



## STAFF REPORT

**TO:** Environment & Planning Committee

**FROM:** Monique Harvey, Environmental Information Officer

**REFERENCE:** S611

**SUBJECT:** **E&P DEPARTMENT DATA MANAGEMENT UPDATE - REPORT EP07/09/08** - Report prepared for hearing of 12 September 2007

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### 1. INTRODUCTION

The position of Environmental Information Officer began in November 2006. The purpose of the role is to ensure data from environmental monitoring and investigations, consent processing, and policy development is captured, validated, secure and readily available to staff and the public.

Prior to the establishment of this role much of the environmental data collected at TDC was being stored less than ideally. Data was held in one-off files in different locations, making retrieval and analysis cumbersome. Numerous databases existed at various stages of development.

The appendices to this report outlines projects completed in the last nine months and lists known future projects.

### 2. PROGRESS

Processes are now in place to ensure environmental sampling programs are organised and data is available. For example the swimming water quality sampling results are now automatically available on the internet on a weekly basis during the summer.

There is now a single database for storing environmental monitoring data (ENVMON). This stores a range of data including water quality, air quality, dairy farm discharges, wastewater treatment plant monitoring, and sanitary survey results. Data is available to all staff in the Council and quality control processes are in place to ensure data integrity.

Other databases have been redesigned and developed to bring them into line with Council's business practices. This redevelopment has allowed data to be available to a wider number of staff members and linking with other technologies. An example is the Bores database which is now accessed by staff through the GIS application Explore Tasman.

A short demonstration of the bores database and sampling process management database (Samplzyer) will be given.

### **3. RECOMMENDATION**

THAT Council receive this report.

Monique Harvey  
**Environmental Information Officer**

**APPENDIX ONE:**  
Environmental Information Projects Progress Update

**1. Completed Projects**

<b>ENVMON Database</b>	Data from old Access database has been imported into SQL ENVMON database (over 20,000 records). Data includes water quality (river, beach, groundwater, discharges), Air Quality and consent monitoring data.
<b>Historic Import</b>	<b>Data</b> Spreadsheet data imported into ENVMON database. Objective is to have one place for storage/retrieval of Environmental data.
<b>Samplizer Application</b>	Web-browser based application for viewing lab requests, managing samples (request sample number, chain of custody forms), enter and view field data for sampling programs, and view analysis reports.
<b>Cawthron Automated Sampling</b>	The entire process from obtaining a sample number to results being loaded into the ENVMON database is now managed by TDC processes. Data is imported into ENVMON automatically on a weekly basis making it available for staff members or directly onto the web.
<b>Hilltop Upgrade</b>	ENVMON data is viewed in Hilltop. Hilltop upgraded to improve visibility of this data.
<b>Bores Database</b>	All bore records imported from old Access database into SQL Bores database providing access to all TDC staff. Bore cards and associated information scanned in to database. Bore locations are viewed in Explore Tasman and direct access to the Bores DB is available from here.
<b>Sites Contaminated Register Database</b>	All paper records from the Sites Contaminated Register are now in a new SQL database. Scans of paper records are included. Data is secure and enables data to be viewed by appropriate TDC staff members.
<b>Bathing Water on Web 06/07</b>	Data from 06/07 bathing water monitoring sampling season was available on the web prior to each weekend over summer. Only four sites were sampled.
<b>Motupipi WQ on Web</b>	Motupipi catchment study has an automated water quality monitoring site measuring 10 parameters. All data is available on the website alongside all other river flow and rainfall sites.
<b>Water Web Pages</b>	The Water pages of the Environmental section of the TDC website have been updated using a format template.

**Hilltop Manuals & Training** Basic Hilltop training provided for users within the E&P department. Manuals for Hilltop and Samplyzer applications were written and available on Council's intranet site.

**Hydro Comments Database** Hydrology had comments for each site stored in individual text files. All data now imported into SQL Comments database where data entry and export is available. Comments can also be viewed on graphs in Hilltop.

## 2. Current Projects

**Fish Passage Database** New Fish Passage SQL database structure is developed, awaiting Resource Scientist to validate historic data. Future data collections will be imported directly into database.

**Hazardous Facilities Database** Data currently stored in paper files, database structure to be designed and built.

**Wastewater Systems Database** Data currently stored in paper files, database structure to be designed and built. More data currently being collected to provide more information on the structure required.

**MWH Engineering Data** MWH collect samples for TDC at Wastewater Treatment Plants and Transfer Stations. Data currently held by MWH with limited access for TDC staff. Project to have MWH use TDC sampling processes (via Samplyzer) so results from Cawthron will be available weekly in ENVMON database. Historic data imported into ENMVON.

**Groundwater Data on Web** Project to add graphs to the internet site of automated groundwater level recording sites. This will compliment the existing river flow and rainfall pages.

**Marine Farming** No data as yet but consents to be issued late in 2007. Database required to store consent monitoring data and provide analysis and reporting capabilities.

## 3. Future Projects

**Cross Section Data** TDC collects and stores cross section data for both river and coastal locations. Currently data is stored in Excel and is not available widely. Project to investigate other data storage/retrieval options and implement a new system.

**Hill Laboratories Data** Hill Laboratories analyse samples for TDC not done through Cawthron. Lab results from Hills are currently not stored in a central electronic location. Project to import all historic results from Hill Laboratories and implement a process for importation of future sampling results.

<b>SOE Reporting Templates</b>	As part of State of Environment Monitoring (SOE) program, a project to design and implement standard format templates for Resource Scientists to report on for future monitoring years (within Environmental Information section). Aim is for templates to be double-sided colour A4 size summaries, suitable for public distribution.
<b>Replace Tideda with Hilltop</b>	TDC has two Hydrological time-series software programs, Hilltop and Tideda. Tideda has been traditionally used but Hilltop is to replace this. Project aims to fully implement Hilltop for Hydrology and no longer use Tideda within the organisation.
<b>Land and Coastal pages on Website</b>	Once the external website has been upgraded, recommence project to update the Land and Coastal pages of the Environmental section of the website.
<b>Bathing Water on Web 07/08</b>	For an expanded network of sampling sites (approx 25). Data to be available on website each Friday of summer sampling period.
<b>EI Electronic File Structure</b>	Project to work with all EI staff to tidy up structure and bring it into line with standard corporate conventions. This will also assist with any Electronic Document Management Systems likely to be implemented in future at TDC.
<b>Hydro telemetry system</b>	Project to assist Environmental Monitoring department to move away from the present Flosys telemetry system to a new more robust and widely used system. New system likely to be either an improved version of Flosys, Hydrotel or Hilltop Telemetry software.
<b>1970s Orchard Data</b>	Project to import all paper records of 1970s contaminated orchard land data into the Sites Contaminated Register database.
<b>GIS EI Application</b>	Project to provide an EI Explore type application where all GIS layers of interest to EI department are available. Aim is to have a version of Explore Tasman optimised for EI, without the layers not used by the department.
<b>Pests DB</b>	Review dataset and assess if current storage is most appropriate.
<b>Archaeological sites</b>	Data currently stored in GIS which is not optimal storage for this dataset. Project to review data and import into database, allowing more TDC staff access to the data.
<b>Heritage Buildings</b>	Current database requires review and assessments for its suitability.

<b>Dwellings</b>	Requirement to know where on a lot a dwelling is located and the size of dwelling. Project to assess what dwellings data TDC hold and what other Councils do to store this data.
<b>Community Outcomes</b>	Requirement for Council to report on this. Data inputs mainly from external sources but at present has not been captured and stored in an appropriate form, making reporting difficult. Project to review this dataset and decide on an appropriate storage and reporting technology.
<b>Woodburners</b>	Information is collected by building consents but is not recorded in a suitable format for policy department to report on. Project to standardise recording of woodburners in NCS to assist with reporting.
<b>Land Monitoring</b>	<b>Use</b> Project to capture and report on changes in the supply and development status of residential and business land, both for urban and rural areas. Monitor changes in pattern of rural use.