

Air Quality in Ogden Valley

At the request of Weber-Morgan Health Department Director of Environmental Quality (Louis Cooper), air quality was monitored in the Valley from January 31-March 16, 2014 (44 days). The Utah State Department of Environmental Quality placed a monitor at the fire station near Huntsville (unfortunately the monitor was within 100 yards of a home that heats entirely with wood and wood burning smoke could have locally increased the levels seen in the study).

In August 2014, Bo Call (DEQ section manager for air monitoring) presented the findings to the GEM committee and addressed the planning questions: Should we be worried? What can we do to preserve air quality? In a nutshell...

1. The study does NOT establish a proper baseline for the Valley but does give us a pretty good idea of where we are on particulate pollution. To get a true baseline apparently we need to monitor when the ground is snow covered, during several temperature inversions, and probably for a longer period. That said, we now know the pollution levels are relatively low in the Valley (compared to Ogden) and reduce the odds DEQ will conduct a full study anytime soon. GEM will continue to advocate for a solid baseline so we can know the true effect of growth in people and housing units on air quality.
2. In general, the Valley during winter shares the same characteristics as Ogden but at a lower pollution level; the Valley runs about 2/3 Ogden ratings. That is, when an inversion sets up in Ogden and particulate levels go high, they also increase in the Valley. During the monitoring period, the Valley averaged a reading of 3.875 compared to Ogden's 4.893. The worst 24 hours for Ogden (18.7) was also the worst 24 hours for the Valley (13.2). On the other hand, during the month of February Valley pollution exceeded Ogden pollution eight of 28 days.
3. The scientists don't think much winter Wasatch Front particulate pollution spills over to the upper valleys (because the inversion traps the pollution on the Front). But they also know that Ogden Valley is *very* small when you think about just the lower Valley floor being "trapped" under the inversion and that everything burned under that cap will stay there until the inversion ceases (Bo compared our little Valley to the vast "air shed" the Wasatch Front has...extending across the Salt Lake and beyond. On the Wasatch Front DEQ estimates that cars and trucks create about five times the particulates as households. Over 2/3 of the Front's particulates come from large industry and commercial...I think good news for us since we don't have any.
4. The scientists tell us that our temperature inversions will trap pollution, and that the pollution level now and in the future is a direct function of all the particulates we put into the air while the inversion is in place. If we quadruple the number of housing units, automobile traffic, fireplaces, etc, in general we will quadruple the particulate pollution level (with the caveat that cars are getting MUCH cleaner (a 10-fold improvement in the last 13 years).

5. The primary sources of particulate pollution in the Valley are fairly clear and boil down to anything we burn, including propane, natural gas, gasoline, diesel, wood, green waste, ditch weeds, etc. Most of this does not affect air quality unless a temperature inversion sets up, then much of it is trapped.
6. There are some things we should think about to keep winter air as clean as we can:
 - a. Figure out the elevation level where the inversion traps most of what we burn and pay special attention to building standards, transportation, and burning policy below that level.
 - b. Not a good idea to build 10,000 condos with wood burning fireplaces, especially below 5500 feet; is a good idea to have high energy standards for insulation and heating equipment. Could encourage non-burning heating sources like passive solar, earth-sink heat pumps, electric heating.
 - c. Is a good idea to restrict burning during inversion periods
7. DEQ tells us a quite thorough study was done for the upper valleys regarding summer ozone levels, but so far I have not been able to find it.