

Adv S Rawat

Regional Chief Director

Department of Forestry, Fisheries and the Environment

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5 April 2023

Dear Adv Rawat

ACTIONSA RESPONSE TO THE CITY OF CAPE TOWN'S RESPONDING STATEMENT

ActionSA responds as follows to the City of Cape Town's Response to the Appeal to the Coastal Water Discharge Permits for Camps Bay and Green Point ("the City's Response"), in accordance with the same numbering used in the City's Response:

RE PARAGRAPH 1:

1. The City's Response says that "The marine outfalls mentioned in the appeal namely Camps Bay and Green Point both have preliminary treatment in the form of screenings removal." It is, however, important to note that:
 - 1.1 The screens are either insufficient, or not properly maintained, or not properly used, as evidenced by the numerous testimonials of water users in the areas around these outfalls noting the presence of solid faeces and other sanitary items normally found in sewage¹.
 - 1.2 Even when the screens are used correctly, the pathogens and chemicals contained in the wastewater get through the screens and pass into the sea.
 - 1.3 The Coastal Waters Discharge Permits for Camps Bay and Green Point ("the permits") specifically prohibit anything besides the items listed in Table 1 from being discharged into the sea via the marine outfalls. The release of the items described in point 1.2 above is contrary to the permits.

¹ WESSA Comments on Application for a coastal waters discharge permit for Hout Bay, Camps Bay and Green Point sewage sea outfalls 10 July 2015 Page 2; ActionSA Provincial Chairperson, Michelle Wasserman's personal observations after kayaking out to the end of the Green Point outfall pipe on 13 February 2023 recorded on Twitter at <https://twitter.com/go2Michelle/status/1625350544146530307>

- 2 The permits state that “as the screens remove the foreign elements, it has a cleaning process of washing and drying the elements.” If a “washing and drying” process indeed takes place, then:
 - 2.1 The only elements that get “washed and dried” are items that are bigger than the 3mm screen. These items are then reportedly taken away. There is no washing and drying of that which passes through the screen and into the sea.
 - 2.2 It can be assumed that the water that is used in the “washing” process also flows through the screen and into the sea – carrying that which was washed out of the large items with it.

RE PARAGRAPH 2:

- 3 Despite the “odour control system” and “odour masking system” described in the City’s Response, one can still smell the Hydrogen Sulfide (H₂S) from miles away from the pump station, and particularly along the promenade at Green Point.
 - 3.1 It is clear from the City’s Response that odours are not mitigated at the surface above the diffusers which is why it can be clearly smelled.
 - 3.2 It is important to note that when people smell the odours, they are in fact inhaling the gas that is escaping. These gasses, particularly Hydrogen Sulfide, are highly toxic.
 - 3.3 There are regular complaints from residents about the smell. The concern regarding the bad smell (and therefore the toxic gasses that people are inhaling) that emanates from the marine outfall would have been brought to the attention of the Department of Forestry, Fisheries, and the Environment prior to the issuing of the permits if there had been a proper and more recent public participation process.

RE PARAGRAPH 3:

- 4 Although the exit point of the Green Point outfall is not in the Marine Protected Area, it is right on the border thereof. You cannot tell pathogens and chemicals discharged into the ocean from the outfall where to go, and there are no boundaries that prevent the pathogens and chemicals from being transported into the Marine Protected Area by the currents.

- 4.1 The CSIR Report² states that effluent plumes periodically extend beyond the allowable mixing zones.
 - 4.2 The City of Cape Town's own modelling shows that the sewage plume released from the outfall goes in all directions depending on the weather conditions and the tides, so the dispersion will end up in the Marine Protected Area, even if it is dispersed outside it.
 - 4.3 Recent research by Petrik *et al* has shown that the chemical signature of the sewage from the outfall is dispersed far and wide, and not just 200m from the marine outfall. In fact, the chemical signature of the sewage has been found as far as Robben Island and, at Camps Bay and Hout Bay, more than 1km from the outfall.
 - 4.4 It is important to note that the dispersion model done by CLS, and relied upon by the City of Cape Town in its response, is inaccurate. The CLS dispersion model assumes the plume comes out only once, "instantaneously" (see Fig 5.4 on page 17 of the CLS report), at "a moment in time" (see Fig 4.1 on page 4 of the CLS report). The CLS dispersion model does not take into account what happens when the dispersion is continuous, 365 days per year, 24 hours per day, year after year.
- 5 Although the exit point of the Camps Bay outfall discharges into a Control Zone in the MPA and not into a Sanctuary or No Take Zone, you cannot tell pathogens and chemicals where to go, and there are no boundaries that prevent the pathogens and chemicals that are dispersed into a Control Zone from moving into a Sanctuary or No Take Zone. What is inescapable is that the Camps Bay outfall discharges into an MPA.
- 6 The fact that the Camps Bay outfall was commissioned in 1977 and the Table Mountain Marine National Park MPA was declared in 2004 means that the City of Cape Town has had nearly 20 years to comply with its legal obligations. Once the law governing the Marine Protected Area came into being, the City of Cape Town should have started the process of complying with their legal obligations. Instead, they have delayed compliance for almost 20 years.

² CSIR Report On the Cape Town Outfalls Monitoring Programme-2015/2016 Survey, Published June 2017 page 32

- 7 It may be correct that the marine outfalls were not identified as a risk to the MPA at the time it was declared as they should have been, but a danger is sometimes not immediately identified as such, and the City of Cape Town's population and chemical usage has increased dramatically since 2004.
- 7.1 For example, doctors in the 1940's endorsed cigarettes, and asbestos was used for years before it was found to be harmful. But once one knows about the harm that something is causing, then that knowledge must be acted on. We now know that what currently comes out of the marine outfalls is damaging the species in the Marine Protected Area.
- 7.2 At the time that the marine outfalls were built, the measurement techniques to determine the impact did not exist. They now do. When new information becomes available, it must be considered, and the previous lack of knowledge cannot be used as an excuse for not acting.
- 7.3 It is also highly relevant that the circumstances that were present in 2004 have changed. Since the declaration of the MPA 20 years ago, the population of the City of Cape Town has more than doubled (from 2.1 million to 4.89 million since 1994) thereby more than doubling the amount of effluent being pumped into the sea. The use of modern chemicals and hormones has also increased exponentially since then. WESSA, in its comments on the City of Cape Town's application for the coastal waters discharge permit in 2015, pointed this out as follows:

*"When these outfalls were commissioned in the decades previous, it could not be expected of the engineers to anticipate the sheer number, complexity and toxicity of chemicals that are now readily disposed, both legally and illegally, into these sewerage systems."*³

³ WESSA Comments on Application for a coastal waters discharge permit for Hout Bay, Camps Bay and Green Point sewage sea outfalls 10 July 2015 Page 2

7.4 Furthermore, the previous Camps Bay permit allowed the discharge of 2 million and 70 thousand m³ pa (2 000 070 m³ pa). The new Camps Bay permit allows 4 million, one hundred and twenty four thousand, five hundred cubic meters pa (4 124 500 m³pa or 11 300 m³ /d). While existing outfalls may be permitted by the Minister, no new outfalls are allowed within a Marine Protected Area and yet this new permit allows for the discharge of an additional 2 million, one hundred and twenty four thousand, four hundred and thirty cubic meters pa. This is, in effect, an almost doubling of the discharge volume, having the same effect as a new outfall. This is inconsistent with the objects of, and stipulations contained in, South African environmental legislation.

RE PARAGRAPH 4:

8 Numerous reports, including that of the City of Cape Town, do in fact show that beaches are polluted with effluent containing pathogens, chemicals, pharmaceuticals, and toxins, for example:

8.1 A study conducted in 2017 by Petrik *et al*/ analysed samples taken from rock pools at low tide near Granger Bay, and under beach sand. The results showed intermittently high levels of microbial pollution and 15 pharmaceutical and common household chemicals were identified. The study, using “chemical fingerprinting” traced the chemicals back to the marine outfall.

8.2 The November 2022 Marine Outfalls Presentation to the City of Cape Town Section 80 Committee⁴ shows that numerous chemicals and pharmaceuticals have been found at various sites along the coastline.

8.3 The following beaches are zoned red (unsafe for swimming) based on actual enterococci levels for a 5 year rolling period calculated as at 29 March 2023: Three Anchor Bay, Rocklands Beach, Milton Beach tidal pool, Saunders Rocks tidal pool, Camps Bay tidal pool A, Camps Bay tidal pool B, Beta Beach, Granger Bay, Mouille Point, Green Point Park Road, Rocklands, Milton beach tidal pool (outside), Sunset beach tidal pool (outside), Saunders' Rocks, Saunders' Rocks tidal pool (outside), Maiden's Cove tidal pool 1 (outside). This would not be the case if beaches and tidal pools were not polluted.

⁴ at page 31

- 9 It should be noted that the “contour plots” used in the CLS Environmental Summary Report on Modelling and Measurement Programmes: Camps Bay Outfall referred to in paragraph 4 of the City’s Response (“the CLS report”) are computer generated and do not reflect real microbial data and may not produce accurate data.
- 10 The following information from the CLS report is important:
- 10.1 At Table 5.4 on page 15 thereof, it shows how the Enterococci count obtained in the winter of 2020 reaches a count of 1900 which is unacceptably high.
 - 10.2 At page 16 it states that “The highest counts are recorded in the swash zones of the beaches.”
 - 10.3 At page 16 of the CLS report it is conceded that: “The highest enterococci count occurred close to the outfall diffuser bank, but moderately elevated counts were distributed across the survey area, except for offshore, indicating a more pervasive influence of the outfall than is evident in the tabulated data”.
- 11 While there are three stormwater pipes that discharge into Three Anchor Bay, their impact on the pollution on the beaches is negligible for the following reasons:
- 11.1 The data given is for 2018 / 2019 which was the period of a severe drought when there was no stormwater. The pollution indicated in the 2018 / 2019 data could therefore not have come from stormwater.
 - 11.2 Even now, outside the drought, the volumes of stormwater compared to outfall discharge is negligible.
 - 11.3 The “chemical fingerprint” of the pollution on the beaches links it directly to the marine outfalls⁵.
 - 11.4 This means that the majority of the pollution of the beaches is not coming from the stormwater system, but from the marine outfalls⁶.

⁵ Herbicides in Camps Bay (Cape Town, South Africa), supplemented Cecilia Y. Ojemaye a , Chionyedua T. Onwordi a,b , Daniela M. Pampanin c , Magne O. Sydnes c , Leslie Petrik 2020 <https://doi.org/10.1016/j.scitotenv.2021.146057>

⁶ “Data revealed that this Atlantic Ocean marine protected environment is affected by the presence of numerous and diverse emerging contaminants that could only have originated from sewage discharges” page 1, “The burden of emerging contaminants upon an Atlantic Ocean marine protected reserve adjacent to Camps Bay, Cape Town, South Africa” 2022 <https://doi.org/10.1016/j.heliyon.2022.e12625>

RE PARAGRAPH 5:

12 The City's Response says that "the effluent discharges are not specifically in contravention of the CMP's Policy Statement or the Chapter on Coastal Water Quality." It is clear from this wording that, while the contravention is not specific, there is indeed a contravention.

12.1 Coastal Water Quality must be compromised in Camps Bay where the mixing zones cover approximately 235 953 m² of a Marine Protected Area in which microbial levels probably exceed the permissible levels for safe surfing, swimming, or kayaking.

12.2 Coastal Water Quality must similarly be compromised In Green Point where the mixing zones cover approximately 4 156 428 m² in which area microbial levels will probably exceed the permissible levels for surfing, swimming, or kayaking.

RE PARAGRAPH 6:

13 The City's Response that "marine outfalls are common practice across the world" leaves out three important facts:

13.1 Firstly: while other countries "have a commonality in discharge volumes with the CCT outfalls [they] differ in pre-discharge treatment levels with higher treatment levels being applied." (See the CLS report at page 1). The CLS report sets out in detail (on page 1) how:

- (a) Sao Paulo uses preliminary treatment but adds chlorination to reduce human health risks.
- (b) Florida, California, Australia and New Zealand employ secondary treatment, which, in Australia, allows the recovery of fresh water for other uses.
- (c) Current recommendations on Australian policy arising from cost / benefit analyses indicate that tertiary treatment, with freshwater recovery, before discharge will be required in future.
- (d) Norway uses secondary treatment prior to discharge and the outfalls are far further from land and at greater depths.

13.2 Secondly: The marine outfalls in other parts of the world are not discharging their effluent into Marine Protected Areas.

13.3 Thirdly: Cape Town coastal zones hosts a unique assemblage of marine biota and endangered species such as the African Penguin, that are being exposed to toxic chemicals originating from sewage.

14 The City's Response that "more treatment could be undertaken before final discharge" is encouraging. It must, however, be pointed out that, while the City of Cape Town has "commissioned a study to provide the City with the most economical and environmentally acceptable options," these studies have been done before⁷.

14.1 It will always be more economical in the short term to continue with the status quo. It is the cost to human health, as well as externalized costs to the marine environment, that must be calculated when making calculations and decisions about the way forward.

14.2 In their present form, the permits (at clauses 11.1 and 11.2) require the City of Cape Town to "investigate methods for continuous improvement of the effluent quality" and to "investigate means of optimizing dispersion at sea and minimizing the impact on the receiving environment." This is not adequate.

14.2.1 This requirement needs to be strengthened to comply with the duty of care and remediation stipulated in Section 58 of the ICM Act and Section 28 of NEMA.

14.2.2 It is submitted that the permits must require the City of Cape Town, within 3 years:

- a) To investigate and implement methods for improvement of the effluent quality to a level where harmful pathogens and chemicals are not released into the receiving environment; and
- b) To investigate and implement means of optimizing dispersion at sea and minimizing the impact on the receiving environment.

⁷ See Neil Overy's paper "Pollute the bay and poison the people': A short history of the Green Point marine sewage outfall, 1882–1992" in which he sets out "how narrow economic interests from the 1880s until today have driven the City's commitment to the Green Point outfall despite a long history of opposition from citizens and scientists and repeated instances of pollution and ill-health."

15 The City's Response that "Research shows that the impact of the outfalls are largely constrained to the allowable mixing zones" is incorrect. Professor Petrik's research has shown that the dispersion is far greater than the allowable mixing zone and high accumulation of sewage related chemicals is present in marine biota collected more than a kilometer away from the discharge.

15.1 The dispersion model done by CLS and relied upon by the City of Cape Town in its response, is inaccurate. The CLS dispersion model assumes the plume comes out once, "instantaneously" (see Fig 5.4 on page 17 of the CLS report), at "a moment in time" (see Fig 4.1 on page 4 of the CLS report). The CLS dispersion model does not take into account what happens when the dispersion is continuous, 365 days per year, 24 hours per day, year after year.

15.2 Professor Leslie Petrik's research has shown, with real data, that bioaccumulation factors of diverse chemical contaminants from sewage that are found in marine biota are unacceptably high. This data was already available since 2016 but has not been incorporated in the decision making process.

16 The City's Response that the "outfalls are operating within legislated standards and guidelines" is incorrect.

16.1 South African Water Quality Guidelines for Coastal Marine Waters Guideline⁸s state that "water should not contain litter, floating particulate matter... scum...or any other similar floating materials and residues from land-based sources in concentrations that may cause nuisance", yet there is clear evidence from satellite imagery⁹ and anecdotal evidence¹⁰ that objectionable matter is frequently observed floating in the vicinity of the marine outfalls.

⁸ Republic of South Africa, Department of Environmental Affairs (2012). South African Water Quality Guidelines for Coastal Marine Waters. Volume 2: Guidelines for recreational use. Page ii

⁹ "This conclusion is based on the visibility of effluent reaching the sea surface in satellite images provided in Google Earth" - CSIR Report On the Cape Town Outfalls Monitoring Programme-2015/2016 Survey, Published June 2017 page 32;

¹⁰ ActionSA Provincial Chairperson, Michelle Wasserman's personal observations after kayaking out to the end of the Green Point outfall pipe on 13 February 2023 recorded on Twitter at <https://twitter.com/go2Michelle/status/1625350544146530307>

16.2 Marine Outfall Pipes are subject to distinct permitting requirements in terms of Section 69 of the Integrated Coastal Management Act (which the permits have been issued under), and Section 48A of the National Environmental Management: Protected Areas Amendment Act (NEMPA).

16.2.1 Both permits must be in place in order for the City of Cape Town's use of the Marine Outfall Pipes to be lawful, and neither can serve as a substitute for the other.

16.2.2 The City of Cape Town does not have the permit required in terms of NEMPA.

16.2.3 The City of Cape Town is therefore contravening NEMPA, which states at Section 48A that:

"Despite any other legislation, no person may in a marine protected area:

(d) Discharge or deposit waste or any other polluting matter.

(e) In any manner which results in an adverse effect on the marine environment, disturb, alter or destroy the natural environment or disturb or alter the water quality or abstract sea water.

(f) Carry on any activity which may have an adverse effect on the ecosystem of the area."

17 The City of Cape Town's emphasis on the outfalls constituting "a fraction of Cape Town's wastewater" fails to consider the tourist income which many people depend on, which would dry up should tourists stop coming to Cape Town due to pollution of beaches. As WESSA cautioned the City of Cape Town in 2015 (8 years ago):

*"We believe that to continue to implement the status quo is to jeopardise one the key economic drivers of Cape Town and its hard-won Blue Flag status tourism beaches, and will place the city at a similar reputational and economic risk that Durban has already experienced."*¹¹

¹¹ WESSA Comments on Application for a coastal waters discharge permit for Hout Bay, Camps Bay and Green Point sewage sea outfalls 10 July 2015 Page 3

18 The City of Cape Town’s reliance on “limited resources” fails to consider the fact that the local residents have been charged a sewer levy for years, which should be spent on the service for which it has been gathered.

RE PARAGRAPH 7:

19 The City’s Response says that “from 1 July 2021 to June 2022, Total Kjeldahl Nitrogen and Ammonia are the only parameter which are below 90%”. However:

19.1 Out of the 11 substances listed in Table 1 of the Permit, the limits set for 4 of them (Total Suspended Solids, Total Kjeldahl Nitrogen, Ammonia and Chemical Oxygen Demand) are regularly not met.

19.2 The CLS report states (at page 3) that the effluent was “markedly noncompliant” for Total Suspended Solids, Chemical Oxygen Demand, Total ammonia nitrogen and aluminum.

19.3 Moreover, the specified limit of 60mg/l Ammonia is harmful to fish and cannot be in alignment with MPA objectives (unionised ammonia begins causing gill damage at approximately 0.05mg/l and death at approximately 2.0 mg/l).

20 The results provided in the City’s Response in their Annexure “A” (labelled Marine Outfalls compliance) also do not show all items that are going out the outfalls.

20.1 The permits issued by the Department of Forestry, Fisheries & the Environment, specifically exclude anything (“no other material”) other than the effluent and its constituents authorised by the permits. The list of what is authorised by the permits is contained in Table 1. Despite this, the City of Cape Town is discharging *inter alia* the following material which is not allowed in terms of the permits:

(a) The chemicals listed on page 18 of the CLS report i.e. 37 compounds including “ofloxacin, valsartan, venlafaxine, ciprofloxacin, alprazolam, citalopram, and bezafibrate being represented at concentrations <5 ng/l, salicylic acid at 179 ng/l, and desloratadine 112 ng/l.”

(b) Microplastics which are contained in the effluent, and which are smaller than the 3 mm screens and are therefore discharged into the sea with the effluent.

20.2 None of the above are listed in Table 1 of the permits, none are in Annexure A of the City's "Marine Outfall Compliance" list, but are all being discharged out of the marine outfall in contravention of the permits.

21 Given that the City of Cape Town is, by its own admission (and as shown by research), currently discharging elements that are not contained in Table 1 of the Permit, into the sea via the marine outfall, it is important to test for various components to ensure that the discharge meets the required standards and does not harm the marine environment. In this regard:

21.1 The permit conditions relating to which elements and substances should be sampled and the sampling protocol thereof is inadequate and should be adjusted prior to the issuing of any further permits.

21.2 The testing frequency and sample quantity needs to be better defined based on the flow rate or some other means which is more indicative of reality (The permits emission limits are measured in mg/litre at a monitoring weekly frequency. That means that only 1 litre may be tested out of 35 million litres. This is clearly totally inadequate.)

22 Given that the City of Cape Town is, by its own admission, currently in contravention of the permits, it is imperative that the permits insist on an oversight committee where at least one, but preferably more, interested and affected parties are involved. The permits condition addressing this issue is far too weak presently, in that:

22.1 In their present form, the permits say that the Permit Advisory Forum (PAF) "may" be facilitated by an independent facilitator. This is not adequate. The permits should stipulate that the PAF "must" be facilitated by an independent facilitator.

22.2 The permits need to be far more assertive and stipulate by when the Compliance Review Committee is to be formed, when they must meet and that independent specialists and/ or interested or affected parties must be represented on that Committee. This Committee must have the powers to inspect the site and the reporting systems. It must also be able to modify the monitoring criteria if so required.

RE PARAGRAPH 8:

23 The City's Response states that "the outfall largely meets all requirements". This is not correct, as shown in paragraphs 19 and 20 above.

RE PARAGRAPH 9:

24 The City's Response shows that the advert calling for public participation was placed in the newspaper in 2015.

24.1 No responses were given in respect of the issues raised by the public at that time, and the concerns raised by respondents were not addressed.

24.2 The advert was placed 8 years ago. Since then, there has been a large amount of research done and evidence gathered in respect of the impact of the marine outfall on the environment. There should have been a new public participation process in terms of which this new information could have been submitted and considered.

24.3 The permits should, at the very least, be referred back for further public participation to allow the information, research and experiences that has come to light since 2015 to be raised by the community and relevant stakeholders.

25 The City's Response that "there is no evidence that the public is swimming in excrement" is incorrect.

25.1 The 2017 CSIR Report¹² predicted that the effluent from the outfalls would reach the shoreline 10% of the time.

25.2 The CSIR Report¹³ also states that "It is, however, not impossible that effluent-derived constituents are reaching the shoreline under favourable wind and sea states, even if only periodically and in a much diluted form. Regardless of the source, faecal indicator bacteria colony forming unit counts in shoreline waters at most sites are periodically high enough to suggest a risk to human health through exposure to cooccurring pathogenic microorganisms."

¹² CSIR Report On the Cape Town Outfalls Monitoring Programme-2015/2016 Survey, Published June 2017 page 8

¹³ At page 125

- 25.3 The results of water tests conducted by the City of Cape Town at Camps Bay and Clifton Beach show that levels of E. Coli and Enterococcus often exceed the permissible limits and on occasion reach critically high concentrations.
- 25.4 The City of Cape Town's own studies from over 10,000 sample bacterial tests at 90 sites along 307 km of the Peninsula coastline, have shown gross fecal pollution in many coastal sites around the Peninsula (City of Cape Town: Know your coast, 2019). Thus, it is common cause that there are few sites around the Peninsula that are uncontaminated by sewage.¹⁴
- 25.5 The University of the Western Cape's independent research has confirmed very large spikes of bacterial contamination on the city's beaches and in the ocean in the vicinity of the marine outfalls¹⁵.
- 25.6 The firsthand evidence of water users around these outfalls for many years provides evidence of "smells, floating sewage-related solids/wastes and that of infections resulting from this pollution."¹⁶
- 25.7 The CLS report at page 16 states that "The highest counts are recorded in the swash zones of the beaches."
- 25.8 Research has shown that there are chemicals on the beaches which indicate the presence of effluent from the outfalls. These chemical signatures are a strong pointer to there being persistent microbial contamination on the beaches¹⁷.
- 25.9 Since it is undisputed that there is sewage in the swash zones on the beaches, then it must be accepted that the sewage could only have reached these points if it came from the sea in which people swim. It is also important to note that swash zones (where the sea water flows over the sand) is the area in which babies and small children usually play.

¹⁴ Herbicides in Camps Bay (Cape Town, South Africa), supplemented Cecilia Y. Ojemaye a , Chionyedua T. Onwordi a,b , Daniela M. Pampanin c , Magne O. Sydnes c , Leslie Petrik 2020 <https://doi.org/10.1016/j.scitotenv.2021.146057>

¹⁵ Environmental and Nano Sciences Group Department of Chemistry University of the Western Cape Letter to Mr Gordon Khauoe Department of Environmental Affairs 14 September 2017

¹⁶ WESSA Comments on Application for a coastal waters discharge permit for Hout Bay, Camps Bay and Green Point sewage sea outfalls 10 July 2015 Page 2

¹⁷ Herbicides in Camps Bay (Cape Town, South Africa), 2020 *supra*

RE PARAGRAPH 10:

26 Paragraphs 16.1 above is repeated.

27 The similarity between the situations in KZN and Cape Town is that, in both, the failures of local government are causing raw sewerage to enter the sea and pollute the ocean, shores and beaches.

28 As pointed out by WESSA, *“It must be considered that even the perception that the coastal waters of Cape Town are becoming too polluted to safely access will have drastic impacts on foreign and local tourism to the city.”*¹⁸

RE PARAGRAPH 11:

29 Conventional wastewater treatment does remove some Contaminants of Emerging Concern (CECs) as evidenced by CEC levels contained in sewage sludge. Treatment at a Waste Water Treatment Works (WWTWs), while not removing CECs entirely, would reduce the amount of CECs discharged into the environment compared to the amounts contained in screened only sewage.

30 While land-based WWTWs may require funding, this does not excuse the City of Cape Town of its mandate to manage sewage in such a way as to minimise risk to human health and the environment. The City of Cape Town is mandated to come up with a solution and remove the Contaminants of Emerging Concern from the effluent.

31 If it is possible for the City of Cape Town to turn effluent into drinking water, then it must be possible for them to remove the Contaminants of Emerging Concern from the effluent. On 31 October 2022 the Mail & Guardian reported¹⁹ that Michael Killick, the Director of bulk services for water and sanitation in the City of Cape Town announced that “within five years the city’s residents and visitors will drink purified sewage water” and that the City would have their “own laboratory with control and monitoring systems throughout the process. We’ll test for herbicides, pesticides, and contaminants of emerging concern,

¹⁸ WESSA Comments on Application for a coastal waters discharge permit for Hout Bay, Camps Bay and Green Point sewage sea outfalls 10 July 2015 Page 2

¹⁹ <https://mg.co.za/environment/2022-10-31-cape-town-has-found-a-permanent-solution-to-water-scarcity-recycled-sewage/>

which are hormones, even caffeine, pharmaceuticals, and E coli. So we'll be able to pick up if there are any issues.”

32 The same Mail & Guardian article reports that “Namibia has provided treated sewage as drinking water for its city residents since 1968. Their plant, which initially treated 4.3 million litres of water a day, was refurbished in 2002. It now produces 21 million litres of drinking water daily.”

33 Despite the City's protestations about cost implications, it will remain in contravention of the permits if it continues pumping CEC's out of the marine outfalls.

RE PARAGRAPH 12:

34 Recent studies of penguins show that the chemical signature from the effluent from the marine outfalls is present in their flesh. This is a species in decline, and this would be adding to the stress they would experience. The results of this study will be published soon.

Thank you for providing ActionSA with the opportunity to respond to the City's responding statement.

Yours faithfully

Michelle Wasserman
Western Cape Provincial Chairperson
ActionSA
(unsigned as sent electronically)