Regulatory Hot Topics

Pardee Technical Seminar

October 25, 2018

Hot Topics October 2018

- Regulatory Issues Summary
- Recycled Water Policy
- Climate Change Vulnerability Assessment Survey
- BACWA Biosolids Survey
- CEC White Paper
- ELAP and TNI implementation
- Toxicity Provisions, and Toxicity Litigation Update

Regulatory Issues Summary

BACWA BAY AREA CLEAN WATER AGENCIES

KEY REGULATORY ISSUE SUMMARY
Updated October 22, 2018

Contents

Action items for member agencies are in **bold**

Background Highlights	Challenges and Recent Updates	Next Steps for BACWA	Links/Resources
NUTRIENTS IN SAN FRANCISCO BAY – SCIENCE			
• San Francisco Bay receives some of the highest nitrogen loads among estuaries worldwide, yet has not historically experienced the water quality problems typical of other nutrient-enriched estuaries. It is not known whether this level of nitrogen loading, which will continue to increase in proportion to human population increase, is sustainable over the long term. • Because of the complexity of the science behind nutrient impacts in the SF Bay, stakeholders in the region are participating in a steering committee to prioritize scientific studies and ensure that all science to be used for policy decisions is conducted under one umbrella.	• For FY19, BACWA is voluntarily contributing an additional $200k to the science program, in addition to the $800K required by the Watershed Permit. • Agencies are conducting effluent monitoring under the watershed permit. • Current scientific efforts are focused on expanding monitoring data, modeling, and work exploring the linkage between nutrients, dissolved oxygen, and harmful algal species. • Future studies will be focused on the science needed to inform the development of nutrient load caps for the third Nutrient Watershed Permit.	• Continue to participate in steering committee and planning subcommittee, and provide funding for scientific studies. • **Participate in the Nutrient Technical Workgroup, which is a venue to provide technical input to the process, and is open to the public, as well as the Stakeholder Advisory Group.** • Increase funding for the science per the expected requirements of the second Watershed Permit, effective July 1, 2019.	BACWA "Other Useful Nutrient Documents" Page: http://bacwa.org/nutrients/other-useful-nutrient-documents/ SFEI Nutrient Science Plan Documents: http://sfbaynutrients.sfei.org/books/reports-and-work-products

Recycled Water Policy

- The State Water Board plans to adopt Policy amendments in December 2019. BACWA commented on the May draft, and an update is expected in October. Key issues are:
  - Introduces goal to minimize wastewater discharge to ocean, bays, estuaries
  - Terminates Region 2 96-011 RW General Order
  - Adds to the procedural burdens in obtaining Wastewater Change Petitions
  - Removes requirement for priority pollutant monitoring
- BACWA and CASA have been meeting with State Water Board staff. They tentatively have extended the schedule for 96-011 termination, but will require the review of engineering reports from projects that began prior to 2001, prior to enrollment in the State General Order.

Climate Change Vulnerability Assessment

- In response to 2017 Climate Change Resolution, State Water Board is looking for information on vulnerability assessments
  - They want to inform both funding assistance and possible permit requirements
- Plan to send survey to all Wastewater Collection, Conveyance, and/or Treatment Agencies
- Summit Partners have participated in conference call with State Water Board staff to look for alternatives to get them the information they want

Climate Change Vulnerability Assessment

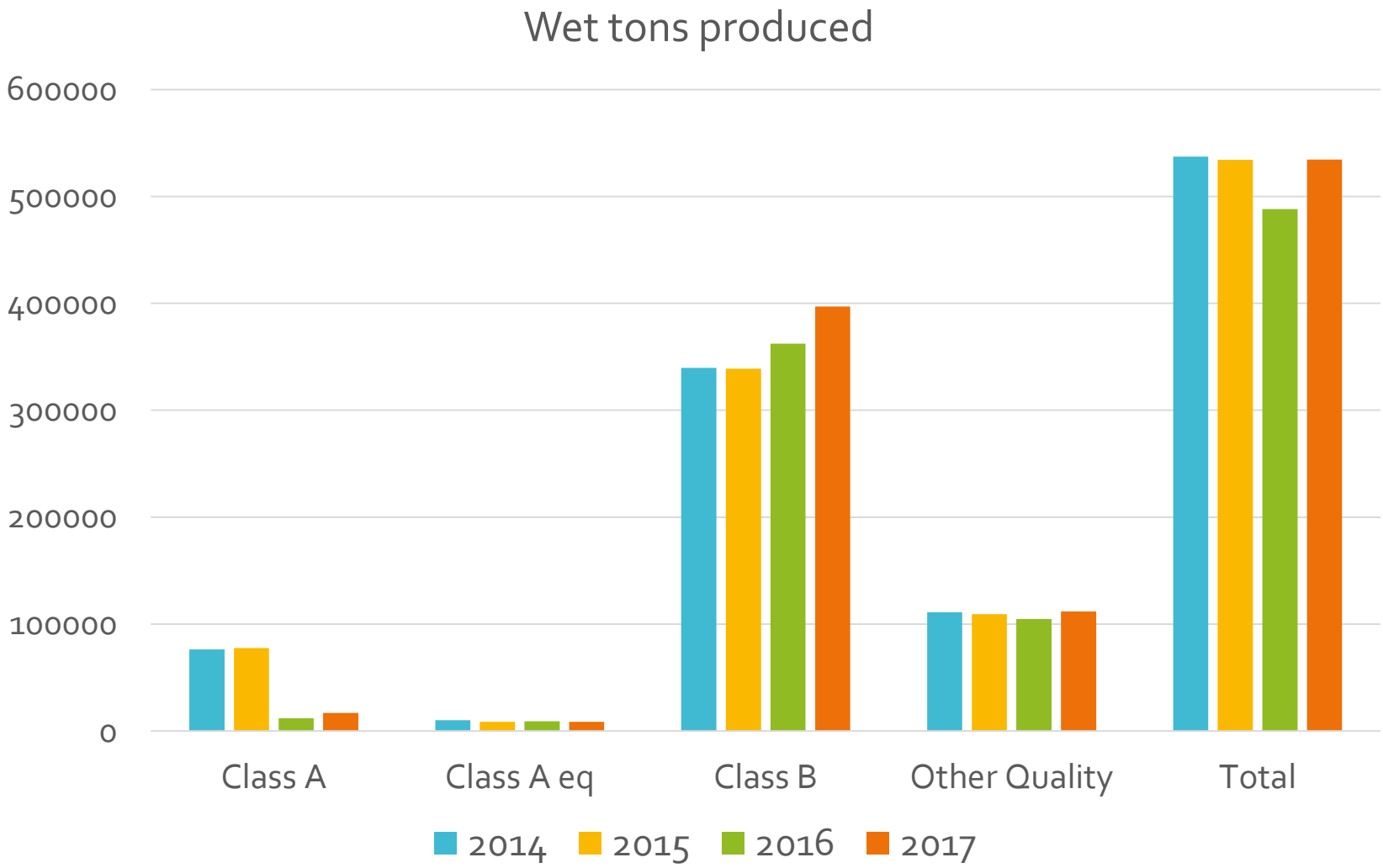
- Survey questions:
  - **STUDY** - Has your agency conducted a facility or infrastructure vulnerability assessment that includes climate change-related impacts or future extreme weather events? (follow-up on details)
  - **IMPLEMENTATION** - Select status of measures to increase resiliency (provides list of measures, with boxes for level of progress)
  - **FUNDING** - Can the measures to increase resilience to climate change impacts be accomplished within your existing budget or anticipated future budgets?

- Next steps – Summit Partners to meet with Water Board staff on November 14, and make recommendations to improve survey

2018 BACWA Biosolids Survey

- Survey performed every two years. The first one was in 2016.
- Survey covers the following:
  - Biosolids production volumes
  - Dewatering technologies employed
  - Biosolids management technologies and destinations
  - Biosolids management and transportation rates
  - Agency challenges
  - Agencies' long term biosolids management plans
  - Biosolids marketing efforts
  - Identify social media outlets for biosolids marketing

Bisolids Survey – Wet tons



Challenges to biosolids programs, ranked

2018	2016
Rising costs	Rising costs
Regulatory Restrictions on using Biosolids for Alternative Daily Cover	Regulatory Restrictions on using Biosolids for Alternative Daily Cover
Securing sustainable reuse options	Securing long term disposal options
Hauling distance	Hauling distance
Public perception/relations	Public perception/relations
Local restrictions on land application	Space for drying operations
Space for drying operations	Local restrictions on land application
Wet weather impeding drying operations	Wet weather impeding drying operations
Other	Other

Biosolids Survey – Future Plans

Question: How does your agency plan to respond to the likely limits on landfill reuse or disposal resulting from AB 1383?

- Only five agencies did not respond with alternatives under consideration
- In 2016, 18 of 31 respondents responded that they did not have a plan

2018 BACWA Biosolids Survey

Full report expected early 2019

CEC Study Participation

- The State Water Board is considering develop a Pilot CECs Monitoring Plan for the State.
- Region 2's CEC strategy focuses on monitoring concentrations of constituents with high occurrence and high potential toxicity. Much of what the State Water Board is considering for its Pilot Monitoring Plan is already being implemented in Region 2 through the RMP.
- The Regional Water Board has stated that voluntary participation in RMP CECs studies from **representative POTWs** is key to avoiding State mandates for CECs monitoring.

Representation Data

- Location by subembayment
- Source water – surface vs. groundwater, potential agricultural impacts
- Number of connections
- Population served
- Type of Treatment
  - Secondary
  - Advanced Secondary/Filtration
  - Disinfection type
- Average dry weather flow treated
- Discharge to Bay

Representation Data – Industrial Users

- Industrial users, number of the following:
  - Airports
  - Military Bases
  - Electroplating Facilities
  - Hospitals
  - Commercial Laundry
  - Pet Groomers
  - Refineries
  - Textile or leather production plants
  - Carpet manufacturers
  - Car wash centers and automobile repair service centers
  - Plant nurseries, cannabis growing operations (include size of operation and type e.g. hydroponics)

ELAP Update

- Agency managers have begun to give input to the Board on the impacts of transitioning to TNI on their agencies. The lab committee feels this is having more of an impact on Board Members than lab staff giving comments.
- There is some interest still in the BACWA lab committee about doing a Regional or Statewide assessment on costs, both for startup and ongoing.
- The dual track accreditation concept may have some traction with some Board members
- Next draft regulations expected this Fall

Toxicity Provisions

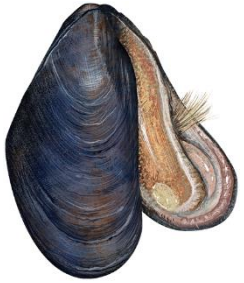
- Toxicity 100
- Status Quo in the SF Bay Region
- What's the problem with the TST?
- NEW DRAFT of Toxicity Provisions!
- Discussions with Regional Water Board
- Next Steps

Toxicity tests conducted by exposing organisms to effluent

Plants

Selenastrum capricornutum

Invertebrates

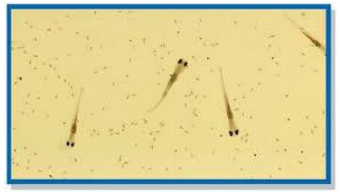


Mytilus edulis

Ceriodaphnia dubia

Arbacia Punctulata

Vertebrates



Pimphales Promelas

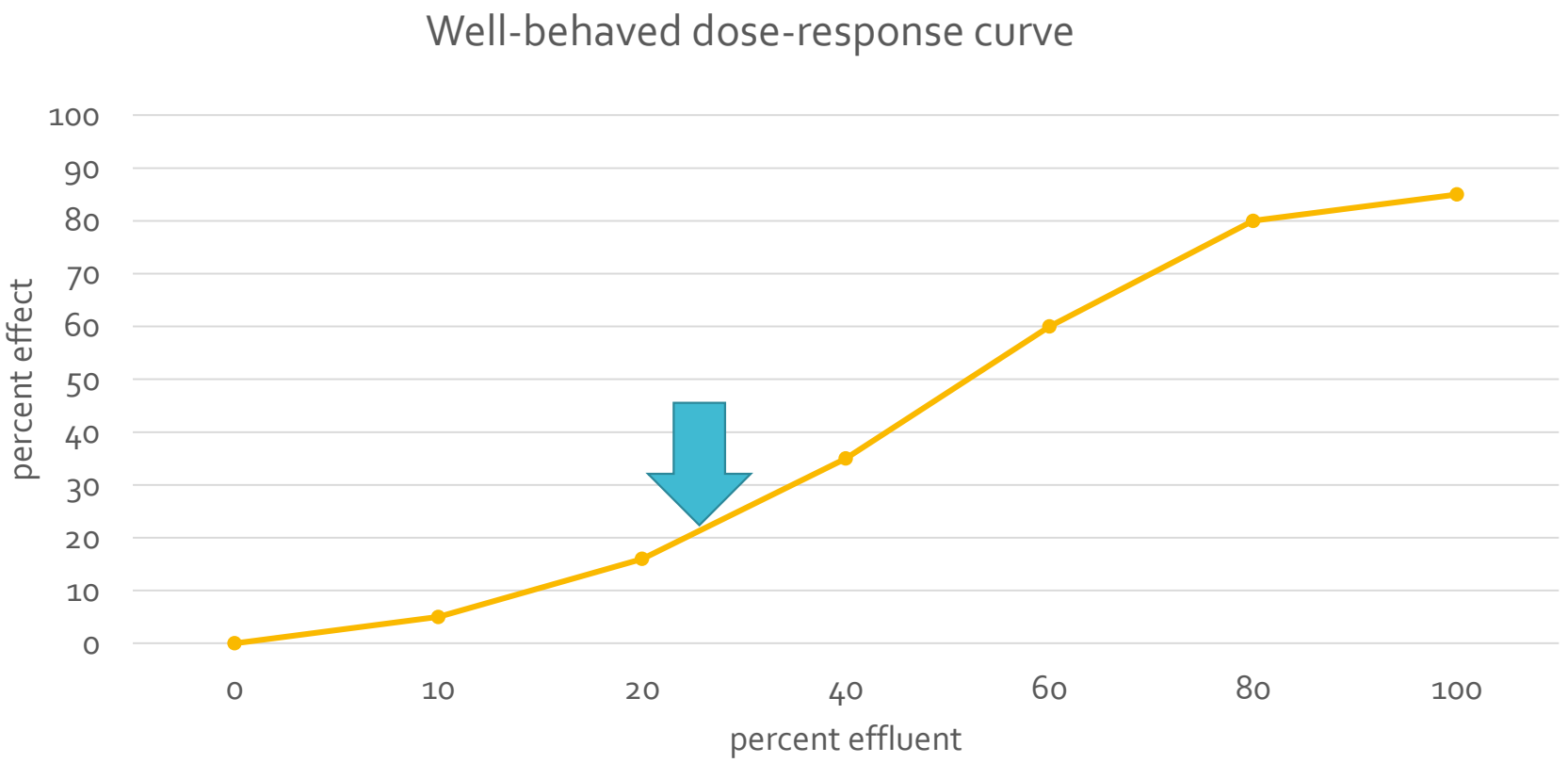
Orthorynchus mykiss

Endpoints: What response do we measure?

- Mortality (Acute toxicity)
- Non-lethal endpoints (Chronic Toxicity)
  - Growth
  - Normal embryonic development
  - Reproductive success
  - Other responses

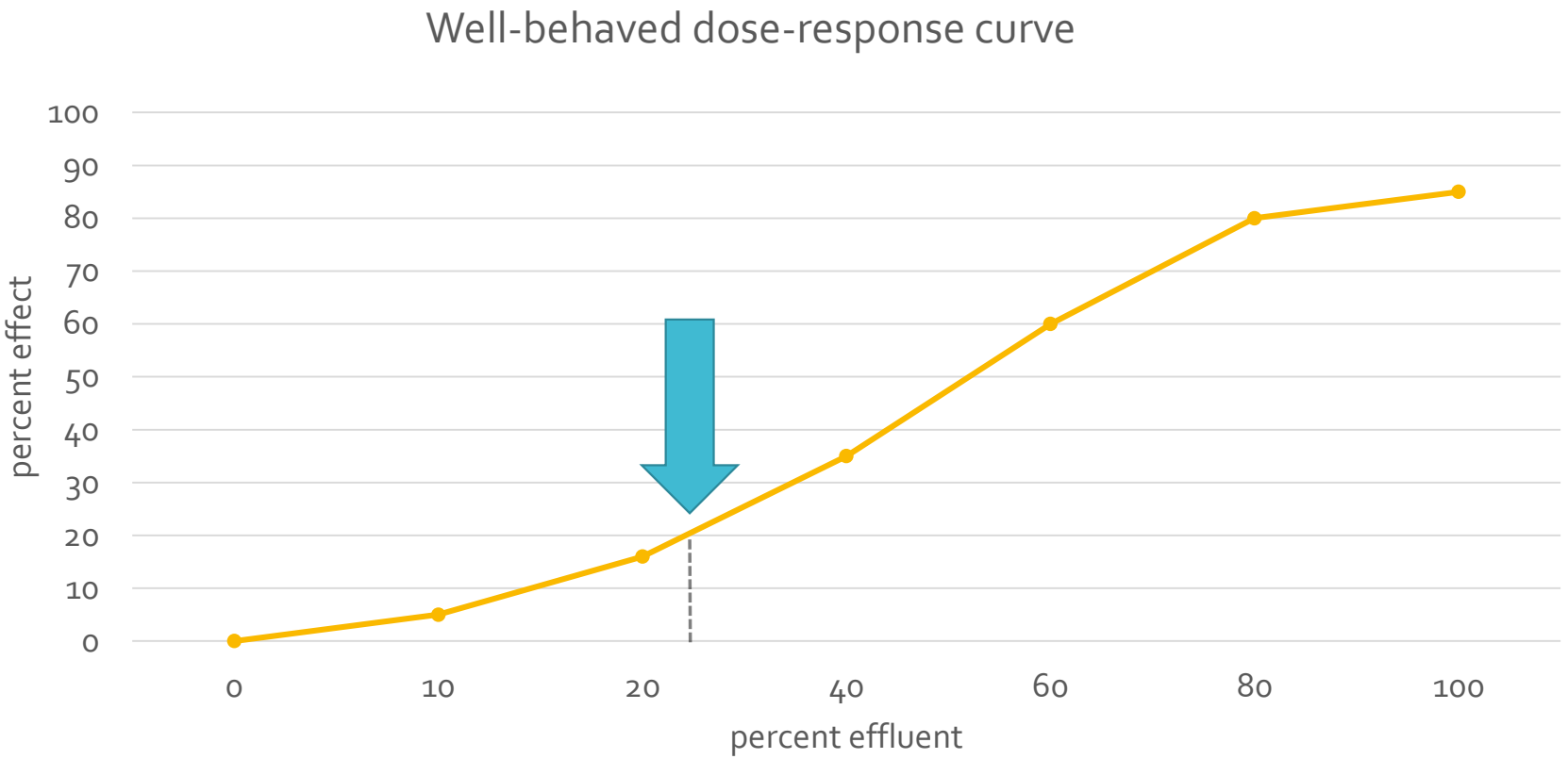
Toxicity 100

$$\% \text{ effect} = \frac{\text{control response} - \text{test response}}{\text{control response}}$$



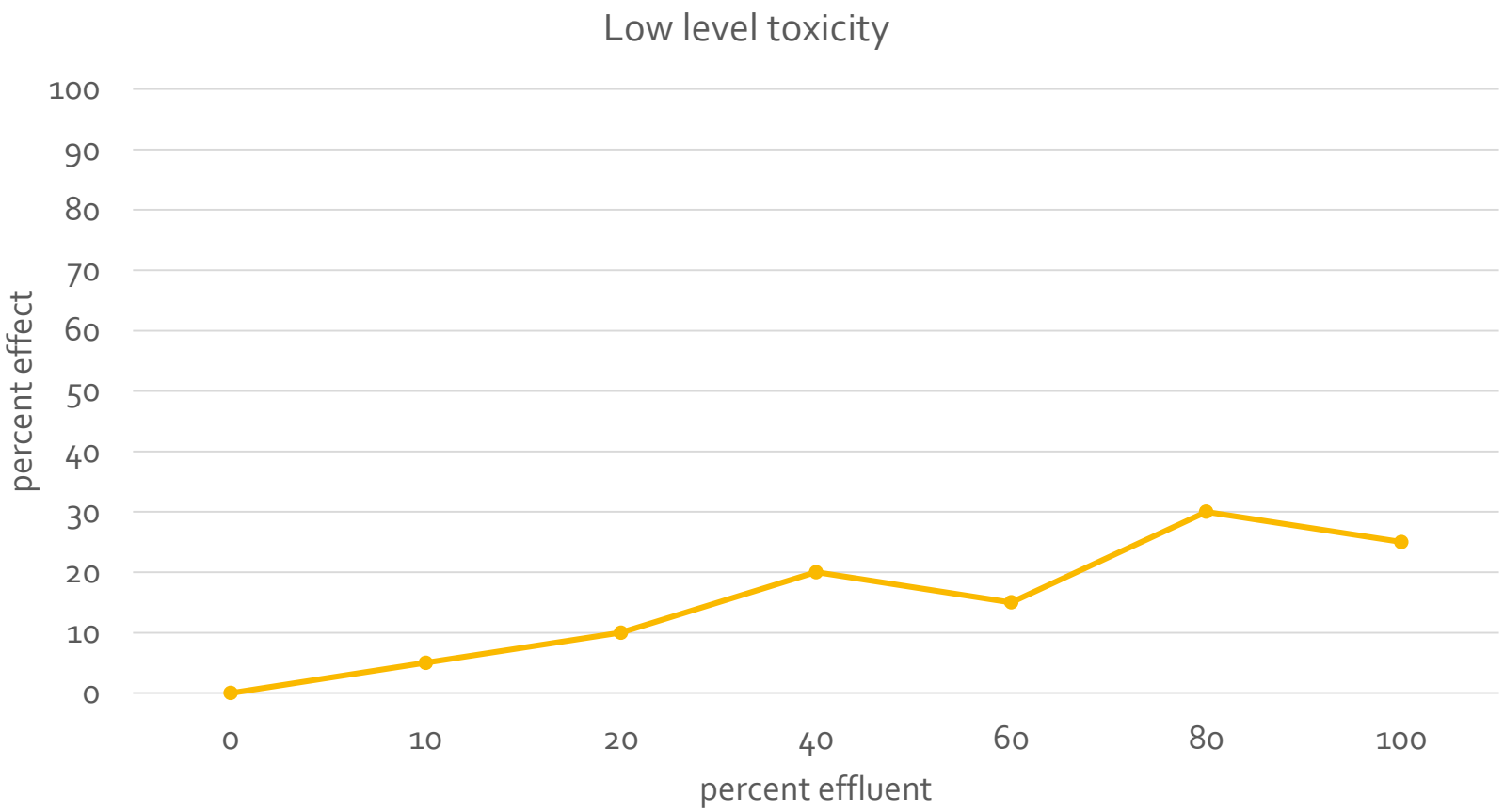
EC25: Effective Concentration 25% - the effluent concentration that shows a 25% effect in toxicity.

Toxicity 100



$$TU_c = \frac{100}{\%\ \text{effluent at EC25}} = 5$$

Many agencies observe persistent, low-level toxicity



Status quo in San Francisco Bay Region

- Historically, R2 POTWs were given chronic toxicity triggers, and acute toxicity limits
- If you observed toxicity, you accelerated monitoring, then embarked on a Toxicity Identification Evaluation/Toxicity Reduction Evaluation (TIE/TRE)
- Decades ago, TIEs would reveal toxicity caused by industrial chemicals, legacy pesticides
- Now toxicity is more likely to be low-level and difficult to identify
- BACWA agencies have spent >$1.3M on TRE between 2010 and 2016 with no results

Changes in the San Francisco Bay Region

- At EPA's urging, agencies with Reasonable Potential are now also being given chronic toxicity limits
  - Las Gallinas
  - Rodeo
  - Pacifica
- Members were concerned that the Regional Water Board is "making it up as they go along" with respect to RPAs and effluent limits
- No TST in Region 2 yet, unlike Southern California

What's different about the TST?

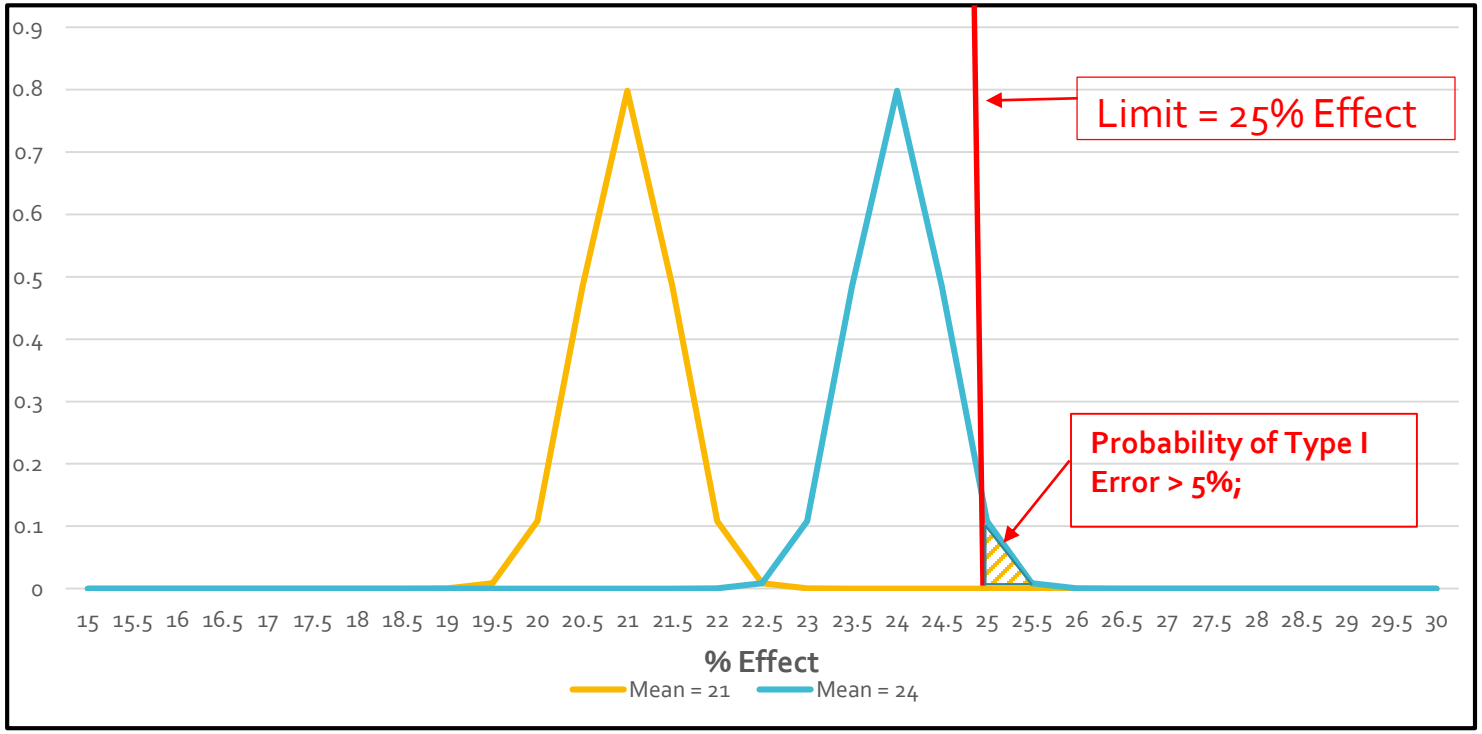
- SAME toxicity test method, DIFFERENT statistical evaluation
- TST is performed only at Instream Waste Concentration (IWC), not using dose-response curve
- TST give a "pass" or "fail", rather than a measure of toxicity like TUc
- Agencies can input historic toxicity data at IWC into TST calculator to see if they would have passed

How bad is the TST?

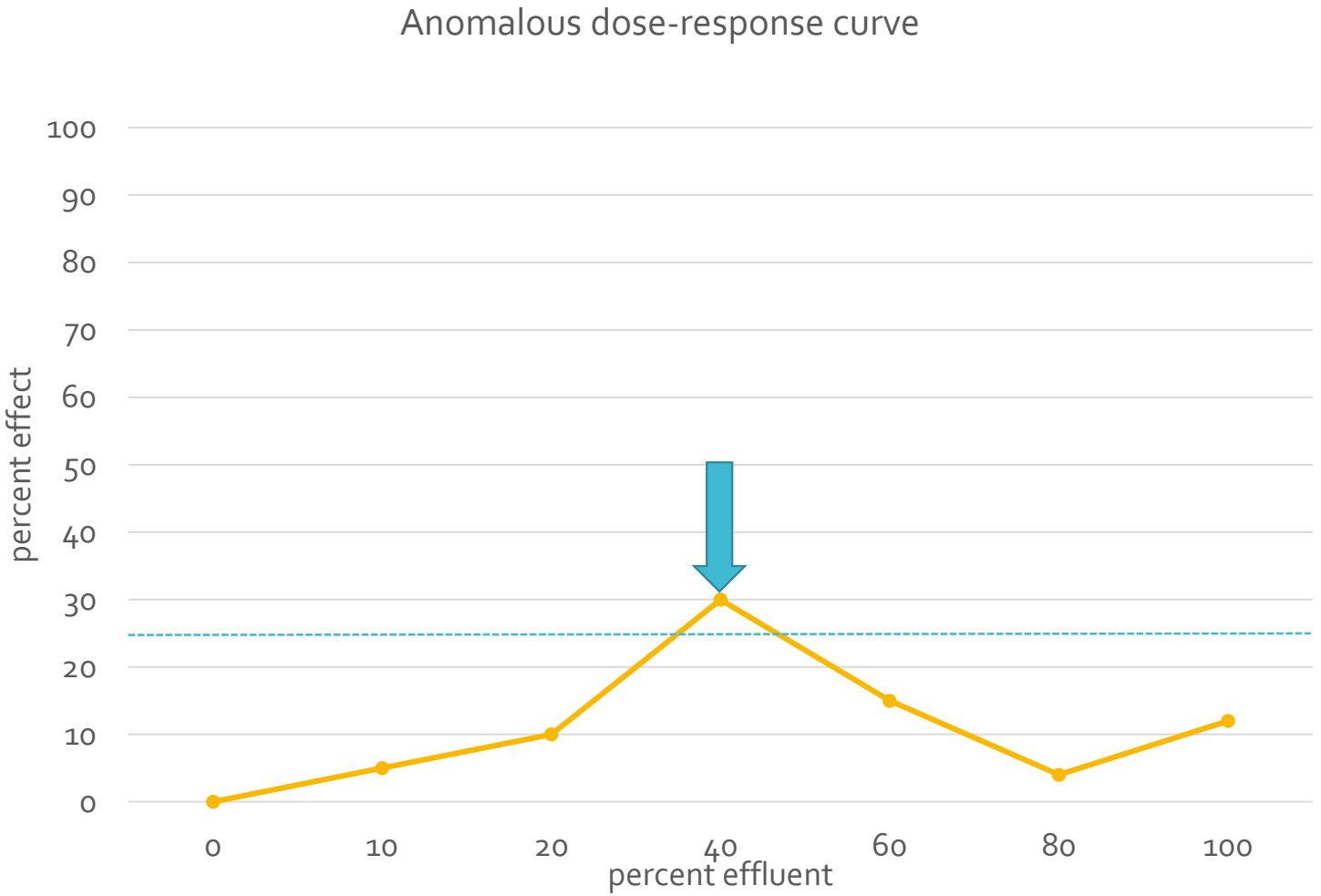
- Different opinions, but two major concerns:

1. Increase rate of false determinations of toxicity compared to EC25, punishes high variability
   - Some species (*Ceriodaphnia dubia*) have inherently high variability. BACWA is partially funding a White Paper to look more closely at this issue.
2. No recourse for anomalous dose-response curves

Margin of Error in the TST



TST only looks at the IWC

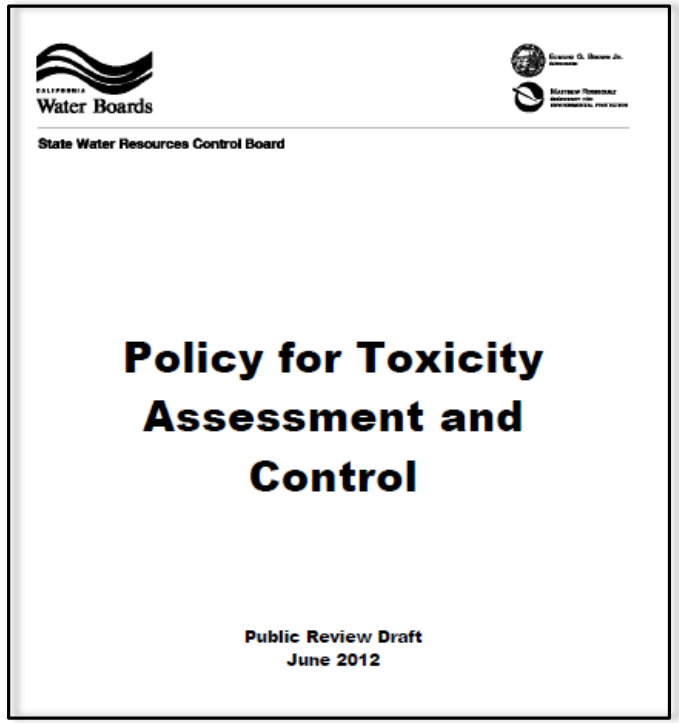


TST Litigation

- BACWA joined SCAP and CVCWA in ongoing lawsuit alleging EPA is improperly requiring use of unpromulgated method
- EPA objects on basis of statute of limitations

History and Background

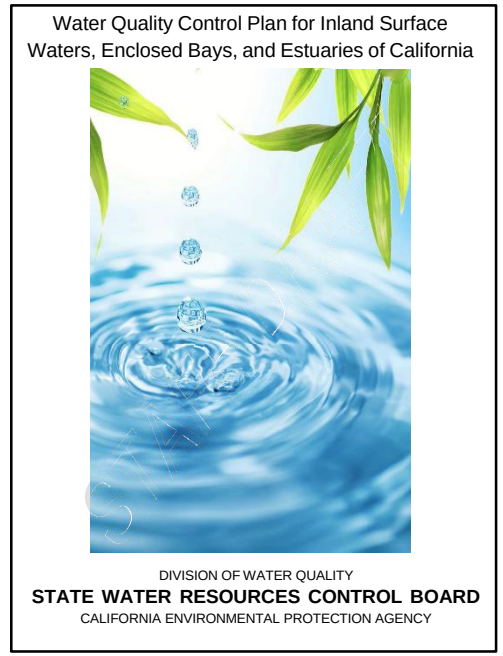
- June 2012- Draft Policy released for "formal"public comment
- August 2012 -SWRCB Workshop
- Revised draft Plan expected in Spring 2013
- Eventual Adoption anticipated in late 2013
- No responses to comments posted
- Next draft has been due "in two months" since 2013



WHAT'S NEW?
TST and Numeric Chronic Toxicity Limits

Current Status

- **New Draft Toxicity Plan Released – October 19, 2018**
- Now proposed as a component of the State's Inland Surface Waters, Enclosed Bays, and Estuaries Plan
  - It is to be "Provisions" in the SIP, not a "Policy"
  - Will not require amending the Basin Plan
- They did make some changes in response to comments!



Implementation

Minimum Monitoring Frequencies

Routine testing

- For POTWs ≥ 5 MGD – Chronic Testing Monthly
- For POTWs ≤ 5 MGD – Chronic Testing Quarterly

Most Sensitive Species Screens

- Three toxicity tests conducted concurrently using three different species.
- Repeated four times.
  - Quarterly for one year for continuous dischargers
  - Evenly spaced through out a year for non-continuous dischargers
- At least once in ten years, "unless the discharger is participating in a regional monitoring program"
- Still have to do a sensitive species screening once

Reasonable Potential - Who Will Get Numeric Limits?

- For POTWs ≥ 5 MGD – You Have Assumed RP
- For POTWs ≤ 5 MGD – If any single test exhibits a 10% effect or greater, you will have RP

What Will The Limits Look Like?

- Maximum Daily Effluent Limit (MDEL)
  - A single test exhibiting a survival effect of 50% or more
  - Think of it as a single test limit.
- Monthly Median Effluent Limit (MMEL)
  - A median result of "Pass" based on the TST statistic, and <25% effect with no more than three tests conducted in a calendar month
  - Think of it as a multiple test limit

Reduced Compliance Monitoring Frequency

- **Temporary reduction in routine monitoring allowed during a TRE**
- Twice per year (every 6 months)
- **Reduction in Routine Monitoring if:**
- MDEL and MMEL has not been exceeded for five years.
- Toxicity provisions in the NPDES Permit have been followed.

Compliance Challenge!

- Because toxicity limits are NEW, and because the TST has a higher rate of false determinations of toxicity, many agencies will violate their toxicity limits
- This threatens clean compliance records
- Agencies producing recycled water don't want their effluent labeled as "toxic"

Region 2 under the new State Toxicity Provisions

- Issues to discuss with Regional Water Board on Friday:
  - What is the earliest agencies will start seeing Toxicity Provisions in Permits
  - Acute toxicity RPAs are at RWB discretion
  - Whether to grant IWC (dilution) is at RWB discretion
  - Sensitive species screening will cost RMP up to $900K over first five years
  - Can historical data be used for determining immediate eligibility for reduced monitoring?

Next steps

- Public workshop October 31
- State Water Board hearing November 28
- Written comments due December 7

- Discussion of BACWA Comment Strategy at November Board Meeting – What can we change at this point?