

REVISED 1-23-15 – STRAWMAN FOR DISCUSSION - Step 3

3A: Available Monitoring Data

Obtain all reliable monitoring data for the pesticide in the watershed (Coalition, CEDEN, USGS, DPR). Examine data quality, detection limits relative to reference values, sample timing relative to application and runoff timing. Select only high quality data (exclude non-detects when detection limits > reference values) and samples timed to capture drift or discharge/runoff.

- (1) Do **sufficient** samples exist to characterize the potential impact of the pesticide in the watershed at all vulnerable time periods? (**DPR defines “sufficient” as 20 in a county.**)
- (2) Has some sampling occurred in last 5 years?
- (3) Are any measured values  $\geq 10\%$  of reference value?

**If yes to (1) and (2) and no to (3) – decision is complete = not a monitoring priority (Identify and exclude).**

3B: Environmental Fate

Identify and exclude/eliminate pesticides:

- likely to partition into sediments, except pesticides toxic at very low concentrations, i.e., eliminate chemicals with  $K_{oc} > 100,000$  unless lowest reference value  $< 1 \mu\text{g/L}$
- with Hydrolysis half-life  $< 1$  day
- with both Vapor pressure  $> 1 \times 10^{-4}$  mmHg and Henry's law constant  $> 100 \text{ Pa m}^3/\text{mol}$

3C: Site-Specific or Regulatory

Optional considerations for identifying and excluding pesticides:

- Recent (last 3 years) new EPA or DPR regulatory controls established and demonstrated to prevent water pollution
- Growers have terminated or greatly reduced use in last 3 years (or longer time period if appropriate)
- Successful management plan, with outcome documented by sufficient samples
- Not used in a particular subwatershed

3D: Chemical Analysis Method

Current availability of analytical methods with sufficiently sensitive/environmentally relevant detection limits. If costly or if chemical groupings offer cost advantages, document and consider in 3E.

**If none available, document – decision is complete = not a monitoring priority at this time.**

3E: Final Selection

Evaluate list to identify which pesticides to monitor and when to monitor. Prioritize:

- (1) highest ranked pesticides
- (2) pesticides with ratios greater than the ratios for pesticides that have previously been associated with water pollution in the watershed (e.g., chlorpyrifos, pyrethroids)
- (3) pesticides with detections  $> 10\%$  of reference value, unless sampling frequency during vulnerable time periods has been sufficient to capture peak concentrations or there is evidence to demonstrate that “outliers” are not real
- (4) pesticides without monitoring data in the entire watershed, particularly pesticides conditionally registered by DPR due to potential for surface water pollution

De-prioritize pesticides with very few applications (sampling unlikely to be coordinated with application timing)

Provide scientific explanation for decisions to not monitor pesticides with enforceable drinking water standards, water quality objectives, EPA water quality criteria, or on 303(d) list.