Padre Isles bacterial testing. June 2019.

The following summarizes the results of bacterial testing of select waters in the canals of Padre Isles subdivision, Corpus Christi, Texas as a result of a malfunctioning sanitary sewer line which allowed an overflow of raw sewage through a manhole which subsequently entered a canal via a storm drain. The incident occurred about midday on June 3, 2019, near the intersection of Gypsy and Atascadera avenues.

The sewer line was unclogged by City of Corpus Christi Utility crews by mid-afternoon. None of the crew interviewed could provide an estimate of the volume of overflow but did state that they were sure the overflow drained into only a single canal based on ammonia readings taken that afternoon in the nearby canals. The indicated canal was the one behind the homes on Atascadera and Bounty Avenues, which intersects with the canal behind Cuttysark and Cruiser Streets. These canals are indicated on the accompanying map showing sampling locations.

It was suggested to PIPOA staff that homeowners on the affected canal be notified of the incident and advised not to swim in the waters until further notice. The water quality consultant subsequently ordered microbiological supplies necessary to carry out enumeration of "enterococci bacteria" in canal waters employing the EPA recommended method 1600 (mEI membrane filter procedure). The enterococci group of microorganisms can come from a variety of warm blooded animals, including humans. EPA criteria state that statistically acceptable levels of indicator enterococci for contact recreation in marine waters are as follows: **No single sample to exceed 104 colonies/100 ml sample, and/or the geometric mean of multiple samples from the same sampling location not to exceed 35 colonies/100 ml.**

The following are data from two sampling dates, June 11 and 15, 2019. Numbers refer to sampling locations on the accompanying map. Samples were divided into two groups 1-10, and 11-20 for statistical analyses (i.e., calculating the geometric mean). Date. Location-colonies/100 ml sample

June 11, 2109. 1-11;2-13;3-19;4-22;5-16;6-5;7-23;8-21;9-10;10-16 Geometric mean = **14.3/100 ml**

June 11,2019. 11-34;12-20;13-38;14-19;15-26;16-33;17-37;18-35;19-29;20-30 Geo. Mean = **29.4/100 ml**

June 15, 2019. 1-10;2-20;3-20;4-17;5-24;6-19;7-26;8-16;9-15;10-17 Geometric mean = **17.9/100 ml**

June 15, 2019. 11-37;12-25;13-26;14-33;15-33;16-22;17-20;18-22;19-26;20-32 Geo. Mean = **27.1/100 ml**

Since none of these samples, either singly or groups, exceeded the EPA criteria of 104 colonies/100 ml for a single sample nor a geometric mean of 35 colonies/100 ml these waters meet microbiological guidelines for contact recreation.

Any questions, please let me know.

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