What is DEQ Asking You to Consider?

Cleaner Air Oregon

REFORMING OREGON'S INDUSTRIAL AIR QUALITY REGULATIONS

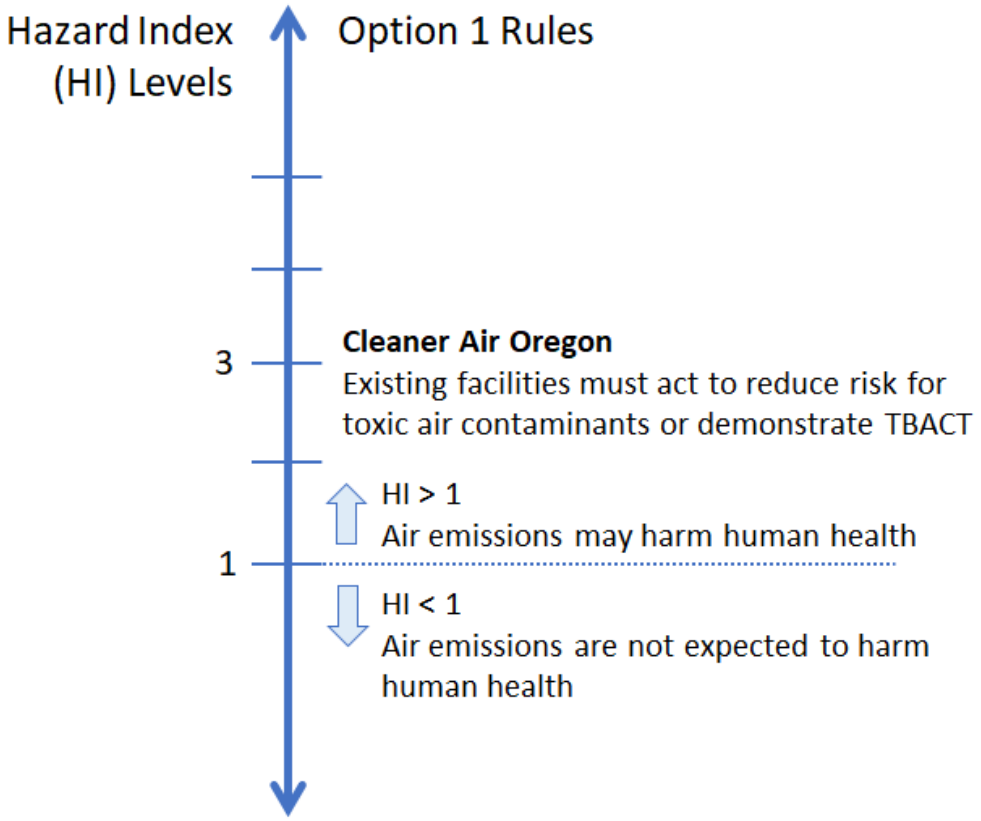
Inviting Oregonians to help create new regulations that protect what we all care about:
the health of our people, a clean environment, and the economic vitality of our communities.

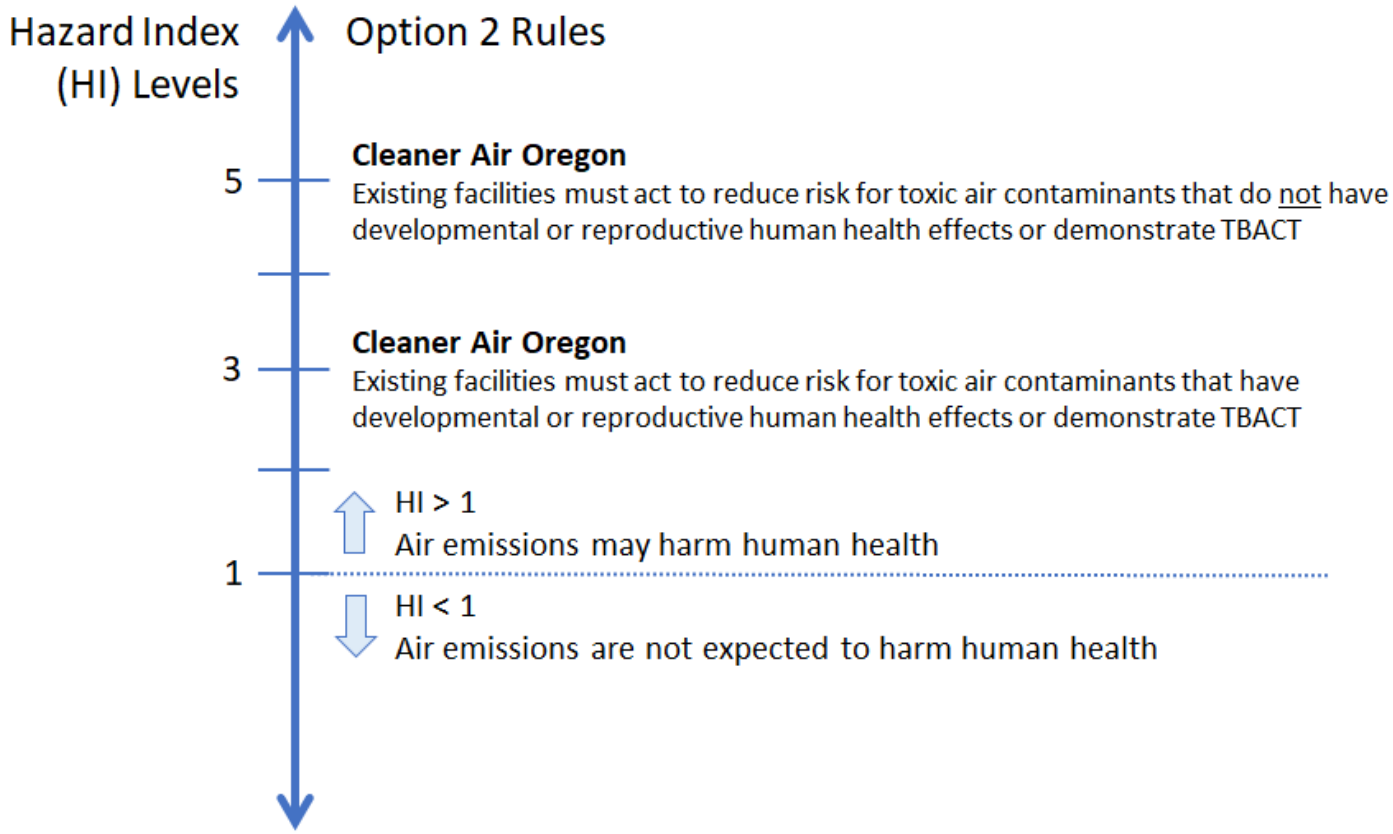
July 10, 2019

Issues to consider for rulemaking

- Both policy and science considerations
- What defines a “severe human health effect”?
  - consult authoritative literature
  - evaluate organ systems
  - types of impacts (reversible, irreversible)
  - consider individual dose responses
- Resources for research

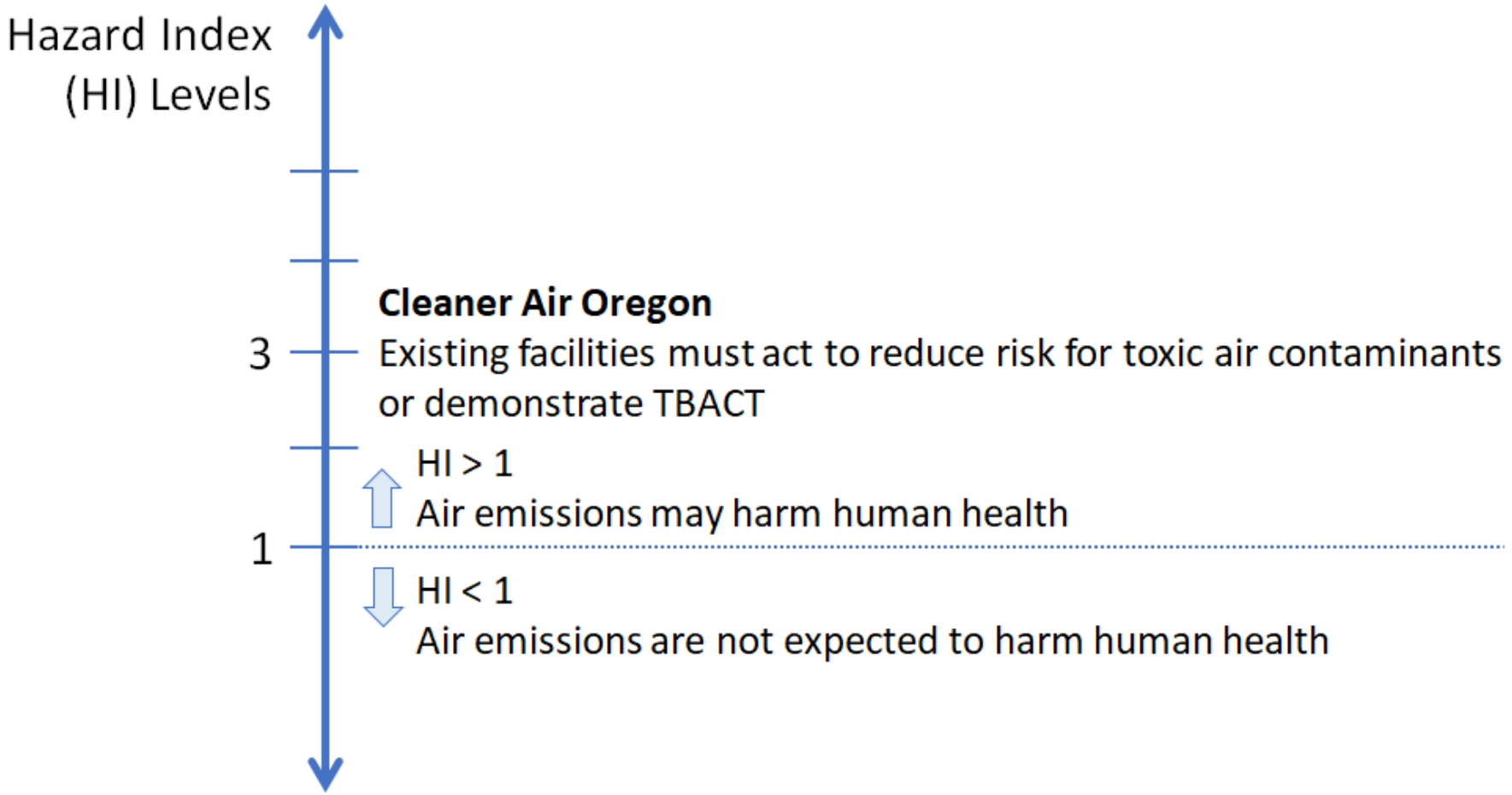
A range of rule options





Option 1 description

All 184 toxic air contaminants with non-cancer effects are assigned an HI of 3.



Option 1 implications

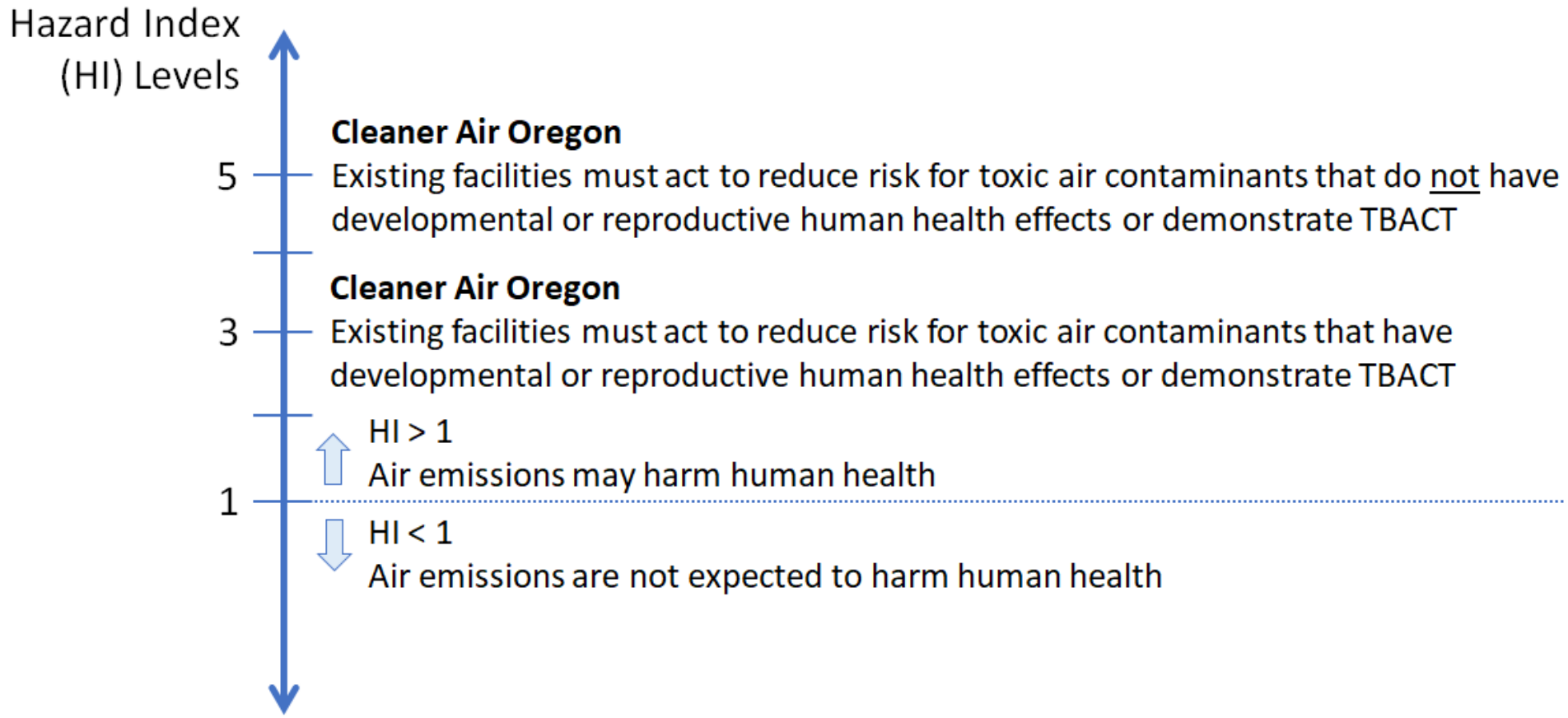
- Health-protective option
- Less rule changes
- Most straightforward option for risk calculations
- Some existing facilities may be required to take action that otherwise would not be required (e.g., HI4 or HI5)

OAR 340-245-8010
Table 1 Risk Action Levels†

Applicability	Risk Action Level	Excess Cancer Risk per Million	Noncancer Hazard Index
Existing Source	Aggregate TEU Level	2.5	0.1
	Source Permit Level	5	0.5
	Community Engagement Level	25	1
	TBACT Level	50	3 ~~5~~
	Risk Reduction Level	200	6 ~~10~~
	Immediate Curtailment Level	500	12 ~~20~~

Option 2 description

Toxic air contaminants expected to have developmental impacts (141) are assigned an HI of 3. Others (43) remain assigned at 5.



Option 2 considerations

- More difficult risk assessment calculations when facility emits a mix of toxic air contaminants that are regulated at both an HI of 3 and an HI of 5
- Developed exceedance ratio

$$Risk_{HI3} = \sum_{HI3\ chemicals} \frac{Concentration}{Risk\ Based\ Concentration}$$

$$Risk_{HI5} = \sum_{HI5\ chemicals} \frac{Concentration}{Risk\ Based\ Concentration}$$

$$Exceedance\ Ratio = \frac{Risk_{HI3}}{3} + \frac{Risk_{HI5}}{5}$$

HI3 = Toxic air contaminants assigned noncancer TBACT RAL of 3.

HI5 = Toxic air contaminants assigned noncancer TBACT RAL of 5.

Option 2 - implications

- Less health-protective than Option 1
- Requires more complex risk calculations, including use of exceedance ratio.
- Fewer facilities may have to make investments in emission reductions

DEQ State of Oregon Department of Environmental Quality

OAR 340-245-8010
Table 1 Risk Action Levels†

Applicability	Risk Action Level	Excess Cancer Risk per Million	Noncancer Hazard Index
Existing Source	TBACT Level	50	5[a] ~~or~~ or 3[b] or Exceedance Ratio of > 1[c]
	Risk Reduction Level	200	10[a] or 6[b] or Exceedance Ratio of 2[c]
	Immediate Curtailment Level	500	20[a] or 12[b] or Exceedance Ratio of 4[c]

Questions