Surface Water Protection Program (SWPP) Registration Evaluation

MAA Workshop 2015

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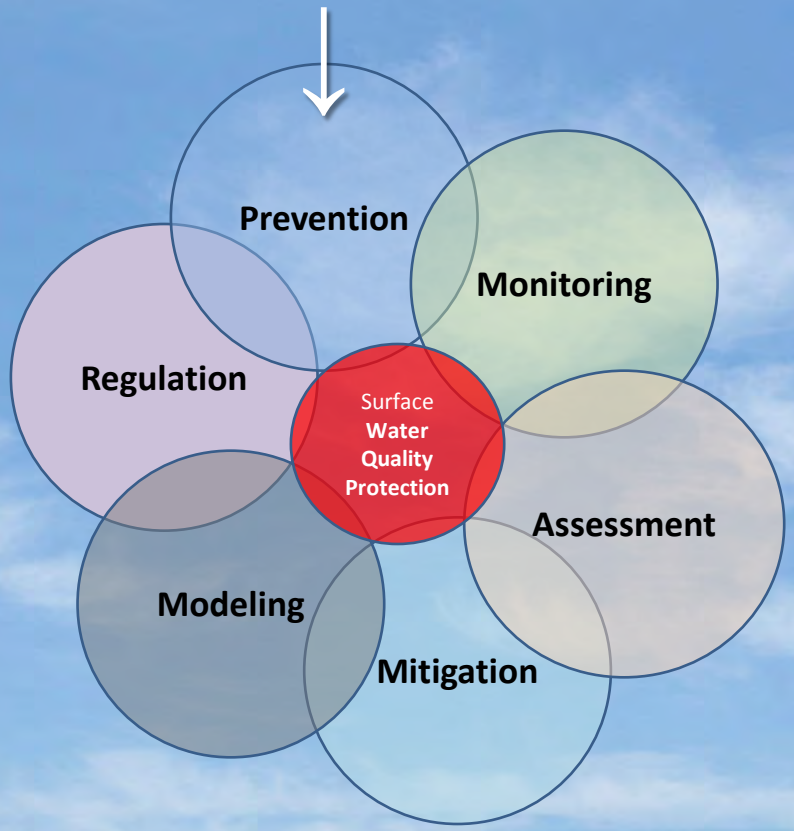
Surface Water Protection Program

DPR's Registration Evaluation

- What is it?
  - DPR's scientific evaluation of new pesticide products that come in for CA registration
  - CEQA equivalency
  - Managed by Pesticide Registration Branch (PRB)

- Various review "stations"
  - In PRB: Chemistry, Ecotoxicology, Plant Physiology, Microbiology, Pest & Disease Protection
  - Outside PRB: Human Health Assessment, Worker Health & Safety, Pest Management & Licensing, Enforcement, Environmental Monitoring (air, ground water, & surface water)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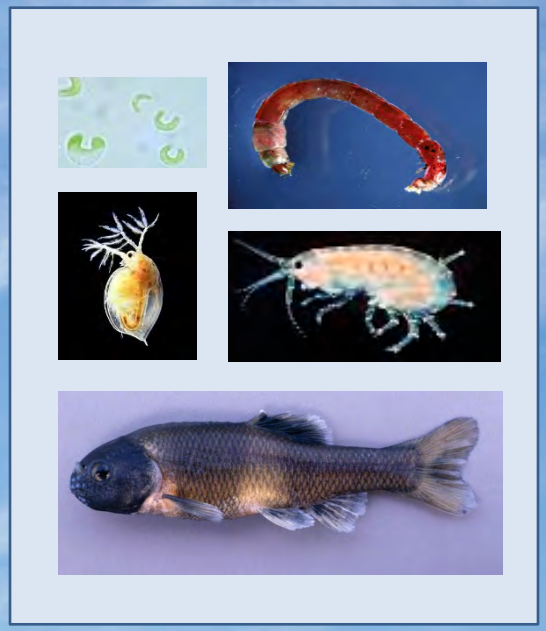


What Types of Products are Evaluated by SWPP?

- We don't review ALL products.
- Routing Criteria (last updated in 2012):
  - All new active ingredients (a.i.) in outdoor use products
    - With some exceptions (low risk use patterns)
  - Direct application to water
  - Use on rice
  - Antifouling paints
  - Products designated by PRB Chief as needing evaluation by SWPP

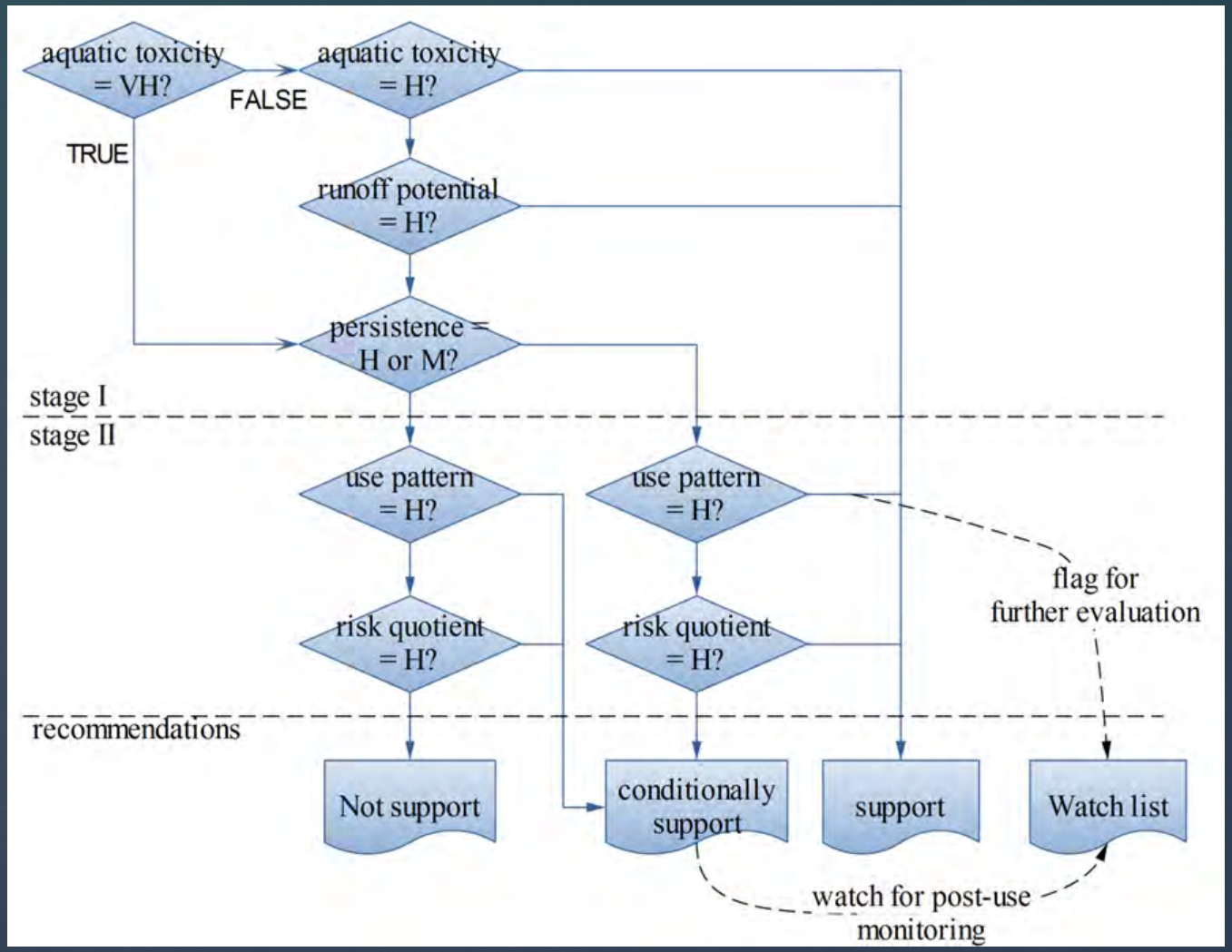
SWPP Evaluation Overview

- Main preventative tool for water & sediment quality protection
- Two methods for evaluations:
  - Model-assisted
  - Not model-assisted (best professional judgement)
- Prior to 2012 – no model
- Today doing both but modeling capability increasing
- Since 2009, ~36 product/a.i. evaluations/yr.

Registration Evaluation (RegEval) Model

- Risk based
  - PEC vs. lowest aquatic LC50 = RQ
  - RQ vs. Levels of Concern → recommendation
- Can run dissolved & absorbed phases
- Note evaluations rely on data required by EPA under FIFRA
  - Chemistry & ecotoxicity studies & data must be approved by PRB
- Data input CRITICAL
- Periodic staff training & user manual

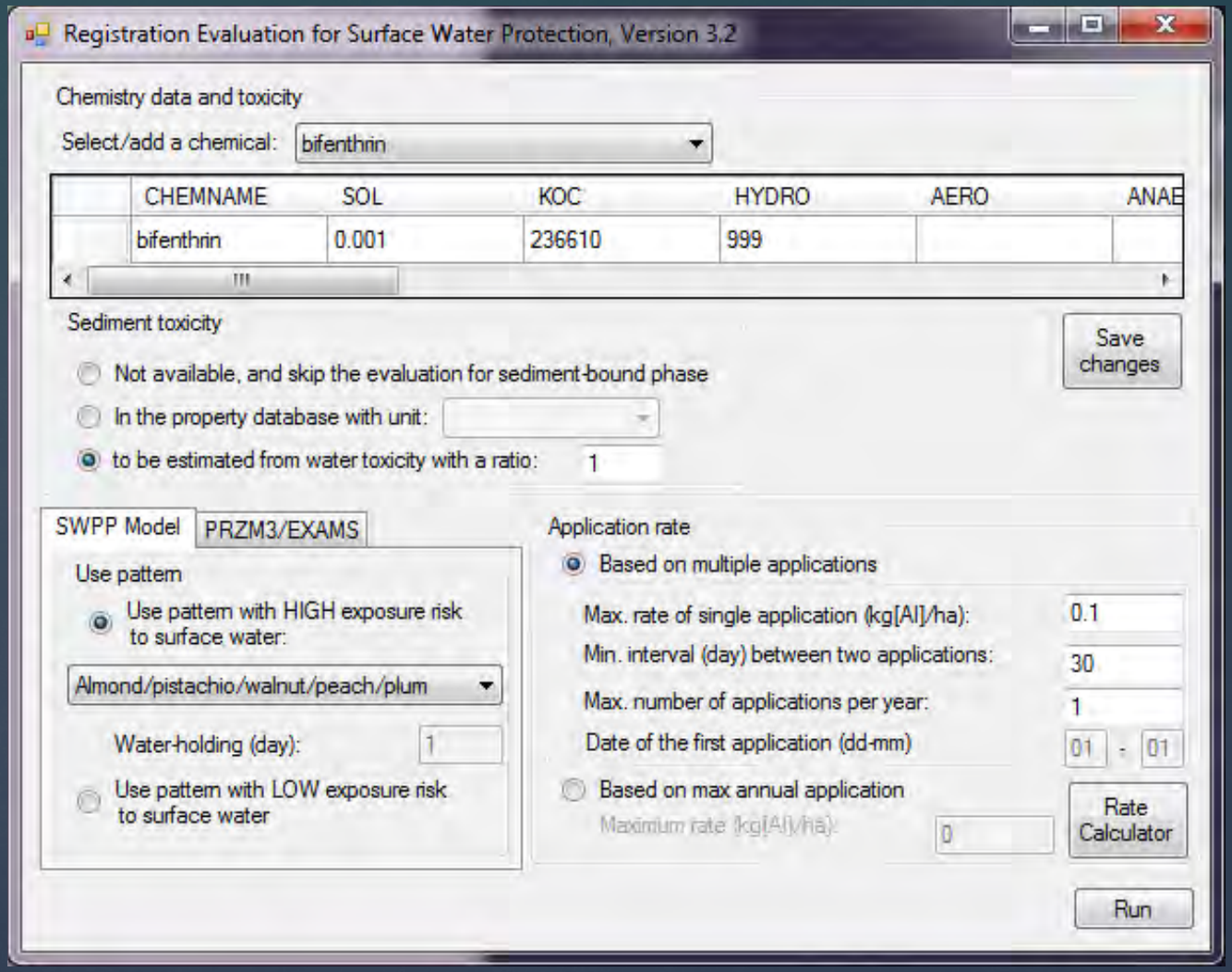
Model Flow Chart



RegEval Model – Ag Use Scenarios

- Rely on U.S. EPA PRZM
- CA crop/irrigation scenarios (developed by US EPA)
  - Examples: alfalfa, almond, cotton, sugar beet, tomato, grain, citrus, grape, rice…
- Edge-of-field prediction w/ degradation factored in
  - EXAMS theoretical 1-ha pond not used
  - But can run full PRZM-EXAMS

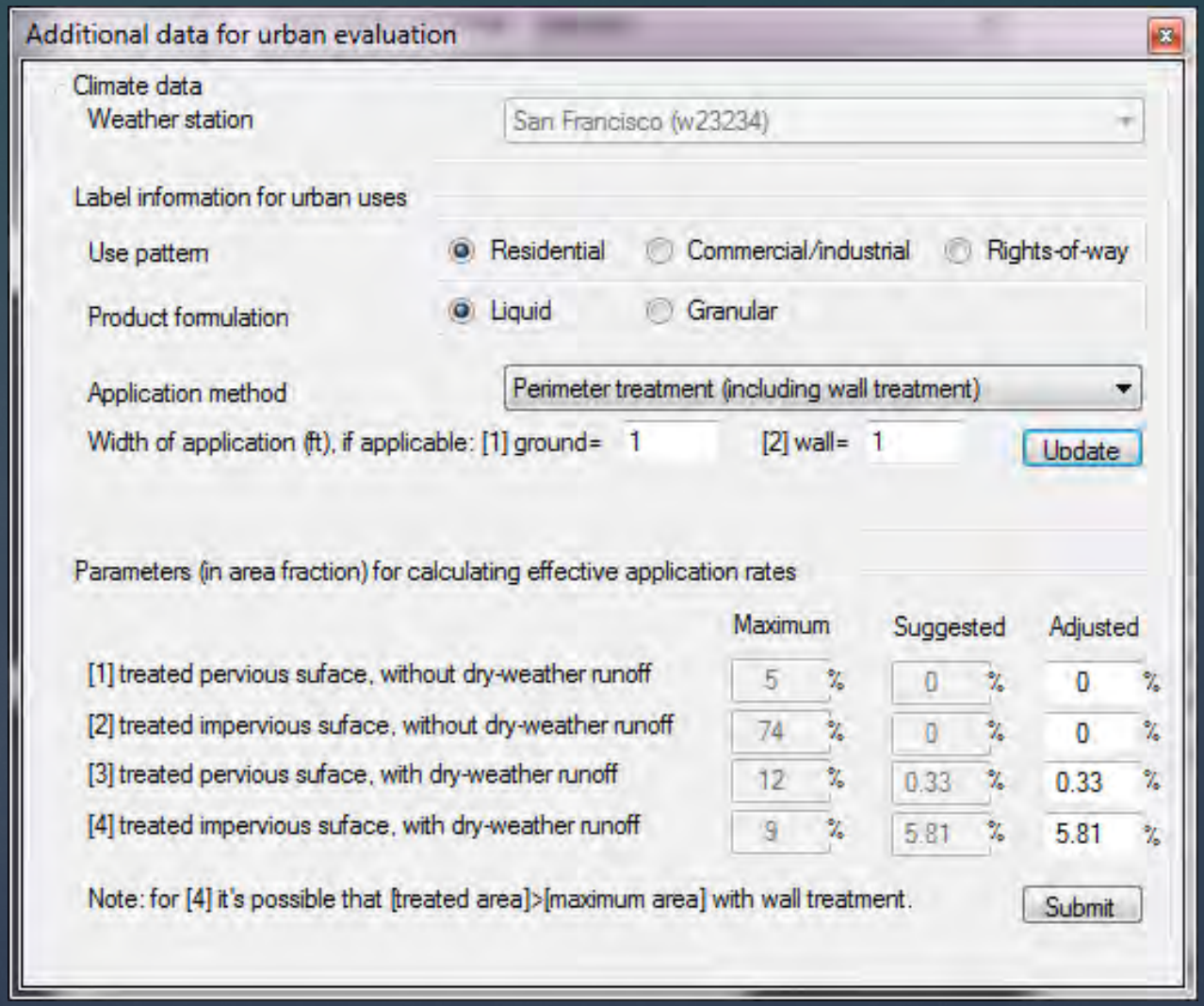
Main User Interface



RegEval Model – Non-Ag (Urban) Use Scenarios

- Rely on U.S. EPA PRZM/EXAMS
- PRZM component based on CA suburban landscapes w/ higher housing density & higher percentage of impervious surfaces
- Urban scenarios include: residential, commercial/industrial, rights-of-way
- Application methods include: lawn/turf, paved surface, perimeter spray, crack & crevice
- Also has aquatic application scenario

User Interface – Urban



Model Results

- Support, Conditional , or Deny
- Can also FLAG a.i.'s for future routing
- Model recommendation strongly considered but actual SWPP recommendation could differ…
  - Example: degradate concerns
- Conditional usually involved analytical method request, but sometimes more
  - Additional toxicity tests, e-fate studies
- SW also has <u>monitoring prioritization model</u>
  - a "safety net" to catch potentially problematic conditional a.i.'s

Some Thoughts…

- RegEval Model continually evolving
  - Striving for ever more realistic & CA-centric predictions
  - CA receiving water module (coming)
  - Degradate module (coming)

- Eventually anyone could run model
  - Including registrants prior to submission of product labels to DPR
  - Could help shape the development of future product labels

More Thoughts…

- SW evaluations & recommendations:
  - Will identify products with the highest potential to cause SW problems
  - Avoid costly, involved & protracted efforts to develop & implement mitigation or regulations
  - Successful resolution between DPR & registrants reinforces the usefulness & importance of SW registration evaluations

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Product Registration Review Process
Back to Regulatory Issues
Methodology and procedures for reviewing pesticide product data submitted for registration. The review focuses on potential impacts of pesticide on surface water quality.
SWPP Registration Evaluation Model User Manual (Version 3.1), PDF (710 kb). Yuzhou Luo and Nan Singhasemanon. October 2, 2014.
Notice to California Registrants 2012-02. Evaluation for Impacts to California Surface Waters. CA12-02, PDF (727 kb)
Methodology for Evaluating Pesticides for Surface Water Protection.
I: Initial Screening, PDF (342 kb). Yuzhou Luo and Xin Deng. January 26, 2012
II: Refined Modeling, PDF (266 kb). Yuzhou Luo and Xin Deng. January 26, 2012
III: Module for Urban Scenarios, PDF (593 kb). Yuzhou Luo. February 28, 2014.
Methodology for Screening Pesticide Products with High Exposure Potentials to Marine/Estuarine Organisms, PDF (409 kb). Yina Xie and Yuzhou Luo. March 9, 2015.
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Thank you…