

# Draft Highest Attainable Condition Procedure

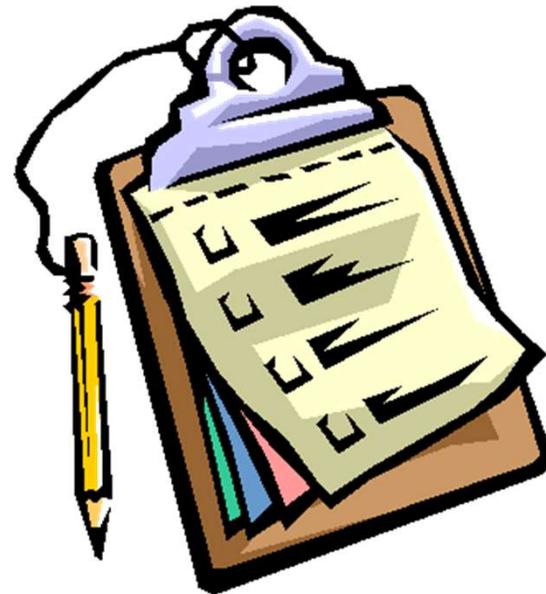
## Water Quality Standards and Assessment

Presentation to Willamette Basin Mercury MDV Advisory Committee  
April 4, 2019  
DEQ Headquarters, Portland, OR

# Topics

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- Review of HAC concept
- New, improved flow chart!
- Rationale



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- Simplified process that applies to industrial and municipal dischargers.
  - Prioritizes MMP implementation
    - Source reduction can achieve similar Hg reductions at lower environmental harm



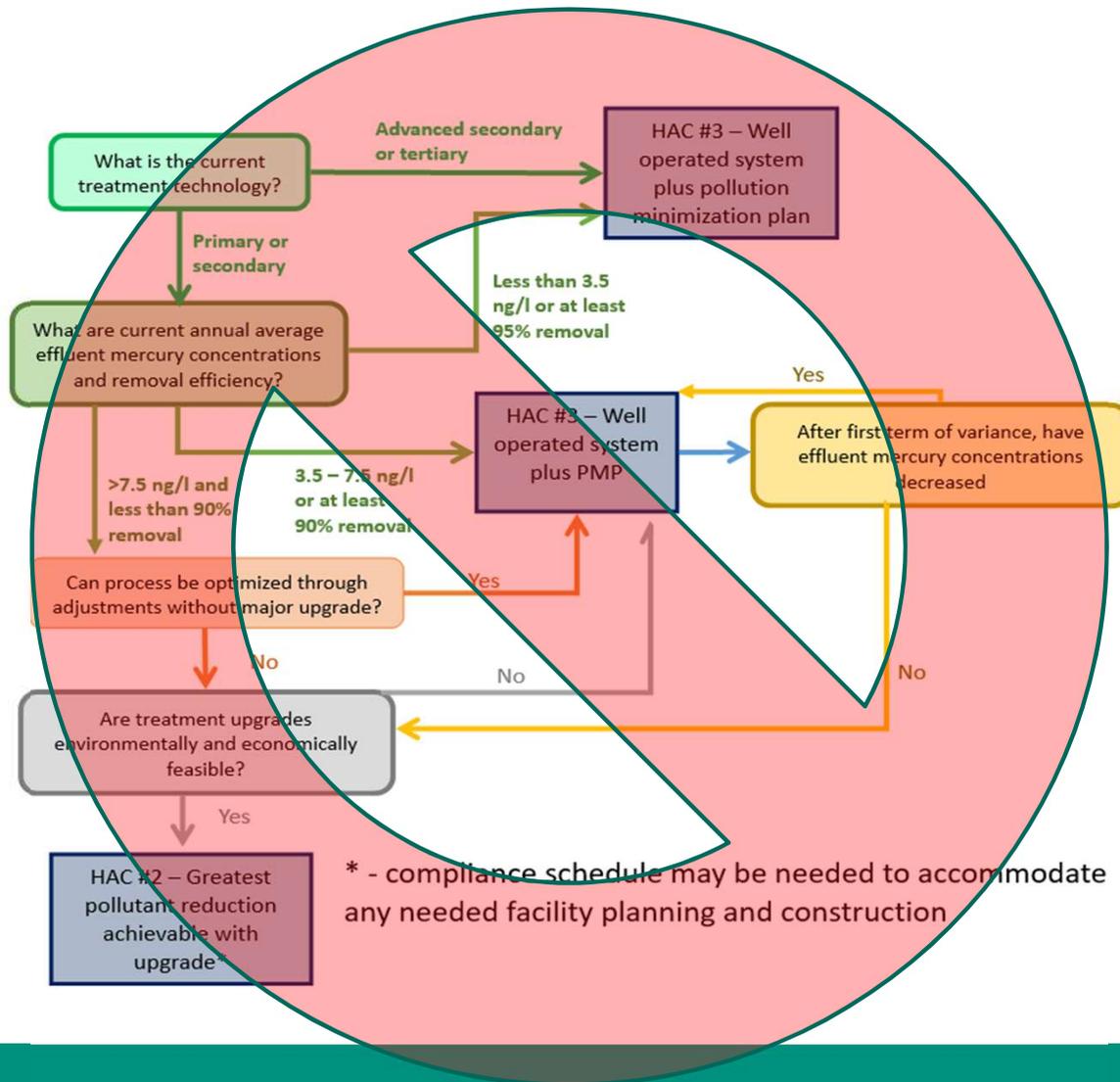
# Highest Attainable Condition

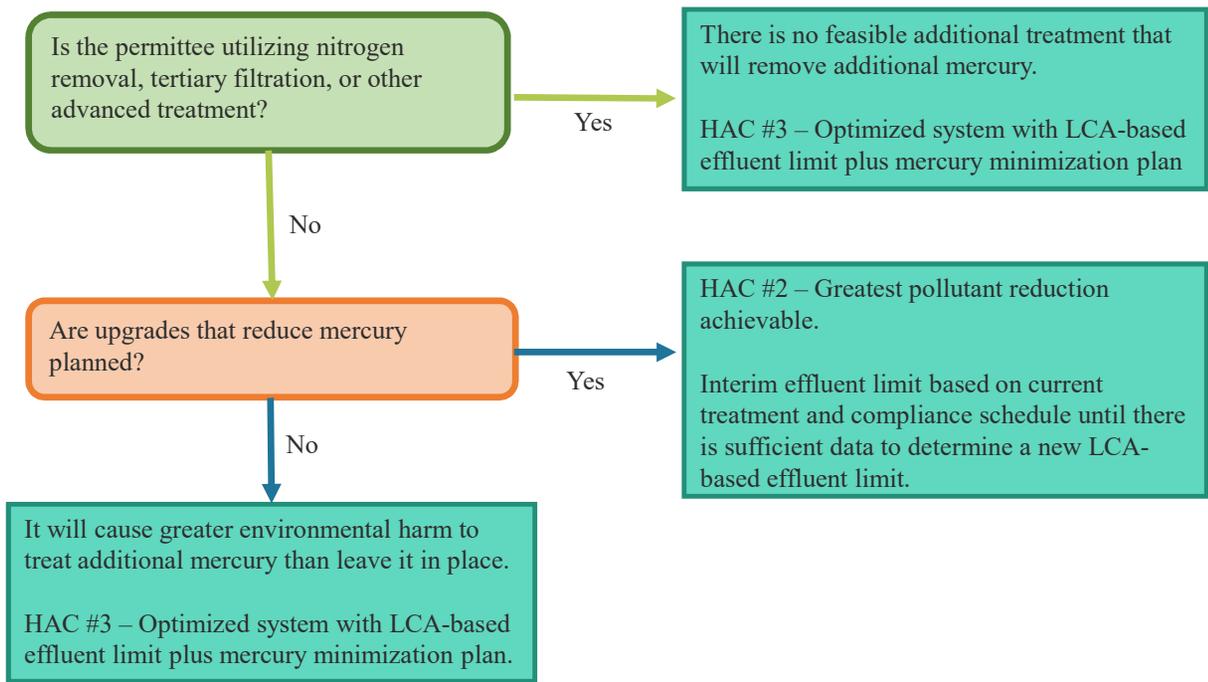
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2. Effluent condition with greatest pollutant reduction achievable

or

3. Effluent condition that optimizes current technology + pollutant reduction program





# Advanced systems

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Is the permittee utilizing nitrogen removal, tertiary filtration, or other advanced treatment?

Yes

There is no feasible additional treatment that will remove additional mercury.

HAC #3 – Optimized system with LCA-based effluent limit plus mercury minimization plan

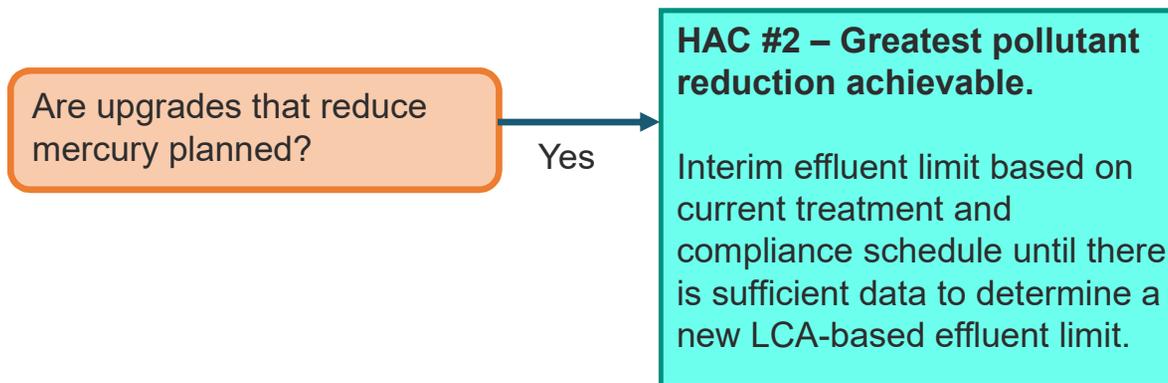
# Rationale

- No proven treatment that can achieve additional mercury reductions
- DEQ will revisit technology every five years to determine if there are any feasible technological advances.



# Systems undergoing upgrades

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# Rationale

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- Upgrades can address multiple pollutants.
- Provide facility sufficient time to collect data to develop LCA under new treatment.



# All Other Facilities

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Are upgrades that reduce mercury planned?

No

Source reduction will result in similar mercury levels and cause less environmental harm than treatment.

HAC #3 – Optimized system with LCA-based effluent limit plus mercury minimization plan.

# Rationale

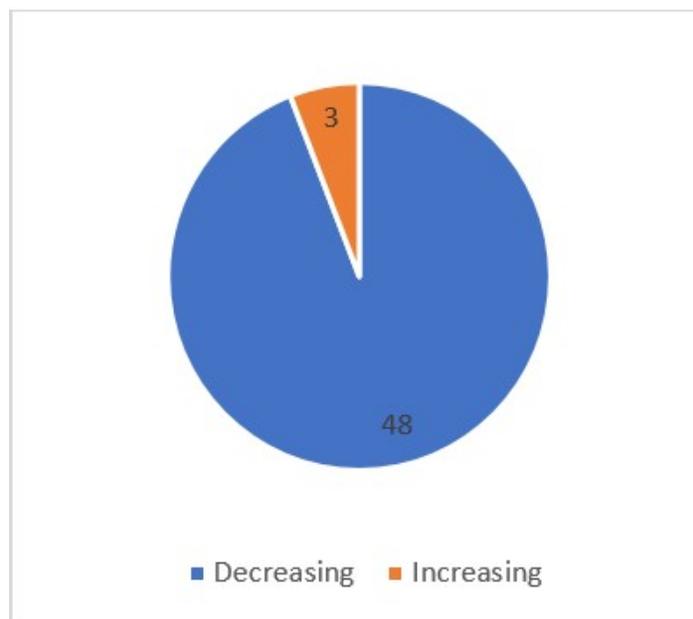
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- MMP implementation will lead to similar Hg reductions as treatment.
- Treatment causes more environmental harm than MMP implementation.



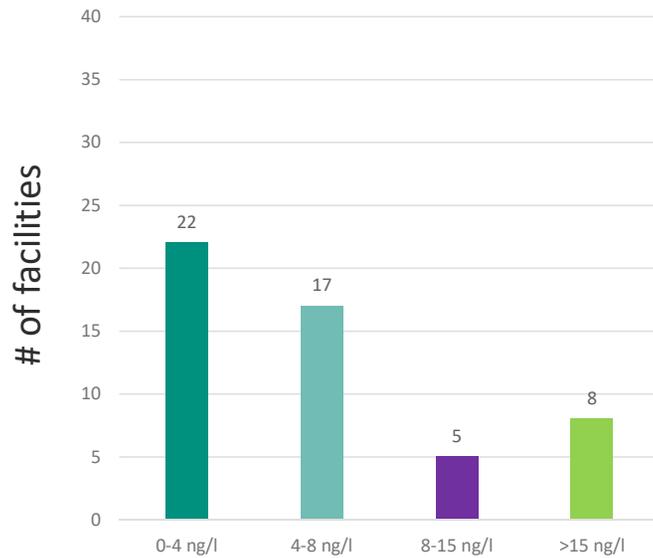
# Wisc. POTWs 2004-2018

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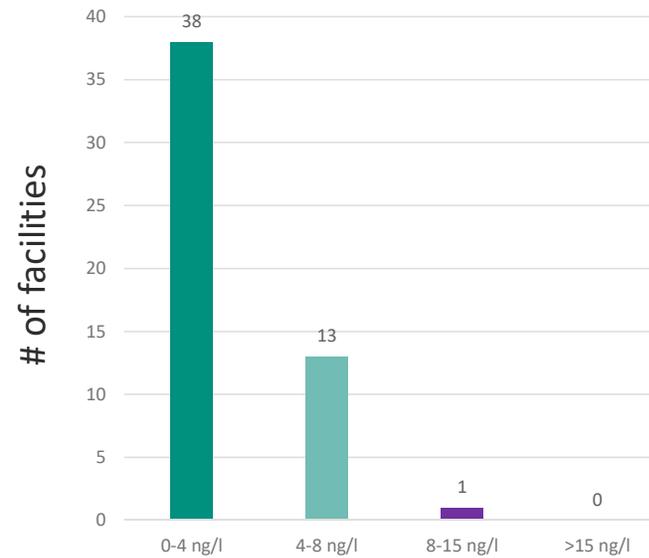


# of facilities with increasing or decreasing trend in annual average mercury effluent concentrations 2004-2008 vs. 2014-2018

# Wisc. POTWs 2004-2018



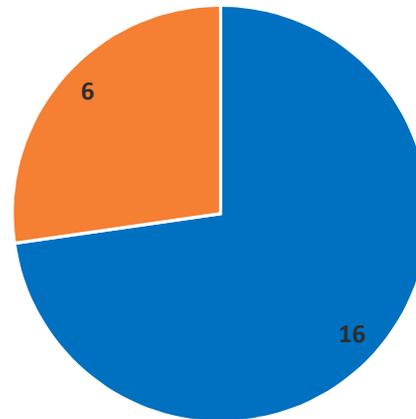
Level currently achievable, 2004-2008



Level currently achievable, 2014-2018

# Wisc. Industrials 2004-2018

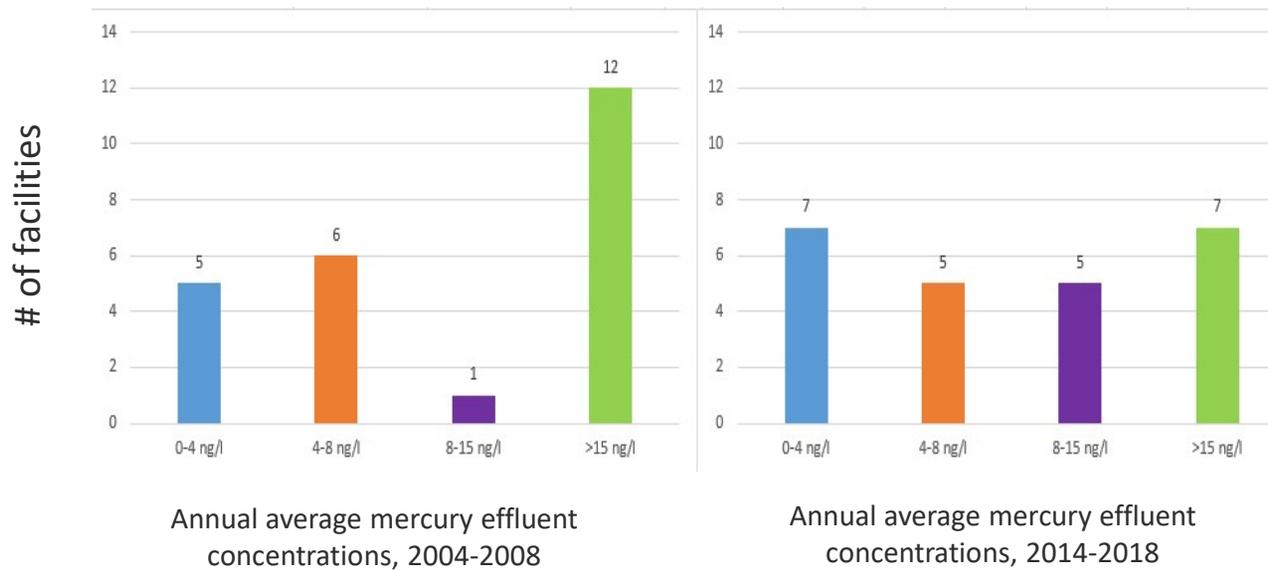
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■ Decreasing ■ Increasing

# of facilities with increasing or decreasing trend in annual average mercury effluent concentrations 2004-2008 vs. 2014-2018

# Wisconsin Industrials 2004-2018

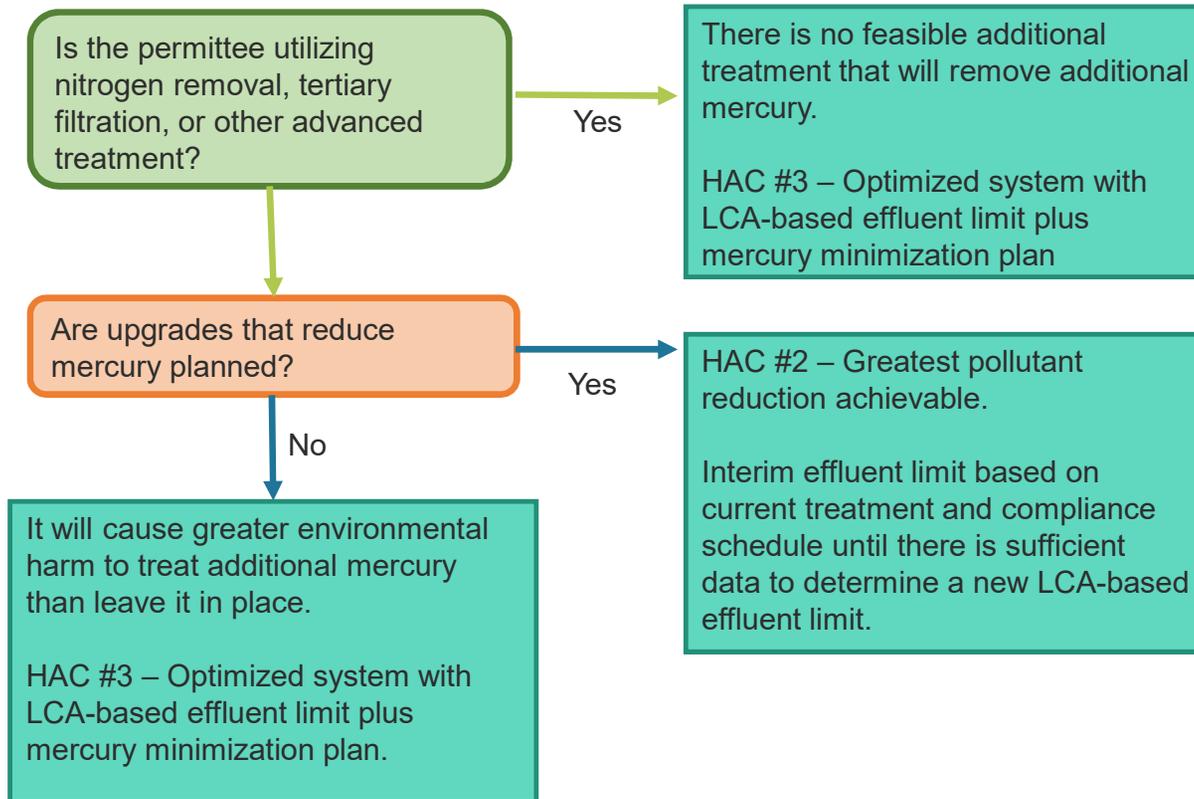


# Environmental Harm of Treatment

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- MMP: No incremental cost
- Upgrades:
  - >200 MWh/MGD/yr compared to secondary
  - Equiv. to 125 tons CO<sub>2</sub> equiv/yr/MGD.
  - Additional cost of transporting waste, plus risk to reintroduce waste to environment.
- Need to weigh harm of treatment vs. harm of leaving pollution in place for a few years.

# Comments and discussion



DEQ can provide documents in an alternate format or in a language other than English upon request. Call DEQ at 800-452-4011 or email [deqinfo@deq.state.or.us](mailto:deqinfo@deq.state.or.us).

