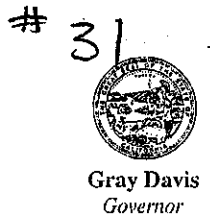




State Water Resources Control Board



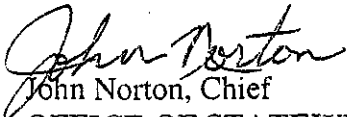
Winston H. Hickox
Secretary for
Environmental
Protection

Office of Statewide Initiatives
1001 I Street • Sacramento, California 95814 • (916) 341-5276
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FAX (916) 341-5284

Gray Davis
Governor

*The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption.
For a list of simple ways you can reduce demand and cut your energy costs, see our website at <http://www.swrcb.ca.gov>.*

TO: Celeste Cantú
Executive Director
EXECUTIVE OFFICE

FROM: 
John Norton, Chief
OFFICE OF STATEWIDE INITIATIVES

DATE: February 5, 2003

SUBJECT: 303(d) LISTING GUIDANCE FOR BACTERIA IN OCEAN WATERS

I am submitting the 303(d) listing guidance for bacteria/pathogens in ocean waters on behalf of the Beach Water Quality Workgroup (BWQW) of which I serve as Chair. The Monitoring and Reporting Subcommittee of the BWQW prepared the guidance document. The members of the BWQW reviewed the recommendations and requested that the guidance document be forwarded to the State Water Resources Control Board for their consideration.

If you have any questions please contact Robin McCraw, Clean Beaches Coordinator, at 916/341-5547.

Attachment

cc: Tom Howard, Deputy Director
Stan Martinson, Chief, DWQ
Craig J. Wilson, Senior ES, DWQ
Robin McCraw, ES IV, OSI

5784



Beach Water Quality Workgroup

PARTICIPANTS:

- State Water Resources Control Board
- Los Angeles Regional Water Quality Control Board
- Santa Ana Regional Water Quality Control Board
- San Diego Regional Water Quality Control Board
- Central Coast Regional Water Quality Control Board
- San Francisco Bay Regional Water Quality Control Board
- California Coastal Commission
- California Department of Health Services
- Santa Monica Bay Restoration Project
- Surfrider Foundation
- Heal the Bay
- Orange County Sanitation District
- Los Angeles County Sanitation Districts
- City of San Diego Metropolitan Wastewater
- San Diego County Environmental Health
- Orange County Environmental Health
- Los Angeles County Environmental Health
- Ventura County Environmental Health
- Santa Barbara County Environmental Health
- Santa Cruz County Environmental Health
- City of Long Beach Environmental Health
- City of Encinitas
- Orange County Public Facilities & Resources Department
- Ventura County Flood Control
- Scripps Institute of Oceanography
- Southern California Coastal Water Research Project

January 30, 2003

Celeste Cantu, Executive Director
State Water Resources Control Board
1001 I Street
Sacramento, California 95812

Dear Ms. Cantu,

This is to submit recommendations from the Beach Water Quality Workgroup regarding criteria that should be employed for 303(d) listing marine beach water bodies for pathogens or bacteria (Attachment 1). Our Monitoring and Reporting Subcommittee developed the attached recommendations, and a substantial majority of the subcommittee supports these recommendations. The Beach Water Quality Workgroup reviewed the recommendations and overwhelmingly supports the recommendations.

The Monitoring and Reporting Subcommittee consists of representatives from the State Water Resources Control Board, Regional Water Quality Control Boards (RWQCBs), local environmental health agencies, regulated dischargers and the advocacy group, Heal the Bay. The subcommittee devoted seven meetings to this subject over a period of seven months, and most of the recommendations reflect a consensus reached by the participants regarding the issues addressed. The document notes where consensus was not reached for specific recommendations and what organization(s) had a serious objection to the recommendation as written. Additionally, Heal the Bay submitted written dissents to some recommendations (Attachment 2).

The recommendations provide a framework for determining marine beach bacteriological water quality impairments using data generated by regulatory activities conducted by RWQCBs and various local agencies. These activities include, but are not limited to, monitoring and regulatory activities conducted by local environmental health agencies, monitoring activities conducted to demonstrate compliance with NPDES permits by wastewater treatment plants and special studies that may be conducted by RWQCBs and recognized private and public institutions.

At this time, the subcommittee has reviewed and formulated guidance for delisting marine beach water bodies, but these recommendations have not

been thoroughly reviewed and finalized. The findings and recommendations will be submitted to you when this process has been completed.

We trust you will find the recommendations appropriate, and that they will provide a basis for establishing consistent and rational approach for the listing process between regional boards.



John Norton, Chairman
Beach Water Quality Workgroup

Attachments (2)

MONITORING & REPORTING SUBCOMMITTEE BEACH WATER QUALITY WORKGROUP

303(d) LISTING GUIDANCE

The Monitoring & Reporting Subcommittee recommends the following:

Recommendation 1: Listing should be based on the frequency of water quality standards exceedances.

The frequency of exceedances of water quality objectives established by the State Water Resources Control Board (SWRCB) in the Ocean Plan, and the exceedances of standards established by the Department of Health Services¹ should determine when an ocean water body/beach segment is listed. This represents the most appropriate means of measuring the failure to meet water quality objectives and the loss of a REC-1 designated beneficial use.

Numerous studies indicate that bacterial levels vary considerably over short periods of time and distances. The magnitude of bacterial levels usually vary by source, the concentration of the source contaminate and the volume of discharge. The magnitude of bacteria does not justify the use of bacterial levels for 303(d) listing since they measure neither loss of beneficial use nor a failure to attain water quality objectives. Monitoring frequencies, with the exception of daily monitoring, employed by environmental health agencies and many dischargers do not accurately reflect the duration of the failure to meet the established standards. Consequently, only the frequency of exceedances should be used.

The SWRCB² and the State Department of Health Services³(DHS) have respectively established water quality objectives and bacterial standards for marine beaches. When these bacterial standards are exceeded the local health officer/environmental health agency having jurisdiction must warn the public that the standards have been exceeded by posting warning signs on the beach where the standard exceedances have occurred. The posting of warning signs on the beach constitutes a failure to meet water quality objectives/standards and the loss of REC-1 beneficial use for that water body.

Routine bacteriological monitoring of ocean water is conducted in accordance with the requirements of AB411⁴ by local environmental health agencies and various NPDES permits issued by California Regional Water Quality Control Boards (RWQCB). The latter monitoring is conducted by agencies discharging sewage effluent into the ocean waters. The data collected in these monitoring

¹ Title 17, California Code of Regulations

² California Water Code.

³ AB411, Statutes of 1997.

⁴ AB411, Statutes of 1997.

programs should be used to identify beaches where water quality does not meet state bacteriological standards for marine beaches.

Implementation: Regional board staff may use the frequency of “postings” by the local environmental health agency as the “first screen” to determine if a water body should be listed. When beaches are rarely or never posted and when they are frequently posted, the RWQCB may be able to make the appropriate determination without reviewing the bacteriological data. This data must clearly be indicative of the water quality at the monitoring station in question. An analysis of the bacteriological data should be conducted when posting data (reported to the SWRCB by local environmental health agencies) does not clearly provide the method for making a listing decision. The number of postings and the total number of days a beach is posted should not be considered alone since postings may not accurately reflect the frequency that the water body does not meet the health standards or water quality objectives. An analysis of the bacteriological data should be conducted when posting data reported to the SWRCB by local agencies does not provide a clear method for making a listing decision.

A beach should be listed when there is no enforcement action available to address the water quality impairment, and the most appropriate means available to address the water quality impairment is a TMDL. Generally, the number of beach closures should not be considered in the listing criteria since the causes of beach closures can usually be addressed by RWQCB enforcement actions. If site-specific conditions warrant their use, e.g., beach closures caused by high indicator bacterial densities with an unknown source, RWQCB staff may use this data. Other site-specific information should be considered when appropriate. For example, best management practices (BMPs) may have been instituted to address impairment and a TMDL may no longer be required to address the problem.

Note: Attached is Heal the Bay's formal dissent to the recommendation with staff's comments.

Recommendation 2: The threshold frequency for listing should be the number of water quality standard exceedances in a watershed that is minimally impacted by human activities.

At least portions of total and fecal coliform and enterococcus bacteria are naturally occurring in the environment, and their presence does not necessarily indicate fecal pollution from human and domestic animals. As a result, the receiving water from natural runoff in creeks and streams may contain significant levels of coliform and enterococcus bacteria causing the water body to exceed the bacterial standards.

In order to adequately compensate for natural occurring indicator bacteria, each RWQCB should establish a "reference" beach in their region where possible. The reference beach is one where adequate bacteriological data has been collected and is available from a minimally impacted water body, i.e., one that is not impacted or only minimally altered by human activity. The frequency of exceedances at this site becomes the threshold for determining a bacteriological impaired water body. This requires the identification of watersheds within defined regions that have not been environmentally altered by human activity where possible.

If data is not available from a minimally impacted water body, EPA recommends that the threshold for exceedances should be 10% of the total samples collected. If water quality monitoring at any given site is only conducted during the AB411 period (April 1 thru October 31)⁵, the threshold frequency for exceedances at that site should be set at 4% the total samples.⁶

Implementation: RWQCBs should identify, where possible, a minimally impacted water body within that region and collect bacteriological data to determine what is the appropriate threshold to use for the frequency criteria. Lacking a reference beach, the RWQCB must select and use the most appropriate threshold frequency. This will generally be either 10% or 4% of the samples as the exceedances threshold. Significant rainfall may occur during the AB411 period however. When this occurs, RWQCBs should consider excluding the wet-weather data from the dataset if the 4% threshold is used since the use of 4% is based on dry-weather monitoring.

Note: Attached is Heal the Bay's formal dissent to the recommendation with staff's comments.

Recommendation 3: Listing should be based on a valid dataset.

RWQCBs should have confidence that the bacteriological dataset is adequate and unbiased for listing purposes. In most instances, the dataset for a given location should be derived from routine monitoring by either a discharger or the local environmental health agency.

Implementation: RWQCB staff must determine the validity of their data set. There may be instances where the number of samples collected may be inadequate for determining either the impairment of a water body or in determining that it is unimpaired when doubts exist. Every effort should be made to collect a sufficient amount of data before this determination is made. This may involve special studies or increased monitoring.

⁵ AB411, Statutes of 1997.

⁶ SCCWRP, Bight 98 Study.

Recommendation 4: Listing should be based on the frequency of water quality standards exceeding the threshold number in multiple years.

The entire bacteriological data set for the time period between listings for any given site should be used to determine impairment and the need to implement a TMDL. The Clean Water Act calls for listings to be conducted every two years, but the period has been lengthened to three-year intervals⁷. Using multiple years of data is more likely to ensure the listing is based on data that is representative of the actual water quality at the beach since an unusually wet or dry year should not unduly affect the data set.

Implementation: The entire data set between listing periods should be used to determine if the frequency threshold has been exceeded unless there is a reason to consider the data on a yearly basis. A suitable reason for considering less than the entire data set may be the implementation of a BMP. If only one year in the period exceeds the threshold, professional judgment should be exercised in determining if the water body in question should be listed.

Recommendation 5: Permanent postings should be counted as exceedances when they are based on site-specific water quality data. "Precautionary" postings should not count as water quality exceedances.

Local environmental health agencies may "post" beach areas adjacent to storm drain and creek discharges with warning signs permanently. These postings are long term and are based on the experience of the local agency in that they have accumulated sufficient data to show that the ocean water in the area is often impaired when there is a discharge. This type of posting is referred to as a "permanent posting". There are other instances when warning signs are posted because the local health agency believes that the receiving water will be impaired by the discharge even though there is little or no confirmation monitoring to validate this belief. These are referred to as "precautionary postings".

As discussed under Recommendation 1, beach listings for impairment due to elevated levels of bacteria should be based on water quality data. Since permanent postings are typically based on monitoring results, these postings should be counted as exceedances of water quality parameters and used in the listing process.

A permanent posting therefore constitutes water quality impairment and must be listed. Precautionary postings not supported by water quality data should not be

⁷ Some members of the M&R Subcommittee believe that the minimum amount of data used for listing purposes should encompass a minimum of three years.

considered in the listing process even though both types of postings result in a loss of beneficial use in the area of the posting.

Implementation: RWQCB staff must obtain the posting information from each local environmental health jurisdiction to differentiate permanent postings from precautionary postings. A revised data collection and processing system to be employed by the SWRCB may allow this information to be posted on their web site.

Recommendation 6: “Rain Advisories” should be considered in the same manner as precautionary postings.

“Rain advisories” are issued by local health jurisdictions when rainfall is imminent or after rainfall has begun. These advisories are precautionary in nature and are not issued on the basis of monitoring data. These advisories are usually issued in lieu of posting the beach during the non-AB 411 periods. During the AB411 period, routine monitoring is required, and if the AB411 standards are exceeded the beach must be posted. Consequently, monitoring data is usable to the degree that it is appropriate during rainfall.

AB411 and its regulations⁸ do not authorize the use of “rain advisories”. They are an activity that local health jurisdictions generally conducted before the passage of AB411 and the practice has been continued. No protocols have been established for the issuance of these advisories.

Most routine bacteriological monitoring by both dischargers and environmental health agencies continues as scheduled during wet-weather periods. If an agency suspends monitoring during rainfall or within 72 hours of rainfall, the involved monitoring stations are, in effect, monitored only during dry-weather since bacterial levels usually revert to background 72 hours following rainfall. Consequently, the frequency threshold for listing should be reduced to 4% of the samples collected.

Implementation: No implementation issues exist since the recommendation essentially says to ignore these advisories.

Note: Attached is Heal the Bay’s formal dissent to the recommendation with staff’s comments.

⁸ Title 17, California Code of Regulations

Recommendation 7: Establish monitoring stations at defined distances from storm drain discharges in order to enhance data consistency.

Monitoring locations have been established in NPDES permits by RWQCBs and the local health agency establishes monitoring locations for its AB411 regulatory activities. AB411 and its regulations do not prescribe the location of monitoring stations in relation to storm drain discharges. As a result, no consistency exists between the agencies conducting monitoring activities relative to the distances samples are collected from storm drain discharges.

The BWQW has recommended that the distance of a monitoring station from a storm drain discharge be set at 25 yards, but it is unknown how many health agencies or RWQCBs are following this recommendation.

Implementation: Neither RWQCBs nor DHS have the authority to establish a consistent location for monitoring stations from storm drain discharges. RWQCBs set the monitoring locations for NPDES compliance but they have no authority over health jurisdictions' monitoring locations. DHS may have the statutory authority to determine monitoring locations, but it did not exercise this authority, if it exists, in the regulations. TMDL compliance monitoring may further complicate any action regarding this recommendation.

Note: Attached is Heal the Bay's formal dissent to the recommendation with staff's comments.

Recommendation 8: Differences in the results of laboratory analyses utilizing different laboratory methods are insignificant.

Currently, most health agencies use a defined substrate methodology for the laboratory analyses of their collected samples. Because EPA has not approved this method, dischargers are either using membrane filter or multiple tube fermentation methodologies for sample analysis. Bight 98⁹ and correlation studies conducted by local public health laboratories and approved by the State Department of Health Services demonstrated that there was no significant difference in the results each method produced.

Implementation: No implementation issues exist.

Note: Attached is Heal the Bay's formal dissent to the recommendation with staff's comments.

⁹ Noble, Rachel, et al., Southern California Bight 1998 Regional Monitoring Program: I. Summer Shoreline Microbiology, Southern California Coastal Waters Research Project.

Recommendation 9: In the absence of site-specific data, the length of beach to be listed should be 50 yards on each side of the storm drain discharge.

The Monitoring & Reporting Subcommittee has recommended that monitoring stations be located 25 yards from the source of the impairment, e.g., storm drain discharge. When the bacterial standard(s) are exceeded, signs are routinely posted at 25 yards on each side of the source of the impairment. They can be seen for a distance of approximately 25 yards. Consequently, the loss of beneficial use is approximately 50 yards on each side of the source of impairment.

“Adaptive” sampling may be employed by some monitoring agencies when a monitoring station frequently exceeds bacterial standards in order to assess the area of beach impacted by the storm drain discharge. In these cases, signs are posted at a greater distance from the source discharge point. These distances are reported to SWRCB and are in the database.

In some cases, two monitoring stations may be linked by hydrological conditions. It may also be demonstrated in the future that the amount of flow and its pattern from the discharge point can significantly increase the amount of beach affected by the discharge. In both of these cases the entire area affected should be listed.

Implementation: The distance recommended is for guidance purposes only. The establishment of a TMDL, when appropriate, should address the problem regardless of the distance cited in the listing.

Note: Attached is Heal the Bay's formal dissent to the recommendation with staff's comments.

MONITORING & REPORTING SUBCOMMITTEE BEACH WATER QUALITY WORKGROUP

303(d) LISTING CRITERIA

The Monitoring & Reporting Subcommittee recommends the following:

Recommendation 1: Listing should be based on the frequency of water quality standards exceedances.

The frequency of exceedances of water quality objectives established by the State Water Resources Control Board (SWRCB) in the Ocean Plan, and the exceedances of standards established by the Department of Health Services¹ should determine when an ocean water body/beach segment is listed. This represents the most appropriate means of measuring the failure to meet water quality objectives and the loss of a REC-1 designated beneficial use.

Numerous studies indicate that bacterial levels vary considerably over short periods of time and distances. The magnitude of bacterial levels usually vary by source, the concentration of the source contaminate and the volume of discharge. The magnitude of bacteria does not justify the use of bacterial levels for 303(d) listing since they measure neither loss of beneficial use nor a failure to attain water quality objectives. Monitoring frequencies, with the exception of daily monitoring, employed by environmental health agencies and many dischargers do not accurately reflect the duration of the failure to meet the established standards. Consequently, only the frequency of exceedances should be used.

The SWRCB² and the State Department of Health Services³(DHS) have respectively established water quality objectives and bacterial standards for marine beaches. When these bacterial standards are exceeded the local health officer/environmental health agency having jurisdiction must warn the public that the standards have been exceeded by posting warning signs on the beach where the standard exceedances have occurred. The posting of warning signs on the beach constitutes a failure to meet water quality objectives/standards and the loss of REC-1 beneficial use for that water body.

Routine bacteriological monitoring of ocean water is conducted in accordance with the requirements of AB411⁴ by local environmental health agencies and various NPDES permits issued by California Regional Water Quality Control Boards (RWQCB). The latter monitoring is conducted by agencies discharging sewage effluent into the ocean waters. The data collected in these monitoring

¹ Title 17, California Code of Regulations

² California Water Code.

³ AB411, Statutes of 1997.

⁴ AB411, Statutes of 1997.

programs should be used to identify beaches where water quality does not meet state bacteriological standards for marine beaches.

Implementation: Regional board staff may use the frequency of "postings" by the local environmental health agency as the "first screen" to determine if a water body should be listed. When beaches are rarely or never posted and when they are frequently posted, the RWQCB may be able to make the appropriate determination without reviewing the bacteriological data. This data must clearly be indicative of the water quality at the monitoring station in question. An analysis of the bacteriological data should be conducted when posting data (reported to the SWRCB by local environmental health agencies) does not clearly provide the method for making a listing decision. The number of postings and the total number of days a beach is posted should not be considered alone since postings may not accurately reflect the frequency that the water body does not meet the health standards or water quality objectives. An analysis of the bacteriological data should be conducted when posting data reported to the SWRCB by local agencies does not provide a clear method for making a listing decision.

A beach should be listed when there is no enforcement action available to address the water quality impairment, and the most appropriate means available to address the water quality impairment is a TMDL. Generally, the number of beach closures should not be considered in the listing criteria since the causes of beach closures can usually be addressed by RWQCB enforcement actions. If site-specific conditions warrant their use, e.g., beach closures caused by high indicator bacterial densities with an unknown source, RWQCB staff may use this data. Other site-specific information should be considered when appropriate. For example, best management practices (BMPs) may have been instituted to address impairment and a TMDL may no longer be required to address the problem.

Dissenting Opinion – Heal the Bay: We agree with the BWQWG's recommendation that the listing process should be based on analysis of monitoring data. We disagree with the BWQWG's recommendation that the availability of enforcement and the appropriateness of a TMDL be factors considered in the listing process for several reasons. First, anytime AB-411 bacteriological standards are exceeded, enforcement actions can be taken by the RWQCBs under authority provided in the Clean Water Act and the Porter-Cologne Act. Thus, this recommendation, if broadly applied, could lead to no beaches being listed due to exceedances of the AB-411 standards because there is always some type of enforcement action available. Second, the Clean Water Act and its implementing regulations do not allow for the consideration of these factors in the listing process. Moreover, TMDLs can be developed and implemented in a variety of different ways. Thus, even if the Clean Water Act did allow for consideration of "the appropriateness of a TMDL", it would be difficult for RWQCB staff to evaluate TMDL appropriateness during the listing process. Finally, the Clean Water Act does not require that a TMDL be the "most

appropriate means” of mitigating the impairment for a waterbody to be identified as impaired. In summary, we believe the BWQWG’s recommendation to consider availability of enforcement actions and to determine that a TMDL is the most appropriate method of mitigating beach pollution runs contrary to federal and state law and will hinder RWQCBs’ ability to accurately identify beaches that are too polluted to support recreational uses.

Recommendation 2: The threshold frequency for listing should be the number of water quality standard exceedances in a watershed that is minimally impacted by human activities.

At least portions of total and fecal coliform and enterococcus bacteria are naturally occurring in the environment, and their presence does not necessarily indicate fecal pollution from human and domestic animals. As a result, the receiving water from natural runoff in creeks and streams may contain significant levels of coliform and enterococcus bacteria causing the water body to exceed the bacterial standards.

In order to adequately compensate for natural occurring indicator bacteria, each RWQCB should establish a “reference” beach in their region where possible. The reference beach is one where adequate bacteriological data has been collected and is available from a minimally impacted water body, i.e., one that is not impacted or only minimally altered by human activity. The frequency of exceedances at this site becomes the threshold for determining a bacteriological impaired water body. This requires the identification of watersheds within defined regions that have not been environmentally altered by human activity where possible.

If data is not available from a minimally impacted water body, EPA recommends that the threshold for exceedances should be 10% of the total samples collected. If water quality monitoring at any given site is only conducted during the AB411 period (April 1 thru October 31)⁵, the threshold frequency for exceedances at that site should be set at 4% the total samples.⁶

Implementation: RWQCBs should identify, where possible, a minimally impacted water body within that region and collect bacteriological data to determine what is the appropriate threshold to use for the frequency criteria. Lacking a reference beach, the RWQCB must select and use the most appropriate threshold frequency. This will generally be either 10% or 4% of the samples as the exceedances threshold. Significant rainfall may occur during the AB411 period however. When this occurs, RWQCBs should consider excluding the wet-weather data from the dataset if the 4% threshold is used since the use of 4% is based on dry-weather monitoring.

⁵ AB411, Statutes of 1997.

⁶ SCCWRP, Bight 98 Study.

Dissenting Opinion – Heal the Bay: We disagree with the recommendation to set the allowable exceedances at 10% a year or 4% during the AB411 period to account for natural sources of bacteria when a reference beach is not available. These exceedance rates are somewhat arbitrary and not supported by existing data.

The 10% threshold originates from past recommendations from the U.S. EPA for fecal coliform bacteria⁷. However, the EPA's more recent May 2002 draft Implementation Guidance of Ambient Water Quality Criteria for Bacteria does not recommend an allowable exceedance rate of 10%. Moreover, analysis conducted for the bacteria TMDLs for Santa Monica Bay does not support a 10% exceedance rate⁸. Analysis of 5 years of routine monitoring data at 57 beaches showed that 32 beaches had an average exceedance rate of less than 10% per year. Many of these watersheds had exceedance rates of less than 3%, much lower than the arbitrary 10% recommended by the BWQWG.

We also disagree with setting the allowable rate of exceedance to 4% during dry weather, based on the results of the Bight '98 study. This application of the Bight '98 results may be inappropriate because this study was a short snap-shot (5 weeks) of water quality that may not be representative of dry weather conditions, and because it is unknown whether the sample locations in this study were impacted by sources of fecal bacteria other than representative natural sources. Analysis completed for the bacteria TMDLs for Santa Monica Bay does not support 4%. This analysis showed 35 of the 57 beaches in Santa Monica Bay had average annual exceedance rates during dry weather of less than 4%.

In summary, the BWQWG recommendations to account for natural sources of bacteria will result in too many allowable exceedances and, thus, an under protection of public health. Using a reference beach methodology to account for natural bacteria sources is scientifically defensible, and based on our review of the existing monitoring programs in the State, we believe there are reference beach locations suitable for most beaches that are routinely monitored.

Recommendation 3: Listing should be based on a valid dataset.

RWQCBs should have confidence that the bacteriological dataset is adequate and unbiased for listing purposes. In most instances, the dataset for a given location should be derived from routine monitoring by either a discharger or the local environmental health agency.

Implementation: RWQCB staff must determine the validity of their data set. There may be instances where the number of samples collected may be inadequate for determining either the impairment of a water body or in

⁷ U.S. EPA, 1997, Guidelines for Preparation of the Comprehensive State Water Quality Assessments and Electronic Updates.

⁸ Alamillo, Heal the Bay, 2002 unpublished data.

determining that it is unimpaired when doubts exist. Every effort should be made to collect a sufficient amount of data before this determination is made. This may involve special studies or increased monitoring.

Recommendation 4: Listing should be based on the frequency of water quality standards exceeding the threshold number in multiple years.

The entire bacteriological data set for the time period between listings for any given site should be used to determine impairment and the need to implement a TMDL. The Clean Water Act calls for listings to be conducted every two years, but the period has been lengthened to three-year intervals⁹. Using multiple years of data is more likely to ensure the listing is based on data that is representative of the actual water quality at the beach since an unusually wet or dry year should not unduly affect the data set.

Implementation: The entire data set between listing periods should be used to determine if the frequency threshold has been exceeded unless there is a reason to consider the data on a yearly basis. A suitable reason for considering less than the entire data set may be the implementation of a BMP. If only one year in the period exceeds the threshold, professional judgment should be exercised in determining if the water body in question should be listed.

Recommendation 5: Permanent postings should be counted as exceedances when they are based on site-specific water quality data. "Precautionary" postings should not count as water quality exceedances.

Local environmental health agencies may "post" beach areas adjacent to storm drain and creek discharges with warning signs permanently. These postings are long term and are based on the experience of the local agency in that they have accumulated sufficient data to show that the ocean water in the area is often impaired when there is a discharge. This type of posting is referred to as a "permanent posting". There are other instances when warning signs are posted because the local health agency believes that the receiving water will be impaired by the discharge even though there is little or no confirmation monitoring to validate this belief. These are referred to as "precautionary postings".

As discussed under Recommendation 1, beach listings for impairment due to elevated levels of bacteria should be based on water quality data. Since permanent postings are typically based on monitoring results, these postings should be counted as exceedances of water quality parameters and used in the listing process.

⁹ Some members of the M&R Subcommittee believe that the minimum amount of data used for listing purposes should encompass a minimum of three years.

A permanent posting therefore constitutes water quality impairment and must be listed. Precautionary postings not supported by water quality data should not be considered in the listing process even though both types of postings result in a loss of beneficial use in the area of the posting.

Implementation: RWQCB staff must obtain the posting information from each local environmental health jurisdiction to differentiate permanent postings from precautionary postings. A revised data collection and processing system to be employed by the SWRCB may allow this information to be posted on their web site.

Recommendation 6: “Rain Advisories” should be considered in the same manner as precautionary postings.

“Rain advisories” are issued by local health jurisdictions when rainfall is imminent or after rainfall has begun. These advisories are precautionary in nature and are not issued on the basis of monitoring data. These advisories are usually issued in lieu of posting the beach during the non-AB 411 periods. During the AB411 period, routine monitoring is required, and if the AB411 standards are exceeded the beach must be posted. Consequently, monitoring data is usable to the degree that it is appropriate during rainfall.

AB411 and its regulations¹⁰ do not authorize the use of “rain advisories”. They are an activity that local health jurisdictions generally conducted before the passage of AB411 and the practice has been continued. No protocols have been established for the issuance of these advisories.

Most routine bacteriological monitoring by both dischargers and environmental health agencies continues as scheduled during wet-weather periods. If an agency suspends monitoring during rainfall or within 72 hours of rainfall, the involved monitoring stations are, in effect, monitored only during dry-weather since bacterial levels usually revert to background 72 hours following rainfall. Consequently, the frequency threshold for listing should be reduced to 4% of the samples collected.

Implementation: No implementation issues exist since the recommendation essentially says to ignore these advisories.

Dissenting Opinion – Heal the Bay: Rain advisories should be used in the listing process for beaches that are not routinely monitored during wet weather or during the non-AB411 season. Extensive data demonstrates that nearly all AB-411 beaches have poor water quality during wet weather. At beaches not monitored during the wet season, the local health officer is relying on rain

¹⁰ Title 17, California Code of Regulations

advisories in lieu of monitoring data to protect public health and, therefore, the only information available to the public about the quality of water at these beaches is the rain advisories. Thus, the rain advisories become a de facto measure of the loss of beneficial use at these beaches. RWQCBs that do not use rain advisories in the listing process for beaches that are not routinely monitored during wet weather or during the non-AB411 season are unintentionally providing an incentive for monitoring agencies to suspend monitoring during these time periods, and instead rely on rain advisories, thus avoiding 303(d) listing of beaches that are polluted during the wet season.

Recommendation 7: Establish monitoring stations at defined distances from storm drain discharges in order to enhance data consistency.

Monitoring locations have been established in NPDES permits by RWQCBs and the local health agency establishes monitoring locations for its AB411 regulatory activities. AB411 and its regulations do not prescribe the location of monitoring stations in relation to storm drain discharges. As a result, no consistency exists between the agencies conducting monitoring activities relative to the distances samples are collected from storm drain discharges.

The BWQW has recommended that the distance of a monitoring station from a storm drain discharge be set at 25 yards, but it is unknown how many health agencies or RWQCBs are following this recommendation.

Implementation: Neither RWQCBs nor DHS have the authority to establish a consistent location for monitoring stations from storm drain discharges. RWQCBs set the monitoring locations for NPDES compliance but they have no authority over health jurisdictions' monitoring locations. DHS may have the statutory authority to determine monitoring locations, but it did not exercise this authority, if it exists, in the regulations. TMDL compliance monitoring may further complicate any action regarding this recommendation.

Dissenting Opinion – Heal the Bay: Routine monitoring stations should be located directly in front of the drain for several reasons. First, monitoring 25 yards from the drain effectively allows a mixing zone of the discharge along 25 yards of the beach. Thus, along 25 yards of beach, bacteria densities could exceed the health standards and the beneficial use of recreational swimming is lost. Second, the loss of beneficial uses along 25 yards of the beach must be assumed even when the sampling data collected at the 25 yard monitoring station indicates levels of bacteria are below the bacteriological standards because the amount of dilution along the shoreline is highly variable and likely site-specific (depending on beach topography and ocean conditions)¹¹. Third, the direction of the bacteria plume emanating from the drain is dependent on the longshore

¹¹ Taggart, Heal the Bay, Storm Drain Plume Dispersion Study, unpublished data.

current in the surf zone, which at many beaches can be upcoast or downcoast from the drain depending on swell direction. At these drains, monitoring would have to be conducted at both 25 meters upcoast and downcoast to be protective of public health. Currently, few monitoring agencies take into account longshore current direction when monitoring beaches, thus monitoring results from stations located 25 yards from the discharge may be misrepresenting the true risk to swimmers.

Recommendation 8: Differences in the results of laboratory analyses utilizing different laboratory methods are insignificant.

Currently, most health agencies use a defined substrate methodology for the laboratory analyses of their collected samples. Because EPA has not approved this method, dischargers are either using membrane filter or multiple tube fermentation methodologies for sample analysis. Bight 98¹² studies demonstrated that there was no significant difference in the results each method produced.

Implementation: No implementation issues exist.

Dissenting Opinion – Heal the Bay: It should be assumed that *E. coli* comprises 80% of fecal coliform when analyzing monitoring data that includes *E. coli* measured by the defined substrate methodology (Idexx). Defined substrate methodology cannot measure fecal coliform. Instead, *E. coli* is measured as a surrogate for fecal coliform. Currently, the quantitative relationship between *E. coli* and fecal coliform is unknown. The BWQWB recommendation infers a 1:1 ratio of *E. coli* to fecal coliform. Since it has been established that *E. coli* is a subset of fecal coliform, this recommendation will result in an underestimate of fecal bacteria densities. We recommend using a conservative assumption that *E. coli* represents 80% of the fecal bacteria in a sample in the interest of public health protection.

Recommendation 9: In the absence of site-specific data, the length of beach to be listed should be 50 yards on each side of the storm drain discharge.

The Monitoring & Reporting Subcommittee has recommended that monitoring stations be located 25 yards from the source of the impairment, e.g., storm drain discharge. When the bacterial standard(s) are exceeded, signs are routinely posted at 25 yards on each side of the source of the impairment. They can be seen for a distance of approximately 25 yards. Consequently, the loss of beneficial use is approximately 50 yards on each side of the source of impairment.

¹² Noble, Rachel, et al., Southern California Bight 1998 Regional Monitoring Program: I. Summer Shoreline Microbiology, Southern California Coastal Waters Research Project.

“Adaptive” sampling may be employed by some monitoring agencies when a monitoring station frequently exceeds bacterial standards in order to assess the area of beach impacted by the storm drain discharge. In these cases, signs are posted at a greater distance from the source discharge point. These distances are reported to SWRCB and are in the database.

In some cases, two monitoring stations may be linked by hydrological conditions. It may also be demonstrated in the future that the amount of flow and its pattern from the discharge point can significantly increase the amount of beach affected by the discharge. In both of these cases the entire area affected should be listed.

Implementation: The distance recommended is for guidance purposes only. The establishment of a TMDL, when appropriate, should address the problem regardless of the distance cited in the listing.

Dissenting Opinion – Heal the Bay: The available data on the distance of the beach impacted with bacteria levels over the health standards adjacent to a storm drain does not support a recommendation of listing 50 yards on either side of the drain¹³. The available data indicates that the distance impacted by densities of bacteria above the health standards is site-specific, but can be well over 400 meters. We recommend that the RWQCB use site-specific data if it is necessary to specify the length of beach impaired.

¹³ Haile, et al., 1996, Santa Monica Bay Epidemiological Study, Santa Monica Bay Restoration Project. Taggart, Heal the Bay, 2002, Storm Drain Plume Dispersion Study, unpublished data.

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Dissenting Opinion Submitted by Heal the Bay and Discussion by State Water Resources Control Board, Office of Statewide Initiatives staff (OSI staff)

Introduction (OSI staff position):

Heal the Bay, a southern California environmental group, has submitted dissenting positions on many of the BWQW's recommendations to bring about a consistent approach to 303(d) listing of marine water bodies for bacteriological impairments. Most the positions expressed by Heal the Bay below were never presented to the BWQW at any of the meetings that Heal the Bay attended. Consequently, Heal the Bay's positions were never discussed by all participants of the subcommittee.

Heal the Bay's dissenting positions were noted in the guidance document as they were known at the time the final draft was prepared. Most of the views presented here are noted in the guidance document itself. Heal the Bay's specific objections presented below are consistent with the notations in the document but are expanded upon here.

All participants involved in the discussion of 303(d) listing criteria participated in what was supposed to be a consensus building process. With the exception of Heal the Bay, discussions and positions were presented by all participants during the meeting times in an effort to reach a consensus on recommendations that made sense and would bring a consistent approach to the process of listing of impaired water bodies per 303(d) of the Clean Water Act. Furthermore, the subcommittee worked within the framework of existing monitoring and regulatory programs and the scope of authority of various agencies involved somehow in this process. Heal the Bay's dissenting comments break with this consensus framework in places and advocate regulatory changes that were beyond the scope of the subcommittee's objectives. (See summary)

Each of the dissenting positions submitted by Heal the Bay are followed by comments prepared by the OSI staff.

Recommendation 1: Listing should be based on the frequency of water quality standards exceedances.

Dissenting Opinion – Heal the Bay: We agree with the BWQWG's recommendation that the listing process should be based on analysis of monitoring data. We disagree with the BWQWG's recommendation that the availability of enforcement and the appropriateness of a TMDL be factors considered in the listing process for several reasons. First, anytime AB-411 bacteriological standards are exceeded, enforcement actions can be taken by the RWQCBs under authority provided in the Clean Water Act and the Porter-Cologne Act. Thus, this recommendation, if broadly applied, could lead to no beaches being listed due to exceedances of the AB-411 standards because there is always some type of enforcement action available. Second, the Clean Water Act

and its implementing regulations do not allow for the consideration of these factors in the listing process. Moreover, TMDLs can be developed and implemented in a variety of different ways. Thus, even if the Clean Water Act did allow for consideration of “the appropriateness of a TMDL”, it would be difficult for RWQCB staff to evaluate TMDL appropriateness during the listing process. Finally, the Clean Water Act does not require that a TMDL be the “most appropriate means” of mitigating the impairment for a waterbody to be identified as impaired. In summary, we believe the BWQWG’s recommendation to consider availability of enforcement actions and to determine that a TMDL is the most appropriate method of mitigating beach pollution runs contrary to federal and state law and will hinder RWQCBs’ ability to accurately identify beaches that are too polluted to support recreational uses.

OSI staff comment:

Recommendation 1 is the cornerstone of the BWQW’s entire effort to present to the SWRCB a consistent method for determining what is a bacteriological impaired water body and requires a TMDL to be drafted by RWQCBs to address the impairment.

SWRCB and RWQCB staff participating in the discussions informed the subcommittee that:

1. 303(d) listing was for the purpose of causing a TMDL to be drafted to correct a water quality impairment.
2. A water body should not or need not be 303(d) listed if other mechanisms besides the drafting of a TMDL are available to the RWQCBs, e.g., enforcement actions.
3. There was no requirement in federal or state law specifically requiring beach closures to be used a listing criteria.

The guidance developed and recommended here was thoroughly discussed in the first meeting of the subcommittee and at many subsequent meetings. Although a Heal the Bay representative in attendance when this discussion took place may have objected to beach closures not being a criterion for listing, he never objected to the information presented by SWRCB and RWQCB staff as being contrary to federal or state law. Furthermore, no objection was made regarding the principle developed that TMDLs were not needed when enforcement actions by RWQCBs were available.

The specific discussion regarding enforcement actions by RWQCBs was in the context of not listing impairments that could be addressed by an enforcement action, and it was specifically intended to address the use of beach closures as a listing criterion. At the time, some RWQCBs were using beach closures as a criterion while others were not. One RWQCB combined closures with postings.

At the time, the use of the frequency of postings as a criterion was being considered since the number of postings had been used by RWQCBs and the

question ensued as to how the frequency of beach closures could be used as a listing criterion. Since almost all beach closures are a result of sewage spills, state and regional board staffs informed the subcommittee that this was not an appropriate criterion for listing since sewage spills could be addressed by enforcement actions.

In the above context, it needs to be remembered that almost all beach closures occur before monitoring begins and the results of analyses are known. Almost all sewage spills are reported in terms of the number of gallons discharged and how much of the spill may have reached receiving waters. This is almost always a guess by the first responders at the site! Environmental health agencies, when informed of the spill, react in the most public health protective mode, i.e., they assume the reporting agency is giving a worst case scenario and the guidelines for closure distances have been developed in a very public health protective fashion. Many closures occur in which the sewage spill has little or no impact on the marine waters and does not cause any violation of water quality objectives/standards. In fact, it is sometimes discovered that the spill did not reach receiving waters. In keeping with the overall philosophy of the recommendations, it is inappropriate to use beach closures as is the use of beach postings as a listing criterion since monitoring data and standard exceedances are not associated with the initiation of this action. Monitoring data becomes available after almost all reported spills that result in beach closures. Consequently, the monitoring data is available and can be used by RWQCBs if appropriate for listing purposes. On the basis of the above, the subcommittee believed it was making an appropriate recommendation that basically called for the number of beach closures not to be used as a criterion for listing.

If the question regarding the requirements of federal and state law is valid, then this must be settled in an appropriate manner. It was certainly beyond the scope of the subcommittee's expertise to decide legal questions. If it is determined that beach closure data due to sewage spills must be a criterion for 303(d) listing, then the issue should be revisited either by the subcommittee or another appropriate body. Additionally, a mechanism for their use must be devised. None currently exists and Heal the Bay did not suggest one.

Recommendation 2: The threshold frequency for listing should be the number of water quality standard exceedances in a watershed that is minimally impacted by human activities.

Dissenting Opinion – Heal the Bay: We disagree with the recommendation to set the allowable exceedances at 10% a year or 4% during the AB411 period to account for natural sources of bacteria when a reference beach is not available. These exceedance rates are somewhat arbitrary and not supported by existing data.

The 10% threshold originates from past recommendations from the U.S. EPA for fecal coliform bacteria¹. However, the EPA's more recent May 2002 draft Implementation Guidance of Ambient Water Quality Criteria for Bacteria does not recommend an allowable exceedance rate of 10%. Moreover, analysis conducted for the bacteria TMDLs for Santa Monica Bay does not support a 10% exceedance rate². Analysis of 5 years of routine monitoring data at 57 beaches showed that 32 beaches had an average exceedance rate of less than 10% per year. Many of these watersheds had exceedance rates of less than 3%, much lower than the arbitrary 10% recommended by the BWQWG.

We also disagree with setting the allowable rate of exceedance to 4% during dry weather, based on the results of the Bight '98 study. This application of the Bight '98 results may be inappropriate because this study was a short snap-shot (5 weeks) of water quality that may not be representative of dry weather conditions, and because it is unknown whether the sample locations in this study were impacted by sources of fecal bacteria other than representative natural sources. Analysis completed for the bacteria TMDLs for Santa Monica Bay does not support 4%. This analysis showed 35 of the 57 beaches in Santa Monica Bay had average annual exceedance rates during dry weather of less than 4%.

In summary, the BWQWG recommendations to account for natural sources of bacteria will result in too many allowable exceedances and, thus, an under protection of public health. Using a reference beach methodology to account for natural bacteria sources is scientifically defensible, and based on our review of the existing monitoring programs in the State, we believe there are reference beach locations suitable for most beaches that are routinely monitored.

OSI staff comment: Heal the Bay ignores the recommendation as stated; namely, the RWQCB should establish a "reference" beach in its regions as the criterion for the number of exceedances allowed and instead argues about what was at the time, and probably still is, the only recourse if a "reference" beach was not established.

If the numbers are not 10% and 4% what should they be? Who should establish the number and what should be the basis for that number be. All they say is that these numbers are not correct. What are the correct numbers and in the absence of a reference beach, how should the numbers be determined. Heal the Bay offers no solution to this problem.

The representative from the Los Angeles RWQCB and a representative of SCCWRP who conducted studies regarding the reference beach in Santa Monica Bay supported the numbers and stated that data used to establish a "reference" beach in Santa Monica Bay supported 10% and 4%.

¹ U.S. EPA, 1997, Guidelines for Preparation of the Comprehensive State Water Quality Assessments and Electronic Updates.

² Alamillo, Heal the Bay, 2002 unpublished data.

Heal the Bay supports their argument on the basis of their studies analyses of bacteriological data for Santa Monica Bay. They do not share the specifics regarding these findings other than generalizations that support their opinion, and their study remains unpublished. There is no peer review of their study and how can a claim be made to its validity.

At no time during the subcommittee's discussions did a Heal the Bay representative offer an alternative to the BWQW's recommendation, nor do they offer one in their dissent.

Recommendation 6: "Rain Advisories" should be considered in the same manner as precautionary postings.

Dissenting Opinion – Heal the Bay: Rain advisories should be used in the listing process for beaches that are not routinely monitored during wet weather or during the non-AB411 season. Extensive data demonstrates that nearly all AB-411 beaches have poor water quality during wet weather. At beaches not monitored during the wet season, the local health officer is relying on rain advisories in lieu of monitoring data to protect public health and, therefore, the only information available to the public about the quality of water at these beaches is the rain advisories. Thus, the rain advisories become a de facto measure of the loss of beneficial use at these beaches. RWQCBs that do not use rain advisories in the listing process for beaches that are not routinely monitored during wet weather or during the non-AB411 season are unintentionally providing an incentive for monitoring agencies to suspend monitoring during these time periods, and instead rely on rain advisories, thus avoiding 303(d) listing of beaches that are polluted during the wet season.

OSI staff comment: The following statement by Heal the Bay is only partially true at best. It's really a misstatement of fact in most cases. *"At beaches not monitored during the wet season, the local health officer is relying on rain advisories in lieu of monitoring data to protect public health and, therefore, the only information available to the public about the quality of water at these beaches is the rain advisories."*

Rain advisories are issued by counties that monitor year round as well as those which don't. The rain advisory mechanism was developed in Los Angeles and Orange Counties as a substitute for "posting" all the beaches within their jurisdiction during rainstorms that occur during the non-AB411 period, especially when no monitoring data exists. To post an entire county shoreline is a very expensive and time-consuming practice and a practice the state was not going to fund.

As the discussion with the recommendation states, no authority, guidance or protocols exist for the issuance by the local environmental health agency of "Rain

advisories.” While it is true that storm water runoff into marine waters usually elevates bacterial levels there is no assurance that is the case with the issuance of each advisory. Evidence³ exists that there is a rainfall threshold that must be exceeded before elevated bacterial levels are observed. This evidence also indicates that these thresholds are probably watershed specific. While some environmental health agencies issue rain advisories on the basis of rainfall amounts, these arbitrary amounts are not based on specific thresholds by watersheds or even an adequate dataset. As a result, no true scientific determination has been made as to when rain advisories should be issued, and no determination has been made as to the frequency at which rain advisories correlate with exceeded standards.

A footnote with the recommendation duly notes Heal the Bays objection to the recommendation. Although Heal the Bay had expressed its dissent to the recommendation as written they did not submit any mechanism that could be utilized by RWQCBs for using rain advisories as a criterion for listing. Similarly, Heal the Bay did not submit any recommendation again with their written dissent for their use. They want them used but suggest no scientifically based mechanism for their use.

Finally, we disagree with Heal the Bay’s assertion that RWQCBs are creating an incentive for monitoring agencies to suspend monitoring during wet weather. Agencies monitoring as a result of NPDES permits could not suspend monitoring during wet-weather and RWQCBs generally exert no influence over environmental health agencies as to how or when they monitor.

Recommendation 7: Establish monitoring stations at defined distances from storm drain discharges in order to enhance data consistency.

Dissenting Opinion – Heal the Bay: Routine monitoring stations should be located directly in front of the drain for several reasons. First, monitoring 25 yards from the drain effectively allows a mixing zone of the discharge along 25 yards of the beach. Thus, along 25 yards of beach, bacteria densities could exceed the health standards and the beneficial use of recreational swimming is lost. Second, the loss of beneficial uses along 25 yards of the beach must be assumed even when the sampling data collected at the 25 yard monitoring station indicates levels of bacteria are below the bacteriological standards because the amount of dilution along the shoreline is highly variable and likely site-specific (depending on beach topography and ocean conditions)⁴. Third, the direction of the bacteria plume emanating from the drain is dependent on the longshore current in the surf zone, which at many beaches can be upcoast or downcoast from the drain depending on swell direction. At these drains, monitoring would

³ Southern California Coastal Waters Research Project, study of bacterial levels and rainfall in Santa Monica Bay.

⁴ Taggart, Heal the Bay, Storm Drain Plume Dispersion Study, unpublished data.

have to be conducted at both 25 meters upcoast and downcoast to be protective of public health. Currently, few monitoring agencies take into account longshore current direction when monitoring beaches, thus monitoring results from stations located 25 yards from the discharge may be misrepresenting the true risk to swimmers.

OSI staff comment: Heal the Bay is not submitting a dissenting opinion to this recommendation. In fact, it would appear Heal the Bay whole heartily supports the recommendation. The recommendation clearly states that monitoring stations are not established at a consistent distance from storm drain discharges.

Heal the Bay takes the position that the monitoring station should be in front of the discharge. The position advocated may be valid, but they never discussed this position with the subcommittee during the 303(d) deliberations and did not advocate this position when the Monitoring and Reporting Subcommittee considered appropriate monitoring locations and recommended 25 yards from the storm drain discharge.

Recommendation 8: Differences in the results of laboratory analyses utilizing different laboratory methods are insignificant.

Dissenting Opinion – Heal the Bay: It should be assumed that *E. coli* comprises 80% of fecal coliform when analyzing monitoring data that includes *E. coli* measured by the defined substrate methodology (Idexx). Defined substrate methodology cannot measure fecal coliform. Instead, *E. coli* is measured as a surrogate for fecal coliform. Currently, the quantitative relationship between *E. coli* and fecal coliform is unknown. The BWQWG recommendation infers a 1:1 ratio of *E. coli* to fecal coliform. Since it has been established that *E. coli* is a subset of fecal coliform, this recommendation will result in an underestimate of fecal bacteria densities. We recommend using a conservative assumption that *E. coli* represents 80% of the fecal bacteria in a sample in the interest of public health protection.

OSI staff comment: Heal the Bay admits the quantitative relationship between *E. coli* and fecal coliform bacteria is unknown. They completely ignore the findings of the SCCWRP in the Bight 98 study, and stated in the recommendation that demonstrated there was no significant difference between the bacterial counts given by the various laboratory methods. Additionally, the public health laboratories using Idexx were required to submit a certification to the State Department of Health Services stating that they had compared sample results between the method they were formally using and Idexx and found the results to be statistically comparable before local environmental health agencies were allowed to use the method. It is probably safe to assume that the ratio of *E. coli* to fecal coliform bacterial levels varies depending upon the source of the bacteria.

Heal the Bay offers no scientific justification for their position that 80% is the proper number.

Recommendation 9: In the absence of site-specific data, the length of beach to be listed should be 50 yards on each side of the storm drain discharge.

Dissenting Opinion – Heal the Bay: The available data on the distance of the beach impacted with bacteria levels over the health standards adjacent to a storm drain does not support a recommendation of listing 50 yards on either side of the drain⁵. The available data indicates that the distance impacted by densities of bacteria above the health standards is site-specific, but can be well over 400 meters. We recommend that the RWQCB use site-specific data if it is necessary to specify the length of beach impaired.

OSI staff comment: The recommendation whole-heartily supports the position that the distance of impairment should be determined by site-specific data. Heal the Bay does not put forth a recommendation for an appropriate distance when site-specific data is not available.

EPILOGUE State Board staff

Heal the Bay is being expressing an counter opinion to what was an honest and time consuming effort to bring a coherent and consistent policy into being. Nothing they say here promotes a consistent or coherent policy to the 303(d) listing process. And even if the subcommittee agreed with all of their opinions, there are, in many cases no mechanisms to legally or economically implement them. In this context, the following summary is offered:

Recommendation 1: First and foremost, this is a legal question. If it is decided at some future date that the number beach closures must be considered in the 303(d) process then the SWRCB should come back to the subcommittee for an implementation recommendation.

Recommendation 2: Heal the Bay does not disagree with the fundamental recommendation; namely, a reference beach should be developed in each region to determine the correct number of exceedances to be allowed. If no reference beach is available, what should the numbers be? Heal the Bay does not offer a solution to this problem.

Recommendation 6: “Rain Advisories” have no basis in law or regulation. The SWRCB and RWQCBs have no jurisdiction over their issuance or use. Contrary to Heal the Bay’s assertion, this practice was developed as a mechanism to warn the public in lieu of posting great distances of beaches without appropriate water

⁵ Haile, et al., 1996, Santa Monica Bay Epidemiological Study, Santa Monica Bay Restoration Project. Taggart, Heal the Bay, 2002, Storm Drain Plume Dispersion Study, unpublished data.

quality information and the expenditure of funds that were not available to local jurisdictions. DHS clearly stated that they did not recognize the practice and were not going to compensate counties for the practice. There is no practical, scientific or legal basis for their use in the listing process.

Recommendation 7: Heal the Bay is not really dissenting from the recommendation but is supporting the recommendation. They are recommending a set place for monitoring stations to be established. The problem is that the SWRCB and RWQCBs do not have the legal authority to implement the recommendation at least when it comes to environmental health agencies' monitoring and regulatory programs. If this is such a good idea, why doesn't the RWQCBs establish this recommendation for monitoring stations in NPDES permits, or the SWRCB establish a policy for this.

Recommendation 8: Heal the Bay's recommendation has no greater validity than the subcommittee's recommendation which is supported by statistical analysis. SWRCB and RWQCBs do impose laboratory methodologies in NPDES permits. They have no authority to impose Heal the Bay's recommendation regarding the use of the defined substrate methodology (Idexx). Heal the Bay should make their case with the State Department of Health Services and the various certified public health laboratories if they believe it is valid. This is the wrong place for this dissent unless they are advocating that agencies using defined substrate methodology should not be considered in the listing criterion. That's not what they appear to be doing however!

Recommendation 9: There is really no dissent here. The recommendation supports the use of all site-specific data that is available. Is Heal the Bay really advocating that the distance should be 400 yards on each side of the drain discharge? They have no real justification for this. At least, the subcommittee developed a rational for its recommendation. Heal the Bay is not providing an alternative rational here.