



Incidents Report Form

Nature Foundation St Maarten

Incident name: Pumping Sewage at Puerta del Sol into the Simpson Bay Lagoon

Date: 10 December 2020 and 11 December 2020

Time: 8:45-10:00 am

Staff members NFSXM involved: Melanie Meijer zu Schlochtern (Manager Nature Foundation St. Maarten)

Involved organizations: Management Puerta del Sol and Treatment plant; Mr. Dudley Plantijn, GeoDesign Mr. Franco Pensso

NFSXM equipment used: Vehicle and Coliform Testing kit

Summary of the incident:

The Nature Foundation received a report regarding possible sewage being pumped into the Simpson Bay Lagoon by Simpson Bay Yacht club, behind Plaza Puerta del Sol business building. Upon arrival at the location a strong sewage scent was noticed directly on the 10th of December 2020. It was explained to the Nature Foundation that the sewage treatment system of Puerta del Sol has been not functioning for months and bad scents and raw sewage was seen being pumped into the lagoon on a daily notice, mainly at night. It was explained that several complains have already been made to the VROMI Minister in written and VROMI inspection have visited the location, but sewage continues to end up in the Simpson Bay Lagoon.

The pipe ending up in the lagoon originating from the treatment system of Puerta del Sol showed grave concerns, as a very bad sewage scent was emerging from the pipe and small pieces of possible toilet paper and feces were seen floating out of the pipe. Also, in the surrounding of the pipe and sewage treatment plant a strong sewage scent was smelled. When accessing the location, the scent was also very strong right by the well know tourist attraction 'boat tour in the lagoon', sewage will be the first thing tourist smells when going on this boat tour.

Two water samples were taken to indicate if total coliform bacteria are present, this is in inaccurate test however it does indicate if sewage might be present. Test results will be available in 48 hours. However, the very strong sewage scent of the collect samples (small sample) show that raw sewage is present, these sample tubes will be kept at Nature Foundation as evidence.

The Nature Foundation explained and showed the situation to Franco Pensso of GeoDesign, part of the management of Puerta del Sol, also to Mr. Dudley Plantijn was spoken to over the phone. The Foundation asked to directly stop the pumping of the wastewater from their sewage treatment system, and to pump out the sewage using sewage trucks until the situation is 100% solved and tested to be clean. The Foundation will revisit the location to see if the treatment system stopped pumping.

On the 11th of December the Nature Foundation revisited the location and noticed the continuation of sewage being pumped into the lagoon, a large sewage scent was recorded, and even larger pieces of



toilet paper were seen floating around from the pipe of Puerta del Sol. The Foundation directly notified the GeoDesign company at Puerta del Sol, however Mr. Pensso was not present. Also, Mr. Mario Jones from the VROMI inspection department was notified, the urgency of the situation was explained to him. Mr. Pensso was reached later in the day by phone, the situation was explained to him and the need of daily sewage trucks to pump until the sewage treatment plant is repaired. The Nature Foundation advised him to conduct water quality testing (SLS Lab) before resuming the Wastewater Treatment plant, these results should fall within the norms of healthy waters. Later that day we received a message from Mr. Pensso with the following: "Today 2 trucks were by the building pumping out the water from the treatment plant. There is schedule a daily truck until the problem is solved". Also, the inspection department mentioned that they will monitor the situation.

On the 12th of December both samples taken on the 10th of December which were tested for total coliform came back positive, showing that total coliform is present in the samples taken from the water from the Treatment plant. This could indicate that the water is contaminated and has too high levels of coliform, however samples should be tested by the SLS lab to determine the height of the levels to indicate the severance of the coliform level. The Foundation expect that to be very high, as the samples have a very strong 'sickening' smell of sewage.

Biological and environmental info incident:

Pumping raw sewage into the marine environment can lead to serious health issues for surrounding inhabitants. Swimming, diving or walking in water contaminated with fecal bacteria can result in gastrointestinal illness (diarrhea or vomiting), respiratory illness, and infections of the skin, ear, eye, sinus, and wound infections.

Fecal contaminated waters can impact the environment and marine life tremendously, as high nutrient input due to poor sewage treatment creates algae blooms. Poor sewage treatment causes raw untreated sewage finding its ways into water bodies and because it is rich in nitrogen compounds such as nitrates and ammonia, it causes algal bloom. Algae blooms increase the competition for oxygen, leading to an imbalance in the aquatic ecosystem and suffocation of aquatic animals like fish and other marine life, ending up with dead and stinky waters. Marine life species may also be impacted directly, such as the sea turtle disease Fibropapillomatosis which can be enhanced by polluted waters.

Input of high concentrations of nutrients have a very large impact on coral reefs and is actually the main cause of widespread death of coral cover across the Caribbean. Coral reefs are the most productive and species rich marine ecosystems and are critical for fisheries, tourism, shore protection and biodiversity of tropical islands. However, they are the most nutrient sensitive of all habitats, requiring the lowest external inputs to avoid eutrophication and habitat degradation caused by excessive growth of algae, as algae thrive and overgrow corals due to additional nutrient input.

Advise from the Nature Foundation:

The Foundation advises to directly stop the operation of the sewage treatment plant until it is proven that clean and healthy water is being pumped into the lagoon instead of sewage water. The wastewater emerging from the treatment plant should be tested often by an independent laboratory in order to ensure these missteps are not being continued. Therefore, the Foundation advises to not allow any pumping of their treatment plant water into the lagoon until multiple tests show clean results (tested by

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SLS lab). In the meantime, sewage pumping trucks should be used to dispose the wastewater from the treatment plant, until it is proven that the water from the treatment plant is within the norm than its operation could resume.

The very strong sewage scent clearly shows that currently raw sewage is being pumped into the Simpson Bay lagoon by Puerta del Sol their treatment plant. According to the National Waste Ordinance (AB 2013, GT nr. 135) and the National Ordinance Wastewater (AB 2013, GT no. 142, COUNTRY REGULATION) it is prohibited to discharge and or store environmentally untreated, damaging and or dangerous substances (liquids) into the soil or surface waters (https://decentrale.regelgeving.overheid.nl/cvdr/xhtmloutput/historie/Sint%20Maarten/208544/208544_3.html).

It is clearly that Puerta del Sol is in violation with these ordinances. The effluent norms, which have been incorporated in the conditions of Puerta del Sol their Hinderance permit, are derived from "The End Report Environmental Norms, Netherlands Antilles, June 11, 2007 and are shown here:

1. The following table (1) denotes the maximum quantity of the mentioned parameters allowed for the Effluent Quality discharges of the WWTI

Table 1

Parameter	Unit	Value (yearly average)	General Max. Value*
BOD5	mg O ₂ /l	30	50
COD	mg O ₂ /l	150	150
Nitrogen	mg N/l	5	5
Phosphorus	mg P/l	1	1
Fecal Coli form	100 ml ⁻¹	200	200
Chlorine	mg/l	na	na
Suspended Solid	mg/l	30	30
pH	-	6-8	6-8

* Maximum value at any given moment.

The Hinderance permit also mentions that due to the close proximity to the lagoon, it is essential that the effluent norms are complied to and monitored stringently. However, it is clear that this is not happening considering the very strong sewage scent recorded. The current wastewater being released by Puerta del Sol treatment plant clearly will exceed the quantities permitted under the Hinderance permits, as the sewage scent can be smelled from far and raw sewage is visible by eye, including floating pieces of toilet paper and possible feces.

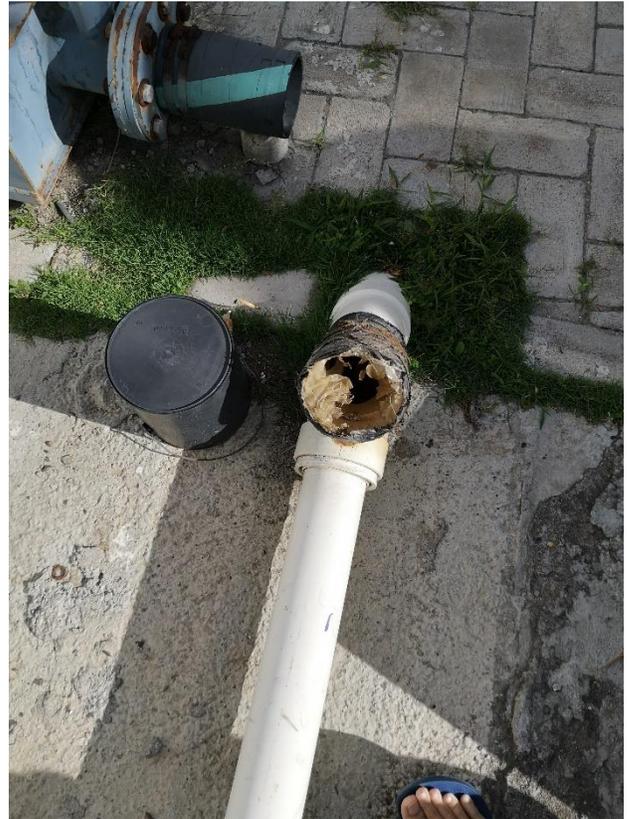
Besides the serious negative health effects and environmental impacts, the sewage scent can seriously harm the tourist industry, as currently tourist their first experience is the strong smell of sewage instead of enjoying their vacation when visiting close to this location.

The Nature Foundation will revisit the location in the coming weeks, to record if the activity has stopped. Videos are attached to the report showing pieces floating in the water being released from the Puerta del Sol treatment plant into the Simpson Bay Lagoon. The Foundation has small samples of the sewage water collected in their office, opening the sample tubes results in a very strong sewage scent filling the room.

Pictures



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