

Water Quality Criteria

10.29.20 Working Group Notes

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Notes

The purpose of criteria working group meetings are to go over the specific criteria in detail with the goal of identifying questions to take back to the international organization; identifying criteria which need to further strengthening; identifying areas for improvement; and identifying areas which may be problematic to implement. To facilitate note taking on these goals we will look at each criterion and assess:

1. No change
2. Yes this specific change
3. Yes need more discussion/question to international org
4. Add criteria, is this a guideline or imperative criteria?

Criterion 7. The beach must fully comply with the water quality sampling and frequency requirements.

b. Yes, increase frequency to sampling once a week.

For this to be a meaningful criterion, sampling which already occurs at most beaches once a week during their season must be upheld by the criterion.

b. Yes, sampling techniques should implement EPA approved methodology.

Each state sets its own standards for methodology which is then approved by the EPA. Methodologies are verified using these state guidance's and the criteria should reflect this standard rather than a specific depth.

Criterion 8. The beach must fully comply with the standards and requirements for water quality analysis.

b. Yes, “the laboratory must be internationally, nationally, or state accredited...”

Each state sets its own standards for methodology which is then approved by the EPA. There is no national level accreditation for water testing laboratories; Labs and technicians are often accredited at the state level (for example, by a state department of health) and the criteria should reflect this standard.

a. No change to “Exceptional Circumstances”

No definition is needed for exceptional circumstances. Leaving this vague allows the National Jury to consider issues on a case-by-case basis rather than only specifically delineated cases.

Criterion 9. Industrial, waste-water or sewage-related discharges must not affect the beach area.

a. No change

Ultimately, the bacteria thresholds will disqualify any beach which has recurrent discharge issues. Intent of this criterion is interpreted as identification for beach operators and the public about where and when these incidents happen.

Criterion 10. The beach must comply with the Blue Flag requirements for the microbiological parameters Escherichia Coli (faecal coli bacteria) and intestinal enterococci (streptococci).

C. Yes, more discussion.

Our discussion involved only comments on enterococci while we wait for further information from the international Blue Flag Staff. We will revisit the E.Coli when we have more information.

Our options include-

1. All states have the same standard, either:
 - The strongest individual state standard: EPA's most precautionary recommendation of 60cfu/100ml).
 - Something stronger than 100cfu/100ml, but not as strong as 60cfu/100ml
2. Meet the BF standard 100cfu/100ml or your state's standard if it is stronger.

Canada also has a bifurcated system (option 2). EPA recommends the 60-70cfu/100ml advisory point. At this time we do not know historically how many sites are testing below or above the 60/70cfu threshold. While the 100cfu threshold may not push many communities to improve their water quality, we, as the National Operator, will review criteria every 5 years. We could strengthen this criterion in the future and in the meantime encourage beaches to continually strive for better water quality each year despite the static nature of the thresholds.

Criterion 11. The beach must comply with the Blue Flag requirements for physical parameters.

We did not discuss this criterion fully, but concern about the inclusion of algal blooms and red tides was brought up which could be added to the language in this criterion and criteria 7 and 9.

[Next Steps](#)

Notes will be sent out via email and made available on the Blue Flag in the US website. Written comments on the above notes will be accepted through November 20.

National Operator staff will circulate proposed criteria changes by December 4 for working group review. If necessary, another meeting will be held for review and acceptance of the criteria by the working group at a time convenient to most stakeholders.



Applying Blue Flag Criteria in the United States

The Surfrider Foundation offers these recommendations and poses the below questions to help establish a Blue Flag program in the US that will challenge beach operators to achieve high standards in providing and ensuring safe water quality, environmental management, environmental education and public safety.

In many ways the international Blue Flag criteria will do this as is. However, in some instances as described below, more robust criteria are needed to elevate beach management to meet or exceed the beach management standards that are already routinely achieved in US coastal states. The Blue Flag Canada draft beach criteria were reviewed for reference and example of how to implement the international criteria in North America.

Water Quality Monitoring & Public Notification Criteria

The International Criteria requires beaches to be tested monthly for E. coli and enterococcus, and results to be posted at the beach within one month. **These minimum requirements would be a step backwards for public health protection at most US beaches.** Instead, we recommend that Blue Flag beaches should follow these criteria and protocols to be most valuable locally:

- Beaches should be tested as frequently as Tier 1 beaches are tested locally, or at least weekly – whichever is greater. Weekly testing in most states is typical of the most popular Tier 1 beaches, however in some regions, like the Great Lakes, beaches are sampled 2-3x/week. Blue Flag beaches should meet this standard of excellence and not be viewed as ‘less than’ typical.
- Meet EPA approved and state implemented Beach Action Values when those local water quality standards are lower than Blue Flag International WQ criteria. For instance, coastal states use a range of Beach Action Values to issue swim advisories such as enterococcus counts of 60, 70, 104, 130 (all in cfu/100ml), and beaches should be judged according to state relevant criteria where those local criteria are below the international criteria of 100 cfu/100 ml. See state specific criteria for all US coastal states [here](#).
- Testing beaches for both E. coli and enterococcus. There certainly is no harm in this but in the US there is no standard for E. coli in marine waters, only enterococcus. In freshwaters there is a

standard for both E. coli and enterococcus that are used. Surfrider would be most concerned that fecal indicator bacteria levels that correspond to the state approved water quality criteria and implemented Beach Action Value are measured.

- Results should be posted at the beach as soon as they are available, generally the very next day after samples are collected. Additionally, any advisories issued by local/state health authorities to protect public health should also be posted at the beach, including but not limited to swim advisories, rain and brown water advisories, and harmful algal bloom advisories.
- Samples should be collected in accordance with the protocols required by state beach water quality monitoring programs and health authorities. That could vary somewhat from the 30 cm recommended by International Blue Flag, for instance to 6 inches/15 cm below the surface. Harmful Algal Bloom events, including red tides and cyanobacteria blooms, should be included in the types of abnormal weather or extreme events that would cause a beach to take down its Blue Flag temporarily, as is required by Blue Flag Canada.
- Discarding or discounting of test results should be limited to better defined extreme events. International criteria allows discounting of results for 'extreme weather events' or for follow up testing of short-term events, which could be caused by wet weather/runoff conditions, community water infrastructure failures, etc... I think as written the criteria are not specific enough on when discounting or discarding of samples would be allowed. Extreme weather events such as hurricanes or tropical storms that would cause truly severe and atypical bacteria levels to be measured, seem to be reasonable to discount as long as a beach stays within the 15% allowance, however discounting the results of follow-up testing for smaller short term events that could occur at some locations with only moderate levels of rain seems to defeat the purpose of testing in the first place.

Other beach assessment and management considerations

No sewage discharge. It is clear that a beach cannot have permitted or allowed discharges of untreated sewage into its waters, but how will beaches that are in communities that experience frequent sewage infrastructure failures and spills be handled? For instance, most of S. Florida is plagued by sewage failures and overages, especially during the wet season.

Beach bathrooms. Connection to sewer should be required where available. Regular maintenance/pumping records should be kept where bathrooms are serviced by septic systems. No cesspools allowed.

No driving on the beach. No unauthorized driving leaves a lot of wiggle room. Recommend Blue Flag Canada language instead. No driving permitted except emergency and work vehicles.

Domestic animals. Also recommend Blue Flag Canada language for more specificity.

Beach cleaning. We do not recommend allowing beaches to use mechanical beach sieving. If cigarette butts are an issue, we'd recommend a no smoking on the beach policy instead. Blue Flag Canada has good language regarding beach cleaning and requiring seaweed to be left on the beach, except when contributing to unsafe or unsanitary conditions.

Free access to public. How will public access be considered for beaches that require local town, city or other municipality residence for parking? Would a beach need to offer non-resident paid parking at or below \$30/day?

Litter & plastic reduction. We are very supportive of criteria to have plentiful and well maintained garbage and recycling bins, as well as potable water to reduce the need of plastic water bottles for beach goers.

Environmental education and information. Surfrider is very supportive of these criteria to better inform beach goers of how to protect natural environments at the beach and to reduce their impact. We'd recommend ways to reduce single-use plastics as a training or education category for both beach goers, food service providers and tourist operators using the beach. In regards to the presence of stranded or hurt marine life, we suggest signage that clearly mentions the local marine mammal rescue agency ([see here](#) for list by state/region).

Monitoring of renourishment projects. Beach renourishment is a necessity in current areas, yet it's important for beach managers to adequately document and mitigate potential adverse impacts to marine life and beach ecology more broadly. Surfrider recommends new criteria or expanding criterion 25 to require pre/during/post nourishment monitoring of physical parameters (e.g. beach morphology) and ecological parameters (e.g. abundance and diversity of marine/coastal wildlife and vegetation).

Appendix B: International Jury Comments

It clarified to the National Operator that the Bathing Water Quality criteria is the same for the whole FEE network and as such the sites in the US will have to monitor for both E. coli and I.E. as per the World Health Organization guidelines. The frequency for both biological parameters do not have to be similar, and it is possible to only sample the minimum for one of the parameters as long as the BF criteria are complied with.

Appendix C: Ryan S Comments

- The Blue Flag standards are different and more stringent than the [current EPA recreational WQ criteria](#) and California's single sample standards for beach postings (104 and 400 CFU/100 mL for entero and E. coli, respectively).
- In the 2012 criteria, EPA decided to move away from using E. Coli at marine sites due in part to the findings of the Wade et al. 2003 review¹, which found that Enterococcus is a better indicator of health risk.
- A few years back, the State of California updated its WQ provisions, and was about to move towards using Enterococcus exclusively, as per EPA's guidelines. However, the State ended up keeping E Coli for public notification purposes after considering epi studies done at California beaches (e.g. the Haile et. al and Yau et al)² which contradicted the Wade study and showed that E. coli can be important in indicating risk. Indeed, E. coli is the most important indicator at a number of popular CA beaches, and removing it as an indicator would suddenly make those beaches appear 'clean'. It can also provide additional information to Enterococcus on pollution sources.
- There are a number of other indicators that have been proposed that perhaps improve upon the standard fecal indicator bacteria such as *Clostridium perfringens* (indicative of presence of raw sewage) and HF183 (a human specific marker), though there doesn't seem to be official guidance on these.
- So to answer your question, I guess I'd say that it is very site specific and perhaps it is most health protective to (at least initially) sample for as many indicators as frequently as possible.

¹ If you would like to have these documents sent to you please email annie.mercer@asbpa.org for access.

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