

Revisions to Washington's State Recreational Use Criteria

Bryson Finch

Watershed Management Section
Water Quality Program



Why Now?

- **BEACH Act (2000)**

- Requires coastal states to adopt new EPA criteria within 36 months
- Requires states to adopt 2012 recommendations by Dec. 2015
- Risk losing EPA BEACH grant if fail to adopt new criteria

- Increased interest from regulated community to update criteria



1986 EPA Recommendations

- **Fecal coliform** no longer recommended
 - Poor relationship between fecal coliform and GI illness
- 1986 Recommendations:
 - **E. coli** (GM: 126 cfu/100 mL) for freshwater
 - **Enterococcus** (GM: 33 cfu/100 mL) for fresh and marine waters

Water Type	Indicator	Correlation Coefficient
Marine	Enterococcus	.96
	E. coli	.56
	Klebsiella	.61
	Einterobacter/Citrobacter	.64
	Total coliform	.65
	C. perfringens	.01
	P. aeruginosa	.59
	Fecal coliforms	.51
	A. hydrophila	.60
	V. parahemolyticus	.42
Staphylococci	.60	
Freshwater	Enterococcus	.74
	E. coli	.80
	Fecal coliforms	-.08



2012 EPA Recommendations

Criteria Elements	Estimated Illness Rate (NGI): 36 per 1,000 primary contact recreators		OR	Estimated Illness Rate (NGI): 32 per 1,000 primary contact recreators	
	Magnitude			Magnitude	
Indicator	GM (cfu/100 mL) ^a	STV (cfu/100 mL) ^a		GM (cfu/100 mL) ^a	STV (cfu/100 mL) ^a
Enterococci – marine and fresh	35	130		30	110
OR					
<i>E. coli</i> – fresh	126	410		100	320

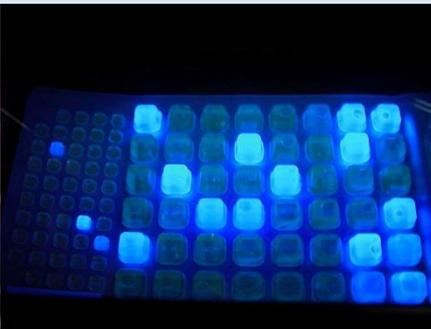
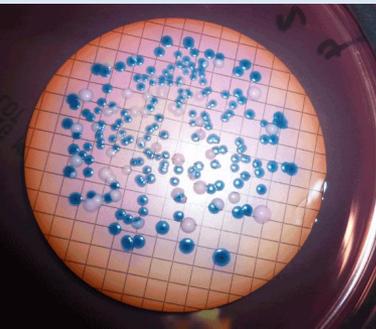
Duration and Frequency: The waterbody GM should not be greater than the selected GM magnitude in any 30-day interval. There should not be greater than a ten percent excursion frequency of the selected STV magnitude in the same 30-day interval.



Why E. coli for Freshwater?

■ Advantages

- Strong correlation with GI illnesses in freshwater
- Simpler analysis and similar methods and lab costs as fecal coliform
- E. coli is a subset of fecal coliform enabling correlations between indicators
- E. coli is more specific to fecal sources of warm-blooded animals
- Methods do not enumerate Klebsiella
- Compatible with neighboring states' standards



Current WQ Standards



FRESHWATER

Recreation
fecal coliform

Shellfish Harvesting
&
Recreation
fecal coliform criteria

MARINE WATER



Revised WQ Standards and Considerations



FRESHWATER

~~Recreation
fecal coliform~~

Recreation
E. Coli and/or
Enterococcus criteria

Upstream compliance may require regulatory limits on *fecal coliform* to meet downstream shellfish harvesting use

Shellfish Harvesting
fecal coliform criteria

MARINE WATER

Recreation
Enterococcus criteria



Marine Shellfish Protection



■ Shellfish Harvesting

- Fecal coliform will remain the indicator regardless of state actions
- Based on FDA National Shellfish Sanitation Program guidelines
- Criteria of fecal coliform: *GM: 14 cfu/100 mL; STV: 43 cfu/100 mL*

■ Existing fecal coliform TMDLs

- TMDL load and wasteload allocations set for the protection of downstream shellfish beds will continue
- Ecology will maintain the ability to apply fecal coliform limits in freshwaters where necessary to protect downstream uses



WAC 173-201A-210(3)(b)(iii)

“As determined necessary by the department, more stringent bacterial criteria may be established for waters that cause, or significantly contribute to the decertification or conditional certification of commercial or recreational shellfish harvest areas, even when the preassigned bacteria criteria for the water is being met.”



Timeline / Outreach

- Announce rulemaking (**CR-101**): August 16th, 2017 ✓
 - Stakeholder/public process: educate / collect information / draft rule
 - Kick-off webinar: October 17th, 2017 ✓
 - Technical Team Meetings: February - March 2018 ✓
 - Regulatory (cost/benefit) analysis: ongoing
 - SEPA analysis: May 2018
 - Proposed rule language webinar: Late June 2018

- Publish proposed rule (**CR-102**): July 2018
 - Hold 2-4 public hearings
 - Receive and respond formally to comments

- Adopt rule by late 2018 or early 2019



Questions?

- Contact Information:

Bryson Finch

Water Quality Standards Scientist

WA Dept. of Ecology, WQ Program

bfin461@ecy.wa.gov

360.407.7158

