Shelton, Washington PM2.5 Pollution

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PM2.5 Air Quality Indexes

Estimated 24-Hour Average Micrograms per Cubic Meter

Category	WAQA Washington	AQI Federal EPA
Good	**0- 13.4**	**0-15.4**
Moderate	**13.5 – 20.4**	**15.5 – 40.4**
Unhealthy for Sensitive Groups	**20.5 – 35.4**	**40.5 – 65.4**
Unhealthy	**35.5 – 80.4**	**65.5 – 150.4**
Very Unhealthy	**80.5 – 135.4**	**150.5 – 250.4**
Hazardous	**>135.4**	**>250.4**

WAQA versus AQI

Category	WAQA	AQI
Good	None	**None**
Moderate	Lung/heart disease, stroke, diabetes, URI **Consider limiting activity**	**Unusually sensitive people** **Consider reducing prolonged/heavy exertion**
Unhealthy for Sensitive Groups	**Lung/heart disease, stroke diabetes,URI, infants, children, older adults Limit activity**	**Lung/heart disease, older adults, children** **Reduce prolong/heavy exertion**

WAQA versus AQI

Category	WAQA	AQI
Unhealthy	Everyone limit activity Lung/heart disease, stroke, diabetes,URI, infants, children, older adults Stay indoors	Everyone reduce prolonged /heavy exertion Lung/heart disease,older adults, children avoid prolonged/heavy exertion
Very Unhealthy	Everyone stay indoors Lung/heart disease, stroke diabetes, URI, infants, children, older adults Limit indoor activity Shut windows/doors Air Conditioning - recirculate	Everyone avoid prolonged /heavy exertion Lung/heart disease, older adults, children avoid prolonged/heavy exertion

WAQA versus AQI

Category	WAQA	AQI
Hazardous	Everyone stay indoors Shut windows/doors Air Conditioning – recirculate Cannot shut windows/doors consider leaving the area	Everyone avoid all physical activity Lung/heart disease, older adults, children remain indoors and keep activity low

EPA National Ambient Air Quality Standards Sept 21, 2006

Particulate Matter 2.5 Micrograms per Cubic Meter

- **PM2.5 standard changed from 65 to 35 in 2006**
- **15.0 ug/m3 Annual – 3 yr average of the weighted annual mean PM2.5**
- **35 ug/m3 PM2.5 – 3 year average of the 98th percentile of 24 – hour concentration**
- **The Air Quality Index (AQI) has NOT been updated to reflect the stricter EPA National Ambient Air Quality Standards**

Winter PM2.5 STUDY

Category	WAQA	Oct 2009 – Mar 2010	
		HRS	%
Good	0-13.4	854	19.0%
Moderate	13.5-20.4	1132	25.2%
Unhealthy-Sensitive Groups	20.5-35.4	1199	26.7%
Unhealthy	35.5-80.4	874	19.4%
Very Unhealthy	80.5-135.4	243	5.4%
Hazardous	135.5+	40	0.9%

1986 Hours 45.7%

2356 Hours 54.3%

Washington Air Quality Advisory (WAQA)
Shelton – December 2009 – PM2.5 – 35 and Greater

24 Hours of Unhealthy,Very Unhealthy or Hazardous Air

Sun	Mon	Tues	Wed	Thur	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Washington Air Quality Advisory (WAQA)
Shelton – December 2009 – PM2.5 – 35 and Greater

8 Hours of Unhealthy,Very Unhealthy or Hazardous Air

Sun	Mon	Tues	Wed	Thur	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Adage Pollution
All New Pollution

Pollutant	Tons per Year	Pounds per Year	Pounds per Month
PM2.5	98	196,000	16,333
Nitrogen Oxides	240	480,000	40,000
Sulfur Dioxide	149	298,000	24,833
VOC	34	68,000	5,667

Why I Believe the Permit Process is Failing to Protect Citizens

- **The PM2.5 data is based on a 3 year historical average**
- **Seasonal changes in air quality are not considered**
- **Average wind speed is used and times of low wind speed are not considered**
- **Local conditions like air inversion levels are not included in the process**
- **It would appear that the permit process is based more on the conditions in the community now and not how they will be with multiple plants in operation**