# **SUBMISSION TO IPART- Sydney Water Pricing**

https://www.ipart.nsw.gov.au/Home/Industries/Water/Reviews/Metro-Pricing/Prices-for-Sydney-Water-Corporation-from-1-July-2020 Lynda Newnam, 14<sup>th</sup> October 2019

I support increased expenditure on environmental works but recommend that IPART require Sydney Water to adopt a long-term holistic approach.

"There should be nothing political in good management of our water. It is time the community, through its Parliament, made it clear that existing laws must be complied with, improved environmental outcomes are not optional and old traditions should be replaced by innovative technology and inter-agency co-operation." Dr Peter Macdonald Chair of the NSW Parliament Inquiry into the Sydney Water Board-April 1994.

Sydney Water has been fined \$269,500 for two overflow events that led to millions of litres of untreated sewage flowing into Botany Bay, creating "a potential risk" to those exposed to the effluent. The Land and Environment Court convicted the utility on three offences related to the overflows from an outlet into Mill Stream during scheduled maintenance works in May and June 2017.

July 19, 2019, SMH: <u>https://www.smh.com.au/environment/conservation/sydney-water-fined-apologises-for-leaking-millions-of-litres-of-sewage-20190719-p528ug.html</u>



## BRIEF BACKGROUND REGARDING PERSONAL INTEREST IN SYDNEY WATER:

I am a Sydney Water domestic household customer.

As a volunteer, I have coordinated a Streamwatch group from 2002 to 2012 hosted and funded by Sydney Water and from 2013 to June 2019 hosted by the Australian Museum and funded by Sydney Water. It is now hosted by the Greater Sydney Landcare Network with minimal transition funding provided to June 2020.

I participated, as a volunteer, in a Sydney Water workshop series June, July, August, 2015 held at the Sydney Mechanics School of Arts 5.30-7.30pm for each session eg. https://www.sydneywatertalk.com.au/12706/documents/24270

I attend the Malabar WTP Community Consultative Committee.

I have engaged with Sydney Water over the erosion and pollution on Foreshore Beach, industrial discharges into Botany Bay, stormwater harvesting, wetlands, 'enforceable undertakings'

I am one of 31,465 who have LIKED the Sydney Water facebook and 7,214 who FOLLOW on Twitter.

# **KEY THEMES/ CHALLENGES**

- Engagement with customers and other stakeholders
- Climate Change
- Population Growth
- Legacy problems: aging/decaying/decayed assets; land use responsibilities
- Catchment Management

Please note I am responding to some of the questions asked by IPART within this framework. I am happy to expand on anything contained here if IPART is interested.

#### **ENGAGEMENT & EDUCATION**



(Photo Malabar Fatberg - the cumulative impact of thousands of ignorant actions)

It is critical to achieve best practice in engagement. The challenges won't be met if the customers/stakeholders don't know what is at stake. I have read in the IPART paper that 10,000 customers were engaged. People can engage on social media and surveys but without knowing what was asked (and how it was asked), and their level of understanding, their responses may be inadequate and misleading. Unless IPART has detailed information on the methodology I don't think it is possible to judge the effectiveness. For example, were customers asked to comment on Sydney Water's Activity Against Output Measures as provided in Table E.1 following:

Output or activity measure	Output measure target	Output achieved		
	(as detailed in 2016) Determination over 2016-20)	(Sydney Water's forecast over 2016-20)		
Water services				
Renewal of critical water mains	47 km	31.3 km		
Renewal of large valves	120	76		
Reticulation water mains	180 km	96.1 km		
Reservoir reliability program	33 reservoirs renewed	20 reservoirs renewed		
System reliability	15 renewals	8 renewals		
	16 HV upgrades	11 HV upgrades		
Renewal of customer water meters	471,500 meters	94,000 meters <sup>a</sup>		
Wastewater services				
Renew large wastewater mains	34 km	17.7 km		
	80 manholes	57 manholes		
	4 km pressure mains	0.1 km pressure mains		
Rehabilitate sewers subject to dry weather overflows	112 km	76.1 km		
Wastewater treatment plants renewals	163 project renewals	168 project renewals		
	41 chemical system renewals	22 chemical system renewals		
	11 odour control renewals	10 odour control renewals		
	82 solids treatment renewals	80 solids treatment renewals		
Wastewater pumping station renewals	19 major renewals	23 major renewals		
	37 pump renewals	19 pump renewals		
Stormwater services				
Conduit and Open Channel Renewal and Rehabilitation	7 km conduit renewal	2.1 km conduit renewal		
	3 km open channel renewal	2.8 km open channel renewal		
Stormwater Condition Assessment	160 km condition assessment	151.2 km condition assessment		

#### Table E.1 Sydney Water's activity against output measures, 2016-20

<sup>a</sup> Output achieved for this measure has only been reported for the year 2018-19 by Sydney Water. For comparative purposes, the output measure target averaged over four years would be equivalent to 117,875 customer water renewals per year. Note: Variance between target indicators and output forecast will be discussed with Sydney Water.

Source: Sydney Water's pricing proposal, July 2019, Attachment 9A Capital expenditure, Table 1.2, p 7-12; Sydney Water's pricing proposal, July 2019, Output measures – Sydney Water 2018-19, p 1; IPART, Review of prices for Sydney Water Corporation's water, wastewater, stormwater drainage and other services – From 1 July 2016 to 30 June 2016 – Final Report, June 2016, p 282.

If I had been 'engaged' I would want to know why the shortfalls, and what was being done to rectify. Were there satisfactory explanations? Are similar assumptions used to inform the current projections? Are priorities appropriate?

Did the 'engagement' on the discretionary projects include details on the benefits for the Diamond Bay project as compared to spending a similar amount on another project. I agree it is long overdue, but there are other areas which experience poor water quality because of Sydney Water operations. In an environmental and human health assessment is Diamond Bay the top priority or was it bumped up the list because of the political imperative <u>https://nsw.liberal.org.au/candidates/gladys-berejiklian/news/articles/LAST-DAYS-FOR-OCEAN-OUTFALLS-ON-THE-HORIZON</u> Were customers aware of the system of wastewater treatment plants and overflows: <u>http://www.sydneywater.com.au/web/groups/publicwebcontent/documents/webasset/zgrf/mdq1/~ed isp/dd\_045245.pdf</u> before considering priorities?

#### 3.3.1 Sydney Water's engagement on discretionary projects

Sydney Water consulted on four discretionary projects:

- To build new infrastructure to divert untreated wastewater from the Vaucluse-Diamond Bay cliff-face outfalls, and instead treat it at the Bondi treatment plant, before releasing it into the ocean.
- Implementing a waterway health improvement program for its stormwater assets, which includes native vegetation planting, increasing recreational facilities and removing garbage.
- Reducing illegal stormwater connections, and reducing stormwater inflow from privately owned wastewater pipes, to Sydney Water's wastewater system by fixing privately owned plumbing in areas where there is a high level of inflow and infiltration into Sydney Water's systems ('source control').
- A broad roll out of digital meters to all customers.

Project	Proposed expenditure	Total capital cost over the proposal period (\$2019-20)	Price impact
Untreated wastewater cliff-face outfalls	To build infrastructure to divert wastewater to the Bondi wastewater treatment plant	\$64 million	Extra \$2.30 a year per customer
Source control of rainwater in the wastewater system	To undertake source control to reduce rainwater in the wastewater system and spread the cost over the general customer base	\$25 million	Bill saving of \$3.00 a year per customer <sup>a</sup>
Stormwater management activities to improve waterway health	To implement the Waterway health improvement program	\$16 million	Extra \$2.90 per year per customer
Roll out of digital meters	Delay rolling out digital meters	N/A	No change to bills

a Saving is based on the alternative option of augmenting wastewater pipes and storages to manage rainwater in the wastewater system.

Sources: Sydney Water, July 2019, Pricing Proposal to IPART, Attachment 3, p 102; Sydney Water, June 2019, Pricing Proposal to IPART, Attachment 3, p 82; Sydney Water, June 2019, Pricing Proposal to IPART, Attachment 3, p 101; Sydney Water, June 2019, Pricing Proposal to IPART, Attachment 3, p 39.

Regarding the illegal stormwater connections will there be a major collaboration between Sydney Water and local and state government to ensure compliance?

#### **CUSTOMERS ARE NOT CHARACTERISED**

There are no incentives for customers to do better for the environment. For example, a customer who uses 500 litres of water to hose down a driveway, moving cigarette butts and dog and cat excreta into waterways through the stormwater system pays the same for that 500 litres as another who uses it to support tree canopy (a Premier's Priority) and native habitat (Green and Blue Corridors are a GSC priority). Nor are there incentives to provide diversion to storage. While there are different challenges, this applies both to domestic and commercial customers.

	2019-20	2020-21	2021-22	2022-23	2023-24
Water					
Residential service price \$/year	83	73	73	73	73
Water usage price <sup>a</sup> \$/kL	2.13	2.13	2.13	2.13	2.13
20mm non-residential service charge <sup>b</sup> \$/year	83	73	73	73	73
Wastewater					
Residential service price \$/year	590	658	658	658	658
Deemed wastewater usage charge \$/a (residential and non-residential)	178	92	92	92	92
20 mm non-residential service charge <sup>b</sup> \$/year	590	658	658	658	658
Wastewater usage price \$/kL	1.18	0.61	0.61	0.61	0.61
Stormwater					
Units, small (<200 sq m) non-residential \$/year	25	27	27	27	27
Houses, medium (201-1,000 sqm) non-residential \$/year	80	86	86	86	86
Large (1,001 - 10,000 sqm)	463	502	502	502	502
non-residential \$/year					
Very large (10,001 - 45,000 sqm)	2,059	2,230	2,230	2,230	2,230
non-residential \$/year					
Largest (>45,000 sqm) non-residential \$/year	5,148	5.576	5.576	5.576	5.576

#### Table 1.2 Key prices in Sydney Water's price proposal (\$2019-20)

a Water usage price excludes cost pass-throughs from the Sydney Desalination Plant. Non-residential service charges for larger water meter sizes are calculated as: (meter size in mm)\*x(20 mm meter price)/400.

b All wastewater prices assume a 100% sewerage discharge factor (SDF). Sydney Water's default SDF is 78%.

Note: 2019-20 prices were not available when Sydney Water finalised its pricing proposal. The prices for 2019-20 are based on Sydney Water's forecast of inflation, and some costs.

Source: Sydney Water Annual Information, and some costs.

While Sydney Water has 31,465 LIKES on Facebook it would be useful to analyse the quality of the posts relative to the education task and the level of engagement even at this elementary level. By way of comparison University of NSW has 656,881 LIKES and Hugh Jackman, 23,779,931. Sydney Water has over 5 million customers <u>https://www.sydneywater.com.au/SW/about-us/our-organisation/what-we-do/index.htm</u>

Why is engagement on social media so low? I have noticed the quality of posts has declined. I don't have supporting evidence, but IPART should ask Sydney Water for their Strategic Communication Plan which should identify measures for aligning educational objectives and through that record the effectiveness of such engagement.

The court finding quoted on the first page required Sydney Water to report the court decision on social media. Sydney Water objected to this. Why would they object to this? What is wrong withn the Sydney Water culture? Shouldn't this be part of *continuous learning*. The reasons for objecting are provided here: <u>https://www.caselaw.nsw.gov.au/decision/5d2d27a5e4b08c5b85d8aeb4</u> When they did publish on social media it was 'buried' on a Friday night and then only what was required, ending with:

"Sydney Water Corporation apologises to the community for these untreated sewage discharges and has implemented actions in an effort to prevent recurrence of the circumstances leading to the offences. Sydney Water Corporation takes its responsibility to protect the environment and public health very seriously." Is this effective communication? Do they demonstrate that they take their responsibility seriously?

Another example is from the Malabar WTP which is a major asset, the largest plant of its kind in Australia. In the future there will be opportunities for an EfW project using externally sourced feed stock. The project is flagged in the Greater Sydney Commission District Plan and this is where I first found out about it, not at a Malabar meeting. EfW aligns with ESD objectives of Sydney Water. Malabar is in Randwick City LGA. Last year Randwick finalised a 2030 Waste Strategy. There was no mention of a possible EfW operation at Malabar. Not only does this example identify a lack of coordination between agencies but it was a missed opportunity for Sydney Water (and Randwick Council) to engage customers and, in this case, local stakeholders in a conversation about environmental improvements. This avoidance of engaging, robustly and transparently, with customers/community on major issues such as EfW comes back to the culture within the senior team at Board and at senior executive level.

# From the legislation:

# Part 6 Provisions relating to the Corporation Division 1 Objectives of Corporation

# 21 Objectives of Corporation

(1) The principal objectives of the Corporation are:

(a) to be a successful business and, to this end:

(i) to operate at least as efficiently as any comparable businesses, and

(ii) to maximise the net worth of the State's investment in the Corporation, and

(iii) to exhibit a sense of social responsibility by having regard to the interests of the community in which it operates, and

(b) to protect the environment by conducting its operations in compliance with the principles of ecologically sustainable development contained in section 6 (2) of the *Protection of the Environment Administration Act 1991*, and

(c) to protect public health by supplying safe drinking water to its customers and other members of the public in compliance with the requirements of any operating licence.

(2) Despite section 8 of the *State Owned Corporations Act 1989*, each of the Corporation's principal objectives is of equal importance.

# 22 Implementation of principal objectives

(1) In implementing the principal objectives set out in section 21, the Corporation has the following special objectives:

- (a) to reduce risks to human health,
- (b) to prevent the degradation of the environment.

(2) Those special objectives are to be interpreted by reference to the objectives referred to in section 6

(1) (b) of the *Protection of the Environment Administration Act 1991*, so far as they are relevant to the Corporation.

(3) In implementing those special objectives, regard is to be had to the means referred to in section 6

(1) (b) of the *Protection of the Environment Administration Act 1991*, so far as they are relevant to the Corporation, and (in particular) to the following means:

(a) reducing the environmental impact of its discharges into or onto the air, water or land of substances likely to cause harm to the environment,

- (b) minimising its creation of waste by the use of appropriate technology, practices and procedures,
- (c) reducing its use of energy, water and other materials and substances,

(d) re-using and recovering energy, water and other materials and substances, used or discharged by it, by the use of appropriate technology, practices and procedures,

(e) reducing significantly, by 30 June 2000, the combined environmental impact of the per capita amount of energy and water used by the Corporation and other materials and substances discharged by the Corporation, compared with that impact in the year ending 30 June 1994.

These are key objectives/statements relating to environmental responsibilities, as taken from the relevant legislation quoted above

- To exhibit a sense of social responsibility by having regard to the interests of the community in which it operates.
- To protect the environment by conducting operations in compliance with the principles of ecologically sustainable development.
- reducing the environmental impact of its discharges into or onto the air, water or land of substances likely to cause harm to the environment,
- re-using and recovering energy, water and other materials and substances, used or discharged by it, by the use of appropriate technology, practices and procedures,

# STREAMWATCH

At this point I will turn to the Streamwatch program established by Sydney Water/Water Board in 1990 and now the second oldest Citizen Science program in NSW. The program provided Sydney Water with direct access to a diverse range of environmental groups and sites across Greater Sydney. Below is a screenshot of Streamwatch sites as they existed in 2018.



Sydney Water gave the program, including IP, along with 4 years of funding to the Australian Museum at the beginning of 2013. The Museum failed to secure on-going funding and eventually a volunteer group, the Greater Sydney Landcare Network, took it on in July this year. Some details: <a href="https://citizensciencepartnerships.com/2019/02/05/taking-the-citizen-out-of-citizen-science/">https://citizensciencepartnerships.com/2019/02/05/taking-the-citizen-out-of-citizen-science/</a>

For reasons unexplained to this day, Sydney Water failed to realise the potential value in leveraging the partnerships established through its Streatmwatch Program. This chapter <u>https://citizensciencepartnerships.files.wordpress.com/2019/02/adams-steamwatch-cooks-river-in-sainty.pdf</u> in a book edited by wetlands expert Geoff Sainty provides a snapshot of volunteer knowledge and commitment within one Streamwatch group.

Last year Sydney Water stepped up as the lead agency for the Our Living River program which aims to deliver safe swimming at selected sites on the Parramatta River. The program's masterplan was funded through an 'enforceable undertakings' agreement between Sydney Water and the NSW EPA. It is important to note that \$millions are provided each year by Sydney Water in licence fees to the EPA and sometimes fines to the EPA, Enivironmental Trust and others. The NSW EPA also has responsibilities to engage with the community under Object 3(b) "(b) to provide increased opportunities for public involvement and participation in environment protection" Streamwatch could have been a beneficiary in a realigned fit for purpose program.

This is an example of the type of comments that are captured on facebook pages with regard to Sydney Water standards on water quality, which in a number of areas fall short of its own expectations: <u>https://www.sydneywater.com.au/SW/water-the-environment/what-we-re-</u> <u>doing/environmentalprotection/index.htm</u>



Esna Lee Gymea Bay baths has sewer coming out into it. I have had signs placed on my property by Sydney water warning of sewer leakage which flow into the baths. Please beware

Like · Reply · 14h



Peter Williamson Setting the bar at 2008 standards....why is it still acceptable to dump raw sewage into our waterways? Sydney Water does this by design each time we have heavy rain. Cash from overdevelopment is not spent on leaking sewage pipes draining into our waterways. No strategy. This picture was Sydney water only last weekend with another dump into gymea bay. They tell me nothing can be done, the problem is too hard.



Like · Reply · 16h

# LEADERSHIP

Under the legislation (see 5A below), the board of Sydney Water

https://www.sydneywater.com.au/SW/about-us/our-people/who-we-are/board-members/index.htm is required to have expertise in business management, protection of the environment and public health. The first of these appears to be well-covered compared in particular to 'protection of the environment'.

## 5A Board of Corporation

- (1) The board of the Corporation is to consist of the following:
- (a) a chairperson, appointed by the voting shareholders of the Corporation,

(b) 9 directors appointed by the voting shareholders, who are to have appropriate expertise, to the intent that the board includes directors with separate expertise in at least the following areas:

- (i) business management,
- (ii) protection of the environment,
- (iii) public health.

# STORMWATER/DETENTION

In addition to addressing comments made previously about characterising customers, this needs to be looked at closely on a whole of catchment basis recognising the mix of ownership of critical assets. The collaborative catchment/sub-catchment approach is needed to establish priorities, optimise environmental outcomes, and communicate effectively with the community. Some of the work that was done in the early 1990s should be reviewed. It is essential to establish a robust framework particularly as Sydney moves from a population of 5 million to 8 million.

Returning to what I identified as the main challenge of Engagement and Education. It was refreshing to see Sydney Water take on the role of lead agency for the Our Living River program. Regardless of the complexity of responsibilities Sydney Water is identified in the community as the prime authority for waterways (freshwater), even where its responsibility is not direct. Sydney Water rightly proclaim their credentials <u>http://www.sydneywater.com.au/SW/water-the-environment/what-we-re-doing/current-projects/managing-stormwater/index.htm</u>

## http://www.sydneywater.com.au/SW/education/water-management/Stormwater/index.htm

Intuitively they are the 'go to' organisation for information, even if it is required to direct visitors to external links – examples of this would be wetlands/detention lands. Sydney Water manages extensive wetlands/detention lands and these along with links to other holdings, catchment by catchment could be shown on the website. Such action would also align with the Greater Sydney Commission's objectives for Green and Blue Grids. It is important that leadership also be taken in ensuring appropriate zoning for such sites. For example a wetlands within a detention basin managed by Sydney Water at the Chullora

Industrial Estate (Freshwater Creek/Chullora Wetlands)



remains zoned as Industrial. It requires Environmental Zoning in the Canterbury-Bankstown LEP. The detention basin in Banksmeadow, in this case managed by Orica, is zoned Industrial and also required rezoning as environmental within the Bayside LEP and also recognised for its values within the 3 Ports SEPP and wider region. Bayside has one of the lowest canopy covers within Greater Sydney and will struggle to meet the Premier's Priority Target of 40% unless agencies are proactive about this priority. In this case more appropriate ownership could have been negotiated when the larger Orica site was undergoing State Significant Development assessment 2009-2014. However, it is not too late to establish. Note statement from Dam Safety NSW regarding community benefits which in this case would apply to vegetation/habitat cover.



Flood retarding basins are urban holding ponds which temporarily store some, or all, of the stormwater runoff from a catchment. They reduce downstream flow rates for small to moderate flood events. Such basins are constructed to reduce the cost of downstream channel upgrades, to reduce downstream flooding impacts or to meet requirements restricting urban catchment outflow peaks.

These basins may have considerable benefits other than flood control for the community (e.g. recreation areas, scenic pond, pollution control etc) and are usually designed to mitigate floods up to the 1 in 100 Annual Exceedance Probability (AEP) flood level. However, when these basins store water they act as dams. Basins which could pose a potential threat to communities downstream are "prescribed" by the DSC under the *NSW Dams Safety Act 1978*. The DSC then maintains continuing oversight of their safety. It should be noted, however, that the DSC does not prescribe road and rail embankments unless they are designed to act as retarding basins.

https://www.damsafety.nsw.gov.au/DSC/Download/Info Sheets PDF/Dam/DSC3E.pdf

Plan of Management(POM) 2018-2018 for Botany Wetlands

https://www.sydneywater.com.au/web/groups/publicwebcontent/documents/document/zgrf/mjax/~e disp/dd\_201370.pdf

Community access to the Wetlands has been identified in the GSC District Plan which Sydney Water reference in their POM:

"Public access There are limited formal public access routes through the wetlands. Greater public access through the wetlands is a frequent recurring request from the community and stakeholders, and is identified in the Eastern District Plan and Sydney's Green Grid Report. Increasing public access is considered the key element in better engaging the community and showcasing the wetlands values."

There are no examples of community collaboration to achieve this and importantly to achieve buyin/social licence for changes to current uses. A collaboration was possible under the Green Army Grants scheme but did not happen because Sydney Water would not bear any costs within the partnership (i.e. matching \$150,000 provided by the Commonwealth for tracks, interpretation and bird hide). Social capital that could have been leveraged from such a collaboration.

#### **ENVIRONMENTAL PROTECTION**

Prevention is identified within the Pollution incident response management plan <u>https://www.sydneywater.com.au/web/groups/publicwebcontent/documents/document/zgrf/mdq1/~</u>edisp/dd\_045259.pdf

# 2 Pollution incident response management

Incident Management is the process of limiting the actual and potential disruption caused by an event. Sydney Water has adopted the comprehensive approach to Incident Management commonly referred to as PPRR, which includes:

- Prevention
- Preparedness
- Response
- Recovery



To effectively manage incidents, all areas of Sydney Water, including our suppliers and business partners, take an integrated perspective in preventing, preparing, responding to and recovering from events.

#### This is part of the Strategy

https://www.sydneywater.com.au/web/groups/publicwebcontent/documents/document/zgrf/mdk5/~ edisp/dd\_099791.pdf Our rapidly growing city will put pressure on natural resources, infrastructure and liveability of communities. Looking forward to 2030 and beyond, we must manage the urban water cycle and land use in new and better ways if we are to meet population growth and create more liveable communities.

# Our environmental sustainability goal and themes

We aspire to provide water services for our city that sustain and enhance the lifestyle of our customers, now and in the future, increasing our standing in the community as a trusted environmental steward by 2030.



## And emphasised is COLLABORATION

## COLLABORATE

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- think differently in delivering liveable solutions that have benefits valued by our customers
- provide a framework for environmental initiatives we may work on collaboratively with our stakeholders and regulators
- demonstrate our strategic environmental outcomes to our customers and community
- help meet our commitment to support and promote the United Nations Sustainable Development Goals, and achieve Goal 6: ensure availability and sustainable management of water and sanitation for all.

But not mentioned in the Sydney Water document is Goal 17 of the SDGs: Partnerships.

The community, through Streamwatch provided assistance in managing this responsibility eg. <u>https://citizensciencepartnerships.com/2015/11/25/water-quality-monitoring-to-ensure-better-quality-development/</u>

By contrast to Sydney Water, Melbourne Water, under the chairmanship of John Thwaites, continues to support its Waterwatch program <u>https://www.melbournewater.com.au/community-and-education/waterwatch-programs</u> Note that Professor Thwaites is also Chair of the Sustainable Development Institute at Monash University and is a member of the UN network that provides advice on the Sustainable Development Goals.



Sydney's most polluted site - Foreshores Beach in Botany Bay - retained its 'very poor' grading, with pollution from sewage overflows discharging to nearby Mill Stream contributing to the result. State of the Beaches 2019 Report released this month <u>https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Water/Beaches/state-of-beaches-2018-2019-statewide-summary-how-to-read-quality-assurance-190312.pdf</u>

Stormwater in urban areas often contains sewage from leakages, overflows or sewer chokes when the sewerage system fails.

Sewage overflows can occur in wet weather when the network has exceeded capacity due to rainwater entering the system. The mix of sewage and rainwater discharges from designated overflow points and drains to waterways, usually via the stormwater system. Overflows from the sewerage system can also occur in dry weather due to mechanical failure or power outage.