

# Impacts of Washington's Proposals on Businesses and NPDES Permits

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# Presentation Overview

- What are some technical implications of the proposed Water Quality Criteria?
- How will the proposed Water Quality Standards affect NPDES permits?



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# How will proposed HH WQC affect permittees?

- Key chemicals and permit examples
  - Benzo(a)pyrene
  - PCBs
- 303(d) listing process
- Implementation tools
- Toxics reduction bill





# How will new WQC affect NPDES permit limits?

- Example for each chemical
- Calculation of permit limits
- Analytical detection limits



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# Calculation of Permit Limits

- Step 1: Reasonable potential analysis (RPA)
  - Who needs a limit?
- Step 2: Calculation of a water quality-based effluent limit, if needed



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# Calculation of Permit Limits (cont.)

Both steps require site-specific information as well as appropriate water quality criteria

- Ambient chemical concentration
- Effluent concentration measurements
  - Maximum measured effluent concentration
  - Average measured effluent concentration
  - Standard deviation of measured effluent concentrations
  - Number of measured effluent concentrations
- Dilution factor, if mixing zone present



# Benzo(a)pyrene

FCR/WQC	Current WA Values	Proposed New WA Values	Change
Organism only (OO) WQC (ng/L)	31	21	↓32%
Organism + water (O+W) WQC (ng/L)	2.8	2.8	No change

- Several local laboratories can conduct analysis for proposed OO criteria
- None of the local laboratories contacted can conduct analysis for O+W criteria



# Example 1: Existing Permit for a Port Facility: Benzo(a)pyrene

HH WQC	Limit Required Based on Reasonable Potential Analysis?	Maximum Daily Limit (ng/L)
NTR/Current WA	No	No reasonable potential <sup>a</sup>
Proposed WA	No	No reasonable potential

<sup>a</sup> Limit as reported in fact sheet is equal to current water quality criterion (31 ng/L).





# PCBs

FCR/WQC	Current WA Values	Proposed New WA Values	Change
Organism only (OO) and organism + water (O+W) WQC (ng/L)	0.17	0.17	No change

- One local laboratory can analyze for criteria using Method 1668 – high-resolution congener method (\$\$\$)
- Current EPA-approved methods are low-resolution methods for Aroclors



## Example 2: Individual Permit for Treated Stormwater on a Listed Water Body: PCBs

HH WQC	Limit Required Based on Reasonable Potential Analysis?	Maximum Daily Limit (ng/L)
NTR/Current WA/ Proposed WA	Yes	8.9

- Permit requires Method 8082A (which, like Method 1668, is not approved by EPA under 40 CFR 136)
- Laboratories using Method is 8082A are not quite able to detect 8.9 ng/L



# Implications of Proposed HH WQC and Improved Analytical Methods for Permittees

- More “yes” outcomes from reasonable potential analyses → longer list of chemicals with limits (more sampling)
- Lower/more enforceable effluent limits for many chemicals
  - More-sensitive (and expensive) analyses?
  - More violations?

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# More Category 5/303(d) Listings

- Sediment-based on SMS
- Tissue-based (driven by HH WQC)
  - New analytical methods
  - New HH WQC
- Most WA water bodies will qualify for listing based on PCBs
- No clear pathway for being delisted



No new or expanding discharges

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# Implementation Tools

- Compliance schedules, variances, intake credits
- Site-specific adjustments (e.g., mixing zones)
- Not much optimism regarding new tools
- Implementation tools complicated for stormwater
- Hopeful that changes to guidance (e.g., permit writer's manual) will provide more options to work toward compliance



# Toxics Reduction Legislation

- Potential to provide much more improvement than more stringent HH WQC
- Difficult to predict what this will mean for permittees – depends on the chemical, final rule language



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# Summary and Conclusions

- Overall, proposed HH WQC are more acceptable than many permittees had feared
- Timing for adoption of new analytical methods is a big question
- New HH WQC and new analytical methods will trigger the need for water quality effluent limits for chemicals and outfalls that currently do not require them
  - Monitoring requirements will increase
  - For some chemicals, limits are now and/or will be below analytical capabilities, below background, and/or unachievable



# Summary and Conclusions (cont.)

- More 303(d) listings driven by sediment (new SMS) and tissue (new HH WQC and improved analytical methods)
- 303(d) listings challenging for new and expanding dischargers
- Impacts of implementation tools and toxics reduction rule uncertain

