Ozone Issues In Urban And Rural Areas Of Utah

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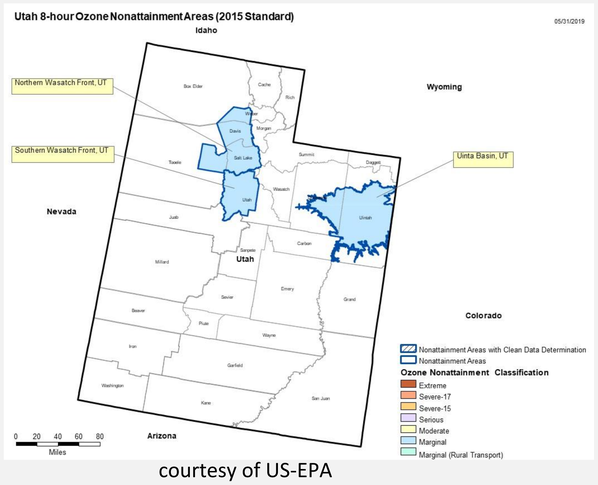
Designation as Nonattainment

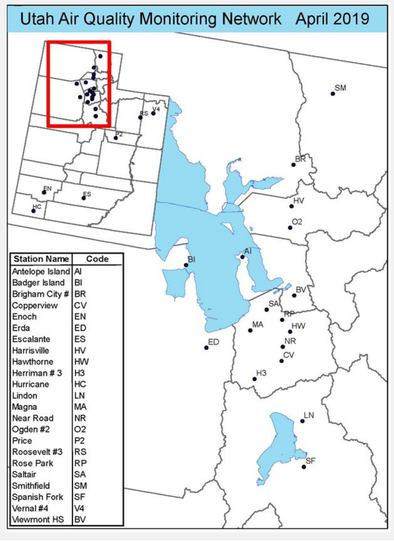
-In 2018 the Wasatch Front and parts of the Uinta Basin were designated as marginal nonattainment areas for Ozone.
-Wasatch front includes the populated metropolitan areas of Utah, Salt Lake, Davis, Weber, Tooele, and Box Elder County
-Uinta Basin includes tribal land and parts of the Uintah and Duchesne counties below 6,250 ft



courtesy of US-EPA

Locations of Ozone Monitors

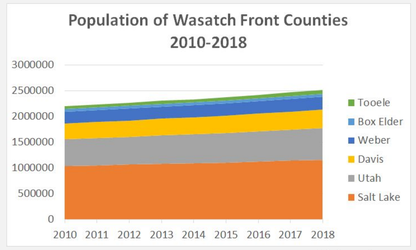
-Almost every monitoring site operated by the state of Utah has an Ozone monitor, most also have a NO/NO2/NOx monitor



Station Name	Code
Antelope Island	AI
Badger Island	BI
Brigham City #	BR
Copperview	CV
Enoch	EN
Erda	ED
Escalante	ES
Harrisville	HV
Hawthorne	HW
Herriman # 3	H3
Hurricane	HC
Lindon	LN
Magna	MA
Near Road	NR
Ogden #2	O2
Price	P2
Roosevelt #3	RS
Rose Park	RP
Saltair	SA
Smithfield	SM
Spanish Fork	SF
Vernal #4	V4
Viewmont HS	BV

Urban Summertime Ozone Issues

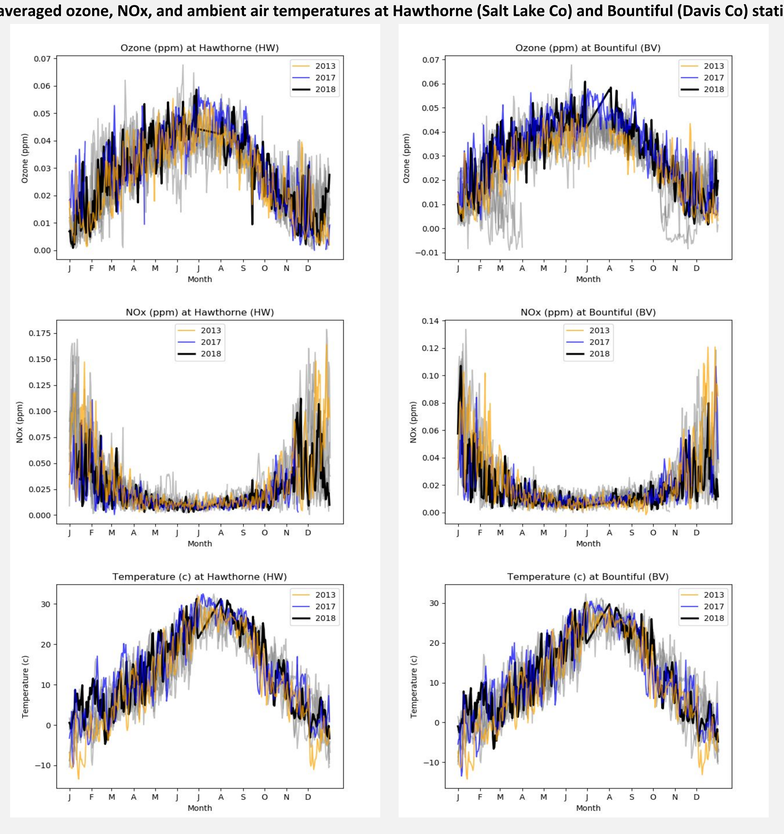
-Utah has consistently had one of the highest population growth rates in the country, partly due to its high birth rate and strong economy
-As population continues to increase in the metropolitan areas, and industries change, Utah needs to identify effective and practical methods to reduce ozone precursors in order to enhance future air quality



source: U.S. Census Bureau

A Sunny Day Along the Wasatch Front!

Day-averaged ozone, NOx, and ambient air temperatures at Hawthorne (Salt Lake Co) and Bountiful (Davis Co) stations

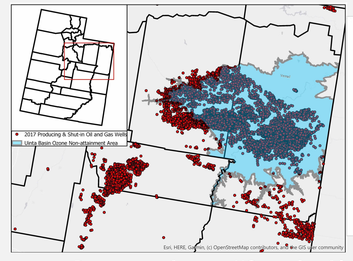


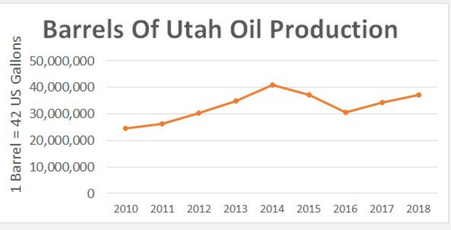
Wintertime Ozone in areas with Oil and Gas Production

-The Uintah basin is not densely populated, but has a high oil and gas production activity
-Oil and gas production causes the release of a variety of VOC's in addition to NOx
-Basin topography combined with cold, stagnant weather in the winter allows for pollutants to become trapped and build during extended inversion periods
-It is believed that the reflections of light by snow allow for photolysis to be enhanced enough to produce ozone in the presence of VOC's and NOx in the stable polluted layer
-Wintertime Ozone season can start in mid November and last through the end of March

Photos courtesy of Utah Division of Air Quality

Oil and Gas Wells in Utah





Day-averaged ozone, NOx, and ambient air temperatures at Vernal (5469 ft) and Roosevelt (5210 ft)