

| Ground Water Quality Data in Karaikal During Pre Monsoon 2021 |                                                       |                 |                 |                                       |                                        |
|---------------------------------------------------------------|-------------------------------------------------------|-----------------|-----------------|---------------------------------------|----------------------------------------|
| Sl.No.                                                        | Parameters                                            | Vadamattam      | T.R.Pattinam    | Acceptable Limit<br>(IS 10500 : 2012) | Permissible limit<br>(IS 10500 : 2012) |
| Station Code                                                  |                                                       | 2014            | 2013            |                                       |                                        |
| 1                                                             | Latitude                                              | 11° 58' 5.7" N  | 10° 50' 28.6" N |                                       |                                        |
| 2                                                             | Longitude                                             | 79 ° 47' 43.8"E | 79 ° 49' 55.6"E |                                       |                                        |
| 3                                                             | Dt.of Sampling                                        | 15.09.2021      | 15.09.2021      |                                       |                                        |
| 4                                                             | Time                                                  | 09.30 A.M       | 08.30 A.M       |                                       |                                        |
| 5                                                             | Temperature °C                                        | 28.4            | 28.4            |                                       |                                        |
| 6                                                             | pH                                                    | 8.00            | 8.44            | 6.5 - 8.5                             | NR                                     |
| 7                                                             | Conductivity µmho/cm                                  | 1511            | 1926            |                                       |                                        |
| 8                                                             | COD (mg/l)                                            | BDL (DL-5.0)    |                 |                                       |                                        |
| 9                                                             | Turbidity NTU                                         | BDL (DL-1.0)    | BDL (DL-1.0)    | 1                                     | 5                                      |
| 10                                                            | Nitrate -N (mg/l)                                     | 0.4             | BDL (DL-0.3)    |                                       |                                        |
| 11                                                            | Nitrite-N (mg/l)                                      | 0.1             | BDL (DL-0.02)   |                                       |                                        |
| 12                                                            | Nitrate (mg/l)                                        | 1.6             | 1.5             | 45                                    | NR                                     |
| 13                                                            | Hexavalent Chromium (mg/l)                            | BDL             |                 |                                       |                                        |
| 14                                                            | Ammonia (NH <sub>3</sub> -N) (mg/l)                   | 0.47            | 0.56            |                                       |                                        |
| 15                                                            | Bi- Carbonate as CaCO <sub>3</sub> (mg/l)             | 314.0           | 282             |                                       |                                        |
| 16                                                            | Bi- Carbonate as HCO <sub>3</sub> <sup>-</sup> (mg/l) | 383.1           | 344.0           |                                       |                                        |
| 17                                                            | P. Alkalinity (mg/l)                                  | 8.0             | 36.0            |                                       |                                        |
| 18                                                            | Carbonate as CO <sub>3</sub> <sup>2-</sup> (mg/l)     | 4.8             | 21.6            |                                       |                                        |
| 19                                                            | Total Alkalinity (mg/l)                               | 322.0           | 318.0           | 200                                   | 600                                    |
| 20                                                            | Chloride (mg/l)                                       | 261.9           | 403.7           | 250                                   | 1000                                   |
| 21                                                            | Total Hardness as CaCO <sub>3</sub> (mg/l)            | 38              | 86              | 200                                   | 600                                    |
| 22                                                            | Calcium Hardness as CaCO <sub>3</sub> (mg/l)          | 32              | 56              |                                       |                                        |
| 23                                                            | Magnesium Hardness as CaCO <sub>3</sub> (mg/l)        | 6               | 30              |                                       |                                        |
| 24                                                            | Calcium as Ca <sup>++</sup> (mg/l)                    | 12.8            | 22.4            | 75                                    | 200                                    |
| 25                                                            | Magnesium as Mg <sup>++</sup> (mg/l)                  | 1.4             | 7.3             | 30                                    | 100                                    |

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|--------------|------------------------|-----------------|---------------|---------------------------------------|----------------------------------------|
| Station Code |                        | 2014            | 2013          |                                       |                                        |
| 26           | TDS (mg/l)             | 818             | 1093          | 500                                   | 2000                                   |
| 27           | TSS (mg/l)             | BDL (DL-10.0)   |               |                                       |                                        |
| 28           | FDS / TFS (mg/l)       | 346             | 724           |                                       |                                        |
| 29           | Sodium (mg/l)          | 348.9           | 426.4         |                                       |                                        |
| 30           | Potassium (mg/l)       | 3.5             | 3.2           |                                       |                                        |
| 31           | Sulphate (mg/l)        | BDL (DL-5.0)    |               | 200                                   | 400                                    |
| 32           | Ortho phosphate (mg/l) | 0.06            | BDL (DL-0.05) |                                       |                                        |
| 33           | % Sodium               | 94.72           | 91.10         |                                       |                                        |
| 34           | SAR                    | 24.7            | 19.9          |                                       |                                        |
| 35           | Copper (mg/l)          | BDL (DL-0.01)   |               | 0.05                                  | 1.5                                    |
| 36           | Nickel (mg/l)          | BDL (DL-0.01)   |               | 0.02                                  | NR                                     |
| 37           | Cadmium (mg/l)         | BDL (DL-0.001)  |               | 0.003                                 | NR                                     |
| 38           | Lead (mg/l)            | BDL (DL-0.005)  |               | 0.01                                  | NR                                     |
| 39           | Total Chromium (mg/l)  | BDL (DL-0.01)   |               | 0.05                                  | NR                                     |
| 40           | Iron (mg/l)            | 0.054           | 0.037         | 0.3                                   | NR                                     |
| 41           | Zinc (mg/l)            | BDL (DL-0.1)    |               | 5                                     | 15                                     |
| 42           | Arsenic (mg/l)         | BDL (DL-0.005)  |               | 0.01                                  | 0.05                                   |
| 43           | Mercury (mg/l)         | BDL (DL-0.0005) |               | 0.001                                 | NR                                     |

BDL - Below Detectable Limit; DL - Detection Limit  
NR - No Relaxation