

# PM2.5 monitoring data Libby, Montana

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EPA Woodstove Workshop  
Reno, Nevada  
March 15, 2007

# Caveats

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- ❑ This is an interim report during a transitional phase.
  - ❑ No conclusions are being made now.
  - ❑ None of the data is official right now.
  - ❑ None of the BAM data will be considered “equivalent”.
  - ❑ Definitive report will have to wait until Spring of 2008.
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# PM2.5 FRM Monitors in Libby

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- ❑ Started in 1999
  - ❑ Every 3<sup>rd</sup> Day
  - ❑ Located on the roof of the Lincoln County Health Office downtown.
  - ❑ Ave. Ann. Mean 2005-06 15.6  $\mu\text{g}/\text{m}^3$
  - ❑ Ave. 98<sup>th</sup> % 24 hr 05-06 46  $\mu\text{g}/\text{m}^3$
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# Continuous PM monitors

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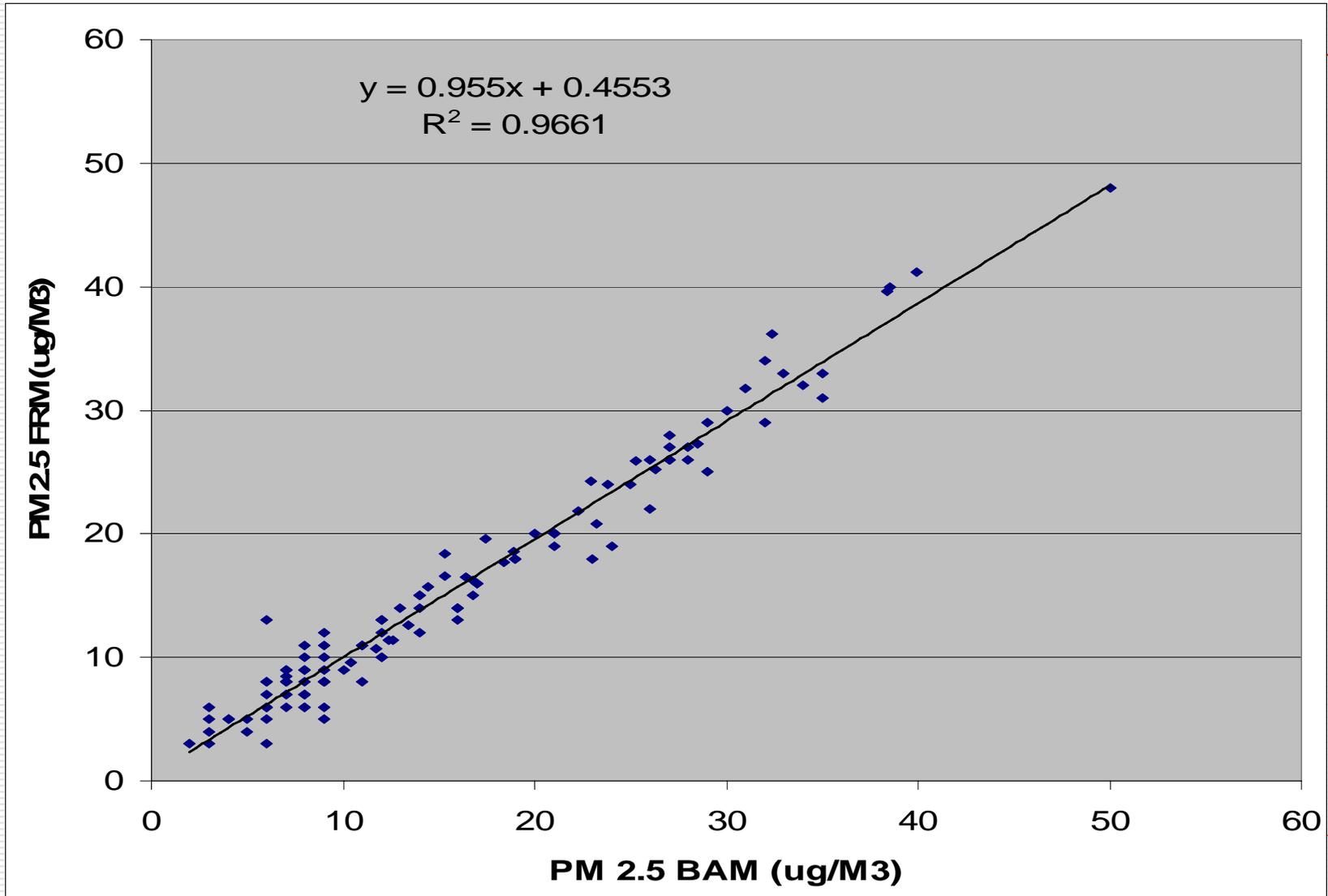
- ❑ PM-10 TEOM Since early 1990s
  - ❑ PM-2.5 BAM since November 2005
  - ❑ PM-2.5 BAM data will not be reported as “equivalent” data.
  - ❑ PM-2.5 BAM will be used to implement burning restrictions as per Lincoln County rule.
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# Apples and Oranges?

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- ❑ For this report all data before November 2006 is from FRM monitors.
  - ❑ All data for November 2006 through February 2007 is non-equivalent BAM data.
  - ❑ Comparison of BAM and FRM is excellent.
  - ❑ Good enough for this report.
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# Libby BAM vs. FRM 14 months



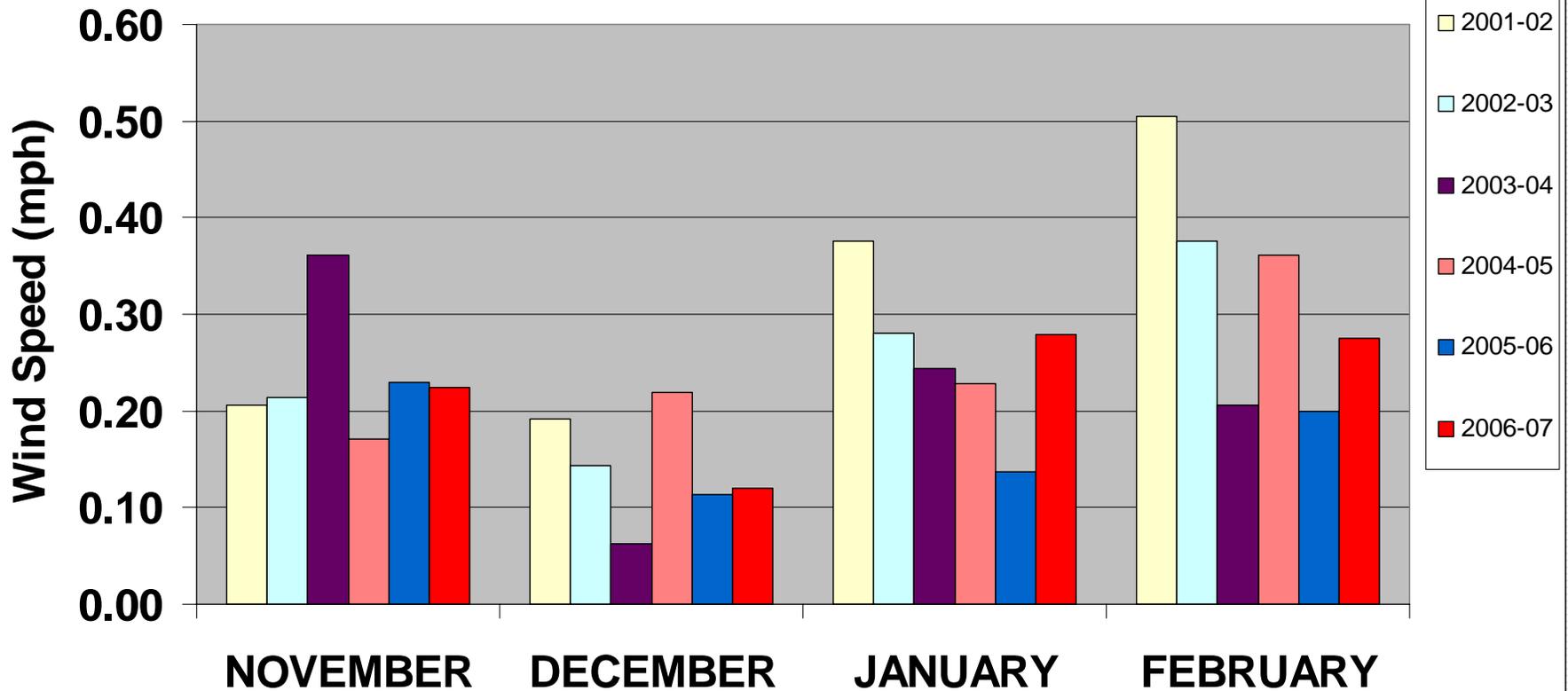
# LIBBY DISPERSION

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- ❑ Winter months very stagnant.
  - ❑ Average wind speeds very low (< 0.5 mph ).
  - ❑ Calms > 90%
  - ❑ Modified Pacific most of time.
  - ❑ Cold but not arctic.
  - ❑ Fog and low clouds common in winter.
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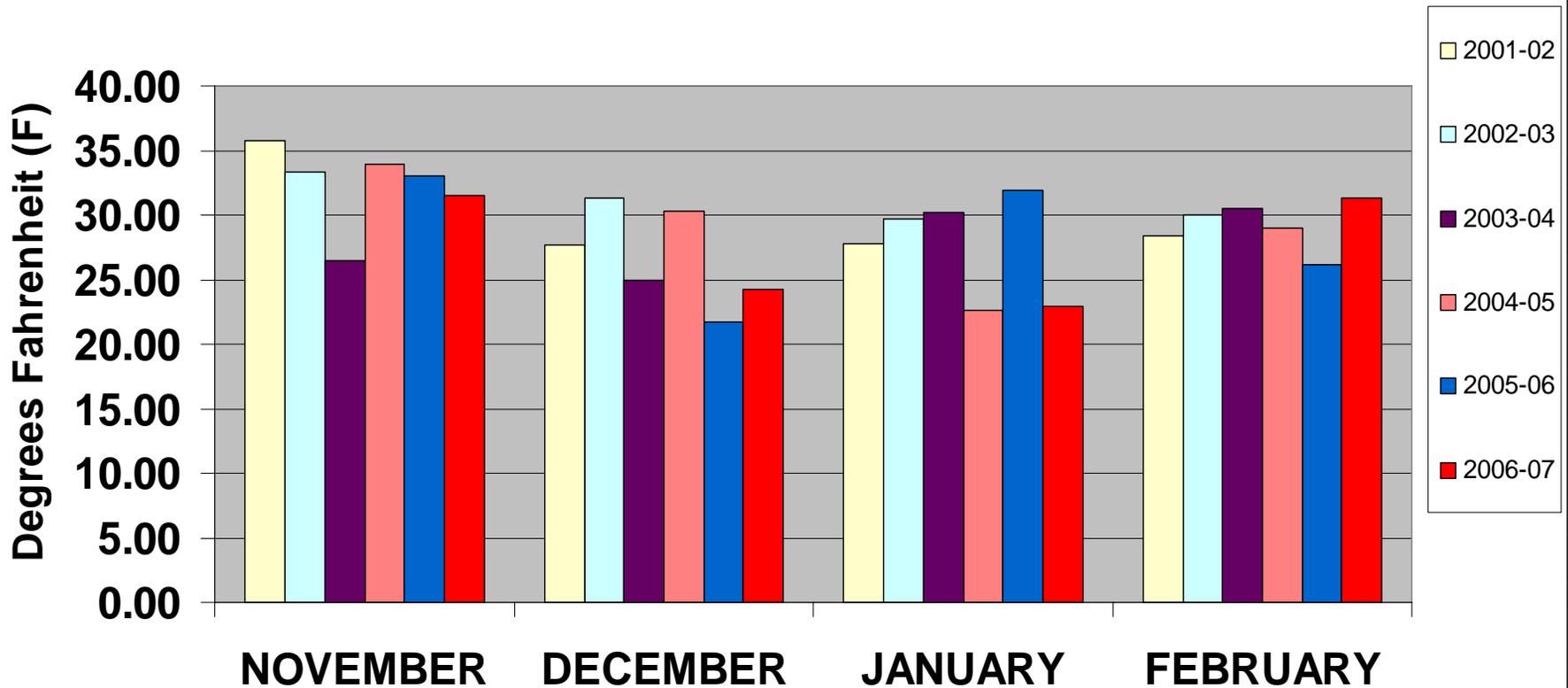
# Monthly Average Winds 01-07

## Average Monthly Wind Speed Libby Woodstove Changeout



# Monthly Ave. Temp 01-07

## Average Monthly Temperature Libby Woodstove Changeout



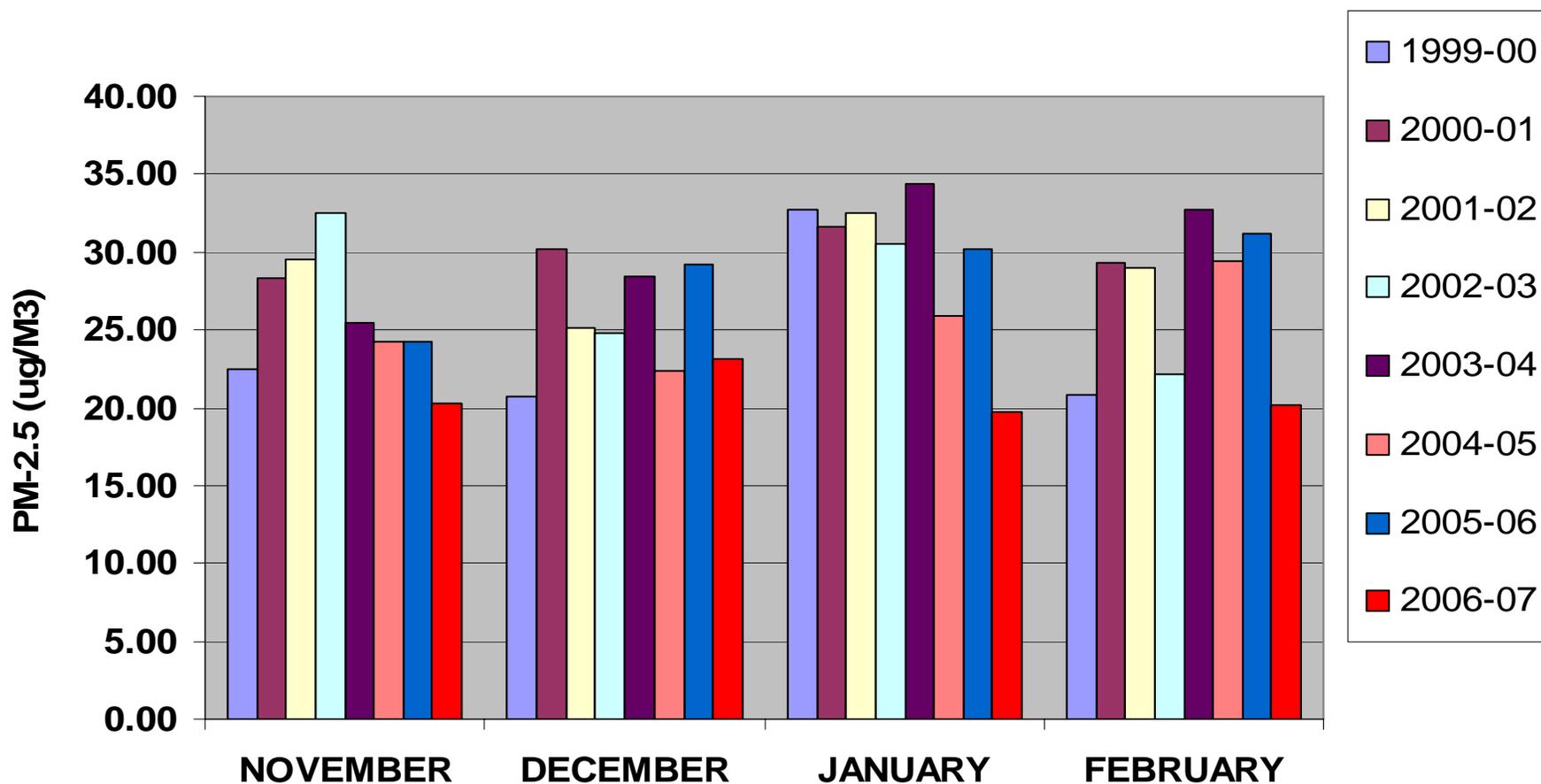
# 2006-07 vs. previous five years

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- Wind speed unremarkable.
  - Temperature unremarkable.
  - Dispersion unremarkable
  - Any changes in average monitored results should be reflective of emission changes and not weather changes.
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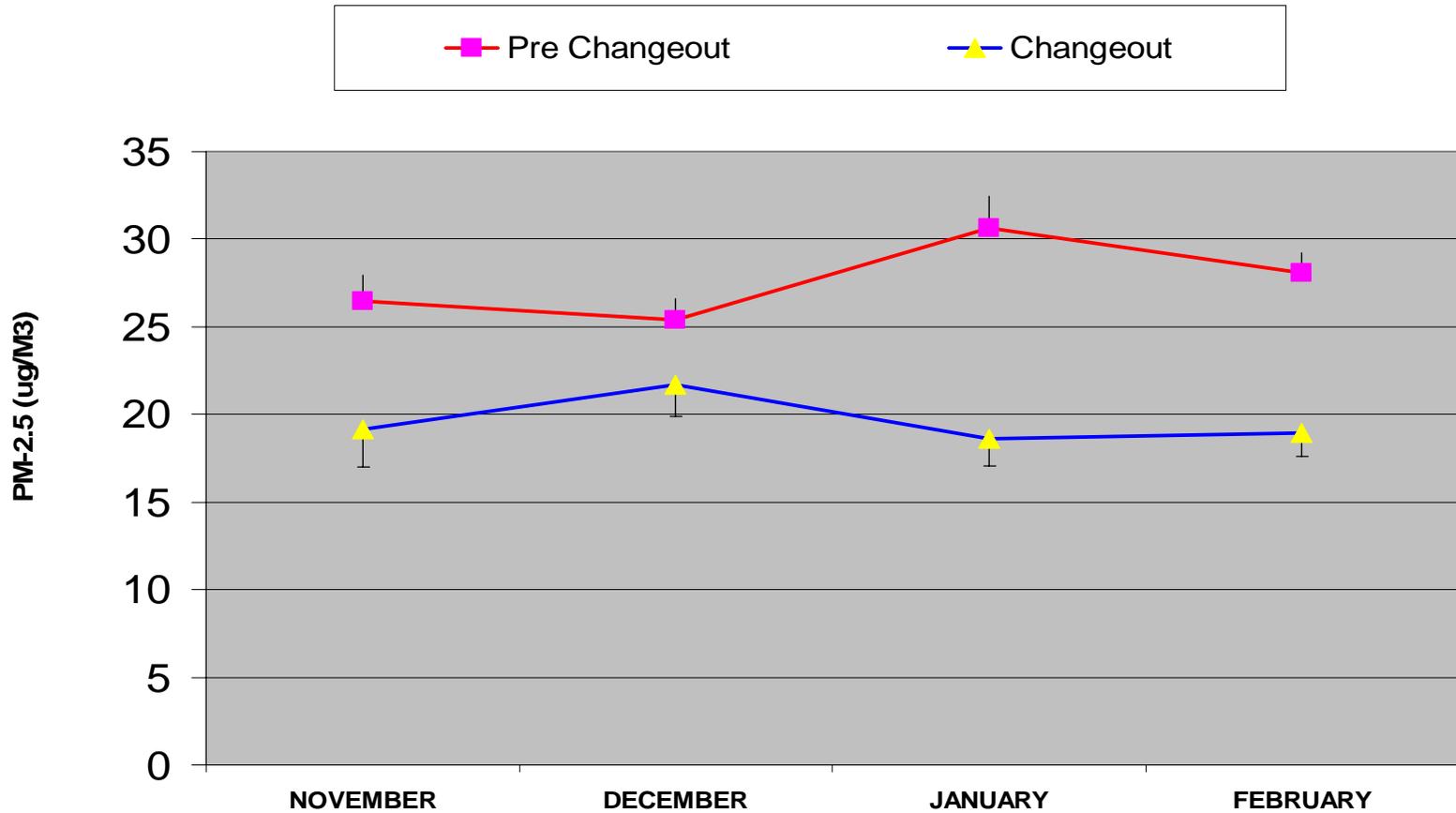
# Libby monthly average PM2.5

**Average Sample PM-2.5 Concentration  
Libby Woodstove Changeout**



# Libby 2006-07 vs. Ave. 99-06

Pre Changeout and Changeout PM 2.5 Concentration



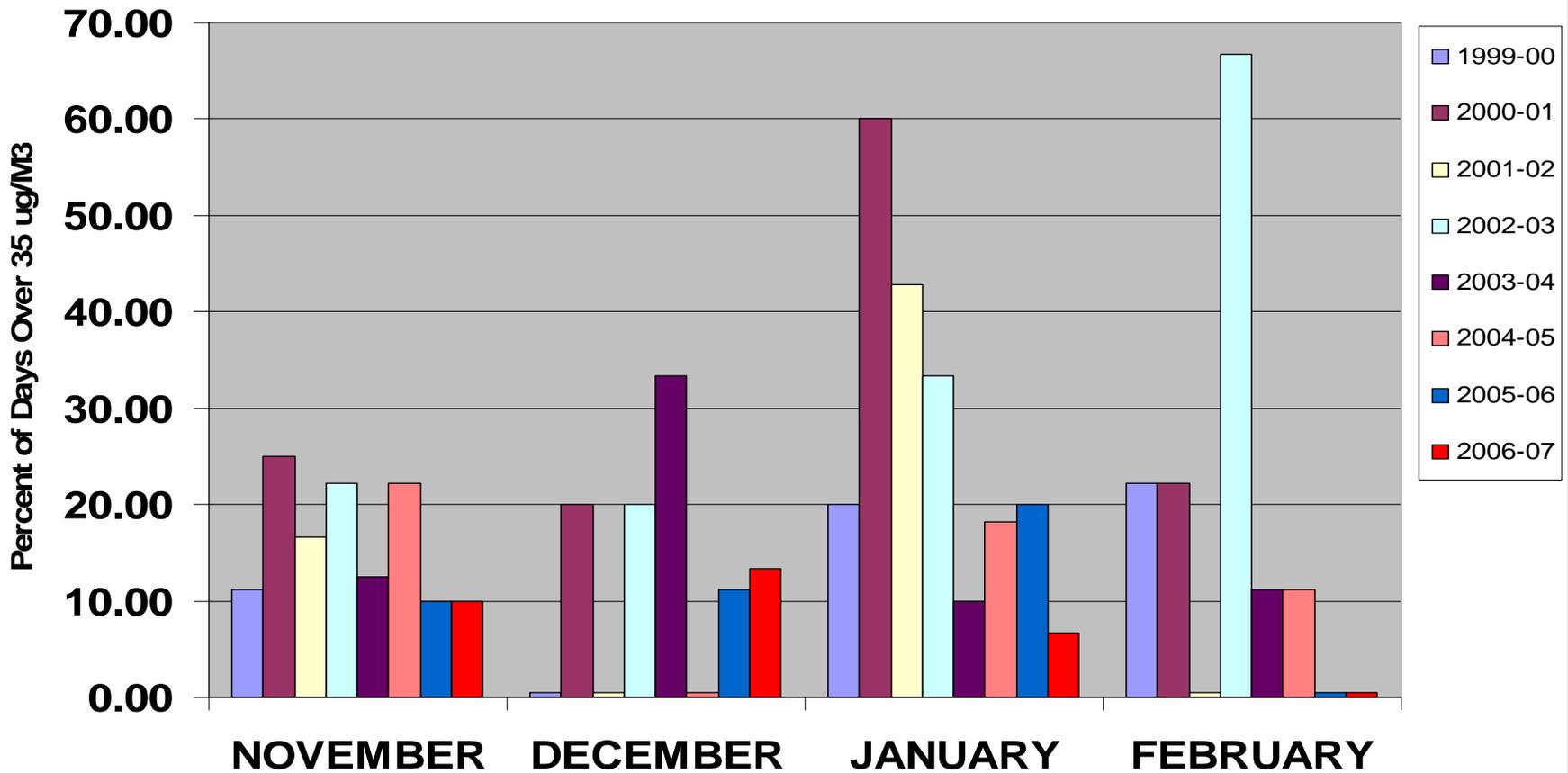
# This is not a conclusion - but -

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- ❑ I told my boss I think the annual average problem in Libby is solved.
  - ❑ MDEQ has told EPA that we may not submit a designation of non-attainment for Libby for the new 24 hour NAAQS in December 2007.
  - ❑ MDEQ no longer considers ambient data from Libby prior to January 1, 2007 to be representative of the current reality.
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# Libby 24 hour

## Percentage of Sampled Days Over 35 ug/M3 Libby Woodstove Changeout



# QUESTIONS?

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