



The Impact of Wind Direction on the Location of High Ozone in the Houston-Galveston-Brazoria Area

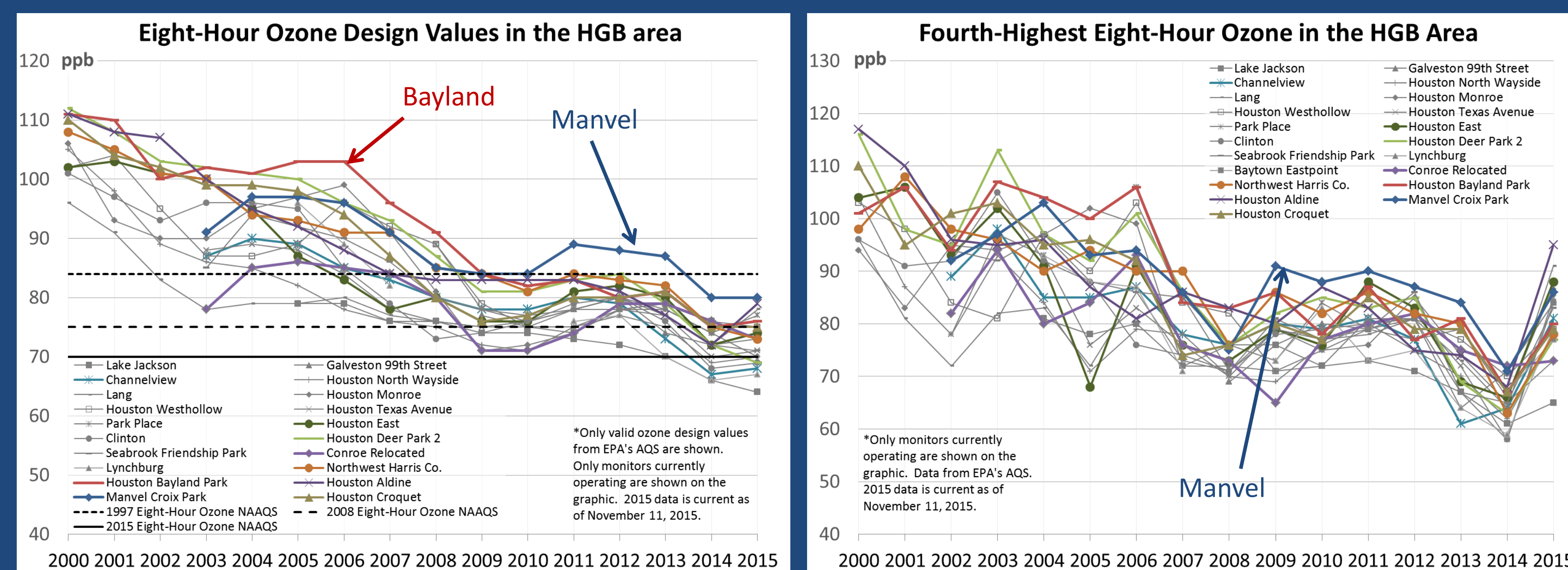
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Introduction

- The Houston-Galveston-Brazoria (HGB) area has historically observed some of the highest ozone in the state of Texas.
- For several years, the highest ozone design values in the HGB area were observed at the Bayland Park Monitor, but after 2009, the Manvel Croix Park Monitor had the highest design values.
- Why has the location of high ozone in the HGB area changed?

Ozone Design Value Trends

- Ozone design values are the three-year average of the fourth-highest eight-hour ozone values at a monitor.
- They are used to determine compliance with EPA's national Ambient Air Quality Standards (NAAQS).
- The Bayland Park monitor observed the highest eight-hour ozone design values from 2003 through 2009.
- After 2009, the highest eight-hour ozone design values were observed at Manvel Croix Park.
- The Manvel Croix Park monitor has also observed some of the highest fourth-highest concentrations from 2009 through 2014.



Spatial Trends in Ozone Design Values

- Spatial examination of ozone design values is a first step in determining the cause of high ozone at different locations.
- In 2008 the highest ozone was on the western edge of the HGB monitoring area at the Bayland Park monitor, but high ozone was also observed in other parts of the area.
- By 2011, ozone decreased in the HGB area, but the highest ozone was observed at the Manvel Croix Park monitor, which is located on the southwestern part of the HGB monitoring area.
- Ozone values were much lower in 2014 but the highest values continued to remain at the Manvel Croix Park monitor.

