



Preview of the 2nd Nutrient Watershed Permit

BACWA ANNUAL MEETING

JANUARY 11, 2019

Agenda

- ▶ Schedule
- ▶ Preview of the Administrative Draft of the 2nd Nutrient Watershed Permit
- ▶ Membership Workshop
- ▶ Next Steps

Schedule

- ▶ Administrative Draft (AD) released January 2, 2019
- ▶ BACWA Workshop January 17, 2019, comments to Water Board (WB)
- ▶ WB may provide a 2nd AD in February
- ▶ Tentative Order scheduled for March 2019
- ▶ Comments received and responses made in April 2019
- ▶ Public hearing May 8, 2019
- ▶ Adoption June 12, 2019

Major Provisions Anticipated and Included

- ▶ Continuation of individual plant monitoring and reporting
- ▶ Group Annual Reporting
- ▶ Funding for the Science Program (\$2.2M/yr)
- ▶ Regional Study on non-grey scape multi-benefit approaches to nutrient reduction
- ▶ Recognition of plants undertaking early actions to reduce nutrients

Key Details of Interest

- ▶ BACWA Survey Status and Use
- ▶ Early Actions
- ▶ Robust Planning
- ▶ Load Targets
- ▶ Averaging Periods
- ▶ Monitoring and Reporting
- ▶ Regional Study
- ▶ Trading

BACWA Surveys - Status and Uses

- ▶ In discussion with the Water Board leading up to the preparation of the 2nd Nutrient Watershed Permit, it became clear that more concrete information of what BACWA members were planning on implementing early actions to reduce nutrients and status of POTW's regulatory planning would be helpful in preparing the Administrative Draft
- ▶ BACWA quickly prepared an initial survey that was sent to all Watershed Permit agencies in Nov.

Initial BACWA Survey

- ▶ Received 27 plants responds to the initial survey
 - ▶ Growth projections provided
 - ▶ Status of planning/design/construction efforts
- ▶ WB desired additional information
 - ▶ details on early actions,
 - ▶ significant anticipated impacts on future nutrient loads
- ▶ 2nd Survey Prepared and Reviewed with WB

2nd BACWA Survey

- ▶ 2nd survey sent out December 15th, due January 15th
- ▶ Consisted of two templates to complete
 - ▶ Detailed information on any early actions that will be completed by 2024
 - ▶ Significant increases in loads by 2024 due to other than population growth (e.g. organics diversions from landfills)
- ▶ BACWA will use the detailed information on early actions to complete Table F-6 in the Fact Sheet
- ▶ BACWA will provide a summary to the WB of BACWA member's planning activities as well as any significant increases in loads anticipated between 2019 and 2024
 - ▶ This information will help support any future adjustments in load targets as well as provide support for a future compliance schedule
- ▶ **IMPORTANT: GET YOUR SURVEYS SUBMITTED**

Early Actions

- ▶ The Permit Fact Sheet contains a blank table summarizing agencies committing to early actions
- ▶ BACWA will complete table once survey information is submitted
- ▶ Approach for early actors is to place them at the bottom of the priority list for undertaking any management actions resulting from continue monitoring and modeling to determine if reductions are required beyond load caps imposed for subembayments (i.e. others must meet limits first)
- ▶ The threshold for qualifying as an early actor is “significantly reduce nutrient loads during this Order term”
- ▶ BACWA Initial Survey showed 4-5 plants are committing to undertake early action

Robust Planning

- ▶ Plants undertaking robust planning will be viewed favorably by WB (i.e. compliance schedules if needed to meet any future limits)
- ▶ BACWA will provide the WB a summary of the status of its member's planning efforts, based on survey information
- ▶ Going forward, need to keep the WB informed as to what you are planning and when

Load Targets

- ▶ Load targets included in 2nd Watershed Permit in 2019
- ▶ These are not limits
- ▶ Concept: WB wants to encourage POTWs to begin planning for how they will eventually reduce nutrients if the science supports the need for limits. The first imposition of limits would be load caps in the 3rd Watershed Permit in 2024
- ▶ Load Targets allow POTWs to compare their current loads with a potential future load cap
- ▶ Load targets are calculated by looking at current performance (Baseline) and adding a percent increase (Buffer) to account for growth to 2024

Load Targets – Baseline

- ▶ Baseline: 95th percent upper confidence level of the mean (2014-18)
- ▶ BACWA is reviewing the data used to calculate the Baseline
- ▶ The WB has indicated a willingness to make adjustments in the Baseline for plants with good rationale (e.g. FSSD baseline years included reduced loads during 2014-18 due to pilot plant operation now terminated)

Load Targets - Growth Projections and Buffer

- ▶ Table F-5 in Administrative Draft provides each plant's Baseline and Load Target
- ▶ Load Target is calculated by adding a 15% Buffer to the Baseline
 - ▶ Allows for growth cushion beyond the general average projected by POTWs
 - ▶ Average from initial survey of roughly 1.5% growth per year over the 5 year term of the 2nd Watershed Permit or 7.73% growth in 5 years
 - ▶ Ultimate load caps on a subembayment basis will dampen effect of a single plant's variations in load
- ▶ WB's intent was to not have POTWs exceeding their Load Target by 2024
- ▶ BACWA is reviewing the calculation of the Load Targets to see if, as calculated, they present problems for any individual POTW

Load Targets – Unanticipated Increases (2019-2024)

- ▶ Some plants may have unanticipated increases beyond their control (i.e. large reductions in recycling due to wet weather)
- ▶ WB wants to avoid dis-incentivizing plant's effort to comply with State goals (e.g. organics diversions)
- ▶ 2nd survey is opportunity for POTWs to Identifying now any known or anticipated large increase in nutrient loads other than from growth
- ▶ BACWA will provide this information to the WB
- ▶ The Fact Sheet states that the WB may adjust Load Targets if necessary (e.g. account for decreased recycling demand, increased biosolids management, or expanded waste-to-energy programs)

Nutrient Load Increase Estimates

“No” means no estimate is available. For agencies with estimates, increase in nutrient loads is presented where available, otherwise growth was used.

Name of Agency	Annual Growth Projection
Central Contra Costa Sanitary District	0.74-1.5%
Central Marin Sanitation Agency	0%
City of American Canyon	No
City of Benicia - Wastewater Treatment Plant	No
City of Burlingame Waste Water Treatment Facility	No
City of Hayward WPCF	2.2%
City of Livermore	2%
City of Palo Alto	1.0-1.5%
City of Petaluma	2.8%
City of San Leandro	1%
City of San Mateo	1%
City of Sunnyvale	1.5%
Delta Diablo	1.0-1.5%
Dublin San Ramon Services District	1.3%
East Bay Municipal Utility District	No
Fairfield-Suisun Sewer District	1.1%
Las Gallinas Valley Sanitary District	No
Novato Sanitary District	3-4%
Oro Loma Sanitary District	1%
Pinole/Hercules WPCP	No
Rodeo Sanitary District	No
San Jose-Santa Clara Regional Wastewater Facility	1.3%
Sewerage Agency of Southern Marin	0.1%
SFPUC	1%
Silicon Valley Clean Water (SVCW)	1%
Union Sanitary District	2.5-3%
WCWD	No

Averaging Periods

- ▶ Averaging periods for establishing limits (i.e. max day, annual, dry season, etc.) can have a profound effect on the cost of nutrient reductions with little environmental benefit
- ▶ Load Targets are based on dry season (i.e. May 1st – Sept 30th); eliminates many of the problems associated with nutrient reductions during cold weather and wet weather flows
- ▶ Seasonal dischargers (those prohibited from discharging during dry weather) do not have Load Targets; tend to be smaller dischargers with small loads)

Monitoring and Reporting

- ▶ The Load Targets are based on Dissolved Inorganic Nitrogen (DIN)
 - ▶ Eliminates the need for TKN testing in the effluent, expensive and somewhat dangerous test
- ▶ Other changes to Effluent Monitoring
 - ▶ Eliminated dissolved reactive phosphorus – an extra effort that did not provide meaningful value
 - ▶ Eliminated the calculation for total nitrogen,
- ▶ Added Influent monitoring (NH₃, TKN, NO₂, NO₃, TP, calc. DIN)
 - ▶ Influent monitoring provides valuable information to the POTW
 - ▶ Documents unusual increase in loads
 - ▶ Provides data on plants effectiveness in removing nutrients
- ▶ Smaller plants not required to conduct influent monitoring (> 1 mgd)
- ▶ Continuation of individual plant as well as Group Annual reporting

Administrative Draft - Regional Study

- ▶ Requires completion of a report on nutrient discharge reduction by natural systems
- ▶ Similar approach as used for the Optimization/Upgrade Study required by the 1st Watershed Permit
 - ▶ Scoping Plan
 - ▶ Evaluation Plan and Implementation
 - ▶ Status reports
 - ▶ Final Report
- ▶ Fact Sheet
 - ▶ Discusses the need and rationale for a multi-benefit approach to reducing nutrients through nature based systems
 - ▶ States that BACWA expressed interest in funding but silent on amount

Trading

- ▶ WB supports trading as a concept and mentions in the Fact Sheet the consideration of a nutrient credit trading system between discharges within subembayments.
- ▶ Early Actors may see an opportunity to recoup some upfront costs
- ▶ Difficult to develop a trading program in advance of more science that predicts the impacts of both near field and far filed loads in the most at risk subembayments
- ▶ When the timing is right a trading program may result in the lowest overall costs if nutrient reductions are needed
- ▶ High likelihood that larger plants would drive the trading concept due to their inherent economies of scale
- ▶ BACWA may want to consider further exploring how a trading program would work during the term of the the 2nd WS Permit

BACWA Membership Workshop

- ▶ January 17 th at EBMUD plant
 - ▶ Maintenance Building Meeting Room
 - ▶ Parking available
 - ▶ **MUST BE REGISTERED TO ATTEND TO GET THROUGH SECURITY)**
- ▶ Complete review of the Administrative Draft with proposed track changes
- ▶ Interested in feedback from all BACWA members
- ▶ Goal is to achieve a consensus on comments that will be submitted to the Water Board

Next Steps

- ▶ Review 1st version of AD
- ▶ Hold workshop for BACWA members [Jan 17th](#)
- ▶ Compile follow-up survey results and provide to WB
- ▶ Provide feed back to the WB, Bi-monthly Joint Meeting on Feb 5th
- ▶ Review 2nd AD and TO; comment as needed and continue dialogue with WB
- ▶ Attend 2nd Watershed Permit adoption