

The Air Toxics “Hot Spots” Program



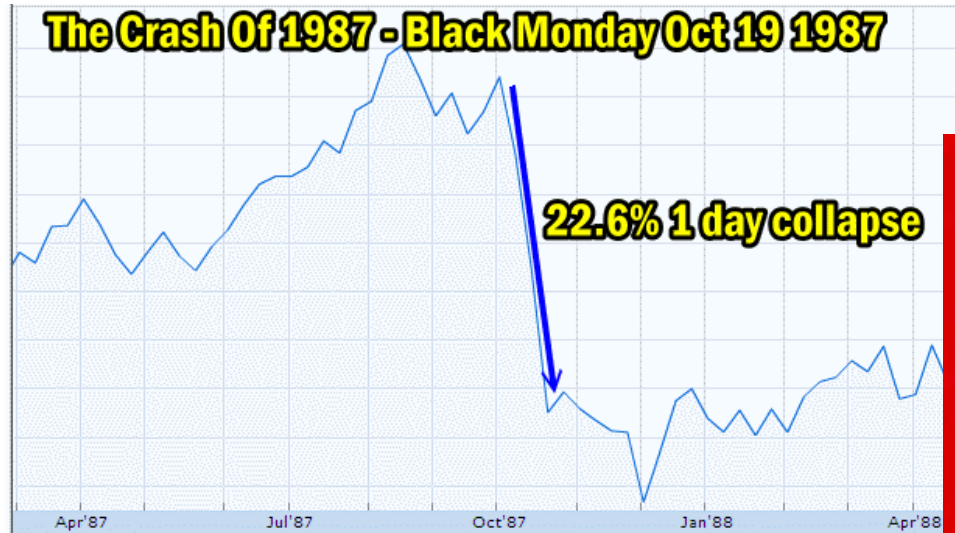
HOW DID WE GET HERE?

**2017 Symposium
Enforcement, Engineering and Toxics**

Jorge DeGuzman
November 8, 2017



WELCOME TO 1987!



"All the News That's Fit to Print"

The New York Times

Late Edition

New York Today, increasing clouds, High 62-61. Tonight, cloudy, breezy, showers likely. Low 51-52. Tomorrow, showers ending, High 58-63. Yesterday, High 66, low 44. Details on page 86.

VOL. CXXXVII, No. 47,298 Copyright © 1987 The New York Times NEW YORK, TUESDAY, OCTOBER 26, 1987

STOCKS PLUNGE 508 POINTS, A DROP OF 22.6%; 604 MILLION VOLUME NEARLY DOUBLES RECORD

A Huge Blow to the Five-Year Bull Market

Dow's Record Fall
Yesterday's plunge was down 22.6 percent from Friday's close.

The Dow Jones industrial average, which has been surging since August 1982, began a dramatic fall last week that continued through yesterday when it closed at 1,728.74. (Shown: Weekly Close of the Dow.)

WORLDWIDE IMPACT

Frenzied Trading Raises Fears of Recession — Tape 2 Hours Late

By LAWRENCE J. DE MARSA

Stock market prices plunged in a turbulent wave of selling yesterday, giving Wall Street its worst day in history and raising fears of a recession.

The Dow Jones industrial average, considered a benchmark of the market's health, plummeted a record 508 points, to 1,728.74, based on preliminary calculations. That 22.6 percent decline was the worst since World War I and far greater than the 11.62 percent drop on Oct. 26, 1929, that ended what had been the 1920's 11.7 percent decline from the previous peak.

Since hitting a record 3,122.42 on Aug. 23, the Dow has fallen almost 1,000 points, or 36 percent, putting the 10-day index at 121.3 points below the level at which it started the year. With Friday's plunge of 108.56 points, the Dow has fallen more than 70 percent in the last two sessions.

Unprecedented Trading

Yesterday's frenzied trading on the nation's stock exchanges filled volume to unheard-of levels. On the New York Stock Exchange, an estimated 804.3 million shares changed hands, almost double the previous record of 393.5 million shares set just last Friday.

But today's economy is better equipped to handle financial shocks. "I don't see this decline in the stock mar-

Does 1987 Equal 1929?

By ERIC GELMAN

As stock prices soared this year, a Moses, director of the Center for International Business Cycle Research at Columbia University.

To be sure, there are some striking similarities between the current era and the 1920's. In the 1920's, the Dow Jones industrial average rose to a peak of 381.17 in 1929, and then, individual and corporate debt was high, and some sectors of the economy are extremely weak. Trade relations are strained, with protectionist sentiment growing.

The quick recovery, they maintain, says, in an. The huge boom on Wall Street conceals a substantial slow in the economy at large. But there are many, including in "junk" today —

U.S. Ships Shell Iran Installation In Gulf Reprisal

Offshore Target Termed a Base for Gunboats

By STEVEN V. ROBERTS

WASHINGTON, Oct. 19 — United States naval forces struck back at Iran today for attacks on American merchant vessels and other Persian Gulf ships, officials said. The American fleet said it would send a base for Iranian gunboats.

A few hours later, a naval commando detachment boarded a third platform five miles away and destroyed radar and communication equipment. Pentagon officials said.

By American warships were reported in the action, which occurred 120 miles east of Bahrain at about 7 P.M. (7 A.M. Eastern daylight time).

A 10-Missile Warning

American officials said the attacking force took aim at an Iranian missile ship, giving the crew on the four missile destroyers, stationed about three miles away, a 20-minute warning before they fired.

At the United Nations, an Iranian delegate said "there is no doubt that the situation could not be contained."

With the bombarding, the Administration announced to send a message to Iran. The United States had earlier said



Lionel Andrés "Leo" Messi
Born: June 24, 1987 (age 30) in Rosario, Argentina

The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, 1987, Connelly)

AB 2588

The Air Toxics "Hot Spots"
Information and Assessment

1987



The Ws:

WHO: Who is Subject to AB-2588

WHAT: What do affected facilities have to do

WHEN: By when?

Now What?

Health and Safety Code, Division 26

Chapter 2 - Facilities Subject to this Part (§ 44320-44325)

- Facilities Currently Subject to a District Toxics Inventory
- Facilities that manufacture, formulate, use or release substances identified by ARB as per § 44321, and release, or have the potential to release:
 - ≥ 25 tons per year of TOG, PM, NO_x, or Sulfur. - Submit plan by Aug 1, 1989
 - ≥ 10 tons per year of TOG, PM, NO_x, or Sulfur. - Submit plan by Aug 1, 1990
 - < 10 tons per year, ARB must identify the types of facilities to be included – Submit plan by Aug 1, 1994

Appendix E

TOG - Not
ROG or VOC

PM - Not
PM10

S – Later clarified to
be SO_x

The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, 1987, Connelly)

AB 2588
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Information and Assessment



Toxics Inventory Plan
& Report

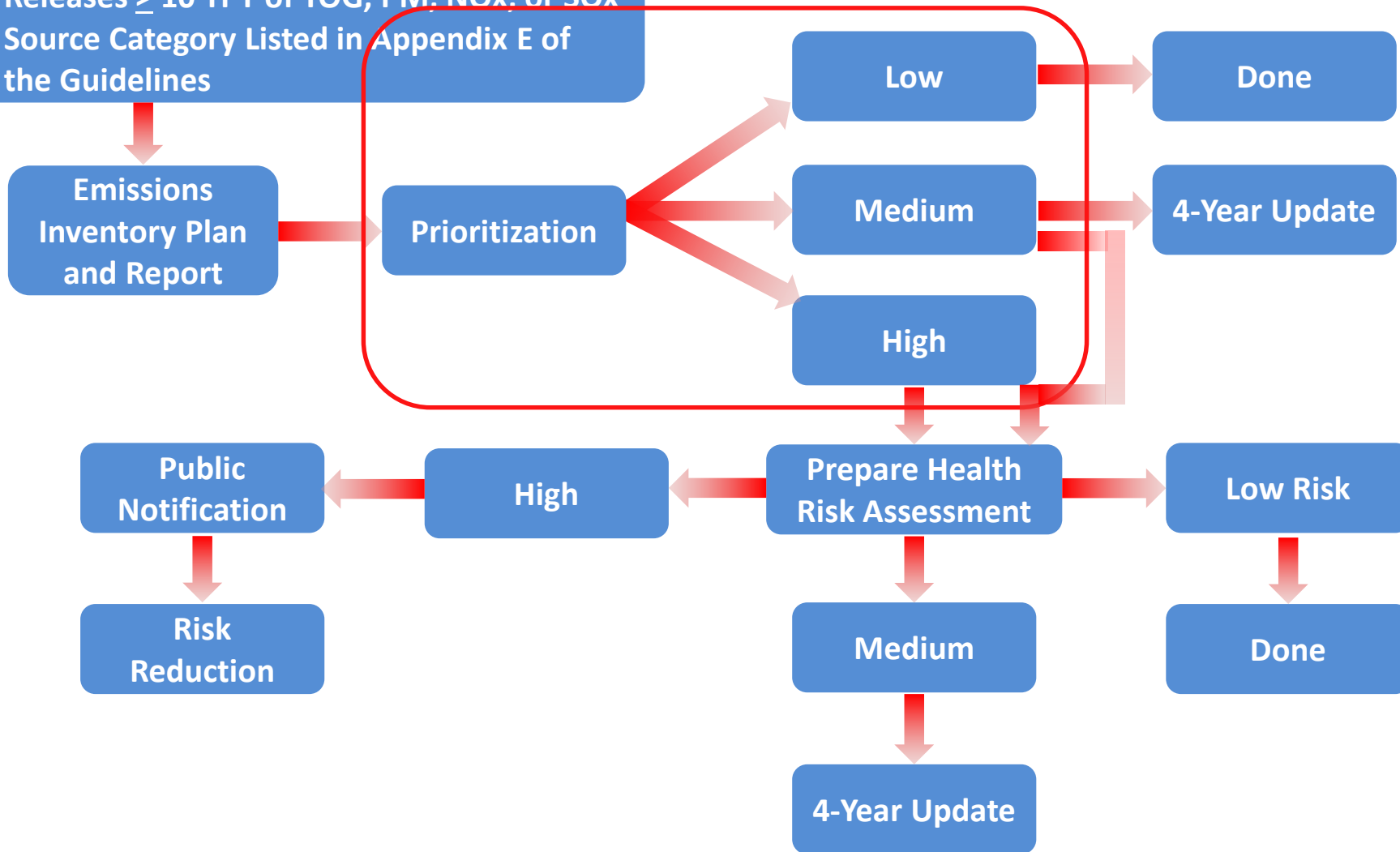
Evaluate Health Risk

Identify Sources Causing
a Significant Risk

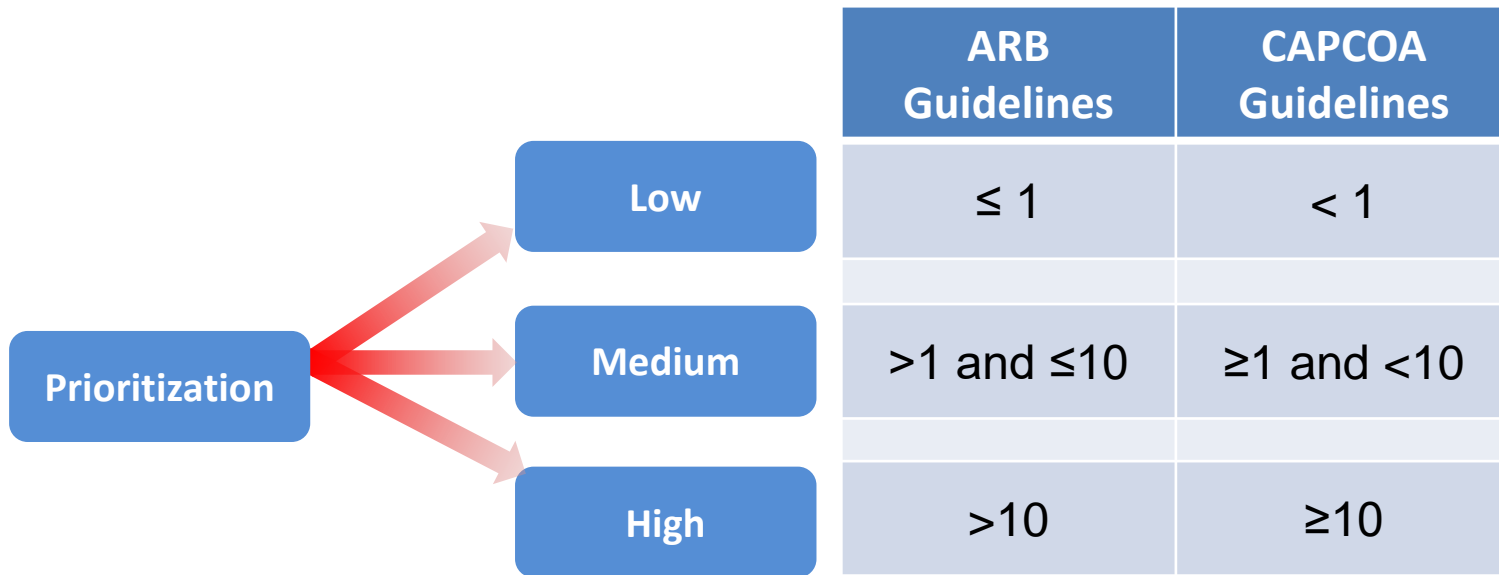
Notify the Public

The Air Toxics "Hot Spots" Information and Assessment Act

- Releases \geq 10 TPY of TOG, PM, NO_x, or SO_x
- Source Category Listed in Appendix E of the Guidelines

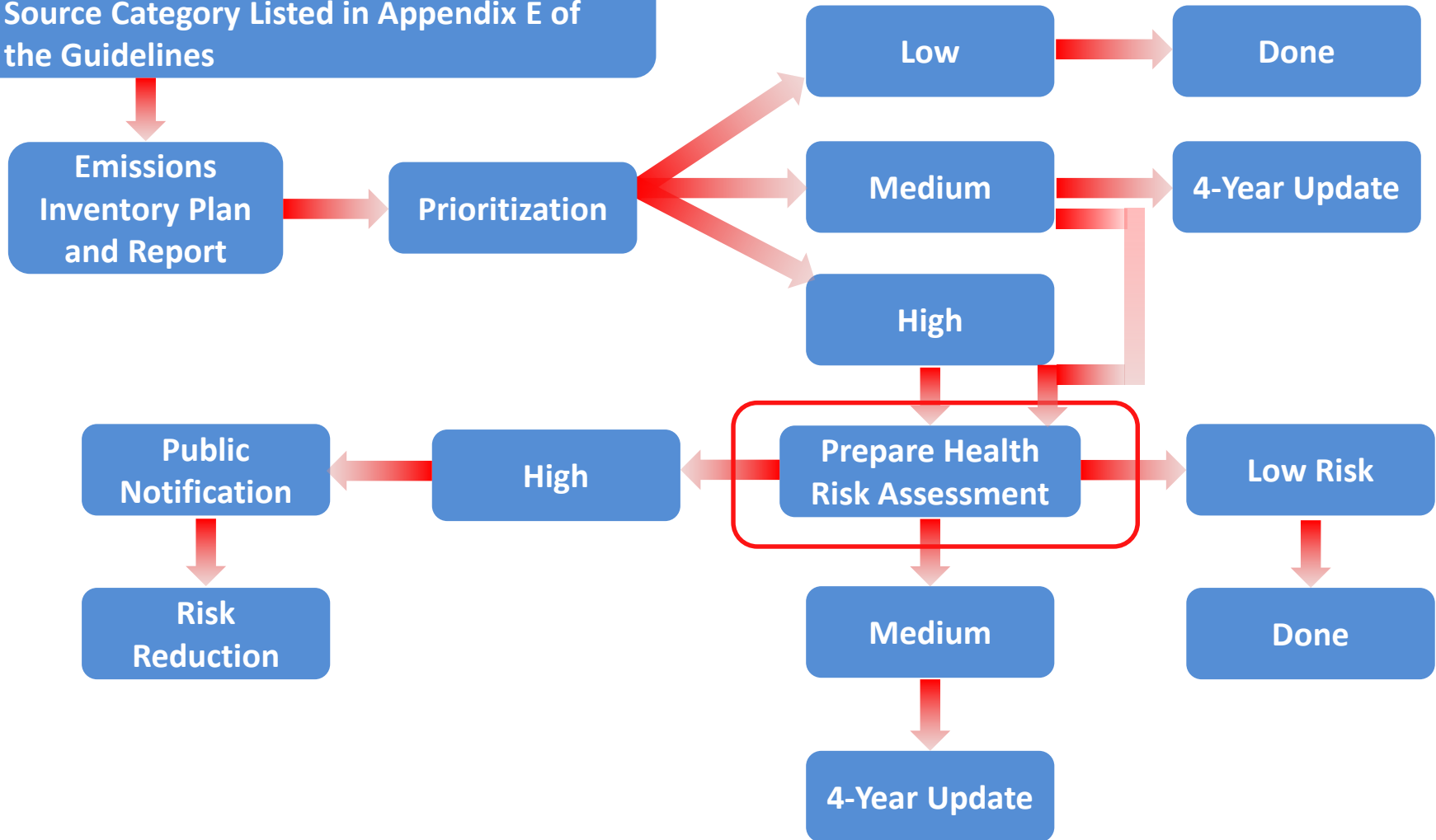


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Toxics Inventory Plan
& Report

Evaluate Health Risk

Identify Sources Causing
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Notify the Public



SIGNIFICANCE LEVELS:

H&S Code § 44362(b)

“Upon approval of the Health Risk Assessment, the operator of the facility shall provide notice to all exposed persons regarding the results of the health risk assessment prepared pursuant to Section 44361 is, **in the judgment of the district**, the health risk assessment indicates **there is a significant health risk** associated with the emissions from the facility.”

Cancer Risk: ≥ 10 in one million

Non-Cancer Chronic Health Risk: Hazard Index >1

Non-Cancer Acute Health Risk: Hazard Index >1

Not to exceed the Reference Exposure Level (REL) - level at or below which no adverse health effects are anticipated

All districts in the state, except as indicated below, chose these levels.

(El Dorado, Great Basin Unified, Lake, Lassen Modoc, Mariposa, Northern Sierra and Tehama have not chosen a significant risk level)

Prop 65 "no significant risk level" and "no observable effect level"

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AB 2588
The Air Toxics "Hot Spots" Information and Assessment

SB 1731 (1992)
Amendment to the Air Toxics "Hot Spots" Act



Toxics Inventory Plan & Report

Risk Reduction Audit and Plan

Evaluate Health Risk

Identify Sources Causing a Significant Risk

Notify the Public

H&S Code § 44362(b)

“...**the health risk assessment conducted by the district indicates, in the judgment of the district, there is a significant health risk..**”

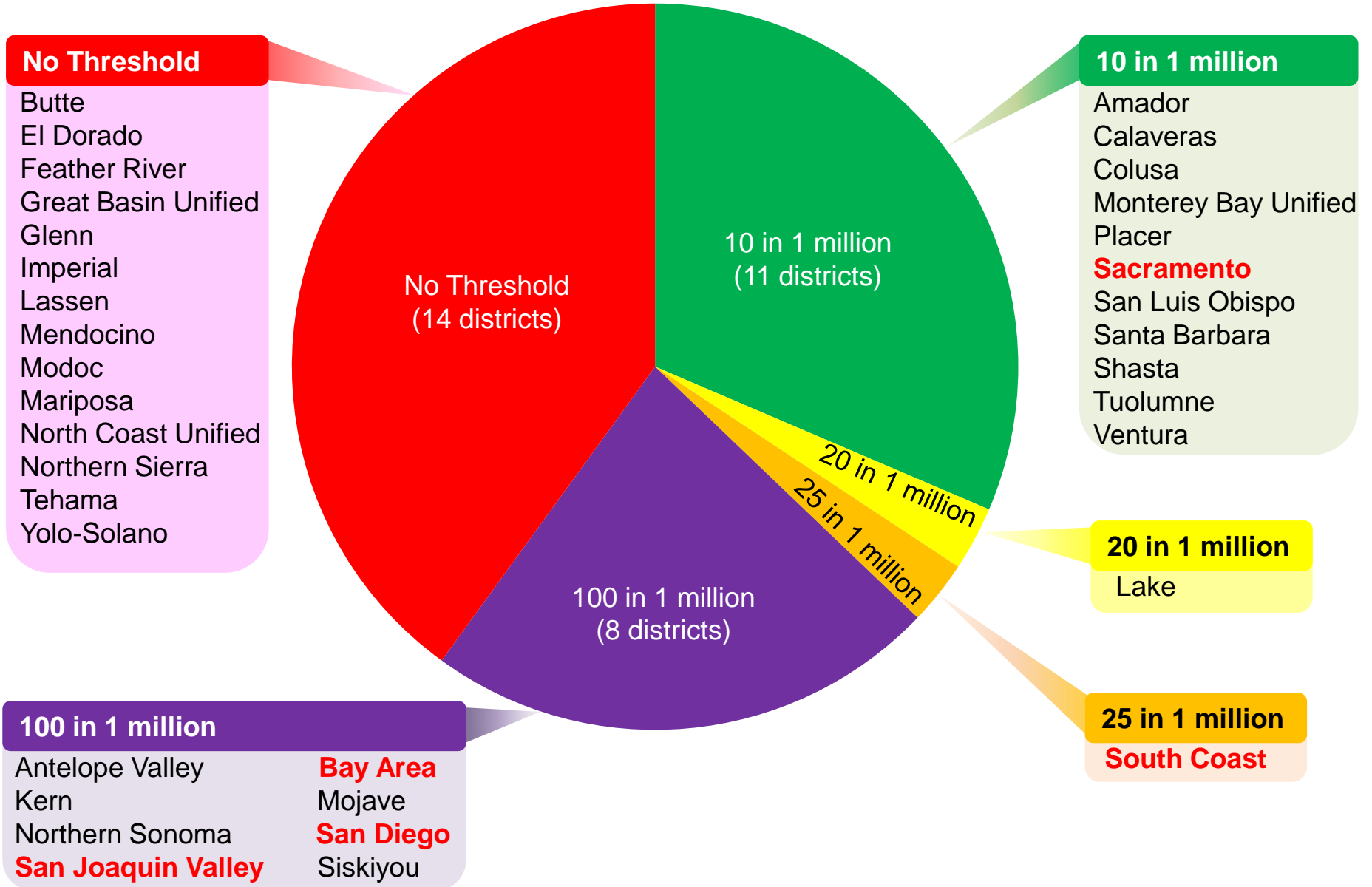
H&S Code § 44391(a)

“Whenever a health risk assessment approved pursuant to Chapter 4 (commencing with Section 44360) **indicates, in the judgment of the district, that there is a significant risk** associated with the emissions from a facility, the facility operator shall conduct an airborne toxic risk reduction audit and develop a plan to implement airborne toxic risk reduction measures that will result in the reduction of emissions from the facility to a level below the significant risk level within five years of the date the plan is submitted to the district. The facility operator shall implement measures set forth in the plan in accordance with this chapter.”

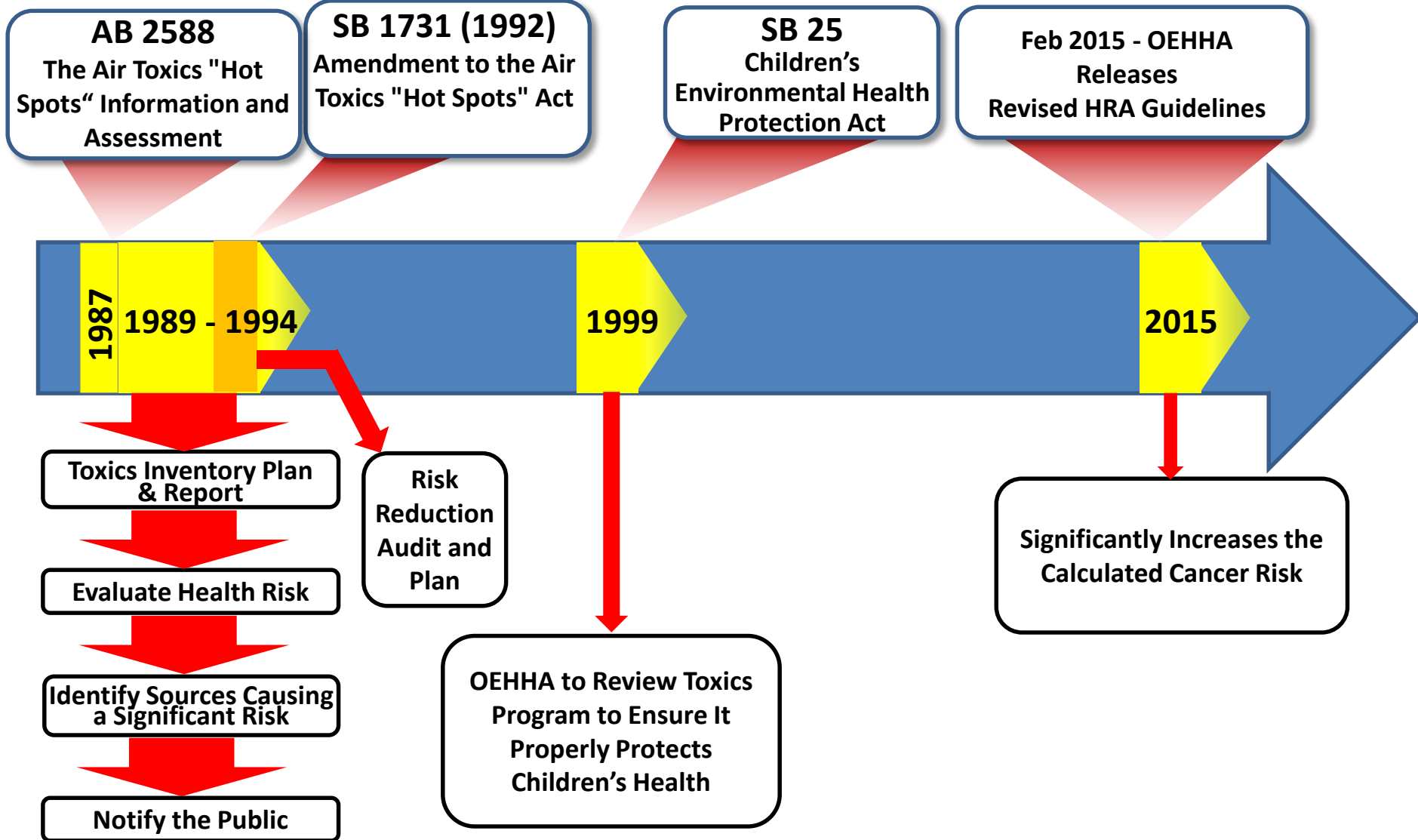
The SMAQMD kept the same significant risk levels as for AB-2588 (Cancer Risk ≥ 10 in one million, acute and chronic HI >1)

Not all districts in the state elected to use the same significant risk levels.

SIGNIFICANT RISK LEVEL FOR RISK REDUCTION AUDIT AND PLAN



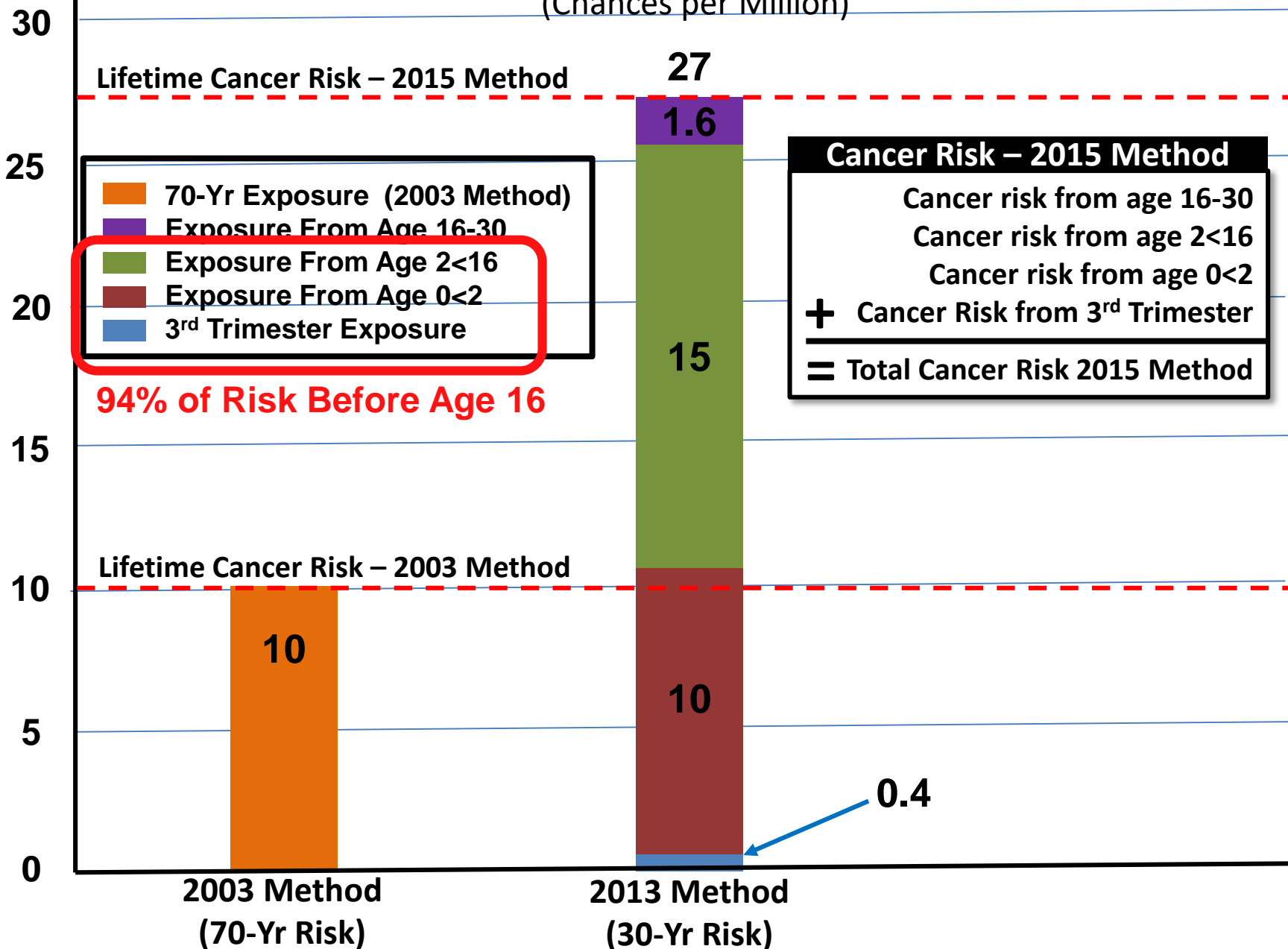
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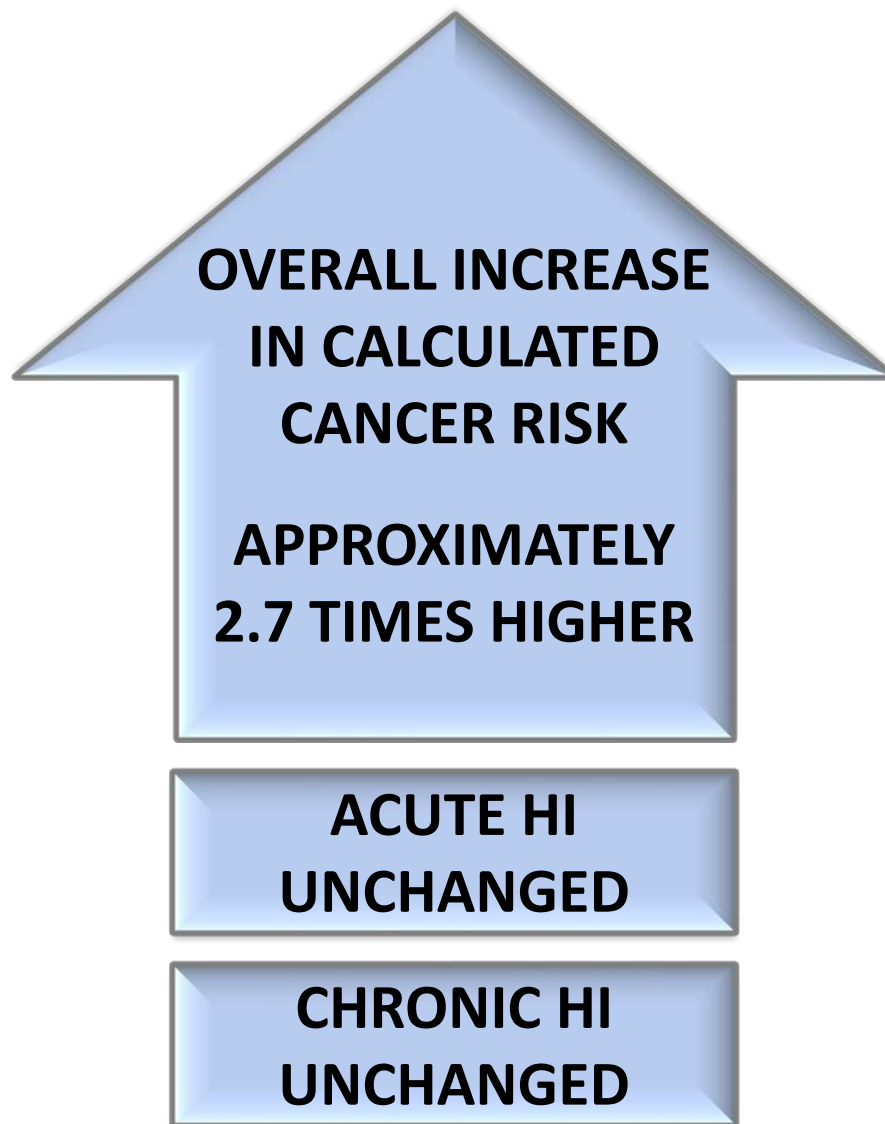
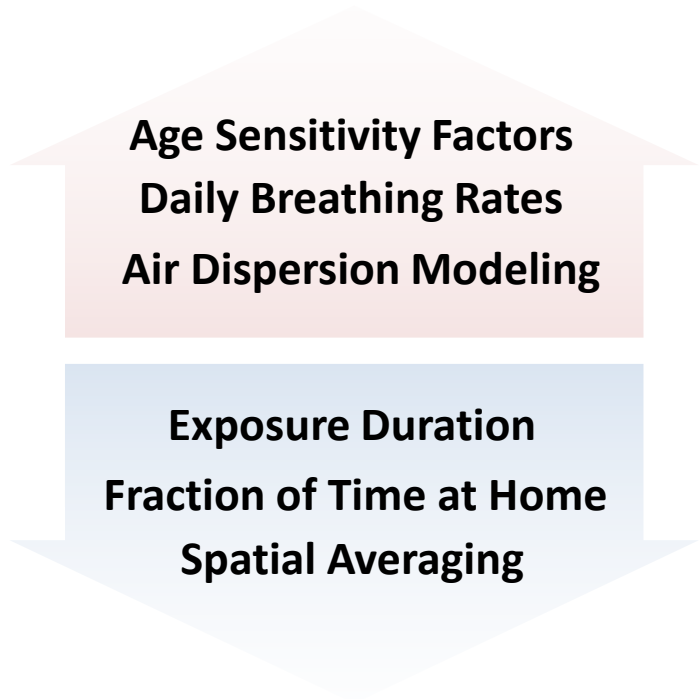
2003 HRA METHODOLOGY VS. 2015 HRA METHODOLOGY

Diesel PM Residential Inhalation Cancer Risk

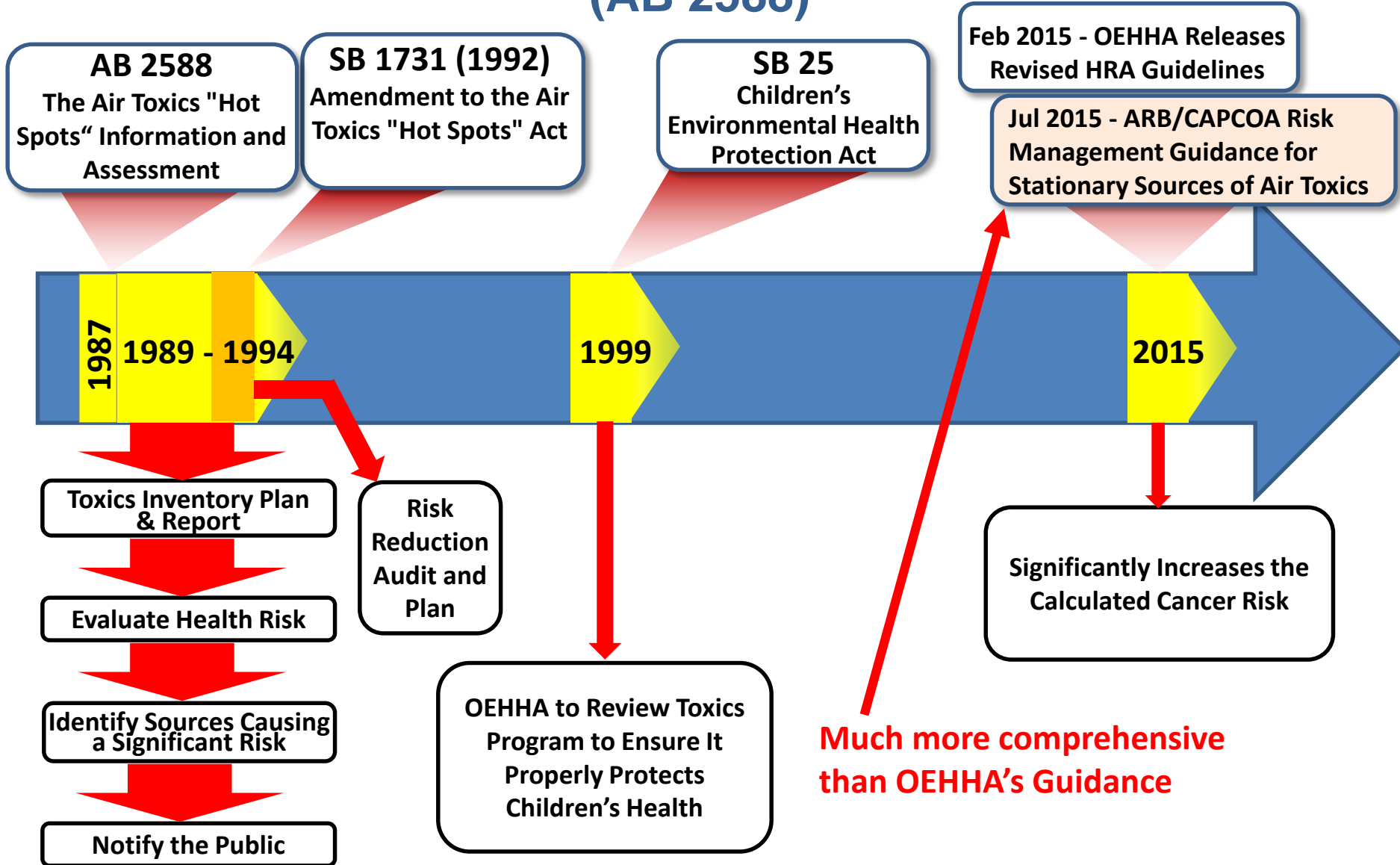
(Chances per Million)



THE AIR TOXICS “HOT SPOTS” PROGRAM EFFECT OF CHANGES TO HEALTH RISK ASSESSMENTS PROCEDURES

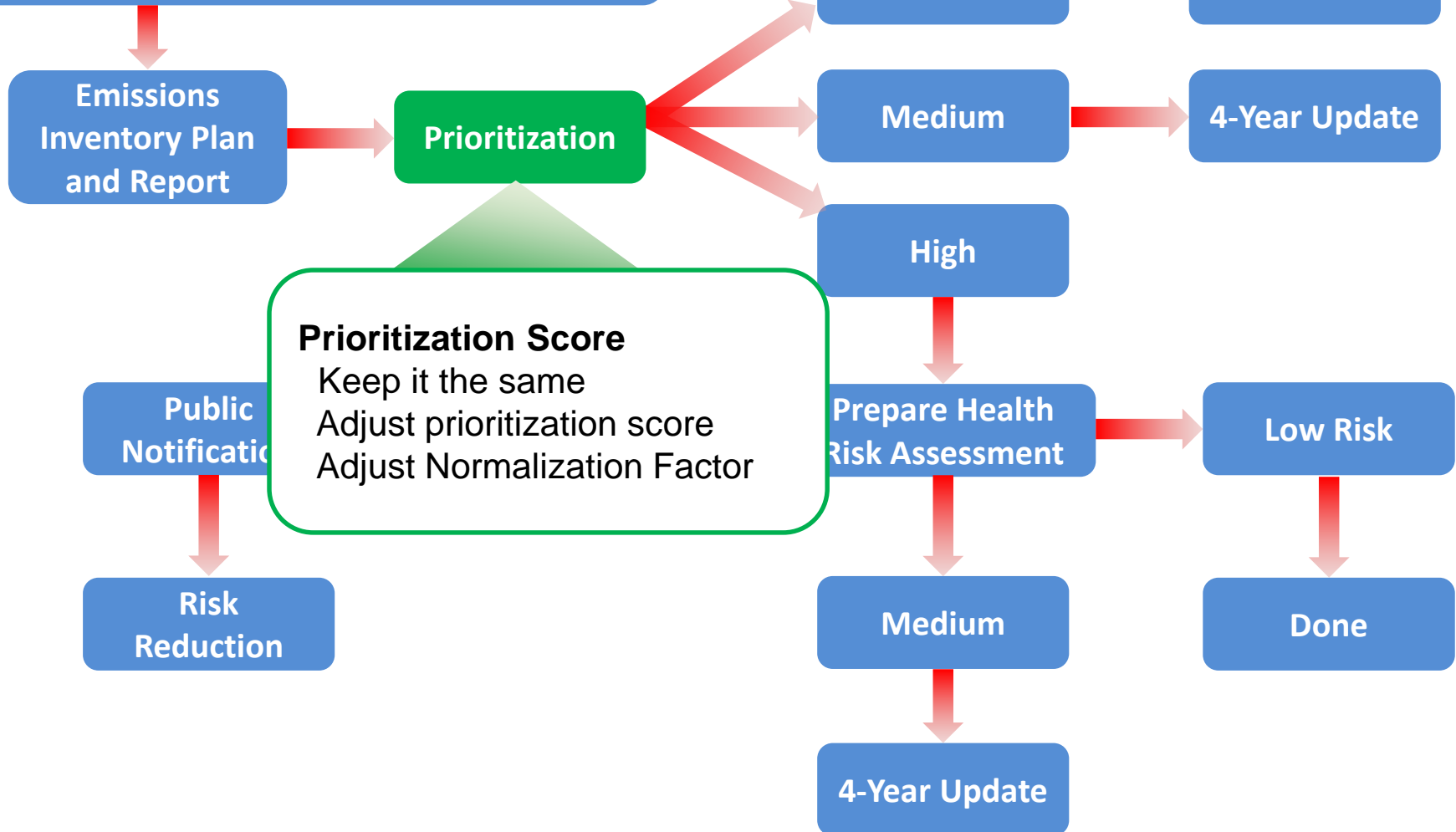


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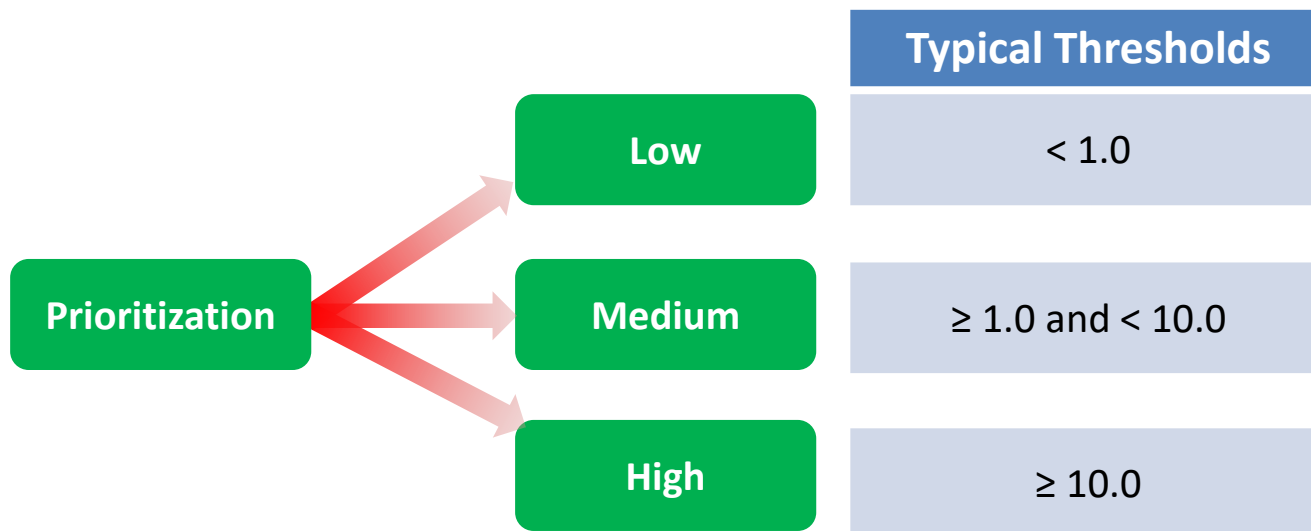


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CHANGES TO THE PRIORITIZATION GUIDELINES



Total Prioritization Score for Carcinogens

$$TS = \sum (E_c)(P_c) \left(\frac{1,700}{7,700} \right)$$

where,

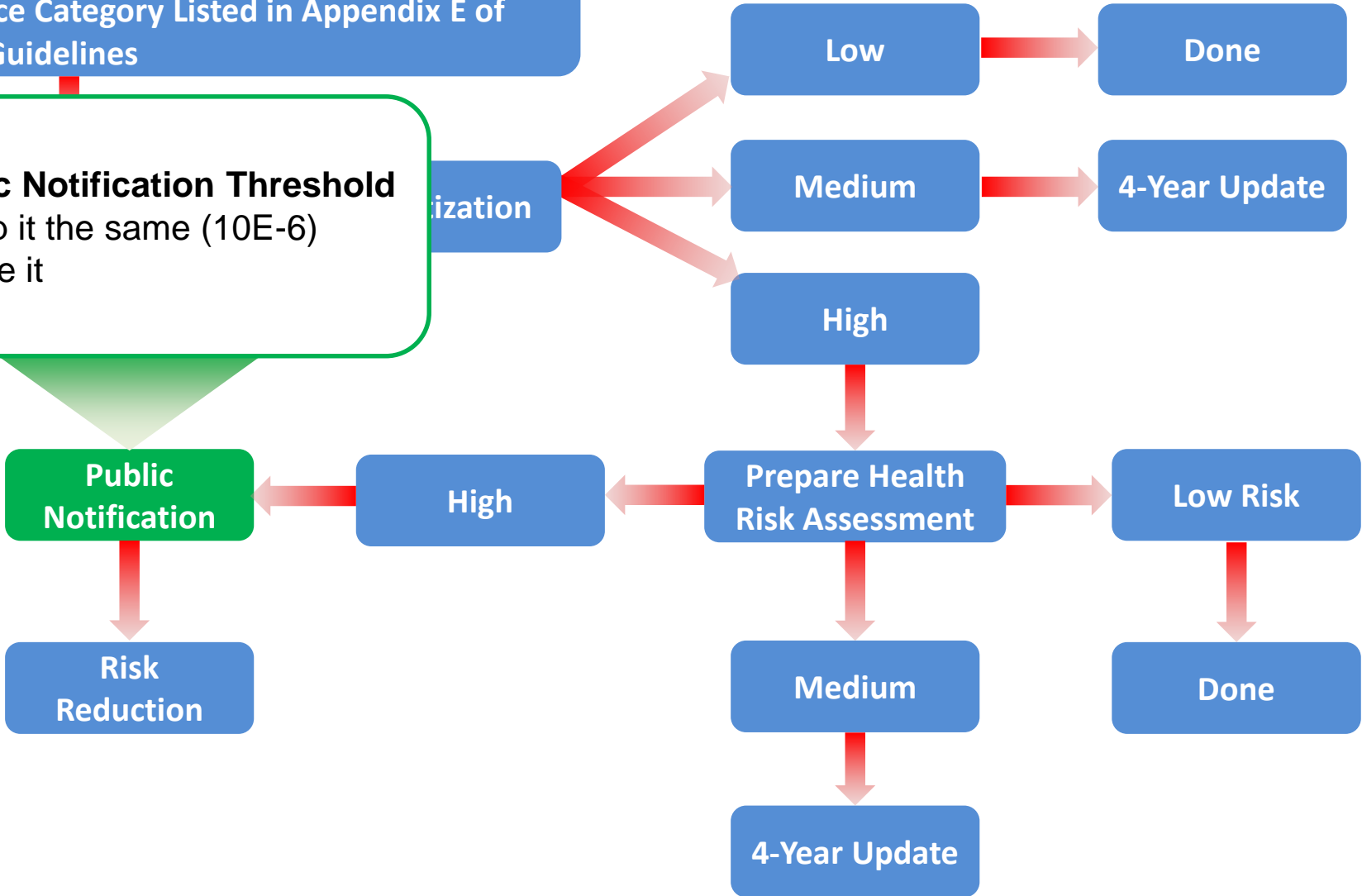
- TS = Total score, sum of scores for all carcinogens for which a unit risk value is available
- c = Specific carcinogen
- E_c = Facilitywide emissions of substance c (lbs/yr)
- P_c = Unit risk value for substance c
- 7,700 = Normalization factor

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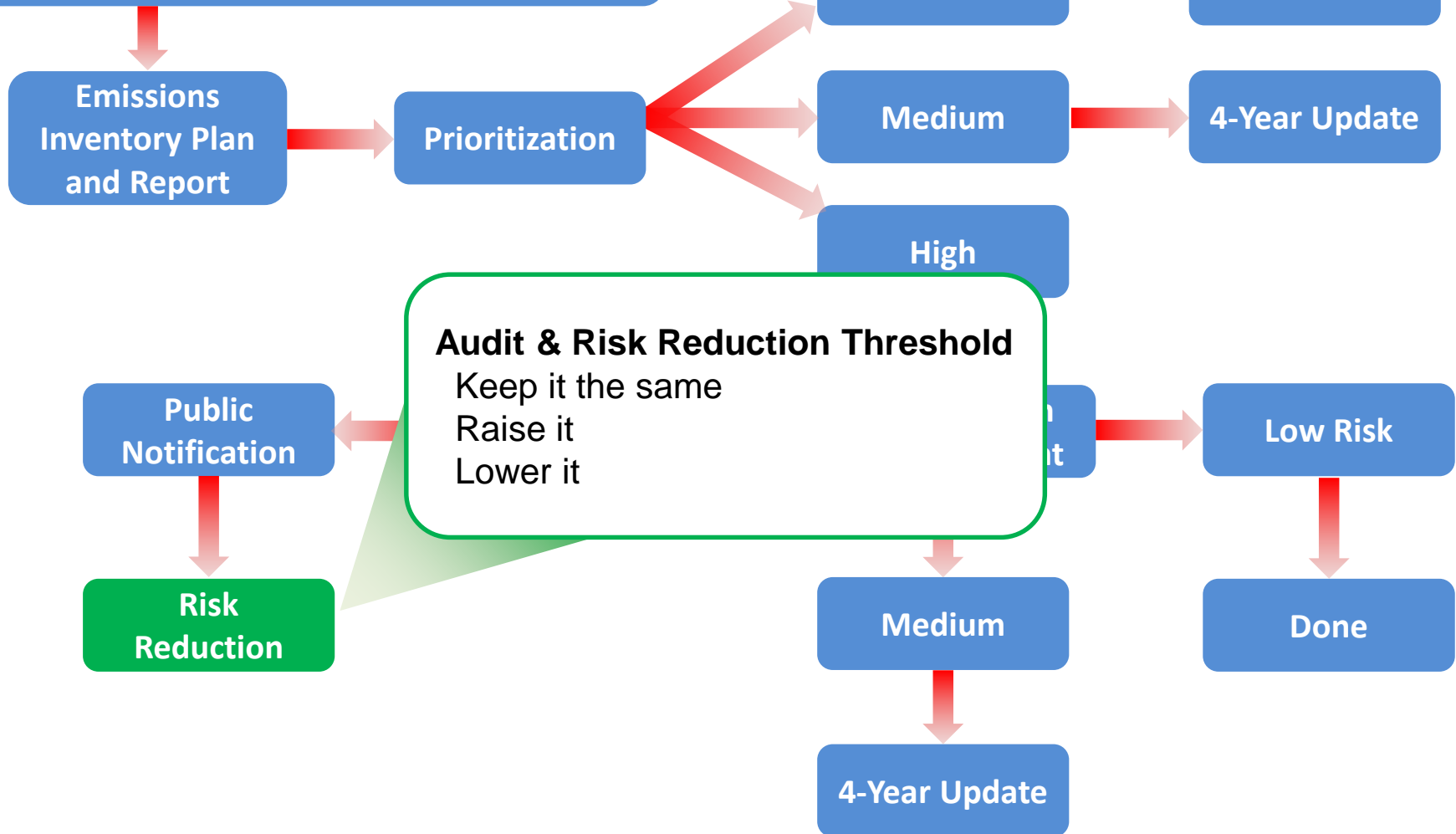
Public Notification Threshold
 Keep it the same (10E-6)
 Raise it

Notification



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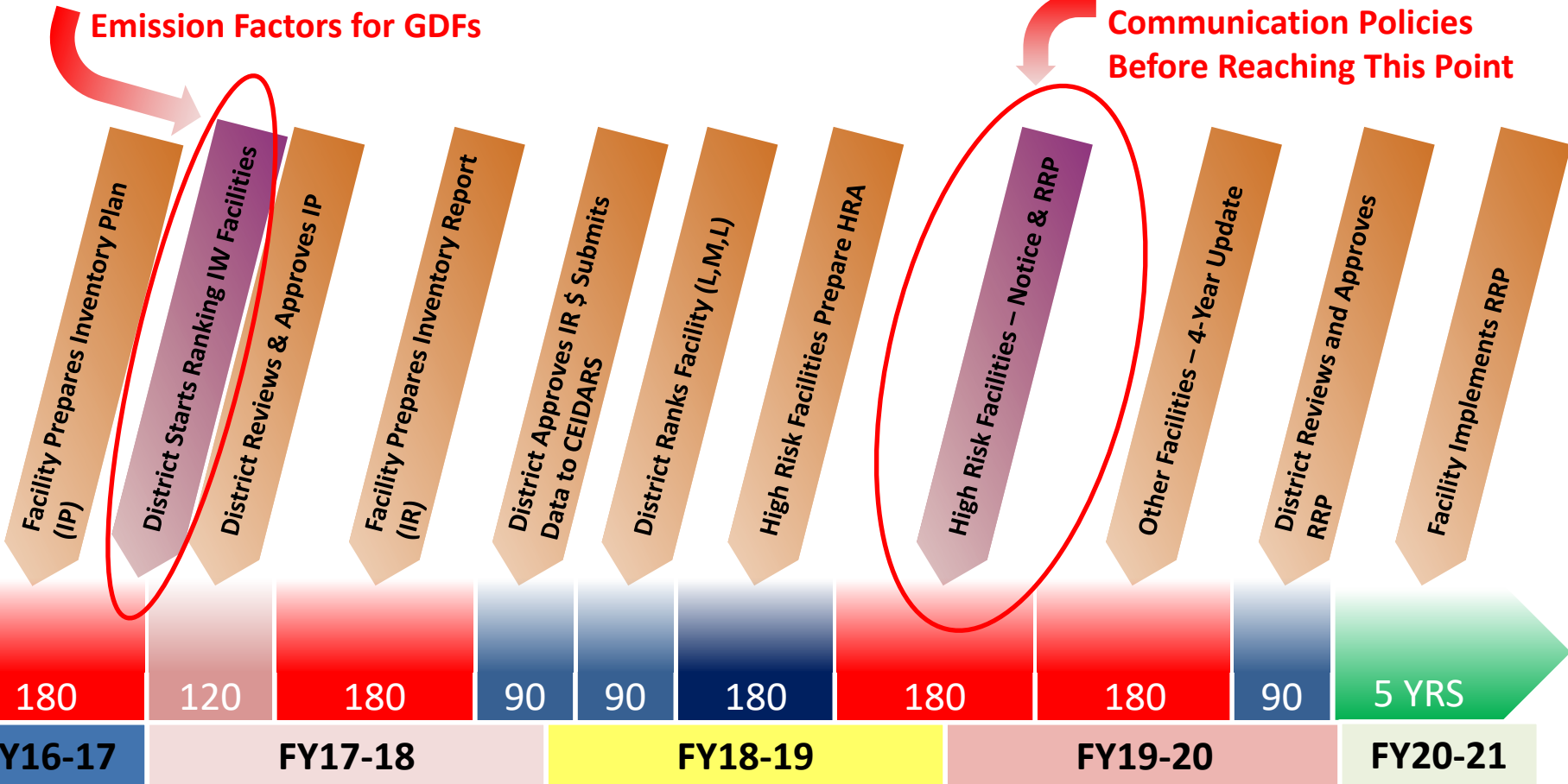
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AIR TOXICS “HOT SPOTS” PROGRAM TIMELINE

**Need New VOC and Benzene
 Emission Factors for GDFs**

**We Need to Develop Good
 Communication Policies
 Before Reaching This Point**



Questions?