A close-up photograph of a person's hand pouring water onto a small green seedling growing out of a mound of dark brown soil. The background is a soft, out-of-focus green, suggesting an outdoor setting. The overall image conveys a sense of care, growth, and environmental stewardship.

IMPLEMENTATION OF 12 MONTH FORWARD FIX METHODOLOGY FOR TRADE EFFLUENT STRENGTHS IN CMOS

31st May 2019
Version 1.0

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OVERVIEW AND BACKGROUND

- We are changing the way we calculate and apply in CMOS the COD and SS sample strengths for variable strength trade effluent discharges (circa 640 No.). The change **does not** affect those discharges already on fixed / agreed strengths (e.g. laundrettes, car washes)
- Our current 6 + 6 month methodology involves calculating the mean sample strengths after the end of each 6 month period, and entering into CMOS to apply from the beginning of the 6 month period.
- New methodology is based on a 12 month forward fix approach, using data from the previous calendar year (January to December), fixed forward to apply from 1st April. There is no reconciliation at the end of the 12 month period.
- We've worked with a third party to develop a model with statistical rules and logic to analyse the quality and quantity of sample data for each discharge and apply business rules to determine the most appropriate, robust and defensible statistical approach for fixing forward COD and SS (e.g. median, mean, Z-test etc). This is a wholesale change to the way we calculate strengths for charging and we are confident that the approach to forward fixing strengths is robust and defensible. Exceptions will be considered only for sustained and significant changes, as described later in this deck.
- We want this to be a smooth transition to the new arrangements and need Retailer support to make this work effectively. This document provides more details of the changes and information to support retailers and customers through the transition. Please don't hesitate to contact us if you have any questions.
- We believe that this change is well supported by retailer feedback and is part of our commitment to support and change the market for the better. We thank you for your feedback and support in developing these plans.

KEY DRIVERS FOR CHANGE AND IMPACT

- **NHH Customers** – enables accurate monthly billing and greater predictability of charges.
- **NHH Retailers** – enables accurate monthly billing of customers in line with wholesale charge payment and greater predictability of revenue.
- **Market** –
 - Consistency of approach and alignment to direction of the wholesaler community
 - Simpler administration and efficiency
 - Incentivises / facilitates more frequent collection and submission of trade effluent meter reads into CMOS, increasing the accuracy of market settlement data.
- **STW Wholesale** – improved trade effluent consent compliance, where this relies on accurate volumetric data.

Potential customer Impact

Any change that utilises a different sample data period and methodology for calculation has potential to impact Customers. Our analysis suggests some ups and downs 'in-year'; the long term (2-3 year) effect is likely to be largely neutral or positive. The impact will ultimately depend on the specific nature and profile of the discharge and we would encourage Retailers to make their own assessment during this transition phase.

Where required we can provide the supporting evidence of why the statistical method of strength calculation is fair and representative.

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NEW FORWARD FIX METHODOLOGY AND IMPACT

- The new process uses a robust statistical model, developed with a 3rd party, to calculate representative COD and SS sample strengths using validated sample data taken during the previous 12-month calendar year (i.e. 1st January to 31st December of the previous year). Utilising a calendar year's data ensures seasonality and variability are taken into account.
- The model analyses sample results for each customer discharge and, dependent on the number of samples and the distribution of the data (e.g. normal distribution, binomial distribution etc), it determines the most appropriate statistical method to calculate a representative sample strength (e.g. using a median, mean, Z test etc). COD and SS are modelled separately for each discharge.
- Strengths (COD and SS) are then entered into CMOS to apply from 1st April until 31st March (i.e. fixed forward). There is no reconciliation at the end of the 12 months and the process is simply repeated each year. Strengths will be issued to retailers prior to entry to CMOS.
- Where applicable, ammonia charges are added after converting the ammonia strengths to a COD equivalent, in a similar way to the current process.
- Exceptions will only be considered where there is a **sustained and significant change** to the effluent discharge profile.
- We can provide the supporting evidence of why the method of strength calculation is fair and representative, where required.

TIMELINE FOR IMPLEMENTATION

Customer specific data

- Retailer specific data, containing the new fixed COD and SS strengths for your customers, will be sent to you separately, alongside this pack. This is based on Retailer SPID ownership from April's R1. If you don't receive data, your customers are **not** affected by the changes.

Implementation timeline (transition year) – See Appendix A

- In this transition year, the new methodology will be implemented before the end of June 2019, with the new COD and SS strengths backdated in CMOS to apply from 1st April 2019. This will be reconciled in April and May settlement, but will ensure the new methodology and fixed strengths apply for the full financial / tariff year.
- **No later than Wednesday 29th June 2019** we'll enter new strengths in to CMOS, to apply from 1st April 2019. This provides 4 weeks for Retailers to analyse data and, if necessary, to discuss the results with customers and to raise any queries with us. We are happy to enter the new strengths to CMOS before 29th June if requested.

Implementation timeline (BAU) – See Appendix A

Going forward, after this transition year, the normal BAU timeline will be :-

- Jan & Feb – STW Validate COD and SS sample data for January – December period and run model to calculate COD and SS fixed strength for the coming year
- March – STW issue new COD and SS fixed strengths to retailers. 4 week period for review, queries and exceptions.
- End March – STW upload new strengths to CMOS, to apply from 1st April – 31st March

The process will be repeated annually.

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EXCEPTIONS AND NEW DISCHARGES

This is a wholesale change to the way we calculate strengths for charging and we are confident that the approach to forward fixing strengths is robust and defensible. There are nevertheless likely to be Customer situations where exceptions need to be considered e.g. mid-year installation of effluent treatment.

Exceptions

- We will consider a change or challenge to the fixed strengths at any stage, where it can be demonstrated that a **sustained** and **significant change in strengths** has occurred.
- Retailers can request this via a G01 bilateral form, providing evidence and data to support the request.
- Similarly, STW also reserves the right to amend fixed strengths at any stage, if a **sustained** and **significant change** is observed. We expect these types of exceptions to be infrequent and we will notify Retailers in advance where this occurs.

New Discharges

- For new discharges, or where there is limited or no sampling data available, we will determine the strengths based on:
 - samples taken over a different period which can be shown to be representative; or
 - 75% of the Consented limit; or
 - representative sample data from similar discharges.

WHAT WE ARE ASKING OF YOU

Following receipt of this pack can Retailers please :-

- **Receipt** - Confirm receipt of this pack and the customer specific data by return email (if you have not received data then your customers are not impacted, however if you believe that's incorrect, please let us know).
- **Review** - Review the data and discuss with customers where necessary. If there are any gaps or errors in the customer allocation, please let us know asap.
- **Query** – Raise specific data queries via a G01 form, or if it's a general query or feedback about the information provided, please contact your Account Manager.
- **Confirm** – Where strengths are not queried or challenged, please confirm this to us via your Account Manager at the earliest opportunity, so we can upload to CMOS. (After 29th June we will upload all strengths to CMOS, to ensure changes are made before June R1 is issued).

FREQUENTLY ASKED QUESTIONS (FAQ'S)

We have developed a suite of FAQs to support you in the transition in your communication with Customers. Please do not hesitate to raise any additional questions via email to your Account Manager and we will publish any updates.

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FAQ'S

1. Why are you making these changes ?

We believe that adopting this change will improve the Customer and Retailer experience, making it easier and simpler to bill trade effluent customers accurately on a monthly basis and removing the need to reconcile. It will also incentivise and facilitate more frequent collection and submission of trade effluent meter reads into CMOS, increasing the accuracy of market settlement data and improving trade effluent consent compliance, where this relies on accurate volumetric data. The change is in line with our Scheme of Charges, is well supported by Retailers and is part of our commitment to support and change the market for the better, in this case through simplification and standardisation, and aligning our practice to the direction of other Wholesalers.

2. My Forward Fix strengths are higher than I think they should be, how do I challenge / rectify that?

STW will provide Retailers with the forward fix strength data prior to updating CMOS. Retailer's will then have circa 4 weeks to review the proposed sample strengths and submit any queries if necessary. Queries should be submitted to STW using a G01 NHH form, providing evidence as to why the proposed fixed strength is unrepresentative of the Customer's discharge. Severn Trent will review this information and inform the Retailer of a decision within 10 business days.

FAQ'S CONTINUED

3. My effluent varies throughout the year and I need my charges to reflect that?

By utilising a full 12 months data, the new methodology will take account of normal seasonal variations and the most appropriate statistical method will be used to determine fixed strengths. If a **significant and sustained change in strengths** has occurred, a change can be requested via the G01 bilateral form. Please provide supporting evidence and data.

Variable monthly charging will not be possible under the new approach (although that does not preclude Retailers from adopting a different charging approach with customers).

4. What is the process to apply for exceptions?

If a retailer believes there has been a **significant and sustained** change to the effluent profile they can apply to have the fixed sample strength reviewed. This request can be made via a G01 bilateral form with submission of appropriate evidence to support the application.

5. What do I do if there is a change of occupier at some point during the year?

Retailers should submit a G02 form and apply for a new consent on behalf of the new occupant and their individual effluent needs.

FAQ'S CONTINUED

6. How will the fixed forward value be calculated for new consents?

For new discharges, or where there is limited or no sampling data available we will determine the strengths based on :-

- representative sample data from similar discharges or
- from samples taken over a different period which can be shown to be representative or
- by using 75% of the Consented limits where no other data is available

7. Will Severn Trent still take regular samples?

Yes, regular samples will continue to be taken in accordance with the specific Trade Effluent consent for the site and sample results provided to Retailers and Customers in accordance with the G4 process (same as current).

8. Where can I go for more information?

Please contact your Account Manager in the first instance with any queries regarding this change.

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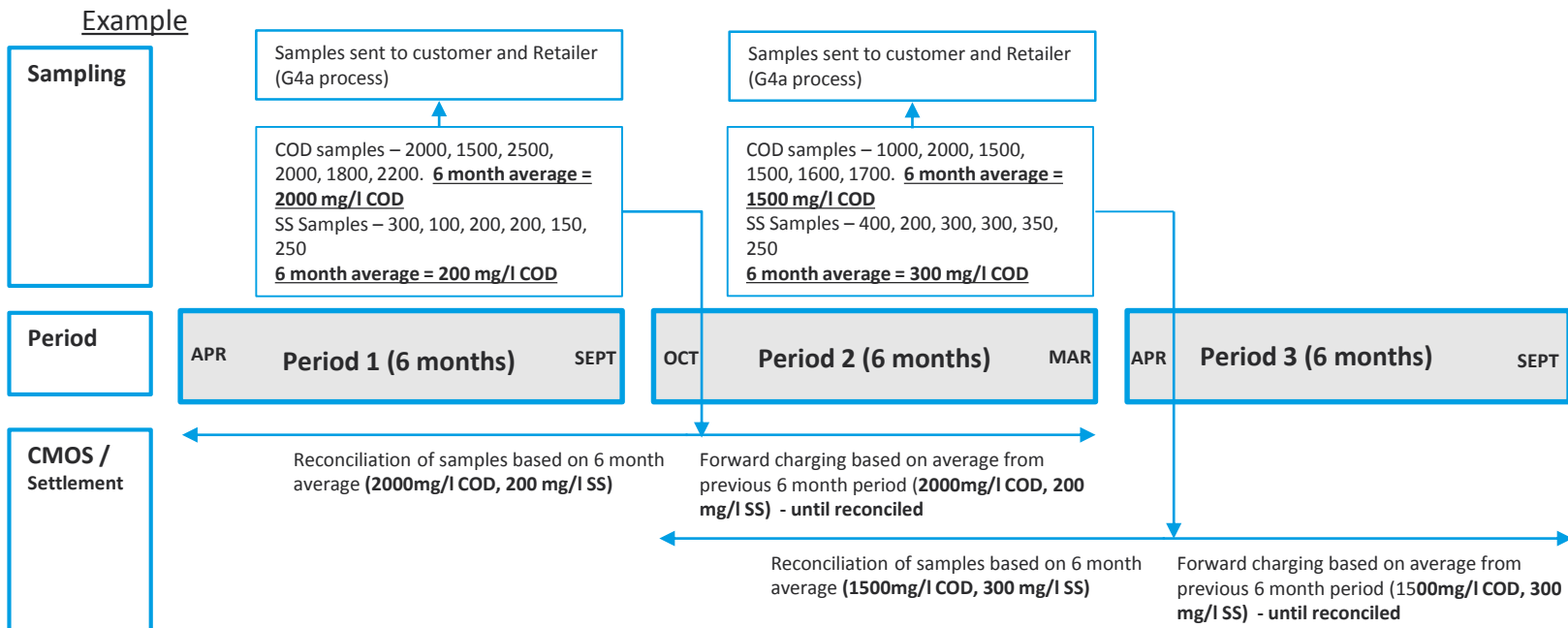
APPENDIX A

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CURRENT APPROACH (6 MONTH REC.)

- Chargeable samples (for COD and SS) are collected over a 6 month period. These are sent to the customer and Retailer (G4a process).
- At the end of each 6 month period, we take the average of the chargeable sample strengths (COD and SS) and amend / reconcile in CMOS for the previous 6 month period. Until the reconciliation takes place, the samples strengths in CMOS, and therefore monthly settlement charges, are based on the average strengths from the previous 6 month period. (see illustration / example below)



TRANSITIONAL TIMELINE (2019)

	April	May	June	July
Comms and data issued to Retailers (end May)			◆	
Retailers review and query (before 29 th June)			■	
STW uploads to CMOS before end June (to apply from 1 st April)	◆		■	
June R1 settlement				◆

'TO BE' APPROACH (12 MONTH FORWARD FIX)

- Chargeable samples (for COD and SS) are collected at the consented frequency and sent to the customer and Retailer (G4a process). (same as current)
- Samples from the preceding 12 month sample period, January to December, used as the basis for calculating/modelling the COD and SS to be used to forward fix strengths in CMOS for the next tariff year, starting 1st April.
- Strengths will be sent to retailers in March, giving 4 weeks for review.
- Subject to exceptions (sustained and significant changes - to be applied for via G01 bilateral process), these strengths would not change until the following year.

