





## Smoke Management – past and present



- **Administrative/ Policy/ Operations History**
- **Burning and Intrusion History**
- **Recent Smoke Intrusion Analysis**



## Administrative/ Policy/ Operations History



- **1969/72 – Voluntary then Regulatory Program**
  - Restricted Area (RA) mainly west of Cascades
  - Seven Designated Areas (DAs) for intrusions
  - Intrusion definition – smoke below 2 – 3000 ft. over DA
  - Burn data limited and manually collected
  - Forecasts/ advisories very general for Coast Range and Cascades
- **1975 – Computerized Smoke Management data system**
- **1978 – 1<sup>st</sup> Review**
  - More detailed intrusion reporting and detailed advisories (Fire Weather Zones)
  - Public meetings to explain program
- **1985 – Advisories become instructions (mandatory compliance)**



## Administrative/ Policy/ Operations History



- **1986 – 2<sup>nd</sup> Review**
  - Four additional DAs – Newport, Lincoln City, Astoria, Bend
  - Visibility Protection Plan for Cascade Class I Areas - summer
  - Intrusion definition – changed to ground level smoke in DA
  - Comprehensive data collection for fuels, weather, and emissions
  - Audit program initiated
- **1989 – Advisory committee established by Legislature**
- **1990 – Northern Spotted Owl listed as threatened and endangered**
- **1991 – 3<sup>rd</sup> Review**
  - Special Protection Zones (SPZs) developed for non-attainment and maintenance areas
  - Voluntary program developed for South Central Oregon
  - Fees instituted for RA burning



## Administrative/ Policy/ Operations History



- **1994 – Voluntary program developed for NE Oregon federal forests**
  - Forecast/Instruction model initiated - detailed and extended forecasts
- **1995 – 4<sup>th</sup> Review (minor)**
  - Added Lakeview SPZ and removed Eugene and Grants Pass SPZ
- **1997 – EPA adopts new particulate emission standard - PM10 to PM2.5**
- **1999 – Regional Haze Rule adopted – Class I visibility protection year-round**
- **2002 – 2005 – 5<sup>th</sup> Review (comprehensive – implemented in 2008)**
  - Virtually all forestland becomes regulated under SMP – Level 1 & 2 land
  - Federal forests pay prescribed burn fees statewide
  - DAs change to SSRAs and increase from 11 to 23
  - Fee structure changes – landing units pay, minimum fee
  - Limited use of polyethylene (PE) to cover piles



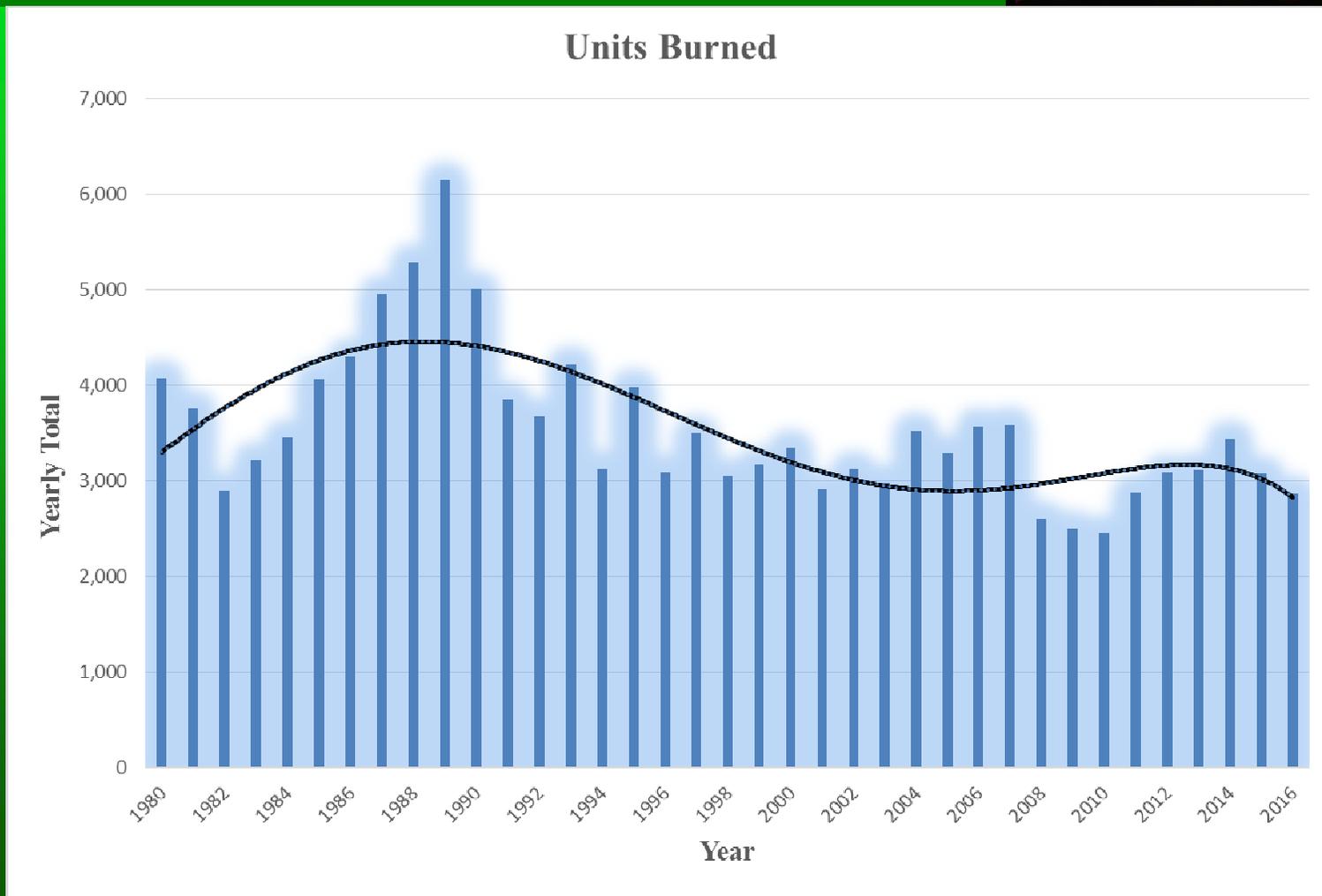
## Administrative/ Policy/ Operations History



- **2012/13 – 6<sup>th</sup> Review**
  - Protect Class I Areas year-round – Crater Lake, Kalmiopsis Wilderness focus
  - Analyze/ report burn alternatives and emission reduction techniques
  - Schedule periodic review every five years
  - Large tonnage burning (2000+ tons) must be monitored
  - La Grande SPZ removed, Medford SPZ altered
- **2014 – Federal restoration burning focus intensifies**
- **2015 – PE study demonstrates improved emission reductions**
- **2016 - Field Coordinator hired**
- **2017 – 7<sup>th</sup> Review initiated: Policy of prescribed burning in Oregon**



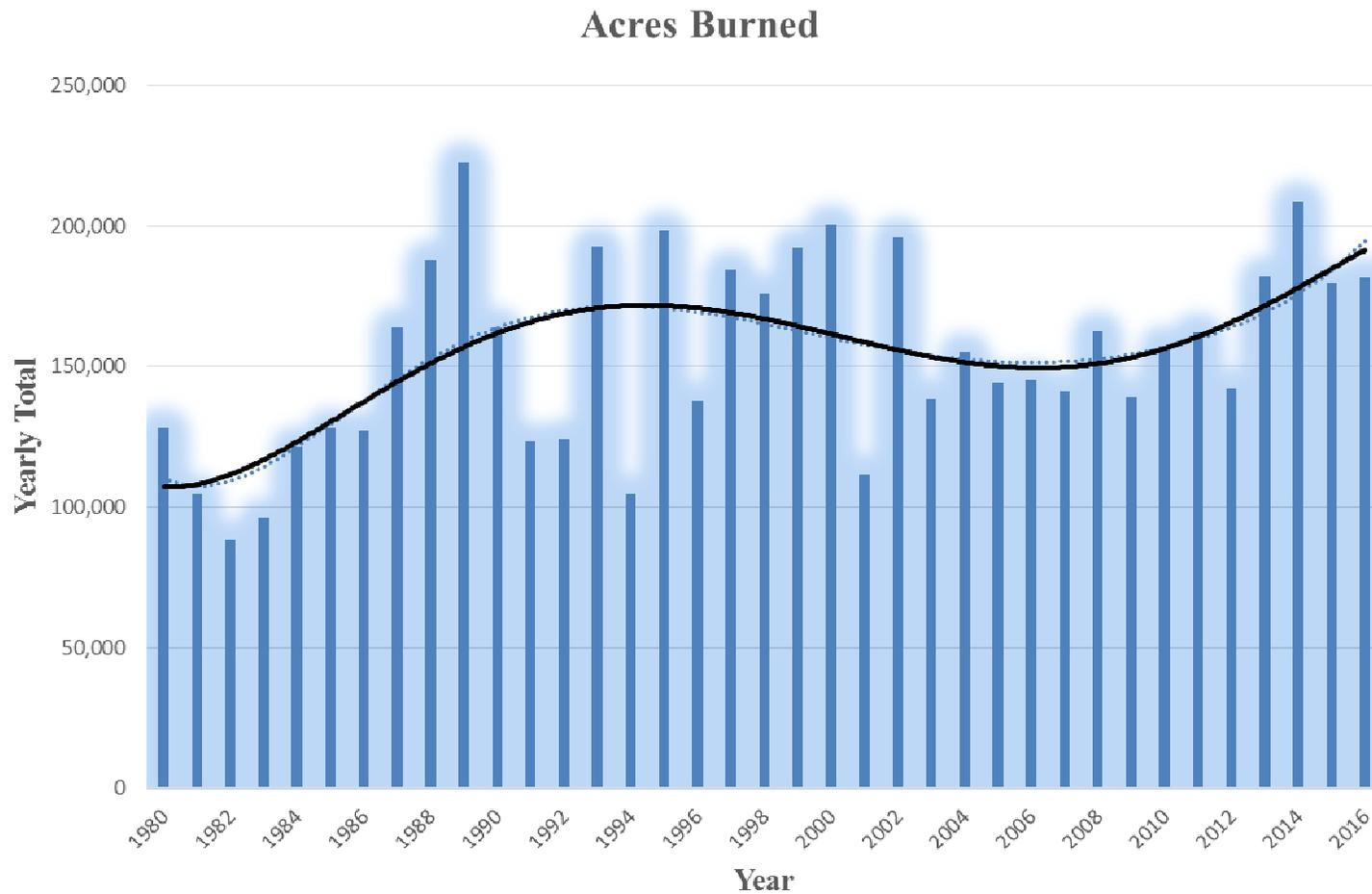
# Burning and Intrusion History



Statewide reporting - 1987



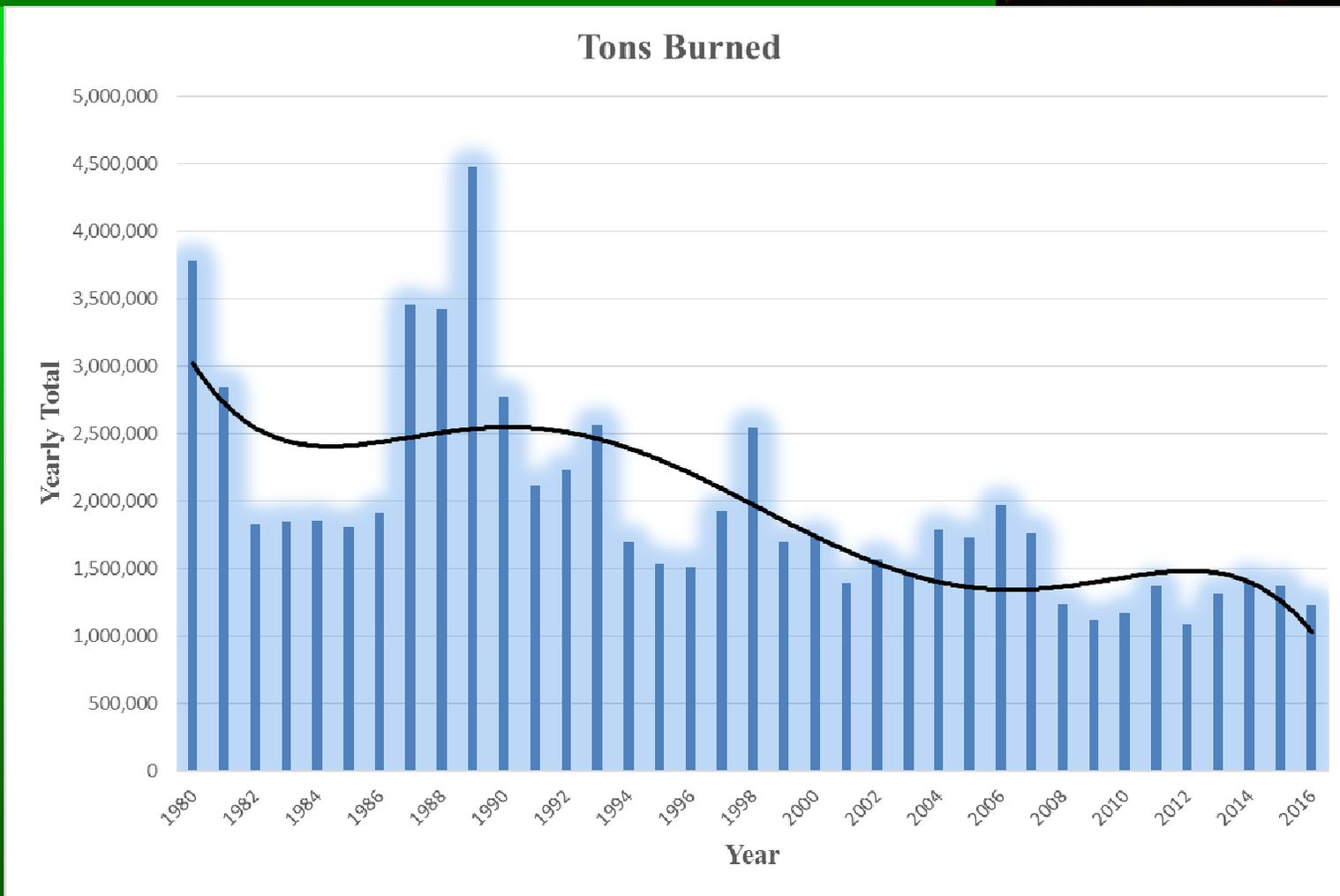
# Burning and Intrusion History



Statewide reporting - 1987



# Burning and Intrusion History



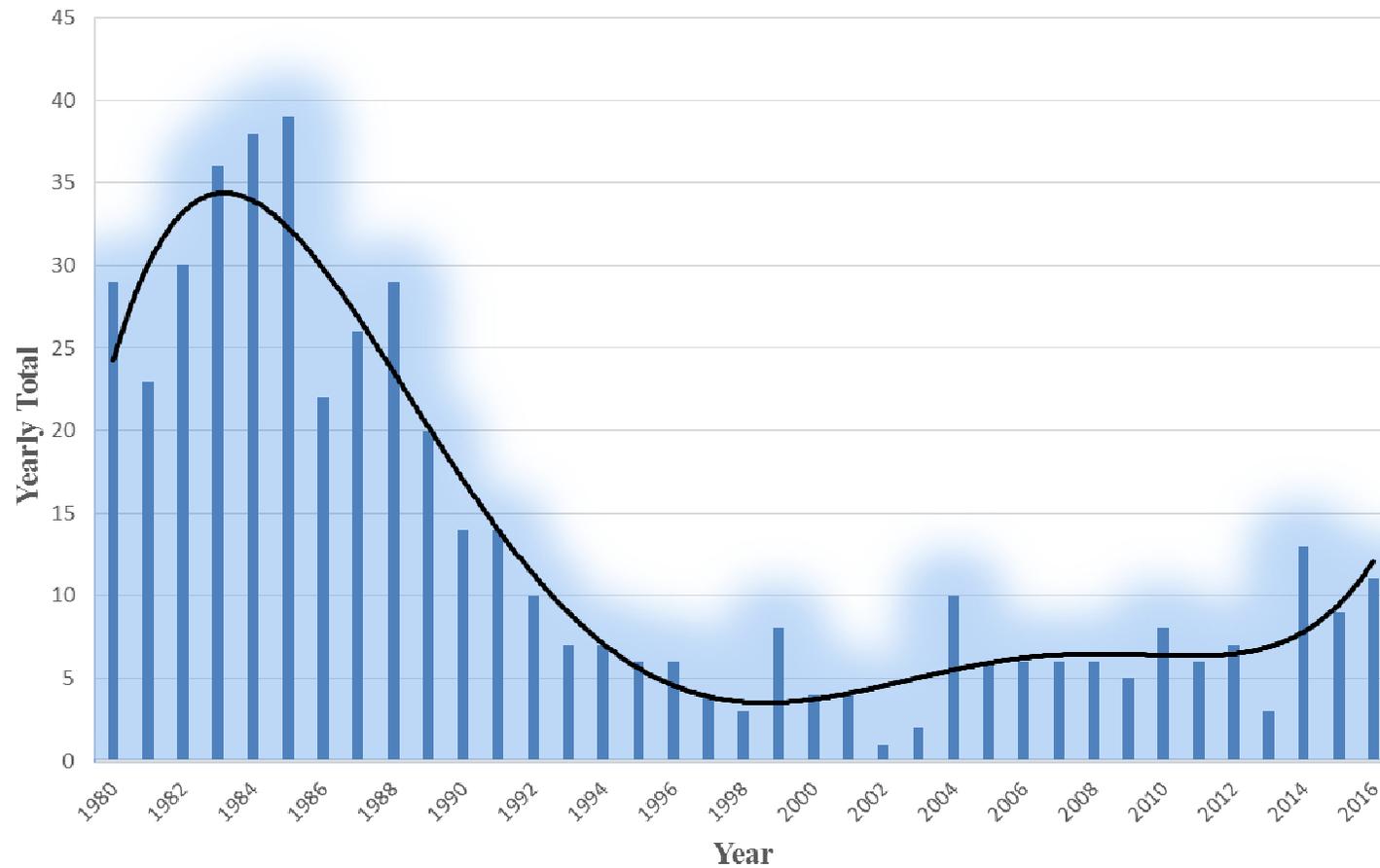
Statewide reporting – 1987; Tonnage reporting increases - 1987



# Burning and Intrusion History



### Smoke Intrusions



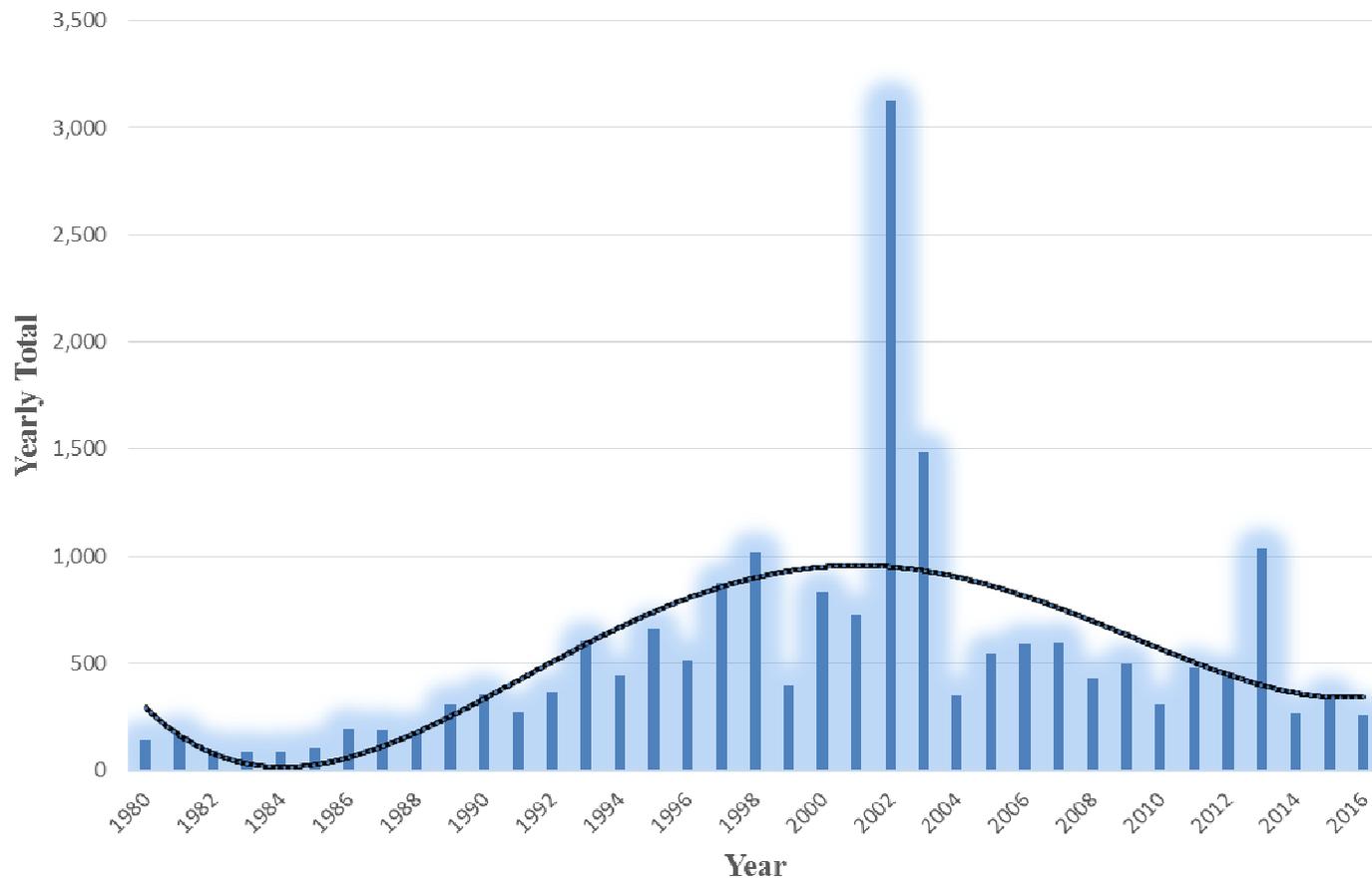
Intrusion definition changes to ground level – 1987; SSRAs increase to 11 – 1987, increase to 23 - 2008



# Burning and Intrusion History



### Intrusions per Units Burned



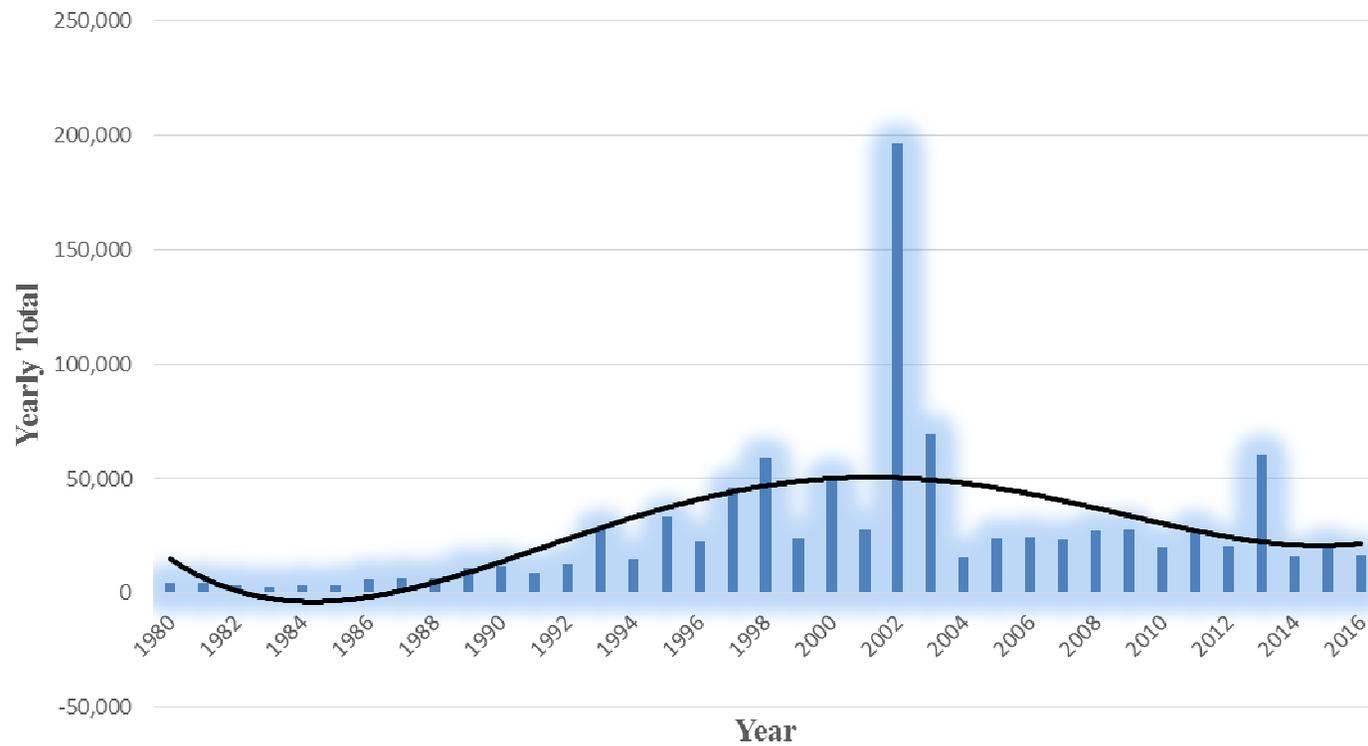
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# Burning and Intrusion History



### Intrusions per Acres Burned



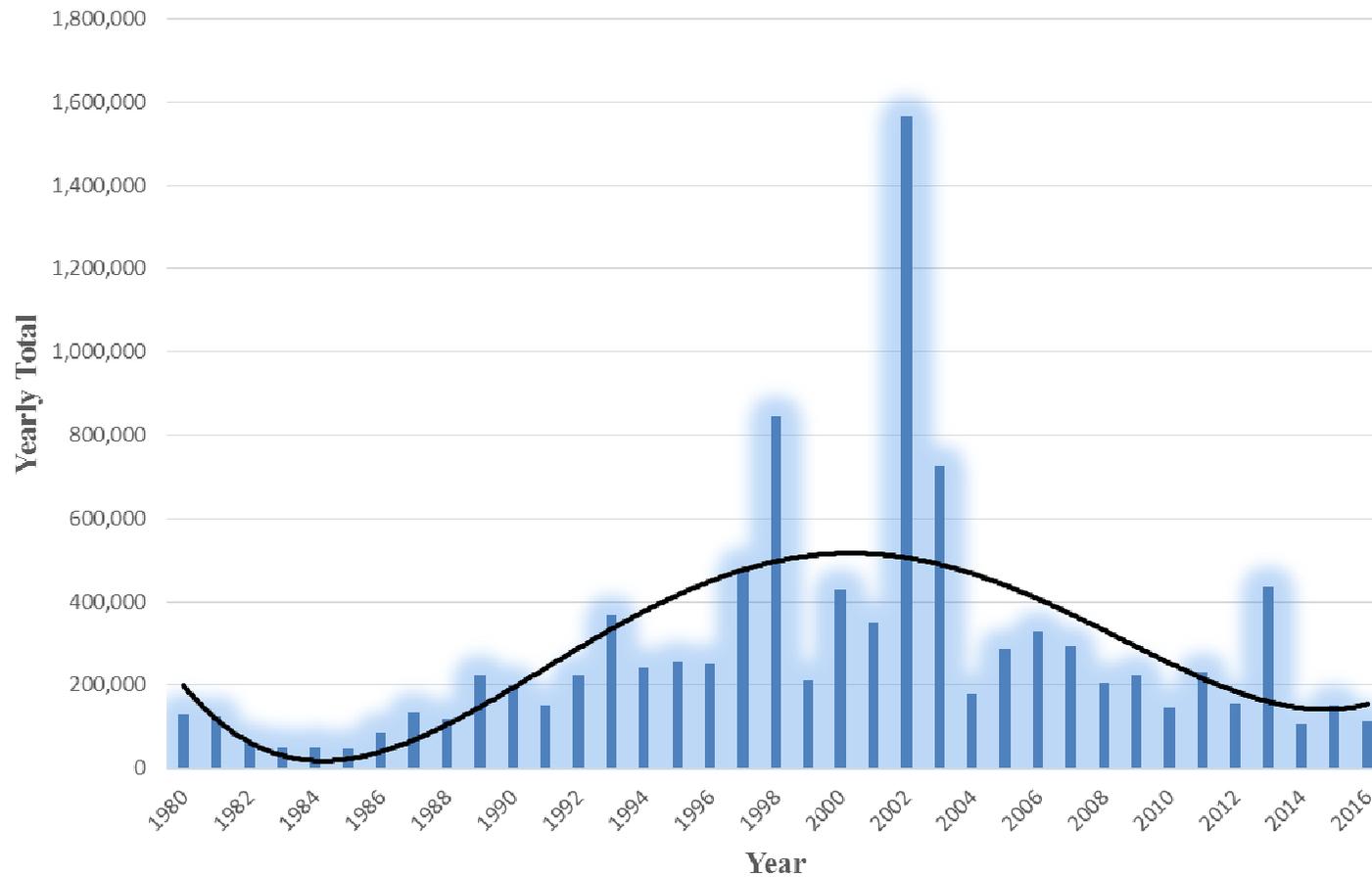
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# Burning and Intrusion History



### Intrusions per Tons Burned



Intrusion definition changes to ground level – 1987; SSRAs increase to 11 – 1987, increase to 23 - 2008

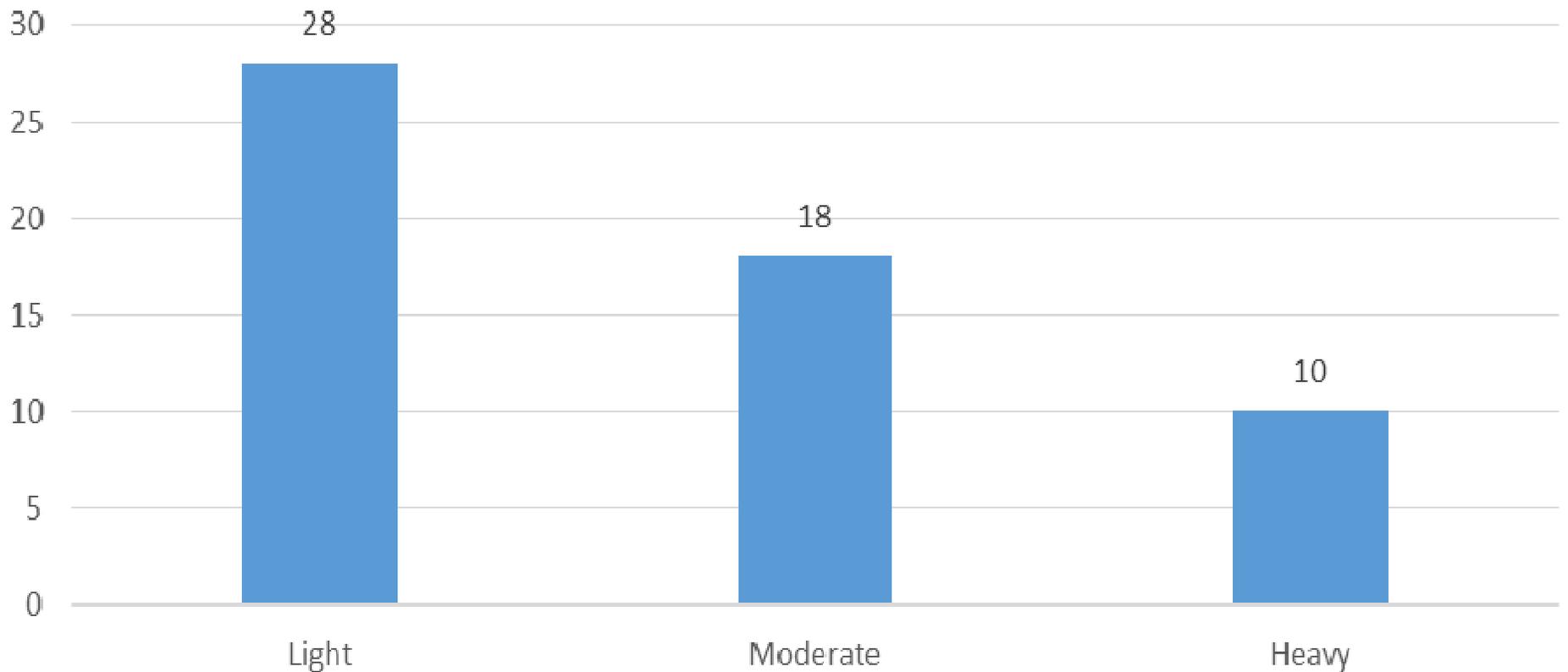


# Recent Smoke Intrusion Analysis

2011 -2017



Number of Smoke Intrusions by Magnitude  
2011 - 2017



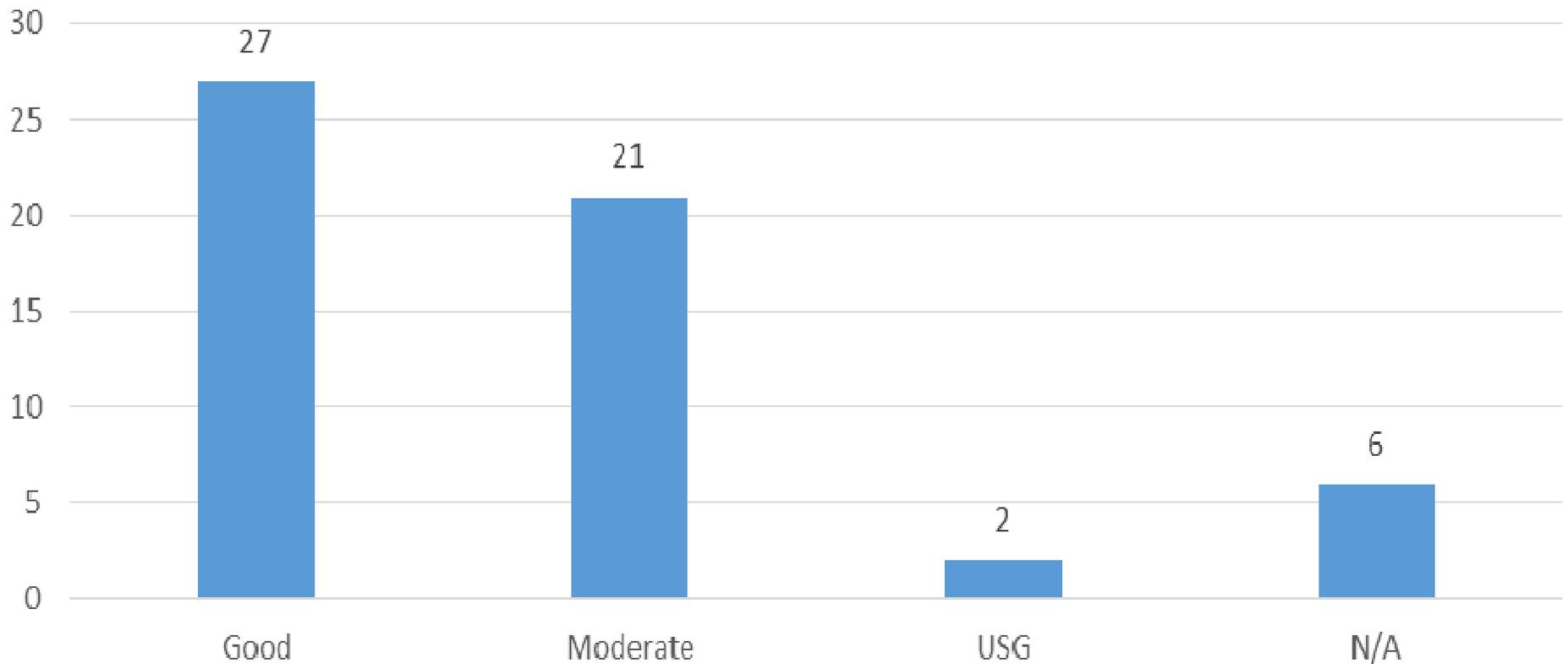


# Recent Smoke Intrusion Analysis

2011 -2017



Number of Smoke Intrusions by 24-hour AQI  
2011-2017



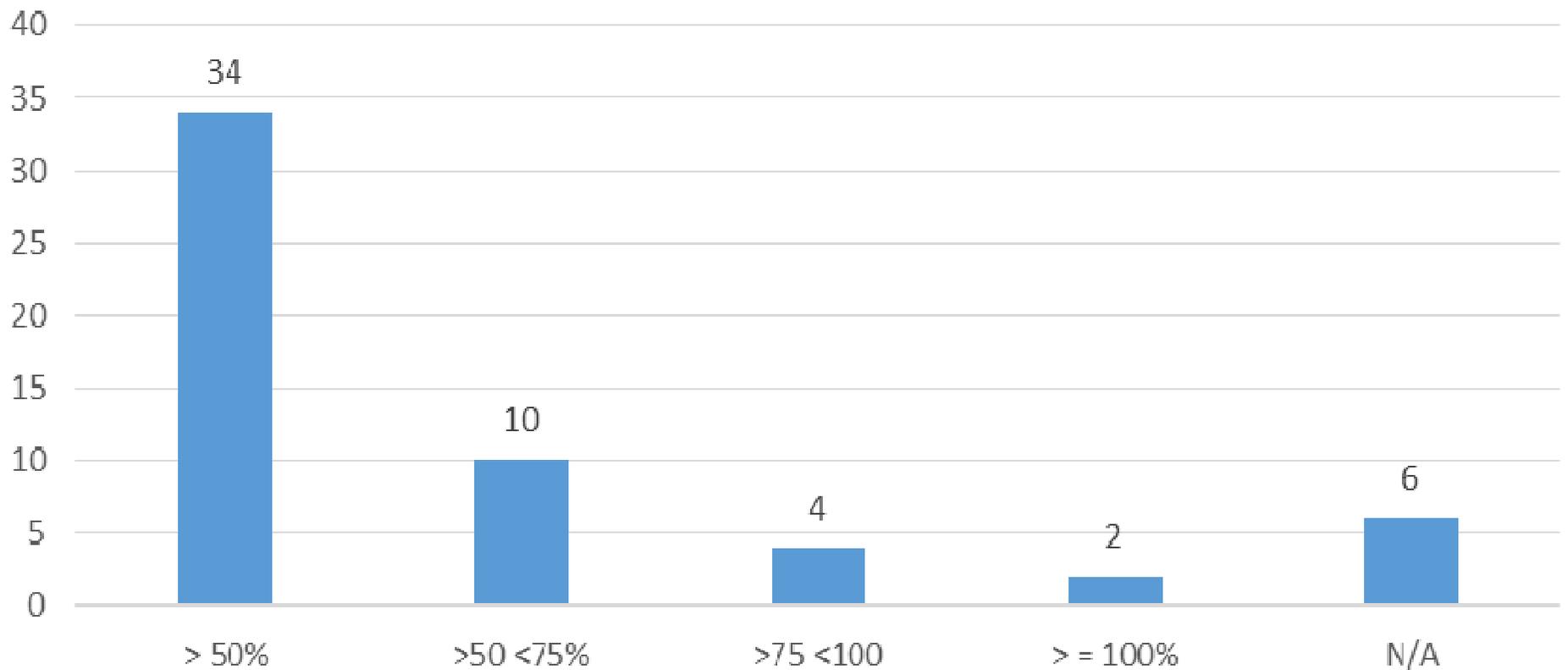


# Recent Smoke Intrusion Analysis

2011 -2017



Number of Smoke Intrusions by % of NAAQS  
2011 - 2017

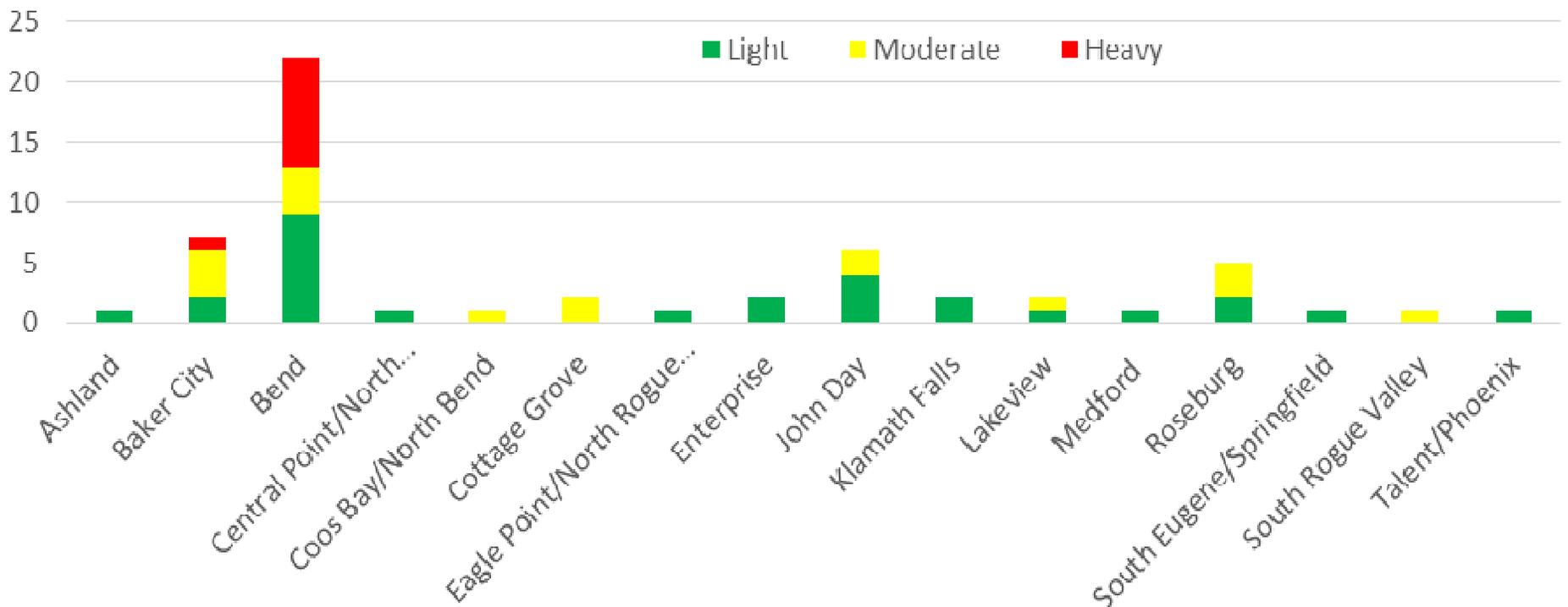




# Recent Smoke Intrusion Analysis 2011 -2017



Number and Magnitude of  
Smoke Intrusions by SSRA (2011-2017)

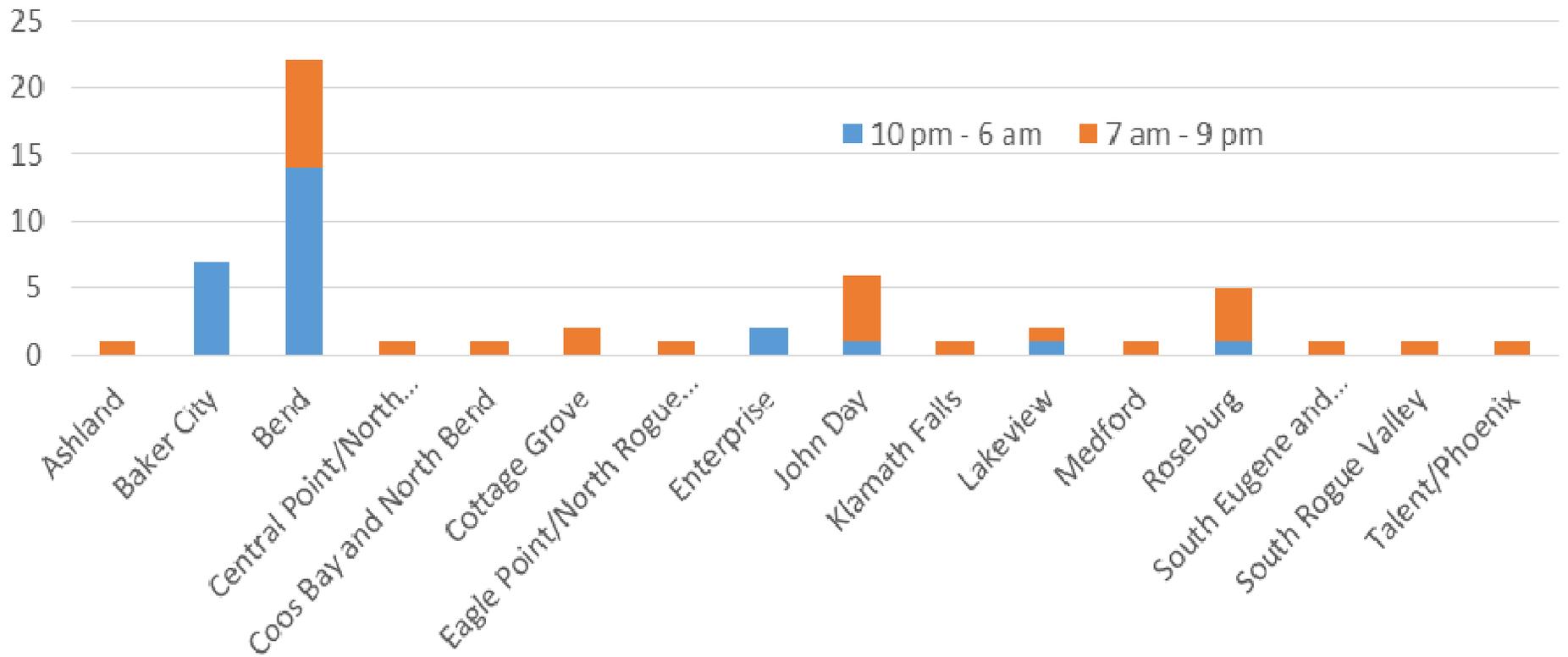




# Recent Smoke Intrusion Analysis 2011 -2017



### Number of Daytime vs Nighttime Smoke Entrance





## Smoke Management – past and present



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