanup College** (18th Feb) who conducted a **micro-plastic surveys of the wetland shoreline**. Sharon Meredith and Kate Born **recorded a video presentation** to present the results of the survey back to the student group. This was to replace an incursion previously planned for the students at the school.
- **Supported Clean Waterways Focus Groups (24 Feb)**
 - Supported the **first focus group meetings** with City of Mandurah for the **Clean Waterways Project**.
 - Focus Group1 – Aims to create a **‘Plastic Free Mandurah’** framework that supports businesses to adopt sustainable, **plastic-free alternatives** to regularly used items.
 - Focus Group2 – Aims to establish a local **‘Rewards for Residents’** guide that connects local businesses offering **sustainable products and services with households**.
- **Coordinated the Clean Up Peel Waterways 2020 event.**
 - A community event that **removes litter across the Peel-Yalgorup Ramsar Wetland** during March. By mid-March teams had covered various areas in South Yunderup, Greenfields Riverside Gardens, Dawesville, North Pinjarra, Halls Head, and the Serpentine River. On 17 March, the decision was made to **postpone the remainder of the events**. In total, **7 clean-ups** were conducted with **172 people** involved and an estimated **1524 kilos of rubbish removed** from the wetland.
- **Stakeholder Consultation**
 - Conducted stakeholder consultation with **BirdLife WA** reviewing strategies for adaptive management for the delivery of the National Shorebird Monitoring Program in the Peel.
- **Jessie Fenelon, Support Officer**
 - Jessie received a full time job offer and **resigned** as the Community Engagement Support Officer. Her last day at PHCC was **25 February**.
- **Upcoming Events**
 - The events that were **scheduled for April and May 2020 have now been postponed** while Community Engagement activities are being reviewed and **adapted for online delivery**.

Component 3: On-Ground

Managed and delivered by Mike Griffiths, Wetlands Restoration Officer with support from Rick James

- **Weed Control: Contract Placement and Delivery**
 - Contracts for **follow-up weed control** at sites treated in Year 1 of the project have been all been placed. The current situation is:
 - o Work on **Cotton Bush at the southern end of Kooljerrenup NR is complete** and has been included in the 3rd quarter MERIT report (Ross Rose contractor).
 - o Work on tree weeds (**Brazilian Pepper and Fig**) on the eastern foreshore of Lake Clifton **commenced at the end of March** (Arboreal Tree Care).
 - o Work on follow-up **Cotton Bush control on the eastern side of Lake Preston** (Ellis Road area) to **commence soon** (Martin’s Environmental Services)
 - Contracts for **new (Year 2) weed control** have also been placed. The current situation is:
 - o Tranen Revegetation Southwest has been awarded the contract for **Spiny Rush control at Lake Preston** and the control of mainly tree weeds at a site along the south-west foreshore of the Harvey Estuary.

- Martin's Environmental Services have been awarded the contract for new ("phase 2") **Cotton bush control south of Ellis Road and weed work at the north-west end of Lake Preston** (near Preston Beach).
- **Re-vegetation**
 - **Request for Quote paperwork sent out and three returns received:** Tranen Revegetation Southwest; GP Forestry and Natural Areas Consulting. Quote assessment underway with the aim of placing a contract before the end of April.
 - **Re-vegetation sites** are located at:
 - The north-west side of Lake Clifton.
 - The eastern foreshore of Lake Clifton (where year 1 weed control work was undertaken).
 - The southern end of Lake McLarty.
 - At Herron Point.
 - Near Nairns Bird hide (Coodanup Foreshore).
- **Landholder Works Agreements (LWAs)**
 - **Follow-up works** commencing with **Year 1 LWA** landholders.
 - In-principle agreement reached for **Year 2 LWAs** with five landholders that adjoin areas where Year 2 weed control work is being undertaken. (Formal agreements are yet to be established).
- **Controlling Pest Animals**
 - A funding Agreement has been established between PHCC and DBCA to undertake **pig control work in Kooljerranup Nature Reserve**. Eddie Juras of Feral Invasive Species Eradication & Management will undertake the work under DBCA supervision. The funding provided **value-adds to an existing DBCA feral animal control program** which has now been extended to include the southern end of the Nature Reserve.
 - A similar Agreement is planned with City of Mandurah to extend an existing contract they have with Terrestrial Ecosystems (Scott & Graham Thompson) to include **Fox and Cat control near Nairns Bird Hide**.
- **Access Control**
 - Agreement has been reached with DBCA to construct a **new fence at the north-west end of Lake McLarty** to restrict access to bushland in this area. This will add to existing access control work that DBCA has already undertaken in this area. The contractual arrangements are still to be finalised.

Alcoa Foundation: Connecting Corridors and Community: Restoring the Serpentine River

Oct 2017 – Oct 2020 US\$ 750,000

Managed by Jo Garvey, Coordinator Healthy Waterways, supported by Jesse Rowley

- **Communicating and Promoting the Alcoa Foundation Project**
 - A draft of **Case Study 1** (of 3), has been produced to showcase the efforts undertaken to collect baseline conditions within the project site to reference future works against.
 - A **video/series of short films showcasing the project is underway**, with all footage collected over the past two years now collated, categorised and ready for film crew to produce. A request for quote is being prepared to engage the suitable contractor.

- Community Environment Grants (CEG) and **On grounds**
 - The Rivercare team is **working closely with CEG recipients affected by the recent bushfires** in the Karnup/Baldivis areas. A site visit was undertaken at Chris McRobert's property (Wilkinson Rd) to observe damage caused by bushfire earlier this year and to track progress of CEG activities:
 - o Approx. 60% of sedges planted were lost.
 - o Approx. 15% of fencing lost at front of property.
 - o Fencing installed to exclude stock from wetland was not affected.
 - o Completed weed control of arum lily and cottonbush.
 - o Chris is closely monitoring the density of weed species, in particular cottonbush post fire.
 - A site visit was undertaken at **Lowlands and Kalga Farm (Richardsons)** to observe damage caused by the bushfire earlier this year and to track progress of CEG activities. Fire has **burnt out more than 36km of fencing across the 400ha farm land** and river foreshore, creeks and drains, as well as destroyed decades of regenerative farming initiatives. The land is now bare and scorched, and eroding fast. The remaining topsoil is being blown away by prevailing winds, which we witnessed first-hand at the time of the site visit.

The farmer is also **working on actions within his CEG grant**, including the following.

- o **Stock crossing and raffle repair completed.**
- o **Weed control of arum lily completed.**
- **Feral Animal Control on River Road**
 - o **Peel-Harvey Biosecurity Group and Landcare SJ** have teamed up to help tackle **feral animals in the Serpentine River area**, in particular the properties on River Road.
 - o **Surveillance cameras installed** on five private properties revealed **foxes** are using the river as a thoroughfare.
 - o A workshop event demonstrating how to correctly trap and bait rabbits and foxes was to occur in May however, this has been postponed due to COVID-19 outbreak restrictions on public gatherings.
 - o A Variation to Agreement was requested and approved to extend the project timeline from June 2020 to November 2020, allowing additional time to deliver workshops.
- Dolphin Camera Monitoring Project
 - Camera installation has still not taken place due to the delay in gaining approvals. A second Variation to Agreement was requested by DBCA to extend the timeframe with cameras now due to be installed before winter.
- **Karu Bilya Wetlands Restoration Project**
 - **Phase 1 is well underway**, with revegetation activities planned and progressing throughout three sites within the southern areas of the project site, South of Karnup Rd and adjacent the Serpentine River.
 - Location and types of species chosen has been coordinated by the PHCC, with expertise from Karl Karu-Landscape Engineer. Some of the species are set to go in a challenging site, which will be coordinated by a specialist contractor with the experience to deliver a successful outcome for the project.
 - **BirdLife WA are joining in the 2020 planting season**, to install important cockatoo food species within the Anstey Wetlands (site E). The project links directly with the '**Alcoa Community Black-Cockatoo Recovery Partnership**' project.

- This project also involves the **NLP2/RLP Banksia project** which supplied the biodegradable tree guards and will assist with the planting of suitable species to **improve vegetation condition in the Banksia Woodland**.
- The biodegradable cardboard guards will be **assembled by a local Noongar working crew** which will be engaged through the 'Restoring the Serpentine River' project.
- An event is scheduled in which Kwinana Alcoa Volunteers will participate in the planting activities, however this is currently on hold due to the COVID-19 pandemic.

- **Hymus Creek Restoration Project**
 - The team is currently working closely with the landholders offering support through the Project and involving other PHCC teams, including the Greening Farms project to identify synergies and opportunities to assist the farmers affected by the fires.

- **Serpentine River Action Plan (RAP)**
 - Most comments, feedback and suggestions have been received and are currently being collated by Jo Garvey. Once all have been received they will be passed on to the Urbaqua team so they can finalise the Plan.

- **River Health Assessments**
 - Five River Health Assessments were undertaken in late November 2019, focused at the priority areas identified from the RAP to investigate at a more detailed level the current in-stream condition of the river
 - **Assessments due to be undertaken in Autumn 2020 have been postponed** until Spring 2020, due to current restrictions in carrying out field work due to the COVID-19 pandemic and the very low water levels in the Serpentine River at present.
 - Delaying sampling to late spring 2020 (assuming we are able to) presents a **unique opportunity to investigate the impacts of bushfire** by comparing results from 2019 and 2020 for fire-affected sites. **This will be a first for south-west WA.**

- **Noongar Cultural Engagement**
 - Jo Garvey is **currently working with GP Forestry** (Contractor engaged at Site A), to scope **engaging Noongar people as casual staff** at the Karu Bilya Serpentine River planting site. Grant is very keen to get local Noongars involved in his work in this region.
 - Jo is currently working with Thelma Crook who has contacted the various groups. The response has been very positive.

- **Funding Opportunities – Planning for the future**
 - Following encouraging feedback from Alcoa and the Alcoa Foundation, a **Grant Concept Paper proposing an extension to the Restoring the Serpentine River project** was finalised and submitted to Alcoa on 31 March for consideration by the Alcoa Foundations (See also 1FTE, Science Advisor project update below).

- **Fish Friendly Farms**
 - **Restoring habitat for native wildlife in the Murray River**
 - o With site visits complete the team is currently **undertaking a desktop review of two priority locations identified within the Middle Murray reaches.**
 - o The review will determine if these properties have any sites where revegetation can be implemented to promote stream shading and enhance habitat for native fish species.
 - o **Exploring potential collaborations with The Nature Conservancy's Shellfish Gardens project** (blue mussels), and Murdoch University's Mussels in Farm Dams' project (Carters freshwater mussel). The Shellfish Garden project aims to install natural habitat modules under jetties, and aligns with the aim of the Fish Friendly Farms initiative, which is to engage community landholders, in particular the fishing community to encourage participation in habitat restoration in the Peel Harvey Catchment. This will enhance habitat for fish and have the potential to provide additional food sources for recreational fish species such as black bream.
 - **Mussels in Farm Dams (Carters freshwater)**
 - Jo in discussion with Alan Lymbery and is supporting the Murdoch team as needed.
 - **Re-snagging Rivers Feasibility study**
 - Andrew Matthews (Oz Fish Unlimited), has provided a Draft Costings document. This document was created to gain an understanding of the complexity of permissions required for the deployment of aquatic habitat restoration structures and modules when undertaking these sorts of projects. The document is currently with PHCC and under review.
- **Stock Enhancement of Black Bream in the Murray River**
 - **John Tonkin College are in the process of relocating their 'in-classroom' facility** (as required by the Dept. of Education) to an outdoor facility with appropriate infrastructure to successfully aquaculture black bream. (See also 1FTE, Science Advisor project update below)
 - Due to COVID-19 restrictions and uncertainty of when students will return to school, we have set a deadline of 30 June to make a decision on the timing of the black bream program for 2020.
 - **The likelihood is that the program will be delayed until 2021**, with the final release of the black bream in December 2021
 - To **maintain momentum and keep students and teachers motivated**, JTC and Murdoch University are exploring a **trial project using silver perch as alternative species** for the students to hone their aquaculture skills.
- **Harvey River Demonstration Reach / Marron - more than a meal**
 - **Four short films have been produced**, capturing community perceptions and values of the Harvey River. The films aim **to engage and educate the wider community on the importance of waterways** and wetlands at providing fish and wildlife habitats, and in return how the fish and wildlife contribute to improving water quality and maintenance of the rivers.

Managed by Steve Fisher, Program Manager, Science and Waterways (in addition to oversight of the projects above)

- Attended the following key meetings with:
 - **Mike Coote (Wetlands Branch, DBCA) and Rick James on 26 February to discuss**
 - o progress on the mapping of the Ramsar 482 boundaries and proposed extensions, and
 - o potential workshop on the effect of climate change on the ecological character of the Ramsar site
 - **David Bolt, Rod Peake (Shire of Murray), Andrew Ward (Peel Development Commission) Jane O'Malley and Caroline Knight (PHCC) on 13 March to discuss the Point Grey Marina Development to discuss the quote by Matt Hipsey (University of WA) to extend and refine modelling work to forecast impacts of the development on the Peel-Harvey Estuary (see also CEOs report).**
 - **Peel Bright Minds Steering Group on 23 March (via Zoom) to:**
 - o consider various options for the future auspicing arrangements of Peel Bright Minds - the group was unanimous in support of the motion *That Regional Development Australia (Peel) take over sole management of the program with the Steering Group constituted as a sub-committee of RDA Peel, acting under the Chairmanship of an appointed RDA Peel Committee Member;* and
 - o discuss impacts of the COVID-19 pandemic on delivery of the program – a strategy is currently being developed.
 - The 'Stock enhancement of black bream in the Murray River' project team i.e. Kim Savins, Barb Sing, Nick Rust (John Tonkin College); Alan Cottingham, Ben Roennfeldt (Murdoch University), Jo Garvey and Jesse Rowley on 31 March to discuss progress on **relocation of aquaculture facilities within the JTC campus and the impacts of the COVID-19 pandemic on the program.** The new facility is under construction; the **black bream aquaculture is likely to go into hiatus for 1 year** (see also Royalties for Regions: Peel-Harvey Estuary Grants project summary above).
 - **Fiona Valesini (TNC) and Adrian Parker (PDC) on 3 April (via Zoom) to discuss how to progress the proposed 'Valuing Nature' project, which arose from the Conservation Action Planning Workshop convened by TNC in March 2019. The aim of the project is to assess the economic value and the ecosystem services value of the Peel-Harvey Estuary. Our homework is to review a similar study "Mapping Ocean Wealth" by TNC and Deakin University to guide the scope for the Peel-Harvey then reconvene the group in May with Simon Reeves (TNC) the author of that study.**
 - **Jodie Read, Suellen Jerrard (Alcoa) and Jo Garvey and Jesse Rowley on 7 April (via Zoom) to discuss progressing PHCC's Grant Concept Paper to a full proposal for funding by the Alcoa Foundation** (see Restoring our river summary above and Provision of advice below); and the impact of COVID-19 pandemic on delivery of the existing project.
 - **The Peel-Harvey Shellfish TAG on 8 April (via Zoom) with representatives from TNC, DPIRD, DWER (Bob Pond), PDC, Shire of Murray, City of Mandurah, Shire of Harvey, Murdoch University, Recfishwest and Mandurah Licensed Fishermen's Association to provide input into TNCs project funded by the Alcoa Foundation.**
 - **Alex Hams, Fiona Valesini, Theo Kearing (TNC), Alan Cottingham (Murdoch University) and Jesse Rowley and Jo Garvey (PHCC) on 8 April (via Zoom) to discuss potential collaborations with PHCC, especially the Fish Friendly Farms project (see Peel-Harvey Estuary Grants project summary above).**

- **Made the following presentations**
 - **'I ♥ Science'**, excerpts from the Ramsar 101 Masterclass and highlights of Science and Waterways projects, presented to **6 members of the Peel Bright Minds Volunteer Group** (9 March)
 - **'Caring for our Ramsar Wetlands: Values, Threats and Actions" to the Association of Independent Retirees**, scheduled for 23 March was **rescheduled to 25 October**.
 - **'PHCC's Ramsar Project: Wetlands and people – a community restoring the ecological character of the Peel-Yalgorup 482 Wetlands to the Ramsar TAG** was **postponed to a later date**.

- **Provision of Advice / driving projects to assist in the restoration of Peel Waterways**
 - **With Jo Garvey in submitted a Project Concept Paper** to Alcoa Australia on 31 March describing PHCC's vision for the next phase of the Connecting Corridors and Communities – Restoring the Serpentine River (see **Alcoa Foundation project report** above). **Our ask was for USD\$ 700,000 over three years 2021-2023**. So far we have received positive feedback.
 - With Thelma Crook, **assisted The Nature Conservancy (TNC) in the recruitment process for their Noongar Marine Project Coordinator**, driving the Shellfish Gardens project. **Theo Kearing was the successful applicant, who will be working out of PHCC's offices** at Sutton St when we emerge from the current restrictions brought about by COVID-19.
 - Provided a **comment on behalf of PHCC for the launch of TNC's Restoring the Peel-Harvey Estuary Project** via a media statement released 16 March 2020. This project is funded by Alcoa Foundation under the Three Rivers, One Estuary Initiative with TNC recognising the close working relationship they have with PHCC in their media statement. **TNC have also produced a 5 min video on the project – see <https://www.youtube.com/watch?v=8Wl0nrW3mJ8&feature=youtu.be>**
 - Reviewed the **Addendum to the Ecological Character Description for the Peel-Yalgorup Wetlands** and provided comment back to Jen Hale, contracted to produce the addendum. Mike Coote did similarly in parallel so both sets of comments have been included in the most recent draft (24 February 2020). The **next steps are for PHCC (Julie) to format into a final draft document** which will be submitted (by Mike Coote) **to the Director General of DBCA for endorsement** by June 2020.

- **Other**
 - Wrote a **media release** regarding the release of the **Ramsar Baseline Report Card** (23 March)
 - **Provided comment (internally)** for PHCC's submission regarding the **review of the EPBC Act**. Andrew is coordinating the submission on behalf of PHCC.

Events (PHCC sponsoring or presenting)

- **Previous events 20 February to 16 April):**
 - March 2020 Clean Up Peel Waterways 2020 event.
(see Wetlands & People Community Engagement)
 - 2 April 2020 **Plastic Micro Fibre Incursion– Video Presentation**
(see Wetlands & People Community Engagement)

- **Future events (after 16 April):**
 - **Scheduled events have been postponed or cancelled** due to the restrictions of the COVID-19 pandemic. Sharon Meredith is **exploring options** on how to present these and others as **virtual events** using e.g. video-conferencing, webinars into the future **so please watch this space**.

Work Health and Safety

- **No incidents or near-misses to report**

