Conformed Response to February 18, 2011 Comments

Draft Statewide General National Pollutant Discharge Elimination System (NPDES) Permit for Residual Pesticide Discharges to Waters of the United States from Aquatic Animal Invasive Species Control Applications

State Water Resources Control Board
March 1, 2011

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A. Comment Letters Received

Letter Number	Affiliation	Representative
1	Association of California Water Agencies	Mark S. Rentz
2	City of Los Angeles Department of Water and Power	Katherine Rubin
3	Californians for Pesticide Reform Environment California Health and Habitat Mothers of Marin Against the Spray Pesticide Action Network of North America Pesticide Free Zone Pesticide Watch Education Fund Safe Alternatives to Pesticides Safety Without Added Toxins (SWAT) San Francisco Baykeeper Stop the Spray East Bay	David Chatfield Dan Jacobsen Sandy Ross Debbie Freidman Katherine Gilje Ginger Souders-Mason Paul S. Towers Nancy Jamello Karen Laslo Jason Flanders Nan Wishner

B. Responses to Comments

General Comment

Staff revised the responses to the comments below to include staff's responses to the State Water Board members' questions at the March 1, 2011 Board meeting, and to make the responses consistent with the adopted permit,

1. Comment Letter 1 - Association of California Water Agencies

Comment 1.01:
It is critical to recognize that the aquatic pesticides and herbicides applied by ACWA members and others are applied intentionally to surface water and are registered for just that purpose. They have had toxicity testing performed on aquatic species as a condition of their USEPA and CA DPR registration. Conclusion: Water Quality Objectives (WQOs) for aquatic pesticides and herbicides and the associated restrictions set forth on the product label have been created to protect aquatic species and beneficial uses.

Response:
Receiving Water Limitations set in the permit are for active ingredients only and do not apply to inert ingredients and additive and synergistic effects from the pesticide products with other constituents in the receiving water. Also, the restrictions on the product label are not adequate to protect the beneficial uses of California's surface waters.

Comment 1.02:
While Water Board staff has identified pesticides as the second most significant impairment of waterbodies in California, such impairments are associated with unintentional drift and surface runoff. Examples of these are historical detections of the organophosphorous insecticides and more recently detections of the pyrethroid insecticides by Don Weston (UC Berkeley) and others in places like Arcade Creek in Sacramento. These insecticides were never intended for use in water and never subjected to toxicity testing to allow for their registration for use in water. We are unaware of data from relevant sources (303(d) list, SWAMP, CIWQS, CEDEN, etc) that indicates that aquatic herbicides are the cause of impacts to water quality. An exception is copper for which there are multiple sources (brakes, paint, plumbing, etc.). Conclusion: Applications of pesticides and herbicides by ACWA members and others specifically approved by USEPA and DPR for direct applications to water have not contributed to waterbody impairments.

Response:
Noted.

Comment 1.03:
Aquatic pesticides and herbicides are used in moving water, often in canals or ditches that may be as long as 75 miles. Conclusion: Dilution, degradation and the common use of this water for irrigation are reasons why aquatic herbicides are not found shortly after they are intentionally introduced into water. Because of the transient nature of water in which aquatic pesticides are applied, toxicity

testing before and after a pesticide application will not measure conditions attributable to the application event.

Response:
At its March 1, 2011 meeting, the State Water Board decided to remove toxicity testing by dischargers. Instead, the State Water Board will initially fund toxicity studies using funds available to the State Water Board. The permit allows for reopening and modification to incorporate toxicity monitoring requirements if the State Water Board-funded toxicity study shows such requirements are necessary.

Comment 1.04:
The NPDES permit for aquatic herbicides has been in place since 2002 and resulted in more than 2,000 sample analyses. Very few incidents involving exceedances of WQOs were identified. See attached graph. Conclusion: The sampling results support the conclusion that additional sampling is unwarranted. We believe that similar sampling protocols and laboratory analysis will suffice for the AAIS Control Permit.

Response:
Active ingredients covered by the Weed Control Permit and AAIS Control Permit are different and therefore, conclusions on sampling protocols from the Weed Control Permit cannot be applied to the AAIS Control Permit.

Comment 1.05:
Staff informed us that their primary justification for toxicity testing is with ingredients (primarily "inerts") contained in pesticide products that are not listed on the label. As we discussed, this concern was raised and addressed during the development of the aquatic weed permit with input from Deltakeeper and Water Board staff. The consensus was that a surrogate would be used to assess the presence of “inerts” or adjuvants. This surrogate is nonylphenol. Just like the legitimate use of surrogates, such as ceriodaphnia, exists in toxicity testing, chemical surrogates such as nonylphenol used in the existing aquatic weed control permit are a legitimate approach to evaluate for the presence and impacts of inerts. Conclusion: A scientifically sound method is in place to assess inerts and adjuvants. Nonetheless, if staff believes that additional or other surrogates need to be analyzed, that is a discussion we are most willing to pursue.

Response:
There is nothing in Weed Control Permit or SFEI’s reports (Aquatic Pesticide Monitoring Program Final Report and Phase 3 (2004) Bioassessment of Waterbodies Treated with Aquatic Pesticides) that describes the use of surrogates. Even if surrogates were used, they would not provide the combined effects of the product ingredients, their degradation byproducts, and pesticides in the receiving water.

Comment 1.06:
ACWA encourages the SWRCB to remove the numeric receiving water limitations for chlorine and the toxicity testing requirements from the subject permit. Chlorine residual monitoring included in the draft permit provides a monitoring approach that is consistent with monitoring currently required under

the Weed Permit, and in other existing NPDES and MS4 permits for potable water discharges. This approach provides a greater opportunity to analyze and determine whether adverse impacts associated with a specific application have occurred, and if so, ensure a timely response to minimize the impacts, and modify future operations to avoid repetition.

Response:
The numeric receiving water limitation for chlorine is for residual chemical pesticide monitoring similar to monitoring required under the Weed Permit. Toxicity testing requirements are needed to implement the Regional Water Boards' Basin Plan narrative toxicity objective of "no toxics in toxic amount" by assessing additive and synergistic effects of the active ingredient, inert ingredient, and degradation byproducts in the receiving water.

Comment 1.07:
Monitoring obligations under a NPDES permit should focus on the presence of chemical(s) being introduced into water, as authorized by the NPDES permit. The use of toxicity testing is not appropriate as part of a compliance permit because toxicity testing is intended to determine general toxicity in the water body, not the presence of residual pesticides. When measuring toxicity, information is gathered on impacts to an organism from the entire water column, not just the presence of a specific chemical. There may be toxicity contributions to the water column from other than that caused by the chemical intentionally introduced. This causes confusion. The causes of toxicity are extremely difficult to determine, the process is expensive and the answer is often "unknown cause of toxicity." Conclusion: Toxicity testing is not a good tool to determine compliance associated with approved application of specific pesticides. Analytical chemistry, as required under the existing weed control permit, is the most appropriate tool for assessing whether specific applications are adversely affecting water quality (I.e. exceeding WQOs).

Response:
The permit requires chemical testing. See Response to Comment 1.03 regarding toxicity testing.

Comment 1.08:
The AAIS Control Permit (i.e. application of sodium hypochlorite to control quagga mussels) states that toxicity testing is not required. However, the provisions of the permit include numerous references and instructions for toxicity testing. This can be very confusing for potential permittees. Recommendation: We recommend removing all the provisions that reference toxicity testing. If, at a future date, such testing is warranted (e.g. new pesticides are approved to control invasive animal species), staff can take advantage of the reopener provision to address whether toxicity to require toxicity testing. It should also be noted that the revised permit does not provide for an expedited process for reopening the permit, as discussed at the November 2010 Water Board hearing and our previous comments.

Response:

References and instructions for toxicity monitoring required by the discharger have been deleted. See Response to Comment 1.03.Comment 1.09:

The aquatic invasive animal permit is currently written to allow for the use of chlorine. Chlorine, like aquatic herbicides, is intended for use in water, has known aquatic toxicity and corresponding WQOs, and is not combined with any inerts. Conclusion: We do not believe toxicity testing associated with these applications is warranted. The monitoring requirements set forth on page C-4 of the revised draft AAIS Control Permit (See "B. Sample Types") should provide sufficient analysis to ensure compliance with the established WQOs.

Response:

The pesticide products covered by this permit contain inert ingredients, which do not have receiving water limitations. Also, see Response to Comment 1.06.

Comment 1.10:

In the staff's response to our earlier comments, they stated that if discharges are covered under another permit, the AAIS Control Permit will not be required. Recommendation: We recommend language should be added to the permit, perhaps under the "Applicability" section, to clarify when an AAIS Control Permit is not required. The permit should provide a complete list of all the agencies and related permits. For example, the revised draft AAIS Control Permit fails to recognize the provisions of Department of Fish and Game plans and Regional Water Quality Control Board permits that cover chlorine for potable water discharges.

Response:

Staff revised the General Permit Application description in Section II.A, Attachment D by adding "[p]ersons subject to an individual NPDES permit or another general NPDES permit applicable to the discharge are not required to obtain coverage under this General Permit." Since this is a General Permit, it is not feasible to provide a complete list of all the agencies and related permits.

Comment 1.11:

Several ACWA members previously commented on the chlorine limits in the permit which are set at a limitation of 10 ug/L monthly average and 20 ug/L daily maximum. These levels are set well below the practical detection limits for widely used field testing methods for chlorine residual, and are below the chlorine limits in other discharge permits for potable water which is dechlorinated prior to discharge. Recommendation: We encourage staff to review the comments submitted on this issue, and reconsider the limits contained in the permit.

Response:

The numeric receiving water limitations for chlorine are set to protect freshwater and marine aquatic life. Staff is aware that receiving water limitations for chlorine are currently below the detection limits and, thus, a nondetect will be in compliance with permit requirements for receiving water limitations. Compliance with receiving water limitations are only considered at post-event monitoring, which is collected within one week after project completion. The project completion date is determined by the discharger based on the appropriate time

required for the aquatic pesticide to be effective in order to control aquatic animal invasive species.

Comment 1.12:
The permit includes a provision for public notification and posting for public comments. The requirement refers to website posting; however it is not clear as to the purpose of the posting and whether the posting is on SWRCB's website, the website of the permit applicant, or both. Recommendation: We are requesting staff to clarify this requirement.

Response:
The requirement refers to the Discharger's website. Staff has added clarification in the permit.

2. **Comment Letter 2 - City of Los Angeles Department of Water and Power (LADWP)**

Comment 2.01:
There is inherent variability associated with toxicity testing, as well as aquatic pesticide applications to water (depending upon water depth, flow rate, spot versus large-scale treatment, time of year and day). For these reasons, it has proven very difficult to monitor for pesticide residuals in the field. In addition, "short-term pulses" of toxicity may be detected in receiving water that previously demonstrated no toxicity - a further reflection of inherent variability. LADWP assumes that toxicity tests will correctly determine that a non-toxic sample is indeed non-toxic ninety-five percent of the time. This conversely means there will be false-positive results five percent of the time. Using this assumption, even if all samples are non-toxic, the probability of passing the six consecutive tests will be no more than 74 percent. Given the role of variability, the probability may in fact be even lower.

Response:
Noted.

Comment 2.02:
Determining the causes of toxicity is very difficult, which is why most California water bodies that are impaired for toxicity list the source as "unknown." Further, toxicity testing serves only to establish general toxicity in the receiving water, not the presence of residual pesticides. Rather, analytical chemistry is the most appropriate tool for assessing whether deliberate pesticide applications have adverse impacts on water quality. If the purpose of the toxicity testing requirement is to determine the presence of unknown ingredients that are contained in pesticides, other more appropriate analytical methods exist.

Response:
Toxicity testing will provide information on the effect level of toxicity in an in-stream waste concentration sample, relative to the control. Since the effect levels of background and event or post-event samples will be compared with the control, the difference in effect levels between background and event or post-event would indicate whether the application is causing or adding toxicity.

Comment 2.03:

As a public agency and drinking water supplier, protecting water quality, its beneficial uses - and public health - are of LADWP's most important missions. However, a review of the 303(d) list shows that unknown sources are responsible for most of the toxicity impairment found in the state's water bodies, not entities such as LADWP that undertake deliberate pesticide applications. The toxicity of these pesticides is known, is used for beneficial purposes, and is applied in a manner consistent with its labeling, by well-trained operators.

Response:
Noted.

Comment 2.04:
In light of the above, LADWP believes that the need for toxicity testing has not been established and suggests that the Board reconsider whether or not toxicity testing is valid for the pesticides permits. However, should the Board require toxicity testing, LADWP requests that the above-referenced section be revised as follows (proposed text shown in bold-face):

"For the first application, the discharger shall collect one Background sample and one Event sample in the application area for toxicity testing. If the Background sample result shows no toxicity, the discharger shall continue taking only Event samples until a total of ***three*** *consecutive Event sample results* (emphasis added) show no toxicity in the receiving water. Thereafter, no further testing for toxicity will be required for the active ingredient used at that representative site. "

Response:
See Response to Comment 1.03.

As stated in the previous response document, the intent of the sampling program is to select a number that will detect most events of noncompliance without requiring needless or burdensome monitoring. Table 3-1 of the EPA Region 9 and 10 Toxicity Training Tool provides guidance on the selection of the appropriate sample number. It shows that six is the minimum number of samples where there is about a 50 percent chance of detecting at least one toxic event for the three probabilities of occurrence shown on the table. Reducing the minimum number of samples to three will reduce the likelihood of detecting at least one toxic event by at least 20 percent.

Staff also used EPA's Technical Support Document for Water Quality-Based Toxics Control (TSD) to determine the appropriate number of samples that would be needed to characterize the impacts of the pesticide applications. Page 53 of the TSD recommends using a coefficient of variation (CV) 0.6 when the data set contains less than 10 samples. Table 3-1 of the TSD shows that with a CV of 0.6, the multiplying factors used to determine whether a discharge causes, has the reasonable potential to cause or contribute to an excursion above a State water quality standard begin to stabilize when the sample number is six. Stabilize means the difference between the two multiplying factors is small. For example, the difference between the multiplying factors for 1 and 5 samples is 9. For 6 and 10 samples, it is 0.8. If the minimum number of samples is reduced to 3, the

difference of the multiplying factors between 3 and 6 is 1.8. Thus, staff retains the requirement for six samples to characterize the effects of pesticide applications.

Comment 2.05:
The toxicity language in Option D excludes the next, intermediate scenario: that pre-existing toxicity may be established via a receiving water Background sample.

Response:
See Response to Comment 1.03.

Comment 2.06:
If there is pre-existing toxicity in receiving water, this significant fact must be reported to the Board for two reasons: (1) to establish a formal record of pre-existing toxicity in that specific receiving water; and because (2) pre-existing toxicity can affect a determination of toxicity resulting from a discharger's applications.

Therefore, LADWP requests that the above-referenced section be revised as follows (proposed text shown in bold-face): "For the first application, the discharger shall collect one Background sample and one Event sample in the application area for toxicity testing. If the Background sample result shows no toxicity, the discharger shall continue taking only Event samples until a total of three consecutive Event sample results show no toxicity in the receiving water. Thereafter, no further testing for toxicity will be required for the active ingredient used at that representative site. *If the Background sample result shows toxicity, the discharger shall report this to the State Water Resources Control Board (Board) within sixty days. If identifiable, all active ingredient/s that contribute to the toxicity must also be reported. If the contributing active ingredient/s cannot be identified, this shall also be reported.*

Response:
See Response to Comment 2.05.

3. Comment Letter 3 – Environmental Groups

Comment 3.01:
We commend the inclusion of 30-day public comment requirement for APAPs as reflecting sound public policy, and agree that its inclusion is required by Waterkeeper Alliance, Inc. v. EPA, 399 F.3d 486 (2d Cir. 2005).

Response:
Staff appreciates the recommendations and support from interested groups.

Comment 3.02:
The permit application fee has apparently been increased from a nominal amount of $136 to $1,120 annually. We endorse the notion of setting permit fees in an amount sufficient to ensure the proper implementation of the program. However, we do not believe the Board has shown that the discharges at issue “require minimal or no treatment systems to meet limits and pose no significant threat to water quality,” or that the amount specified will be sufficient to properly implement the program. We note that annual fees required for comparable

discharges elsewhere in section 2200, e.g., those applicable to "any discharge of toxic wastes," are much higher. Compare 23 CCR § 2200(a) & (a)(1), Category "2.A" ($13,321) or "3.A" ($4,372), with SAP p. 12 ¶ III.L; VCP p. 12 ¶ III.L; AAISCP p. 12 ¶ III.L ("*The nature of pesticides is to be toxic* ….") (emphasis added). Hence, an annual fee of $4,732 should apply at a minimum.

Response:
The annual fee for the permit is $1,200 according to the current regulation of 2200(b)(9) of Title 23, California Code of Regulation. As stated in the permit, in pesticide applications, there is no effluent per se. Thus, there is nothing to treat. Instead, application methods and BMPs are used to meet receiving water limitations.

Comment 3.03:
Antidegradation Policy. According to the revised permits, "compliance with receiving water limitations and other permit requirements will ensure that degradation of the State's waters will be temporary and that the waters will be returned to preapplication conditions after project completion. Therefore, this General Permit is consistent with State and federal antidegradation policies."

We are legally and factually concerned with the assertion that the permits "will ensure" that waterbodies are "returned to pre-application conditions" after completion of pesticide projects. The previous permit drafts had indicated that "[w]hile surface waters may be temporarily degraded; water quality standards and objectives *will not be exceeded*. The nature of pesticides is to be toxic in order to protect beneficial uses such as human health. However, compliance with receiving water limitations *is required*. *Therefore*, this General Permit is consistent with State and federal antidegradation policies." (emphases added). We believe that the earlier statement is legally correct and should be retained. Further, the supposition that it is generally possible to return a waterbody to pre-project conditions after application of a toxic chemical is factually unsupported. We believe that such a flawed assumption simply underscores the greater need to seek out and utilize alternatives to pesticides that will protect beneficial uses without creating toxic conditions or causing water quality violations. See Comment #6, below.

Response:
Staff has made the suggested changes in Section III.L of the permit and Section IV.C.4 in Attachment D as shown below:

While surface waters may be temporarily degraded, water quality standards and objectives will not be exceeded. The nature of pesticides is to be toxic in order to protect human health. However, compliance with receiving water limitations and other permit requirements is required.

Comment 3.04:
Public Notice Requirements.

a. We agree that prior notification is an important requirement in general, but believe it to be completely inappropriate that *the discharger* is allowed to choose *which* website. See also SAP p. 19 ¶ VIII.C.16; VCP p. 19 ¶ VIII.C.14; AAISCP p. 17 ¶ VII.C.14. Concerned residents shouldn't have to scan the

entirety of the Internet to learn of toxic discharges in their neighborhoods; rather, *all* planned discharges should be posted on a *single* website that can be easily found (preferably, the Board's), and these data should be searchable *by location*, if possible.

b. We also believe that the SAP requirement that such notice be given prior to scheduled applications (as opposed to once a year) is appropriate for inclusion in the VCP and AAISCP as well – these pesticides are no less dangerous, and the public has no less of a right to know about them before they occur. Moreover, there should be a requisite lead-time before any application may occur (e.g., 2-4 weeks), so that dischargers cannot creatively "schedule" their applications to occur, say, the very next day.

Response:

a. Comment noted. Staff will compile the list of websites as they are received and consider posting the list on the State Water Board's website. Until the list becomes available, interested parties should refer to discharger's APAP which provides the information on the location of the application schedule. The discharger's APAP will be posted on the State Water Board's website for a 30-day public comment period before approval.

b. Infestations may occur at any time at any location. Requiring public notice requirements prior to every application is infeasible.

Comment 3.05:

In the revised permits, the discharger's APAP includes a mandate to use the least toxic pesticide (if an alternatives analysis indicates that pesticides must be used), and to use the lowest amount of pesticide effective.

We applaud the inclusion of this requirement as perhaps the single most important protective feature in each permit, although its utility will obviously depend on how rigorously it is enforced by the Board and others. We note that the requirement still stops short of mandating that the least toxic alternative be used in every case (i.e., pesticide use *only* as a last resort) – the permits only require that an alternatives analysis be *performed*, but do not appear to dictate a result. In practice, the implementation of the NPDES permitting program for pesticides discharged to and over water should lead both to the development of newer aquatic pesticides that do their work without leaving residues and to increased reliance on less toxic means of pest control. Especially since no specific "best technology" analysis appears to have been done in determining these BMPs (in lieu of setting numerical effluent standards), we submit that a more rigorous requirement is necessary to satisfy both the Clean Water Act's "technology-forcing" mandate, see generally Weyerhaeuser Co. v. Costle, 590 F.2d 1011, 1025 (D.C. Cir. 1978); NRDC v. EPA, 859 F.2d 156, 208-09 (D.C. Cir. 1988), and the legislative intent of the Act's drafters, see generally S. Rep. No. 92-414, at 99 (1971) (statement of Sen. Dole) (emphasizing the importance of "develop[ing] *alternative means* of pest, weed and fungal control," reducing "*[o]ff-target* applications," and developing "pesticides which *degrade after application and leave no toxic or hazardous after-products*.") (emphases added), reprinted in 1972 U.S.C.C.A.N. 3668.

Response:

The purpose of the permit is to protect the beneficial uses of the State's receiving waters from residual pesticide dischargers resulting from aquatic animal invasive species control applications. The permit would require dischargers to determine and implement feasible non-toxic and least toxic alternatives to the selected pesticide application project in order to protect against potential water quality impacts. The development of best management practices is consistent with 40 CFR §122.44(k) and is intended to provide necessary flexibility in planning and implementing effective pesticide applications while protecting water quality. The permit prohibits discharges that cause or contribute to an exceedance of water quality objectives and contains monitoring provisions to determine whether additional measures are needed to meet the requirements of the permit.

In response to CDPH's concern about ambiguity of the term "least toxic," the sentence has been changed to read: If there are no alternatives to pesticides, dischargers shall use the least amount of pesticide necessary to effectively control the target pest.

Comment 3.06:
Standard Provisions. For "water[s] classified as Outstanding National Resource Waters or as … impaired by unknown toxicity," the requirement that a project-specific antidegradation analysis be done before spraying has been removed.

It is unclear from the Board's Response to Comments why this provision has been removed, and what is the legal basis for doing so. The wisdom of removing protections for pristine waterbodies (such as Lake Tahoe and Mono Lake), or for those impaired waterbodies wherein the potential harm from the pesticide application is necessarily unknown, seems suspect. We request that the project specific antidegradation analysis requirement for these waterbodies be reinstated.

Response:
The requirement was removed in response to the request by the Lahontan Regional Water Board (Region 6).

Comment 3.07:
Special Studies, Technical Reports, and Additional Monitoring Requirements. We believe this to be an improvement over the previous version, which simply required the discharger to undertake "additional investigations."

a. Still, nowhere do the permits indicate *who decides* what corrective actions a discharger has to take, and
b. What the *enforcement mechanism* is for this requirement. We ask the Board to please clarify these points.

Response:
a. The discharger has to provide the State Water Board what corrective actions it would take. The State Water Board Division of Water Quality will determine whether the proposed corrective actions are adequate.

b. Failure to comply with this requirement is a violation of Permit and may result in a State Water Board's enforcement action which can include a notice of violation, an administrative civil liability complaint with a fine, or revocation of the Notice of Applicability.

Comment 3.10:
We commend the Board for making the Corrective Action Deadlines provision both stronger and more explicit.

Response:
Staff appreciates the support and recommendations.

Comment 3.11:
The definition of "residual pesticides" has been changed to "those portions of the pesticides that remain in the water *after* the application and its intended purpose (elimination of targeted pests) have been completed" (emphasis added).

a. We submit that this interpretation is inconsistent with the ruling of the U.S. Sixth Circuit Court of Appeals in National Cotton Council, which struck down EPA's earlier rule purporting to exempt applications of aquatic pesticides from the NDPES permit requirement altogether. As that court noted, in expressly holding that pesticide residuals are "added" by the point source applications introducing them to water, the "pesticide residue or excess pesticide – even if treated as distinct from pesticide – is a pollutant" *at the moment of discharge*. National Cotton Council of America v. EPA, 553 F.3d 927, 940 (6th Cir. 2009); see also id. at 938 ("excess and residue pesticides have *exactly the same chemical composition* and are discharged from the same point source at *exactly the same time* as the original pesticide") (emphasis added). This definition of "residual pesticides" is also inconsistent with multiple appellate court rulings that Congress intended water pollution to be controlled through "point source" regulation *whenever feasible*, e.g., United States v. Earth Sciences, Inc., 599 F.2d 368, 373 (10th Cir. 1979); that a point source "adds" a pollutant when it "introduces" that pollutant to the waters "*from the outside world*," e.g., Catskill Mountains Chapter of Trout Unlimited v. City of New York, 273 F.3d 481, 491 (2d Cir. 2001); cf. South Fla. Water Mgmt. Dist. v. Miccosukee Tribe of Indians, 541 U.S. 95, 103 (2004); and that there is no implied NPDES exemption for discharges made for *allegedly beneficial purposes*, e.g., Minnehaha Creek Watershed Dist. v. Hoffman, 597 F.2d 617, 627 (8th Cir. 1979).

b. Accordingly, the Board should clarify that no applicator otherwise covered by the permits may escape regulation by arguing that the pesticide in question has such a lengthy "intended purpose" timeframe that, in effect, it leaves no "residue."

c. Likewise, the Board should reject any implication that the protective provisions of these permits apply only at some indeterminate point "after" the discharge occurs. In particular, there is no basis – in law or in policy – for the notion that in-stream water quality standards may be violated during the pendency of a pesticide application, as certain portions of the permit suggest. See, e.g., AAISCP p. 14 ¶ IV.C (noting that the prohibition against causing or contributing to violations of water quality standards "shall apply *outside* the

treatment area *during* treatment, and *in* the treatment area *after* treatment has been completed") (emphasis added).

Response:

a. Staff amended the definition of residual pesticides to include excess amounts of pesticides used during applications.
b. Comment noted. Staff will evaluate the reasonableness of project length based on the treatment efficacy of the pesticide.
c. For pesticides to perform their intended purpose, receiving water limitations only apply to residual pesticides.

Comment 3.12:

Monitoring Reports. We believe that allowing Discharge Monitoring Reports ("DMRs") to be in a form "as agreed by the discharger and the [Board's] Deputy Director," instead of a standardized form can only lead to abuse, as shrewd applicators seeking to avoid scrutiny may attempt to report their monitoring data in a way that understates or obscures the true nature of discharges documented. Such ad hoc DMRs are also likely to be less readily understood by concerned residents who may wish to perform an oversight role in ensuring compliance. The Board should propose a standardized DMR form for public comment, and require that it be used by all dischargers (even if such a form cannot be developed in time to be included with the finalized permits themselves).

Response:

Staff will create a reporting form for dischargers to use to provide consistency in reporting and facilitate staff's review of monitoring data.

Comment 3.13:

General Monitoring Provisions. In the Spray Applications Permit, dischargers are allowed to change monitoring locations and to not mention this change until the submission of their annual reports. In the other two permits, "All samples shall be taken at the anticipated monitoring locations specified in the Discharger's or Coalition's PAP, *unless otherwise specified*."

Regarding the Spray Applications Permit, the previous version required *prior* notification of such changes in all cases. We submit that the previous requirement should be retained to ensure that dischargers do not propose one monitoring scheme at the beginning of each year only to ignore it for the rest of the year. Regarding the other two permits, it is unclear what "otherwise specified" means here. We believe the best course is to require that all monitoring be done only at the specific locations set forth in the PAP or APAP (as with Spray Applications), since this is the information that the Board and members of the public will have evaluated in deciding whether even to *allow* the initial discharge. To the extent that the Board believes Vector Control or Aquatic Animal Invasive Species Control applications to be of a different nature, the Board should clarify that any *potential* monitoring locations also must be spelled out in the discharger's PAP or APAP, as other provisions of those permits seem to indicate. See VCP p. C-11 ¶ IV.A; AAISCP p. C-9 ¶ IV.

Response:

Staff deleted "unless otherwise specified" to avoid confusion.

Comment 3.14:
We have several questions regarding monitoring locations, and how they relate to the requirements set forth in the permits themselves.

a. Is the "location that receives the most applications" the same as a "representative monitoring location" (and, if these are separate concepts, where in the permit are the provisions requiring monitoring at the "location that receives the most applications")?
b. Does the monitoring scheme described in the above paragraph apply only to chemical testing, or does it apply to toxicity testing as well?
c. How exactly does one determine the "location that receives the most applications" (e.g., is it based on a specific historical time period?)?
d. Why is it true that "the location that receives the most applications will likely show the highest concentrations of residuals" and that "areas that receive fewer applications would also show no exceedance of receiving water limitations" (e.g., cannot areas receiving fewer applications also receive a greater absolute quantity of pesticides?)?
e. Are there not reasons to require monitoring at "the location that receives the most applications," as well as at other locations, *beyond* ensuring that a numerical receiving water limitation is not exceeded (e.g., a *narrative* receiving water limitation requiring "no toxics in toxic amounts," compliance with which may depend on what aquatic animals are present in a given area)?

Under state and federal law, the monitoring provisions in an NPDES discharge permit must be sufficient to allow agency enforcers and concerned citizens to determine readily whether the discharger is in compliance with applicable permit terms, including prohibitions against violating numeric and narrative in-stream water quality standards. As the above questions suggest, it remains unclear precisely how the Board envisions the "representative monitoring" provisions to operate once the permits are in effect. We request that the Board please clarify these monitoring provisions.

Response:

a. The "location that receives the most applications" is one of the "representative monitoring locations."
b. Currently, the monitoring scheme only applies to chemical testing because dischargers are not required to perform toxicity monitoring. See Response to Comment 1.03.
c. That is correct. The "location that receives the most applications" shall be based on historical record of applications.
d. Comment noted. The monitoring and reporting program suggests that the discharger or coalition chose the "worst case or high use area" as representative monitoring locations. The "high use area" does not necessarily have to be based on number of applications; it can also be based on the amount of pesticide applied.
e. Undoubtedly, there are reasons to require monitoring at all locations because water chemistry, aquatic life, pesticide applications differ at

different locations. However, rationale for requiring sampling initially at the most-heavily applied sites is that if applications at these sites do not exceed limits or triggers or cause or add toxicity, it is likely that less heavily applied sites will not show impacts from the applications either.

Comment 3.15:
Sample Types. The revised Invasive Species Permits still require "post-event" monitoring, but only whenever *the discharger* determines, apparently on a case-by-case basis, that the pesticide "project" is "complet[e]." The additional requirement in previous permit drafts that the discharger must perform this monitoring "within one week after the application event" has been removed.

We believe that removing an absolute timeframe for post-event monitoring invites abuse. If the discharger is allowed to determine when "project completion" occurs, he or she will simply wait to perform any sampling until long after any environmental harm has occurred, or the pesticide has fully dissipated (regardless of whether that pesticide is still performing any pest elimination function). See also Comment #11, above. We ask that the one-week post-event monitoring timeframe be reinstated.

Response:
Dischargers are allowed to determine when a project is complete because pesticides may need to stay in the water for a certain period of time after application or be reapplied to effectively control the intended pest. To allow the pesticide to serve its intended purpose, post-event monitoring shall be conducted within one week after project completion.

Comment 3.16:
Toxicity Testing Requirements. The staff recommends five different options for toxicity testing, including performing no such testing, but recommends Option D for each permit. Option D appears to provide that "after a discharger has shown six consecutive samples of no toxicity, monitoring for toxicity will be discontinued," until "[a] new application method is used, a BMP is changed, or an alternative product is used." E.g., SAP, Resp. to Cmt. #4.3, p. 28. Unlike earlier versions, Option D also appears to allow dischargers to forsake taking further "background" samples if the first sample comes back negative.

As we stated in earlier comments, we strongly urge the Board to require some form of toxicity testing in these permits. These pesticides are *known toxicants* that can cause serious water quality problems and other adverse environmental effects, but – unlike for most industrial point source discharges – no "end-of-pipe" treatment technologies or numerical effluent limitations are being required or imposed to ameliorate these harms. Moreover, given that the permit only requires chemical testing for *active* pesticide ingredients, a rigorous toxicity monitoring scheme will be crucial in protecting against the risks posed by *inert* ingredients (which can be greater than the risks posed by active ingredients), and by *additive or synergistic* toxicological effects (both with other pesticides and with other constituents in the receiving water). See generally EPA Office of Pesticide Programs, Pesticide Regulation Notice 97-6 (Sept. 17, 1997), available at http://www.epa.gov/opppmsd1/PR_Notices/pr97-6.html; Letter from U.S. Fish &

Wildlife Service to EPA re: Atrazine Risk Assessment (June 27, 2002), pp. 2-3, available at http://www.eswr.com/104/fwsatrazineletter.pdf.

As for Option D specifically, we are mindful that the Board wishes not to impose undue burdens or meaningless monitoring requirements on pesticide applicators. At the same time, we believe that *some* form of periodic toxicity monitoring should be required even where a discharger is able to establish a modest track record of not causing or contributing to toxic conditions. This is good policy for several reasons. First, the underlying characteristics of the waterbody may change over time, which may give rise to additive or synergistic toxic effects not captured by earlier sampling. Second, further toxicity monitoring ensures that the discharger does not, intentionally or inadvertently, alter the methods or chemicals applied in a way that may be deleterious to water quality. Third, an ongoing toxicity monitoring requirement allows private citizens concerned about discharges in their local waterbodies to perform their own in-stream monitoring, and to cross-check the results they obtain with what the discharger has reported to the Board, as an effective and supplemental assurance that relevant receiving water limitations are not being violated.

Lastly, given the need for an accurate assessment of toxicological risks, we urge that the more stringent requirement on “background” sampling from the earlier draft permits be retained.

Response:
See Response to Comment 1.03.