

# Waters

## An innovative data management solution

### Introduction

The Water Tracking and Electronic Reporting System (WaTERS) is a data management system, designed and managed by the Department of Science, Information Technology and Innovation (DSITI) to assist with environmental regulation. The system allows industry to provide their water-related monitoring data and notifications electronically to the Department of Environment and Heritage Protection (EHP) (see Figure 1). In the past this information would have been submitted via hard copy or pdf reports, making the collation and interpretation of data problematic. The raw monitoring data submitted to WaTERS is automatically compared against the site-specific environmental approval conditions to assist with compliance checking (see Table 1).

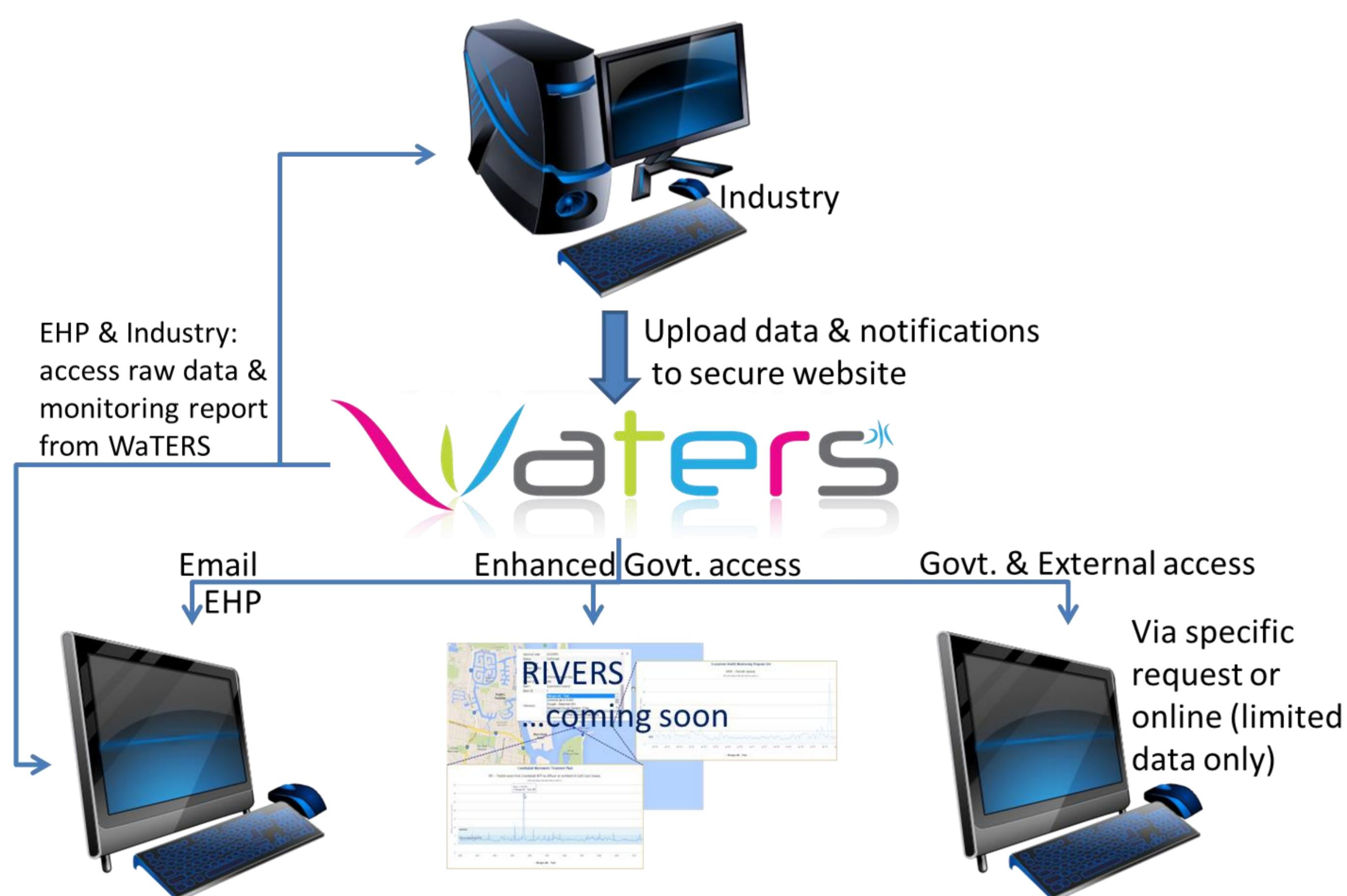


Figure 1. Flowchart depicting data submission by industry and the various methods of accessing data.

Table 1. An example monitoring report which is used as an EHP compliance support tool. Compares raw data submitted by industry to relevant approval limits automatically.

<b>Site:</b>	Wastewater Treatment Plant					
<b>Report Date:</b>	06/10/2015					
<b>Data Period:</b>	01/01/2015 - 30/06/2015					
<b>Client Name:</b>	155271, 156249					
<b>Return Id(s):</b>	155271, 156249					
Indicator	Monitoring Point	Limit Period	Limit Type	Limit Value	Results in Data Period	Exceedances
B.O.D. 5 (mg/L)	RP1	31/03/13 -	maximum	30	25	0
B.O.D. 5 (mg/L)	RP1	31/03/13 -	80th percentile (short-term)	15	25	0
D.O. (mg/L)	RP1	31/03/13 -	minimum	4	27	0
Daily Volume (ML)	RP1	31/03/13 -	maximum (wet day)	250.8	91	0
Daily Volume (ML)	RP1	31/03/13 -	maximum (dry day)	83.6	90	43
Faecal Coliforms (CFU/100mL)	RP1	31/03/13 -	80th percentile (1 day)	600	130	0
Faecal Coliforms (CFU/100mL)	RP1	31/03/13 -	50th percentile (short-term)	150	130	0
Free Residual Chlorine (mg/L)	RP1	31/03/13 -	maximum	0.7	27	0
Nitrogen - Total (mg/L)	RP1	31/03/13 -	maximum	10	25	0
pH (Unit)	RP1	31/03/13 -	range	6.5-8.5	25	0
Phosphorus - Total (mg/L)	RP1	31/03/13 -	maximum	10	25	0
Suspended Solids (mg/L)	RP1	31/03/13 -	maximum	45	25	0
Suspended Solids (mg/L)	RP1	31/03/13 -	80th percentile (short-term)	23	25	0

#### Contact information

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Website: <https://www.business.qld.gov.au/industry/water/water-release-monitoring>

### RIVERS - Data Visualisation and Access

The Regulatory Information, Visualisation, Estimation and Reporting System (RIVERS) delivers data from WaTERS to government (DSITI/EHP). RIVERS provides mapping, visualisation of raw data against regulatory conditions e.g. maximum release limits as well as water quality objectives (WQO), and the facility to download raw data. The system is due for release by early 2016.

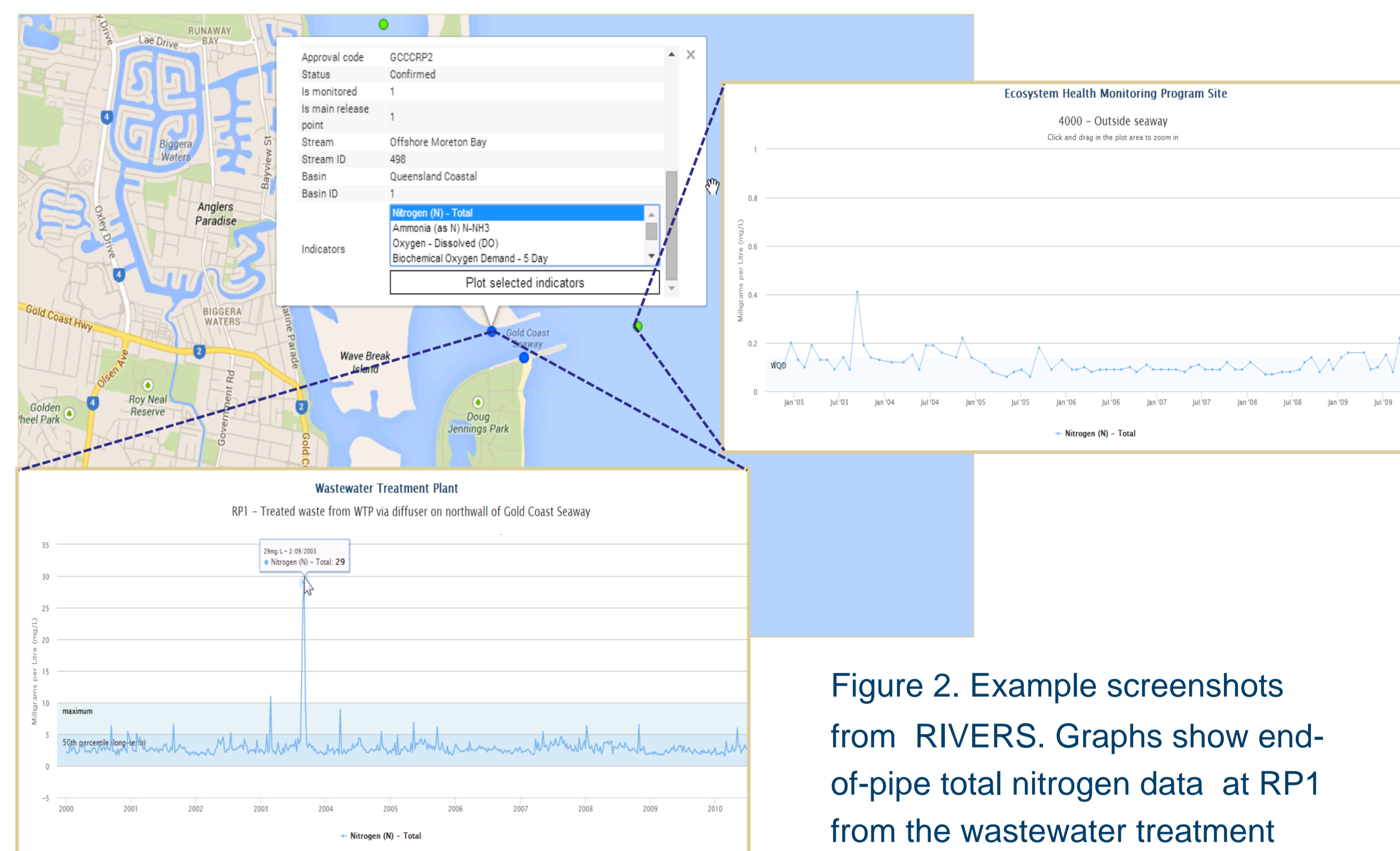


Figure 2. Example screenshots from RIVERS. Graphs show end-of-pipe total nitrogen data at RP1 from the wastewater treatment

plant (WTP) and for an Ecosystem Health Monitoring Program (EHMP) monitoring point in the environment. Blue shading depicts approval limits and water quality objective for comparison to raw data.

### Staged Implementation

WaTERS has progressively been implemented since the mid-2000's, with over 210 sites now submitting their monitoring data to the Queensland Government. The focus has initially been on activities that have authorised releases to water. These include large wastewater treatment plants (WTPs), coal mines, coal seam gas (CSG) activities and heavy industries in Southeast Queensland and Gladstone. Some of these activities are also submitting release and non-compliance notifications via WaTERS.

WaTERS is being expanded to metal mines, groundwater related monitoring from CSG, and waterway monitoring undertaken for WTPs.

WaTERS Statistics 30 <sup>th</sup> Sept 2015	
Clients:	140
Users:	511
Sites:	211
Approvals:	416
Data Submissions:	4092

### Implementation Challenges

Strategies are required to ensure the ongoing use of WaTERS as a regulation support tool. Key strategies include:

- Streamline approval information collection/entry process
- Ensure approvals and policies require industry to use the system
- Continually improving the system to enhance client experience
- Provide broader public access to data and information e.g. WetlandInfo