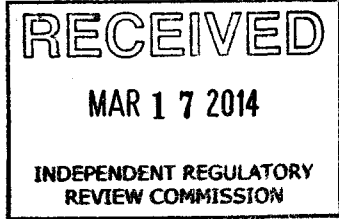


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Katy Dunlap
Eastern Water Project Director

Brian Wagner
President of the Pennsylvania Council of Trout Unlimited

March 14, 2014

Environmental Quality Board
Pennsylvania Department of Environmental Protection
P.O. Box 8477
Harrisburg, PA 17105-8477

RE: Proposed amendments to 25 Pa. Code §78, Oil and Gas Wells

Dear Members of the Environmental Quality Board:

Trout Unlimited and its Pennsylvania Council (collectively "TU") appreciate the opportunity to provide comment on the proposed amendments to Chapter 78 of Title 25, related to revisions necessary to implement additional requirements imposed under the 2012 Oil and Gas Act (Chapter 32, Act 13 of 2012). Specifically, the Pennsylvania Department of Environmental Protection's (DEP) proposed amendments modify and update existing requirements related to surface activities associated with the development of oil and gas wells, including containment of regulated substances, waste disposal, site restoration and reporting releases; establish new provisions for borrow pits, oil and gas gathering pipelines; identification of abandoned wells; and the road-spreading of brine. Additionally, these proposed regulations add new provisions for unconventional gas wells regarding identifying the impacts to public resources, standards for freshwater and wastewater impoundments, well site containment systems, wastewater processing and water management plans. TU respectfully makes the following recommendations, for improving the proposed amendments to Chapter 78, and for fulfilling the overall stated intentions of the amendments.

General Comments

Throughout the proposed amendments, other regulations and laws are extensively cross-referenced, with very few descriptive words included to provide context for what each regulation/law relates to, forcing the reader to perform legal research to determine the effect of the proposed amendments. This frustrates the public participation process, making it difficult for the lay person to understand the effect of the proposed regulations and provide meaningful

Trout Unlimited: America's Leading Coldwater Fisheries Conservation Organization
Eastern Water Project Office: 6281 Cayutaville Rd., Suite 100, Alpine, NY 14805
(607) 703-2056 • email: kdunlap@tu.org • <http://www.tu.org>

input on the significant changes in the proposed amendments. TU recommends that the DEP more clearly define the scope of content of the referenced sections, and include appropriate descriptions with citations to demonstrate what language, within these proposed amendments, is not subject to public comment.

Comments on Specific Sections

§78.15. Application Requirements.

According to §78.15(f), an applicant proposing to drill a well at a location in or within 200 feet of a publicly owned park, forest, game land or wildlife area, must take additional steps in the application to ensure protection of the public resources. The applicant must provide notice the appropriate public resource agency responsible for managing the public resource, upon which the resource agency has 15 days to provide written comments to the applicant and DEP on the functions and uses of the public resource and recommended measures to avoid or minimize probable harmful impacts to the public resource where the well, well site, and access areas is located. By hastening the timeframe by which the public resource agency has to provide feedback, the proposed amendments will have the effect of limiting input from public resource agencies and thus limiting the recommendations to mitigate or avoid impacts. TU recommends clarifying whether the public resource agency feedback timeframe is based upon business days or calendar days, and increasing the overall length of time available to the public resource agency to prepare recommendations for avoidance or mitigation to at least 30 business days. This will allow the public resource agency sufficient time to evaluate the potential impacts on the resource and provide meaningful recommendations to the applicant and DEP.

Section 78.15(f)(3) requires the applicant to provide information to the DEP, including (i) identification of the public resources, (ii) a description of the functions and uses of the public resource, and (iii) a description of the measures proposed to be taken to avoid or mitigate impacts. Subsection (4) goes on to limit the required information to the discrete area of the public resource that may be affected by the well, well site access road. "Discrete" is not defined in this section, nor is it defined in §78.1. If the term is intended to cover only the disturbed area, then the proposed amendment falls far short of protecting the quality of the recreational experience on public lands—which is one of the stated intentions for including this section. Recreational uses—such as fishing in a wilderness stream—that are occurring in areas adjacent to the actual well pad should be required to be reported in the application, and to the appropriate public resource agency, so that suitable mitigation measures can be recommended to support the continued use of those recreational resources. TU recommends clarifying the geographic area for which an applicant must submit required information under §78.15(f)(3) and (4), to ensure adequate buffers to protect existing recreational uses.

§78.51. Protection of water supplies.

TU appreciates DEP's recognition in §78.51 (b) that well site construction, and related sedimentation pollution, can have serious impacts on water resources, including water supplies. However, the effect of this acknowledgement is diminished by §78.51(c)—which explicitly exempts pollution resulting from well site construction from the rebuttable presumption

established in 58 Pa. C.S. §3218(c). TU understands that there are many sources of sedimentation pollution, and that establishing that sedimentation resulting from a particular well site is the cause of contamination in a water supply may be difficult at times. However, as written, the proposed amendments leave no recourse or remedy for the landowner, water purveyor or affected person suffering pollution or diminution of a water supply as a result of well site construction. TU strongly recommends that DEP revisit this section, and clearly state the remedies that are available to the landowner, water purveyor or affected person, if sedimentation from a well site is found to have contaminated a water supply.

§78.53. Erosion and sediment control

Under §78.53, language has been added to clearly state that any person conducting earth disturbance activities associated with any aspect of oil and gas activities, as defined in §78.1, must comply with Chapter 102 to Title 25 of the Pennsylvania Code, as well as the DEP's Erosion and Sediment Pollution Control Manual and the Oil and Gas Operators Manual.

While TU supports the explicit inclusion of these requirements, TU is disappointed that DEP opted not to take the opportunity to formalize, through regulation, certain sections of its erosion and sediment control policy for oil and gas activities. (Policy for Erosion and Sediment Control and Stormwater Management for Earth Disturbance Associated with Oil and Gas Exploration, Production, Processing, or Treatment Operations or Transmission Facilities. Document No. 800-2100-008). Specifically, DEP failed to include its interpretation of the definition of a "project" for purposes of determining whether an erosion and sediment control permit is needed. Section III. of the policy states:

DEP interprets "project" to be substantially connected well sites, access roads, pipelines, other service lines, support facilities, and/or other oil and gas activities. Well pads, impoundments and pipelines, etc., may be permitted separately but are considered together solely to determine whether the total project acreage limit of § 102.5(c) has been met and a permit is required. All portions of a project area of 5 acres or more must obtain permit coverage prior to commencing earth disturbance activity.

There has been significant confusion among the public about DEP's interpretation of a project and under which circumstances the DEP will require an erosion and sediment control permit for oil and gas activities. TU strongly recommends that DEP formally adopt through this regulation, in both §§78.51 and 78.53, a definition of a "project" for purposes of determining when an erosion and sediment control permit is needed, pursuant to DEP's Policy for Erosion and Sediment Control and Stormwater Management for Earth Disturbances for Oil and Gas Exploration, Production, Processing, or Treatment Operations or Transmission Facilities, Document No. 800-2100-008.

§78.56. Temporary storage.

While §78.56 is titled "Temporary Storage," the proposed amendments fail to include a definition of what constitutes temporary. Subsection (d) requires an owner or operator to remove or fill a temporary pit within 9 months of completion of drilling, or in accordance

with an extension granted by DEP. Because there is no timeframe by which all the wells permitted for a particular well pad must be drilled, the “temporary” pit that was constructed to service that well pad could exist for many years, becoming more of a permanent fixture in the landscape.

TU supports the requirement in subsection (a)(5) to install fencing around all pits to protect wildlife. TU recommends that the certification by a soil scientist, required under §78.56(a)(11), that the pit bottom is at least 20 inches above the seasonal high groundwater table, be provided to DEP (not just made available) prior to placing material in the pit. TU also recommends that the operator be required to submit documentation to the DEP, describing methods used to divert stormwater away from the pit, at the same time as the certification from the soil scientist is submitted. This will help to ensure that stormwater controls are in place for the pit, before any material is placed therein. Finally, subsection (a)(13) states that an operator shall correct damages or imperfections (in the liner) before placing material in the pit, and shall maintain the pit until closure of the pit. TU recommends adding language to this section that describes the monitoring and inspection requirements for the life of the pit, including the frequency by which the liner should be inspected and required methods for leak detection.

§78.57. Control, storage and disposal of production fluids.

TU applauds the DEP for amending §78.57 to specifically: (1) prohibit the storage of brine and other fluids produced during operation of a well in an open top structure or in permanent pits; (2) require secondary containment for all new, refurbished or replaced tanks or other associated manifolds, or for additions to an existing series of tanks, for brine or other fluids produced during operation of well; and (3) prohibit the future use of underground or buried storage tanks, and removal of existing underground or buried storage tanks within three years.

§78.58. Onsite processing.

These proposed amendments add a new section to address onsite processing. However, the amendments lack any detail on what criteria DEP will use to approve onsite processing facilities. TU recommends adding language clarifying what conditions DEP may place on an operator who requests to process fluids generated by the development, drilling, stimulation, alteration, operation or plugging of oil and gas wells, to ensure that the processing operation will not result in pollution of land or waters.

Under §78.58(e), after an operator is initially approved for onsite processing at one site, the operator is deemed to have approval for onsite processing on all subsequent sites, as long as the operator notifies DEP. TU is concerned that the automatic approval of subsequent onsite processing facilities will not factor in site-specific factors—such as whether subsequent wells are located in HQ or EV watershed or a water supply area, the proximity to a stream, or other sensitive environmental features. As written, the amendments do not appear to reserve the right of DEP to withdraw the approval for future onsite processing activities. TU strongly recommends that this section be revised to require approval, on a case-by-case basis, for all

onsite processing operations and that a reservation clause be added to ensure that DEP has the authority to withdraw approval of onsite processing operations, if needed.

§78.59b. Freshwater impoundments.

Section 78.59b allows an operator or owner to store mine influenced water in a freshwater impoundment, with DEP approval. By DEP's own definition, mine influenced water is water that pollutes, or may create a threat of pollution to, waters of the Commonwealth. TU recommends prohibiting the storage of mine influence waters in freshwater impoundment, and rather requiring that mine influenced water be stored in centralized impoundments, which have stronger environmental requirements and protections.

78.59c. Centralized Impoundments.

TU appreciates the addition of a new section regulating centralized impoundments and the extensive detail included in §78.59c. To protect water resources, the proposed amendments prohibit the placement of centralized impoundments in the 100-year floodplain and within 100 feet of a stream, spring or body of water. TU recommends increasing the distance required between a centralized impoundment and a stream, spring or water body, to at least 500 feet, to reduce the risk of contamination should the centralized impoundment breach or fail. DEP inspectors should routinely review the operator's leak detection system weekly monitoring reports, and plan unscheduled inspections to ensure that centralized impoundments are not leaking, beyond allowable leakage rates. Section (e)(4)(ix) describes allowable leakage rates for the primary liner, and TU recommends adding language in this section that specifies that the secondary liner shall not allow leakage.

Section 78.59c(g) does not clearly state whether the operator has to install the water quality monitoring system prior to filling the centralized impoundment. The proposed amendments are silent on when the monitoring wells must be constructed and installed, and functioning, and whether or not monitoring has to be completed prior to when the final certification report is approved. TU recommends clarifying this section to ensure that monitoring systems are in place, and functioning, prior to final approval by DEP.

§78.63. Disposal of residual waste – land application.

TU opposes the disposal of residual waste, including contaminated drill cuttings, by land application. Before disposing of residual waste by land application, an operator or owner should be required to test the waste material, above and beyond the testing requirements of §78.63(b), for naturally occurring radioactive material (NORM) levels. If NORM is found, then the residual waste materials should not be permitted to be disposed of by land application.

Section 78.63 (21) requires the owner or operator to remediate the land application area until compliance is demonstrated, if the additional analysis, including soil surveys, monitoring and chemical analysis, fails to show compliance with the loading and application rate of waste consistent with DEP guidelines. However, there is no explicit timeframe by which the additional analysis must take place, or when the owner and operator must come into

compliance. Leaving the remediation of contaminated soils for an unknown period of time will increase the risk of pollution to streams and impacts on aquatic life.

§78.65. Site restoration.

In accordance with §78.65(d)(iii), an owner or operator must restore all areas of the well site not needed to safely operate the well to approximate original conditions, within 9 months of completion of all permitted wells on the well site. Subsections (A) through (F) describe the areas needed to safely operate the well, which include: areas used for service vehicle and rig access; areas used for storage tanks and secondary containment facilities; areas use for wellhead(s) and appurtenant processing facilities; area use for any necessary safety buffer limited to the area surrounding equipment that is physically cordoned off to protect the facilities; area used to store any supplies or equipment consented to by the surface owner; and area used for operation and maintenance of long-term PCSM best management practices. This comprehensive list basically includes every part of a well pad and related areas, suggesting that very limited site restoration is in fact required. Additionally, there is often a significant time lapse between when the first well on a pad is drilled and when subsequent wells are drilled, creating even longer delays in restoration efforts. Re-vegetating disturbed surfaces is imperative to limiting sedimentation pollution, protecting water resources, and restoring habitat and food opportunities for terrestrial wildlife. TU recommends that DEP revise this section to more clearly articulate where and when partial restoration must occur.

§78.68. Oil and gas gathering lines.

Generally, TU is pleased that DEP has added §78.68 to describe regulations related to oil and gas gathering lines. Additionally, TU supports §78.68(c)(2), stating that topsoil and subsoil must be prevented from entering watercourses and bodies of water, and TU recommends that the section be amended to describe the requirements that must be followed to minimize risk of sedimentation events.

§78.68a. Horizontal directional drilling for oil and gas pipelines

TU strongly supports the regulation of, and permitting requirements for, horizontal directional drilling under any body of water or watercourse, pursuant to Chapters 102 and 105 of Title 25 of the Pennsylvania Code; and the requirement that a PPC plan be kept on site, to include a site specific contingency plan that describes measures to be taken to control, contain, and collect any discharge of drilling fluids and minimize impacts to waters. To achieve minimal impact on the stream and adjacent water bodies, subsection (g) requires monitoring of bodies of water and watercourses over the horizontal directional drilling operations, for pressure or loss of drilling fluids. TU recommends adding language to this subsection to include details on what kind of monitoring must take place, over what time frame, and what kind of report must be prepared and whether that report must be submitted to DEP.

§78.69. Water management plans.

TU applauds the DEP for imposing the same requirements for water withdrawals as the Susquehanna River Basin Commission, in the Ohio basin, including requiring: (1) posting of signs at water withdrawal locations; (2) monitoring of water withdrawals or purchases; (3)

reporting of withdrawal volumes, in stream flow measurements and water source purchases; and (4) record keeping. By doing so, the DEP is moving toward a more consistent state-wide water withdrawal management system. Signage, monitoring, reporting and record keeping are only effective tools for ensuring that there is adequate water in-stream and for other uses, if there are sufficient tools and resources for enforcing regulations. TU strongly encourages the DEP to develop and implement an inspection and enforcement plan to ensure that operators are complying with water management plans and that water withdrawals for unconventional shale gas development are not harming other uses, including the ecological health of a stream.

Currently, a well operator submits a company-wide water management plan to the DEP, allowing the company to list multiple counties and water sources in one plan. To gain a better sense of how water withdrawals for unconventional shale gas development may, or may not, be impacting hydrological regimes within Pennsylvania, TU recommends that DEP add a requirement to this section to require a company to submit a water management plan for each sub-basin—at the Hydrologic Unit Code (HUC) 8 level, at a minimum—in which it is operating, rather a single company-wide water management plan.

**§78.70. Road-spreading of brine for dust control and road stabilization &
§78.70a. Pre-wetting, anti-icing and de-icing**

TU applauds the proposed amendment's explicit prohibition of the application of brines from unconventional shale formations on unpaved roads, for dust suppression and for pre-wetting, anti- or de-icing purposes, and TU urges the DEP to prohibit the use of brines from oil wells and conventional gas wells on unpaved roads for the same purposes.

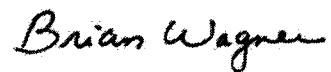
The current thresholds for road application of oil and gas well brines far exceed those thresholds that treatment plants are required to meet before they discharge similar wastewater into streams. The liberal standards for brine application on roads are not protective, as stormwater and snowmelt can easily carry runoff from roads into streams—creating the same harmful impacts on streams as if the wastewater was discharged directly by an ill-equipped treatment facility. Stating in the proposed amendments, in §§78.70(e)(4) and 78.70a.(j), that brine shall not enter bodies of water or water courses, is ignoring the runoff problems associated with unpaved roads. For these reasons, TU cannot support the use of oil and gas well brines on unpaved roads for dust suppression, pre-wetting, anti-icing or de-icing purposes.

In summary, TU believes that many provisions in the proposed amended regulations are an improvement over existing regulations, and will help to tighten DEP's regulation and management of oil and gas in the Commonwealth. As noted, there are several areas where TU believes clarifications and/or more detail is needed to fulfill the stated intent of the amendments. Thank you for the opportunity to provide comments on the proposed amendments. Please do not hesitate to contact Katy Dunlap, kdunlap@tu.org or 607-703-0256, if you have any questions or require further information.

Respectfully,

A handwritten signature in black ink, appearing to read "Katy Dunlap". The signature is fluid and cursive, with the first name "Katy" being more prominent.

Katy Dunlap
Eastern Water Project Director
Trout Unlimited

A handwritten signature in black ink, appearing to read "Brian Wagner". The signature is cursive and elegant, with the first name "Brian" being the most distinct part.

Brian Wagner
President
Pennsylvania Council of Trout Unlimited