WHAT IS OZONE?
There are two types of ozone: stratospheric (good) ozone that is in the upper atmosphere and ground level (bad) ozone that is closer to the earth’s surface. Stratospheric ozone exists naturally. It creates the “ozone layer” that shields us from the sun’s harmful ultraviolet (UV) radiation. Ground level ozone is not naturally occurring. It forms when chemicals called Nitrogen Oxides (NOx) and Volatile Organic Compounds (VOCs) react in the presence of UV radiation. NOx is released by industrial, chemical, and power plants, and automobile exhaust. VOCs are released by industrial emissions, evaporated gasoline, paints, and solvents. Neighborhood businesses and gas powered vehicles and equipment also release NOx and VOCs into the air. The most favorable conditions for ground level ozone formation are sunny days with little cloud cover and still winds.

HOW DOES OZONE AFFECT MY HEALTH?
As ground level ozone increases more people experience adverse health effects. Ozone may irritate the lining of your lungs causing the lining to become inflamed. Symptoms of ozone exposure may include:

- wheezing or shortness of breath
- coughing
- irritation of the nose and throat
- nausea
- chest tightness or pains

Long term exposure to ozone can reduce your lung function and weaken your immune system leaving you at risk to respiratory infections including colds, bronchitis, and pneumonia. The risks of ozone exposure can be reduced by staying indoors.

HOW DO I KNOW IF OZONE LEVELS ARE HIGH?
The Texas Commission on Environmental Quality (TCEQ) provides area ozone forecasts each day using the Air Quality Index (AQI). The AQI is used to report the levels of ozone and other pollutants in the air. It is divided into color categories that show how different levels of ozone may affect your health and what actions you should take. If high levels of air pollutants are expected in the greater Houston area, Harris County Public Health & Environmental Services (HCPHES) issues a Health Advisory to area television stations, newspapers, and radio stations to notify the public. The Health Advisory contains the AQI level and statements for the public to consider when planning their outside activities.

<table>
<thead>
<tr>
<th>Warning</th>
<th>Descriptors</th>
<th>Cautionary Statements for Ozone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td>Good</td>
<td>None</td>
</tr>
<tr>
<td>Yellow</td>
<td>Moderate</td>
<td>Unusually sensitive people should consider limiting prolonged outdoor exertion.</td>
</tr>
<tr>
<td>Orange</td>
<td>Unhealthy for Sensitive Groups</td>
<td>Active children and adults, and people with respiratory diseases, such as asthma, should limit prolonged outdoor exertion.</td>
</tr>
<tr>
<td>Red</td>
<td>Unhealthy</td>
<td>Active children, adults and people with respiratory diseases, such as asthma, should avoid prolonged outdoor exertion; everyone else, especially children, should limit prolonged outdoor exertion.</td>
</tr>
<tr>
<td>Purple</td>
<td>Very Unhealthy</td>
<td>Active children, adults and people with respiratory diseases such as asthma should avoid all outdoor exertion; everyone else, especially children, should limit outdoor exertion.</td>
</tr>
<tr>
<td>Maroon</td>
<td>Hazardous</td>
<td>Everyone should avoid all outdoor exertion.</td>
</tr>
</tbody>
</table>

Ground level ozone is the air pollutant of greatest concern in Texas. Ozone is harmful to people, animals, and crops. It can damage plastic, rubber, and metal. In Harris and surrounding counties ozone season is considered to be March through November. Ozone levels typically reach their peak between the hours of 11 a.m. and 6 p.m. When ozone reaches unhealthy levels everyone needs to reduce activities that release VOCs and NOx into the air. If VOC and NOx emissions are reduced then less ozone will form.

CAN I SIGN-UP FOR E-MAIL OZONE ADVISORIES?
If you would like to receive e-mails regarding ozone watches and warnings, go to: http://www.tceq.state.tx.us/compliance/monitoring/air/monopol/s/ozone_email.html. Individuals (especially parents, coaches, school nurses, health care professionals and individuals with respiratory illnesses) are encouraged to sign up for these email notices. Receiving this information can also remind people to reduce activities that contribute to ozone formation.
WHERE ARE OZONE MONITORS LOCATED?
The map below shows ozone monitors managed by the Environmental Public Health Division of HCPHES, TCEQ, City of Houston, Houston Regional Monitoring Corporation, Environmental Institute of Houston / University of Houston-Clear Lake, and the URS Corporation.

Map of ozone levels for the Greater Houston area, TCEQ

In our effort to protect the public’s health, HCPHES Environmental Public Health Division has placed ozone monitors near populated areas. The public can use information from these ozone monitors to make informed decisions when planning outdoor activities.

Ozone monitors managed by HCPHES are located in the following areas:
- Harris County NE Sheldon Lake State Park
- Baytown S Wetlands Center
- Harris County NE Crosby Library
- Harris County W Tyra Library
- Harris County NE Kingwood Library
- Harris County E La Porte Sylvan Beach
- Harris County N Mercer Arboretum
- Harris County S Tom Bass III Park
- Harris County W Katy Park
- Harris County NE Atascocita
- Harris County NW Meyer Park
- Harris County W Bunker Hill Village

HOW CAN I REDUCE OZONE?
Conserve energy by setting your thermostat a little higher in the summer to help electric utilities reduce emissions.

Limit engine idling. Keep exhaust levels low by keeping engines properly tuned and well maintained. Report smoking vehicles to (800) 453-SMOG.

Decrease driving by carpooling, walking, bicycling, and riding public transportation to reduce emissions from fuel.

When painting or using solvents ask the supplier for Low- or No-VOC products. Make sure that you tightly seal the lids of VOC-containing products to keep evaporation to a minimum.

Read more ozone related information on the web at:
- Harris County Public Health and Environmental Services
  http://www.hcphes.org
- Texas Commission on Environmental Quality
  http://www.tceq.state.tx.us
- U.S. Environmental Protection Agency
  http://www.epa.gov/epahome/ozone.htm
- St. Luke’s Lung Institute
  http://www.stlukestexas.com