



BACK TO BASICS

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QWMN FORUM 2020

CITY OF
GOLDCOAST.[™]

The Vision for a Water Sensitive Gold Coast

GOLD COAST WATER STRATEGY

2019-2024

- Collaborated with CRC WSC and 72+ stakeholders to develop a water sensitive city vision
- Developed Water Strategy as City's response

GOLD COAST
WATER STRATEGY
2019–2024

WATER

CITY OF
GOLDCOAST.



1

**OUR HEALTHY
WATERS**

2

**INNOVATIVE WATER
SOLUTIONS**

3

**WATER-INSPIRED
DESIGN**

4

**PARTNERSHIPS
FOR WATER**

OUR HEALTHY WATERS

Our environment, prosperity and unique Gold Coast lifestyle are dependent upon our healthy and connected water environments. From the hinterland to the ocean, healthy water environments support thriving habitats for native species, recreation and shading and carry out vital floodplain functions.

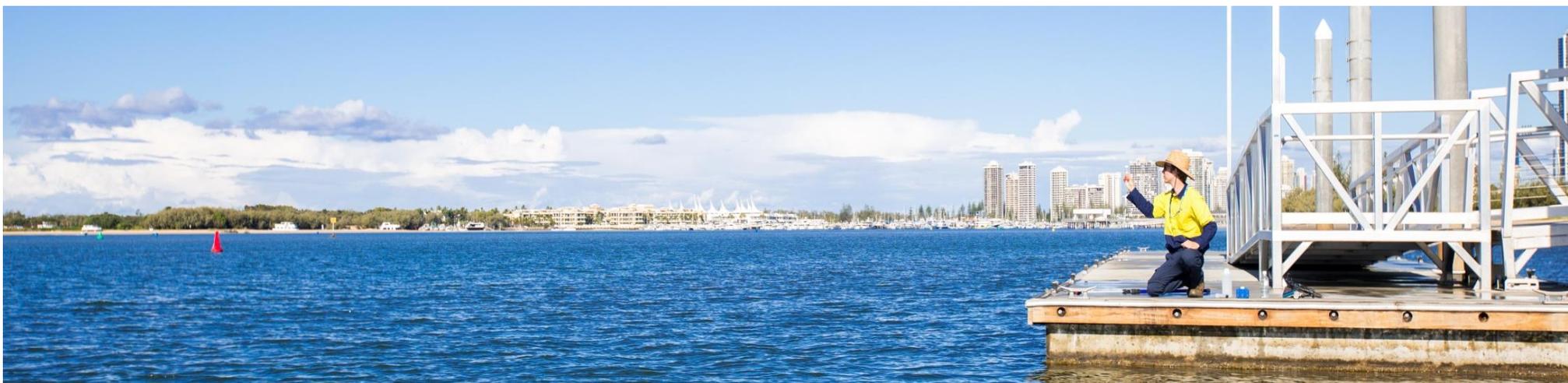
- **ACTION 1.1** Develop and implement an **integrated catchment management monitoring, planning and prioritisation framework**



"THE BEST SOURCE OF INSPIRATION CAN BE FOUND IN THE GOLD COAST'S BEAUTIFUL NATURAL ENVIRONMENTS. CONTINUE TO PROMOTE THESE AREAS THROUGH TOURISM AND LANDCARE MANAGEMENT INITIATIVES."

Quote from a community member

What does transition look like?



MONITORING AND EVALUATION

- Reforming monitoring program design

WATER ENVIRONMENT MONITORING PROGRAM (WEMP)

- Sentinel Water Quality Monitoring
- Sentinel Macroinvertebrate Monitoring
- City Flows Monitoring
- Catchment Health Assessment and Diagnostics (each catchment every 5 years)



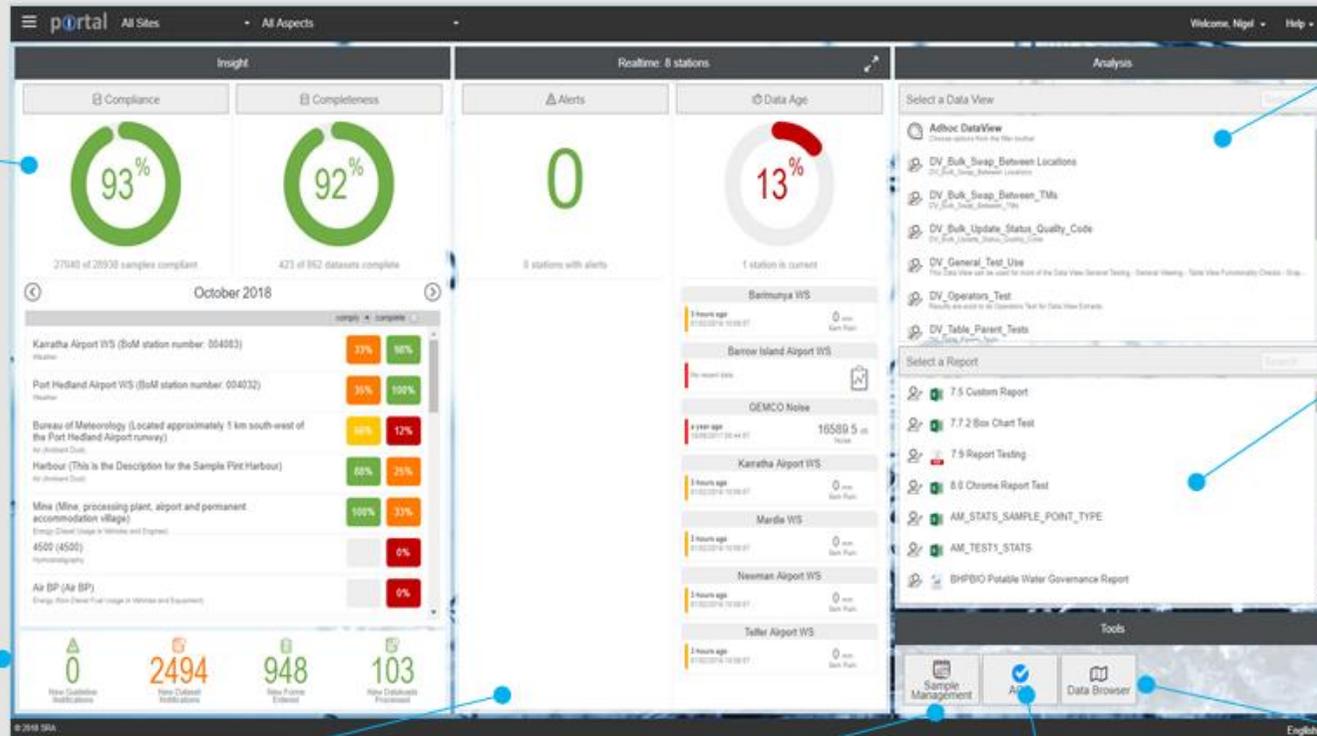
DATA MANAGEMENT

- Consolidated and cleansed and quality coded 30+ years of historical data
- Metadata and quality code guidelines developed and applied
- Partnered with SRA to build Environmental Data Management System (EDMS)

ENVIROSYS

Instant Guideline Compliance and Dataset Completeness **Insight**, highlighting locations with poor performance that need investigating

Compliance, Completeness & Data Notifications



Realtime network alerts and stations out of date

Sample Management Schedule and track the collection of results at locations

TIBCO Spotfire Advanced Analytics to support decision making

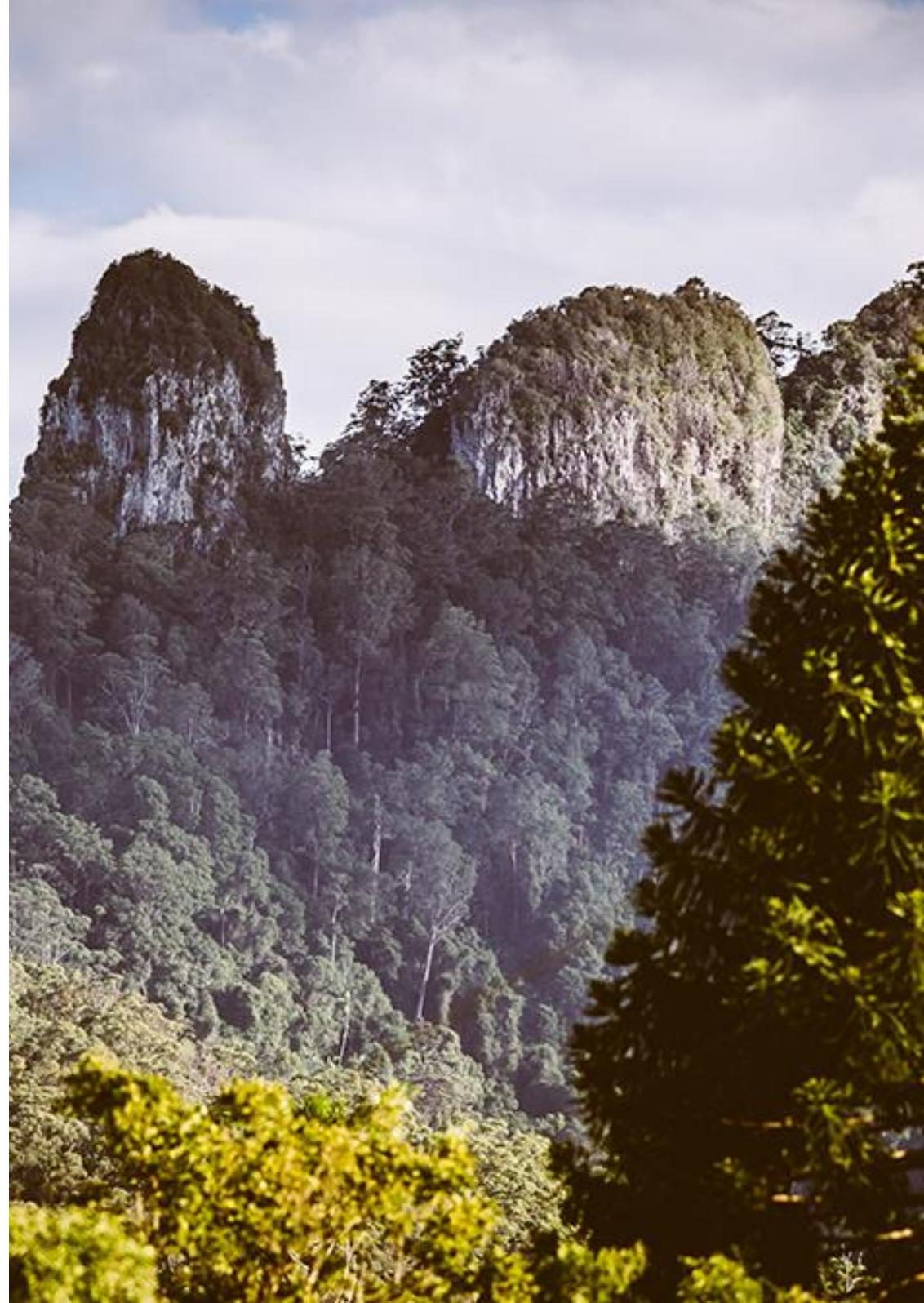
Configurable **Data Views**, representing data in tabular, graphical and/or spatial display

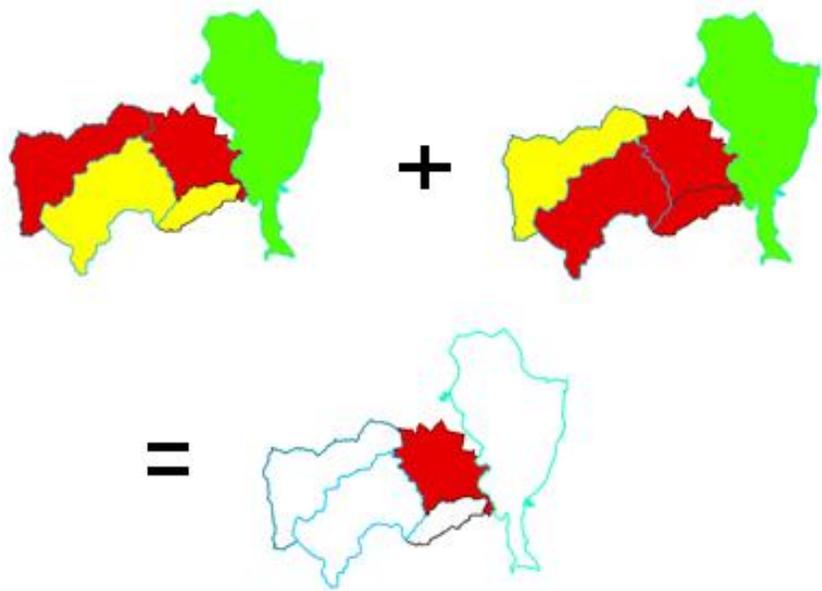
Reports – Standard, Custom and SQL Extracts in one list

Data Browser Provides users with a spatial single-view interface to find and view any Sample Point data

CATCHMENT PLANNING

- WEMP (CHAD, every 5 years) → Catchment Plan
- System understanding – catchment health, pressures, threats, values
- Storymap - interactive display of catchment health and associated management actions





PRIORITISATION



- Using WEMP (CHAD) outputs
- Based on pressures, threats and values
- Qualitative and quantitative data
- Spatially prioritises catchment zones to protect and restore
- Inform either **catchment/ sub-catchment scale modelling** and/ or MCDA to identify individual projects/ treatments

Risk score table for stressors

	Stressor	Description	Risk Score (1-25)
1	Acid soil run-off	Exposure of acid sulphate soils allowing oxidation and runoff of water with high concentrations of heavy metals and low pH	
2	Biota removal or disturbance	Removal, loss or disturbance of individual organisms or a specific species	
3	Flow management	Change to the natural flow regime, through impoundment, extraction or augmentation of water in rivers and streams	
4	Habitat removal or disturbance - general	Removal, loss or disturbance of habitat - general	
5	Habitat removal or disturbance – instream	Removal, loss or disturbance of instream habitat	
6	Habitat removal or disturbance – riparian	Removal, loss or disturbance of riparian habitat	
7	Instream and riparian habitat fragmentation	Changes to the lateral, longitudinal or vertical connectivity of instream or riparian habitat	
8	Nutrients	Changes to concentrations and bioavailability of nutrients	
9	Organic matter	Changes to the availability of carbon-based material derived from plants or animals, in either dissolved or particulate forms	
10	Pathogens	Bacteria, viruses, fungi, protozoa and other organisms that effect fitness and behaviour of other biota	
11	Pest species	Exotic or translocated species, invasive organisms that are detrimental to an ecosystem	
12	Salinity	Changes to surface water or groundwater water conductivity and/or ionic composition	
13	Sediments	Changes to load, distribution/movement patterns, settlement/resuspension rates, grain size of suspended or deposited sediments	
14	Thermal alteration	Change in surface water temperature regime	
15	Toxicants	Change to the concentration or bioavailability of pesticides, herbicides, organics, oils, hydrocarbons, metals, metalloids, organometallics, radiation, other toxic chemicals and contaminants	

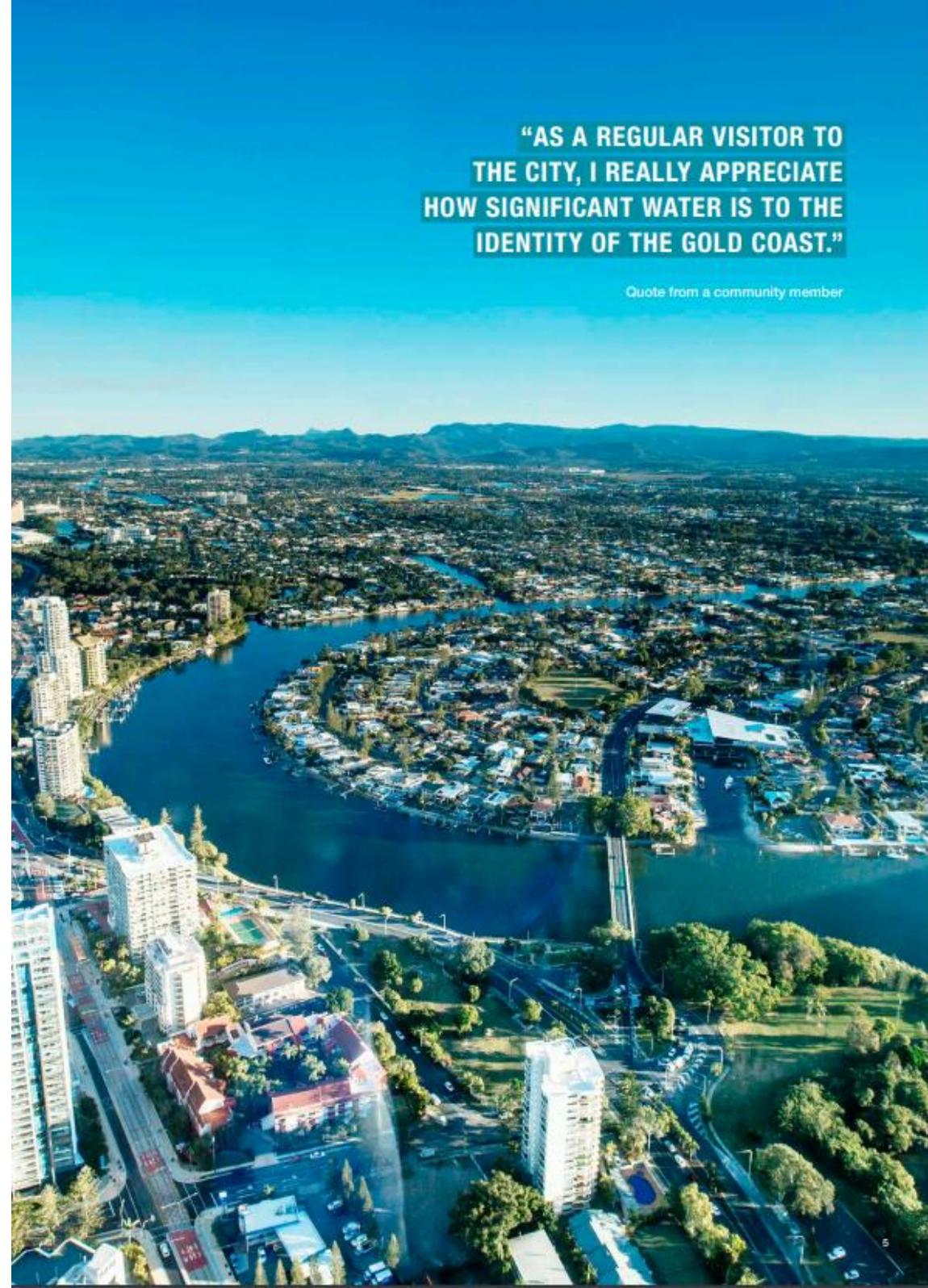
Additional comments:

CATCHMENT ACTION PLANS

- Identified prioritised list of actions (projects and management actions)

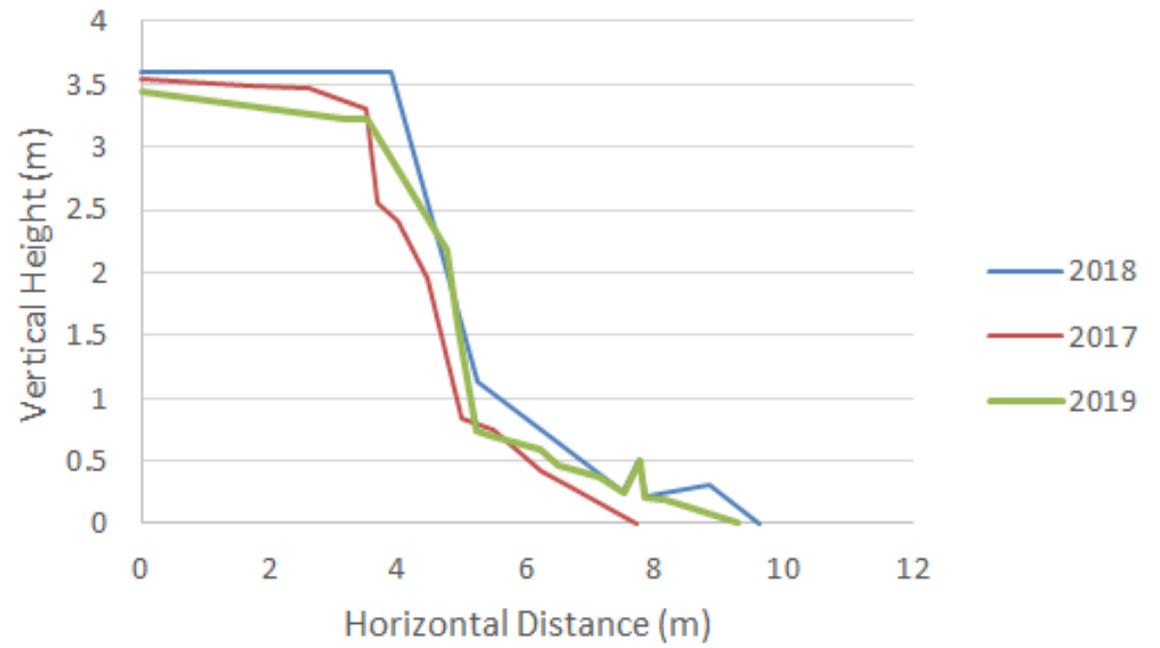
“AS A REGULAR VISITOR TO THE CITY, I REALLY APPRECIATE HOW SIGNIFICANT WATER IS TO THE IDENTITY OF THE GOLD COAST.”

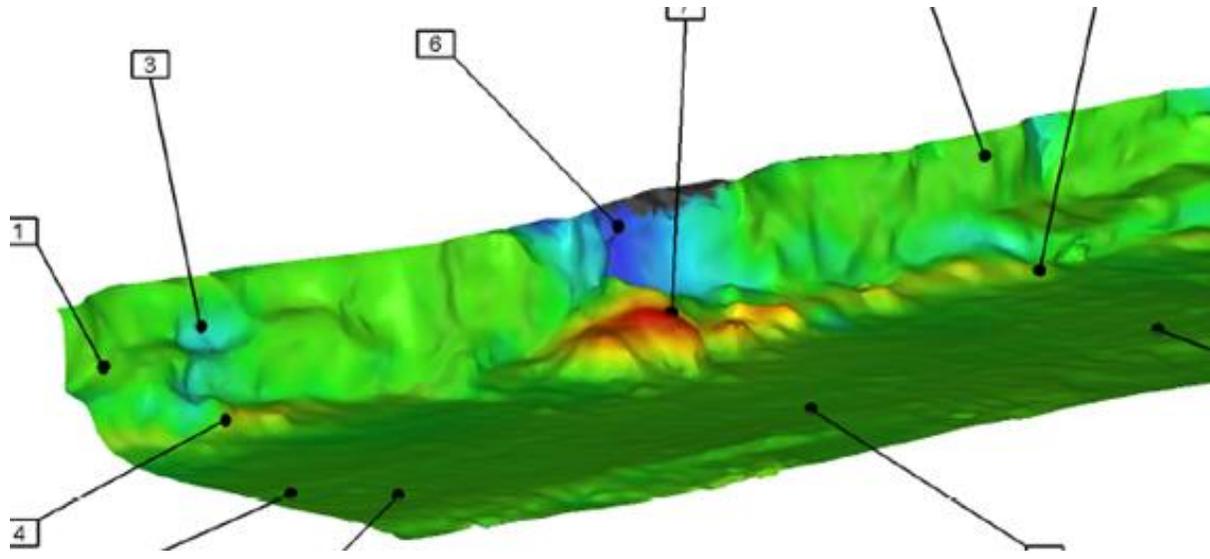
Quote from a community member



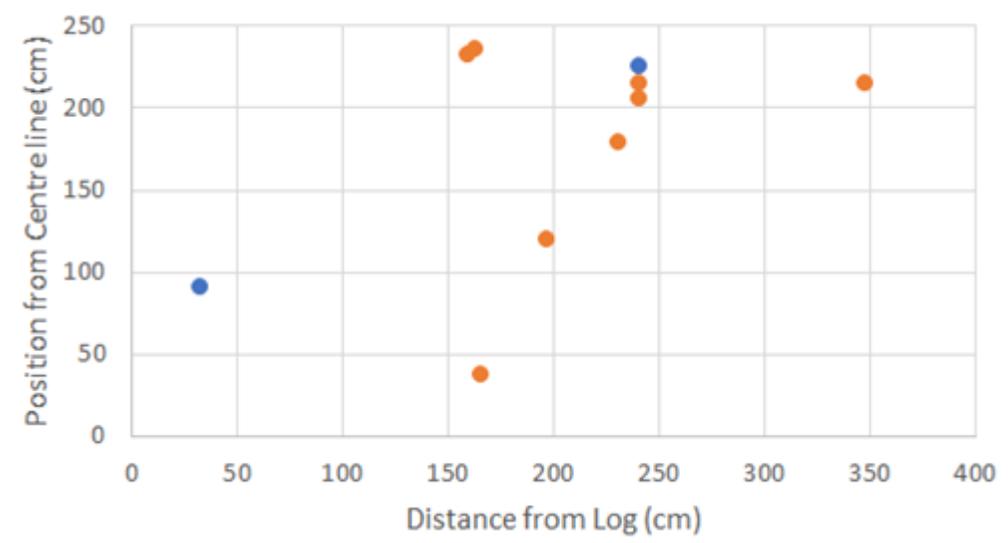


DLT10 (Post-Construction)





DLT09 Upstream Mangrove Layout



● AC
● AM



REPORTING AND COMMUNICATION



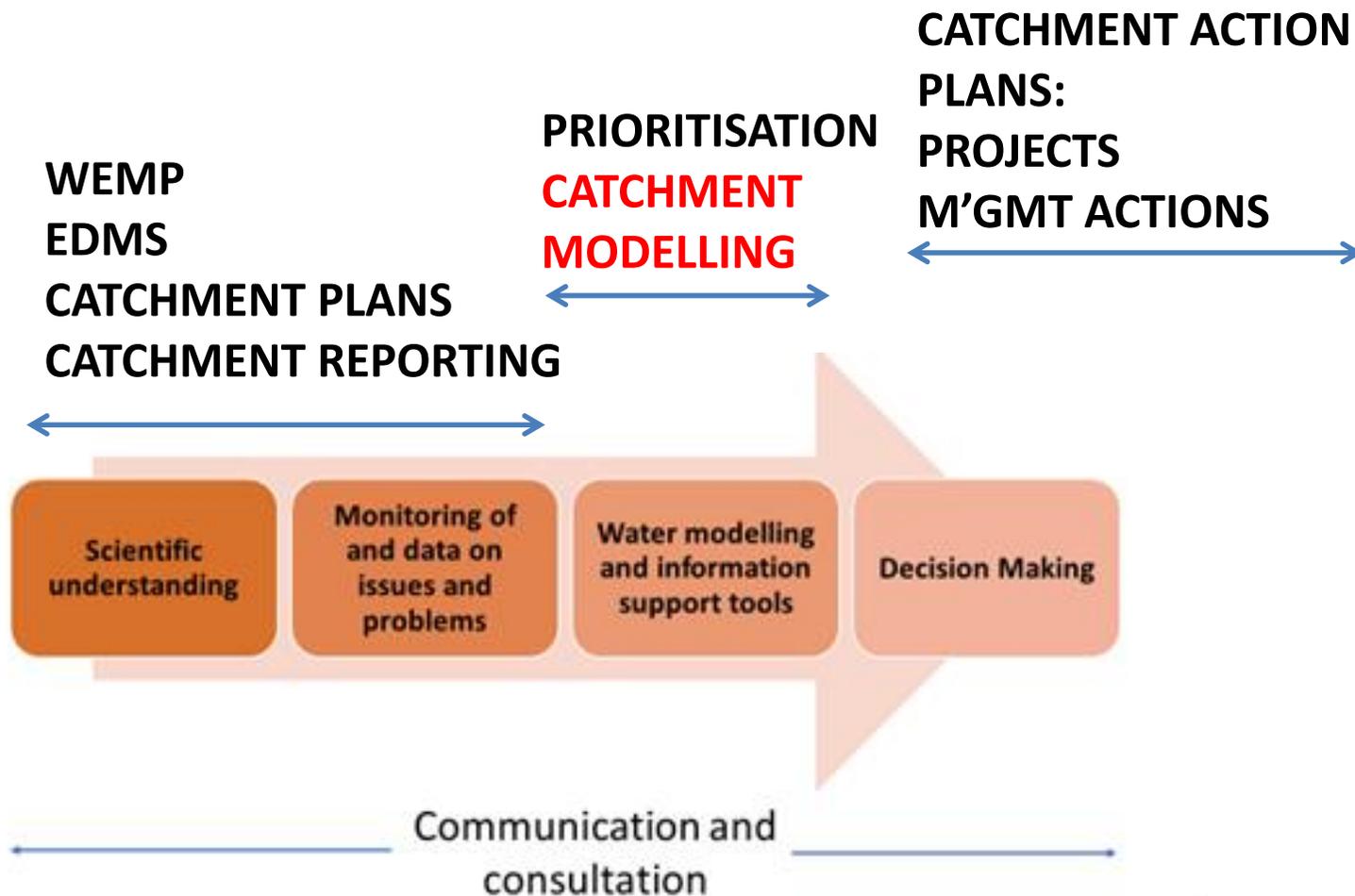
Catchment health reporting

Catchment plans and action plans

State of Environment reporting

Project Reporting

In the pipeline...





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