

# WATER QUALITY DATA PADRE ISLES AND CONTIGUOUS WATERS

July 11-12, 2021

July 18, 2021

ATTN: PETER SCHAEFER, STDS. IMPLEMENTATION TEAM

MC 150

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## INTRODUCTION

The following are water quality reports for the canals and contiguous waters of Padre Isles, Corpus Christi, Texas, which fulfill the monitoring requirements as set forth in a letter from TCEQ (Sidne Tiemann) to the USACE (Mark King) dated October 12, 1994. All temperature measurements are in degrees centigrade. All dissolved oxygen measurements are in milligrams per liter.

## METEOROLOGICAL CONDITIONS

July 11 24, 2021. Day. Pt. Sunny. Wind SE- 20 mph. 31.4 C.

July 12 25, 2021. Night. Wind S-10 mph. 27.0 C.

July 18, 2021. Night. Wind SE- 5 mph. 30.0 C.

July 18, 2021. Day. Pt. cloudy. Wind SSE-10 mph. 34.3 C.

| Date      | Time | Station | Temp. C | D.O. mg/l |
|-----------|------|---------|---------|-----------|
| 7/11/2021 | 1915 | 1       | 31.9    | 10.6      |
|           | 1620 | 2       | 28.4    | 4.2       |
|           | 1925 | 3       | 28.9    | 7.5       |
|           | 1750 | 4       | 29.8    | 11        |
|           | 1630 | 5       | 29.7    | 4.8       |
|           | 1645 | 6       | 29.1    | 11.3      |
|           | 1710 | 7       | 28.9    | 9.2       |
|           | 1810 | 8       | 29.9    | 10.7      |
|           | 1825 | 9       | 29.2    | 8         |
|           | 1835 | 10      | 30.2    | 10.5      |
|           | 1845 | 11      | 29.6    | 8.9       |
|           | 1900 | 12      | 29.6    | 8.3       |
|           | 1740 | 13      | 29.2    | 9.2       |
|           | 1735 | 21      | 29.1    | 8.9       |
|           | 1730 | 23      | 29.2    | 8.5       |

All measurements taken one foot below the surface.

| Date      | Time | Station | Temp. C | D.O. mg/l |
|-----------|------|---------|---------|-----------|
| 7/12/2021 | 645  | 1       | 28.3    | 6.2       |
|           | 400  | 2       | 28.2    | 3.1       |
|           | 655  | 3       | 28.4    | 5.8       |
|           | 525  | 4       | 28.4    | 7         |
|           | 410  | 5       | 28.4    | 1.8       |
|           | 425  | 6       | 28.5    | 7.7       |
|           | 445  | 7       | 28.7    | 8.3       |
|           | 540  | 8       | 28.2    | 4.4       |
|           | 555  | 9       | 28.5    | 5.7       |
|           | 605  | 10      | 28.2    | 4.5       |
|           | 615  | 11      | 28.4    | 5.6       |
|           | 630  | 12      | 28.6    | 6.7       |
|           | 515  | 13      | 28.4    | 6.6       |
|           | 510  | 21      | 28.4    | 6.1       |
|           | 505  | 23      | 28.4    | 6.5       |

All measurements taken one foot below the surface

## NUTRIENTS

Water samples for nutrient analyses were collected one foot below the surface (S) and one foot above the bottom (B) at stations 1,5,6,8,9,10 and 11. Values are reported as milligrams per liter (mg/l or PPM) of the element in the compound. \* The lower limit of detection is 0.007 mg/l for nitrate (NO<sub>3</sub>-N) and nitrite (NO<sub>2</sub>-N) nitrogen, and 0.010 mg/l for phosphate phosphorus (PO<sub>4</sub>-P). ND means not detectable.

\* Strickland and Parsons (1968). A Practical Handbook of Seawater Analysis. Fisheries Research Board of Canada. Ottawa.

| Date      | Time | Station | Depth(ft) | NO <sub>3</sub> -N | NO <sub>2</sub> -N | PO <sub>4</sub> -P |
|-----------|------|---------|-----------|--------------------|--------------------|--------------------|
| 7/11/2021 | 1915 | 1B      | 11        | 0.013              | 0.01               | ND                 |
|           |      | 1S      |           | 0.018              | 0.01               | ND                 |
|           | 1630 | 5B      | 10        | 0.018              | 0.007              | 0.15               |
|           |      | 5S      |           | 0.033              | 0.012              | 0.34               |
|           | 1645 | 6B      | 13        | 0.043              | 0.012              | 0.04               |
|           |      | 6S      |           | 0.012              | ND                 | ND                 |
|           | 1810 | 8B      | 11        | 0.007              | ND                 | ND                 |
|           |      | 8S      |           | 0.007              | ND                 | ND                 |
|           | 1825 | 9B      | 11        | 0.007              | 0.012              | ND                 |
|           |      | 9S      |           | 0.007              | 0.012              | ND                 |
|           | 1835 | 10B     | 13        | 0.007              | ND                 | ND                 |
|           |      | 10S     |           | 0.007              | ND                 | ND                 |
|           | 1845 | 11B     | 11        | 0.007              | 0.01               | ND                 |
|           |      | 11S     |           | 0.007              | 0.01               | ND                 |

| Date      | Time | Station | Temp C | D.O.mg/l |
|-----------|------|---------|--------|----------|
| 7/18/2021 | 540  | 21      | 29.7   | 6.3      |
|           | 555  | 23      | 29.7   | 6.7      |
| 7/18/2021 | 1705 | 21      | 31.3   | 8.5      |
|           | 1715 | 23      | 31.5   | 8.2      |
|           |      |         |        |          |

