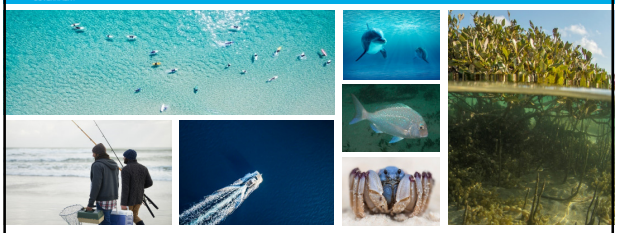

MARINE ESTATE MANAGEMENT AUTHORITY

Working together to manage our marine estate

www.marine.nsw.gov.au

SAORI MIYAKE, WILLIAM CHIRGWIN, GEORGINA DAWSON, JOCELYN DELA-CRUZ
PLACE BASED SCIENCE, DEPARTMENT OF PLANNING, INDUSTRY AND ENVIRONMENT

NSW marine estate management strategy - Management Sub-action 1.2.5

Updating the NSW Water Quality and River Flow Objectives (WQ & RFOs) Stage1: Establishing foundational mapping layers

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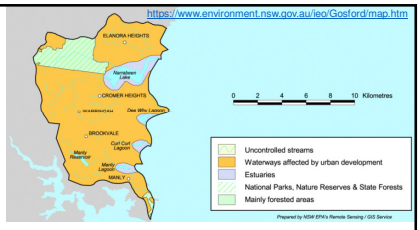
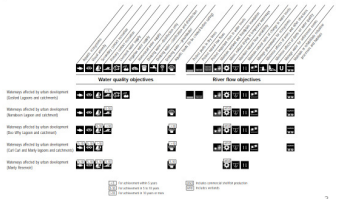
NSW Water Quality and River Flow Objectives (WQ & RFOs)



Gosford and Northern Beaches Lagoons Catchments



https://www.environment.nsw.gov.au/ieo/Gosford/caag.htm

Used in various legislation and policies

- water policies, e.g. Catchment Action Plans (CAPs) and Water Sharing Plans (WSPs)
- Decision making in EPA regulatory activities – POEO Act 1997

Updating NSW WQ & RFOs

Key deliverables for Stage 1 (June 2020):

- Foundational mapping layers for coastal NSW, specifically:
  - Basemap
  - High Ecological Value (HEV) waterways and water dependent ecosystem mapping – please refer to presentation (G. Dawson et al.) at Coastal & Estuarine Science (6C) session for details.
- Updated community environmental values and uses for waterways in pilot areas and coastal NSW
- Updated water quality indicators and "site specific guideline values" for selected sites in pilots
- Updated current NSW WQ & RFO website

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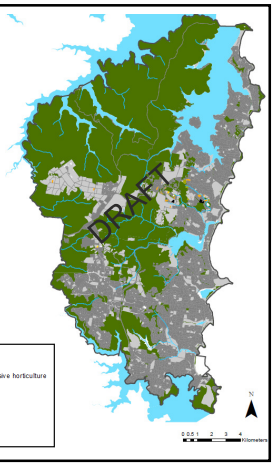
1. Foundational mapping

Basemap

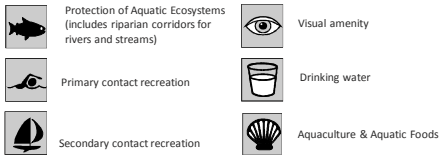
- Generated based on reclassification of recent land use maps, considering land use intensity and land use types.
- Presents land use surrounding a particular waterway / level of disturbance in catchments.
- Supports to assign three management goals of each waterway – to 'protect', 'improve' or 'maintain'.



Land use classes

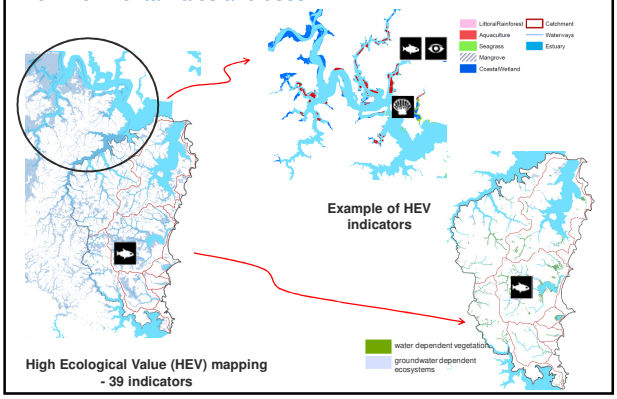
Conservation and natural environments
Plantation forestry
Grazing native vegetation
Grazing modified pastures
Land in transition
Cropping and dryland horticulture
Irrigated cropping and irrigated/intensive horticulture
Intensive animal husbandry
Rural residential and others
Urban
Mining

2. Community Environmental Values and Uses



- what the community believe to be important for a healthy aquatic ecosystem, for public benefit, welfare, safety or health.
- represented through basemap across coastal NSW.

Method – utilizing spatial dataset to update community environmental vales and uses

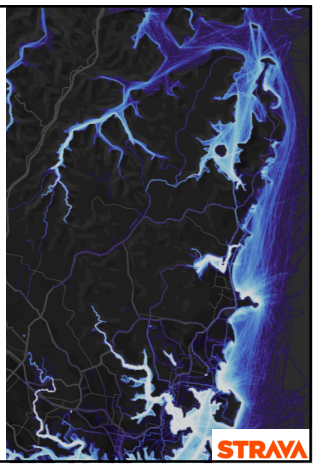


High Ecological Value (HEV) mapping - 39 indicators

Method – utilizing social media dataset to update community environmental values and uses

Waterways affected by urban development
(Narrabeen Lagoon and catchment)

https://www.strava.com/heatmap#11.64/151.23998/-33.64650/blue/water



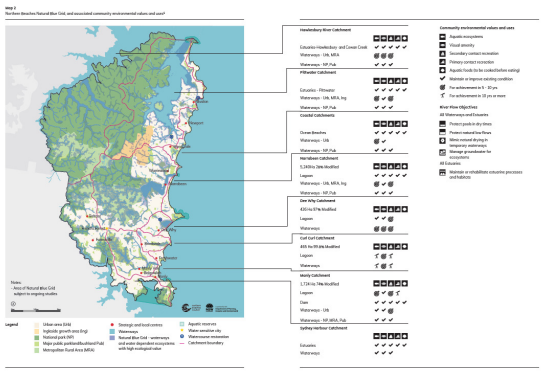
3. Water quality indicators and site specific guideline values for reference sites

- Being updated for selected sites in pilot areas, using data obtained from water quality monitoring programs

https://www.environment.nsw.gov.au/ieo/Gosford/report-03.htm

Environmental value	Indicators	Numeric Criteria (e.g. 'trigger values' on current policy for Northern Beaches Lagoons)
	Total phosphorus (TP)	• Upland rivers: 20 µg/L • Lowland rivers: 25 µg/L for rivers flowing to the coast • Lakes & reservoirs: 10 µg/L • Estuaries: 30 µg/L
	Total nitrogen (TN)	• Upland rivers: 250 µg/L • Lowland rivers: 350 µg/L for rivers flowing to the coast • Lakes & reservoirs: 350 µg/L • Estuaries: 300µg/L
	Electrical Conductivity (Salinity)	• Upland rivers: 30-350 µS/cm • Lowland rivers: 125–2200 µS/cm
	Turbidity	• Upland rivers: 2–25 NTU • Lowland rivers: 6–50 NTU • .....
	PH	.....
	Dissolved Oxygen	.....

Northern Beaches Council: Draft LSPS "Towards 2040"



Questions? Comments?

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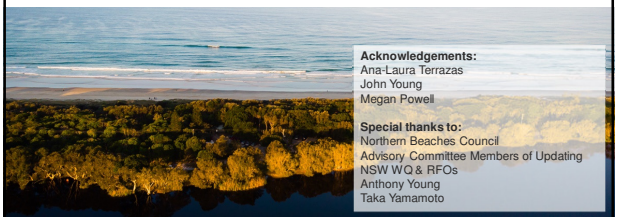

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