

SECTION 14 INCIDENT REPORT (*Waste Management and Pollution Control Act*)

Date and Time of Notification:	Sunday 27 th December 2020, 16:59 hrs
Person / Company:	Power and Water Corporation (PWC)
Incident:	Discharge of highly diluted sewage from sewerage network, Sewage Pumping Stations (Ludmilla SPS and Lakeside Drive SPS)

<p>(a) the incident causing or threatening to cause pollution</p>	<p><i>i. Description of the waste that was discharged.</i></p> <p>Raw and highly diluted sewage</p> <p><i>ii. Indicative wastewater quality for the discharge.</i></p> <p>Inflow data to Ludmilla WWTP was on average 29.6ML/day, and rainfall leading up to the overflow was 47mm for the preceding 3 days (Darwin Airport – 014015), meaning that flows for the day were above twice the average dry weather flows. At 21:00hrs, flow into Ludmilla was 2.63ML/hr, which is equivalent to 63ML/day; therefore there was between 3x and 5x average dry weather flows just prior to the event, meaning a lot of dilution was present. Please refer to the following table for indicative wastewater quality.</p> <p style="text-align: center;">Table 1: Inflow to Ludmilla Wastewater Treatment Plant</p> <table border="1" data-bbox="619 1335 1414 1505"> <thead> <tr> <th>Inflow volume</th> <th>median inflow kL</th> <th>median E coli</th> <th>90th percentile inflow kL</th> <th>90th percentile E coli</th> </tr> </thead> <tbody> <tr> <td>below ADWF (14.5 ML/day)</td> <td>11,040</td> <td>11,199,000</td> <td>12,925</td> <td>15,531,000</td> </tr> <tr> <td>>ADWF</td> <td>15,274</td> <td>9,804,000</td> <td>22,206</td> <td>17,148,300</td> </tr> <tr> <td>>2x ADWF (29.0 ML/day)</td> <td>31,673</td> <td>4,884,000</td> <td>37,166</td> <td>14,385,600</td> </tr> <tr> <td>>3x ADWF (43.5 ML/day)</td> <td>43,629</td> <td>4,611,000</td> <td>50,506</td> <td>12,843,600</td> </tr> <tr> <td>>5x ADWF (72.5 ML/day)</td> <td>71,558</td> <td>5,002,000</td> <td>78,578</td> <td>5,905,200</td> </tr> <tr> <td>>WDL limit (89.5 ML/day)</td> <td>102,445</td> <td>102,445</td> <td>148,575</td> <td>13,704,400</td> </tr> </tbody> </table> <p style="text-align: center;">(ADWF= Average Dry Weather Flow ~14.5 ML/day in 2013/14)</p> <p><i>iii. Volume of the waste that was discharged.</i></p> <p>The volume of wastewater discharged is unknown. No telemetric monitoring occurs at the sites of discharge.</p>	Inflow volume	median inflow kL	median E coli	90th percentile inflow kL	90th percentile E coli	below ADWF (14.5 ML/day)	11,040	11,199,000	12,925	15,531,000	>ADWF	15,274	9,804,000	22,206	17,148,300	>2x ADWF (29.0 ML/day)	31,673	4,884,000	37,166	14,385,600	>3x ADWF (43.5 ML/day)	43,629	4,611,000	50,506	12,843,600	>5x ADWF (72.5 ML/day)	71,558	5,002,000	78,578	5,905,200	>WDL limit (89.5 ML/day)	102,445	102,445	148,575	13,704,400
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<p>(b) the place where the incident occurred</p>	<p><i>i. Description of the PWC asset from which the discharge occurred.</i></p> <p>Ludmilla sewage pumping station (SP042), located at the end of Nemarluk Drive, Ludmilla.</p> <p>Lakeside Drive sewage pumping station (SP008), located at lot 9076 Lakeside Drive, Alawa.</p>																																			

	<p><i>ii. GPS coordinates of the discharge point from the PWC asset, and the final coordinates of the final discharge point.</i> (Ludmilla) Discharge Point: 130.8501056E, -12.4145620S Final Discharge Point: 130.8500007E, -12.4150699S</p> <p>(Lakeside Drive) Discharge Point: 130.8656243E, -12.3806474S Final Discharge Point: 130.8656257E, -12.3804945S</p> <p><i>iii. Indicate any locations nearby to the discharge point where public can gain ready-access, such as public open spaces through which the discharge moves.</i></p> <p>Access to the public is possible but unlikely, as the discharge points are behind a pedestrian fence or within a creek. Due to weather conditions likelihood of people visiting this areas is low.</p>
<p>(c) the date and time of the incident</p>	<p><i>i. The time and date of commencement and cessation of the discharge.</i></p> <p>The Ludmilla SPS overflow started shortly after 21:30hrs on 26/12/2020 when the high-level alarms were triggered. The Lakeside Drive SPS started to overflow at approximately 19:15hrs on 26/12/2020. The time that the overflows ceased is not determinable at present, and will be advised as soon as possible.</p> <p><i>ii. How PWC were notified, or became aware of the discharge.</i></p> <p>High-level alarms from the pump stations, as well as other system alarms notified PWC operations staff of the overflows.</p> <p><i>iii. The process by which the discharge occurred.</i></p> <p>A monsoonal weather event has inundated the sewer systems with stormwater through a combination of inflow and infiltration. This led to the pump stations becoming overwhelmed, as inflow exceeded the pumping capacities.</p> <p><i>iv. The reason why the discharge occurred.</i></p> <p>As per (c) iii.</p>
<p>(d) how the pollution has occurred, is occurring or may occur</p>	<p>As per (c) iii & (c) iv.</p>
<p>(e) the attempts made to prevent, reduce, control, rectify or clean up the pollution or resultant environmental harm caused or threatening to be caused by the incident</p>	<p><i>i. Confirmation signage and fencing has been erected, as appropriate.</i></p> <p>No signage or fencing was erected in this instance; as the spills discharged to creek lines.</p> <p><i>ii. Decontamination of the site as appropriate.</i></p> <p>Clean up consistent with Sewage Spills/Overflow Response Work Instruction as appropriate to the location, and to minimise risk to the Environment. Sites were inspected for any gross pollutants of which none were observed.</p>

(f) the identity of the person notifying the NT EPA	PWC Environmental Team on behalf of Water Services
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Appendix A – Location Map (Ludmilla SPS)



Appendix B – Location Map (Lakeside Drive SPS)

