

Tas 3.1 and Tas 3.2- Implementation of Aquarius TS DMS

A state wide water and sewerage
industry water information
management system



Contents

- Water Reform in Tasmania
- Concept and Vision
- A staged approach
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- Looking Forward
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Tasmanian Water Reform

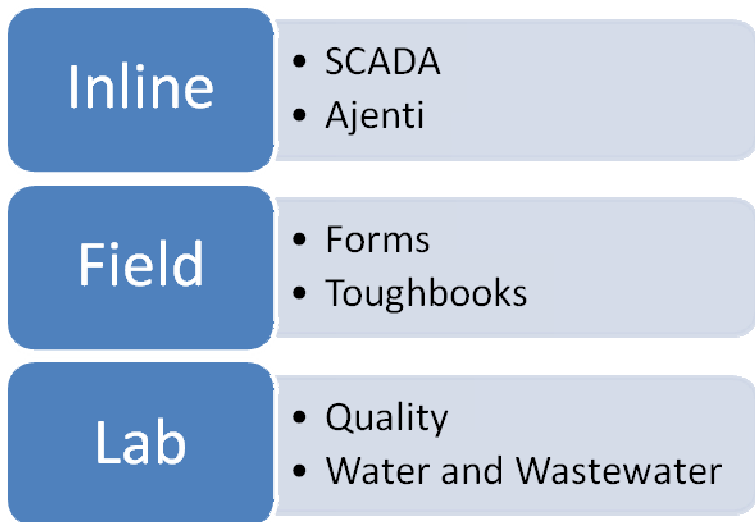
- Water and sewage reform driven by state government.
- Four corporations created on July 1 2009.
 - Southern Water (south)
 - Ben Lomond Water (north)
 - Cradle Mountain Water (north-west)
 - Onstream (common services)
- Southern Water (for example) created from Hobart Water and 12 council's water and sewerage departments.



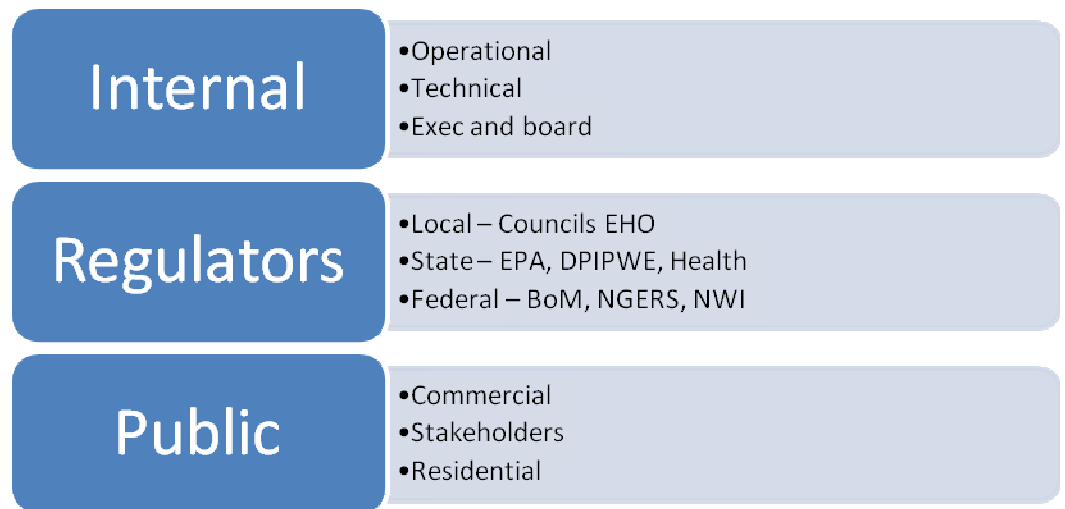
Concept Design



Data Sources



Clients



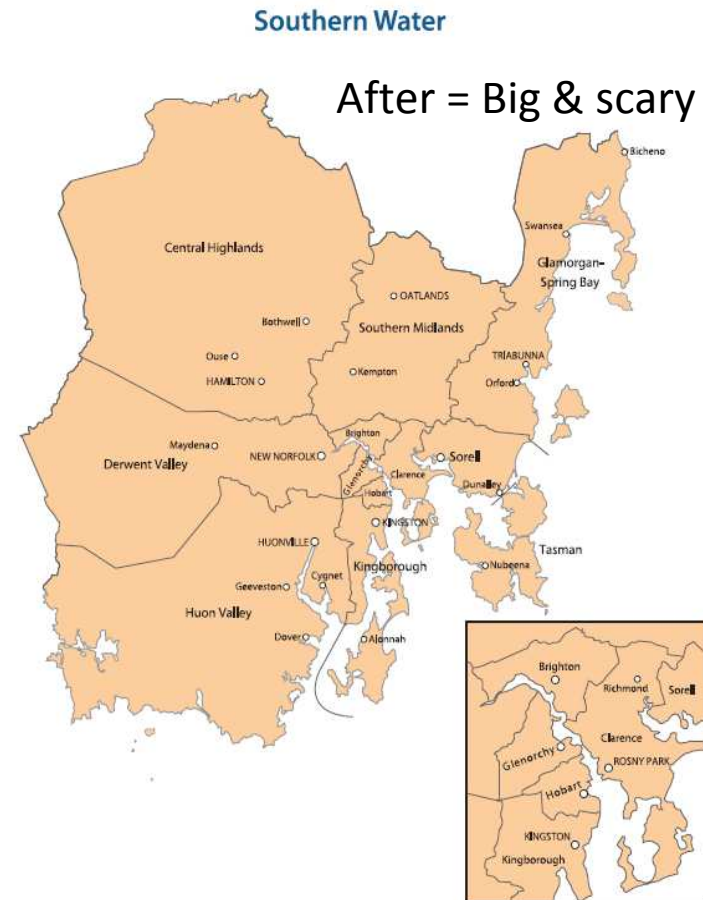
Statewide Vision

- Single database platform across all three water corporations, ideally centrally managed.
- Consolidation of field, lab and key SCADA data.
- Full transparency and public / regulator web based access.
- Accessible for a range of user abilities.
- Range of data management and reporting tools to support KPIs and compliance.



Scope / Scale Explosion.

- Before reform
(Hobart Water)
 - Bulk water only
 - 1 drinking water treatment plant, 4 intakes,
 - about 12 subsystems,
 - some contracted services.
- After reform
(Southern Water)
 - 34 Drinking Water systems,
 - 48 Wastewater systems,
 - 18 Reuse systems.
 - 50 Raw water intakes
 - Plus reticulation, biosolids etc.



Before = Small & manageable

Staged Approach / Rollout

Stage 1 (07/08)

- Data transfer tools
- TimeStudio & Citect

Stage 2 (08/09)

- Transition to Aquarius
- Lab, field and SCADA linkages

Stage 3.1 (09/10)

- Transfer to Southern Water, expansion of scope
- Further SCADA links and telemetered intakes

Stage 3.2 (09/10)

- Rollout to Cradle Mountain and Ben Lomond Water

More to come...



Stage 2 - System Acquisition - 2008

Pre-Qualification for Tender

- 16 Applicants

Shortlisted Tender Process

- 3 Prequalified companies
- OSIsoft (PI), Kisters (Wiski) and Greenspan (Aquarius)

Aquarius Product selected

- Installation and basic integration

Expansion and further integration

- Still ongoing

Aquarius / SWIMS – Key features

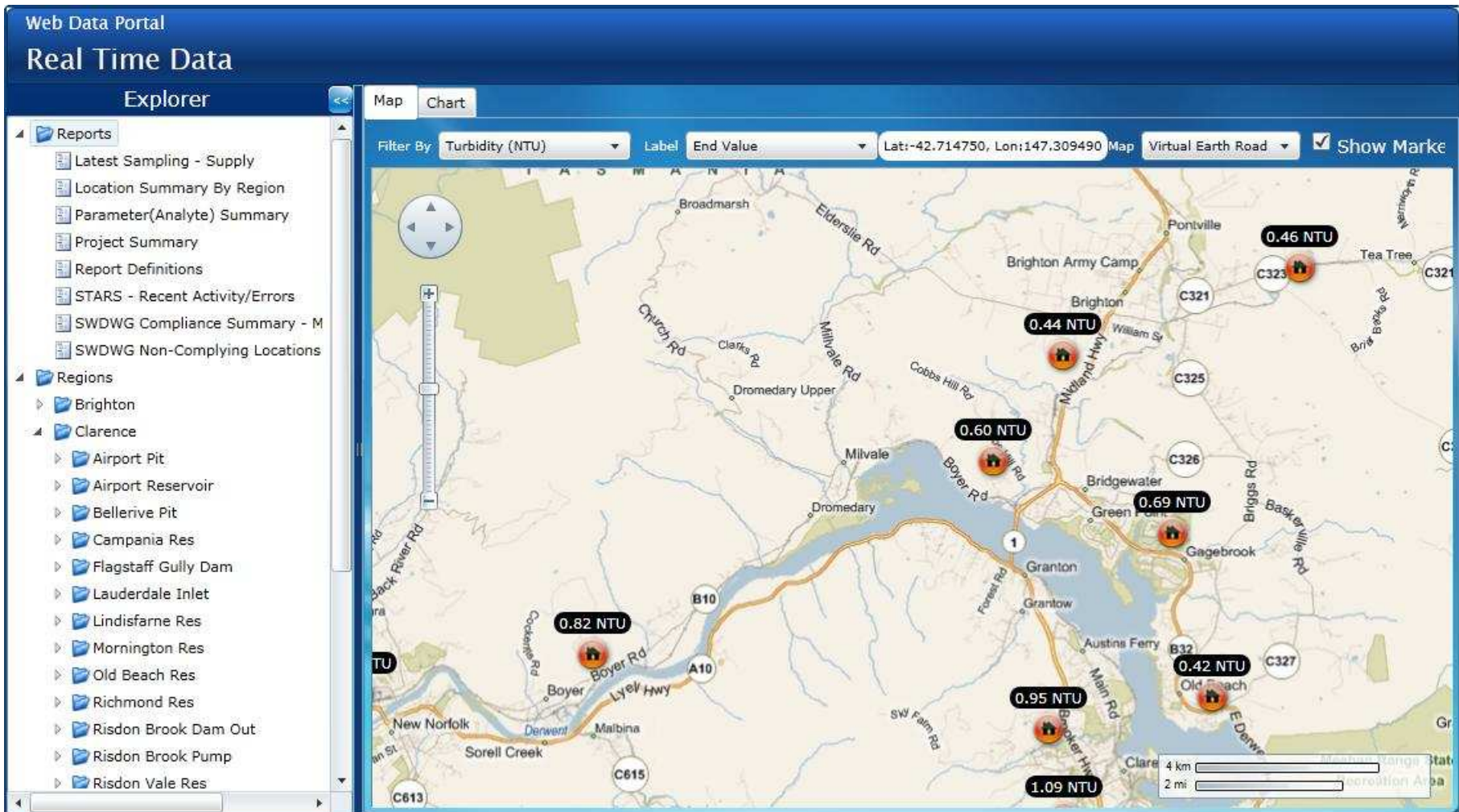


- STARS systems linking toughbooks to Database.
- Links built with 3 labs
- Citect SCADA links

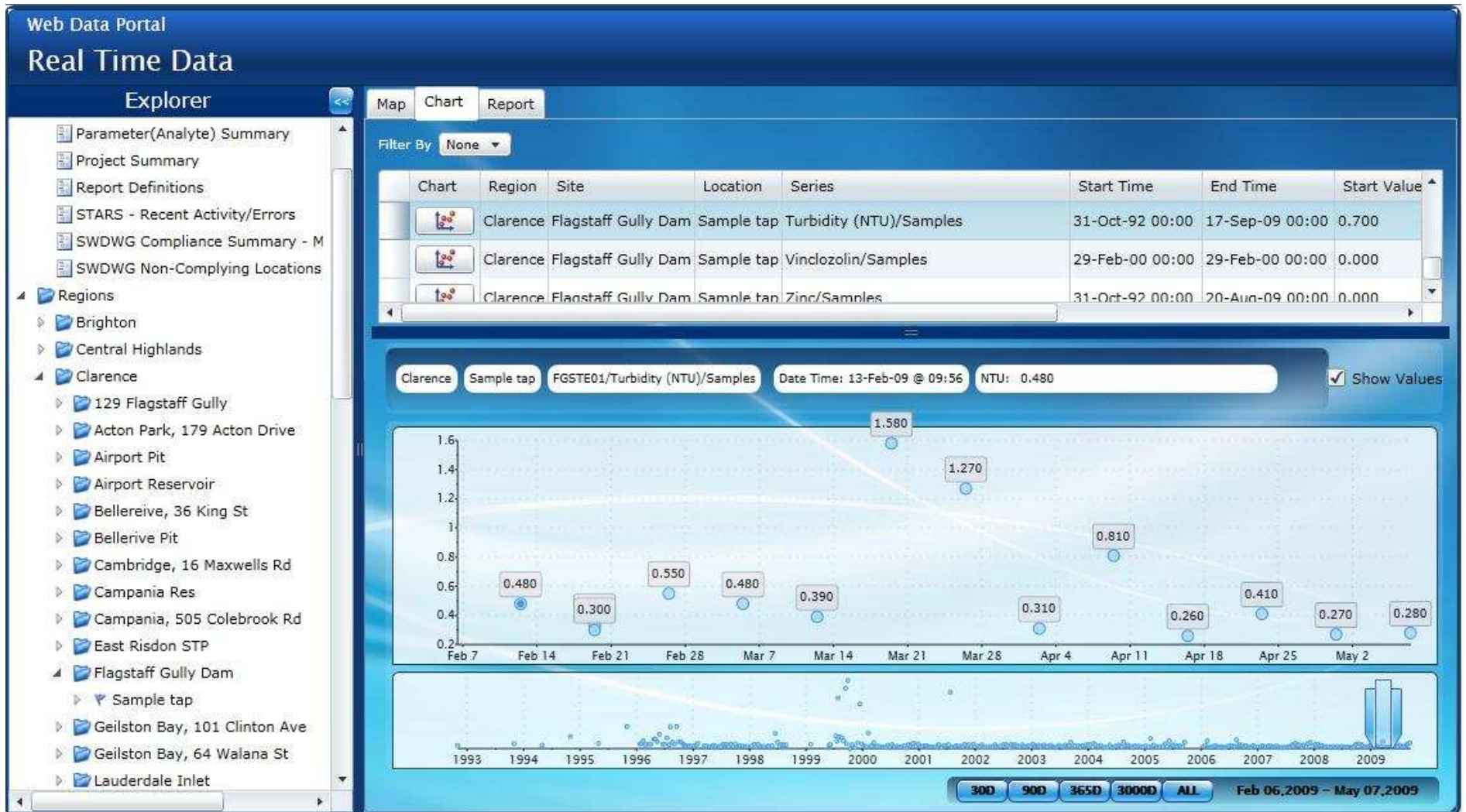
- Aquarius as backbone.
- Greenspan support (excellent)

- BoM Direct Reporting
- EPA direct Reporting
- Some internal reports
- Web Data Portal

Web Data Portal



Web Data Portal



WDP - Report

Web Data Portal
Real Time Data

Explorer

- Reports
 - Latest Sampling - Supply
 - Location Summary By Region
 - Parameter(Analyte) Summary
 - Project Summary
 - Report Definitions
 - STARS - Recent Activity/Errors
 - SWDWG Compliance Summary - M
 - SWDWG Non-Complying Locations
- Regions
 - Brighton
 - Clarence
 - Airport Pit
 - Airport Reservoir
 - Bellerive Pit
 - Campania Res
 - Flagstaff Gully Dam
 - Lauderdale Inlet
 - Lindisfarne Res
 - Mornington Res
 - Old Beach Res
 - Richmond Res
 - Risdon Brook Dam Out
 - Risdon Brook Pump
 - Risdon Vale Res

Map Chart Report

1 / 2 100% Find

southern water Water Information Management System

Summary of Latest Sampling Results for S

Loc ID	Loc Name	Turbidity (NTU)	pH
GOSTE02	59a Tolosa St/Sample tap [Supply-Bulk]	0.96 [2009-09-15 12:25]	7.32 [2009-09-15 12:25]
LFSTE06	Arthur Res/Sample tap [Supply-Bulk]	0.96 [2009-09-14 13:03]	6.80 [2009-09-14 13:03]
KWSTE02	Ash Drive/Sample tap [Supply-Bulk]	0.98 [2009-09-14 10:57]	7.09 [2009-09-14 10:57]
LFSTE04	Barossa Res/Sample tap [Supply-Bulk]	1.14 [2009-09-15 13:55]	6.81 [2009-09-15 13:55]
CSSTE03	Bellerive Pit/Sample tap [Supply-Bulk]	0.56 [2009-09-17 09:58]	7.38 [2009-09-17 09:58]
WDSTE02	Berriedale Pit/Sample tap [Supply-Bulk]	0.60 [2009-09-15 12:15]	7.26 [2009-09-15 12:15]
KWSTE01	Boronia Hill Res/Sample tap [Supply-Bulk]	0.85 [2009-09-14 10:48]	7.30 [2009-09-14 10:48]
WDSTE04	Box Hill DWS Tanks/Sample tap [Supply-Bulk]	0.60 [2009-09-16 11:44]	7.35 [2009-09-16 11:44]
LFSTE14	Box Hill Fenton bfor/Sample tap [Supply-Bulk]	0.79 [2009-09-16 12:22]	6.68 [2009-09-16 12:22]
LFSTE15	Box Hill Fenton Res/Sample tap [Supply-Bulk]	0.95 [2009-09-16 12:43]	6.56 [2009-09-16 12:43]
WDSTE06	Box Hill Road DWS/Sample tap [Supply-Bulk]	1.09 [2009-09-15 11:49]	6.58 [2009-09-15 11:49]
SRSTE05	Bridgewater Res/Sample tap [Supply-Bulk]	0.60 [2009-09-17 07:36]	7.30 [2009-09-17 07:36]
WDSTE03	Bryn Estyn/Bryn Estyn Rising Mn [Supply-Bulk]	0.35 [2009-09-16 11:15]	6.93 [2009-09-16 11:15]
KWSTE03	Burwood Road/Sample tap [Supply-Bulk]	0.95 [2009-09-14 11:13]	7.12 [2009-09-14 11:13]

11.69 x 8.27 in

STARS

STARS Field

Exit New Dataset Delete Dataset Taken By Lab Forms... Synchronise... Settings...

Project C/DV Weekly - Derwent Valley

Data Set 25/08/2005 10:42:35 AM

Taken By Chris

Sampling Place	Water Type	pH	Turbidit	Chlorin	[Micro]	Date/Time
BESTE07: Bryn Estyn Upstream (Environ) [310.	Raw	7.00	56.00		<input checked="" type="checkbox"/>	25-Aug-05 10:42 AM
LFSTE07: Lady Barron Crk Weir (Raw) [304.1]	Raw	6.90	78.00		<input checked="" type="checkbox"/>	25-Aug-05 10:43 AM
▶ LFSTE08: National Park Coomes (Supply) [305.	Supply	8.50	65.00	1.10	<input checked="" type="checkbox"/>	25-Aug-05 10:47 AM
LFSTE12: Uxbridge Road (Supply) [308.1]	Supply	7.00	54.00	0.50	<input checked="" type="checkbox"/>	25-Aug-05 8:25 PM
LFSTE14: Box Hill Fenton bfor (Supply) [315.1]	Supply	6.70	45.00	0.80	<input checked="" type="checkbox"/>	25-Aug-05 8:25 PM
LFSTE15: Box Hill Fenton Res (Supply) [316.1]	Supply	7.10	34.00	0.20	<input checked="" type="checkbox"/>	25-Aug-05 8:26 PM
SRSTE06: Riverton Res (Supply) [301.1]	Supply	8.00	33.00	0.30	<input checked="" type="checkbox"/>	25-Aug-05 8:26 PM
WDSTE03: Bryn Estyn Rising Mn (Supply) [311.	Supply	7.00	23.00	0.50	<input checked="" type="checkbox"/>	25-Aug-05 8:26 PM
WDSTE04: Box Hill DWS Tanks (Supply) [314.1	Supply	7.50	45.00	0.80	<input checked="" type="checkbox"/>	25-Aug-05 8:26 PM
*						

Comments

Tap has been vandalised and is leaking.

Still to do at SW – short term...



- Tough book support.
- More SCADA links.
- Ajenti Data link
- Expanded programs
- More instrumentation

- Server linkages.
- DBA Support
- Training

- Finalise reports.
 - DPIPWE, NWI, NGERS etc
 - Internal operational and board.
- Extras in Web Data Portal (eg. XL Button)
- Public Access to WDP

Looking forward to...

- More internal* resourcing dedicated to support.
- Development of a “user community”.
- Expansion of monitoring systems and programs
 - Catchment, wastewater and reuse - Ajenti
 - Storage instrumentation
- Further tools
 - Quality systems linkages (HACCP, Aquality, ISO etc)
 - Real time asset performance tracking
 - Full public access
- Collaboration and potential to expand platform to other public sector organisations.



Challenges and Lessons

- Biting / Chewing Misalignment
 - Never attempt a big software system project during major industry reform.
- Conservative is not conservative enough
 - When estimating resourcing or \$\$\$ for integration, think of a number and double it.
- Computer says no.
 - System → System linkages, crucial and difficult.
- Help vs Support
 - In house DBA expertise – get some.
 - Committed supplier makes a big difference.
- It never ends.



Tasmania's Water & Sewerage Corporations



TASMAP
INDUSTRY



Q & A

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(Go easy on the technical stuff, I'm just an engineer)

