

Meteorological factors are examined that contribute to elevated ozone concentrations along the southern and eastern margins of the Great Salt Lake. Multiple factors likely contribute to elevated ozone in the Farmington Bay region: (1) ozone precursors from the urban corridor (NO<sub>x</sub> and VOCs) and local biogenic precursors near freshwater ponds are transported by the nocturnal land breeze over the playa surfaces ; (2) actinic fluxes are elevated due to the high albedo over exposed playa surfaces; (3) initial development of the lake breeze concentrates precursors and ozone within the relatively shallow stable lake boundary layer; and (4) the lake breeze then transports ozone into the nearby urban regions later in the afternoon. This study ties directly to the overarching goals of the Science for Solutions program to improve understanding of summertime ozone pollution along the Wasatch Front. Additional sensors will be deployed during the 2020 summer to evaluate the timing of buildup in ozone in the southern Farmington Bay region and subsequent transport into Davis and Salt Lake counties. This small field campaign will provide resources that are likely to enhance operational air quality forecasting and provide critical information to initialize and verify air chemistry models used to identify approaches to meet federal air quality standards.