

November 2, 2010

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State Water Resources Control Board
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RE: Comment Letter – Draft Vector Control Permit

Comments on Draft Statewide General National Pollutant Discharge Elimination System (NPDES) Permit for Residual Pesticide Discharges to Waters of the United States from Vector Control Applications

To whom it may concern:

Thank you for the opportunity to comment on the Board's draft general permit (DGP) for the application of pesticides to and above water for vector control purposes throughout the State of California. We are pleased that the Board is taking the initiative in building on its earlier efforts to regulate point source discharges of pesticide pollutants (such as Order No. 2004-0008-DWQ), in conjunction with efforts by the U.S. Environmental Protection Agency (EPA) to develop a general NPDES permit governing aquatic pesticide use at the federal level.¹

We urge the Board to make its permit as strong and inclusive as possible, so as to protect public health and the environment from adverse impacts that may be caused by pesticide applications to the state's waterways. Towards this shared goal, we would like to provide the following comments on the draft permit:

- **Strengthen requirements for alternatives analysis** – We commend the Board for requiring an analysis of alternatives to pesticides in permit applications, but urge the agency to strengthen those requirements.

According to the draft general permit, all dischargers must take reasonable precautions to minimize the impacts of pesticide use (such as providing adequate personnel training on equipment use and spill prevention). DGP p. 17. Further, applicators of larvicides containing temephos or adulticides must develop and implement "best management practices" (BMPs), including (1) characterize the area of application, identify factors contributing to the pest problem, and establish action thresholds (i.e., pest densities) for implementing pest management strategies; (2) evaluate alternatives (including no action, prevention, and mechanical methods); and (3) if pesticides are

¹ The EPA draft permit, although broader in scope than the Board's vector control permit, implicates many of the same legal and policy issues. For a thoughtful discussion of those issues, please refer to the attached comments of the National Environmental Law Center *et al.* (July 19, 2010). Attachment pp. 3-6 (Overview).

chosen, employ them only when action thresholds are met, using the least intrusive method of pesticide application. DGP pp. 16-17.

These requirements do not go far enough in protecting our state's waterways. As the Board concedes, traditional "end-of-pipe" treatment is not a practicable option for controlling the well-documented impacts of pesticide use. DGP p. 10. And yet, the draft permit contains *no* strict mandate to *reduce or eliminate* pesticide use, to choose the *least harmful alternative*, or, where pesticide use is unavoidable, to use *lowest effective amount*. We would like to see the permit strengthened in all of these regards. The permit should require applicators to use the least toxic alternative in *all* cases, or require that these applicators attempt non-toxic methods of pest control *first* (and prove that these methods were ineffective) before pesticides may be used. Attachment pp. 16-18 (Comment 13). We want to see applicators actually considering and using alternatives instead of just "going through the motions" with respect to this requirement. Also, the Board – *not* the applicators – should set objective standards for when pesticide use is allowed, and work with EPA to develop guidelines as to what management practices are truly the "best" at reducing environmental impacts. Attachment pp. 18-21 (Comment 14-16).

- Strengthen protections for water bodies that are already degraded, that may serve as supplies of drinking water, or that provide habitat for sensitive species.

The permit forbids the discharge of pesticide residues and degradates to impaired waters, but only where those waters are impaired by the specific active ingredient of the pesticide being discharged. DGP p. 17.

This requirement is too narrowly drawn. As the Board has noted elsewhere, over one-quarter of the state's waters are already impaired – that is, are *not* meeting applicable water quality standards – for "pesticide-related" constituents. Attachment pp. 9-10 (Comment 4). But the Board rarely (if ever) specifies the *active ingredient* causing such impairment, and some waters may be even *more* severely impaired by so-called "inert" ingredients. Attachment p. 8 (Comment 3). To close this loophole, the Board should exclude from coverage under the general permit all discharges to waters that are impaired generally for "pesticides," or for substances or conditions known to exacerbate the harmful effects of pesticides (such as mercury or low dissolved oxygen). Further, the Board should specify a presumption that *all* chemical pesticide applications will leave a residue, and reject any argument that the permit's terms should be made less strict for applications of biological pesticides. Attachment pp. 6-8 (Comments 1-2).

The permit contains no special considerations for pesticide applications directly into drinking water sources or indirectly into aquifers that feed drinking wells.

Many California residents do not draw drinking water from a municipal water system, but drink water from wells and springs. When pesticide discharges have the potential to impact sources of drinking water, the Board should impose further limitations on pesticide use, if not an outright ban. At the very least, such discharges should be

allowed only pursuant to an individual NPDES permit, which can better account for the specific risks presented. Attachment p. 10 (Comment 5).

The draft general permit allows discharges into areas containing endangered and threatened species with no additional restrictions whatsoever. Applicators must merely notify federal agencies after the fact when such discharges occur. DGP pp. 22-23.

The permit should afford proactive protection to endangered or threatened species. Applicators should avoid discharges into areas containing such species, or at least be made to minimize the amount and frequency of such discharges. Attachment p. 10 (Comment 5).

- Strengthen site monitoring requirements – Although we applaud the Board for requiring in-stream monitoring and providing for toxicity triggers, we urge that this program be expanded.

The draft permit requires in-stream monitoring for active pesticide ingredients and toxicity indicators, both before and after the application occurs. DGP pp. C-2 to C-7. This monitoring need be done only six times per year, however, at intervals to be determined by the discharger. DGP pp. C-8 to C-10.

The Board should require water quality monitoring before and after *each and every* pesticide application. Especially since the Board is establishing *no* numeric effluent limits for pesticide discharges, post-application monitoring will be crucial in guaranteeing that pesticide use does not contribute to environmental degradation.

- Strengthen right-to-know and public engagement opportunities in the draft permit – Pesticide applications to water bodies impact public health and the environment, and the public has a right to know about pesticide discharges before and after they occur.

The Board requires potential applicants to submit notices of intent (NOIs) and pesticide action plans (PAPs) prior to obtaining coverage, but does not require any of this information to be made available for public notice and comment. DGP p. 5. Discharge monitoring reports need only be submitted on an annual basis. DGP pp. C-11 to C-12.

A well-informed public is an indispensable ally in the fight against water pollution. *Before* any discharges of pesticides are permitted, the Board should make available on its website all NOIs and PAPs submitted for approval, and allow sufficient time for public input before approval may be granted. Attachment pp. 13-14 (Comment 10), p. 24 (Comment 20). Likewise, *after* a discharge occurs, the Board should make available on its website all data submitted pursuant to the permit's monitoring provisions. Attachment pp. 24-25 (Comment 21). Concerned residents shouldn't have to wait an entire year to see monitoring data relating to potentially toxic discharges in their

neighborhoods – as with most other NPDES permits, these data should be submitted *monthly* for periods in which any pesticide discharge occurs.²

We thank you again for the opportunity to comment. Please feel free to contact us with any questions you may have.

Sincerely,

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Sacramento, CA

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² These reporting provisions should not be especially onerous in today's online computing environment. To ensure proper funding for these provisions, the Board should consider raising its nominal application fee of \$136 to a more suitable sum. DGP p. 6 (citing http://www.waterboards.ca.gov/resources/fees/docs/npdes_permit_fees.pdf).

ATTACHMENT



National Environmental Law Center

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July 19, 2010

COMMENTS OF:

**NATIONAL ENVIRONMENTAL LAW CENTER,
ENVIRONMENT AMERICA,
SAN FRANCISCO BAYKEEPER,
WASHINGTON TOXICS COALITION,
MISSOURI COALITION FOR THE ENVIRONMENT,
ASSOCIATION TO PRESERVE CAPE COD,
WESTPORT RIVER WATERSHED ALLIANCE,
IPSWICH RIVER WATERSHED ASSOCIATION,
JONES RIVER WATERSHED ASSOCIATION,
MERRIMACK RIVER WATERSHED COUNCIL,
BERKSHIRE ENVIRONMENTAL ACTION TEAM, and
MASSACHUSETTS WATERSHED COALITION**

ON

**EPA'S DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION
SYSTEM (NPDES) PESTICIDE GENERAL PERMIT FOR POINT SOURCE
DISCHARGES FROM THE APPLICATION OF PESTICIDES**

75 Fed. Reg. 31,775 (June 4, 2010)

SUBMITTED TO: Water Docket
U.S. Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460
Attn: Docket ID No. OW-2010-0257

These comments on EPA's "Draft National Pollutant Discharge Elimination System (NPDES) Pesticide General Permit for Point Source Discharges From the

Application of Pesticides,” 75 Fed. Reg. 31,775 (June 4, 2010), are submitted on behalf of the National Environmental Law Center, Environment America, San Francisco Baykeeper, Washington Toxics Coalition, Missouri Coalition for the Environment, Association to Preserve Cape Cod, Westport River Watershed Alliance, Ipswich River Watershed Association, Jones River Watershed Association, Merrimack River Watershed Council, Berkshire Environmental Action Team, and Massachusetts Watershed Coalition (collectively, “Commentors”).

The National Environmental Law Center (“NELC”) is a non-profit, non-partisan litigation and research organization working to bring polluters into compliance with applicable environmental regulation through legal action and community involvement. NELC represented two New England environmental groups (Environment Maine and the Toxics Action Center) in the legal challenge to EPA’s 2006 regulatory NPDES exemption for discharges of pesticides to and over water, which was vacated by the Sixth Circuit Court of Appeals in National Cotton Council of America v. EPA, 553 F.3d 927 (6th Cir. 2009).

Environment America is a federation of 28 state-based, citizen-funded environmental advocacy organizations with hundreds of thousands of members across the nation. Environment America and its affiliates have a 30-year of history of working on environmental and public health issues, including work relating to strengthening the federal Clean Water Act and ensuring its faithful implementation.

San Francisco Baykeeper is a non-profit corporation with the mission to protect and enhance the water quality of the San Francisco Bay-Delta Estuary and its tributaries for the benefit of its ecosystems and the surrounding human communities, including Baykeeper’s 1,500 members. Baykeeper accomplishes its mission through education, advocacy, restoration, and enforcement of environmental law, and has long advocated for better public information, oversight, regulation, and reduction of the application of pesticides to our area’s waters.

The Washington Toxics Coalition (“WTC”) protects public health and the environment by striving to eliminate toxic pollution. On behalf of its 1,000 members, WTC promotes alternatives, advocates policies, empowers communities, and educates people to create a healthy environment. WTC has assisted communities concerned about pesticide use in aquatic settings, and has actively participated in the NPDES permitting process in Washington state.

The Missouri Coalition for the Environment (“MCE”) is a non-profit corporation that works to protect and restore the environment through education, public engagement, and legal action. The organization has a primary focus on Missouri’s water and air quality, and is especially concerned about the proper administration of the NPDES program. MCE has roughly 1,200 members.

The Association to Preserve Cape Cod (“APCC”) works to foster programs and policies that protect and enhance the natural resources of Cape Cod on behalf of its 5,000

members. APCC has worked with other organizations to postpone the spraying of pesticides on right-of-ways by local utilities pending the adequate mapping of water and wetland areas potentially at risk and the development of a comprehensive program to protect sensitive resource areas.

The Westport River Watershed Alliance (“WRWA”) is a nonprofit, environmental education and advocacy group formed in 1976 to protect and conserve the natural resources of the Westport River and its 100-square mile watershed located in Southeastern Massachusetts. Its activities regarding pesticide use have focused on limiting the mass spraying of malathion for mosquito control, and curbing the use of herbicides for phragmite removal. WRWA has 1,500 members.

The Ipswich River Watershed Association (“IRWA”) is the voice of the Ipswich River, working to make sure there is enough clean water for people, fish, and wildlife, now and in the future. IRWA has commented on pesticide application regulations and programs at the state and local levels on behalf of its membership, comprising 800 families.

The Jones River Watershed Association (“JRWA”) is a membership organization dedicated to conserving, protecting, and restoring the water and natural resources of Southeastern Massachusetts, focusing on the Jones River watershed and Cape Cod Bay ecosystem. JRWA and its subsidiary, the Jones River Environmental Heritage Center, have a contributing membership of over 600 families and residents. For nearly three decades, JRWA has worked to moderate routine and emergency application of pesticides for mosquito control in Massachusetts.

The Merrimack River Watershed Council (“MRWC”) is a non-profit conservation organization founded in 1976 to ensure the sustainable ecological integrity and the balanced, managed use of the Merrimack River and its watershed through science, advocacy, partnering, and recreation. MRWC has 500 members.

The Berkshire Environmental Action Team (“BEAT”) works with citizens to protect the environment in the Berkshires and beyond. BEAT has 100 members across Berkshire County, Massachusetts.

The Massachusetts Watershed Coalition works with community partners across Massachusetts to protect and restore streams, ponds, and water supplies.

OVERVIEW

Commentors welcome EPA’s call for substantive input to assist the agency as it crafts permit terms to regulate the discharge of pesticides to, over, and near the nation’s oceans, lakes, and streams. We also commend EPA for the hard work that the agency has already done in developing its draft proposed permit. At the same time, we respectfully submit, the protections afforded in the draft permit can and should be strengthened so as

to adequately address the serious environmental and human health threats presented by the application of pesticides – all of which are toxic to certain forms of life – directly to surface waters. The fact that EPA expects its draft permit to serve as a template for state permitting efforts throughout the nation further underscores the need for a rigorous, protective approach here.

Commentors believe (and EPA likely agrees) that the development and issuance of robust permits under the NPDES program, and the assiduous compliance by dischargers with the terms of these permits, is the most effective regulatory mechanism for achieving the primary goal of the Clean Water Act (“CWA” or “the Act”): the restoration and maintenance of “the chemical, physical, and biological integrity of the Nation’s waters.” 33 U.S.C. § 1251(a); see also 33 U.S.C. § 1251(a)(3) (“[I]t is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited.”).

For most of the typical point source discharges governed by the NPDES program – such as factories and sewage treatment plants – the Act’s strict mandates are implemented through NPDES permits requiring compliance with numeric discharge limits for specified pollutants (established according to the more stringent of technology-based or water quality-based considerations) and with more general narrative standards designed to further protect water quality. These permits also require comprehensive self-monitoring programs through which the level of compliance is precisely measured and reported to EPA and/or state permitting agencies. These protections both make it easier for dischargers to understand their obligations and for federal, state, and citizen enforcers to hold violators to task, and thus have led to significant environmental gains.

Compliance with such requirements can be time-consuming and costly and, indeed, their imposition sparked a formidable outcry from industrial dischargers in the 1970s and 1980s. In the intervening decades, however, most of these entities have learned how to live with, and to ultimately prosper under, NPDES regulation. Dischargers of aquatic pesticides from discernable point source applications now stand in the same shoes as every other industrial discharger in this respect, and can similarly be heard to augur financial ruin in the face of new regulation. Commentors submit that aquatic pesticide applicators, over time, will likewise learn to adapt to the Act’s regulatory scheme.

Commentors acknowledge that, as EPA notes, discharges of aquatic pesticides *are* different from typical NPDES discharges in certain *qualitative* ways: they “can be highly intermittent,” of “short duration,” “highly variable,” and “from many different locations,” among other things. Fact Sheet at 30. Because of these differences, EPA has taken a fundamentally different approach to these discharges. The draft permit eschews many of the more integral permit protections described above in favor of an amorphous control scheme based largely on indeterminate “best management practices” and unenforceable planning requirements. As helpful as these provisions may be, this approach is – all things considered – likely to be less protective of water quality than permits that require significant pollutant reductions before discharge, and that allow for clear-cut enforcement afterwards.

Moreover, discharges of aquatic pesticides do share *other* important qualitative attributes with discharges from larger stationary sources. Like pollutants discharged from factories, aquatic pesticides can cause (and have caused) significant environmental harm. In the Headwaters case, a single application of chemical herbicide to control aquatic weeds killed over 92,000 juvenile steelhead trout along a five-mile stretch in Bear Creek, a tributary to the famous Rogue River fishery in Oregon. See *Headwaters, Inc. v. Talent Irrigation Dist.*, 243 F.3d 526, 528 (9th Cir. 2001). The spraying of carbaryl to control populations of burrowing shrimp in Washington’s Willapa Bay and Grays Harbor has killed millions of fish and crab since the 1960s, including endangered Chinook salmon.¹ See U.S. National Marine Fisheries Service (“NMFS”), ESA Section 7 Consultation Biological Opinion re: EPA Registration of Pesticides Containing Carbaryl, Carbofuran, and Methomyl (Apr. 20, 2009), pp. 373-79, available at <http://www.nmfs.noaa.gov/pr/pdfs/carbamate.pdf>. And, as EPA apparently concedes, the concurrent regulation of pesticides under the Federal Insecticide, Fungicide and Rodenticide Act (“FIFRA”) does *not* guarantee that water quality standards are maintained where such pesticides are applied to water. See Fact Sheet at 79-83; see also Comments of California Regional Water Quality Control Board, San Francisco Bay Region (Oct. 8, 2003), p. 1 (“Numerous scientific studies have demonstrated that use of some registered pesticides *in accordance with [FIFRA] requirements* may cause lethal or serious non-lethal effects on aquatic species.”) (emphasis added), available at www.regulations.gov (EPA-HQ-OW-2003-0063-0346).²

In light of these risks, and in an effort to at least partially compensate for the absence of the substantive protections typically included in an NPDES permit (which EPA believes are infeasible in the context of aquatic pesticide applications), Commentors urge EPA to strengthen the draft permit in certain significant respects. In particular, we believe that the draft permit must:

1. Require the use of the *least toxic alternative* to pesticide use in *all* cases;
2. Ensure that some form of *water quality monitoring* is performed after pesticide applications in *all* cases; and
3. Allow for the highest level of *public involvement* at *all* stages of the permit development and enforcement processes.

Implementation of this third principle will be especially important in preventing harm, as it will help ensure that the two preceding principles will be implemented in a meaningful fashion. People are understandably concerned when toxic substances are used in areas where they and their families live, work, and play. Commentors believe that pesticide application permits should guarantee that as much information as possible about specific

¹ Obviously, there are other examples. As Commentors expect that EPA will be hearing about them in other comments, we will not belabor the point here.

² Even if EPA is correct in estimating that most ecological damage is caused by runoff from terrestrial pesticide use, the fact remains that FIFRA is supposed to account for *all* uses and ecological risks, and yet we see widespread impairment of surface waters from pesticide use.

applications is provided to concerned citizens before pesticides are used, should give the interested public the right to provide input about the feasibility of using non-toxic alternatives, and should require the development of robust monitoring data regarding pesticide applications so that meaningful decisions may be made as to whether these discharges should be allowed to continue.

Commentors understand and appreciate that EPA wants to minimize the regulatory burden on pesticide applicators. But this policy objective should not – and under the Clean Water Act may not – be elevated above water quality considerations. Pesticide applicators must be made to understand that the days of “rubber stamp” approvals to discharge pesticides, while the public remains shut out of the process, are over. (Indeed, this “business as usual” approach was a frustrating hallmark of regulatory efforts in those western states where discharge permits were required in the wake of the Headwaters decision.) Moreover, the additional protections urged by Commentors are not particularly onerous, especially in comparison to the more detailed requirements usually imposed on point source dischargers.

Lastly, Commentors acknowledge that it may take some time for EPA (or pesticide applicators) to get up to speed on the complexities of this new system, and that a full panoply of protective standards regulating aquatic pesticides may well not be in place as of the issuance of EPA’s final permit. The general permit is merely the first step in a long-term, iterative process towards the development of a comprehensive program, one that will likely be informed by the experiences among the states as well as further input from applicators and the public. Even at this incipient stage, however, it is important that EPA put its best foot forward.

DETAILED COMMENTS

A. SCOPE AND COVERAGE OF THE DRAFT PERMIT

Comment 1: The Permit should presumptively apply to all chemical pesticides, and EPA should acknowledge that any residue is part of the pesticide product itself.

Commentors support EPA’s presumption that “*all* chemical pesticides have a residue, and, therefore would need a permit unless it can be shown that there is no residual.” 75 Fed. Reg. at 31,780.

For pesticide applications over water (for instance, to target adult mosquitoes flying over water), Commentors agree that “any amount of the pesticide that falls into the water of the U.S. is ‘excess’ pesticide and would require coverage by an NPDES permit.” Fact Sheet at 14; see also National Cotton Council, 553 F.3d at 936-37 (for “aerial pesticides,” including “applications ‘above’ or ‘near’ waterways,” any amounts that reach surface waters “are *necessarily* ‘discarded,’ ‘superfluous,’ or ‘excess’ chemical”) (emphasis added). We urge EPA to reject any assertions that the amounts reaching water

should be treated as *de minimis*, as most of these aerial pesticides have specific FIFRA labeling forbidding *any* discharge to water. See, e.g., Peconic Baykeeper, Inc. v. Suffolk County, 600 F.3d 180, 183-84 (2d Cir. 2010) (“Scourge” & “Anvil”).

For pesticide applications directly into water (for instance, to target aquatic pests), Commentors agree that “any amount of the pesticide that remains in the water of the U.S. is a ‘residual’ and would require coverage by an NPDES permit.” Fact Sheet at 14; see also National Cotton Council, 553 F.3d at 936 (same). However, we believe that EPA’s further caveat, that this presumption only applies “once the pesticide no longer provides any pesticidal benefit” *after* application, Fact Sheet at 14, runs contrary to a faithful reading of the Sixth Circuit’s opinion in National Cotton Council. 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*. 553 F.3d at 940; 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).³ Accordingly, EPA should clarify that no applicator otherwise covered by the general permit may escape regulation by arguing that the pesticide in question has such a lengthy “pesticidal benefit” timeframe that, in effect, it leaves no “residue.”

Commentors note that EPA could prevent much confusion by providing guidance as to which chemical pesticides *never* leave residues (if any, in fact, exist), or at least in developing standards by which a permitting authority might determine if this propensity exists in any specific regulatory case. The Sixth Circuit all but called for such guidance in noting that “whether or not a particular chemical pesticide needs to be regulated can be *easily answered* by both the *EPA’s and industry’s experience* with that pesticide.” 553 F.3d at 937 (emphasis added). Commentors are aware of no chemical pesticide that leaves literally *no* quantity of “superfluous” or “excess” chemical in the water (or affects *only* target organisms), and submit that EPA should look upon any claims to the contrary with due suspicion.⁴

³ Any other interpretation, the court noted, would run counter to the Congressional intent in establishing the NPDES program “that pollutants be controlled at the source whenever possible.” 553 F.3d at 939. Even if one were to assume that none of the pesticide became waste until *after* discharge to the water, there would be nothing remarkable about the conclusion that the discharge to the water of something that inexorably *becomes* a pollutant shortly after discharge is the discharge of that pollutant. See, e.g., NRDC v. Southwest Marine, Inc., 236 F.3d 985, 990 (9th Cir. 2000) (aerial discharge of cleaning and paint products during use at marina); Hudson River Fishermen’s Ass’n v. City of New York, 751 F. Supp. 1088, 1101-02 (S.D.N.Y. 1990) (chlorine and alum injected to waterway as purification agents), *aff’d*, 940 F.2d 649 (2d Cir. 1991). EPA has itself taken this position in amicus briefs. See, e.g., Long Island Soundkeeper Fund v. New York Athletic Club, 1996 WL 131863, at *9, *14-*15 (S.D.N.Y. 1996) (spent rounds and skeet targets from firing ranges).

⁴ The Sixth Circuit’s reference to antimycin as an illustrative example does not support such a claim. See *id.* (citing Fairhurst v. Hagener, 422 F.3d 1146, 1149 (2005)). In Fairhurst, the Ninth Circuit upheld the finding that the specific antimycin application at issue there left no residue only because the plaintiff did not *assert* that it did, nor did he make any *evidentiary showing* on that point. 422 F.3d at 1149. The absence of evidence in that case cannot constitute evidence of absence in other cases.

Comment 2: EPA should reject any claim that biological pesticides are of a harmless nature.

Manufacturers of biological pesticides (and EPA itself) have claimed in the past that biological pesticides “generally” or “usually” have no or few toxic effects when applied to water. See, e.g., <http://www.epa.gov/pesticides/glossary> (definition of “biological pesticide”). Although no showing has been made to this effect here by EPA, Commentors are concerned that pesticide manufacturers may lobby for weaker requirements for biological pesticides based on similar allegations, or argue that such dischargers should be subject to lesser scrutiny by regulators.

As the Ninth Circuit found in League of Wilderness Defenders v. Forsgren, 309 F.3d 1181, 1183 (9th Cir. 2002), “[t]he record reveals a number of harmful side effects” associated with an aerial spraying program involving the bacterial pesticide “B.t.k.” (*Bacillus thuringiensis* var. *kurstaki*) and the viral pesticide “TM-BioControl.” “Insecticide will drift outside of the area targeted for spraying and may kill beneficial species, including butterflies. Because aircraft conducting the spraying discharge insecticides directly above streams, stoneflies and other aquatic insects may be affected, reducing food supplies for salmon and other fish. The spraying could also adversely affect birds and plants.” Id.

Comment 3: EPA should clarify that the “pollutants” regulated by the draft permit include all inert ingredients.

At its June 21, 2010 public meeting in Boston regarding the draft permit, EPA indicated that inert ingredients (including adjuvants) are considered to be part of the “pollutant” being discharged. Commentors believe that this is required as a matter of law, since there is no foundation in 33 U.S.C. § 1362(6) for differentiating between active and inactive ingredients: either may be “chemical wastes” or “biological materials.” Further, regulating inert ingredients under the general permit is consistent with the CWA’s protective goals, especially since “EPA has long known and acknowledged that some inert ingredients are *not benign* to human health or the environment” and indeed “may be *more* toxic or pose greater risks than the active ingredient.” EPA Office of Pesticide Programs, Pesticide Regulation Notice 97-6 (Sept. 17, 1997) (emphasis added), available at http://www.epa.gov/oppmsd1/PR_Notices/pr97-6.html; see also Letter from U.S. Fish & Wildlife Service to EPA re: Atrazine Risk Assessment (June 27, 2002) (“FWS Atrazine Letter”), p. 3 (noting that FIFRA regulation does not adequately address risks posed by inert ingredients), available at <http://www.eswr.com/104/fwsatrazineletter.pdf>. To avoid confusion, EPA should commit this position to writing in issuing its final general permit.

Comment 4: EPA should exclude from coverage under the general permit all discharges to waters that are impaired generally for “pesticides,” are impaired for substances known to exacerbate the harmful effects of pesticides, and/or are impaired by any constituent of the pesticide being discharged.

As written, the draft permit excludes from coverage only “those discharges to waters that are impaired for the *specific pesticide* being applied or *its degradates*.” 75 Fed. Reg. at 31,783 (emphasis added); see also Draft Permit at 1-2, § 1.1.2.1. This formulation is inadequate in several respects.

First, as EPA notes, “several states have listed waters as impaired for ‘pesticides’ but have not identified the specific pesticide for which the waterbody is impaired.” Fact Sheet at 16. In fact, this is true in California, the nation’s most populous state, where the NPDES-delegated permitting agency indicated in its March 29, 2005 objection to EPA’s since-invalidated exemption that 27% of its waters are impaired for “pesticide-related” constituents. See http://www.swrcb.ca.gov/water_issues/programs/npdes/docs/aquatic/comments.pdf. Although EPA suggests that “as these impaired waters are further assessed, specific pesticides or classes of pesticides will be identified as the cause of the impairment – at which point dischargers will no longer be eligible to obtain permit coverage under the PGP for discharges of those named pesticides or their degradates,” Fact Sheet at 16, basic precautionary principles dictate that, in the face of uncertainty as to the particular pesticide(s) causing the impairment, EPA should *disallow* coverage.⁵ This approach is especially appropriate in light of the fact that pesticide discharges can have additive or synergistic toxicological effects with other pesticides, a factor which FIFRA’s risk assessment fails to take into account. See FWS Atrazine Letter, pp. 2-3; see also NMFS, ESA Section 7 Consultation Biological Opinion re: Effects of Herbicide Treatment of Noxious Weeds on Lands Administered by the Salmon-Challis National Forest (Sept. 16, 2002), pp. 34-35, available at https://pcts.nmfs.noaa.gov/pls/pcts-pub/sxn7.pcts_upload.download?p_file=F19611/200200390_2002_herbicide_09-16-2002.pdf (detailing how FIFRA’s risk assessment inadequately addresses sublethal and ecosystem-wide effects).

Second, given this risk of additive or synergistic effects, EPA should disallow coverage under the general permit for discharges into waters that are listed as impaired for any parameters known to exacerbate any deleterious effect on non-target organisms of the specific pesticide being discharged. This should include impairment for any pollutant parameters (such as mercury) that may increase an organism’s susceptibility to pesticide

⁵ For similar reasons, EPA should disallow coverage under the general permit whenever it is *possible* that the receiving water may be impaired for any constituent of the pesticide. For instance, many states list water bodies as being impaired for “metals” generically, without specifying the metal. To use EPA’s “copper sulfate” example, the discharge of which into “a waterbody impaired for either copper or sulfates would not be eligible for coverage under this permit,” Fact Sheet at 15-16, Commentors submit that coverage under the permit should likewise be disallowed for a discharge into a water body impaired for “metals,” absent a more specific showing that *different* metals are causing the impairment.

toxicants, and well as any water quality conditions (such as low dissolved oxygen) that may do so.

Third, EPA's reference only to a "specific pesticide" or "its degradates" may lead to arguments that the exemption from coverage under the general permit does not include the specific *constituents* (including inactive ingredients, as well as any compounds that do not result from "degradation" after use) of certain pesticide products. To close this potential loophole, EPA should use the term "constituents" instead.

Comment 5: EPA should impose more stringent limitations on discharges into Tier III anti-degradation waters (and their near-equivalents), into waters that contain plants or animals listed as threatened or endangered under the Endangered Species Act ("ESA"), and into sources of drinking water.

Commentors agree with EPA that coverage under the general permit should be denied for discharges of pesticides into Tier III anti-degradation waters. See Draft Permit at 2, § 1.1.2.2. Presumably, the rationale for this limitation is that higher quality waters deserve greater protection, such that discharges of potentially toxic substances into them should be made, if at all, only under the auspices of an individual permit. For similar reasons, EPA should deny coverage under the general permit for discharges into waters containing ESA-listed species and for discharges into sources of drinking water. See generally Comments 3-4, *supra* (citing FWS & NMFS findings that FIFRA registration does not adequately protect individual water bodies). The same prohibition should apply to Tier 2.5 waters, which (as EPA notes) "have exceptional sociologic, recreational, ecological and/or aesthetic values." Fact Sheet at 17.

To the extent that EPA allows coverage under the general permit for discharges into any of these higher quality waters, EPA should *at the very least* require adherence to the two restrictions it proposes to regulate discharges into waters containing ESA-listed species: "a) where practicable, *avoid the discharge* of any pesticide in areas where it could adversely affect listed species adversely;" and "b) when avoiding pesticide discharge is impracticable, select the types of pesticide and the method of application that will *minimize adverse effects*."⁶ Fact Sheet at 104. The specific proposals EPA is presently contemplating (in conjunction with ongoing ESA Section 7 consultation), see *id.*, provide an excellent starting point to a broader analysis of effective alternatives to pesticide use and other means of ameliorating untoward environmental impacts.

Comment 6: EPA should exclude the most dangerous pesticides from coverage under the general permit.

Certain pesticides pose such great risks to the environment or human health that they should be allowed to be discharged, if ever, *only* pursuant to the greater procedural

⁶ As Commentors will argue below, these restrictions are appropriate for *all* discharges of pesticides to, over, or near water. See Comment 13, *infra*.

protections provided by an individual NPDES permit. For instance, Triclopyr, Naled, Carfentrazone, and glyphosate (the main active ingredient in Roundup)⁷ should be subject to individual permitting, as should any pesticides containing copper or copper compounds.⁸ Discharges of pesticides containing a known or suspected human carcinogen should also be excluded from coverage under the general permit.⁹ Known or suspected endocrine disruptors constitute another class of more dangerous pesticides.¹⁰

Comment 7: EPA should clarify that all “operators” are jointly and severally liable for all permit violations.

EPA correctly notes in the Fact Sheet that “any and all operators covered under this permit are still responsible, jointly and severally, for any violation that may occur.” Fact Sheet at 12. This allocation of responsibilities is not made entirely clear in the draft permit itself, however. See Draft Permit at 3, § 1.2.2 (requiring NOI submission from two types of “operators”); id. at 35 (defining “operator”); id. at 41, Appx. B (“you” must comply with permit, subject to enforcement). To allay any confusion, and to properly put the burden on operators to apportion blame for violations amongst themselves, Commentors ask that EPA add a statement to this effect in the permit.

B. OBTAINING AUTHORIZATION UNDER THE DRAFT PERMIT

Comment 8: EPA should require notices of intent based on environmental and public safety factors, not spatial thresholds.

EPA’s draft permit does not require a notice of intent (“NOI”) to be submitted by dischargers falling under specified “annual treatment area thresholds.” See Draft Permit

⁷ See generally Beyond Pesticides, ChemicalWATCH Factsheet: Triclopyr, available at <http://www.beyondpesticides.org/pesticides/factsheets/Triclopyr.pdf>; EPA Office of Pesticide Programs, Reregistration Eligibility Decision for Naled (July 31, 2006), pp. 32-33, available at http://www.epa.gov/pesticides/reregistration/REDS/naled_red.pdf; EPA Office of Prevention, Pesticides, and Toxic Substances, Pesticide FactSheet: Carfentrazone-ethyl (Sept. 30, 1998), pp. 9-10, available at <http://www.epa.gov/opprd001/factsheets/carfentrazone.pdf>; R. Relyea, “The impact of insecticides and herbicides on the biodiversity and productivity of aquatic communities,” 15 *ECOLOGICAL APPLICATIONS* 618–27 (2005).

⁸ See generally EPA Office of Pesticide Programs, Copper Facts (June 2008), pp. 3-4, http://www.epa.gov/pesticides/reregistration/REDS/factsheets/copper_red_fs.pdf. Indeed, because “copper does not degrade into other compounds,” “in low concentrations is toxic to benthic organisms,” and may “result in high copper concentrations in lake sediments,” the State of Washington has decided to allow the application of algaecides containing copper only pursuant to individual, site-specific NPDES permits. Aquatechnex v. Washington Dep’t of Ecology, PCHB NO. 02-090, 2002 WA ENV LEXIS 87, at *4-*5, ¶¶ 9-10 (Pollution Control Hr’gs Bd. Dec. 24, 2002).

⁹ See generally Colorado State Parks, Stewardship Prescription: Aquatic Herbicide Management (Apr. 1, 2005) (“Colorado Stewardship Prescription”), pp. 18-24, available at <http://parks.state.co.us/SiteCollectionImages/parks/Programs/ParksResourceStewardship/Aquatic%20Herbicide%20Prescription.pdf>.

¹⁰ See generally T. Colborn & L. Carroll, “Pesticides, Sexual Development, Reproduction, and Fertility: Current Perspective and Future Direction,” 13 *HUMAN & ECOLOGICAL RISK ASSESSMENT* 1078 (2007), available at <http://www.beyondpesticides.org/documents/Colborn%20Multigenerational%20Effects.pdf>.

at 3, § 1.2.2. Leaving aside for the moment whether these thresholds are apposite, see Comment 9, infra, Commentors question why a *spatial* threshold provides the appropriate decision-making principle for withholding a proposed discharge from public scrutiny. Under 40 C.F.R. § 122.28(b)(2)(v), EPA may excuse the NOI requirement in a general permit *only* based on “[1] the *type* of discharge; [2] the expected *nature* of the discharge; [3] the potential for *toxic* and conventional pollutants in the discharges; [4] the expected *volume* of the discharges; [5] *other means of identifying* discharges covered by the permit; and [6] the *estimated number of discharges* to be covered by the permit” (emphasis added). The first three of these factors counsel in favor of requiring an NOI to be submitted on the basis of the expected *toxicity* of the discharge in relation to the quality of the specific receiving water (a risk that many, if not most, pesticide applications pose), and the fifth factor counsels in favor of requiring NOIs for *all* discharges since, as EPA concedes, there are no other ready means by which the public will be informed of below-threshold discharges. See Fact Sheet at 19-20 (“the availability, quality, and uniformity of these data may be limited”).

In applying the six factors above, EPA claims to have given “particular weight to the expected volume of the discharges and the estimated number of discharges to be covered by the permit.” Fact Sheet at 18. But the expected volume of the *discharge* is not necessarily tied to the size of the *treatment area*, not has it been shown to be; indeed, EPA states elsewhere that “the volume of the discharge may vary depending on the specific pesticide being used,” among other factors. Fact Sheet at 19. And, where a pesticide is particularly toxic, or where the waterway is either already impaired or especially pristine, neither the size of the discharge *nor* the treatment area is likely to be helpful in determining the propensity for harm. As for the estimated number of discharges, EPA states that “a large majority” are for applications that “EPA considers to have very low potential for impact,” such as “herbicide treatments to short sections of ditch or canal banks.” Fact Sheet at 20; see also EPA Draft Memo on NPDES Applicator & Application Estimates for Aquatic Pesticides (Sept. 23, 2009), p. 2 (*over 90%* of the total number of estimated annual applications of aquatic pesticides are to control weeds on irrigation ditchbanks), available at <http://www.epa.gov/pesticides/ppdc/2009/october/session1-npdes.pdf>. This not only concedes the point that the level of anticipated impact should be driving the NOI requirement, but also says nothing about how the NOI requirement should operate for the remaining 10% of applications (which include the types of applications about which the public is most concerned, *e.g.*, mosquito spraying, aquatic weed control in public lakes and ponds).

Accordingly, Commentors propose, EPA should require NOIs (and should impose any related substantive requirements stemming from the need to submit an NOI (*e.g.*, IPM practices, PDMPs)) for any pesticide discharge that poses greater than a trivial risk to public health or the environment. To provide guidance for dischargers, EPA should develop a list of pesticides that are presumed to pose some risk of harm whenever used.¹¹ The NOI requirement should also apply for any discharges into sources of drinking water,

¹¹ This list would necessarily be more expansive than the list of highly dangerous pesticides that EPA should allow to be discharged only pursuant to individual NPDES permits, rather than this general permit. See Comment 6, supra.

as well as into any impaired or exceptional waters with respect to which EPA does not impose carve-outs for individual permitting. Alternatively, EPA could retain its spatial thresholds and, *in addition*, impose the NOI requirement (and related substantive requirements) on any discharges that pose the risks stated above.

Comment 9: To the extent that EPA retains its spatial approach to annual treatment area thresholds, it should set those thresholds lower.

EPA concedes that its proposed spatial thresholds “exclude[] a significant number of small applications,” Fact Sheet at 21, but appears to believe that all such applications will be benign or will occasion no public concern. Commentors respectfully disagree: smaller water bodies may sometimes be *more* worthy of protection precisely because their diminutive size allows for less assimilative capacity, or because local residents feel a greater personal attachment to them. For instance, in several New England states, any lake or pond over 10 acres in size in its natural state is a “great pond,” and is held by the state in trust for public use. See, e.g., Massachusetts Great Pond List (May 2010), available at <http://www.mass.gov/dep/water/resources/grtpond.htm>. These ponds provide considerable public enjoyment, yet because the smallest of them is only *half* of EPA’s proposed 20-acre annual threshold for aquatic weed, algae, and nuisance animal control, see Draft Permit at 3, § 1.2.2, discharges of potentially harmful pesticides may be made into them with no prior notice, and without the additional protections of the NOI-triggered substantive requirements.¹² This is unacceptable.

Comment 10: In situations where an NOI is required, EPA should allow meaningful input from concerned members of the public before any discharge occurs.

In most cases where an NOI is required, the draft permit demands that such notice be submitted only 10 days prior to commencement of discharge. See Draft Permit at 4, § 1.2.3. It is unclear to Commentors whether EPA envisions this brief period to allow for public comment: on one hand, EPA states formally that “[d]uring this time period, issues can be raised with EPA, who has the authority to deny coverage,” Fact Sheet at 11; on the other hand, EPA staffers have stated informally that the NOI period is *not* meant to allow for public comment. Given the importance of many of the receiving waters to people who live nearby, as well as the comparative lack of structural protections in the draft permit, Commentors urge EPA to embrace a collaborative approach that recognizes the importance of public input *before* pesticide discharges to water are allowed.¹³

¹² This is not a mere hypothetical concern. At Card Pond (11.4 acres), in the majestic Berkshire Region of Western Massachusetts, the state Department of Environmental Protection (“DEP”) recently denied permission to apply Diquat Dibromide (a toxic chemical herbicide), finding that the proposed treatment was “a short term solution and will not address the management needs of Card Pond on a long term basis.” Order of Conditions for DEP Wetlands File #331-87 (April 7, 2009), p. 4. Had EPA’s proposed 20-acre threshold been applied, no IPM practices would have been required, and it is unlikely that alternatives to pesticide use would have been seriously considered.

¹³ There are many ways in which informed members of the public can contribute to this process. For instance, local residents may be aware of impacts that have occurred when similar pesticides were applied nearby.

One simple way to do this would be to allow more time for public input prior to discharge. As EPA notes, most applications of pesticides occur at fairly regular, predictable intervals (especially those, such as mosquito spraying and aquatic weed control, that are likely to be the most controversial). See Fact Sheet at 18-19. For such applications, a 30-day comment period is surely achievable (at least absent emergency conditions), and would certainly yield more robust public feedback. See, e.g., Washington Dep't of Ecology, Aquatic Plant and Algae Management General Permit (WAG-994000) ("Washington Permit"), p. 13, § S2(C) (allowing 30-day public comment period), available at http://www.ecy.wa.gov/programs/wq/pesticides/permit_documents/APAMfinalpermitrevised011509.pdf.

Another way would be to require the discharger to provide more complete information in the NOI itself. For instance, the NOI form included with the draft permit does not appear to require that the applicator indicate what specific pesticide or pesticides are proposed to be discharged. See Draft Permit at 53-54 (Appx. D). Plainly, members of the public need to know what potentially toxic substances are proposed to be added to their waters if they are to reach informed opinions about the propriety of the discharge.¹⁴ Further, the NOI form does not appear to require an explanation of what specific organisms are being targeted by the pesticide application, see id., which would obviously assist in the assessment of feasible alternatives to pesticide use. And, Commentors submit, the NOI should affirmatively require the provision of a map of the proposed treatment area (which should be a relatively trifling burden using free, online mapping tools), in addition to a narrative description of the area.

Lastly, Commentors believe that EPA should require the discharger's Pesticide Discharge Management Plan ("PDMP") to be submitted at the same time as the NOI, and not simply before the first pesticide application. See Draft Permit at 15, § 5.0. Even if the provisions of the PDMP are not technically enforceable, it seems clear that requiring the applicator to think preemptively about how pesticides can be applied as safely as possible – and, indeed, if they should be applied at all – will help reduce environmental impacts. Where local residents find a given PDMP to be insufficiently thought through, these affected persons should be given the opportunity to convince EPA to impose tougher restrictions, or to disallow the pesticide discharge altogether.

Comment 11: EPA should require the submission of a new NOI whenever a different pesticide is used, or a different organism is targeted.

Under the draft permit, once an NOI is submitted for a particular pesticide application activity in a particular area, the applicator remains covered by the permit until

¹⁴ Given that all NOIs must be submitted electronically, see Draft Permit at 4, § 1.2.2, it should not be prohibitively difficult for EPA to maintain a searchable database of all NOI data on its website, from which members of the public can ascertain whether pesticides are proposed to be applied to waters near their homes. Alternatively, or in addition, EPA could create an e-mailing list that generates alerts for subscribers whenever a pesticide is proposed to be applied to water bodies within a specific geographic region (*e.g.*, a zip code area, city, or county).

(1) the applicator submits a notice of termination, (2) EPA revokes the permit, or (3) the permit expires after 5 years. See Draft Permit at t.p. (expiration date is April 8, 2016); *id.* at 5-6, §§ 1.2.4-1.2.5 (continuation/termination); Fact Sheet at 24 (revocation). Although the draft permit requires applicators to terminate coverage where they have “ceased all discharges from the application of pesticides for which [they] obtained permit coverage and [they] do not expect to discharge during the remainder of the permit term for any of the [four primary] use patterns,” Draft Permit at 6, § 1.2.5.2(b), the permit facially allows continued coverage for applicators who seek to apply *different* pesticides or to target *different* organisms – without submitting a new NOI – so long as they also continue the discharge for which they initially obtained coverage. This loophole not only deprives EPA and the public vital information about changed circumstances that might warrant different requirements, but it also encourages applicators to “game the system” (*e.g.*, by submitting an initial NOI describing only the most benign anticipated pesticide application). It is difficult to believe that this is the agency’s intent, and EPA should close this loophole by requiring a new NOI to be submitted under these circumstances, or by making it clear that coverage does not extend to different applications. This would bring the NOI requirements for pesticide applicators more into line with those applicable to point source dischargers generally.¹⁵

Comment 12: EPA should narrow the NOI exception for “declared pest emergency situations,” clarify which requirements apply after such an emergency occurs, and impose mandatory monitoring requirements after every such emergency.

Although Commentors accept that certain exigent circumstances may justify the use of aquatic pesticides – on an exceedingly *rare* basis – prior to the submission of an NOI, we believe that EPA should offer more guidance as to what situations qualify. First, the circumstance constituting such an “emergency” should be determined only by an *environmental agency* with the proper institutional authority to make such a determination – it should not be determined by a government agency with no primary mandate to protect the environment, and certainly *never* by the applicator. See Draft Permit at 4, § 1.2.3; *id.* at 33. Second, EPA should ensure that whatever administrative processes led to the “emergency” declaration were subject to adequate public notice and comment protections, and specify that a permit violation occurs when such a declaration is invalidated (by the agency or a court) after the fact. Third, EPA should specify that any reasonably foreseeable event can never constitute an “emergency,” publish guidance as to what constitutes a “significant” risk of countervailing harm (including guidance on what evidentiary showing must be made), and clarify that mere “economic loss” does *not* qualify. Commentors are very much concerned that the tail not wag the proverbial dog here, and that this provision not be used to allow wholesale exemptions from the Act’s requirements.¹⁶

¹⁵ Alternatively, as a “bright-line” rule, EPA could require a new NOI to be submitted every year.

¹⁶ The regulatory provision cited by EPA in the draft permit’s definition of “declared pest emergency situation” is taken from 40 C.F.R. § 166 *et seq.*, which codifies the Administrator’s power under 7 U.S.C. § 136p to exempt “any Federal or State agency” – *not* private entities – from legal requirements of FIFRA – *not* the CWA. Commentors are aware of no general legal authority allowing EPA to exempt discharges of

Commentors also seek clarification concerning the statement in the draft permit that “[i]n the event that a discharge [in response to a “declared pest emergency situation”] occurs prior to [a discharger] submitting an NOI, [that discharger] must comply with all other requirements of this permit immediately.” Draft Permit, at 4 n.1, § 1.2.3. It is unclear whether these “other requirements” include those substantive provisions triggered by the NOI requirement generally (*e.g.*, IPM practices, PDMPs). If not, EPA should clarify that any subsequent “emergency” spraying at the same site, which will be more readily predictable, is subject to any and all NOI-triggered provisions.

Lastly, because “emergency” applications may be made without proper screening and public notice beforehand, it is imperative that *ambient* monitoring be done in a timely fashion after *every* such application, to ensure that no unacceptable environmental impacts have occurred and to inform decision-making about the propriety of any follow-up applications.

C. TECHNOLOGY-BASED EFFLUENT LIMITATIONS

Comment 13: EPA should require the use of the least toxic alternative to pesticides, or at least require that non-toxic methods of pest control be employed first.

Commentors agree that all dischargers covered by the permit “must implement site-specific control measures that minimize discharges of pesticides to waters.” Draft Permit at 8, § 2.0. In the absence of numeric discharge limits, enforcement of this minimization requirement will be absolutely essential for protecting water quality. In order to truly “minimize” such discharges, however, the permit should, we believe, contain an explicit, presumptive preference for non-toxic alternatives to pesticide use *in every case*. Only in situations where this proves impractical (*e.g.*, after the performance of a rigorous pesticides needs analysis, or where non-toxic alternatives have been tried and been found to be unsuccessful in controlling pests) should the discharge of pesticides to water be allowed. And, when pesticides are to be used, the permit should require that preference be given to the safest of those pesticides that will do the job.

This approach is wholly consonant with the Act’s “technology-forcing” focus, long noted by the federal courts. 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). In practice, the implementation of the NPDES permitting program for pesticides should lead

pesticides to water from NPDES permit requirements, even for alleged “emergency” situations. The narrow circumstances under which strict compliance with the NPDES program may be excused are explicitly set forth in the Act itself. See, e.g., 33 U.S.C. § 1362(6) (sewage from certain types of vessels and certain substances relating to oil and gas production); 33 U.S.C. § 1342(14) (agricultural stormwater discharges and return flows from irrigated agriculture); 33 U.S.C. § 1342(l) (stormwater runoff from oil, gas, or mining operations); 33 U.S.C. § 1323(a) (Presidential discretion regarding federal facilities, so long as discharge limitations pertaining to toxic pollutants and new sources are met); 33 U.S.C. § 1328(b) (discharges associated with aquaculture projects).

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. Such advancements were envisioned in the 1971 legislative history of the Act itself by Senator Dole, who emphasized 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.*” S. Rep. No. 92-414, at 99 (1971) (emphases added), reprinted in 1972 U.S.C.C.A.N. 3668.

While pesticide applicators (and manufacturers) may disparage the feasibility of alternative pest control strategies, two concluded CWA enforcement cases illustrate how NPDES permitting can spur the effective use of non-pesticide alternatives. After the Ninth Circuit’s 2001 Headwaters decision, the Talent Irrigation District switched from a chemical herbicide to mechanical means for controlling aquatic vegetation, thus avoiding the need for an NPDES permit while simultaneously improving the environmental quality of the waterway. See National Cotton Council, 6th Cir. Docket No. 06-4630, Graham Decl. Supp. Pet’r Opp’n EPA Mot. Stay Mandate (May 8, 2009) ¶¶ 4-8. And, after a challenge to its unpermitted aquatic pesticide use, Idaho’s Gem County Mosquito Abatement District eliminated the direct discharge of chemical pesticides to water, implemented programs to reduce mosquito habitat, and significantly reduced pesticide use overall. See National Cotton Council, 6th Cir. Docket No. 06-4630, Dill Decl. Supp. Pet’r Opp’n EPA Mot. Stay Mandate (May 8, 2009) ¶¶ 6-7. This approach has proven successful in controlling pests and insect-borne disease: Gem County has experienced a *decrease* in the incidence of West Nile virus. See id. ¶ 7.

Another effective approach that has lead to diminished pesticide use is the development of comprehensive water body (or watershed) plans, examples of which are already in effect in Massachusetts and Connecticut, to coordinate aquatic weed control activities. See generally Massachusetts Executive Office of Environmental Affairs, “The Practical Guide to Lake Management in Massachusetts” (2004), p. 15 *et seq.*, available at http://www.mass.gov/dcr/watersupply/lakepond/downloads/practical_guide.pdf. Under such plans, all requests to use pesticides are considered cumulatively, and control options are coordinated among various community members. Applicators may be required to identify causes of pestilence (such as nutrient loading from agricultural activities, septic systems, or runoff) and to undertake efforts to stem these causes. Or they may be required to attempt non-toxic control alternatives (such as benthic barriers or mechanical weed pulling) before pesticide use is allowed.¹⁷ These plans also facilitate a consideration of the cumulative environmental impacts from the totality of pesticide use

¹⁷ The proposed pesticide discharge at Card Pond in Massachusetts, discussed above in Comment 9, was rejected in large part because the applicator failed to submit a proper lake management plan. As DEP indicated, an adequate plan “should include water quality data, information on the history and sources of water quality degradation, maps of the contributing watersheds, topography, mapped soils, surficial geology, land uses, zoning and other information to identify existing pollution inputs to the water body. The plan should also provide a water budget and a nutrient budget for the water body. It is essential to review past and current watershed management practices, assess the effect of these practices on water quality, and evaluate alternative watershed management practices to improve water quality through source control.” Order of Conditions for DEP Wetlands File #331-87 (April 7, 2009), p. 4.

in a water body, and thus help identify and reject excessive uses. EPA should encourage the development of such plans in appropriate circumstances.

Comment 14: EPA should set objective standards for when pesticide use is allowed.

The draft permit defines a “control measure” (which all dischargers must adopt so as to “minimize” pesticide use) as “any BMP or other method used to meet the effluent limitations” in the permit, which “*could* include other actions that a *prudent operator* would implement to reduce and/or eliminate pesticide discharges to waters of the U.S. to comply with the effluent limitations.” Draft Permit at 32 (emphases added). Commentors submit that this language is too vague to be meaningfully enforced. EPA should clarify that a control measure “*must*” include actions to reduce and/or eliminate pesticide discharges, and should provide written guidance as to what a “prudent operator” would do.

Towards this end, Commentors appreciate EPA’s statement that “if the permittee is found to have applied a pesticide in a manner inconsistent with the *relevant water-quality related FIFRA labeling requirements*, EPA will *presume* that the effluent limitation to minimize pesticides entering the Waters of the United States has been violated under the NPDES permit.” 75 Fed. Reg. at 31,782 (emphases added); see also Fact Sheet at 32. Nonetheless, EPA should further explain (1) which FIFRA requirements it means; and (2) whether this presumption can be rebutted, and if so, how. Also, EPA should clarify that the requirements on a FIFRA label simply provide a “floor” (*i.e.*, a *minimum* requirement) of how a “prudent operator” would properly use a pesticide, and not a “ceiling” on what acts the CWA requires such an operator to perform in “reducing and/or eliminating pesticide discharges.”¹⁸ To better ensure that applicable FIFRA requirements are met, along with other BMPs (see, e.g., Fact Sheet at 34-35), Commentors propose that EPA prepare a checklist of pertinent requirements, incorporate this checklist into the permit, and require applicators to sign off on the completion of each task under the penalty of perjury.¹⁹

¹⁸ As EPA has noted elsewhere, FIFRA and the CWA serve different purposes, use different risk management approaches, and employ different control strategies. See *Headwaters*, 9th Cir. Docket No. 99-35373, Brief for the U.S. as *Amicus Curiae* (1999) (“*Headwaters Amicus Br.*”), pp. 10-21, available at <http://westernlaw.org/files-1/epa%20amicus%20brief.pdf>; see also *Headwaters*, 243 F.3d at 531-32. Unlike the CWA, see 33 U.S.C. § 1251(a)(1), the goal of FIFRA is not the elimination (or even the minimization) of pollutant discharges; rather, FIFRA ensures no more than that the use of a pesticide “will not *generally* cause *unreasonable* adverse effects on the environment.” 7 U.S.C. § 136a(c)(5) (emphasis added).

¹⁹ Applicators may balk at this requirement as unnecessary or burdensome, but such a claim would ignore the reality that (1) FIFRA use requirements are woefully under-enforced, see D. Stever, 1 *LAW OF CHEMICAL REGULATION & HAZARDOUS WASTE* § 3:75, at 3-111 (2003 ed.) (“[P]esticide uses are not closely regulated by the EPA. The Agency has essentially left all enforcement of pesticide use requirements to the states, which are by and large not adequately staffed to provide much field enforcement.”); and (2) NPDES regulations already require certifications (under threat of felony prosecution) for persons responsible for environmental compliance, see 40 C.F.R. § 122.22(b), (d).

For dischargers subject to the NOI requirement, the draft permit further requires the establishment of an Integrated Pest Management (“IPM”) program, which requires applicators, *inter alia*, to evaluate alternatives to pesticide use (including no action, prevention, and mechanical methods), but then leaves it up to the *applicator* to determine whether and when “action thresholds” are met. Draft Permit at 8-14, 31; see also Fact Sheet at 37 (“As *operators* gain insight and experience into specific pest management settings, the action levels can be *revised up or down.*”) (emphasis added). While Commentors acknowledge that some pesticide applicators may well have experience in these matters, many do not. Moreover, allowing the regulated party to define the terms of regulation appears both to be illegal under the Act and indefensible as a matter of public policy. Instead, EPA should set clear, scientifically-derived guidelines for the establishment of “action thresholds” allowing pesticide use for each of the four use categories. Furthermore, EPA should specify that, in calculating action thresholds, “environmental” and “human health” considerations should take precedence over those relating to “economic, ... aesthetic, or other effects.” Draft Permit at 31. Lastly, EPA should clarify that dischargers must evaluate *each and every* of the IPM alternatives (*i.e.*, no action; prevention; mechanical or physical methods; cultural methods; biological control agents; pesticides) before the decision to use pesticides may be lawfully made, and should publish guidance on what constitutes a sufficiently rigorous level of “evaluation.” Obviously, the whole point of requiring such evaluation is to promote a meaningful and exploratory inquiry, and not simply to make operators jump through hoops in reaching a predetermined result that pesticides must be used in every instance.

Comment 15: Consistent with the Act’s mandate to establish effluent limitations for “categories” of point sources, EPA should develop guidelines for preferred IPM strategies for each use category.

EPA does not indicate whether it has analyzed discharges of pesticides to water under either the Act’s “best available technology” (“BAT”) standard for “existing” sources or the Act’s “best available demonstrated technology” (“BADT”) standard for “new” sources. See 33 U.S.C. §§ 1311(b)(2)(A), 1316(a)(1); see also 33 U.S.C. § 1314(b) (setting forth guidelines respecting BAT/BADT determinations). Both standards are presumptively applicable to the pesticide discharges at issue here, and Commentors urge EPA to clarify whether it has done this analysis and, if so, to make clear both what this analysis entailed and how it satisfies the relevant technology standard of the Act. If EPA has not yet done this analysis, Commentors urge the agency to announce a timetable for doing so.

Under either standard, EPA is obligated to set all technology-based prescriptions by “categories” of sources. See 33 U.S.C. §§ 1311(b)(2)(A), 1316(b)(1); see also E.I. du Pont de Nemours & Co. v. Train, 430 U.S. 112, 129 (1977) (“[Section] 301 limitations ... are to be based primarily on classes and categories, and ... are to take the form of regulations.”). Insofar as possible, EPA must “assure that similar point sources with similar characteristics ... will meet similar effluent limitations.” NRDC v. Train, 510 F.2d 692, 709-10 (D.C. Cir. 1974). Although EPA has distinguished between four use categories in setting forth certain requirements in the draft permit (such as the IPM

requirements), the requirements set forth therein are too generic to provide any meaningful guidance on what specific practices reflect the application of technology that is the “best available.”

Although Commentors recognize that EPA may refuse to set *numeric* limitations where doing so is “infeasible,” 40 C.F.R. § 122.44(k), this does not mean that whatever *narrative* limitations it sets must be left to the vagaries of case-by-case determinations. Commentors submit that EPA can and should publish (or commission the publication of) detailed development documents setting forth, for instance, the sorts of non-toxic alternatives that exist for each of the four use categories, specific ways of reducing environmental impacts when pesticides must be used, and so forth.²⁰ Faithful adherence to the principles announced in these documents could be incorporated as a condition of the general permit. Also, to the extent that any applications require *individual* permits (for instance, for discharges into impaired water bodies), these development documents should be used to guide BPJ determinations in developing appropriate terms for those permits.

Comment 16: EPA should determine which specific control technologies are the best available for each pesticide use category.

As discussed in the previous comment, the Fact Sheet contains no explanation of how (or whether) the technology-based provisions in EPA’s draft permit meet the governing BAT/BADT standards set forth in 33 U.S.C. §§ 1311, 1314, and 1316. For either standard, Congress directed EPA to require that discharges be reduced to the level achieved by the available technology that is best at reducing or eliminating the discharge of pollution, provided that the industry can afford it. See generally EPA v. National Crushed Stone Ass’n, 449 U.S. 64, 79-83 (1980). Thus, for instance, if specific IPM measures *can* be used – *i.e.*, if they are technologically and economically feasible for the pesticide industry, or for categories of the industry – these measures *must* be used. The draft permit requires applicators to “minimize” discharges of pesticides to water, which it defines as “to reduce and/or eliminate pesticide discharges ... to the extent *technologically available and economically practicable and achievable*,” Draft Permit at 34 (emphasis added), but this is only a narrative limitation on specific discharges, not an assessment of any given means of minimizing pesticide discharges for whole industrial categories. Surely, there is no indication that EPA has prescribed in the draft permit the most protective approach feasible, as it is statutorily required to do.

If EPA has the necessary information regarding costs and control efficiencies to perform this analysis, it should do so in issuing the final general permit. If EPA lacks this information at present, it should endeavor to gather this information over the next few years such that *specific* “available technologies” may be evaluated for the various use categories in advance of the next general permit (*i.e.*, the one that will be issued, presumably, after the present one expires in April 2016). By that time, EPA should be

²⁰ Similar guidance documents were developed in the 1970s and 1980s to assist EPA in formulating its initial effluent limitation guidelines for numerous categories and classes of industrial discharges.

able to make an informed decision about which is “best,” in line with the statutory factors. Germane to this inquiry, Commentors highlight EPA’s observation that many applicators already use IPM practices similar to what the draft permit requires, see Fact Sheet at 36, and note that some of these practices may already be required by FIFRA use labels.²¹ See also 75 Fed. Reg. at 31,784 (“EPA expects the economic impact on covered entities, including small businesses, to be minimal.”). Indeed, numerous pesticide applicators have themselves noted, at EPA’s public meetings and in formal comments, how many of the provisions in the draft permit are already required.

D. WATER QUALITY-BASED EFFLUENT LIMITATIONS

Comment 17: EPA should strengthen the narrative requirements regarding water quality standards.

The draft permit includes the requirement that “discharge must be controlled as necessary to meet applicable numeric and narrative ... water quality standards” (“WQS”) as well as a duty to take “corrective action” if a discharger or EPA determine that the discharge “causes or contributes” to a violations of a WQS. Draft Permit at 14, § 3.0. First, consistent with applicable law, see 40 C.F.R. § 122.44(d)(1)(i), EPA should clarify that no discharge may cause (*i.e.*, by itself) or contribute to (*i.e.*, in conjunction with other discharges) such a WQS violation; otherwise, the contribution requirement might be read as applying only to the duty to take “corrective action.” But see Fact Sheet at 72 (“[T]he second sentence [of the narrative standard] implements this requirement in more specific terms.”). Second, to ensure that dischargers are actually aware of the danger that their discharges may violate applicable WQS, EPA should require on the NOI form that every potential applicator indicate whether the receiving waters are already impaired for any constituent (pesticide-related or otherwise). Third, given the propensity for additive or synergistic effects among pesticides, EPA should establish a database listing all pesticide applications to specific water bodies, which must be consulted prior to the use of pesticides in that water. Fourth, reports of WQS violations by private individuals, in addition to those by the discharger or EPA, should also be credited in establishing the duty to take corrective action.²²

Commentors note that many of the suggestions we make elsewhere with respect to technology-based requirements (*e.g.*, preference for non-toxic alternatives), improved monitoring, and more robust provisions for public participation may well be required by this narrative water quality provision. See generally 33 U.S.C. § 1311(b)(1)(C)

²¹ Of course, the fact that other statutory regimes may require similar precautions is not a legally proper reason for weakening any requirements in an NPDES permit. As EPA has pointed out, overlapping protection by multiple statutes is the norm, not the exception, in the field of federal environmental law. See Headwaters Amicus Br. at 10-11,16-20 (citing examples); see also Monongahela Power Co. v. Marsh, 809 F.2d 41, 53 (D.C. Cir. 1987). Generally speaking, “where two statutes are capable of coexistence, it is the duty of the courts, absent a clearly expressed congressional intention to the contrary, to regard each as effective.” Ruckelshaus v. Monsanto Co., 467 U.S. 986, 1018 (1984) (internal quotes omitted).

²² Similarly, private person should be allowed to report “adverse incident” events necessitating corrective action. See Draft Permit at 20, § 6.1(e); id. at 31.

(requiring the imposition of “any more stringent limitation,” on effluents or otherwise, to meet WQS).

E. SITE MONITORING

Comment 18: EPA should require post-application monitoring of receiving waters for discharges of the more toxic pesticides, and for discharges meeting certain operational thresholds.

The draft permit requires no ambient monitoring: instead, the discharger must “monitor” (1) the amount of pesticide being applied to ensure that it is “the lowest amount to effectively control the pest” (consistent with resistance concerns); (2) the maintenance and application activities to ensure proper operation; and (3) under certain circumstances, the area of application – via a *visual* spot check – for “adverse incidents” (*e.g.*, fish kills or behavioral changes; observable human health effects). See Draft Permit at 14, §§ 4.1-4.2; *id.* at 31. Commentors submit that a mere visual inspection of the application area is unlikely to be effective at documenting toxic effects. As the Act recognizes, a “toxic pollutant” is one that causes “death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction) or physical deformations” in exposed organisms “or their offspring.” 33 U.S.C. § 1362(13). Many (if not most) of these sorts of impacts will *never* be observable to the naked eye – certainly not on basis of a single observation. And, even if they were, EPA should not rely on an applicator’s lay assessment (as persons not studied in aquatic toxicology or zoology) as to whether an observed condition qualifies as a “toxic” effect. Visual monitoring of receiving waters thus cannot “assure compliance with permit limitations,” as 40 C.F.R. § 122.44(i) requires. Fact Sheet at 7.

Accordingly, for pesticides that EPA knows to pose more significant risks of harm to non-target organisms, EPA should require the monitoring of receiving waters after each application, to ensure that any pesticide residuals are at safe levels.²³ A safe level is one that is known to cause no impairment to non-target organisms *irrespective* of whether “adverse” impacts have been observed. Commentors note that ambient monitoring is characteristically required by NPDES permitting agencies in setting numeric water quality-based effluent limitations applicable to larger point sources, which – unlike pesticide applications – have the benefit of supplemental protections afforded by of “end of pipe” treatment technology. Monitoring of receiving waters has also been required in states where NPDES permits have been issued to aquatic pesticide applicators. See, e.g., Washington Permit, p. 30, § S7(A)(2).

²³ Where such pesticides have the known or suspected propensity to seep into groundwater (especially drinking water) that is hydrologically connected to surface waters, EPA should require that groundwater monitoring be performed as well. See generally Colorado Stewardship Prescription, pp. 27-29 (listing chemical herbicides that pose “potential threats to groundwater”). Likewise, where pesticides or their constituents may accumulate in sediments, sediment monitoring should be required. See discussion in note 8, *supra* (copper).

In addition to any specified high-risk pesticides, EPA should require post-application ambient monitoring for any pesticide discharges that are made on a scheduled, programmatic basis by government agencies (such as annual springtime mosquito spraying by local vector control districts). These discharges are wholly predictable, and such monitoring thus can generally be made a part of the routine planning and budgetary process. Moreover, agencies generally should have (or have the wherewithal to obtain) the financial resources and expertise to perform such monitoring.

Comment 19: At the very least, EPA should require visual monitoring during and after every pesticide application.

Under the draft permit, a visual check is only required *during* a pesticide application “when considerations for safety and feasibility allow”, and only required *post*-application if the discharger happens to be conducting a surveillance or efficacy check *anyway*. Draft Permit at 14, § 4.2. Apparently, the restrictions for “safety and feasibility” during application relate to, for instance, applications at nighttime or from a moving vehicle operated by the applicator. See Fact Sheet at 87. Commentors submit that these obstacles are not particularly difficult to remove, say, by requiring pesticide applications to be made during daytime hours (if efficacious), or demanding that the applicator hire a spotter to look for adverse effects during applications. Regarding post-application monitoring, Commentors reject EPA’s proposal that applicators need only perform visual inspections if they otherwise happen to be conducting “efficacy” checks as part of the “normal course of business.” Fact Sheet at 87. The fundamental nature of the NPDES program is to *alter* the “normal course of business” where necessary to protect water quality, and surely it is not unduly burdensome to require that a discharger simply *look* at the treatment area after an application, especially given the known ecological risks posed by most pesticide uses.

Commentors believe that post-application visual monitoring could be made even more effective by enlisting the help of local residents who may be concerned about discharges to nearby waters. To this end, Commentors urge EPA to require the posting of some form of public notice (or e-mail alerts to subscriber lists) prior to any given application (at least to public waters), so that concerned residents can perform their *own* visual inspections and report back to EPA on any “adverse incidents” they observe.²⁴ Because applicators will often have an economic incentive to under-report observations of this nature, they should not be relied upon as the sole arbiter of whether post-application effects are acceptable.

²⁴ The State of Washington’s General NPDES Permit for Aquatic Nuisance Plant and Algae Control requires similar public notice provisions. See Aquatechnex, 2002 WA ENV LEXIS 87, at *9-*10.

F. PESTICIDE DISCHARGE MANAGEMENT PLANS (“PDMPs”)

Comment 20: All PDMPs should be submitted to EPA, and be made publicly available.

While Commentors support the general idea of a PDMP planning process, we believe it inadequate that these PDMPs merely be made *available* for submission, upon request, to EPA or other environmental agencies. Rather, such submission should be a required part of the process. Further, the draft permit should make clear that PDMPs are available to the public. See Draft Permit at 19, § 5.3. Ostensibly, EPA is requiring the preparation of PDMPs because it believes they will cause applicators to think more proactively about how to meet the technology-based and water quality-based effluent limitations imposed elsewhere in the permit. But, as any good schoolteacher knows, there is little educational value in simply requiring students to do their homework without requiring them to turn that homework in. Here, unless an applicator is required to submit the PDMP for review by EPA, neither the applicator, EPA, nor concerned citizens will know whether it was prepared correctly. EPA can close this feedback loop, at minimal cost, by requiring submission and public disclosure. Any concern about protecting “confidential business information” (Fact Sheet at 11) is misplaced here, as the Act and its implementing regulations provide explicitly that “information which is effluent data or a standard or limitation is not eligible for confidential treatment.” 40 C.F.R. § 2.302(e); see also *Mobil Oil Corp. v. EPA*, 716 F.2d 1187, 1190 (7th Cir. 1983) (noting that information relating to the development of effluent limitations should not be “ke[pt] secret”).

G. REPORTING REQUIREMENTS

Comment 21: All dischargers should submit detailed reports on every application, and all of these reports should be made publicly available.

In most NPDES permits, EPA requires the submission of monthly Discharge Monitoring Reports (“DMRs”), which typically provide detailed information on every regulated pollutant parameter discharged during that period – including the rate or concentration of each parameter – so that government agencies and citizen enforcers can readily discern whether a discharger is meeting the substantive requirements of the permit. See generally *Sierra Club v. Union Oil Co. of Cal.*, 813 F.2d 1480, 1492 (9th Cir. 1987) (accuracy secured by this self-monitoring and reporting scheme is “fundamental” to the NPDES program and “critical to [the] effective operation of the Act.”). Likewise, in the draft permit, EPA requires larger dischargers subject to the NOI requirement to create records detailing the dates of each application, all waters into which pesticides were discharged, total amounts used, how applied, and emergency responses taken (among other things). See Draft Permit at 24-25, §§ 7.2-7.3. These records must be kept for three years. See id. at 25, § 7.3. However, this detailed information – which would obviously be crucial to compliance determinations and, if necessary, subsequent enforcement efforts – is *not* submitted to EPA or otherwise made publicly available; instead, these dischargers need only submit to EPA an *annual* report detailing these

activities in *summary* form. See id. at 24-26, §§ 7.2-7.4. Reporting requirements for dischargers not subject to the NOI requirement are even less helpful: these dischargers need keep *no* records detailing what, when, or where pesticides were used, even in summary form. See id. at 24, § 7.2.

If EPA or concerned citizens are to be able to ascertain whether an applicator has “minimized” pesticide discharges, whether a given discharge may have “caused or contributed” to water quality violations, or whether an “observable adverse incident” can be traced to a particular application,²⁵ the general permit must require that all detailed information concerning each pesticide discharge be submitted to EPA by every discharger, and that this information be made publicly available. See, e.g., California State Water Resources Control Board, General Permit No. CAG990003, 2001 Cal. ENV LEXIS 12 (July 19, 2001), at *46, *60-*61 (requiring “a monthly report to the [regional permitting authority] documenting specific information for each aquatic pesticide treatment site”). As all of these data can readily be submitted electronically, see, e.g., id. at 25, § 7.4, meeting this obligation should occasion no huge additional expenditures. (Indeed, as EPA notes, some of these reporting tasks are already required by FIFRA or other laws. See Fact Sheet at 98.) Moreover, to ensure that a complete database of information is compiled, all records should be retained by the discharger and EPA for a minimum for five years, and not merely three.

CONCLUSION

EPA has a historic opportunity to rectify almost 40 years of inaction on NPDES permitting for discharges of pesticides to water, and to provide the first-ever meaningful regulation of pesticide use on case-by-case, water body-specific basis. Commentors urge the agency to use all risk management tools its disposal – and especially the collective knowledge of the general public – to ensure that pesticide applications occur, if at all, only under the safest possible conditions.

Commentors again thank EPA for the opportunity to provide feedback on this process, and stand at the ready to provide additional information should the agency find it helpful.

²⁵ Commentors note that these requirements are applicable to *every* discharger, regardless of the NOI thresholds. See Draft Permit at 8, § 2.1; id. at 14, §§ 3.0, 4.2.