

Responses to Comments Submitted on the Draft Surface Water Regulatory Concepts

Comment 1. Overall, the intent of these regulatory concepts appears to support the protection of surface water, although the enforcement or compliance of some of these options may be difficult to achieve by the county agricultural commissioners (CACs). Some pesticides are non - restricted so it even makes it more difficult to track down the date of application to make sure that the property owner or applicator is in compliance with these regulatory concepts; additionally, with monthly use reports there can be the time lag between application date and when the reports are due to the CAC to verify the application date.

Depending on the CAC office, it appears that one could spend a substantial amount of time in implementing these regulatory concepts by just trying to verify buffers, wind speeds, soil conditions, documentation and monitoring of application sites treated.

Response 1. The comments are duly noted.

Comment 2. The concepts state “Airblast, high-pressure wand or hand gun applications shall not be made within 100 feet of any sensitive aquatic site (defined in Attachment II). Is there data to support 100 foot buffer for hand gun applications? It seems that hand gun applications could fall under the 25-foot buffer.

Response 2. The commenter may have interpreted the language to mean that the 100-foot buffer would apply to all hand gun applications. We will modify the language to clarify that the 100-foot buffer only applies to high pressure hand gun applications.

Comment 3. The concepts states “Aerial applications shall not be made within 150 feet of any sensitive aquatic site (defined in Attachment II), or in the case of forestry applications, the distance specified by the local regional board if greater than 150 feet.” The commenter is concerned that the local regional board will now be dictating buffer zones for pesticide applications. The commenter also asks whether the [regional board] requirements go directly to CACs or will they go through DPR and then to the CACs, i.e., what will be the procedure for ascertaining the alternative buffer zones?

Response 3. One of DPR’s goals in developing the surface water regulations is to recognize and avoid duplication of regulatory effort that wastes state resources and unnecessarily burdens the regulated public. Most pesticide applications made to forests are herbicides applied to control plants that compete with newly planted forest species. Prior to application, those herbicides must be addressed by forest managers in a timber harvest plan that is reviewed and must be approved by several agencies including the regional board. To avoid duplication DPR will consider exempting pesticides applied under an approved timber harvest plan from the SW regulations.

Comment 4. The concepts state “Wind speed shall be 3-10 miles per hour (mph) at the perimeter of the application site as measured by an anemometer on the upwind side, or

in the case of aerial applications to forestry sites, no more than the maximum wind speed specified by the local regional board. The commenter is concerned that the local regional board will now be dictating wind speed for pesticide applications, and asks what the procedure will be to ascertain those requirements.

Response 4. The latest draft concepts no longer have any wind speed requirements. However, forestry pesticide applicators would be subject to any wind speed requirements specified by the regional board under its legal authority.

Comment 5. The concepts state “Aerial applications to deciduous plants during the dormant season shall only be allowed if soil conditions do not allow field entry, or approaching bloom conditions necessitate aerial application, and if the operator of the property obtains a written recommendation from a licensed pest control adviser.” The commenter asks who makes the determination of "soil conditions do not allow field entry"- CACs, grower, PCA?

Response 5. The operator of the property would make that determination. The CAC could review that determination at a later date if there was a question about the property operator’s decision in light of common practice and conditions in the area.

Comment 6. Concerns with the drift buffer zones proposals: There are no mitigations listed. For example, if the wind is blowing away from the sensitive aquatic site, a reduction or elimination of the unsprayed buffer would be reasonable. In non agricultural settings there may be solid fencing or foliar barriers that would mitigate drift potential. Backpack or handheld spray applications can be precisely controlled to the point where a 25 foot buffer is not necessary; this is especially important for some noxious weed programs.

Response 6. Presumably, by “no mitigations” the commenter means that there are no circumstances under which the buffer zone would not apply. We will review and consider specifying conditions under which the buffer zones would not apply.

Comment 7. The allowable wind speed is listed at 3-10 mph. This type of a restriction is already covered for volatile phenoxy herbicides, including Appendix I dicamba and Propanil. Restrictions in CCR §6464 restrict air speed for these products to not less than 2 mph or more than 7 mph from March 16 through October 15th in the Central Valley. This is confusing with the 3-10 mph restriction of the draft.

Response 7. Since the latest draft concepts have no wind speed requirements, this comment no longer applies.

Comment 8. My understanding for the 2-7 mph restriction is that the *volatility* of these phenoxyes when used at wind speeds less than 2 mph make offsite movement due to inversions possible and at wind speeds of greater than 7 mph particulate offsite movement is increased. Are the listed materials that are not highly volatile a concern for surface water contamination due to inversions?

Response 8. The fine particles that are of concern during inversion conditions are primarily the result of the nozzles and pressures used, rather than the volatility of the pesticide. DPR will consider whether additional restrictions on nozzles and pressures are needed during inversion conditions.

Comment 9. Probably 90% of residential and landscape applications in our area occur when the wind speed is less than 3 mph. In addition to applications occurring on days or at the time of day when there is little or no wind, applications in residential landscaped areas are normally protected from wind by fencing, structures, trees and shrubs to the point that there is little or no air movement in the application area even though there is wind in the treetops. We see this as desirable for the prevention of drift unto neighboring sensitive sites.

Response 9. Since the latest draft concepts have no wind speed requirements, this comment no longer applies.

Comment 10. In Contra Costa County most agricultural applications also occur when the wind speed is less than 3 mph. This has been desired with nonvolatile materials because the chance of offsite particulate drift is greatly diminished. These applications sometimes take place at night or early in the morning before the wind comes up. In the delta region when the wind starts up there is usually only a very short period of time before it exceeds 10 mph. Elimination of applications that occur when the wind is 0-3 mph for non volatile materials would both cause increases in drift and make it nearly impossible for growers and PCO's to do their job.

Response 10. Since the latest draft concepts have no wind speed requirements, this comment no longer applies.

Comment 11. The National Weather Service has been very inaccurate with rainfall prediction, especially in the last couple of drought years. They often predict rain that either doesn't come or that comes in amount much lower than predicted. On occasion unpredicted rain also occurs, especially when looking at a forecast 48 hours or more in advance.

Response 11. DPR scientists using the National Weather Service forecasts to plan stormwater monitoring of pesticide runoff have found the predictions to be reasonably accurate. Although there are times when storms produce significantly less, and sometimes more, rainfall than predicted, in general we believe using National Weather Service forecasts increases the chance of preventing stormwater runoff.

Comment 12. With some of the listed materials such as oryzalin and trifluralin, rain is desirable to set the material in the soil. Though a sudden rain runoff event is not desirable a steady or light rain is needed and the closer to the application the better.

Response 12. Runoff is determined by factors such as the amount and intensity of rainfall, the amount of soil moisture, presence of cover crops, and soil texture. The current ground water regulations allow incorporation of preemergent herbicides using a minimum of ¼ inch of irrigation water and a maximum of either one inch or the maximum amount of irrigation water specified on the label, at application rates that do not cause surface water runoff from the treated property or to wells on the treated property. Lighter sandier soils can take higher intensities of rainfall without runoff, where heavier soils can take less.

Thus we will consider amending the draft proposal to allow applications of the listed materials to soils at field capacity under certain conditions. For example, we could allow applications to coarse soils (sands, sandy loams, and loamy sands) for rainfall forecast to be 0.5 inches or less, and for all other soils, for rainfall forecast to be less than 0.25 inches. Intensity of rainfall and presence of cover crops are other factors we may consider in crafting the regulations.

Comment 13. It is very difficult to tell where drains are in a landscaped yard. The 10' use restriction from a drain may be unreasonable at least for some of the products listed.

Response 13. We are not aware that drains in residential yards commonly lead directly to public drains or gutters. In commercial yards, we believe that property operators would know where drains are located so that they can be maintained. In any case, we will consider language that would require pesticide applicators to consult with property operators prior to application of any of the listed materials to determine the location of any drains.

Comment 14. There may be mitigating barriers such as berms, fences, vegetative filtration strips, etc. that should be considered that would prevent runoff. In these cases [varying or eliminating] buffers between the application and the sensitive site should be considered.

Response 14. To the extent that berms and fences allow the property operator to comply with the 72-hour runoff holding provisions, these provisions are currently addressed. The appropriate size of vegetative filter strips depends on factors such as slope; soil type; density, height and species of vegetation; and pesticide characteristics. Currently these various factors can be considered only as part of the surface water quality management plan, which could be submitted as an alternative to complying with the rainfall avoidance, runoff holding provisions, or runoff treatment options. However, we will continue to consider and review other options for allowing vegetative buffers as an appropriate alternative mitigation measure.

Comment 15. PCO's commonly spray eaves for spider control. It seems that this would have to be considered a spot treatment to be allowable by the draft proposal. Runoff from the eaves is not likely unless the homeowner hoses them off or they are power-washed pre-paint. Since neither of these is likely within a few days of an application,

exempting this type of application either directly or through spot treat interpretation should be considered.

Response 15. We will consider language that would allow standard 100% area application to eaves that would not be exposed to rain washoff, provided that property operators are advised not to hose down or power-wash the treated area for xx months after application.

Comment 16. The commenter suggests adding “hand held applications directed to the ground” to the listed of exemptions from the drift management provisions.

Response 16. We will consider language that would exempt from the drift requirements hand held applications directed to the ground and made at less than some maximum specified pressure.

Comment 17. The commenter asks whether we should specify the pounds per square inch (psi) for “high pressure” wand, like 60 psi, and recommends that hand held gun applications controlled and directed to the ground should be allowable, presumably as an exemption.

Response 17. We have amended the concepts to specify that high pressure means 60 psi or greater. Regarding hand held gun applications, see response 16.

Comment 18. The concepts state “Runoff Management to Protect Surface Water-Agricultural Production: for four weeks after application divert any rain runoff with an on-site recirculating system and/or contain and hold any rain runoff for 72 hours before releasing into a sensitive aquatic site or into a ditch or drain that ultimately discharges into a sensitive aquatic site.” The commenter asks whether runoff can be released into a dry ditch or canal.

Response 18. We will review various scenarios to determine if there are conditions under which discharge to a dry ditch or canal could be allowed, provided that the discharge into that drain or canal did not runoff into an adjacent water body within a specified time.

Comment 19. The 11th exemption, “applications made to hydrologically isolated sites” should be moved to the #1 position.

Response 19. We will consider making that change.

Comment 20. One of the options to prevent runoff requires the operator of the property to obtain and follows a written recommendation from a licensed pest control adviser (PCA) for the pesticide application. The commenter recommends that the PCA should be certified to write a “surface water” recommendation. Some certification or CE requirement should be in place to ensure that a PCA has attended course work or has

proven their knowledge in some way (Pass/Fail exam?) to prove that they have knowledge regarding surface water issues and mitigation strategies.

Response 20. The purpose for requiring a written recommendation from a licensed PCA is to ensure that the applicator is aware of the potential hazard to surface water, that alternative pest management practices have been considered, and that the application of the listed pesticides is necessary. The recommendation is required, by Food and Agricultural Code section 12003, to include, when applicable, “a warning of the possibility of damages by the pesticide application that reasonably should have been known by the agricultural pest control adviser to exist.” The recommendation is also required, by section 6556, Title 3 of the California Code of Regulations, to include, among others, (1) the criteria used for determining the need for the recommended treatment, and (2) certification that alternatives and mitigation measures that would substantially lessen any significant adverse impact on the environment have been considered and, if feasible, adopted. In addition, PCAs would not be involved in writing the alternative surface water management plans since these can only be developed by other entities approved by the Director. Thus, since the purpose of the written recommendation is not to impart information on how specifically to protect surface water, there would be no need to certify the PCA in surface water protection.

Comment 21. The concepts state with regard to runoff management for non production agriculture applications, “Do not apply unless the property operator or resident has been advised not to allow irrigation runoff for 72 hours after application.” The commenter recommends that the regulations require the applicator provide the property operator an advisory to prove that the applicator gave the information to the property operator, and so that the property operator has some document to refer to.

Response 21. We will consider modifying the language to address this comment.

Comment 22. The concepts state “Pesticide applications are exempted from the requirements of paragraph (a) of this section if the pest control business making the application has been certified by an organization that has adopted standards or requirements of a green or sustainable program, as defined in Appendix II, which has been approved by the director. The pesticide control business shall be in compliance with those standards or requirements during, and maintain records of the certification for two years after, the application.” The commenter asks how the pest control business proves that it is certified, who enforces that those standards have been met/maintained, and how a county inspector is supposed to know if what is being applied is a part of a green or sustainable program?

Response 22. The DPR Director will approve organizations that certify companies as meeting green or sustainable program standards. Those standards will be defined as part of the Director approval process as will the process by which those certifying organizations ensure and document that those companies are complying with those standards. We are considering options for how an applicator would indicate to a CAC inspector that the applicator is working for a certified pest control business.

Comment 23. The definition of “sensitive aquatic site” does not have any exemptions for farm ponds that are constructed solely for agricultural purposes and that are not connected to any stream, river, or other water body. Many of these “isolated” ponds in the north are filled by a pump from a river or stream as well as being filled by rainwater or springs. Crops are often planted close to these ponds. This requirement has the potential to put ground out of production. This is a common scenario in many vineyards and orchards in the north. Most labels already have enforceable statements that prohibit contamination of surface waters.

Response 23. We will consider exempting farm ponds from the drift buffer zone requirements.

Comment 24. The section on “Runoff Management to Protect Surface Water- Agricultural Production” is very confusing to read.

Response 24. This comment is duly noted. We are open to suggestions on how to make it less confusing.

Comment 25. In the “Runoff Management to Protect Surface Water- Agricultural Production” section, there is a provision at the end that allows an “out” if the operator of the property possesses and is implementing a surface water quality management plan in conjunction with a PCA recommendation etc. Who will be responsible for monitoring the plan? Will inspectors be required to read and make determinations of compliance of all these different plans? There are workload concerns as well as concerns about enforceability if there is a violation of the “surface water quality management plan” as opposed to a direct violation of the code.

Response 25. The surface water management plans must be developed in cooperation with, and meet the requirements of, conservation agencies, certifiers of organic or sustainable agricultural products or other organizations, including agricultural water quality coalitions, that have been approved by the director. These entities will be responsible for ensuring the plans are followed. The extent to which these entities have procedures to ensure these plans will be followed will be one of the major factors the DPR Director uses in approving these certifying entities. The CAC would only have to verify that the applicator is operating under a plan, not enforce the various elements of a plan. We are reviewing options for how a field inspector might make that verification.

Comment 26. In the section “Runoff Management to Protect Surface Water- Non Production- it is written to apply to persons applying pesticide for hire. This seems to exclude many types of “non production agricultural applications by people other than “for hire”. An example would be a grower treating his own rights of way or an application in a cemetery or park by an employee.

Response 26. We will review additional uses to determine if they should be included. These could include nonproduction agricultural uses, such as applications to cemeteries, golf courses, parks, recreation areas, wildlife areas/refuges, reservoirs, ditches, ditch banks, lakes, rivers and streams, roadsides and other rights-of-way. We could also consider adding outdoor industrial and outdoor institutional applications. We plan to exclude applications not for hire to residential properties.

Comment 27. Who enforces provisions of “green sustainable program” (extra workload, and enforceability)?

Response 27. See response 22.

Comment 28. The San Diego Regional Water Quality Control Board (SDRWQCB) issued a Stormwater Permit to the County of San Diego and numerous other municipal co-permittees to protect water resources and improve water quality in the San Diego area. San Diego County adopted a Watershed Protection Ordinance to ensure that permit requirements are met. San Diego County Department of Agriculture, Weights & Measures’ Ag Water Quality Program regulates nurseries, greenhouses, cemeteries, & golf courses for those purposes. Recently adopted SDRWQCB regulations require all agricultural and nursery operations in the San Diego region to sample and test wet and dry weather runoff for pollutants and report the findings (Ag Waiver). DPR’s proposed Surface Water Regulations add another layer on top of these current regulatory requirements. Our main concern stems from the duplicity of all of these regulations. We need to protect our water resources and at the same time, be mindful about reducing duplicative regulatory requirements. Can some of the existing requirements be used to ensure DPR requirements are met?

Response 28. Our goal is to protect surface water from specified pesticides. We want to take full advantage of all acceptable efforts to accomplish this goal and avoid duplication of efforts and unnecessary overlap of programs and burdens on the regulated public. Our intention is to exempt acceptable surface water protection programs from our regulation where possible to eliminate duplication of effort.

Comment 29. We recommend that the language “Wind speed shall be 3-10 miles per hour (mph) at the perimeter of the application site as measured by an anemometer on the upwind side” be re-phrased for clarity to “no applications allowed when wind speed is greater than 10 miles per hour or less than 3 miles per hour.”

Response 29. Since the latest draft concepts have no wind speed requirements, this comment no longer applies.

Comment 30. 3CCR 6464 (Cc)(1) refers to wind speed of 2-7 MPH for areas in the Central Valley. Does this conflict with this proposed regulation?

Response 30. Since the latest draft concepts have no wind speed requirements, this comment no longer applies.

Comment 31. Current dormant spray regulations (3CCR section 6960. Dormant Insecticide Contamination Prevention) state that except under the conditions specified in subsection (a), aerial application of dormant insecticides shall only be allowed if (1) soil conditions do not allow field entry, or approaching bloom conditions necessitate aerial application; and (2) all the requirements in subsection (b) are met.. The requirements of subsection (b) are (1) the operator of the property to be treated shall obtain a written recommendation from a licensed pest control adviser prior to the application; and (2) the application shall not be made within 100 feet of any sensitive aquatic site; and (3) wind speed shall be 3-10 miles per hour (mph) at the perimeter of the application site as measured by an anemometer on the upwind side. Although the draft language for the surface water regulation rearranges that language, it does not effectively change that language.

The commenter states that the property operator can make his own recommendations as stated in Insp Proc p. 201, item 1, bullet 3.

Response 31. Since the requirement for a written recommendation by a licensed pest control adviser is part of a regulation specifically adopted to protect surface water, it would take precedence over the more general policy statement in the Inspection Procedures Manual.

Comment 32. One of the uses exempted from the draft drift control measures is application to animal burrows. The commenter asks whether this should be an exemption no matter how close to sensitive aquatic sites.

Response 32. This exemption was crafted in case pesticides used to treat pests such as squirrels and gophers are included in the list of pesticides regulated to protect surface water. Since applications to animal burrows are typically made by hand or equipment that specifically places the pesticide inside the burrow, we believe the risk of drift would be negligible. However, at this time we do not believe any of the listed pesticides would be used for that purpose, and upon further consideration think it unlikely that such pesticides would be listed to protect surface water quality. Thus, we will consider removing that exemption.

Comment 33. To mitigate pesticide offsite site movement due to irrigation runoff, the draft regulation concepts would require the property operator, for four weeks after application, to divert any irrigation runoff with an on-site recirculating system and/or contain and hold any irrigation runoff from the time irrigation is started on any part of the field until 72 hours after irrigation is completed on the entire field, before releasing into a sensitive aquatic site or into a ditch or drain that ultimately discharges into a sensitive aquatic site. The commenter suggests that we add the phrase “if permitted by local ordinances” to that language because there may be a conflict with SWRCB regulations

and the San Diego County Watershed Protection Ordinance [regarding] discharging non-stormwater to the MS4 or receiving waters.

Response 33. While we recognize that there may be a number of additional provisions in various current and potential future state statutes, regulations or local ordinances, the eventual surface water regulations could only be enforced by authority provided by the pesticide provisions of the Food and Agricultural Code.

Comment 34. One of the options for mitigating runoff as a source of surface water contamination is for property operators to implement a surface water quality management plan, as defined. The commenter asks whether complying with the requirements of the Ag Waiver issued by the regional board could avoid overlapping regulatory requirements.

Response 34. If the requirements of the Ag Waiver serve the same purpose as the surface water quality plan, they would satisfy that draft provision. We will consider amendments to the language to allow that equivalency.

Comment 35. To control runoff in the non production agricultural arena, the draft concepts propose various measures to minimize the risk of pesticide movement offsite in runoff water. The commenter supports the specificity of those measures but states that enforcing a requirement that property operators not allow any irrigation runoff for 72 hours after application is problematic.

Response 35. We agree. We are considering options for requiring the commercial applicator to notify and determine whether the property occupant could reasonably comply with that mitigation measure before the pesticide is applied.

Comment 36. The surface water quality management plan that is one option to protect surface water is a farm, conservation or other plan that has been developed in cooperation with, and meets the requirements of, conservation agencies, certifiers of organic or sustainable agricultural products or other organizations, that have been approved by the director. The commenter asks if a list of approved organizations has been posted on DPR's Web site.

Response 36. No organizations have yet been considered for approval. Examples of such potential organizations are the federal Natural Resources Conservation Service and various organizations that coordinate development and implementation of sustainable practice programs with growers. We will make a list of such organizations available when they are approved.

Comment 37. A major problem with DPR's approach is that the cause of the problem (pesticides in surface water) has not been clearly identified so the solutions (proposed regulations) may or may not solve the problem.

As an example, chlorpyrifos has been found in surface waters of Santa Barbara and San Luis Obispo counties. Chlorpyrifos is routinely incorporated into the soil to control root

pests at the same time that transplants are set out. Chlorpyrifos can also be applied as a band to the base of plants and as a foliar spray. The proposed regulations would require different restrictions and all would create problems for the growers and regulatory authorities.

Since there are several materials and methods of application, a better solution would be [to] determine the cause of the problem and educate/regulate the growers to modify or eliminate practices which cause problems.

Response 37. Chlorpyrifos has been found to violate water quality objectives in various California water bodies. Two agencies have responsibility in this arena. The state and regional boards are mandated to protect water quality, and the Department of Pesticide Regulation (DPR) is mandated to protect the environment from environmentally harmful pesticides by prohibiting, regulating, or ensuring proper stewardship of those pesticides.

The offsite movement of chlorpyrifos is considered a discharge of waste. Water Code (WC) section 13260 requires any person who discharges waste to file with the regional board a report of the discharge, with appropriate fees, unless the regional board has issued a waiver pursuant to WC section 13269. Regional boards in production agriculture areas have approved or are working on approving such waivers for irrigated lands. The waiver is required to be conditional, which may include monitoring to verify the adequacy and effectiveness of the waiver's conditions. Each regional board is developing its own program to implement the waiver.

Some regional boards are considering requiring pesticide dischargers (growers) to adopt management practices or farm plans to protect beneficial uses of state waters. For example, the Central Coast Regional Water Quality Control Board is using a list of questions about topics such as pesticide management, irrigation water management, and erosion and sediment control to both understand the extent to which growers have adopted certain practices that protect surface and ground water and to make sure growers know what practices to adopt. If surface water monitoring shows continued contamination by pesticides, regional boards would likely tighten the waiver conditions, or ultimately issue a discharge prohibition, and/or look to DPR to take action to adopt enforceable regulations or more stringent regulations to protect surface water, or suspend or cancel registration of the pesticide.

So should DPR “determine the cause of the problem” and “educate/regulate the growers to modify or eliminate practices which cause problems”?

We believe we understand some of the causes of the problem and thus should adopt regulations in the near future for the following reasons:

(1) DPR has a legal mandate to protect the environment including surface water, it has information that additional measures to protect surface water are necessary, and it has information that specific measures could be adopted that would protect that surface water;

(2) in 2007 DPR adopted regulations to protect surface water from dormant sprays. Additional monitoring has shown that pesticides applied during the growing season contaminate surface water as well. As with dormant spray pesticides, both drift and runoff are known to be potential sources. Field studies have shown offsite movement of chlorpyrifos in both the water and sediment phases, although there are indications that offsite movement in the water phase may predominate. It is likely that the source of the residues in both cases is presence of chlorpyrifos on the surface or in the top few millimeters of the soil surface from directed unincorporated applications to the soil, residues that miss the target during foliar applications or residues that wash off the target during rainfall or overhead irrigation. The draft proposal to require holding runoff water for 72 hours after the storm or irrigation event would address both the water and sediment sources of offsite movement. However, soil incorporation of chlorpyrifos that “hides” residues from surface water runoff is another mitigation measure we are considering. If adopted, this measure would thus exempt chlorpyrifos incorporated into the soil to control root pests from the holding time or other runoff mitigation measures. To date, we do not know whether band applications can mitigate SW contamination; and (3) This rulemaking would be the next step in an evolving program to protect surface water. As additional monitoring and field study information become available, the regulatory program would be updated based on those new data.

An additional potential benefit of DPR regulations would be that regional boards could accept compliance with those regulations as an alternative waiver condition.

Comment 38. Another area of concern is how the proposed exemption for a green or sustainable program will be administered. It is likely that many growers/applicators will attempt to qualify for an exemption to avoid the regulatory impact. While the approach may have merit, further standards should be developed to establish guidelines for which approaches might qualify. Otherwise, DPR will likely get inundated with requests for exemption. Attachment II has a short definition of what constitutes a “green or sustainable program” but more specific information, perhaps related to different classes of chemical compounds and/or formulations, should be developed. Local enforcement (related to the exemption) will be very difficult without more specific criteria related to the approval of such approaches.

Response 38. As we further develop the regulations, we will determine how either the certifying agency or the pest control business itself would document compliance by the business with the standards of the certifying organization, to facilitate enforcement. We are open to suggestions by the commenter on how different classes of chemical compounds and/or formulations could influence the definition and/or standards developed for green or sustainable programs.

Comment 39. We also have questions related to the drift management section. Drift is already regulated through the substantial drift provisions and specific label requirements. If this area is added to a surface water regulation then consistency (or lack of) and which code takes precedence may become an issue. Also, this could force opening up the substantial drift code as an unintended consequence of this propose regulation.

Response 39. 3CCR section 6000 defines "substantial drift" to mean the quantity of pesticide outside of the area treated is greater than that which would have resulted had the applicator used due care. This definition is applicable to section 12972 of the Food and Agricultural Code and section 6614 of Title 3, California Code of Regulations.

The purpose of adopting drift control language in the surface water regulations is to give growers a more specific and consistent standard about what the definition means by "due care" with regard to surface water protection. Another purpose is to address drift where it has not been adequately addressed on labels because the Spray Drift Task Force data were not available when a particular reregistration eligibility decision (RED) (that requires specific label language) was issued. The latter case would justify inconsistency between labels and the draft SW regulation. In the case of differing drift control measures on the label vs. the SW regulation, presumably the more stringent requirements would apply.

Regarding the question of whether the surface water protection drift regulation language or the "substantial drift" regulation language would take precedence, arguably both sections of the regulation would be used in the investigation. The first question would be to determine if the applicator followed specific label requirements and the surface water drift control regulations. If not, then appropriate actions would be taken for not meeting those label or regulation requirements. The investigation could also determine whether the resulting surface water contamination is greater than that which would have resulted had the applicator used due care, above and beyond the label and surface water drift control regulation violations.

Comment 40. The proposed restrictions do not include any measures to control pesticide discharges to surface waters via municipal wastewater treatment plants. This may not be under the purview of DPR's legal authority.

Response 40. Although we would expect a reduction in pesticides residues flowing into municipal wastewater treatment plants as a result of these regulations, DPR does not have the authority to control pesticide discharges to surface water from municipal wastewater treatment plants.

Comment 41. The language in (a)(1) gives the impression that airblast applications can be made within 25 feet of any sensitive aquatic site. Two options for clarifying this: (i) Add "[see (a) (2) below]" after airblast, or (ii) start with aerial application first, followed by airblast, and then ground application. The comment also addressed equivalent sections in the nonagricultural area.

Response 41. The text was modified to clarify this point.

Comment 42. The 25-, 100-, and 150-foot buffer zones for specific applications sound reasonable. Is there any basis for selecting these numbers?

Response 42. These buffer zones are based on a review of U.S. Environmental Protection Agency (EPA) Reregistration Eligibility Decision (RED) documents for a number of pesticides. These values are based on the AgDrift model, developed by the Spray Drift Task Force and used by pesticide registrants and EPA to establish buffer zones to protect nontarget areas against drift. The 25-, 100-, and 150-foot values are representative values from the REDs and pesticide labels. A number of pesticide labels specify longer buffer zones, which would apply in lieu of the distances specified in the DPR regulation.

Comment 43. Add “including vegetation management operations” after forestry applications in (a) (3).

Response 43. Since applicators understand that most forestry applications are for the purpose of vegetation management, we do not believe this change is necessary.

Comment 44. One of the factors controlling pesticide drift is wind speed. Is there any basis for selecting wind speed between three and ten miles per hour?

Response 44. Since windspeed is not addressed in the latest draft concepts, this comment no longer applies.

Comment 45. Add at the end of (a) (5) “The application should adhere to the 150 feet buffer zone for sensitive aquatic sites as specified in (a) (3).”

Response 45. Since the 150-foot aerial application buffer zone requirement is specified in the same section of the regulations, we believe it is clear that this applies to dormant aerial spray applications as well.

Comment 46. Add “pursuant to the Statewide general National Pollutant Discharge Elimination System (NPDES) permits adopted by SWRCB after “intentional applications to water” in (b) (10). The information on these permits is available at the SWRCB Web site:

http://www.waterboards.ca.gov/water_issues/programs/npdes/aquatic.shtml.

Response 46. It is conceivable that by policy some intentional pesticide applications to water, such as artificially constructed fish ponds in city parks or backyards, may not require NPDES permits, and thus would not qualify for the exemption. In addition, while we recognize that there may be a number of additional provisions in various current and potential future state statutes, regulations or local ordinances that may apply to intentional application to water, the eventual surface water regulations could only be enforced by authority provided by the pesticide provisions of the Food and Agricultural Code. Thus, we have decided not to add the suggested language.

Comment 47. Under (b) “Invasive non-native riparian species control” may be added as # (12).

Response 47. We would like more information about why we should exempt “invasive non-native riparian species control” from the drift management measures.

Comment 48. Add “and timber (including vegetation management operations in forest lands)” after “agricultural commodity” in (a) (1).

Response 48. “Timber” is not an application site classification used in either the pesticide use reporting system or apparently on labels registered for forestry use. Applicators that treat forestry sites are aware that forestry applications are classified as “agricultural production” applications, and that most forestry applications are for vegetation management.

Comment 49. Replace the word “dormant” with “pesticide” in (a) (1). This recommendation should apply to all situations, including dormant applications.

Response 49. We initially limited this stormwater provision to dormant applications for the following reasons: (1) more of the applied pesticide would be intercepted by foliage during the nondormant season and thus less would reach the ground where it would be available for runoff, and (2) some pesticides are purposely applied before a rain event during the nondormant season to protect fruit and/or foliage from disease that could be caused by the rain itself. However, we have decided to make the suggested change and see what comments we receive from interested parties.

Comment 50. Is there any basis for selecting the 48-hour window period in (a) (1)? Does the forecast have to be National Weather Service (NWS) specific? Is there any Web site link to the NWS, and will it be provided in the proposed restrictions.

Response 50. 48 hours was selected because weather forecasts become less reliable at longer intervals. The NWS is referenced as the standard so that both users and enforcement personnel would use the same forecasting data. Pesticide labels that specify weather forecasting also reference the NWS. CAC staff do not have the expertise, or the resources, to approve alternate forecasting on a case-by case-basis. There is a Web site link to the NWS but we cannot reference it in regulation because if the link changes, we would have to change the regulations.

Comment 51. The DPR Director should consider the ecotoxicology and biodegradation issues associated with the treatment technology/product, as well as the toxicity of the pesticide breakdown products during the approval process.

Response 51. Since the treatment technology/product is not likely to be a pesticide, the Director does not have the authority to require specific information about the technology/product to be submitted. However, DPR would review all available information about the product, including its aquatic toxicity and the toxicity of any breakdown products that would be produced, and seek comment by state agencies, such as via the Pesticide Registration and Evaluation Committee, to ensure that use of the product would not adversely impact water quality. In addition, the text was modified to

state that DPR will consult with SWRCB before a final decision on the use of the treatment product is made.

Comment 52. The user of treatment technology/product should notify the local CAC of its use, and this information should be available to DPR and local regional boards.

Response 52. Since the product is not likely to be a pesticide, neither the Director nor the CAC would have authority to require notification of its use. The Director will consult with SWRCB before approving use of any technology/product used to treat contaminated runoff.

Comment 53. The 72-hour retention time may be a minimum requirement with an understanding that it may not be appropriate for all pesticides of concern. As data become available pesticide and site-specific retention times should be developed.

Response 53. The primary purpose of the retention time is not to allow for degradation of the pesticide but to prevent a large mass of pesticide residues from entering surface water all at once during a storm event. Except for crops such as rice or where water is held in a drainage pond, holding water longer than 72 hours is likely to cause crop damage.

Comment 54. The language in (C) needs some clarification. Title 3, California Code of Regulations (3CCR) section 6800(a) lists seven herbicides (atrazine, simazine, bromacil, diuron, prometon, bentazon, and norflurazon) that have been detected in ground water due to agricultural use pursuant to the Pesticide Contamination Prevention Act. All these herbicides, except prometon are proposed to be included for the draft restrictions for surface water protection. Prometon was excluded since its lowest toxicity benchmark is over 50 ug/l (ppb). 3 CCR section 6487.4 states that agricultural, outdoor industrial, and outdoor institutional use of these herbicides shall be prohibited in runoff ground water protection areas unless one of the eight listed management practices are met and designated by the CACs on the permit. Apparently the language in (C) does not apply to the conditions of 3CCR section 6487.4 during the months of August and September. Please also note that section 6487.4 requirements also apply to outdoor industrial and outdoor institutional uses, which are not covered under this section of the proposed restrictions.

Response 54. We have reworded this section to clarify that if pesticides also listed in section 6800(a) are applied during the period April 1 through September 30, compliance with the 72-hour holding period is required. In addition, we have added the alternative provision for pesticides also listed in section 6800(a) to the “nonproduction” section as well.

Comments 55. We recommend deleting (3) (A). The requirements of (3) (A) can be incorporated into (2) (B) by adding “or irrigation” after “rain” in the first line and deleting “rain” from the second line. We (also) recommend deleting (3) (B). The requirements of (3) (B) are identical to the requirements of (2) (A).

Response 55. We have decided to keep the rainfall and irrigation runoff provisions in separate sections because they differ. There is a second rainfall runoff mitigation measure for surface water pesticides also listed in section 6800(a) and used in ground water protection areas. We also added an introductory phrase to paragraphs (B) and (C) to clarify the purpose of each.

Comment 56. Under (b) (7) if immediately after application the pesticides are incorporated into soil through the use of irrigation water, then there should be no runoff from the treated field.

Response 56. We have revised the text to clarify that if incorporation is by irrigation, irrigation should be applied at rates and a duration that do not result in runoff.

Comment 57. Delete “rangeland sites” from (b) (11).

Response 57. That change was made.

Comment 58. We were unable to locate the requirements of 3CCR section 6964 cited under (c). What are these requirements?

Response 58. For these draft surface water protection “concepts,” we decided to avoid using section numbers to convey to the interested parties that we are not locked into a specific regulatory structure and truly open to all suggestions for addressing surface water protection. We inadvertently associated the requirements to protect surface water from runoff with a potential section 6964.

Comment 59. What is the logic of citing 3CCR section 6556(d) in (c) (1)? This section merely states “Criteria used for determining the need for the recommended treatment.” It appears to be redundant.

Response 59. 3CCR section 6556(d) requires recommendations written by licensed pest control advisers to include the criteria used for determining the need for the recommended treatment. The purpose of the language in (c)(1) is to further define what those criteria must include.

Comment 60. It seems that restricting pesticide application may be a prudent measure to prevent runoff in situations where soil moisture is at field capacity and /or a storm event is predicted. For this reason, implementation of the “surface water quality management plan” mentioned in (c) (2) may not be protective enough.

Response 60. This regulatory concept would require the Director to approve the various organizations that would in turn approve the plans that would serve as surface water quality management plans. The Director would not approve these organizations unless they demonstrated that the plans would be the equivalent of the requirements specified in regulation.

Comment 61. In (c) (2) the phrase “adversely affect water quality” is ambiguous and very judgmental. We suggest replacing it with “protect beneficial uses of water and not exceed the numeric or narrative water quality objectives.”

Response 61. DPR’s authority comes from the Food and Agricultural Code, which gives us only general authority to protect the environment by prohibiting, regulating, or ensuring the proper stewardship of pesticides. Although our regulatory actions here are intended to protect the environment and to assist SWRCB in meeting its numeric or narrative water quality objectives, it is more appropriate to do so under our own statutory mandates rather than those of SWRCB.

Comment 62. Provide some specific examples of agricultural uses which are non-production.

Response 62. In the context of the draft surface water concepts, “nonproduction” includes both nonproduction agricultural applications and nonagricultural applications. Examples of nonproduction agricultural applications are cemeteries, ditches and ditch banks, farm roads, golf courses, greenbelts, ground water recharge ponds, highway medians, irrigation canals, parks, railroad shoulders, recreation areas, lakes, rivers, streams, reservoirs, roadsides, and rights-of-way. Examples of nonagricultural applications are airports, apartments, hospitals, libraries, lumber yards, mosquito abatement districts, retail nurseries, office complexes, schools, sewage and water treatment plants, and shopping malls.

Comment 63. In (a) (2) the maximum treatable height of three feet appears to be more than sufficient for structural pest control purposes. In some situations, pesticide washoff from the lower portion of vertical wall may be as significant as runoff from horizontal surface, since the lower portions of most urban walls are not protected from rain.

Response 63. In the absence of additional data, we decided to be consistent with the label amendments that U.S. EPA is proposing to mitigate offsite movement of pyrethroids. These label statements were expected to be in place by December 2009.

Comment 64. In (a) (3) please add “In general, proper pesticide cleanup and disposal procedures should be followed to protect water quality,”

Response 64. These elements are already covered in 3CCR section 6600 (General Standards of Care) and on every pesticide label, which is enforced pursuant to section Food and Agricultural Code section 12973 (the use of any pesticide shall not conflict with labeling).

Comment 65. Under (a) (6) is there a reference for the ten feet buffer zone, and whether the term drain applies specifically to the city-owned storm drain inlet.

Response 65. We believe the ten-foot buffer zone would apply to any city-owned storm drain inlet.

Comment 66. Since the draft restrictions are intended to address pesticide drift and runoff measures are to protect surface waters, they should apply to all relevant pesticide applications as protective and precautionary measures. Attachment I lists pesticides which have already been detected in surface waters of the State more than once. Consequently these pesticides have already proven that they have a high potential to contaminate surface water. The restrictive measures will hopefully prevent further surface water contamination from these selected pesticides. However, the draft regulation could be improved if it included a mechanism to identify pesticides with high potential to contaminate surface water in a manner that is preventive rather than reactive, i.e., an approach that does not rely on having monitoring data to identify problems after they occur. This approach would take care of data gaps caused by the lack of pesticide analytical methods at environmentally relevant detection limits for many pesticides, as well as budget constraints that preclude water quality monitoring for all pesticides of potential interest.

Response 66. We agree and continue to seek and test methods and models that could help identify pesticides that have the potential to contaminate surface water before that contamination occurs.

Comment 67. We hope that DPR's Surface Water Database include water quality monitoring data from SWCRB's Surface Water Ambient Monitoring Program, and the Irrigated Lands Regulatory Program.

Response 67. We actively seek and encourage reporting of all results of surface water monitoring in California, including results from the programs mentioned. We include that information as it becomes available.

Comment 68. It should be specified that all intentional applications of terbuthylazine to water should be pursuant to the Statewide general NPDES permit.

Response 68. See response 47.

Comment 69. Current regulations for thiobencarb use in rice field do not appear to be sufficient to protect water quality. Recent monitoring data from Sacramento River watershed include quite a few findings of thiobencarb at concentrations greater than the lowest benchmark limit of 1 ug/l (ppb).

Response 69. Thiobencarb detections are being addressed in a separate forum involving the rice industry, DPR and the Central Valley Regional Water Quality Control Board.

Comment 70. Molinate is excluded from the list since its use will no longer be allowed after August 2009. This case proves the importance of evaluation and screening of pesticides as potential water quality contaminants at the initial registration stage. This

approach would avoid the water quality problems which are currently being tackled by the Water Boards for legacy pesticides, such as DDT. The Central Valley Water Board is in the process of developing a Basin Plan amendment to establish Total Maximum Daily Loads (TMDLs) to address legacy organochlorine pesticides in several Central Valley waterbodies.

Response 70. We agree. See response 67.

Comment 71. The benchmark approach could be improved if it employed water quality criteria for aquatic life protection as the preferred aquatic life comparison values. Water quality criteria are more robust for water quality protection than USEPA's aquatic life benchmarks, which are normally based on fewer data. Only when water quality criteria do not exist (which is the case for most pesticides) then the USEPA Office of Pesticide Program's (OPP) aquatic life benchmarks and ECOTOX data are very appropriate to use as proposed in the draft restrictions.

Response 71. We agree and will use water quality criteria when they are available.

Comment 72. California has several State-specific water quality criteria, such as the ones developed by the California Department of Fish and Game (DFG) for hazard assessments to aquatic organisms. Since these values were developed by employing the water quality criteria methodology, they are more robust than the OPP's aquatic life benchmarks. These values are in DFG-prepared documents that are posted on DPR's Web site: <http://www.cdpr.ca.gov/docs/emon/surfwtr/hazasm.htm>

Response 72. There are DFG hazard assessments for 17 of the 71 pesticides detected in surface water and reviewed, along with their associated salts, amines, esters, etc. for the DPR surface water regulatory concepts. To compare the various DFG toxicity values developed in the hazard assessments with the toxicity values used in the DPR screening, only DFG toxicity values measured on the active ingredient were used unless there were only data for formulated products. The lowest values to protect human health or aquatic organisms used in the initial DPR screening were compared with the lowest values to protect aquatic organisms developed in the DFG hazard assessments. We computed the ratio of the lowest DFG value to the lowest DPR value. Ratios of less than one indicate that DPR values were less protective of aquatic organisms than the DFG values. The ratios ranged from 0.03 for cypermethrin to 173,000 for 2,4-D. The median ratio was 6.2. Although the DFG values were lower for carbofuran, chlorpyrifos, cypermethrin, S-cypermethrin, diazinon, methidathion, methomyl, and methyl parathion, they did not result in any change in the list of pesticides subject to the draft surface water protection concepts.

Comment 73. The exclusion of pesticides with benchmark or protection level of greater than 50 ug/l (ppb) does not appear to be the most protective approach. It is not clear why this exclusion is included in the draft restriction. Some of the excluded pesticides are highly water soluble and used in large volumes in urban areas. It is theoretically possible

that they could be detected in surface waters at concentrations exceeding 50 ppb threshold.

Response 73. Although it is possible that pesticides could be detected at concentrations exceeding 50 ppb, it is not very likely. The goal of the initial surface water protection program is to address the most significant threats and risks. The program is expected to evolve over time as more information becomes available.

Comment 74. We have several comments on the definition of “sensitive aquatic site.” Not all waterbodies may be designated or listed in the regional water quality control plan (Basin Plan). The proposed restrictions should apply to waterbodies named in the Basin Plan and those that are not mentioned. For instance, in the Central Valley Region, only a small fraction of the waters is designated in the Basin Plan. The definition should accommodate the application of “Tributary Rule,” which states that those waters not specifically listed (generally small tributaries) are designated with the same beneficial uses as the streams, lakes, or reservoirs to which they are tributary. Some regional boards may consider estuaries, wetlands, ephemeral drains, playas, and washes as sensitive aquatic sites. The San Francisco Water Quality Control Board considers all surface waters in the region as sensitive. For these reasons we recommend that the local regional board staff should be consulted in determining sensitive aquatic sites.

Response 74. We revised the definition of “sensitive aquatic site” to conform to the current definition in section 6000 of Title 3 of the California Code of Regulations as revised to be consistent with the statutory mandates specified in the Food and Agricultural Code for regulating pesticides. In addition, the intent of the regulatory concepts is to protect all sensitive surface water, not to list actual water bodies.

Comment 75. The phrase “adversely impact” in the definition of “Sensitive aquatic site” is ambiguous and judgmental.

Response 75. DPR’s authority comes from the Food and Agricultural Code which gives us only general authority to protect the environment by prohibiting, regulating, or ensuring the proper stewardship of pesticides. Although our regulatory actions here are intended to protect the environment and to assist SWRCB in meeting its numeric or narrative water quality objectives, it is more appropriate to do so under our own statutory mandates rather than those of SWRCB.

Comment 76. The “Surface water quality management plan” includes a “pest management component” and an “irrigation and stormwater runoff management component.” The “pest management component” is fairly well defined in detail with a list of six requirements. However, nothing is mentioned about the “irrigation and stormwater runoff component” in Attachment II, which leaves one to believe that they are comprehensively covered under the restriction listed the sections dealing with “runoff management to protect surface water.”

Response 76. The Director would be required to approve the various organizations that would in turn approve the plans that would serve as surface water quality management plans. The Director would not approve these organizations unless they demonstrated that the plans would have adequate provisions to address irrigation and stormwater runoff as a source of surface water contamination.

Comment 77. We are concerned that requiring consultations from regional board staff to determine if an Ag Drain is a “sensitive aquatic site” will create a quagmire of subjective and confusing application of this regulation.

Response 77. We revised the definition of “sensitive aquatic site” to conform to the current definition in section 6000 of Title 3 of the California Code of Regulations as revised to be consistent with the statutory mandates specified in the Food and Agricultural Code for regulating pesticides. Thus, consultation with regional board staff is no longer required.

Comment 78. DPR did not provide [sufficient] detail regarding how buffer zone sizes are determined. Where are the data to justify the width of proposed buffers for aerial drift and surface water run-off? At present, the size of the proposed buffer zones appears to be arbitrary which weakens the regulation.

Response 78. See response 42.

Comment 79. What scientific basis is used to determine how long (four weeks) a grower must divert and hold (for three days) stormwater runoff? This, too, appears arbitrary and diminishes the regulation.

Response 79. The four-week period was chosen as a policy decision to balance a longer period that would result in more complete breakdown of residues but be more difficult for an applicator and enforcement staff to track, and a shorter period that is more likely to result in unacceptable offsite movement of residues. Arguably, DPR could establish different holding times for each pesticide or group of pesticides based on degradation half-lives and other factors. But this would result in a complex regulatory scheme that would complicate both compliance and enforcement of the regulations. It should also be noted that this regulation is the first step in a process that is expected to evolve as we gather additional data and other information that would allow us to make adjustments to the program.

Comment 80. Who makes the determination about when soil moisture is at field capacity? While field capacity is generally known for a particular soil type, how will DPR staff enforce this regulation?

Response 80. The property operator would make that determination. The purpose of this provision is to establish the principle of avoiding application prior to rainfall events that are likely to result in runoff. Field capacity is used as an indicator that soils cannot hold

additional water, which means runoff is more likely. CAC field staff would use their discretion to educate applicators on this point and to take enforcement action if necessary.

Comment 81. What is a grower supposed to do if/when his field contains multiple soil types with different holding capacities? Which field capacity will establish the compliance standard?

Response 81. See response to previous comment.

Comment 82. The 48-hour waiting period for making an application prior to a rainfall event will essentially render many herbicides useless. This requirement is rather nonsensical since many herbicides are intentionally designed to be incorporated with rainfall or sprinkler irrigation water. For example, the efficacy of the following herbicides: Bromacil, Diuron, Pendimethalin, Simazine, and Trifluralin, will be substantially decreased. Is this a disingenuous attempt to prevent the use of these compounds without actually canceling the registrations?

Response 82. We are reviewing ways that we might allow applications before rainfall if the amount of forecasted rainfall is insufficient to cause runoff. While it may be beneficial to take advantage of any rainfall that follows after application for incorporation, for most herbicides rainfall is not needed within the first 48 hours after application for incorporation. Rainfall that occurs after the first 48 hours following application also incorporates the residues into the soil. In the ground water arena where runoff is one of the pathways resulting in ground water contamination, we generally recommend that applicators not rely on rainfall for incorporation because, based on review of rainfall events, there is more likely to be either too little (not properly incorporated and thus still available for offsite movement during a subsequent high rainfall event) or too much rainfall (causing the very offsite movement of residues we are trying to mitigate) for proper incorporation.

Comment 83. The requirement that an enzymatic breakdown product must be used is intriguing. Are such products commercially available? We have not found that to be the case. Currently, we are conducting demonstration trials with Landguard, which hydrolyzes organophosphate pesticides. However, at present, there is not a U.S. manufacturer or marketer for this product.

From a development point of view, it is interesting to see the language about the use of enzymatic breakdown products, when, in general and to date, government grants (e.g. from DPR or EPA) have concentrated on pesticide use reductions or reduced alternative pesticides rather than on pesticide mitigations. Consequently, little work has been done to develop pesticide mitigations. Lack of funding support is one reason there are so few commercially available mitigation products currently available.

Response 83. We agree. If such a product becomes available and is approved by the Director, this provision would allow its use.

Comment 84. We propose the following alternative language “Apply the pesticide only if the best available mitigation technology has been utilized”. This language does not limit mitigation options to enzymatic products; but, instead provides an incentive for private industry to develop multiple mitigation technologies and innovations.

Response 84. DPR encourages development and use of alternative mitigation measures. However, we would need to review the data demonstrating the effectiveness of the “best available technology” before we could allow its use as an acceptable mitigation measure. The DPR ground water regulations allow the Director to approve alternative mitigation measures that have been demonstrated by data to be effective. The Director can adopt these mitigation measures by policy that allows immediate use without the time-consuming formal rulemaking process. We will consider adopting that same provision for the surface water regulations.

Comment 85. The four week period for rainwater retention can potentially conflict with Food Safety requirements. The California Leafy Green Marketing Agreement reads “Locate production blocks to minimize potential access by animals of significant risk and maximize distances to possible sources of microbial contamination. For example, consider the proximity to water (i.e., riparian areas), animal of significant risk harborage, open range lands, non-contiguous blocks, urban centers, etc. Periodically monitor these factors and assess during preseason and preharvest assessments as outlined in Tables 5 and 6. If the designated food safety professional deems that there is the potential for microbial contamination from adjacent areas, a risk assessment shall be performed to determine the risk level as well as to evaluate potential strategies to control or reduce the introduction of human pathogens.”

Response 85. We want to clarify that the actual holding period is three days, not four weeks. But the three-day holding period is triggered by any rainfall that occurs within four weeks of application. This comment illustrates the importance of notifying and seeking input from all the interested parties that may be impacted by these surface water regulations.

Comment 86. It appears there is room to improve coordination between agencies. Agencies need to provide growers with adequate tools to comply with these regulations. For example, if a grower does not have a catchment basin, he may or may not need to apply for multiple permits in order to construct a basin. If a permit is required, this could take multiple years and thousands of dollars as he runs the permitting gauntlet. In the meantime, how will a grower farm and simultaneously comply with this regulation?

Response 86. It is our understanding that growers also construct holding basins to help meet sediment water quality objectives enforced by regional boards. However, if a constructed basin requiring a permit is the only way to meet this surface water regulation, we would be required to assess the cost impacts of either that construction and permitting process or the cost (and loss of revenue) impacts of not being able to use the pesticides we regulate to protect surface water. Any data on costs of construction and maintaining holding basins stakeholders provide to DPR will be helpful in conducting our analysis of

impacts of the regulations. The results of that analysis would be used to make policy decisions about how to proceed with the regulations.

Comment 87. The creation of water catchment basins could potentially create endangered species habitat. Has DPR initiated discussions with wildlife regulatory agencies to ensure that growers may clean out sediment basins and maintain their property without “taking” endangered species that move into mandated catchment basins? One idea would be that DPR and California Department of Fish and Game jointly create a multi-species Safe Harbor Agreement specific to water catchment basins.

Response 87. We plan to seek input from agencies that regulate endangered species. In addition, the DPR Endangered Species Program has a long and successful history of coordinating development of pesticide mitigation measures with these agencies. We should also note that these regulations would require water to be held for a relatively short time, thus minimizing the time that endangered species may become established.

Comment 88. Has DPR discussed the impacts of reduced fresh-water runoff to aquatic, amphibious, bird, plant and wildlife in coastal lagoons and estuaries? What are the contingency plans for 20% diversion of freshwater? 40% diversion? 60% diversion? Loss of endangered species habitat as a result of retained freshwater supplies is an unexplored and unintended consequence of regulations which mandate water diversions and retention.

Response 88. The draft surface water concepts would require runoff water to be held for three days, after which it could be released. So except to the extent that some water may leach into the soil during the holding period, most of the water would be released to flow into the sites mentioned by the commenter.

Comment 89. We have concerns about conflicting and duplicative regulations, as well as the cumulative effects of single-discipline regulation.

Conflicting regulations - are growers going to comply with DPR regulations [that] just conflict with Food Safety, Endangered Species or Water Quality regulations?

Response 89. We will attempt to address potential conflicts with existing regulations.

Comments 90. A “One Size Fits All” approach should be avoided – For example, some coastal counties have complex land use ordinances which could conceivably prohibit growers from constructing catchment basins. The DPR surface water regulation does not take local restrictions into account. How should a grower reconcile this?

Response 90. One of the purposes of seeking comments on the draft regulatory concepts is to learn about problems growers might have in complying with the regulations, and to consider alternatives that might be more feasible. We are interested in learning about specific ordinances that may be problematic.

Comment 91. Duplicative regulation – Does the need really exist for *both* the DPR surface water regulations and the Conditional Ag Waiver for Irrigated Lands? This duplication will lead to regulatory confusion, subjectivity and conflict. It would seem, in this economic and budgetary climate that responsible governance would require *less* duplication rather than the opposite.

Response 91. See response 28.

Comment 92. Cumulative burden - Each resource agency (pesticide, air, water, wildlife, and waste) has a separate set of regulatory codes. The regulations, in and of themselves, seem reasonable and may not create an economic burden. However, what are the impacts of the cumulative regulatory burden to the agricultural industry? At what point will this be assessed? Where is the determination of the economic tipping point? Where is the analysis of when industry can no longer absorb the cost of increased regulation and remain viable? Again, it would seem that good governance would demand this sort of social cost/benefit analysis before imposing, yet, another regulation.

Response 92. Individual agencies adopt programs according to the legal authorities and mandates enacted by the Legislature and Governor. When these agencies adopt regulations to implement these programs, they must follow the requirements of the Administrative Procedures Act as interpreted by the Office of Administrative Law. To the extent that issues like cumulative burdens are not addressed by current law or current implementation of the law, there may be a need for statutory relief via the Legislature or judicial relief via the Judiciary.

Comment 93. A pest control adviser believes that pesticide surface water runoff originates from poorly written and out-of-date labels and from poorly informed applicators and end-users. If the pesticide label is adequate and pesticide applicators and pest control advisers are properly educated and informed, then much of the pesticide runoff issue will be eliminated.

Response 93. We agree that label language can be improved to address surface water protection. U.S. EPA is implementing a label improvement program that will help address this issue. Although U.S. EPA has exclusive authority to change labels, DPR uses every opportunity to provide feedback for label improvement. Proper education and outreach are also critical parts of any successful surface water protection program.

Comment 94. I do not believe that drift is a significant source of pesticide contamination of surface water. Thus there is no need to regulate drift as part of the DPR surface water regulations.

Response 94. There are a number of reasons we believe drift is a potential significant source of surface water contamination. The following are examples: EPA addresses drift as a potential source in the RED documents issued for individual pesticides. For example, the RED for diazinon requires the following label statement:

“This product is highly toxic to birds, fish and other wildlife. Birds, especially waterfowl, feeding or drinking on treated areas may be killed. Do not exceed maximum permitted label rates. Rates above those recommended significantly increase potential hazards to birds, especially waterfowl. Keep out of lakes, streams, ponds, tidal marshes and estuaries. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Shrimp and crab may be killed at application rates recommended on this label. Do not apply where fish, shrimp, crab, and other aquatic life are important resources. Do not contaminate water by cleaning of equipment or disposal of equipment wash water. This pesticide is highly toxic to bees exposed to direct treatment or to residues on blooming crops or weeds. Do not apply this pesticide or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.”

In addition, in a 1992 study to assess the deposition of methyl parathion from an aerial application in agricultural drains adjacent to a rice field, DPR staff concluded that offsite deposition may result in significant levels of methyl parathion in agricultural drains adjacent to the application site. Patterns of deposition implicated aerial application.

In a recent surface water monitoring study, one of the agricultural water quality coalitions detected chlorpyrifos exceeding its water quality objective in surface water from an airblast sprayer application where runoff was ruled out as a source of residues.

Drift is a particular concern for pesticides with very high aquatic toxicities where a very small amount drifting onto a water body is enough to violate water quality objectives.

