

# Preservation, Inc. Comments

Central Coast RWQCB Meeting, Ag Order 4.0

March 19, 2019

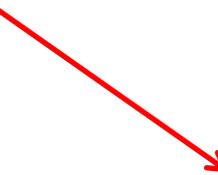
Salinas/Watsonville, CA

TABLE 3: PESTICIDE MANAGEMENT FOR SUR

Ag Order 4.0 (Conceptual Option 1)
Phases are based on location-specific conditions including water quality impairment, high quality surface water, and risk to surface water areas.
<p><b>Discharge Limit</b>                      Pesticide Concentration = TBD µg/L                      Toxicity Test = TBD # of toxic samples allowed                      Toxic Unit = TBD</p> <p><b>Application Limits</b>  <i>Ranches that repeatedly exceed</i> the pesticide concentration discharge limit per the time schedule may be limited or prohibited from applying that pesticide.</p> <p><i>Ranches that repeatedly exceed</i> the toxicity discharge limit per the time schedule may be required to complete a toxicity identification evaluation to identify chemicals causing toxicity. Ranches may be limited or prohibited from applying the pesticide(s) that caused the toxicity.</p> <p><i>Relatively higher limits</i></p>
<p><b>Discharge Limit</b>                      TBD µg/L by 20XX                      TBD µg/L by 20XX                      Discharge Limit by 20XX</p> <p>TBD # toxic samples allowed by 20XX                      TBD # toxic samples allowed by 20XX                      Discharge Limit by 20XX</p> <p>TBD Toxicity Unit by 20XX                      TBD Toxicity Unit by 20XX</p>

FACE WATER AND GROUNDWATER PROTECTION

Ag Order 4.0 - Updated Option
<p>Prioritization based on location-specific pesticide or toxicity water quality impairment, high quality surface water, and risk to surface water areas, and TMDL projects.</p> <p><b>Receiving Water Limit and Discharge Limit</b>                      Pesticide Concentration: TMDL load allocations, EPA Aquatic Life Benchmark(s), or LC50, whichever is lower, and narrative water quality objectives.                      Toxicity Test: Chronic <i>sediment toxicity</i> will result in at least 80% survival rate in appropriate test species.                      Toxicity Test: Chronic <i>water column toxicity</i> will result in at least 80% survival and reproduction rates in appropriate test species.                      Toxic Unit (Sum) &lt; 1.0 TU</p> <p><i>If the receiving water is higher quality water than these limits, the higher quality receiving water shall be maintained, unless degradation is allowed through appropriate findings.</i></p>
<p><b>Receiving Water Limit and Discharge Limit</b>                      TMDL Areas (TMDL Load Allocations)</p> <ul style="list-style-type: none"> <li>- Receiving water limits consistent with TMDL time schedule</li> <li>- Discharge limits triggered if receiving water limits not achieved per TMDL time schedule</li> </ul> <p>Other Areas (Benchmarks, LC50 and/or Water Quality Objectives)</p> <p>Example schedule for prioritized watershed:</p> <ul style="list-style-type: none"> <li>- Concentration: No more than three (3) consecutive samples exceed the EPA Aquatic Life Benchmark or LC50, whichever is lower,</li> </ul>



# Examples of new 3/1/2019 concepts which merit additional discussion

- Numeric targets related to **pesticides and toxicity** will be interpreted differently depending on frequency of monitoring
  - Frequency of monitoring is a technical design question, and must consider additional objectives outside the scope of the Options Table.
- It is inappropriate to apply numeric **nutrient** targets developed for ambient waters to individual discharges.
  - Some of these targets would be prohibitive of naturally occurring storm runoff
- **Sediment/erosion** milestones prohibit natural geomorphological processes, discourage rapid implementation of retention basins, and in some cases focus industry management bandwidth away from “turbidity hot-spots” identified by the CMP.

# Pesticide Targets

## Receiving Water Limit and Discharge Limit

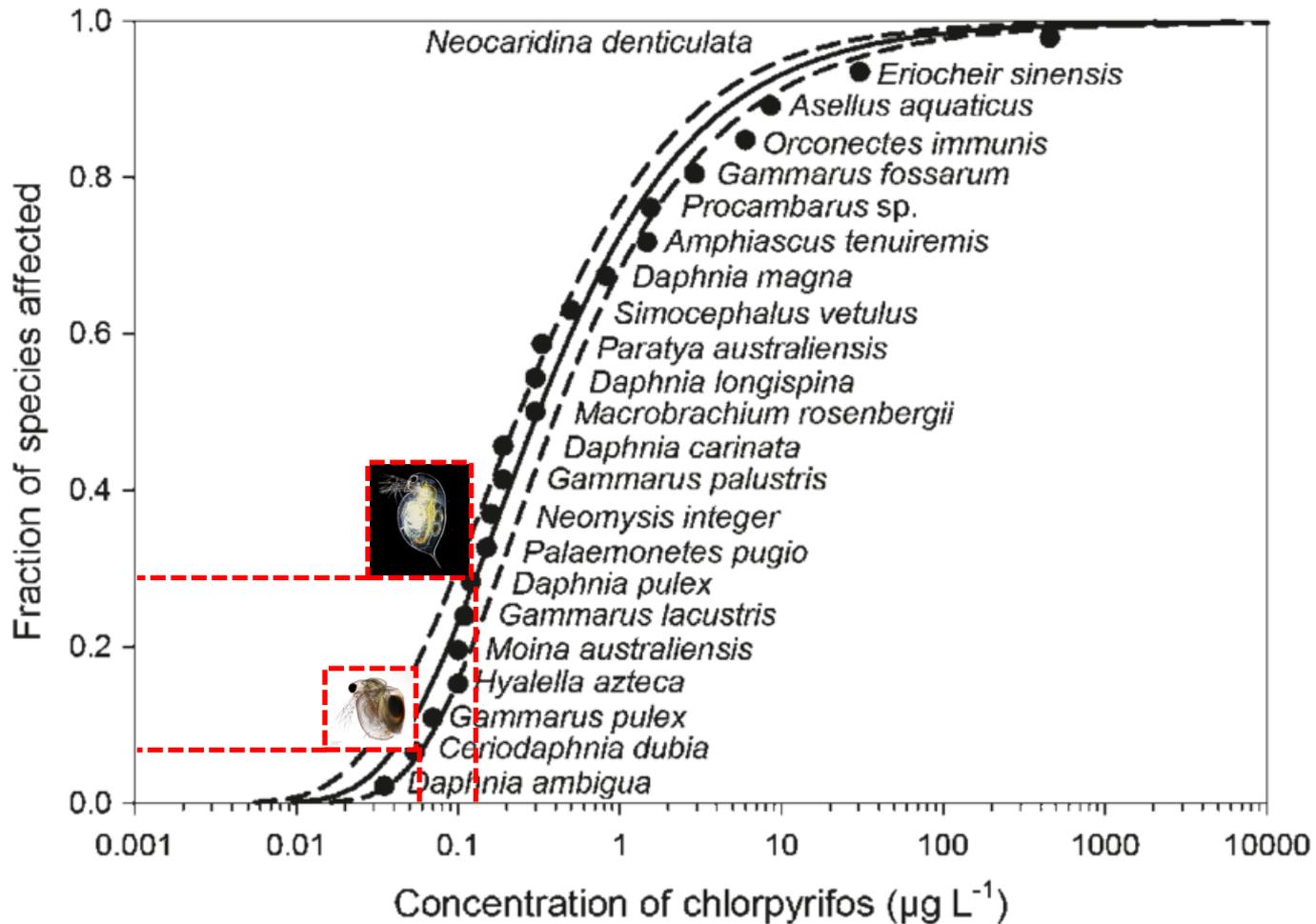
Pesticide Concentration: TMDL load allocations, EPA Aquatic Life Benchmark(s), or LC50, whichever is lower, and narrative water quality objectives.

Toxicity Test: Chronic *sediment toxicity* will result in at least 80% survival rate in appropriate test species.

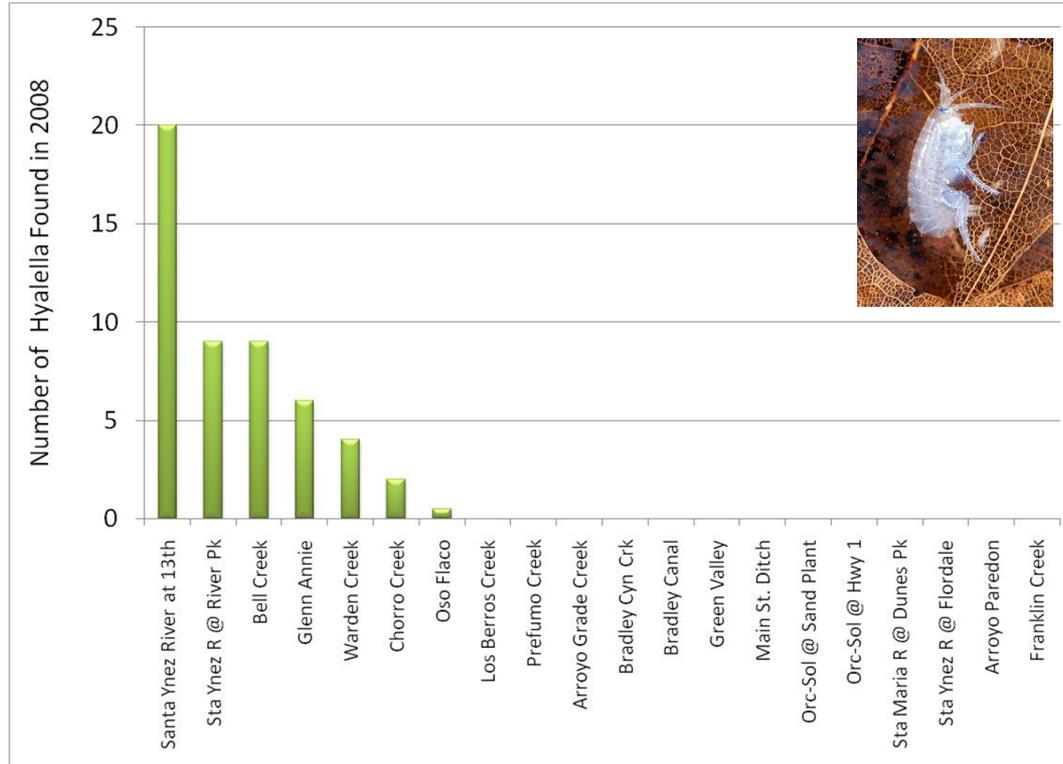
Toxicity Test: Chronic *water column toxicity* will result in at least 80% survival and reproduction rates in appropriate test species.

Toxic Unit (Sum) < 1.0 TU

“The lowest number that can be found, on any given day.”



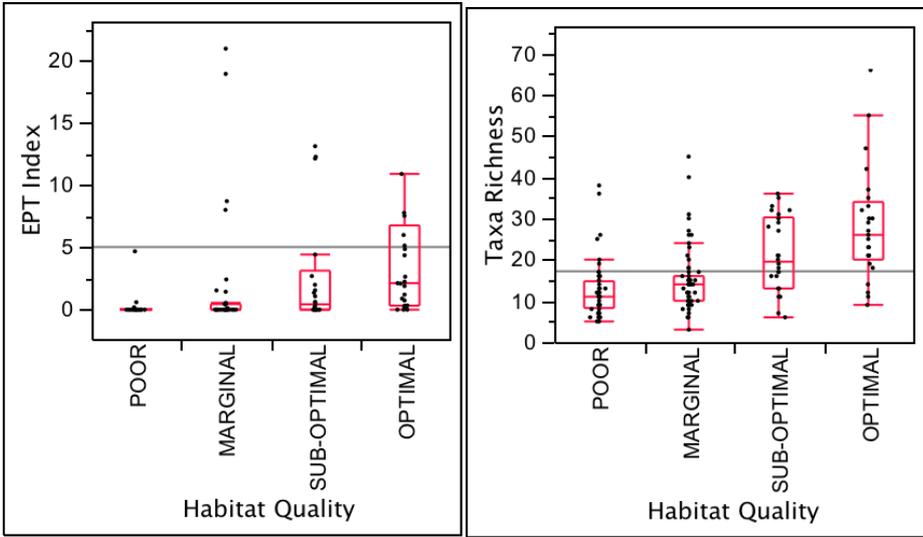
### Subset of CMP Bioassassment Results



*“Site 310WRP resident Hyalella in reps at test term. Re-test couldn't be performed bc resident organism couldn't be removed by sieving. Since # Hyalella recov at test term > # of org. loaded into test reps, Mean Dry Wgt not assessd; MPSL: 100417 updated Mean, PerEff, SigEffect per R3 QAO per R3”*

*– From CMP’s 2<sup>nd</sup> quarter 2013 electronic data delivery*

# Non-Chemical Stressors & Additional Aquatic Life Metrics Monitored by the CMP



## From CCWQP's Ag Order 4.0 Comment Letter:

Bioassessment is another type of monitoring which has historically been ordered at a reduced frequency and bears disproportionately on the cost of the CMP. Significant access impediments were identified during Ag Order 2.0 due to the lengthy upstream extent of waded transects required by the protocol. We note that bioassessment monitoring is a requirement for all ranches in both of the Ag Order 4.0 Options Tables columns. Discussion of this requirement must take place early enough in the process to allow for planning, budgeting, and additional topic-specific stakeholder engagement. Bioassessment monitoring is typically performed during the Spring Index Period, i.e. in April or May.

### From Staff Report Matrix of Options:

#### Surface Water Quality Trends

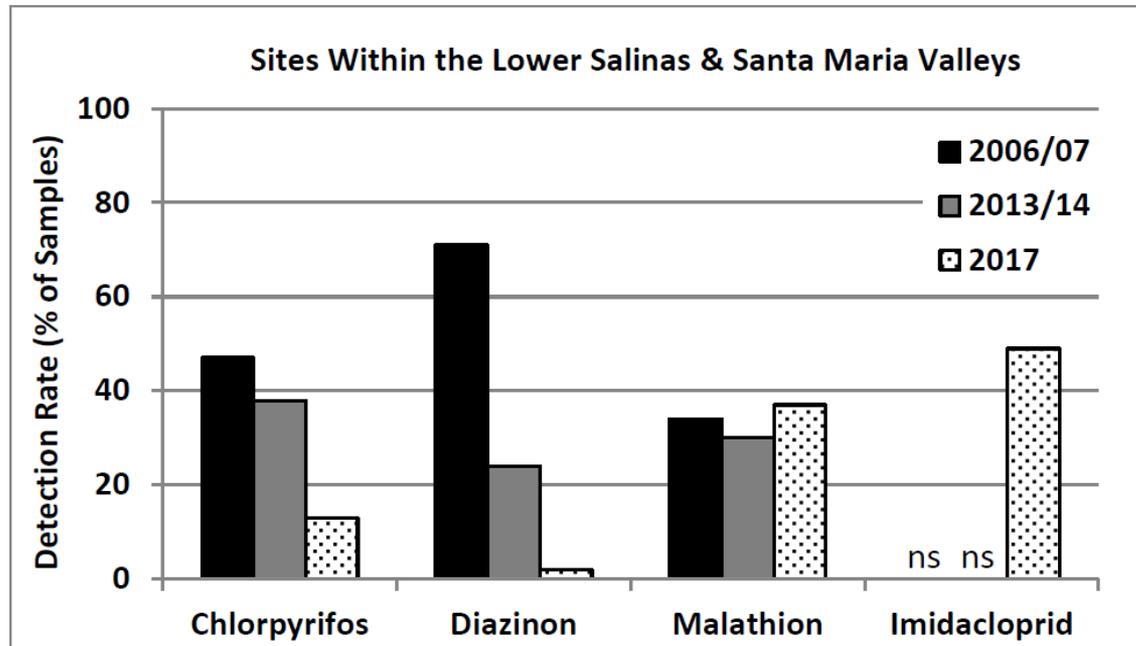
All ranches must conduct regional bioassessment trend monitoring, either individually or through a cooperative program.

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*Ag Order 4.0 Adoption Timeline precludes Bioassessment monitoring during the Spring Index period of 2020.*

# Monitoring Design



*Thoughtful design helps us produce interpretable data ...*

*... and to "know what we don't know."*

From Lopez, 2019 in Luo et al. 2019 *in press*

The technical design of a Monitoring and Reporting Program to meet program objectives is beyond the scope of formal RWQCB process.

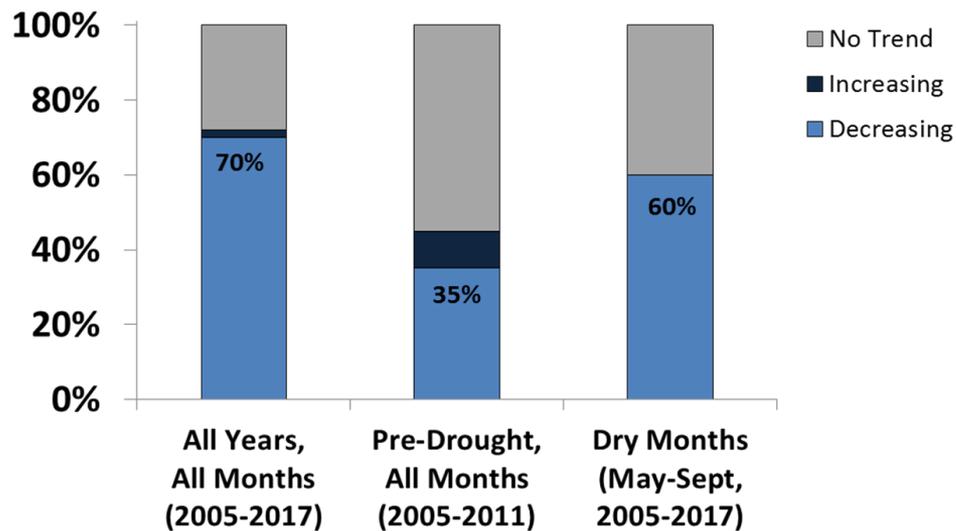
To meet Ag Order 4.0 process deadlines, there can be no further delay in the engagement of appropriate technical staff and decision makers, in the detail-oriented task of creating MRP's and associated QAPP's.

Implementation of certain suggested requirements in 2020 is impossible.

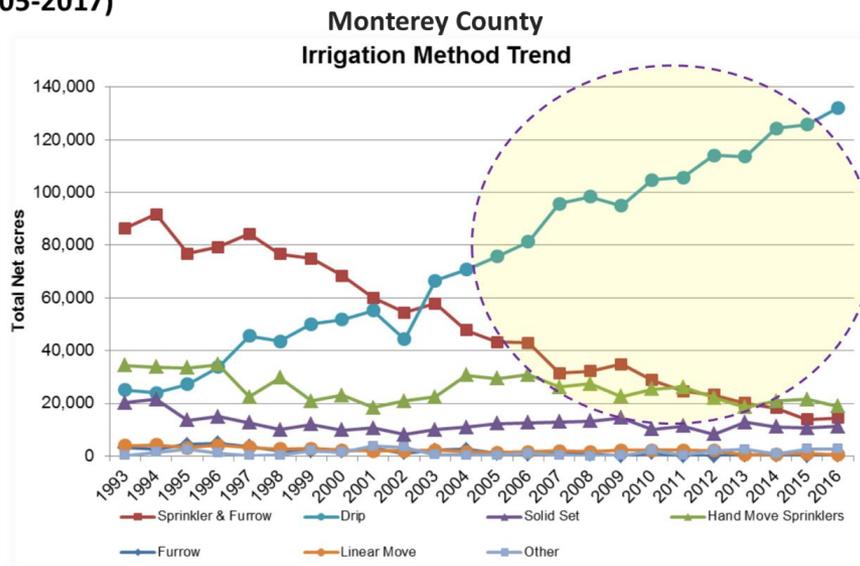
The word “load” is absent from the Staff Report in the context of surface water, except in reference to “TMDL load allocations.”

“TMDL load allocations” are listed as concentrations.

*(see Staff Report Attachment 7)*

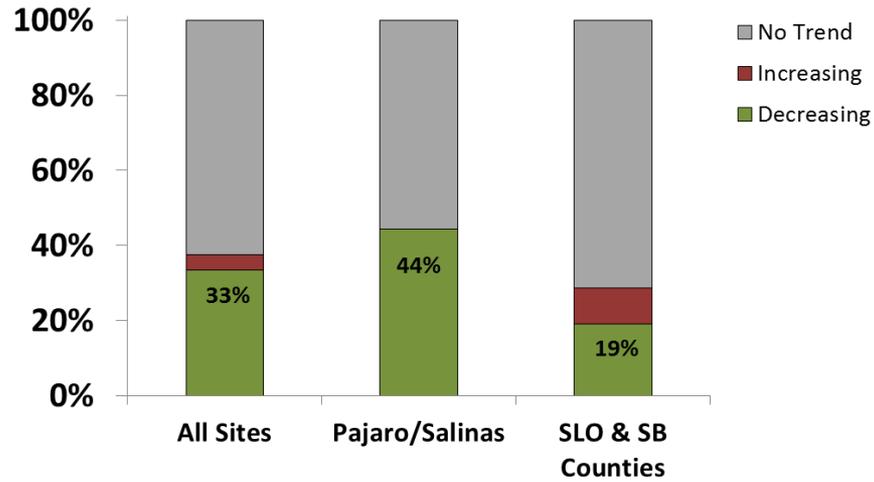


## Trends in Stream Flow & Irrigation Practices Affecting Loading to Surface Water

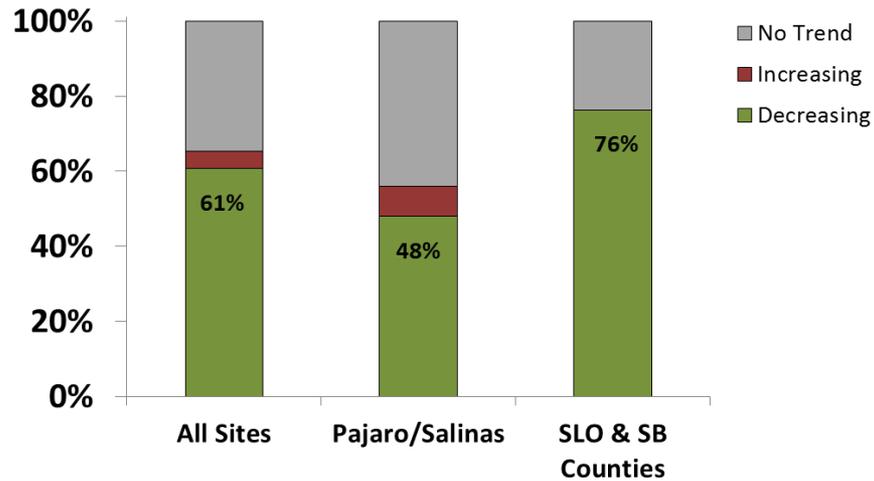


# Trends in Sediment Concentration & Loading

## Concentrations



## Loads



# Individual Discharge Monitoring

- Not the best way to identify sources of impairment
- Not the best way to determine BMP effectiveness
- Not the best way to detect change

# Concentration at the CMP site is influenced by many factors

- Hydrology of the watershed
  - Baseflow
  - Climate
  - Hydromodification
- Mix of discharges
  - Stream flow (carries discharges from upstream to downstream points in watershed)
  - Number, volume, concentration, & frequency of individual discharges

# Surface Water Follow-up

**CENTRAL COAST REGION CONDITIONAL WAIVER  
COOPERATIVE MONITORING PROGRAM**

**FOLLOW-UP MONITORING REPORT:**  
WATER QUALITY RESULTS FROM UPSTREAM  
MONITORING **2008**

Central Coast Water Quality Preservation, Inc.  
*"Managing the Cooperative Monitoring Program on Behalf of Ag"*

Kirk Schmidt  
831-750-5449  
[kschmidt@ccwqp.org](mailto:kschmidt@ccwqp.org)

Sarah Greene  
831-331-9051  
[sgreene@ccwqp.org](mailto:sgreene@ccwqp.org)

Revised September, 2010

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# Staff Report Attachment 7 vs. CMP Watersheds

*When everything is a priority,  
nothing is a priority*

