COMMONWEALTH of VIRGINIA

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SUBJECT: Technical Advisory Committee (TAC) Meeting to Discuss the 2018 Reissuance of 9VAC25-800 Virginia Pollutant Discharge Elimination System (VPDES) General Permit Regulation for Discharges Resulting from the Application of Pesticides to Surface Waters

TO: TAC Members and DEQ Staff

FROM: Elleanore Daub, Virginia Pollutant Discharge Elimination System (VPDES) DEQ Central Office

DATE: March 8, 2018

A TAC meeting was held February 1, 2018 at the Virginia Department of Environmental Quality (DEQ), Piedmont Regional Office in Glen Allen. The meeting began at 10:00 AM. Those attending the meeting were:

Name	Organization
Mark Eversole	Virginia Marine Resources Commission
Liza Fleeson Trossbach	Virginia Dept. of Ag. & Consumer Services (VDACS)
Todd Groh	Virginia Dept. of Forestry
Ron Harris	Newport News Waterworks
Mark Vandevender	Dept. Utilities/Public Works, Spotsylvania County
Daniel Hood	Solitude Lake Management
Paul Hlavinka	Maryland Department of the Environment
Allan Brockenbrough	DEQ CO VPDES Permits
Elleanore Daub	DEQ CO VPDES Permits
Peter Sherman	DEQ CO VPDES Permits
Kevin Crider	DEQ BRRO VPDES
Morgan Mchugh	DEQ PRO VPDES

Handouts – Draft existing Pesticide General Permit (VAG87) for amendment and reissuance (9VAC25-800-10 through 60) including comments. PowerPoint overview of the VPDES General Permit for Discharges Resulting From the Application of Pesticides to Surface Waters.

Discussion

After introductions, DEQ staff provided an overview of the existing VPDES pesticide general permit (see handout) and led the group through a discussion of potential questions and issues that have arisen during the term of the current permit. A summary of the discussion is provided below. Any potential changes will be based on EPA's reissuance of its pesticide general permit in 2016 and concerns that have been identified to date. At this stage DEQ does not anticipate significant changes in the existing permit.

Schedule – The existing VPDES pesticide general permit (VAG87) expires 12/31/2018. DEQ would like to obtain Virginia Water Control Board approval of the reissued pesticide general permit several months prior to the expiration date of the current permit. There are Board meetings in June and September.

General Background – The question was asked whether the use of Integrated Pest Management (IPM) is unique to Virginia. DEQ responded that VAG87 includes specific IPM requirements for operators with control of financing for, or the decision to perform, pesticide applications that result in discharges and for operators that must do a Pesticide Discharge Management Plan (PDMP). Elements of the EPA Pesticide General Permit are similarly based on IPM principles.

The question was asked whether the commercial applicator license process informs applicants about the pesticide general permit. DEQ responded that the VPDES program does not administer the applicator licensing process. DEQ had conducted outreach for the existing and prior pesticide general permits; however DEQ has not received many requests for outreach recently. VDACS may be informing applicators of the permit during recertification training.

DEQ noted that EPA deleted "wildlife" from its definition of "adverse impact" and it is not clear why. It was suggested that it may be difficult to correlate pesticide application with potential wildlife impacts since there could be many causes and wildlife is transitory so it is not known when it might be in proximity to pesticide application.

DEQ regions are interested in additional guidance to address pesticide general permit scope issues.

DEQ stated that the permit includes some extra definitions, mostly from VDACS regulations (e.g., "Label" and "Labeling"). During the first issuance, DEQ worked to make the general permit consistent with existing VDACS regulations.

DEQ published a Notice of Intended Regulatory Action (NOIRA) for the reissuance of the pesticide general permit during the summer of 2017.

Algistats, Alum, Iron, Potassium Permanganate – DEQ stated that one question that has been raised is whether algistats should be included under the pesticide general permit. Algistats prevent the growth of algae. Examples of algistats include alum and dyes.

Participants indicated that as part of water treatment various some of these substances are used as coagulants and to promote sedimentation. Alum is used as a raw water treatment (it sequesters phosphorus). Alum clarifies water. It is used a lot in Wisconsin and Michigan, as well as in Virginia. It lowers the pH initially but does not change the dissolved oxygen profile. Potassium permanganate changes the valence of magnesium so that flocculants/ coagulants can be used. Flocculants cause sediments to drop out of the water column, clarifying the water.

Minnesota addressed alum and iron in a draft pesticides general permit as allowable "non-pesticides," but removed this allowance in the final permit because they were not registered pesticides.

Hydrogen peroxide also is used as an algicide (it oxidizes algal cell walls). Hydrogen peroxide is a powerful oxidant that readily decomposes to water and oxygen, leaving no residue and is effective at low concentrations where no toxic effects are expected. If the product is not a registered pesticide in Virginia, the application of the product does not need coverage. This is stated in the fact sheet.

DEQ asked if such treatment is primarily in the reservoir itself or part of drinking water treatment systems. Most of these substances are used in treatment systems, typically early in the process.

DEQ observed that if any of these substances are registered pesticides, then their use in covered use categories are subject to the pesticide general permit. If they are not registered pesticides, then their use is not covered by the permit. DEQ may consider additional guidance regarding these substances.

VDACS noted that with regard to alum, hydrogen peroxide and dyes added to water, one key is whether the product or user is making pesticidal claims. If they are then they must be registered with VDACS. VDACS oversees the use of two types of pesticide products: 1) Products registered as pesticides with EPA, which also must register with VDACS; 2) Products that are exempt from federal registration, but must register in the State (annual registration).

The merit of covering these "non-pesticidal" related activities under the pesticide general permit was recognized but there are concerns with expanding the scope of the permit beyond the original objective and the outcome of the court case. Without evidence of a demonstrated problem associated with algistats, DEQ is not inclined to address them in the permit. Specific issues will be addressed case-by-case, and guidance will be provided if determined necessary.

Pond Restorers – Several products exist that purport to restore ponds. Most contain one or more forms of bacteria. The product in question was not labelled as a pesticide. An example from Norfolk was mentioned. VDACS was originally approached about the use of the product and DEQ responded that use of a product that alters the physical, chemical or biological properties of state waters could place the owner in violation of State Law.

Pond Dyes – Typically used in private ponds, pond dye has the potential to show up downstream and in the past DEQ has received some complaints regarding color issues due to dye. In

response, DEQ has issued some warning letters. There is some debate as to how the State law and regulations apply to dye (the water quality standards regulation addresses color; the Code of Virginia suggests that a dye would have to pose adverse impact – see citations below). A question about the implications of including pond dyes under the pesticide general permit was asked. Participants responded that the use would be an authorized VPDES discharge subject to permit terms including potentially subject to (integrated pest management) IPM and the creation of a pesticide discharge management plan (PDMP). It was noted that dyes are intended to leave a residue and that at times they are likely to make their way downstream. It is unclear whether dye use would typically exceed the applicable annual threshold in the permit (exceeding the annual thresholds requires IPM and the creation of a PDMP). One participant indicated that he was not sure he wanted dyes addressed in the pesticide general permit, but added he would like them addressed somewhere.

DEQ observed that the statute provides that it is unlawful to… "Otherwise alter the physical, chemical or biological properties of state waters and make them detrimental to the public health, or to animal or aquatic life, or to the uses of such waters for domestic or industrial consumption, or for recreation, or for other uses" (VA Code § 62.1-44.5). DEQ noted that one argument we have heard is that dyes are not detrimental to health, aquatic life or other uses. DEQ stated that State water quality standard regulations at 9VAC25-260-20) provide that substances to be controlled include substances that produce color.

One participant stated that if dyes are not covered under the pesticide general permit then applicators could not apply them without some potential risk. It seems applicators would want dyes covered under the permit. There is no permit shield if excluded from the pesticide general permit. So an applicator would want to be clear on regulatory status.

Very few dyes are registered as pesticides. If they make a pesticidal claim they must be registered in the State. The use of any dye that is a pesticide is covered under the general permit. DEQ reminded participants that, at present, the general permit is limited to the application of pesticides in surface waters. The question is whether to add to this scope products that are predominantly non-pesticides.

The point was made that a significant element of protection against misapplication seems to be applicator training.

VDACS certification is required for commercial applicators and those who apply restricted pesticides. Homeowners not in these categories can apply pesticides without certification.

A regional DEQ member indicated that he was aware of one complaint regarding dye but had not received any calls personally. He noted that his region at times struggles to address color in individual permits. Color poses aesthetic and recreational use concerns, among potentially others. Some people believe that it is good to add, but generally we do not want artificial color in streams.
One participant asked if the State uses mixing zones. DEQ responded yes, but not in general permits.

Another participant stated that dyes are used primarily for aesthetic purposes, not biological control. Dyes can change sunlight penetration somewhat. Some are used to reduce bottom growth. Most dyes are not pesticides. Dyes may have been addressed in the Virginia Water Protection (VWP) program or in individual permits.

DEQ noted that dye tests can be appropriate in some circumstances (e.g., sewer line tests, mixing zone evaluation) subject to notifications and plan requirements, but that is not the issue here.

Dyes do persist. They break down with exposure to sunlight.

One participant suggested requiring plans for the use of dyes to prevent downstream impacts.

DEQ should address in guidance when warning letters should be issued when complaints related to pond dyes are received.

Application of Herbicides in Tidal Wetlands and Submerged Lands and Tidal Wetlands Laws / Requirements for Joint Permit Applications – The existing pesticide general permit covers the application of herbicides in tidal wetlands. DEQ has been made aware of some instances where no local wetlands board approval was obtained prior to application. DEQ is interested in the best way to address the issue of ensuring that Virginia Marine Resources Commission (VMRC)/ wetlands board approvals are obtained when necessary.

DEQ indicated that the pesticide general permit specifically provides that other requirements beyond this permit (e.g., wetlands protection, FIFRA, State pesticide registration and application requirements, etc.) continue to apply to the application of pesticides in State waters.

It is the local wetlands board decision as to whether pesticide application can be allowed and what, if any, requirements apply (e.g., vegetative plan).

VMRC does issue permits to mow hydrilla but complete removal of submerged aquatic vegetation (SAV) using herbicides must go through the appropriate approvals. The best approach to ensure full compliance is to submit a joint permit application to VMRC. VMRC will distribute it to the appropriate entities including the local wetlands board.

DEQ asked whether this is a documentation issue. There seems to be a parallel process (pesticide general permit and wetlands permit). The VPDES program have discussed the issue with the VWP program. One participant noted that an extra line in the permit could be useful to highlight the State wetlands requirements.

DEQ observed that the Maryland pesticide general permit expressly does not cover weed (other than wetland species such as phragmites), algae, or pathogen control applications in tidal waters. Maryland also has toxic material permits (this older permit program addresses any homeowner, farmer, local government, or other person who wants to control nuisance aquatic life in ponds, ditches or waterways by the use of chemical products (e.g., mosquito control, algae removal) but is considering merging this with other existing permit programs. Maryland does not have local wetlands boards but has a wetlands permitting group.

DEQ inquired as to whether it will be sufficient to supplement existing guidance regard this issue. DEQ suggested that developing some frequently asked questions (FAQs) on this topic could be helpful since FAQs are often used more readily by the public and can target specific issues.

The VWP program encountered a homeowner's community that applied pesticides to tidal wetlands. The VWP program supported the VMRC response. Upon investigation the waters were state-owned bottomland, and there should have been an effort to minimize the problem first (mowing), followed by pollution prevention in an individual permit. The association did not apply for a permit. Applications occurred twice before DEQ was called.

Another case where pesticides can be avoided is to treat hydrilla in water (reservoirs) using carp. The pesticide general permit includes a section addressing prohibitions from permit coverage in 9VAC25-800-30 D 3 – Authorization to Discharge. A wetlands restriction could be placed in this section of the regulation.

Application of Herbicides to Stormwater and Compensations Sites under the Virginia Stormwater Management Program (VSMP) and VWP programs – In wetlands banks, limited activity is allowed with specific VWP authorization. There may be the need for further coordination between VPDES and VWP since VPDES is permitting pesticide application and VWP is protecting the wetland. It appears that there is another step that pesticide applicators need to take before applying pesticides to these areas (i.e., talk to VWP).

There is some concern regarding stormwater best management practices (BMPs) to protect water quality in basins. People are applying herbicides to basins that rely on vegetation to remove pollutants (e.g., nutrients). This is counterproductive. They should consider other options (mechanical harvesting, BMPs).

What do people do when a water/ wetland is full of phragmites? It is a difficult plant to eradicate. Herbicides can be chosen that focus on species control. Note that conditions may be silted in and if flow is restored then conditions might be less conducive to phragmites.

Corrective Actions for Unauthorized Releases Part I D 1 – DEQ asked if corrective actions under the pesticide general permit only apply to spills to water. Probably, since other programs (VDACS) exist for other spills and the pest management measures are for surface waters. There is also a question of spill in close proximity to surface water.

Calculation of Treatment Area Thresholds –
DEQ asked if there are issues with calculating the treatment area thresholds. No specific issues were identified by TAC.

Bees – There have been a few reports of bees dying after mosquito spraying. Such effects are out of scope of the pesticide general permit since adverse incidents focus on water. Any pesticide misapplication is addressed by VDACS. A participant noted that, at the federal level, one bumblebee has been listed as endangered.

Other Discussion Points – DEQ asked if the permit's current approach of specifying the requirements for decision-makers and applicators is good, workable approach. DEQ has not received much feedback indicating that aspects of the permit are not working or may need to be changed.

A participant asked who inspects permittees to determine compliance. DEQ works with VDACS to promote compliance. VDACS focuses on pesticide application. Active monitoring is mostly complaint driven.

DEQ uses some VDACS regulatory language in the permit to promote state-wide program consistency and avoid duplicative or conflicting language or requirements. This results in some of the language in the State pesticide general permit being different than in EPA's permit. State VDACS definitions encompass the equivalent federal definition.

Regarding forestry, mature forests are covered under the permit. Immature forests do not need coverage (waterways are obvious and can be avoided). This is stated in the Fact Sheet and it seems to be working. DEQ has visited forestry tracts in various stages of growth and saw that this approach seems to be protective.

DEQ noted that EPA has a lot endangered species protection provisions in the federal general permit. Our permit has basic requirements (include notice requirement). The definition of "pest" in the regulation specifically states that any organism classified by state or federal law or regulation as endangered or threatened is not a pest. A list of species and resources is attached to the fact sheet.

DEQ asked whether VDACS check the citations applicable to their agency and inform DEQ of any changes. UPDATE: VDACS has checked and citations are correct.

It was noted that pesticide use limitations and restrictions for products that affect threatened and endangered species are on the pesticide label.

VDACS trains pesticides applicators and can tailor certification programs if needed to address changes to the general permit. VDACS can communicate with certified applicators to share information (e.g., FAQs, permit reissuance information).

The next step is for DEQ to write a meeting summary and update the regulation based on our discussion. DEQ plans to take the regulation to the State Water Control Board for approval to go to public comment and hearing at the June Board meeting. That would put the publication for public comment and hearing in the July-August time frame. The permit expires December 31, 2018.

Thanks to all the TAC members for their service.