

Connecting Corridors and Communities

Restoring the Serpentine River

Edition 6
December 2020

Welcome to the sixth edition of *Connecting Corridors and Communities* - an update on the project and on Natural Resource Management (NRM) in the Serpentine River Corridor. NRM refers to the management of natural resources such as land, water, soils, plants and animals. It brings together landuse planning, water management, biodiversity conservation and the future sustainability of industries such as agriculture, mining, tourism, fisheries and forestry.

Research Being Implemented Into Future Riparian Activities

With the Serpentine River Action Plan now in place and River Health Assessment sampling being completed, meetings with stakeholders and targeted private landholders are currently underway to plan for the future health of the Serpentine River. These meetings are being held to plan future restoration works at priority sites identified through this research and are taking into account the important connection the community shares with the Serpentine River. Additionally, to further assist with this planning, in partnership with Urbaqua Pty Ltd, two Concept Plans are being finalised to provide a guide to suitable restoration techniques at priority sites that meet all stakeholder requirements. These plans will provide a visual representation of works to be implemented and highlights the importance of site specific restoration design.

This future restoration planning is also taking into consideration the results and main findings of the River Health Assessments performed

by scientists from Murdoch University's Fish Group and Fish Health Unit. The results have revealed that all sites sampled continue to support a variety of native fish populations even after the series of wildfires we saw occur in January 2020. Furthermore, the highly invasive Pearl Cichlid (*Geophagus brasiliensis*) was not detected during the sampling (spring 2019 & 2020). This is an extremely positive result and highlights the critical role landholders are playing in undertaking onground works to help improve the health and biodiversity of the Serpentine River. However, to continue to support abundances of native fish into the future and further increase aquatic diversity, it has been recommended that some areas undergo more extensive instream and riparian habitat restoration actions.

To view the Serpentine River Action Plan in full detail, please follow this link: <https://peel-harvey.org.au/publications/serpentine-river-action-plan/>



Vegetation Condition Monitoring at 7 Sites

Over the past three years, monitoring the change in vegetation condition across the 'Connecting Corridors and Communities, Restoring the Serpentine River' project area has been critical to either establish baseline data and/or to identify factors that may be contributing to changes in the overall vegetation structure. The sites chosen to be monitored represent the Serpentine River on a landscape scale. Sites represented areas where restoration works such as revegetation, fencing, weed control and bank stabilisation had taken place through past PHCC projects and other sites were chosen strategically to represent areas where future onground restoration works were to be undertaken. Pre and post onground works vegetation surveys were conducted to ensure all information was being captured using the National Vegetation Information System (NVIS) methodology, developed by the Australian Governments Department of Agriculture, Water and the Environment.

It is clear that the main issues contributing to degraded riparian vegetation along the Serpentine River are illegal access and the introduction of invasive weed species. However, as the majority of sites were chosen strategically to record the difference in vegetation condition before and after restoration works had been completed, it is evident that these issues are being addressed and are now under control. These areas will continue to be monitored over the next three years. Data collected will inform and prioritise actions for the future, as well as help us to evaluate the success of current activities taking place.



Restoration Works to Continue...

Your Rivercare Team is excited to announce the continuation of the Three Rivers One Estuary Initiative funded by the Alcoa Foundation. Until the year 2023, this funding will continue to help restore the health and biodiversity of the Serpentine River as well as the Murray River. This new project is entitled 'Healing Bilya: Restoring the Murray and Serpentine Rivers'.

The word 'Bilya' is the Noongar name for river and as the Murray and Serpentine Rivers are culturally significant, it was an obvious choice that we include this in the title for our new and exciting upcoming project.

There may be opportunities available in the future for you as a community member to take part, so please keep an eye on our social media pages or email us at jesse.rowley@peel-harvey.org.au stating you would like to be added to our mailing list to receive updates.

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Planting Days, Dung Beetles & Feral Animal Control

Since our last newsletter, many community events have been held with the aim to raise awareness of the importance of the Serpentine River and to communicate how and why we are choosing to undertake certain actions to improve the river's health.

In consecutive days in August, two events were held at Lowlands, the 'Restoring the Serpentine River' projects reference site.

The first event was a planting day with a cultural exchange. This entailed the Bindjareb Noongar community, PHCC Officers, the Alcoa community and local landholders coming together to plant 2,000 native seedlings along the 800m stretch of Hymus Creek, a priority site identified through the River Action Plan and an area severely damaged by wildfire in January 2020. The event also included the leader of the Bindjareb Middars, Theo Kearing, carrying out a cultural blessing of the site through a Welcome to Country, Smoking Ceremony and the sharing of traditional stories followed by a spiritual dance to signify unity and new beginnings.



Teaming up with PHCC's Regional Agricultural Landcare Facilitator, the second event involved bringing research scientists, stakeholders and private landholders together to discuss the importance of dung beetles and how this ecosystem engineer can be utilised in regenerative agriculture. Dung Beetle expert John Allen and Jacob Berson, a research associate from the University of Western Australia, shared with participants their insights into dung beetle research and discussed how this research forms part of a larger nation-wide program. This event was followed by a dung beetle release day with students and teachers from North Dandalup Primary School. It was a day full of excitement involving the release of 500 *Onthophagus gazella* beetles onto farmland to help increase soil productivity and to reduce the large population of pest species of bushfly throughout the Serpentine River Sub-Catchment. The school also received an additional 500 *O. gazella* beetles to place into constructed breeding boxes, allowing the students to continue learning about the important role dung beetles play in innovative agricultural practices through a hands-on approach.



Finally, through Landcare SJ's Community Environment Grant project that targets feral animals along the Serpentine River, private landholders were fortunate to attend a workshop to further develop their feral animal control skills with advice from highly regarded fox controllers, Andy and Linda Lockey. This gave participants the opportunity to ask questions directly to the experts and discuss options for tackling feral animals. Trapping demonstrations were also performed to show how to achieve the best outcome when targeting foxes, feral cats and rabbits.

For further detail on these events, please visit our website via the links below.

Planting Day with a Cultural Exchange: <https://peel-harvey.org.au/planting-day-with-a-cultural-exchange/>
Ecosystem Engineers: The Humble Dung Beetle: <https://peel-harvey.org.au/ecosystem-engineers-the-humble-dung-beetle/>
Unleash the Dung Beetles: <https://peel-harvey.org.au/unleash-the-dung-beetles/>



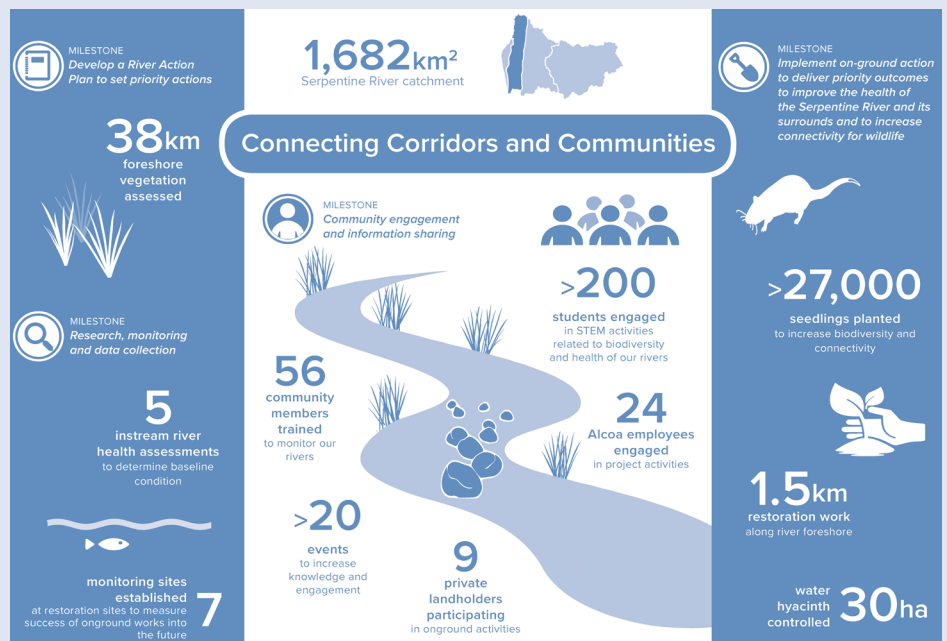
Thank You to our Serpentine River Community

We would like to say thank you to each community member and stakeholder for taking part in the 'Connecting Corridors and Communities, Restoring the Serpentine River' project.

To all that have played a part in delivering this project through either being involved in our Community Environment Grant Program, undertaking onground works, attending our Healthy Rivers stall at an event, participated in training opportunities and workshops and more, we could not have delivered this project without your support.

We hope that we can continue to work together into the future through the Three Rivers One Estuary Initiative and would greatly appreciate your feedback through a quick five minute evaluation survey.

This can be completed via this link
<https://www.surveymonkey.com/r/PHCCFeedbackSerpentineRiver>



This project is supported by the Peel-Harvey Catchment Council through funding from the Alcoa Foundation's Three Rivers, One Estuary Initiative.

Alcoa Foundation: Investing where Alcoa has a presence, partnering with communities to address local needs in a sustainable manner. With our nonprofit partners, we contribute to environmental excellence, economic success and social responsibility around the globe.