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Hydrology Operations

Manual

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Field Data Collection: Paper-Based Forms

1. Overview:

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From May 2025 Horizons Regional Council (Horizons) started to use ArcGIS Survey 123 for its digital field capture, sample registration and laboratory sample submission for its monthly; State of Environment, Point Discharge, Coastal and Estuary Discrete Water Quality Sampling.

Groundwater, Lakes, Turbidity Grab and Autosampler samples will follow suit once testing is completed and as such paper-based data collection remains the primary method. These samples will continue to require the completion and submission of a field form in conjunction with a Laboratory Test Request form.

Paper-based forms will remain the primary method of field data collection and lab submission for the following instances:

- 1. The use of Survey 123 digital field capture has not completed testing and been adopted.
- 2. The collected samples are not being sent to Horizons contracted laboratory service partner; Eurofins Limited.
- 3. The samples intended Eurofins Limited are either; (i) collected by parties linked to Horizons such as community groups and schools etc., or; (ii) of projects of limited scope. In such cases prior confirmation will need to be made to Eurofins Limited and the Discrete Water Quality Portfolio Holder or proxy.
- 4. As a back-up due to unforeseen consequences such as, but not limited to, equipment failure. If paper-based data collection is being used in situations where digital data capture is expected the Discrete Water Quality Portfolio Holder or proxy needs to be made aware on the day of data collection/sampling.

The Rest of this document shall now detail the procedures re; sample data collection using paper-based forms.

2. Location of proofs:

These are stored within in the Hydrology Operations Manual:

- Field Sampling Form used for surface water grab samples.
- <u>Coastal Sampling Form</u> now replaced by the Field Sampling Form (above).
- <u>Groundwater Sampling Form</u> used for all groundwater sampling.
- Lake Sampling Form used for all lake sampling.
- <u>Laboratory Test Request Form</u> [\used to accompany all samples send to a laboratory for analyses: The exceptions for the need for this form are for compliance samples where a formal Chain of custody from should be used :<u>\\ares\Hydrology\Catchment Data</u> <u>ISO9001-2008 QMS\Operations Manual\cd_om_15.4_appendix_30_Chain of Custody -</u> <u>ELS with relinquish 2013.pdf</u> and Autosampler sampling runs (see below).
- <u>Autosampler Sample Form</u>: This form combined both the field form and Laboratory Test Request Form.
- 3. Completion of Field Forms:

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All samples must be accompanied with the completed field forms. As such the forms must be completed as fully as possible as legibly as possible. Comments are transcribed into our databases verbatim.

When preparing samples for delivery to Laboratory all paperwork should be checked for completion and clarity/legibility.

3.1 Field Sampling Form:

These **must be** completed as much as possible:

- i. Time New Zealand Standard Time
- ii. Date
- iii. Site Name Matched to the Hilltop Name for the Site
- iv. GPS Reference (if the site is new or has moved)
- v. Handheld meter used
- vi. Temperature in °C
- vii. Barometric Pressure (mbars)
- viii. DO (%)
- ix. DO (mg/L)
- x. Specific conductance µS/cm
- xi. pH
- xii. ORP (project specific)
- xiii. Black disc measurement :refer to the SOPs for Black Disc measurements:<u>\\ares\Hydrology\Catchment Data ISO9001-2008 QMS\Operations</u> <u>Manual\cd om 15.6 appendix 9 Black Disc Procedures.pdf</u> and Clarity tube measurements: <u>\\ares\Hydrology\Catchment Data ISO9001-2008 QMS\Operations</u> <u>Manual\cd om 15.6 appendix 10 Clarity Tube Procedures.pdf</u>
- xiv. Water Colour: record a description that best describes the site conditions.
- xv. Water Clarity: circle the most accurate descriptor (Low, Moderate, High)
- xvi. Staff gauge (if at sample site); recorded in accordance with: <u>NEMS: Water level</u>
- xvii. Flow estimation : recorded any estimated or gauged flow recorded during the sample
- xviii. Velocity estimation: *circle the most accurate descriptor (Low, Medium, High)*
- xix. Sediment/bed sizing: SOP currently under construction.
- xx. Comment on anything that you deem significant (tide, effluent, stock).

a. NOTE: A photo must be taken for each sample

3.2 Groundwater Sampling Form:

State of Environment Groundwater Sampling is undertaken by a contractor reporting to the Environmental Data Team

3.3 Lake Sampling Form:

Refer to the appropriate Lakes Sampling Run Guide and <u>\\ares\Hydrology\Catchment Data</u> <u>ISO9001-2008 QMS\Operations Manual\cd_om_15.6_appendix_5_Lake Sampling</u> <u>Procedures_V2.pdf</u>

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3.4 Laboratory Test Request Form:

For all surface water, groundwater and lake samples (excluding compliance sampling) a Laboratory Test Request Form must accompany the field form. This form acts both as a receipt and as confirmation of the test analyses required. As much as possible we use standardised test sets; therefore for the majority of sample runs only a minimum amount of the form needs competition.

- i. Date, Name and Contact Number this field needs completion for every use
- ii. Sample ID numbers all sample numbers linked to the sample run need to commented here [i.e. 20XX0001 to 20XX0011 inclusive]
- iii. Sample Run Name confirm the run name, this should match the Sampler run name, which in turn should match the name on the field form(s)
- iv. Standard Profiles / Chemical Analysis / Bacterial Analysis / Other Analysis Required these part only needs completion for a non-standard run or project specific sample. In these cases confirmation needs to be sought from Discrete Water Quality portfolio holder*.
- v. Lab use only / Office use only leave blank
- vi. Chain of Custody Form this part will only need completion for a non-standard run or project specific sample. In these cases confirmation needs to be sought from Discrete Water Quality portfolio holder
- vii. 1 copy sent to lab (i.e. white copy sent to lab in chilly bin) this field needs completion for every use
- viii. 1 copy kept- (i.e. yellow copy sent to data entry) this field needs completion for every use
- ix. Samples sent by (signature) MUST be signed by the person preparing the samples for dispatch tot the lab

*When additional analysis are required in addition to completing the relevant section of the form and email must also be sent to: samplingwellington@eurofins-food.nz confirming the additional requirements.

Limitations: One Laboratory Test Request Form needs completion for each profile. For example if a SoE sample run and Estuary Sample run are combined on the day (and within the same fieldsheet form/book); one Laboratory Test Request Form needs completion for the SoE samples and second Laboratory Test Request Form is required for the estuary sample(s) to allow for the different analyses between profiles.

3.5 Autosampler Form:

Due to the volume of samples used with an Autosampler this form combines the Laboratory Test Request Form with the field form.

Ensure the top of the form is completed with a contact number and a run name that matches what is in Sampler.

Simply fill in the first four columns, paying special attention to the sample date for longer runs.

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Tick the *Profile HRC Turb (RI2036)* column if the samples are to be tested against the normal sample suite [this is in sampler as 'Hydrology – Autosampler Profile (ELS)]. If the sample suite is different clearly comment this in the actual column and seek guidance from the Discrete Water Quality Portfolio Holder.

Tick the *Profile Nutrients (A01505)* column if the samples are to be tested against a nutrient profile. This is typically a sample suite specific to the sample run - seek guidance from the Discrete Water Quality Portfolio Holder.

Tick the column for any samples that are discarded prior to sending to the laboratory -i.e. samples that failed to fill. This is to advise the laboratory of any known errors in the sample number sequence.

4. Filing of Sampling Forms:

All forms are triplicate: (i) WHITE copy is for the Lab; (ii) YELLOW copy is for Data Entry; (iii) PINK copy is retained for archiving. NOTE: for the Autosampler forms the sequence is WHITE/PINK/GREEN – this form will refer to the more prevalent colour sequence for clarity...

- The WHITE copy is to be removed from the book(s); placed and sealed in a bag and added with the samples in the chilly bin for delivery to the Laboratory.
- The YELLOW copy is to be removed from the book(s) and placed in the Data Entry intray in the hydrology office
- The PINK copy is to be left in the book [the book placed back on the shelf]; once the book is used up it needs to passed to the Discrete Water Quality portfolio holder for disposal.