Peel-Harvey Estuary





Issue

The Peel-Harvey Estuary, Rivers and waterways are in very poor health and research is showing that without a transformational approach to their management, further reduction in rainfall and streamflow will see the system collapse, taking with it an estimated \$3.35 billion of economic value to the Region. Actions identified for the management of the waterways in the Strategic Assessment for Perth and Peel and the pending Peel-Harvey Estuary Protection Plan, need to be implemented now, including legislative changes putting the restoration of the health of the system as a Regional priority.

Economic Value of the Peel-Harvey Waterways - \$3.35 billion + p.a.

Preserving the health of the Peel-Harvey waterways is central to local community values and will retain significant economic benefits currently supported through local tourism, commercial fisheries and recreational activities. The following values have been found to be reliant on the condition of the waterways:

- \$217 million in annual expenditure on recreational fishing activities
- \$40 million in annual expenditure on boat maintenance and operations in the Peel
- \$1.8 million in annual revenue generated through storing boats in PYS Marinas
- Between \$0.9 million and \$1.7 million in annual catch from commercial fishing
- \$318.2 million in annual tourism expenditure spent in Mandurah
- \$3.15 million derived from the value of 9 commercial fishing licenses

The total monetary value of ecosystem services derived from Peel-Harvey's coastal and inland wetland ecosystems was quantified in 2013 to be approximately \$3.35 billion (2007 prices)[1]. By comparison, the Peel's Gross Regional Product at the time was estimated at \$5.6 billion.

Estimates do not include real estate values which are estimated to drop in value by ~\$50,000 per property, should the system collapse again (2010, Peel Estuary and Land Values Near Waterways, an Economic Valuation)

^[1] Arkwright D, 2013, Peel Development Commission Occasional Paper 2.8: Valuing the Eco-System Services in the Peel Region.

Research Findings - ARC Linkage Project (2019)

- The estuary has **reduced flushing** due to declining river flows;
- Ecologically, the estuary is showing signs of trouble with condition reverting to pre-Dawesville Channel era (...highest macroalgal growths on record)
- Several 'trouble hot-spots' have emerged across the estuary, especially poorly flushed areas
- The drying climate projected for 2050 is forecast to reduce water flows to the estuary by ~50%, exacerbating the current condition.
- Nutrient reduction has been identified as a potential strategy to help adapt to the drying climate.
- **Risk to fish stocks,** e.g. Black Bream (Murray River) have only reached maturity in 1 year since 2010.
- Allowing a 'business as usual' approach to catchment management, as well as agricultural and urban development beyond that proposed in the SAPPR, is forecast to intensify problems with hypoxia in the rivers and increase nutrient flows to the rivers and parts of the basins.

Legislative Changes to protect the health of the Peel-Harvey:

- Reinstate the Strategic Assessment for Perth and Peel and implementation of priority actions
- **Governance Structure** to ensure coordination and collaboration of regional implementation across portfolios, with independent Chair and reporting progress against quantifiable targets;
- Statutory protection via a designated Special Control Area for the Peel-Harvey, removing exemptions from clearing, inappropriate stocking rates, point source pollution loopholes, enabling appropriate horticulture and agriculture, managing fertilizer application, enabling environmental flows;
- Review of **land use zones** impacting on river health (subregional structure plans) e.g. introduction of rural conservation in key areas (adjacent to waterways).

On-Ground Works – \$11.42 million / year x 10 year intensive restoration works*

Implement the pending Peel-Harvey Water Quality Improvement Plan, and the Binjareb Boodja Landscapes 2025 (NRM Strategy), and the pending Estuary Protection Plan (DWER) including:

		\$ per annum
а	River Restoration (traditional rivercare – revegetation etc)	\$3,200,000
b	Fish restocking & habitat restoration	\$1,000,000
С	Soil Testing and Fertiliser application support	\$260,000
С	Soil Amendment & HT clay application	\$1,200,000
е	Drainage retrofits and restoration	\$875,000
f	Stormwater retrofits, bio-filters, constructed wetlands etc	\$2,600,000
g	Establish and maintain environmental flows	\$1,400,000 (from year 3)
h	Noongar Ranger Program	\$460,000
i	Monitoring and analyzing	\$280,000
j	Collaboration and Administrative	\$145,000

^{*}funding amounts are broad estimates only and subject to detailed planning. PHCC is aware of the pending Estuary Protection Plan being prepared by the DWER, and would seek advice and costings consistent with this process

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