Return to Sewer
Non household Policy

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Southern Water

Contents

Return to Sewer

Overview / Introduction

Southern Water accepts that some commercial sites do not return the majority of their usage to the sewers. As a result, all non-household customers are able to request a '***non-return to sewer assessment'***.

This does not mean they will get a reduction, and it is the responsibility of retailers to provide Southern Water with the information to warrant any reduction. This is where the Wholesale Services Team become involved.

What is Return to Sewer?

We acknowledge that not all the water used at a property will go down our sewers and therefore the return to sewer percent is not 100%. An investigation completed by Southern Water found that on average of 5% of water used does not return to our sewers, and this is what Southern Water gives Non household customers as a standard. This means 95% of the water used is billable to non-household customers for their waste water return to sewer amount.

The Return to Sewer percentage (that the Wholesale Services team will decide on) is;

'***The amount of water recorded on the water meter, that Southern Water charge a percentage of as wastewater'***

Completing a Non Return to Sewer Assessment

For customers who already have a reduced Return to Sewer percentage, they can request a reassessment if their circumstances change.

Southern Water cannot complete a non-return to sewer assessment without a completed H01 CMOS form. The retailer is also able to contact Southern Water by phoning the Wholesale Services team on **0330 303 1272**.

When the application is received, the Wholesale Services Team will calculate the percentage based on the numbers detailed at the ***Annex A - Non Return to Sewer Examples***.

If the retailer has not supplied sufficient information for the calculation to be made, the Wholesale Services team will call the retailer to go through the information requirements with them. The questions on the following page may help the retailer when contacting their customer.

Backdating RTS calculations

A request for non-return to sewer will be applied from the last actual read. Southern Water will not back date non-return to sewer requests. The only exception to this is if we agree with the customer via the retailer to wait a year in order to get a better view of consumption; if this happens an adjustment will be made to the original request.

Annex A - Non Return to Sewer Example Calculations

Helpful calculation information: 1 cubic metre = 1000 litres = 220 gallons

A) Grounds Irrigation

Mainly for bowling greens / sports centres / football greens and parks –

i. What system do you use to irrigate the greens?
ii. How many sprinklers?
iii. If not sprinklers, what flow rate does the system state it has?
iv. Does it have a tank that the water comes from and what's the capacity of that tank?
v. How many hours a day and days a year is it used?

Example: **3 sprinklers used 2 hours every day in the summer. (April to August)**

- 3 sprinklers x 2 hours = ***6 cubic meters a day***
- ***6 cubic meters*** x 153 days (1 April to 1 September) = ***918*** **cubic metres** a year

Answer; 918 cubic metres non return to sewer

B) Charged at Trade Effluent

Mainly for industrial sites – As retailer, after submitting the non-return to sewer form via CMOS, you will then be engaging with the Trade Effluent team for any further questions or queries. They are contactable on **0330 303 0277.**

The Return to Sewer percentage should be zero and they should have everything sorted with the Inspector, with any domestic usage being billed as an Annual Domestic Volume (ADV). However, this is not always the case and if the customer can provide new information / changes to the site that the inspector is not aware of, then the Trade Effluent Inspector can talk you though any further steps that may be required.

C) Tankered Waste

Questions to find out -

i. What is the full capacity of the tank?
ii. Where is the wastewater stored after being taken away?
iii. How often is it emptied?
iv. Can a receipt of the septic tank / storage be provided as evidence?
v. Where does the tankered waste go?

There are places that have partial connection to Southern Water sewers, so instead of being charged nothing, we have a reduced Return to Sewer percentage.

However, if the waste that is tankered away gets sent to a Wastewater Treatment Works, there is a chance it could end up in our sewers. Retailers are required to confirm if this is not the case. If this is the case, there would be no rebate.

Example: **4000 gallon tanker emptied once every 4 years**.

4000 gallons / 4 years = 1000 gallons per year
1000 gallons = **4.545 cubic metres** per year **Answer; 4.5 cubic meters non return to sewer**

D) Water loss by evaporation

Mainly for factories with cooling towers – These can be difficult to assess. If there are any doubts the retailer will be referred to a Trade Effluent Inspector for help and advice. The Trade Effluent Team are contactable on **0330 303 0277.**

E) Volume of water incorporated in product

Mainly for breweries / bakers and production factories –

i. How much water is used in their recipes?
ii. How many batches do they make a day?
iii. How many days are they open a year? This may have to be an average as they may not make the same thing every day they are open.

Examples:
1. Recipe 1 uses 2 litres of water and is made 20 times a day Open 250 days a year;
> 2 x 20 = 40 litres a day
40 x 250 days = 10000 litres a year or **10 cubic metres**

2. Recipe 2 uses 5 litres of water and is made 15 times a day Open 250 days a year;
> 5 x 15 = 75 litres a day
15 x 250 = 18750 litres a year or **18.75 cubic metres**

Answer; Total 28.75 cubic metres non return to sewer

For restaurants / pubs / and other similar businesses wanting allowances for food and water served on site – **WE WILL NOT PROVIDE AN ALLOWANCE,** unless they can categorically prove that all of their customers do not use the toilet facilities (that they legally have to provide), and can also prove all of their customers then leave *our entire Southern Water area* before going to the bathroom.

It will be classified as indirect use of our services supplied.

F) Other loses i.e. animals

Mainly for farms:

i. How many animals are on the site?
ii. How many days a year are they at the farm?

Farms do have a history of leakage because they have pipes that run under acres of land and they get old and rusty with minimal maintenance.

If a farmer included leakage in their non-return to sewer element you should not allow it. Advise them that Southern Water will not encourage or ignore excessive waste of a precious resource and they can either repair the leaks on their property or receive a waste water notice.

If the leak is on the Southern Water part of the pipe up to the meter, then Southern Water will arrange a repair. However, this still won't be included in their non-return to sewer.

Example:
1. 5 Horses at site all year
> 5 horses x 55 litres a day = 275 litres
275 litres x 365 days = 100375 litres a year or **100.375 cubic metres**

2. 20 Beef Cattle there March till August
> 20 cattle x 55 litres a day = 1100 litres
1100 litres x (1 March-31 August) 183 days = 201300 litres or **201.3 cubic metres**

Answer; Total 301.675 cubic metres non return to sewers

G) Swimming Pools

Mainly for Schools and Sports Centres –

i. What is the height, width and depth of the pool (depth may have to include lowest and highest point)

The average depth is calculated by adding the two measurements together and dividing by two.

ii. Is it indoors or outdoors?
iii. Is it heated?

Southern Water does not give a return to sewer allowance for draining and refilling a swimming pool because the pool will drain into Southern Water's sewers. Your customer should not be empting out a whole swimming pool on a regular basis.

Southern Water does give a one off allowance to domestic customers filling a pool for the first time, so there maybe scope for one off gestures for commercial – but not as standard billing.

Drainage of swimming pool water may need to be referred to Trade Effluent due to the level of chemicals being discharged.

Example: Swimming pool Height – 25 meters
Width – 10 metres
Depth – shallow end is 0.8 metres & deep end is 2 metres

Depth = 0.8 + 2 / 2 = 1.4 metres average
25 x 10 x 1.4 = 350 cubic metres capacity
20% evaporation given equates to:
350 / 100 * 20 = **70 cubic metres**
Answer; 70 cubic metres non return to sewer

H) Other specific customer types

i. Marinas – it used to be that these sites only had boats that they cleaned off and refilled with fresh water, with a small office of staff at the site. We would calculate the consumption that was confirmed return to sewer based on the number of staff at said site.

Now the marinas have restaurants, living quarters and all manner of things that mean it is not feasible to ignore all of the usage draining in to the sewers.

Some marinas have multiple supplies and can identify what does / does not return to sewer based on what supply pipe it is. The remainder are calculated based on the none-return element from all the supplies into the site as a whole.

It is recommended that these sites get as many sub meters as they can to identify their usage and thus guarantee them the best reduced Return To Sewer Southern Water can give.

Alternatively, the following information is required;

i. How many berths do they have?
ii. How often are the berths fully docked?
iii. What is the average number of boats at the site over the year?
iv. What is the average tank size within the boats that get refilled on site?
v. What boat washing facilities do they have?
vi. What is the flow rate of that system?
    a. A pressure washers is **4 cubic meters an hour**
    b. A regular hose is **1 cubic meters an hour**
vii. How long does it take to wash a boat?
viii. How many boats are washed in the year?

Above are the main elements of the non-return to sewer.

The marina may state they have dry docks, but they need to confirm that they do the boat washing on site or it's not really a relevant piece of information.

Example: Marina

i. How many berths do they have? 500
ii. How often are the berths fully docked/ what is the average number of
iii. boats at the site over the year? 500 in the summer, 200 in the winter.
iv. The average tank size in the boats that get refilled on site? 100 litres
v. What boat washing facilities do they have? Pressure washer and hose
vi. What's the flow rate of that system (if not a hose or pressure washer)? n/a
vii. How many boats do they pressure wash? 350
viii. How long does is take to pressure wash? 1 hour
ix. How many boats do the customers wash themselves? 5 boats a week
x. How long does it take to wash a boat? 1 hour

Average (500+200/2=350) 350 boats over 365 days all get 0.1cm fresh water each topped up and taken away.
0.1 x 350= **35 cubic meters**

Pressure washed by company
350 x 4 (1 hour pressure washer rate) = **1400 cubic metres**

Customer washed 5 boats per week for 1 hour
5 x 52 = 260
260 x 1 (1 hour standard hose) = **260 cubic metres**

Answer; Total consumption not returning to the sewer = 1695 cubic metres

ii. Caravan Parks – can be varied. Southern Water may require a site visits for these customers - The main questions to ask are:

i. How many caravans are at the site?
ii. How long does it take to wash a caravan?
iii. How many times are the caravans washed in the year?

Caravan parks are known for having little add on bits – but they could apply to anyone. These include:

iv. Swimming pools
v. Irrigation of large green areas
vi. Watering of small gardens (for each caravan) can be watered with watering cans…
vii. Pressure washing

If the caravan park state that they have an area for campers with tents and a standpipe for water – this probably won't count. Either the stand pipe won't be charged for waste or they supply toilets and laundry services and these would have the return to sewer element.

Return to Sewer Calculation - last resort

When there is **no feasible means to calculate what does not return to the sewer**, then a calculation can be completed based on what does. This is not the normal practice and should be a last resort.

This is because it gives too much opportunity to miss usage that does drain into Southern Water's sewers.

The prime examples are marinas and commercial sites that quote the number of staff as the only usage that might return to sewer, but do not account for visitors / customers using domestic facilities on site. It's impossible for a restaurant or canteen to count the number of customers they have, and even more difficult to determine the number of those that use the bathroom facilities.

We calculate this based on the following questions –

i. How many residents live on the site? (Where applicable)
ii. How many members are there? (Where applicable)
iii. What is the average number of members using the facilities per day? (Where applicable)
iv. How many full time staff work there?
v. How many part time staff work there?
vi. **Is there a canteen facility?**
vii. Do they have showering facilities?
viii. How many days a year is the site open to customers?
ix How many days a year is the site open to staff?

The canteen has a direct impact on how much water per person we attribute – so it's an important question.

Example 1: A care home with allotments / swimming pool

Number of residents - 20
Number of full time staff - 5
Number of part time staff - 9

Canteen Y/N – Y

Residents = 140 litres per head per day
~~20 x 140 x 365 = 1022000 litres or **1022 cubic metres**~~

Full time staff with canteen = 40 litres a day
5 x 40 x 250 (5 day week) = 50000 litres or **50 cubic metres**

Part time staff with canteen is 50% of full time = 20 litres a day
9 x 20 x 250 = 45000 litres or **45 cubic metres**

Answer; 1117 cubic metres returning to sewer

Example 2: A golf club with irrigation too complex to calculate non return! (This can be hard as not all club members use the site when it's open)

Number of members =	150
Average number of members there a day =	10
Facilities for members =	Canteen and shower facilities
Number of full time staff =	15
Number of part time staff =	3
Canteen for staff y/n =	Y
Number of days club open to members =	180 days a year.
Number of days club open (staff there) =	200

If members used site every day with full facilities = 20 litres a day
150 x 20 x 180 = 540000 litres or **540 cubic metres**
Based on average
10 x 20 x 180 = 36000 litres or **36 cubic metres**

Full time staff with canteen = 40 litres a day
15 x 40 x 200 = 120000 litres or **120 cubic metres**

Part time staff with canteen is 50% of full time = 20 litres a day
3 x 20 x 200 = 12000 litres or **12 cubic metres**

Answer; 168 cubic metres

If the percentage return to sewer appears incorrect, further investigation may be required. For example; where a google search uncovers detail that the site holds wedding receptions, then the average number of members at the site every day could be distorted. They may have had minimalist percentage rates charged for years before being picked up.

The next steps…

Once the amount in cubic metres that is / is not returning to our sewers is known, the amount needs to be made into a percentage in order to amend the account going forward. To do this, you need a full year's consumption to compare the [non]return to.

It is very important that we get a full year's consumption as some non-household customers have seasonal usage and Southern Water needs to capture this change in their usage.

It should also be noted that any stopped meters or leak allowances will need to be accounted for by the Wholesale Services Team. If they are not confident that the last year's usage is typical for the customer they will have two options.

Option 1. Go back three years and go on an average usage.

Option 2. If there aren't enough years of the customer being at that property, then the request will be referred to the Team Leader and the request may be put on hold for one year. After that time has passed, the calculations based on the recorded new usage are made and backdated with the new percent return to sewer

Annex B - Simple formulas

1. ***To find the average;***

Add all elements and then divide that total by the number of elements used.

E.g. Year 1 + Year 2 + Year 3 / 3 = **Average**

2. ***Percentages;***

i. For Percentage of total as an amount;

Total / 100 x Percentage = Amount
20% of 70 would be 70/100 x 20 = 14

ii. For amount as % of total

Amount / Total x 100 = Percentage
20 as percentage of 70 would be 20/70 x 100 = 28.5%