

SIP Update

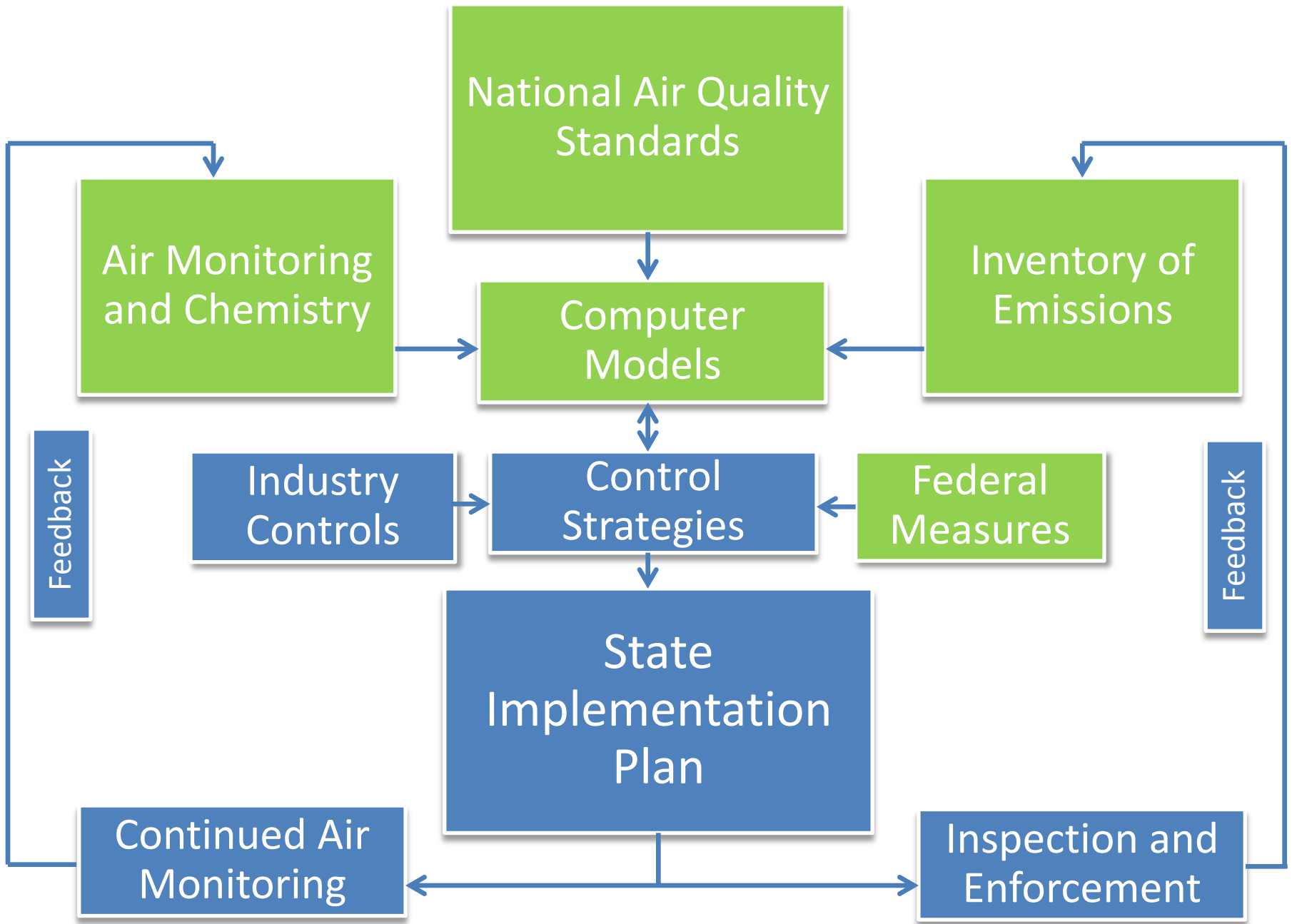
October 27, 2017



Serious SIP

- The Salt Lake and Provo PM2.5 nonattainment areas were found to be exceeding the 24-hour health standard as of their attainment date (December 31, 2015) and the EPA has reclassified each of the areas to Serious Non-Attainment.
- The Clean Air Act requires a new SIP for each area. These Serious Area plans are to be “in addition to” the Moderate Area plans Utah has already submitted, but they will essentially build upon what has already been accomplished and require the Best Available Control Measures and Technologies.
- The deadline for the submission is December 31, 2017.

<https://deq.utah.gov/Pollutants/P/pm/pm25/serious-area-state-implementation-plans/index.htm>



SIP Status

Secure | <https://deq.utah.gov/Pollutants/P/pm/pm25/serious-area-state-implementation-plans/control-strategies.htm>



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Control Strategies Serious Area PM_{2.5} State Implementation Plan (SIP) Development

Disclaimer

The Serious PM_{2.5} SIP Development is very much an iterative process. The technical foundation of any SIP involves numerous emissions inventories, air quality modeling assumptions, potential emission controls, and ever-fluctuating design values recorded throughout the air monitoring network. The PM_{2.5} Implementation Rule is very prescriptive about how these numbers must fit together to comprise an approvable plan. Various components are compiled early in the process only to be pieced together with other components later in the process. Corrections and adjustment to the various pieces is almost always necessary – even right up to the very end. Nothing appearing in these Serious PM_{2.5} SIP development pages during the process of SIP development is to be regarded as a final product. The UDAQ is making this DRAFT work available for public review in an effort to ensure transparency throughout the SIP development process. We encourage the public to review and provide feedback on these intermediary products with the understanding that they are not yet final.

Background

The Clean Air Act (the Act) requires EPA to establish [National Ambient Air Quality Standards \(NAAQS\)](#) to protect human health and the environment. The Act also delegates authority to the states to develop enforceable plans, known as [State Implementation Plans \(SIPs\)](#), to achieve those NAAQS.

In 2014, Utah developed SIPs designed to reduce fine particulate matter (PM_{2.5}) in three Moderate PM_{2.5} nonattainment areas: Salt Lake City, Provo, Logan, Utah-Idaho. The Moderate area SIPs aimed to achieve the NAAQS by implementing air pollution control

SIP Status

DRAFT: August 1, 2017 Salt Lake Area Source BACM

NOTE: The BACM analysis was prepared assuming the Utah Air Quality Board will adopt the area source rules presently in the development phase. Consequently, this draft BACM analysis should not be cited as it is subject to change.

Salt Lake Area Source BACM Analysis

BACM Analysis Process

One of the requirements for a serious nonattainment area plan is to demonstrate that the plan includes the best available control measures (BACM) that can be feasibly and cost effectively implemented for all precursors. EPA defines BACM as being more stringent than reasonably available control measures (RACM), but less stringent than the lowest achievable emission rate (LAER), which does not take into consideration the cost effectiveness of implementing a particular control measure. The BACM analysis was conducted based on:

- ❖ Literature review of EPA guidance documents and regulations including:
 - Control Techniques Guidelines (CTG)
 - Alternative Control Techniques (ACT)
 - New Source Performance Standards (NSPS)

- ❖ A comparison of existing rules to the CTG to assure that all appropriate CTG's have been addressed in rulemaking

Control Strategy Selection

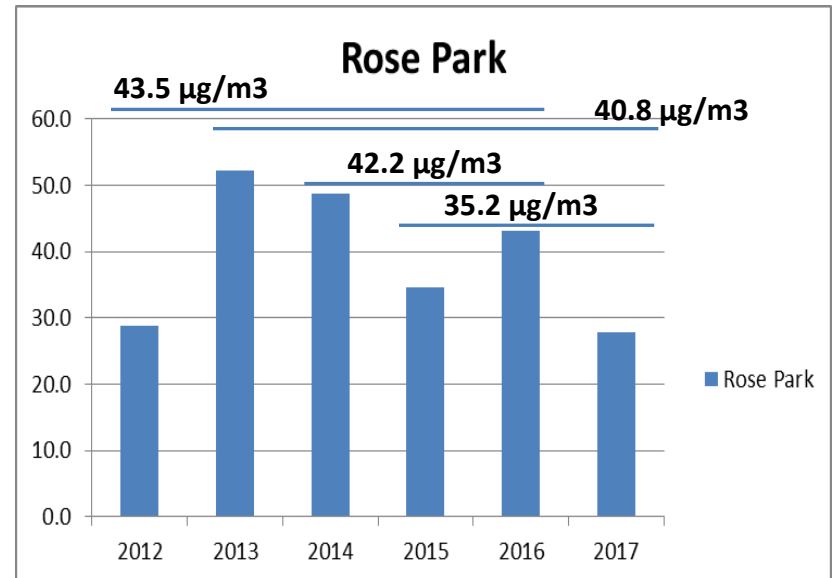
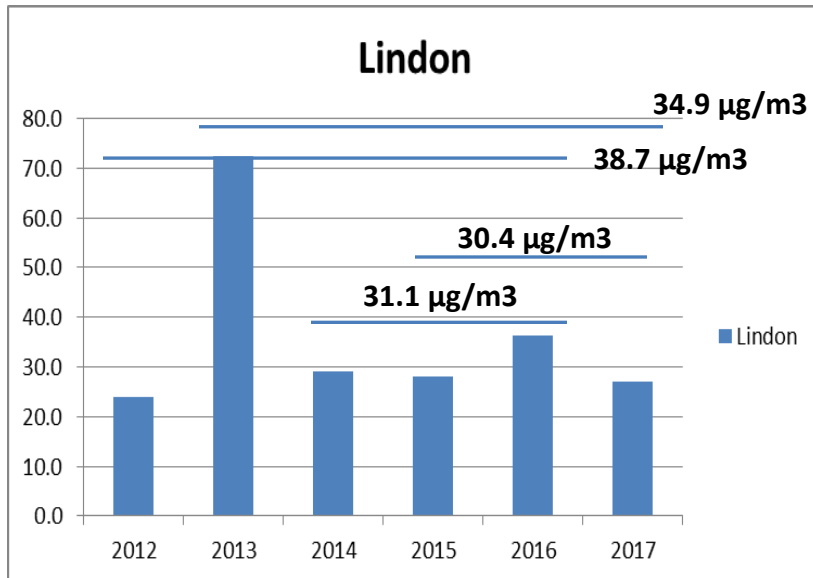
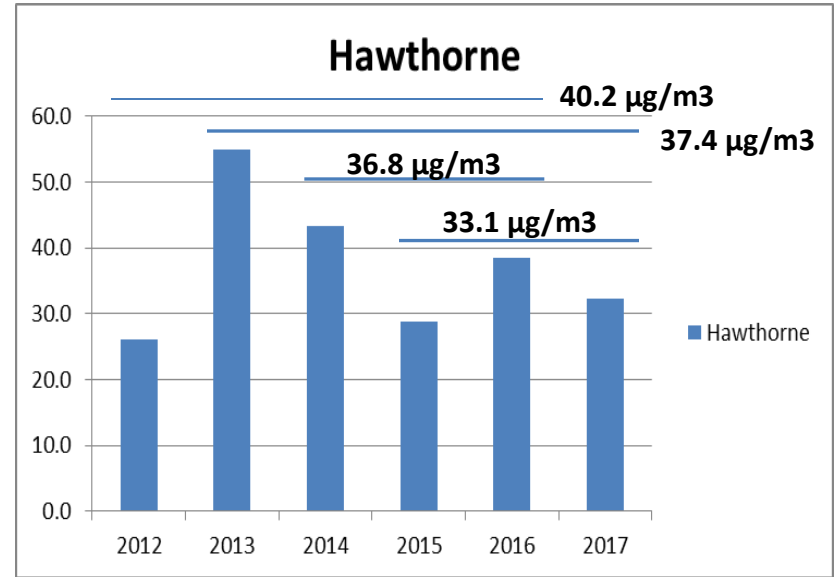
- BACT for major point sources (MSM required if the compliance date is extended)
- BACM for area sources – that can be feasibly and cost effectively implemented for all precursors. EPA defines BACM as being more stringent than reasonably available control measures (RACM), but less stringent than the lowest achievable emission rate (LAER), which does not take into consideration the cost effectiveness of implementing a particular control measure.

Potential Monitored Design Values

Charts show, in $\mu\text{g}/\text{m}^3$, the 98th percentile value collected for each year.

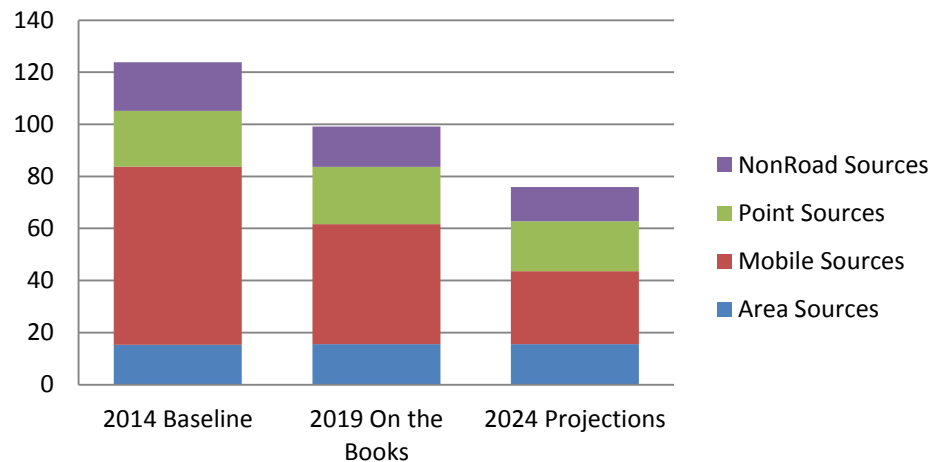
EPA allows for different aggregations of these values to determine Monitored Design Values for use in SIPs.

Indicated on charts are various 3-year averages and 5-year compilations (as averages of three 3-year averages.)

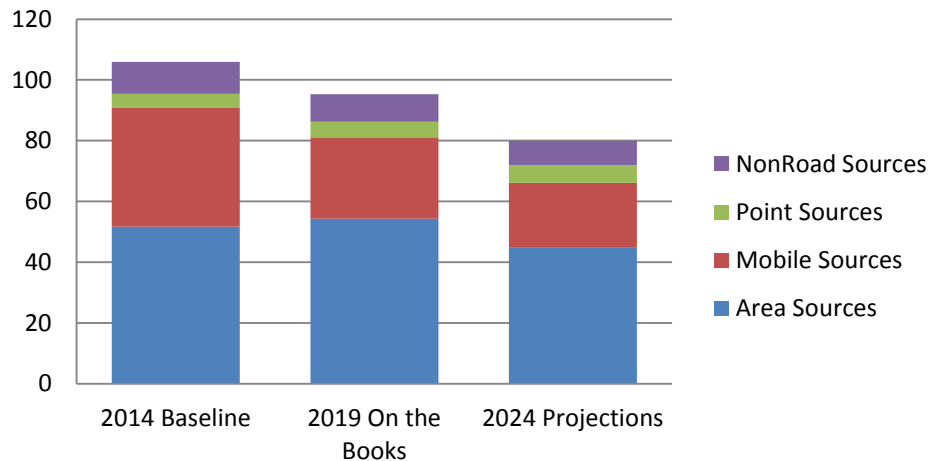


Emissions Projections (Winter Weekday) – Salt Lake Non-attainment Area (Preliminary)

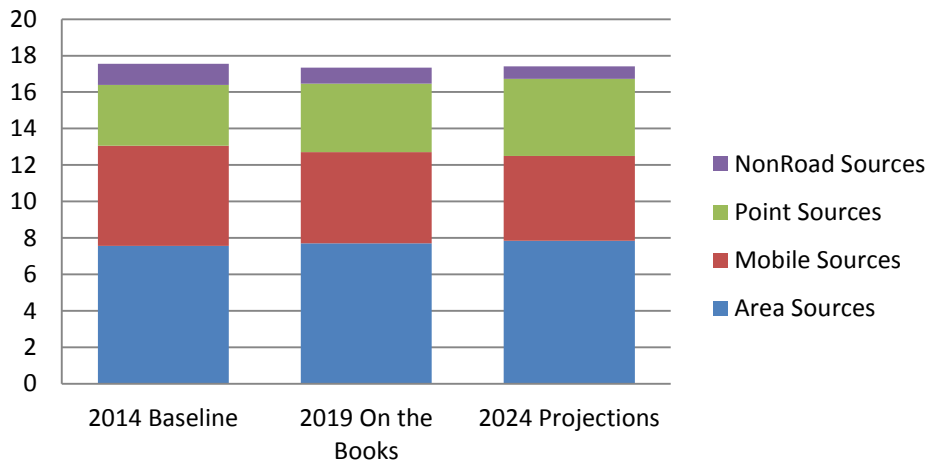
NOx - Salt Lake NAA



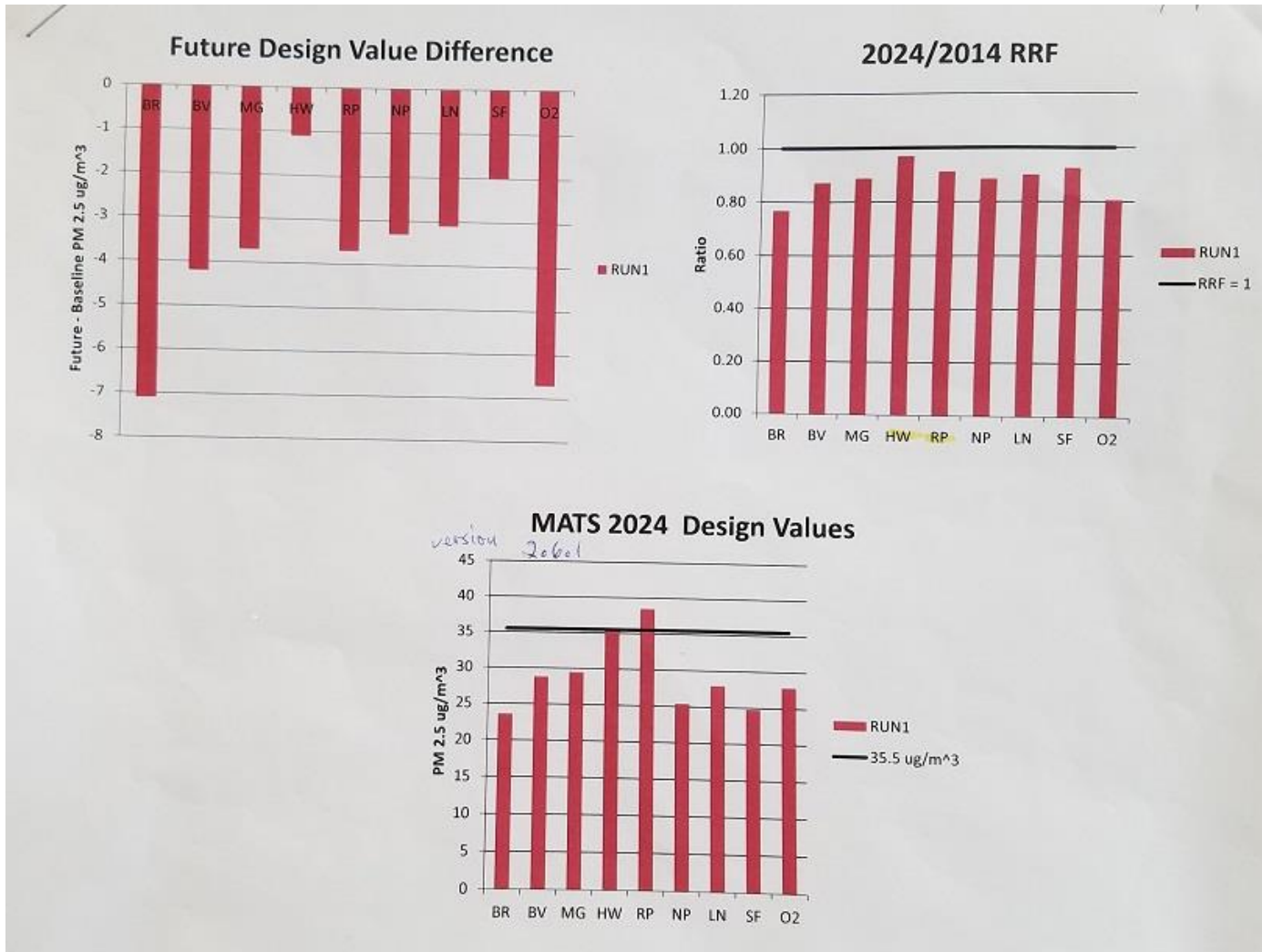
VOC - Salt Lake NAA



Pr. PM2.5 - Salt Lake NAA



(Very) Preliminary Model Results



Source: UDAQ October 3, 2017

Current Focus

- Model validation and inventory projections
- Area Source control evaluation and rule updates to meet BACM
- BACT, Additional Feasible Measures, Most Stringent Measures review for Point Sources
- Ammonia Sensitivity Analysis
- Direct PM_{2.5} Sensitivity Analysis