

# Information Management of Point Source Monitoring

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# Overview

- Describe Information Management Tools:
  - Point Source Database (PSD)
  - PSD Online
  - Geographical Information Systems (GIS)  
Layer of Point Sources
- Describe what information is available

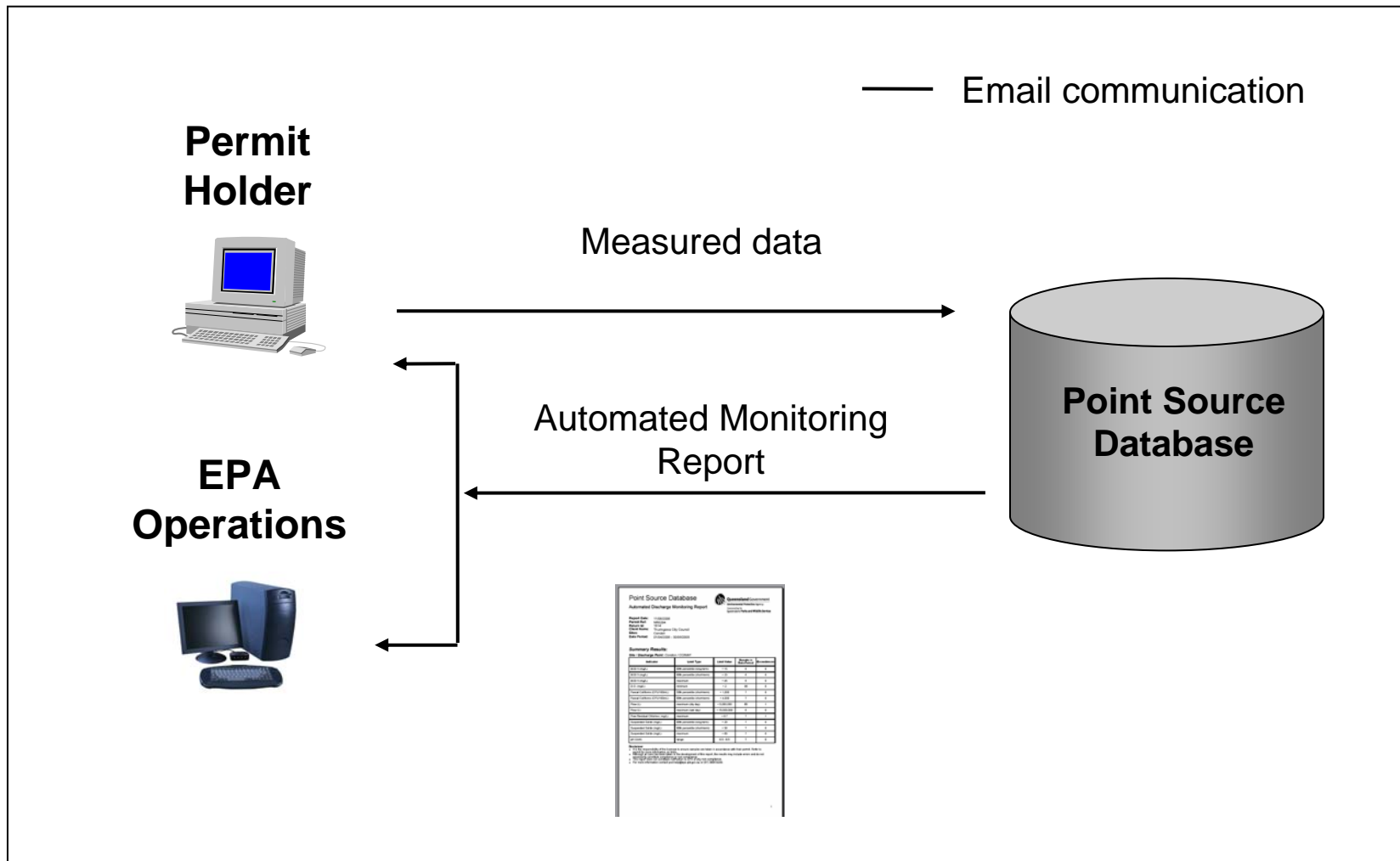
# Introduction

- Urban waterways are challenged by:
- Growing population – increase in point sources
- Climate change – reduced flows
- Limited information for decision making—  
dispersed, not available and difficult to  
access in a useful form

# Introduction

- EPA provides 'licences' for environmentally relevant activities
- Licences include water quality limits for effluent discharged to surface waters
- Permit holders required to monitor
- PSD developed to aid compliance and collate information in useful form

# Point Source Database



# Point Source Database

## Automated Discharge Monitoring Report



Queensland Government  
Environmental Protection Agency  
Incorporating the  
Queensland Parks and Wildlife Service

**Report Date:** 11/08/2008  
**Permit Ref:** NR0294  
**Return Id:** 1614  
**Client Name:** Thuringowa City Council  
**Sites:** Condon  
**Data Period:** 01/04/2008 - 30/06/2008

### Summary Results:

**Site / Discharge Point:** Condon / CONW1

Indicator	Limit Type	Limit Value	Results in Data Period	Exceedences
BOD 5 (mg/L)	80th percentile (long-term)	< 15	6	0
BOD 5 (mg/L)	80th percentile (short-term)	< 23	6	0
BOD 5 (mg/L)	maximum	< 45	6	0
D.O. (mg/L)	minimum	> 2	90	0
Faecal Coliforms (CFU/100mL)	50th percentile (short-term)	< 1,000	7	0
Faecal Coliforms (CFU/100mL)	80th percentile (short-term)	< 4,000	7	0
Flow (L)	maximum (dry day)	< 5,000,000	85	1
Flow (L)	maximum (wet day)	< 15,000,000	6	0
Free Residual Chlorine ( mg/L)	maximum	< 0.7	7	1
Suspended Solids (mg/L)	80th percentile (long-term)	< 20	7	0
Suspended Solids (mg/L)	80th percentile (short-term)	< 30	7	0
Suspended Solids (mg/L)	maximum	< 60	7	0
pH (Unit)	range	6.5 - 8.5	7	0

#### Disclaimer

- It is the responsibility of the licensee to ensure samples are taken in accordance with their permit. Refer to permit for more information on limits.
- Although all care has been taken in the development of this report, the results may include errors and do not necessarily constitute compliance or non-compliance.
- This report does not constitute notification to EPA of any non-compliance.
- For more information contact [psd.help@epa.qld.gov.au](mailto:psd.help@epa.qld.gov.au) or (07) 3596 9249.



Queensland Government  
Environmental Protection Agency

# PSD Implementation

- Implemented for STPs >10 000 Equivalent Persons (ERA 15 e,f,g)
- Historical data – from 2000
- Data for > 60 STPs in Qld
- Next - major industry & remaining STP's

# Point Source Data Online

- Export and graph data
- Calculate loads

## Point Source Data Online

Home > Features > Data Online

>> Features >> Data Request >> What's New >> Feedback >> Disclaimer >> Help

SITE ▲	DP ▼	PERMIT ▼	Active ▼	CLIENT ▼	BASIN ▼	STREAM ▼
Beaudesert	BEAW1	SR2218	Y	Beaudesert Shire Council	Logan-Albert River BASIN	LOGAN RIVER
Beenleigh	GCCCRP3	SR2206	Y	Gold Coast City Council	Logan-Albert River BASIN	ALBERT RIVER
Bitumen Plant	BITW1	SR0070	Y	Shell Company of Australia	Brisbane River BASIN	BRISBANE RIVER
Bli Bli	BLIW1	SR0307	Y	Maroochy Shire Council	Maroochy River BASIN	MAROOCHY RIVER
Bohle	TVLW3	NR0137	Y	Townsville City Council	Test Basin 001	My test stream 1
Bowen	BOWW1	NR0329	Y	Bowen Shire Council	Proserpine River BASIN	PACIFIC OCEAN
BP Refinery	BPRW1	SR0084	Y	BP Australia Ltd	Brisbane River BASIN	BRISBANE RIVER
BP Refinery STP	BPRW2	SR0084	Y	BP Australia Ltd	Brisbane River BASIN	BRISBANE RIVER
BP Whinstanes	BPWw2	SR115	Y	BP Australia Ltd	Brisbane River BASIN	BRISBANE RIVER
BP Whinstanes	BPWw1	SR115	Y	BP Australia Ltd	Brisbane River BASIN	BRISBANE RIVER
Brendale	PRSCW12	SR1248	Y	Pine Rivers Shire Council	Pine River BASIN	SOUTH PINE RIVER
Bribie Aqua	BIAW1	ENDC00143505	Y	Department Primary Industri	Brisbane River BASIN	MORETON BAY
Bribie Island	BRISW1	SR1750	Y	Caboolture Shire Council	Queensland Coastal	GROUNDWATER

- Choose Indicator(s)**  
 BOD 5 (mg/l)  
 D.O. (mg/l)  
 Faecal Coliforms (CFU/100ml)  
 Flow (L)  
 Free Residual Chlorine ( mg/L)  
 Suspended Solids (mg/l)  
 Total Nitrogen (mg/l)  
 Total Phosphorus (mg/l)  
 pH (Unit)
- Pick FROM date**
- Pick TO date**
- Choose Type of Limit**

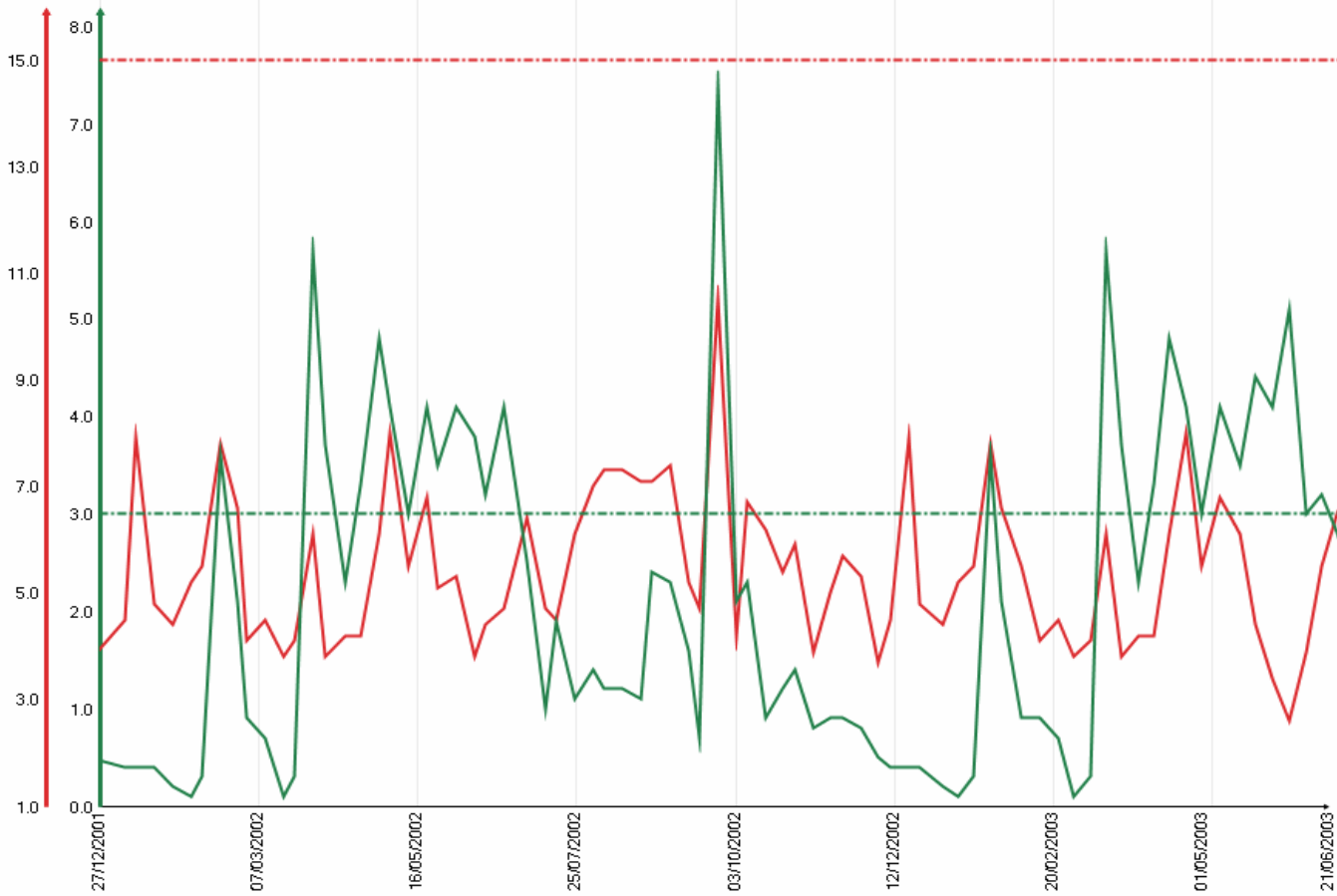
Data/Graph

<b>SITE</b>	Brendale Sewage Treatment Plant
<b>PERMIT</b>	SR1248 (Click for details)
<b>CLIENT</b>	Pine Rivers Shire Council
<b>DP_ID</b>	PRSCW12
<b>DP_DESCR</b>	Sewage wastes from STP via an outfall pipe to the South Pine River approx. 7.5km AMTD
<b>DP_MAIN</b>	Y
<b>DP_LAT</b>	-27.3233 (Click for Map)
<b>DP_LON</b>	153
<b>BASIN</b>	Pine River BASIN
<b>STREAM</b>	SOUTH PINE RIVER



Point Source Data Online is jointly maintained by Freshwater & Marine Sciences and Environmental Informations Systems Unit  
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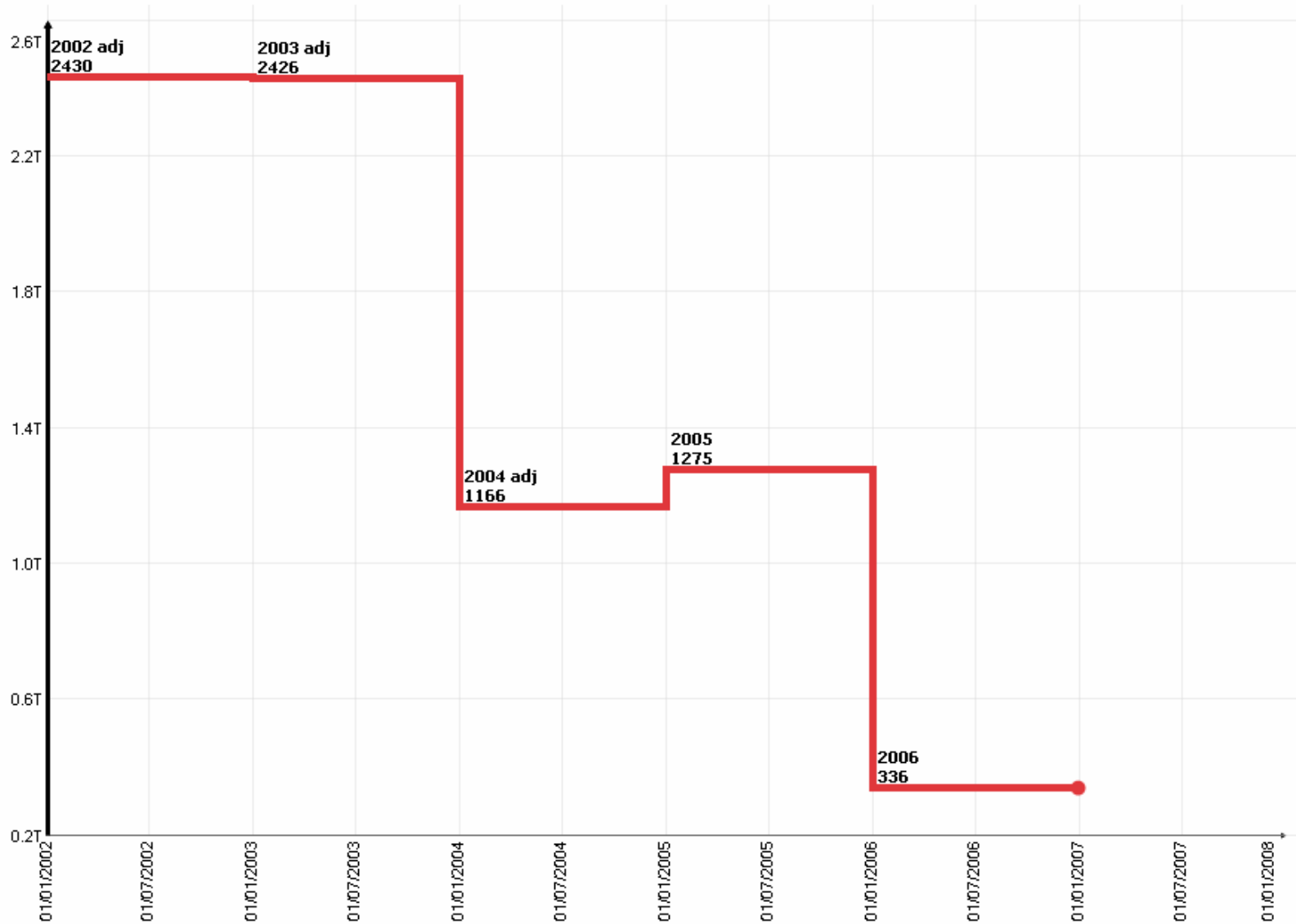


- Total Nitrogen (mg/l)
- ◆ Total Nitrogen (mg/l) Lower Limit
- ◆ Total Nitrogen (mg/l) Upper Limit
- Total Phosphorus (mg/l)
- ◆ Total Phosphorus (mg/l) Lower Limit
- ◆ Total Phosphorus (mg/l) Upper Limit

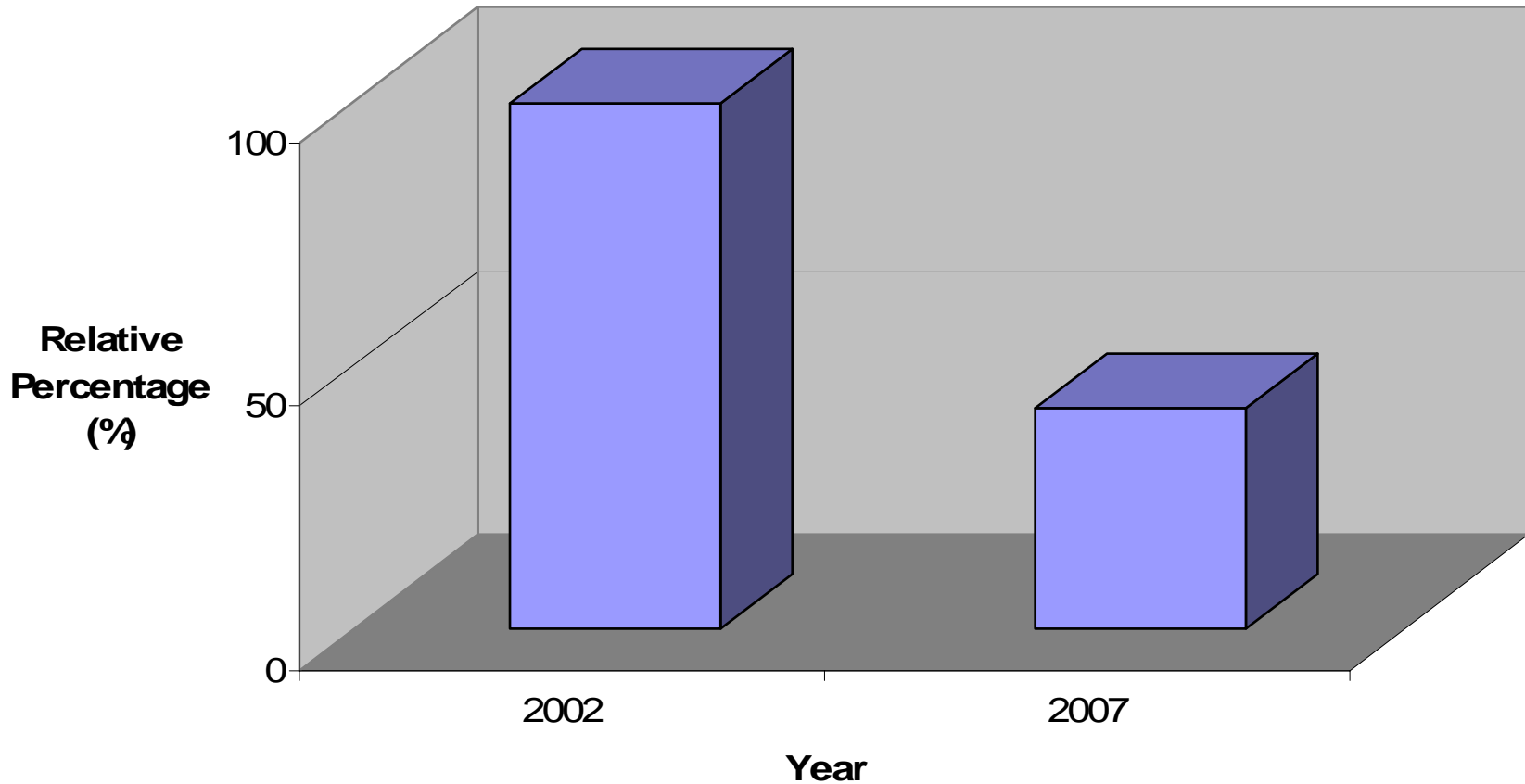
# Load Estimation

- Loads – all nutrient species and total suspended solids
- Daily, Monthly, Annual
- Allows calculation of loads over periods with missing flow results

# Yearly(Calendar) Total Nitrogen (mg/L) Load Estimation (01/01/2002 - 31/12/2007)

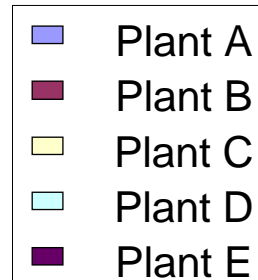
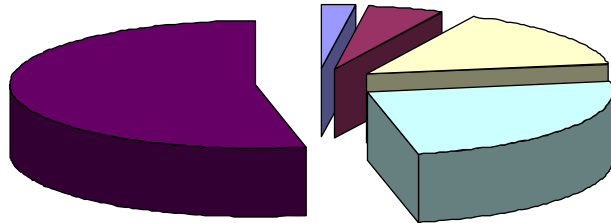


# Annual Total Nitrogen Loads

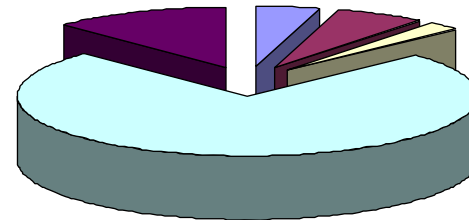


# Relative contribution to Total load

2002 Total  
Nitrogen Load



2007 Total  
Nitrogen Load





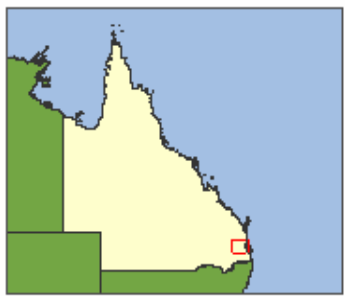


# ecomaps



Session: *no session currently loaded*

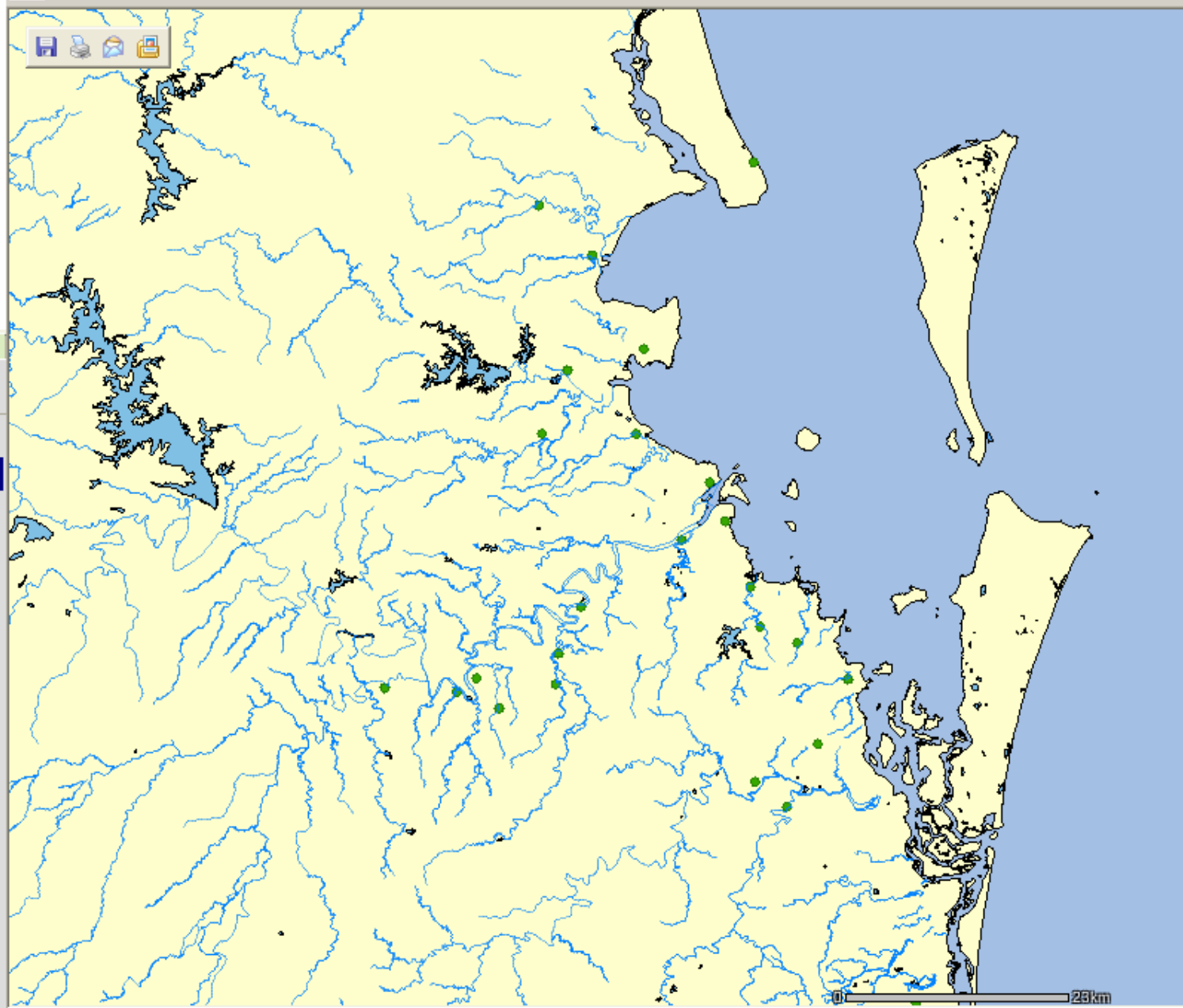
Scale 1:



**Add/Remove Layers**  
**Refresh Map**

Layers Legend Draw Sessions  
Check All Uncheck All Remove All

- Rivers
- Lakes and Reservoirs
- Point Source Discharges to Water
- Point Source Discharge Plants
- Major Towns
- Queensland
- Other States



## Permit Limit Data:

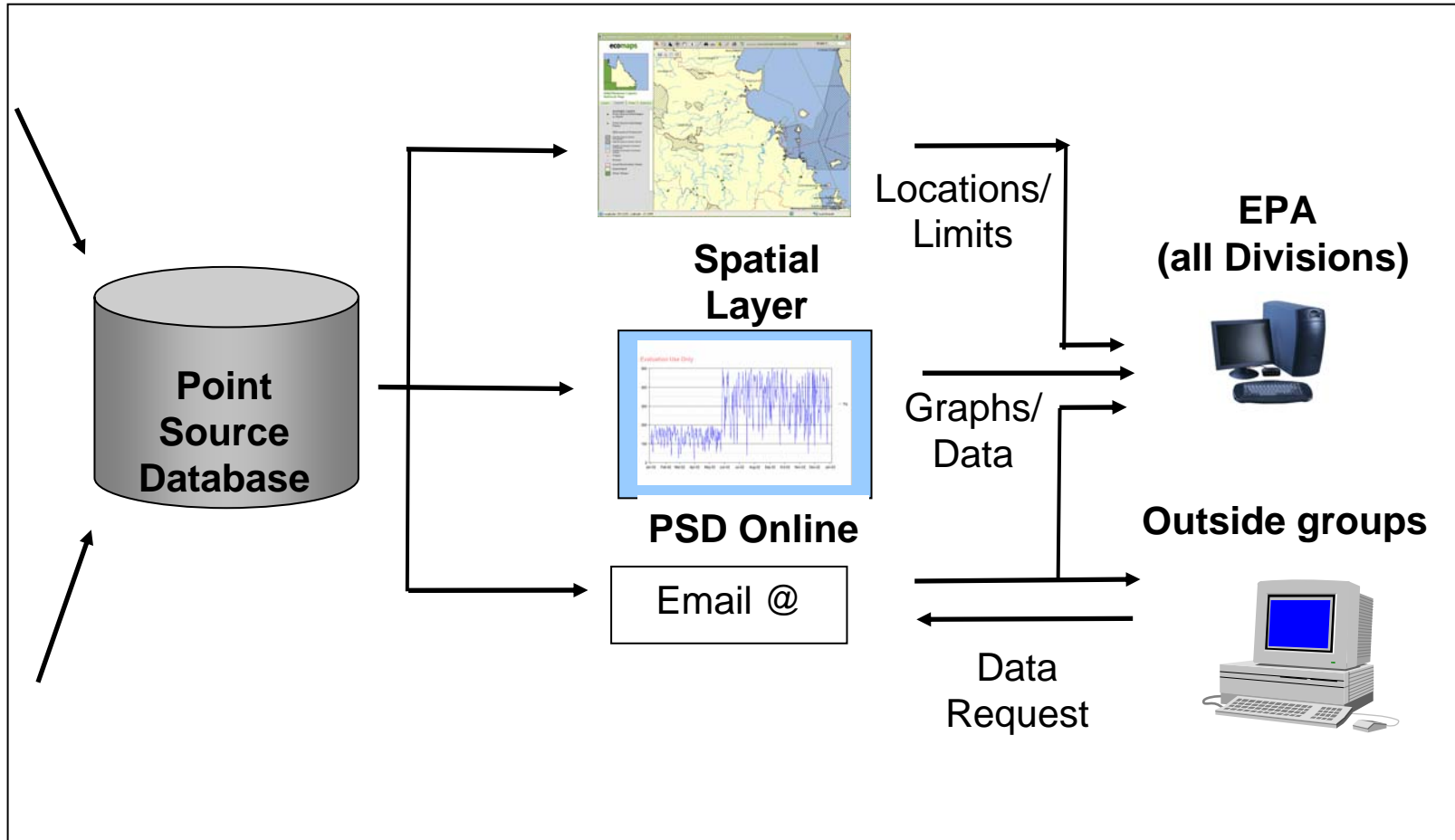
Permit Ref = SR2202

Site ID = LUGGAGE POINT

No.	Indicator	Limit Type	Lower Limit	Upper Limit	Percentile Calculation Period
1	BOD 5	80TH PERCENTILE (LONG-TERM)		20	12 M
2	BOD 5	80TH PERCENTILE (SHORT-TERM)		30	5 W
3	BOD 5	MAXIMUM		60	0
4	SUSPENDED SOLIDS	80TH PERCENTILE (LONG-TERM)		30	12 M
5	SUSPENDED SOLIDS	50TH PERCENTILE (SHORT-TERM)		45	5 W
6	SUSPENDED SOLIDS	MAXIMUM		90	0
7	TOTAL NITROGEN	MAXIMUM		30	0
8	TOTAL NITROGEN	MAXIMUM		15	0
9	TOTAL PHOSPHORUS	50TH PERCENTILE (LONG-TERM)		10	12 M
10	TOTAL PHOSPHORUS	50TH PERCENTILE (SHORT-TERM)		15	5 W
11	TOTAL PHOSPHORUS	MAXIMUM		30	0
12	PH	RANGE	8.5	8.5	0
13	D.O.	MINIMUM	2		0
14	MBAS	MAXIMUM		2	0
15	TOTAL PHENOLS	MAXIMUM		0.5	1 W
16	AS	MAXIMUM		0.1	0
17	CD	MAXIMUM		0.01	0
18	CR	MAXIMUM		0.5	0
19	CHROMIUM VI	MAXIMUM		0.05	0
20	CU	MAXIMUM		0.1	0
21	PB	MAXIMUM		0.1	0
22	HG	MAXIMUM		0.005	0
23	NI	MAXIMUM		0.5	0
24	ZN	MAXIMUM		0.5	0
25	FLOW	MAXIMUM (DRY DAY)		2600000000	0
26	FLOW	MAXIMUM (WET DAY)		10000000000	0
27	TOTAL ORG-P PEST.	MAXIMUM		3	12 M
28	TOTAL NITROGEN	50TH PERCENTILE (LONG-TERM)		10	12 M
29	TOTAL NITROGEN	50TH PERCENTILE (LONG-TERM)		5	12 M



# Summary



# Available Information

- PSD and PSD Online –internal EPA only
- Datasets may be requested by individuals, universities, companies– charges may apply
- Effluent quality data  
-water.data@epa.qld.gov.au
- GIS layer – locations and limits  
-data.coordinator@epa.qld.gov.au

