

MINUTES OF PHCC STRATEGIC MEETING

Held on Thursday 20 February 2020
at Peel Manor House, 164 Fletcher Road, Karnup



The Chairman opened the meeting at 9.10 am

Attendance

Board Members:

Caroline Knight	Chairman
Darralyn Ebsary	Deputy Chairman
Marilyn Gray	Treasurer
Paddi Creevey OAM	Secretary
Bob Pond	Executive Committee (Dept of Water & Environmental Regulation) DWER
Sue Fyfe (from 8.49am)	Community Member
Andy Gulliver	Community Member
David Prattent	Community Member
Howard Mitchell	Community Member
Claire Reid	Community Member
Amanda Willmott	Community Member
Mark Cugley	Dept of Biodiversity, Conservation & Attractions
Adrian Parker	PDC (Proxy)

Guest Speakers

Prof Lyn Beazley AO	
Prof Kingley Dixon	(not in attendance – presentation provided and played)
Dr David Blake	Centre for Ecosystem Management, ECU
Daniel Ferguson	Principal Water Planner, DWER
Peter Muirden	PHCC Engineering Hydrologist
Prof Alex Gardner	School of Law, UWA
Dr Fiona Valesini	Senior Research Fellow, Centre for Sustainable Aquatic Ecosystems, Murdoch University
Dr Matt Hipsey	Associate Professor, School of Agriculture and Environment, UWA
Brad Degens	Senior Soil & Water Scientist and Project Leader, DWER
Dr Malcolm Robb	Manager Aquatic Science, DWER

Staff Members:

Jane O'Malley	Chief Executive Officer
Steve Fisher	Program Manager, Science & Waterways
Melanie Durack	Program Manager, Hotham-Williams
Andrew Del Marco	Program Manager, Land Conservation
Rick James	Coordinator, Wetlands & Science Management
Jo Garvey	Health Rivers Coordinator
Jess Rowley	Rivercare Officer
Leanne Greene	Office Manager & Executive Support (Minutes)
Janine Neeling	Administration Officer

Invitees:

Steven Harding	Director Infrastructure Services, Shire of Serpentine-Jarradale
Andrew Trosic	Director Development Services, Shire of Serpentine-Jarradale
Kuenzang Tschering	PhD Student, ECU
Rupert Richardson	Landholder

Apologies:

Cr Brad Cardilini	Local Government Representative (Coastal)
Cr Eliza Dowling	Local Government Representative (Inland)
Rob Summers	Department of Primary Industries & Regional Development
Andrew Ward	Peel Development Commission
Suzanne Brown	Water Corporation (Observer)
Scott Haine	Dept of Planning, Lands & Heritage (Observer)

The Chairman welcomed everyone to the PHCC Strategic Meeting, acknowledging guest speakers, and providing an overview of the day's proceedings.

S.1/2/20 Jane O'Malley, Chief Executive Officer: Presentation on PHCC Strategic Directions - Review of 2-year Key Achievements

A detailed report setting out the progress made against each of the Strategic Directions '2 year key achievements planned' was provided to Members of the Board prior to the meeting (Members Page).

Jane provided an overview of the PHCC's progress against the key achievements set in as our Strategic Directions 2016-2019, which included:

- Goal 1.1.1 Implementing a new framework for budgeting and finance management at various levels and tracking deliverables was progressing. The team was using this for all NLP projects and it was being used for reporting to steering committees. It was not yet something that could be used for across the organisation reporting, but progress was being made towards this.
- Goal 2.1.3 Reviewing and updating the Natural Resource Management (NRM) Strategy, which was required to be completed by 19 July 2021 (Australian Government tender). The PHCC had commenced surveying community and was on track to meet the required timeframe.
- Goal 3.1.1 Maintaining representation and endeavouring to influence strategic planning processes, via Board member and staff representation on a plethora of groups (including Peel Alliance, Dwellingup Futures, WA Feral Cat Working Group, NRM WA). However, it was noted that advocacy across Government agencies had been made more challenging in view of the PHEMC and SAPPR process being stalled.
- Goal 4.1.6 Undertaking a 10 year review of the Science Strategy for the Peel-Harvey Estuary – We have completed a gap analysis of the original strategy and commenced discussions with the authors. The results of the ARC Linkage project (Dec 2019) had been received to inform the review. Investigations will be undertaken into contracting a consultant to carry out the review.
- Goal 5.1.4 Delivering current contract obligations to a high quality, including adaptive management and evaluation of outcomes. This was arguably the most important thing for the PHCC to maintain its reputation as a quality delivery agent, and in this regard, it continued to perform exceptionally well across projects. However, there were challenges within the REI drainage project (noting that obligations would be met).
- Goal 6.1.7 Supporting and promoting Citizen Science opportunities – The PHCC continue to kick goals in this area, e.g. continuing Shorebird 2020 and the Bream Project with John Tonkin College. This was predominately across the Science & Waterways program.

Note – All presentations are provided for Members only, on the Members Page. Members are reminded not to share presentations without prior approval from the Authors (PHCC is seeking to get permission to share presentations).

ACTION: Leanne to ask guest speakers if their presentations can be shared publicly, or are only provided for PHCC Members.

Forests and Fire Presentations

S.2/2/20 Professor Lyn Beazley, AO: Science, Forests and the Future

Professor Beazley presented on Forests and the Future, emphasising:

- More than 10.7m hectares of land had burnt so far in the Australian bushfires, including 80% of the Blue Mountains, and 50% of the Gondwana world heritage rainforests. However, climate change was being experienced more in Western Australia than in the eastern states.
- Predicted future tree canopy losses indicated that globally, coverage could shrink by ~223 million hectares by 2050, with the vast majority of the losses occurring in the tropics.
- The work of EucFACE, the 'Dead Tree Detectives' Citizen Science program and the Terrestrial Ecosystem Research Network (TERN).
- The benefits of proforestation, which allowed trees to regenerate naturally, which was more likely to result in a resilient and diverse forest.
- There was a demonstrated want and need to urban trees in WA, as seen in many cities around the world.

Professor Beazley strongly recommended that contact be made with a number of individuals who could assist in sharing their knowledge of the work being carried out in the above areas. She also highlighted that 2029 would see the 100 year anniversary of WA being founded.

ACTION: Jane to consider suggested contacts / future presenters for PHCC meetings, as suggested at the meeting:

- Sarah Curran Regan – Program Coordinator, Peel Bright Minds
- Prof Giles Hardy – Murdoch University (Dead Tree Detectives)
- Dr Margaret Byrne – TERN to understand what trees are suggested for planting in view of our drying climate.

The meeting adjourned at 10 am for morning tea, recommencing at 10.30 am

S.3/2/20 Professor Kingsley Dixon: Fire in our Landscapes

Whilst unable to attend the meeting in person, Professor Kingsley Dixon kindly supplied a pre-recorded presentation that focused on the need to understand the long-term impact of prescribed burning in biodiversity hotspots, such as south-western Australia. Highlighted issues included:

- Target driven burning at current scales was the largest and most severe landscape impact since agricultural clearing, with fire sensitive ecosystems now being subjected to target focused burning. An estimated 10,000 ha had been backburnt using aerial incendiary to create pyro-nimbus to redirect winds.
- The frequency (up to 10 times natural frequencies) and a seasonality of prescribed burning would challenge and deplete species of ecological resilience.
- High frequency fire degrades fragmented ecosystems more rapidly. A rapidly drying climate required longer inter-fire recovery periods.

- Muir 1985 for *Banksia (dryandra) sessilis*: flowers freely 3-4 years; only sets seed after 8 years; reaches max honey production by 12-15 years.
- Long unburnt sites were critical for many animal and plant species. In 200 years, Australia had been responsible for more mammal extinctions than any other country, being the fourth worst country for extinctions - >500 threatened animals and 1300 plant species are federally listed.
- In May 2016, the call of the National Firefighting Centre for a 'national large air-tanker' fleet to confront a growing bushfire threat had been turned down, in a federal government ruling that the task was one for the states.

ACTION: Jane and Mark Cugley to invite appropriate DBCA representative to be a guest speaker to address Board meeting about prescribed burning to provide insight into how they are determining prescribed burning regimes.

S.4/2/20 Dr David Blake (Centre for Ecosystem Management, ECU): Fire and Water Quality – An Emergent Issue for Water Catchment Management

Dr Blake advised that current trends suggest that fire and water quality was going to be a persistent challenge for the next few decades at least. During his presentation, he focussed on:

- The consequences of fire for catchment water quality, including erosion, deposition and atmospheric effects.
- The consequences of fire for wetland water quality, including rehydration of burnt or overheated (organic) soils (biogeochemical alteration).
- The effects of fire retardants and fire prevention.
- Organic pollutants produced during combustion (polycyclic aromatic hydrocarbons – PAH), which are considered carcinogenic and harmful to humans.

Water Availability Presentations

S.5/2/20 Daniel Ferguson (Principal Water Planner, DWER): Peel Region Water Use and Availability

Mr Ferguson provided an outline of water availability, use and projected demand for the Peel region. Key messages included:

- Most high-quality, well located and relatively inexpensive water sources are fully allocated in the Peel region. The volume of water currently available in the Murray and Serpentine groundwater areas would likely reduce.
- Building water security meant optimising the use of available groundwater and surface water, redesigning how water was used and finding alternative, climate-resilient sources.
- The Peel Integrated Water Initiative was a series of investigations that would help guide sustainable water resource management for the region's economic growth.
- Waterwise Perth had 38 actions to manage the impacts of climate change on water resources and urban liveability. The aim was for Perth to be a leading waterwise city by 2030.

S.6/2/20 Peter Muirden (PHCC Engineering Hydrologist): Using Empirical Data to Show the Seasonal Influence of Early Winter Rainfall Change in SW WA and Impacts on Peel-Harvey

During his presentation, Peter emphasised that analysing annual rainfall only provided part of the picture. It is not just the total annual rainfall that defines our climate, but when that rainfall occurs. The findings of his analysis in relation to hydrology data from Muir-Byenup and its implications for the Peel Region identified:

- The area around Perth-Peel on the Swan Coastal Plain are proving far more complex than Muir-Byenup.
- There are many influences in the Swan Coastal Plain area that effect wetland and streamflow behaviour, including abstraction and urbanisation.
- Changes in rainfall have caused significant impact in the hydrology of the Peel region.
- While there are reductions in annual rainfall over much of southwest WA, the biggest drivers in changes to streamflow and wetland hydroperiod are likely to be driven from very large reductions in early winter rainfall (April, May, June and July).

S.7/2/20 Prof Alex Gardner (School of Law, UWA): Environmental Flows and Wetlands Restoration – Legal Approaches (Case Study of the Peel-Harvey Estuary)

Professor Gardner referenced the UWA Law Review article on which his presentation was based: http://www.law.uwa.edu.au/data/assets/pdf_file/0003/3033849/9.-Jensen-and-Gardner.pdf . During his presentation, he discussed:

- Conditions, concepts and climate change
- Australian policy and law, including key national policy (2004) goals for environmental water. He advised that WA has no legal duties for Environmental Water Provisions (EWP) and/or rehabilitate waterways and wetlands.
- The case study: Peel-Harvey Estuary and duties (under the Environmental Protection Act 1986 and Rights in Water and Irrigation Act 1914), showed ecological studies recognised the need for Environmental Water Provisions (EWPs) in WA, but they had not been provided and there were only limited social releases.
- The current Department of Water release regime, balanced what was practical in a drying climate given declining inflows, and the volume of water that would be required to reach the estuary.
- The need for State law to implement national goals (including the need for innovative solutions for alternative water sources), an effective regulatory framework for EWPs, and setting default EWPs that would apply within a specified time.

Professor Gardner identified the need for transparency reforms that required licence conditions to be made public and releases publically accounted, and for the environmental impact assessment (EIA) process to include the assessment of proposed plans, reviews of existing approvals and revocations.

The meeting adjourned at 12.50pm for lunch, recommencing at 1.40pm

Water Quality Presentations

S.8/2/20 Dr Fiona Valesini (Senior Research Fellow, Centre for Sustainable Aquatic Ecosystems, Murdoch University) and Dr Matt Hipsey (Associate Professor, School of Agriculture and Environment, UWA): **Balancing Estuarine and Societal Health in a Changing Environment**

Drs Fiona Valesini and Matt Hipsey delivered their research findings in relation to the current estuary condition (relative to trends monitored from the 1970s onwards), with the key messages being:

- The estuary has less flushing due to declining river flows.
- Ecologically, the estuary is showing signs of trouble.
- Several ‘trouble hot-spots’ have emerged.
- Water and nutrient balance modelling give us a new assessment tool.

Future (2050) predications for estuarine health are:

- Projected future drying climate is expected to have an overwhelming influence on water flows to the estuary, concentrating poor water quality and ecological problems in the rivers.

- Implementing extensive catchment management actions can significantly reduce nutrient flows to the estuary, and is a measure than can help manage the negative effects of the drying trend.
- Allowing a ‘business as usual’ approach to catchment management is forecast to intensify problems.
- The Estuary is in a bad way and will get worse, unless significant action is taken.

S.9/2/20 Brad Degens (Senior Soil & Water Scientist and Project Leader, DWER): **Treating P Loss to Improve Water Quality in Estuaries – Current Science and Future Prospects**

Brad Degens outlined the work being undertaken to find the best ways of using soil amendments and a new Phosphorous (P) absorbing clay to reduce P from runoff waters in catchments to receiving waters, including:

- Work towards product approval and implementation strategy (defining on-farm benefits / risks / application strategies; and building landholder and community support).
- Amending drains to remove P from drain waters.
- Applying clays to directly reduce P for algal blooms.
- Improving efficiency of production, development of local application strategies and defining longevity of benefits.

S.10/2/20 Dr Malcolm Robb (Manager Aquatic Science, DWER): **Impending Peel-Harvey Estuary Protection Plan and Revised Water Quality Improvement Plan (WQIP) for the Peel Harvey**

Dr Robb highlighted actions set out in the draft Peel-Harvey Estuary Protection Plan, which is hoped to be adopted by Government and released in the near future, which included:

- Catchment actions that focus on reducing the loss of nutrients from the catchment to the estuary, leading to poor estuary conditions.
- Aims include improved management of diffuse agricultural nutrients, reducing diffuse and point sources of urban nutrients and improving drainage water quality.
- Estuary actions that focus on addressing sustainably managing fish and crab stocks, developing guidelines for dredging management, mitigating recreation and tourism impacts and conserving foreshores and wetlands.
- Plans, policies and partnership actions that call for collective decision making in the implementation of this plan and strategic coordination of estuary management.
- Actions to measure progress, based on an adaptive and iterative management framework, thereby ensuring that lessons are learned from past experience and promotes a culture of working towards continuous improvement.

ACTION: With the approval of the Minister, Dr Malcolm Robb and his team be invited to attend the next Board meeting to share actions from the Peel-Harvey Estuary Protection Plan (as an extension of the meeting).

The meeting adjourned at 3.40 pm for afternoon tea, recommencing at 4.05 pm

S.11/2/20 “So What” Discussion Session

Arising from the information presented, the Board members were asked “What are we going to do with the information we have just received?” with the following key things being highlighted:

Forests and Fire Presentations

1. Read the [Leeuwin Group Review](#). What are we going to do with the Review information?
2. Do we go to industry (ie Alcoa) regarding alternative fire management?
3. What is science telling us (eg planting species)?
4. Request Department of Biodiversity, Conservation and Attractions (DBCA) Fire Ecologist to present to the Board as soon as possible to inform decision-making. Determine our position to take to government.
5. Connect with / join Terrestrial Ecosystem Research Network (TERN) – Technology for monitoring – what partners?
6. Fire / education: Education built into the new Bushfire Centre for Excellence which is to be constructed in the Shire of Murray.
7. Look at the water in our landscape (upper slope/lower) in discussions re fire management (impacts of fire on upper vs lower slopes).

Water Availability Presentations

1. Advocate – Environmental Water Provisions (EWPs) (ecosystem services and restoration) to be recognised for our waterways, estuary and rivers.
2. Take message to a wider audience – consider holding a “Water Symposium”.
3. Peel Integrated Water Initiative (PIWI) – Advocate for Stage 2 to assist with greater knowledge re water in this area.
4. Advocate for better water storage and re-use / reduce usage.

Water Quality Presentations

1. Birriga Drain – who owns it / manages it – look at opportunities for Water Quality projects here (Rupert).
2. Advocate for Estuary Protection Plan (approval and implementation dollars, with responsibilities and timeframes defined)
3. Invite Department of Environment, Water and Regulation (DWER) to present to the PHCC and discuss actions so we can design and plan landscape scale actions (urgent priority).
4. Advocate for Regional Estuaries Initiative Stage II (REI) (seven estuaries).
5. Design and implement a ‘Communication Strategy’ – Peel-Harvey Catchment Council and ARC Linkage (link to Point Gray communications channel).

S.12/2/20 Wrap up of Strategic Meeting

At the invitation of the Chairman, Paddi Creevey provided an overview and wrap up of the issues covered at the strategic meeting, including the challenges and opportunities that will arise as our climate continues to dry.

The Chairman thanked everyone for their contributions towards a very informative and successful day.

The meeting closed at 4.45 pm

Chairman:

Date:

Summary of suggestions arising from 2020 Strategic meeting – These will be transferred to the Agenda for the April General Meeting:

No.	DETAILS	RESP.	
-	<p>Presentations – Share Publicly Leanne to ask guest speakers if their presentations can be shared publicly, or are only provided for PHCC Members.</p>	Leanne Greene	25/2/20 email circulated to guest speakers seeking their approval – waiting response
S.2/2/20	<p>Presenters for PHCC Meeting Jane to consider suggested contacts / future presenters for PHCC meetings, as suggested at the meeting:</p> <ul style="list-style-type: none"> • Sarah Curran Regan – Program Coordinator, Peel Bright Minds • Prof Giles Hardy – Murdoch University (Dead Tree Detectives) • Dr Margaret Byrne – TERN to understand what trees are suggested for planting in view of our drying climate 	Jane O’Malley	COMPLETE details added to suggested guest speaker list
S.3/2/20	<p>DBCA Prescribed Burning Invite appropriate DBCA representative to be a guest speaker to address Board meeting about prescribed burning to provide insight into how they are determining prescribed burning regimes.</p>	Mark Cugley & Jane O’Malley	
S.10/2/20	<p>Estuary Protection Plan With the approval of the Minister, Dr Malcolm Robb and his team be invited to attend the next Board meeting to share actions from the Peel-Harvey Estuary Protection Plan (as an extension of the meeting).</p>	Jane O’Malley	