Duneland Beach Association
2019 CONSUMER CONFIDENCE REPORT

Is our water safe?
This brochure is a snapshot of the quality of the drinking water that we provided last year. Included as part of this report are details about where the water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and Indiana standards. We are committed to providing you with the information that you need to be aware of in relation to the quality of the water that you drink. For more information about your water, please call: Carol Westbrook at 219-872-8981 or you can join us at one of our board meetings, which are held on the second Tuesday of every month.

Do I need to take special precautions?
Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people, such as people with cancer undergoing chemotherapy, people who have undergone organ transplant, people with HIV/AIDS or other kinds of immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their healthcare providers. EPA/CDC guidelines are appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants and are available from the Safe Drinking Water Hotline at (800) 426-4791.

Were does our water come from?
Duneland Beach purchases 100% of its water from the Department of Water Works Michigan City, Indiana attached is the CCR supplied by the Department of Water Works Michigan City, Indiana this CCR provides quality information for the water provided to Duneland Beach.

Monitoring & Measuring
In addition to the quality control provided by the Department of Water Works Michigan City, Indiana Duneland Beach is required to take monthly total coliform (e-coli) samples and submit them to a certified Lab for testing the results are then sent to I.D.E.M. we are also required to take daily free and total chlorine tests. This data is then submitted to I.D.E.M. Other required monitoring can be reviewed on the table provided at the end of this report.

Why are these contaminants in my drinking water?
See OTHER RELATED DATA provided in the Department of Water Works Michigan City, Indiana Water Quality Report.

Water Quality Data
The table on the next page lists all the contaminants that we detected during the 2019 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise indicated, the data presented in this table is from testing done between January 1, 2019 and December 31, 2019. The Indiana Department of Environmental Management (I.D.E.M) requires us to monitor for certain contaminants at a frequency less then once per year because the concentrations of these are not expected to vary significantly from one year to another. Some of the data, through representative of the water quality may however be more then one year old.
Some of the terms and abbreviations used in this report are:

**MCL:** Maximum Contaminant Level, the highest level of a contaminant that is allowed in drinking water.

**MCLG:** Maximum Contaminant Level Goal, the level of a contaminant in drinking water below which there is no known or expected risk to health.

**MRDL:** Maximum Residual Disinfectant Level, the highest level of disinfectant allowed in drinking water.

**MRDLG:** Maximum Residual Disinfectant Level Goal, the level of drinking water disinfectant below which there is no known or expected risk to health.

**AL:** Action Level: the concentration of contaminant which, when exceeded, triggers treatment or other requirements or action which a system must follow.

**TT:** Treatment Technique, a required process intended to reduce the level of a contaminant in drinking water.

**NTU:** Nephelometric Turbidity Unit, a measurement of the clarity (or cloudiness) of water.

**ppm:** parts per million, or milligrams per liter.

**ppb:** parts per billion, or micrograms per liter.

**p**: potential violation or one that is likely to occur in the near future.

**n/a:** either not available or not applicable

**pCi/L picocuries** per liter (a measure for radiation).

### Inorganic Contaminants

<table>
<thead>
<tr>
<th>Date</th>
<th>Contaminant</th>
<th>90th Percentile</th>
<th>AL</th>
<th># sites over AL</th>
<th>Units</th>
<th>MCLG</th>
<th>Violations</th>
<th>Likely Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/23/2017</td>
<td>copper</td>
<td>0.059</td>
<td>1.3</td>
<td>0</td>
<td>ppm</td>
<td>1.3</td>
<td>No</td>
<td>Corrosion of household plumbing systems; Erosion of natural deposits</td>
</tr>
<tr>
<td>8/23/2017</td>
<td>Lead</td>
<td>2</td>
<td>15</td>
<td>0</td>
<td>ppb</td>
<td>0</td>
<td>No</td>
<td>Corrosion of household plumbing systems; Erosion of natural deposits</td>
</tr>
</tbody>
</table>

### Disinfection Byproducts & Precursors

<table>
<thead>
<tr>
<th>Date</th>
<th>Contaminant</th>
<th>MCL</th>
<th>MCLG</th>
<th>Units</th>
<th>Range Detected</th>
<th>Highest level detected</th>
<th>Violations</th>
<th>Likely Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>Total Haloacetic Acids (baa5)</td>
<td>60</td>
<td>No goal for total</td>
<td>ppb</td>
<td>0-4.2</td>
<td>2.1</td>
<td>No</td>
<td>By-product of drinking water chlorination</td>
</tr>
<tr>
<td>2019</td>
<td>Total Trihalomethanes</td>
<td>80</td>
<td>No goal for total</td>
<td>ppb</td>
<td>13-26</td>
<td>20</td>
<td>No</td>
<td>By-product of drinking water chlorination</td>
</tr>
<tr>
<td>2019</td>
<td>Chlorine</td>
<td>MRDL = 4</td>
<td>MCGL = 4</td>
<td>ppm</td>
<td>0-1</td>
<td>1</td>
<td>No</td>
<td>Water additive used to control microbes</td>
</tr>
</tbody>
</table>
Special Note on Lead: If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Our system is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.era.gov/safewater/lead.

Special Note on Turbidity: **The turbidity treatment technique (TT) requires that at least 95% of the total combined effluent turbidity samples shall not exceed 0.3 NYU (1.0 NTU for slow sand diatomaceous earth filtration system). At least 95% is required to be in compliance. In addition, the maximum turbidity level can not exceed 1.0 NTU at anytime.

Public Involvement Opportunities
If you have any questions about the contents of this report, please contact Mrs. Carol Westbrook at 219-872-5787. Or you can join us at our Water Board Meeting, which are held on the 2nd Tuesday of every month at 7:00 p.m. We encourage you to participate and to give us your feedback.
Message from the Superintendent

We’re pleased to once again present to you this year’s Annual Water Quality Report. This report is to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are pleased to report that our drinking water is safe and meets federal and state requirements.

If you have any questions about this report or concerning your water utility, you may contact the Main Office at (219) 874-3228, and speak to Randall E. Russell, Superintendent. We want our valued customers to be informed about their water utility. If you want to learn more you may attend the Water Board meetings. They are scheduled twice monthly on the 2nd and 4th Tuesdays at 7:00 p.m. in the Main Office, 532 Franklin Street.

Water Source and Treatment

The greater area of Michigan City receives its drinking water directly from Lake Michigan, a surface water source. It is treated through a conventional treatment process that includes Flocculation-Sedimentation (the mixing of Alum into the water to create “Floc” which allows large particulate matter to settle out of the water) and Filtration (to remove fine particulate matter and microorganisms from the water). Chemical additions are also required which includes Chlorine (for bacteriological removal), Alum (to remove large particulate matter), Fluoride (to prevent dental decay), and Chloramines (the mixture of chlorine and ammonia which allows for longer disinfectant levels in the water distribution system and remove chlorine odor from the water).

Monitoring & Measuring Contaminants

The Department of Water Works of Michigan City, IN routinely monitors for contaminants in your drinking water according to Federal and State laws. The Table on the back shows the results of our monitoring for the period of January 1st to December 31st, 2019. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency’s Safe Drinking Water Hotline at (800) 426-4791.

It is important to know that some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune systems disorders, some elderly, and infants can particularly be at risk and should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium are also available from the Safe Drinking Water Hotline (800) 426-4791.

Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. If present, elevated levels of lead can cause serious health problems especially for pregnant women and young children. The Department of Water Works is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (800) 426-4791 or at http://www.epa.gov/safewater/lead.

OTHER RELATED DATA

The sources of drinking water (both tap and bottled water) include, rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases radioactive material, and can pick up substances resulting from the presence of animals or human activity. Contaminants that may be present in source water are:

1. **Microbial Contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural, livestock operations and wildlife.
2. **Inorganic Chemical Contaminants**, such as salts and metals, which can be naturally-occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
3. **Pesticides and Herbicides**, which may come from a variety of sources such as agriculture, stormwater runoff and residential uses.
4. **Organic Chemical Contaminants**, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
5. **Radioactive Contaminants**, which can be naturally occurring or be the result of oil and gas productions and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.
# Water Quality Analysis

The following chart lists the highest recorded level in Michigan City in 2019 and the highest allowed by the USEPA. Michigan City water has met all EPA requirements.

<table>
<thead>
<tr>
<th>DATE</th>
<th>CONTAMINANT</th>
<th>MCL</th>
<th>MCLG</th>
<th>UNIT</th>
<th>RESULT</th>
<th>MIN</th>
<th>MAX</th>
<th>SITES OVER VIOLATES AL</th>
<th>LIKELY SOURCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/13/2019</td>
<td>Barium</td>
<td>2</td>
<td>2</td>
<td>mg/l</td>
<td>0.019</td>
<td>0.02</td>
<td>0.02</td>
<td>No</td>
<td>Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits</td>
</tr>
<tr>
<td>Valid until 12/31/2020</td>
<td>Lead (90th percentile)</td>
<td>15</td>
<td>0</td>
<td>ug/l</td>
<td>6</td>
<td>ND</td>
<td>11</td>
<td>0</td>
<td>Corrosion of household plumbing systems. Erosion of natural deposits</td>
</tr>
<tr>
<td>Valid until 12/31/2020</td>
<td>Copper (90th percentile)</td>
<td>1.3</td>
<td>1.3</td>
<td>mg/l</td>
<td>0.33</td>
<td>ND</td>
<td>0.78</td>
<td>0</td>
<td>Erosion of natural deposits; Corrosion of household plumbing systems; Leaching from wood preservatives</td>
</tr>
<tr>
<td>2019</td>
<td>Fluoride</td>
<td>4</td>
<td>4</td>
<td>mg/l</td>
<td>0.94</td>
<td></td>
<td></td>
<td>No</td>
<td>Water additive which promotes strong teeth; Erosion of natural deposits; Discharges from fertilizer and aluminum factories</td>
</tr>
<tr>
<td>8/13/2019</td>
<td>Nitrate-Nitrite (as N)</td>
<td>10</td>
<td>10</td>
<td>mg/l</td>
<td>0.29</td>
<td></td>
<td></td>
<td>No</td>
<td>Erosion of natural deposits, runoff from fertilizers, leaching from septic systems-sewers</td>
</tr>
<tr>
<td>2019</td>
<td>Total Trihalomethanes</td>
<td>80</td>
<td>0</td>
<td>ug/l</td>
<td>18.5</td>
<td>14.3</td>
<td>25.2</td>
<td>No</td>
<td>By-product of drinking water chlorination</td>
</tr>
<tr>
<td>2019</td>
<td>Total Haloacetic Acids</td>
<td>60</td>
<td>0</td>
<td>ug/l</td>
<td>4.1</td>
<td>0.0</td>
<td>8.6</td>
<td>No</td>
<td>By-product of drinking water chlorination</td>
</tr>
<tr>
<td>2019</td>
<td>Total Organic Carbon</td>
<td>TT</td>
<td>TT</td>
<td>mg/l</td>
<td>2.70</td>
<td>1.40</td>
<td>9.10</td>
<td>No</td>
<td>Naturally present in the Environment</td>
</tr>
<tr>
<td>8/13/2019</td>
<td>Sodium</td>
<td>N/A</td>
<td>N/A</td>
<td>mg/l</td>
<td>8.1</td>
<td></td>
<td></td>
<td>No</td>
<td>Metals; Erosion of natural deposits</td>
</tr>
<tr>
<td>2019</td>
<td>Turbidity (lowest percentage)</td>
<td>TT</td>
<td>TT</td>
<td>%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>No</td>
<td>Soil runoff</td>
</tr>
<tr>
<td>2019</td>
<td>Turbidity (Maximum level)</td>
<td>1</td>
<td>1</td>
<td>NTU</td>
<td>0.06</td>
<td>0.04</td>
<td>1.00</td>
<td>No</td>
<td>Soil runoff</td>
</tr>
<tr>
<td>2019</td>
<td>Chloramine residual</td>
<td>4</td>
<td>MRDL</td>
<td>mg/l</td>
<td>1.37</td>
<td>0.15</td>
<td>1.95</td>
<td>No</td>
<td>Water additive (disinfectant) used to control microbiological organisms</td>
</tr>
<tr>
<td>2019</td>
<td>Total Coliform 40/month</td>
<td>5</td>
<td>%</td>
<td>0%</td>
<td>2.5%</td>
<td>0%</td>
<td>2.5%</td>
<td>No</td>
<td>Naturally present in environment</td>
</tr>
</tbody>
</table>

## Definitions

- **MCL**: Maximum Contaminant Level, the highest level of a contaminant that is allowed in drinking water.
- **MCLG**: Maximum Contaminant Level Goal, the level of a contaminant in drinking water below which there is no known or expected risk to health.
- **MRDL**: Maximum Residual Disinfectant Level, the highest level of disinfectant allowed in drinking water.
- **MRDLG**: Maximum Residual Disinfectant Level Goal, the level of drinking water disinfectant below which there is no known or expected risk to health.
- **AL**: Action level, the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- **TT**: Treatment Technique, a required process intended to reduce the level of a contaminant in drinking water.
- **NTU**: Nephelometric Turbidity Unit, is the measure of clarity of the water.
- **mg/l**: milligrams per liter, a measurement for concentration equivalent to ppm = one part per million
- **ug/l**: micrograms per liter, measurement for concentration equivalent to ppb = one part per billion
- **pCi/l**: picocuries per liter, a measurement of radiation
- **P**: Potential violation, one that is likely to occur in the near future, subject to other applicable requirements.
- **ND**: Not detected, the result was not detected at or below the analytical method detection level.

### Special Note on Turbidity:

" The turbidity treatment technique (TT) requires that at least 95% of the total combined effluent turbidity samples shall not exceed 0.3 NTU (1.0 NTU for slow sand and diatomaceous earth filtration systems). At least 95% is required to be in compliance. In addition, the maximum turbidity level cannot exceed 1.0 NTU at anytime."