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March 14, 2014

Sent via e-mail and U.S. Mail

Environmental Quality Board
Attention: Honorable E. Christopher Abruzzo, Chairperson
P.O. Box 8477
Harrisburg, PA 17105 - 8477
E-mail: RegComments@pa.gov

**Re: Comment on Proposed Amendments to Chapter 78
Noticed in 43 Pa.B. 7377 (Saturday, December 14, 2013)**

Dear Environmental Quality Board Members,

Thank you for the opportunity to comment on the proposed revisions to Chapter 78 of the Pennsylvania Code noticed in the December 14, 2013 edition of the Pennsylvania Bulletin. The Center for Coalfield Justice (“CCJ”) respectfully submits the following comments on the Environmental Quality Board’s (“Board”) proposal to amend Chapter 78 (“Proposed Rulemaking”).

The Center for Coalfield Justice is a Pennsylvania-incorporated not-for-profit organization with federal Internal Revenue Service § 501(c)(3)-status recognition located at 184 S. Main Street, Washington, PA 15301. CCJ is a membership organization with a mission to “improve policy and regulations for the oversight of fossil fuel extraction and use; to educate, empower and organize coalfield citizens; and to protect public and environmental health.” CCJ has over one thousand members and supporters and is governed by a volunteer Board of Directors.

The Center for Coalfield Justice was formed as the “Tri-State Citizens Mining Network” in 1994 by a coalition of grassroots groups and individuals concerned about the effects coal mining had on communities and the environment. The people involved recognized the need to work together to build a strong voice in the coalfield community. Tri-State was incorporated in 1999 and re-organized into “Center for Coalfield Justice” in 2007.

In 2011 CCJ’s mission was expanded to include work on all fossil fuel extraction in recognition of the harmful effects of natural gas production on environmental quality and public health in Greene and Washington Counties. To carry out its mission, CCJ

offers it support in education, leading, organizing, and coordinating individuals and groups that have been negatively impacted by fossil fuel extraction and use.

CCJ thanks the Board for extending the comment period and scheduling additional public hearings. CCJ also thanks the Board and the Pennsylvania Department of Environmental Protection (“Department”) for recognizing the need to adopt revised environmental protection performance standards that ensure the protection of public resources, prevention of spills, responsible construction of midstream systems and management of wastes, the identification of abandoned wells, and adequate restoration. CCJ strongly supports the revision of Chapter 78 to achieve these purposes.

There are significant portions of the Proposed Rulemaking that CCJ supports. For example, CCJ strongly supports the prohibition on disposal of solid waste generated by hydraulic fracturing of unconventional wells and solid waste generated by the processing of fluids on the well site,¹ and the requirement that any restored or replaced water supply meet the standards established by the Safe Drinking Water Act.² CCJ also supports the prohibition on using open top structures to store brine and other fluids produced during the operation of the well;³ the requirement that temporary pipelines that transport fluids other than fresh water be installed aboveground and not underground;⁴ increased precautions to prevent unauthorized acts by third parties;⁵ and protection of special concern species.⁶

However, there are critical portions of the Board’s proposal that are far weaker than the law requires. Neither the Department nor the Board has clearly articulated the rationale for the decisions made in developing the Proposed Rulemaking; the prohibition on construction of centralized impoundment within 100 feet of any “solid blue line stream” is contrary to the Department’s duty to protect all waters of the Commonwealth; the environmental protection standards that would apply the disposal of residual waste at the well site are inadequate and inconsistent with the Department’s duty to implement the Solid Waste Management Act; the proposed amendment that would authorize the spreading of brine from conventional wells on gravel and dirt roads for dust control and road stabilization is unlawful and poses an unnecessary threat to the Commonwealth’s water resources; the standards for restoration are inadequate; the Department’s duty to investigate the cause of water pollution or diminution is deficient; and the proposed regulations related to abandoned and orphaned wells are insufficient to protect citizens and the environment. Because it is so deficient, the Board should not approve the Proposed Rulemaking. CCJ urges the Board

¹ Proposed Amendment § 78.62(a)(1)

² Proposed Amendment § 78.51(d)(2)

³ Propose Amendment § 78.57(a)

⁴ Proposed Amendment § 78.68b(b)

⁵ Proposed Amendment § 78.56(a)(5) and § 78.57(g)

⁶ Proposed Amendment § 78.15(f)(iv)

to act quickly to adopt more protective regulations in light of this comment and its own evaluation.

Regulating the development of natural gas in Pennsylvania requires thorough analysis and consideration of our unique community and natural resources. As a result of that analysis, appropriate site-specific and regional protections must be put in place. We appreciate the steps that the Department and the Board have taken to improve the regulation of natural gas development in Pennsylvania; however, the Proposed Rulemaking falls short of ensuring that community health and the environment are adequately protected.

1. In order to ensure meaningful and informed public participation, the Department must clearly articulate the rationale for the decisions it made in developing the Proposed Rulemaking and make the evidence on which they are based publically accessible.

The Commonwealth Documents Law requires an agency to give public notice of its intention to promulgate, amend, or repeal a regulation by publishing a notice of proposed rulemaking in the *Pennsylvania Bulletin* and provide the opportunity for public comment.⁷ The purpose of the notice and comment procedure is to ensure that rulemaking decisions are both legitimate and achieve the best outcomes for Pennsylvania's citizens and environment. Therefore, the public notice should include among other things, a brief explanation of the proposed changes.⁸ Transparency is one of the most effective tools to advance the twin goals of legitimacy and quality decision-making. Transparency requires that information be available and easily accessible by the public. It also requires agency decisions to be clearly articulated, the rationale for these decisions be fully explained, and the evidence on which they are based publically accessible. This kind of explanation and access to information helps ensure meaningful and informed public participation.

According to the Department and the Board, the proposed regulations would update existing requirements to "provide increased protection of public health, safety, and the environment."⁹ The basic purpose of the Proposed Rulemaking is to "ensure the protection of public health, safety, and the environment; protect public resources to minimize impacts from oil and gas drilling; modernize the regulatory program to recognize advances in extraction technology; [and] specify the acceptable containment practices to prevent spills and releases."¹⁰ However, the Department has not explained what specific issues and concerns the proposed rulemaking is meant to solve and address. The Department stated that the goal of the new regulations is to "ensure that

⁷ 45 P.S. § 1201

⁸ 45 P.S. § 1201(3)

⁹ 43 Pa.B. 7377 (Saturday, December 14, 2013).

¹⁰ Proposed Regulations for Oil and Gas Surface Activities Summary (August 27, 2013).

the Commonwealth's oil and gas resources are developed safely, responsibly, and in an environmentally protective manner."¹¹ Additionally, the Department stated that the proposed regulations would amend the current oil and gas well regulations to reflect advances in drilling and completion technologies.¹² The Department also stated that it worked with the Oil and Gas Technical Advisory Board ("TAB") to develop the Proposed Rulemaking.¹³ But, neither the Board nor the Department have adequately explained the rationale for its decisions in amending Chapter 78 and the evidence upon which these decisions are based has not been provided to the public.

For example, the Department has not explained its decision to require operators to identify orphaned and abandoned wells before hydraulic fracturing and visually monitor orphaned and abandoned wells during hydraulic fracturing activities except to say that this requirement will "minimize potential impacts to waters of the Commonwealth from such pathways".¹⁴ The Department has not provided any testimony or evidence to demonstrate that this requirement is sufficient to prevent harm to the public health, safety, welfare and the environment. Additionally, the Department has not explained the basis for its apparent conclusion that the storage and disposal of residual wastes, including contaminated drill cuttings, will not result in adverse impacts to waters of the Commonwealth so long as the pit is located twenty (20) inches above the seasonal high groundwater table and the operator complies with the new material specifications for pit liners. Finally, the Department has not provided any justification or explanation for why it believes that the new restrictions on the location of centralized impoundments, and design and construction standards are sufficient to avoid potential health, safety, and environmental issues.

CCJ does not doubt that the Department, in the last six years, has gained a great deal of knowledge and experience in regulating oil and gas surface related activities.¹⁵ We do think, however, that since this knowledge and experience is apparently the basis for the current proposed rulemaking, it is incumbent on the Department to share in greater detail what it has learned with the public. Other parties evaluating the same information could arrive at different conclusions and envision different, perhaps preferable, solutions to a particular issue or concern.

¹¹ Id.

¹² Department of Environmental Protection and Environmental Quality Board, *Notice of Proposed Rulemaking Preamble*, 25 Pa. Code Chapter 78 (Oil and Gas Wells)

¹³ Id.

¹⁴ 42 Pa.B. 7377 (Saturday, December 14, 2013).

¹⁵ Proposed Regulations for Oil and Gas Surface Activities Summary (August 27, 2013) ("Since 2008, the oil and gas industry has developed new practices to extract natural gas from shale formations. These new practices require additional oversight of applicable standards and controls. For these reasons, new regulations are needed to ensure that the Commonwealth's oil and gas resources are developed safely, responsibly, and in an environmentally protective manner. As a result, this proposed rulemaking related to oil and gas surface activities has been developed by DEP and adopted by the EQB.")

The rulemaking procedures are in place to facilitate public involvement when policy, permitting, and enforcement decision are made that affect Pennsylvania citizens' way of life and natural environment. In order to ensure meaningful and informed public participation, the Department must clearly articulate the basis for the decisions it made in developing the Proposed Rulemaking, and make the evidence on which those decisions are based publically accessible.

2. The Department must fulfill its statutory obligation to protect all of the Commonwealth's water resources by prohibiting centralized impoundments within 100 feet of any stream, not just perennial streams.

CCJ opposes the use of centralized waste impoundments. Centralized impoundments cause unnecessary large-scale surface disturbance, present an unnecessary risk of ground and surface water contamination, and contribute to local air pollution. CCJ encourages the Board to eliminate the use of centralized waste impoundments altogether. In the alternative, the Board must prohibit centralized waste impoundments within 100 ft. of any stream, not just perennial streams.

The provisions of Chapter 78 are issued and amended in part under the Clean Streams Law and the Dam Safety and Encroachments Act.¹⁶ The prohibition on centralized impoundments for wastewater within 100 feet of any stream that flows continually all year round does not fulfill the Department's duty under the Clean Streams Law and the Dam Safety and Encroachments Act. The legislative declarations sections of both the Dam Safety and Encroachments Act and the Clean Streams Law make it abundantly clear that both statutes are environmental protection statutes.¹⁷ The regulatory program promulgated under that authority operates to assure that adverse impacts on water resources are avoided whenever possible, and kept to an absolute minimum when such impacts are unavoidable.¹⁸ Furthermore, this regulatory structure reflects the Supreme Court's observation that the citizens of the Commonwealth have a sufficient and recognized interest in clean streams alone, regardless of any particularized use or size of that surface water.

A. Both the Clean Streams Law itself and the regulations promulgated by the Environmental Quality Board pursuant thereto articulate the General Assembly's clear intent to protect the waters from the Commonwealth from impacts associated with Oil and Gas operations.

¹⁶ 25 Pa. Code Ch. 78 Authority

¹⁷ Section 2 of the Encroachments Act, 32 P.S. § 692.2; Section 4 of the Clean Streams Law 35 P.S. § 691.4.

¹⁸ *Pennsylvania Trout, Trout Unlimited - Penns Woods West Chapter and Citizens for Pennsylvania's Future v. Commonwealth, Department of Environmental Protection, and Orix-Woodmont Deer Creek Venture*, 2004 EHB 310, 364-73; aff'd, 863 A.2d 93 (Pa. Cmwlth. 2004).

The Clean Streams Law empowers the Department to protect the Commonwealth's water resources and provides various tools to achieve this task, including the authority to develop regulations. Section 5(b)(1) of the Clean Streams Law requires the Department to formulate and adopt such rules and regulations as are necessary to implement the provisions of the Act.¹⁹ Section 78.59(c)(5) of the Proposed Rulemaking violates this duty because it only extends to perennial streams.²⁰

Pennsylvania has a detailed, duly promulgated regulatory scheme in place to protect streams and their uses. Oil and Gas operators are subject to these regulations. The legislative findings in the Clean Streams Law make clear that the General Assembly sought to protect all waters of the Commonwealth from pollution, not just streams that flow continually all year round. The General Assembly declared it to be the policy of this Commonwealth that "clean, unpolluted water is absolutely essential" to attract new industries, to develop tourism, and to provide Pennsylvania with adequate outdoor recreational facilities.²¹ To that end, the General Assembly sought to prevent future pollution and to "reclaim and restore to clean, unpolluted condition every polluted stream in the Commonwealth."²² The definitions in Section 691.1 of the Clean Streams Law set forth the most fundamental prohibition underlying the statute's intent: that no person, regardless of type of operation, may engage in conduct that causes pollution to waters of the Commonwealth.²³

The General Assembly established what waters are protected by the Clean Streams Law by defining the term "waters of the Commonwealth" to include large and small streams, continuously flowing or not.²⁴ The General Assembly defined waters of the Commonwealth to be broadly inclusive:

Any and all rivers, streams, creeks, rivulets, impoundments, ditches, water courses, storm sewers, lakes, dammed water, ponds, springs and all other bodies or channels of conveyance of surface and underground water, or parts

¹⁹ 35 P.S. § 691.5(b)(1) ("The department shall have the power and its duty shall be to formulate, adopt, promulgate and repeal such rules and regulations and issue such order as are necessary to implement the provisions of this act.")

²⁰ Proposed Regulation § 78.59(c)(5) ("Centralized impoundments shall not be constructed in any portion of the following areas... Within 100 feet measures horizontally from any solid blue line stream, spring or body of water, except wetlands, identified on the most current 7.5 minute topographic quadrangle map of the United States Geological Survey.")

²¹ 35 P.S. § 691.4(1), (2)

²² 35 P.S. § 691.4(3)

²³ *Id.*

²⁴ 35 P.S. § 691.1 (The Clean Streams Law protects all waters of the Commonwealth, including but not limited to groundwater, perennial streams, intermittent streams, ephemeral streams, springs, and all other bodies within the boundaries of the Commonwealth.)

thereof, whether natural or artificial within or on the boundaries of this Commonwealth.²⁵

Two aspects of this definition are important in regulating oil and gas activities. First, this definition is not limited to perennial streams, or streams that flow year-round. Instead, the General Assembly expressly included “any and all streams,” without regard to whether and how they flow.²⁶ Since the statutory definition includes streams, regardless of whether or not it is characterized as perennial or intermittent, the Department’s duty extends to all streams, not just “solid blue line streams”. Second, the definition includes surface and groundwater. Thus, the Department must also protect springs, seeps, and groundwater.

The General Assembly combined this inclusive definition of waters of the Commonwealth with an equally broad definition of pollution:

“Pollution” shall be construed to mean contamination of any waters of the Commonwealth such as will create or is likely to create a nuisance or to render such waters harmful, detrimental or injurious to public health, safety or welfare, or to domestic, municipal, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses, or to livestock, wild animals, birds, fish or other aquatic life, including but not limited to such contamination by alteration of the physical, chemical, or biological properties of such waters, or change in temperature, taste, color or odor thereof, of the discharge of any liquid, gaseous, radioactive, solid or other substances into such waters.

Again, this definition has two important aspects. First, the definition of pollution applies without limitation to “any waters of the Commonwealth.” Second, the definition of pollution is not limited by type of harm. Pollution may include alternation of the water’s chemical, biological, and physical properties, or a change in appearance, such as taste, color, or odor, or any contamination that will harm or is likely to harm the beneficial use of a particular water.

Furthermore, the Department’s Water Quality Standard regulations define the term “surface waters” to include not only perennial stream, but also intermittent streams, ponds, seeps wetlands, and other water bodies, and define protected uses for those waters.²⁷ The Standards are based on designated and existing water uses for all surface

²⁵ 35 P.S. § 691.1

²⁶ *Id.*

²⁷ 25 Pa. Code §§ 93.1 – 93.9

waters of the Commonwealth.²⁸ The Department must protect the designated uses as well as any existing use such as esthetics, when it issues any permit or approval.²⁹

The statutory definition of “waters of the Commonwealth,” “pollution” and the regulatory definition of “surface waters” make no exception based on the type of industry that may cause pollution to protected waters and contradicts the Proposed Rulemaking’s apparent assertion that some smaller set of water is protected when oil and gas development is involved, specifically centralized impoundments. The Department has a continuing obligation to ensure compliance with the law and regulations it administers, and to promulgate rules and regulations as are necessary to implement the provisions of the Clean Streams Law. Therefore, Section 78.59c(c)(5) of the Proposed Rulemaking must be amended to prohibit centralized impoundments within 100 feet of any water of the Commonwealth, without regard to whether or how it flows.

B. The Dam Safety and Encroachments Act and the regulations promulgated by the Environmental Quality Board pursuant thereto reiterate the General Assembly’s intent to protect both perennial and intermittent streams.

The stated purpose of the Dam Safety and Encroachments Act (“Encroachments Act”) is to, among other things, “protect the natural resources, environmental rights and values secured by the Pennsylvania Constitution,” protect water quality, and “prevent unreasonable interference with water flow.”³⁰ The Encroachments Act, in pertinent part, applies to “all water obstructions and encroachments other than dams, located in, along, across or projecting into any watercourse, floodway, or body of water, whether temporary or permanent.”³¹ The Encroachments Act defines encroachment as “any structure or activity, which in any manner changes, expands or diminishes the course, current or cross-section of any watercourse, floodway or body of water.”³² “Watercourse” is defined as any channel of conveyance of surface water having a defined bed and banks, whether natural or artificial, *with perennial or intermittent flow*.³³ “Body of water” is defined as “any natural or artificial lake, pond, reservoir, swamp, marsh or wetland.”³⁴ Although “floodway” is not specifically defined in the

²⁸ 25 Pa. Code §§ 93.2 and 93.3 (protected water uses include: Cold Water Fishes, Warm Water Fishes, Migratory Fishes, Trout Stocking; Potable, Industrial, Livestock and Wildlife Supply; Irrigation; Boating; Fishing; Water Contact Sports, and Esthetics; High Quality Waters, Exceptional Value Waters; and Navigation); 25 Pa. Code § 93.4 (The list of statewide-designated water uses is set forth in table 2 of Section 93.4 and applies to all “surface waters” of the Commonwealth.)

²⁹ 25 Pa. Code §§ 93.3, 93.4 and 96.3

³⁰ 32 P.S. § 693.2(3), (4)

³¹ 32 P.S. § 693.4(4); 25 Pa. Code § 105.3(a)(4).

³² 32 P.S. § 693.3

³³ *Id.* (emphasis added)

³⁴ *Id.*

Encroachments Act, the regulations adopted pursuant to the Act define “floodway” as “the channel of the watercourse and portion of the adjoining floodplains which are reasonably required to carry and discharge to 100-year frequency flood...[I]t is assumed, absent evidence to the contrary, that the floodway extends from the stream to 50 feet from the top of the bank of the stream.”³⁵ The Encroachments Act Regulations, 25 Pa. Code Chapter 105, are promulgated under the authority of both the Dam Safety and Encroachments Act and the Clean Streams Law.³⁶

Just as the protections under the Clean Streams Law are not limited to perennial streams, the Encroachments Act also seeks to protect water quality and flow of both intermittent and perennial streams. The Encroachments Act’s definition of “watercourse” is not limited to “solid blue line” streams; in fact, it expressly includes both perennial and intermittent streams. The Department has a continuing obligation to promulgate rules and regulations as are necessary to implement the existing laws and regulations it administers. As a result, Section 78.59c(c)(5) should be amended to prohibit centralized impoundments within 100 feet of waters of the commonwealth, regardless of whether and how they flow.

* * *

CCJ acknowledges that Act 13 referred to “solid blue line streams,” which are streams that flow continuously. However, we believe that this reference is imprudent and contrary to existing law and regulation. The legislative declarations of both the Encroachments Act and the Clean Streams Law make it abundantly clear that the General Assembly sought to protect large and small streams, continuously flowing or not, without exception to the type of activity. For these reasons, the Section 78.59c of the Proposed Rulemaking must be revised to prohibit centralized impoundments within 100 feet of any water of the Commonwealth.

3. The Department must fulfill its statutory obligation to implement and enforce the Solid Waste Management Act and associated regulations.

The provisions of Chapter 78 are issued and amended in part under the Clean Streams Law and the Dam Safety and Encroachments Act.³⁷ The Board has the authority and duty to “formulate, adopt, and promulgate such rules and regulations as may be determined by the board for the proper performance of the work of the department [of environmental protection].”³⁸ The Solid Waste Management Act (“SWMA”) is the most important Pennsylvania statute governing solid waste management and the Department

³⁵ 25 Pa. Code § 105.1

³⁶ Dam Safety and Encroachments Act, Act of November 26, 1978, P.L. 1375, as amended, 32 P.S. §§ 693.1 – 693.27; Clean Streams Law, 35 P.S. §§ 691.5, 691.401. *See* 25 Pa Code Chapter 105, *Authority*.

³⁷ 25 Pa. Code Ch. 78 *Authority*

³⁸ 71 P.S. § 510-20(b).

is the agency that is given the primary responsibility for implementing the law.³⁹ The regulatory program governing residual waste is derived principally from article III of the SWMA and is codified at 25 Pa. Code Chapters 287-299.

The Solid Waste Management Act⁴⁰ and the regulations promulgated thereto indicate the general assembly's clear intent to regulate in plenary fashion every aspect of residual waste disposal.⁴¹ The SWMA's legislative findings state, "improper and inadequate solid waste practices create public health hazards, environmental pollution, and economic loss, and cause irreparable harm to the public health, safety, and welfare." Additionally, like the Oil and Gas Act, the SWMA's declaration of policy includes mandates to: "protect the public health, safety and welfare from the short and long-term dangers of transportation, processing, treatment, storage and disposal of all wastes; [and] implement Article 1, Section 27 of the Pennsylvania Constitution."⁴² Furthermore, Section 3273.1(a)(3) of the Oil and Gas Act requires the owner or operator of any pit impoundment, method or facility employed for the disposal of residual wastes generated by the drilling of an oil or gas well or from the production of wells, which is located on the well site, to maintain compliance with the Oil and Gas Act and applicable regulations of the Environmental Quality Board.⁴³ The regulations promulgated by the Board under the SWMA are undoubtedly applicable to the disposal of residual waste at a well site because the provisions of Chapter 78 are issued and amended in part under the authority of the Solid Waste Management Act.

A. The minimum standards for disposing for residual waste at the well site must be amended.

CCJ opposes the use of pits for long-term storage and disposal of residual waste at the well site. Pits can leak and fail, cause unnecessary surface impacts, and present an unacceptable risk of soil and water contamination. In 2013, the State Review of Oil and Natural Gas Environmental Regulations (STRONGER) Board, determined that Pennsylvania's continued use of production pits poses significant environmental problems. Finding III.4 of the STRONGER report concluded: "The review team finds that the PADEP's experience with pits has shown that, although their use is decreasing, many liner failures still occur with pits and other types of waste are being dumped into pits."⁴⁴ STRONGER recommended that the Department "consider adopting regulations

³⁹ 35 P.S. §§ 6018.101 – 6018.1003.

⁴⁰ 35 P.S. §§ 6018.101 et seq. (1980)

⁴¹ *National Solid Wastes Management Ass'n v. Casey*, 600 A.2d 260, 1991 Pa. Commw. LEXIS 633 (Pa. Commw. Ct. 1991); *Cloonan v. Thornburgh*, 519 A.2d 1040, 1986 Pa. Commw. LEXIS 2725 (Pa. Commw. Ct. 1986), *appeal dismissed*, 531 A.2d 1391 (1987), quoting *Commonwealth v. Wilsbach Distributors, Inc.*, 519 A.2d 397, 400 (1986).

⁴² 35 P.S. § 6018.102(4), (10)

⁴³ 58 Pa.C.S. § 3273.1(a)(3)

⁴⁴ State Review of Oil and Natural Gas Environmental Regulations, Inc. (STRONGER), Pennsylvania Follow-up State Review, September 2013, Finding III.4.

or incentives for alternatives to pits used for unconventional wells in order to prevent the threat of pollution to waters of the Commonwealth.”⁴⁵ Best practices support the use of temporary tanks.

The draft regulations would allow well operators to continue disposing of residual waste on well sites as long as they comply with certain minimal environmental protection standards. Section 78.62 of the Proposed Rulemaking would allow well operators to dispose of residual waste, including contaminated drill cuttings, in pits buried on site.⁴⁶ Similarly, Section 78.63 of the Proposed Rulemaking would allow well operators to dispose of residual waste, including contaminated drill cuttings, through land application.⁴⁷ The Board must deny the proposed regulations because they are inadequate to protect the environment and inconsistent with existing law regulating the disposal of residual waste.

i. The proposed regulations are inadequate to protect the environment and property of the public.

While CCJ acknowledges that the Department has increased some regulations around the practice of on-site disposal, the proposed amendments are inadequate to protect the environment and property of the public. There is no public notice of where these sites are located; the requirement that disposal pits be located 20 inches above fresh drinking water is inadequate; there is no long term monitoring to ensure that the disposal sites are not leaking; and as a practical matter the limits for the concentration of various pollutants are unenforceable. Because they are so deficient, the Board should deny the proposed revisions. CCJ urges the Board to act quickly to adopt more protective regulations.

First, although the proposed regulations require the pit to be structurally sound and impermeable, there is no mechanism for the Department to ensure that pit liners have not and will not be punctured. The Department’s continued authorization of on-site disposal of residual waste is especially concerning given the fact the State Review of Oil and Natural Gas Environmental Regulations Board has already determined that the State’s continued use of production pits poses significant environmental problems.

Second, the Department’s proposal establishes limits for the concentration of various pollutants, but there is no mechanism for the Department to ensure that these criteria are met. In fact, the proposed regulations make clear that operators may not be required to perform a chemical analysis in every instance. Furthermore, the limits are meaningless without adequate testing and oversight procedures. Surprisingly, the proposed regulations do not require that sampling of the waste be representative and performed

⁴⁵ Id. Recommendation III.4

⁴⁶ 25 Pa. Code § 78.62(a)

⁴⁷ 25 Pa. Code § 78.63(a)

according to accepted protocols. As a result, it is hard to imagine how the Department will actually enforce these concentration limits.

Third, the requirement that buried pits be only 20 inches, less than 2 feet, above the seasonal high groundwater table gambles with local water quality. Other states have taken a more protective approach. New Mexico requires at least 25 feet above groundwater for temporary storage pits and 50 feet above groundwater for permanent pits.⁴⁸ Louisiana requires disposal pits to be at least 5 feet above the seasonal high groundwater table,⁴⁹ and Michigan requires at least 4 feet.⁵⁰ Given the Department's past experiences noted in the STRONGER report, it is unclear why the Department now believes that less than 2 feet is adequate to protect groundwater. Furthermore, proposed section 78.1 deletes the definition of "seasonal high groundwater table." This definition must be maintained to ensure clarity and consistent enforcement.

Fourth, there is no long term monitoring requirement to ensure that these disposal sites are not leaching into the soil and underground water. Despite the fact that the Department knows that many well site disposal pits have leaked in recent years, the Department's proposal does not require the oil and gas industry to utilize the same basic protective measures as other industries. Coal companies that dispose of waste must submit a plan for protecting the hydrologic balance that includes a groundwater monitoring system, and must also submit a description of the measures that will be taken to ensure the long-term functionality of the systems installed to prevent adverse impacts to groundwater and surface water.⁵¹ The power industry is required to dispose of its waste in landfills that are double-lined and submit long-term monitoring plans.⁵² The Department has not offered any evidence for why the oil and gas industry should be offered this convenience.

Fifth and finally, the Department must consider how the burial of residual waste pits could impact future land uses. The Department's waste management program requires that facilities and sites used for the storage or disposal of wastes derived from the

⁴⁸ New Mexico, *New Mexico Code and State Rules for Oil and Gas*, rule 19.15.17.10.A(1)(a) (2013) ("An operator shall not locate a temporary pit containing low chloride fluid where ground water is less than 25 feet below the bottom of the pit[.]"); rule 19.15.17.10(A)(3)(a) ("An operator shall not locate a temporary pit containing fluids that are not low in chloride where groundwater is less than 50 feet below the bottom of the pit[.]"); rule 19.15.17.10(A)(5)(a) ("An operator shall not locate a permanent pit...where ground water is less than 50 feet below the bottom of the permanent pit").

⁴⁹ Louisiana, *Louisiana Administrative Code*, Title 43, Part XIX §§ 313(A), (C)(6) ("Reserve pit fluids, as well as drilling muds, cuttings, etc...may be disposed of onsite...[the] bottom of the burial cell must be at least 5 feet above the seasonal high groundwater table.")

⁵⁰ Michigan Department of Environmental Quality, *Michigan's Oil and Gas Regulations*, rule 324.407(1)-(3).

⁵¹ 25 Pa. Code § 90.50(a)-(d)

⁵² 25 Pa. Code Ch. 289 Subch. B

exploration and production of oil and natural gas be operated and managed at all times to prevent the contamination of groundwater, surface water, soil and air, protect public health, safety and the environment, and prevent property damage.⁵³ The Federal Housing Administration has established minimum property standards in order to be eligible for FHA mortgage insurance. Drilling muds often contain large quantities of bentonite, which is a soil expansive material.⁵⁴ This results in a site with the potential for great soil volume change, and, therefore, damage to structure.⁵⁵ The Federal Housing Administration has required that “whenever a building is proposed near an active or abandoned well, the pit location must be determine and either all unstable or toxic materials should be removed from it and the pit filled in with compacted selected materials, or no dwelling construction may be accepted on a lot that includes any part of a pit.”⁵⁶ The regulations should be written so that present or future surface owners are not disadvantaged by the industry’s waste disposal practices.

ii. The regulations in Chapter 78 restricting the land application of residual waste are inconsistent with the Department’s waste management regulations.

The Solid Waste Management Act and the associated regulations provide important siting criteria for residual waste management facilities. Chapter 291 of the Department’s waste management regulations addresses land application of residual waste. More specifically, Section 291.202 sets forth five areas where the land application of residual waste is prohibited.⁵⁷ The land application of residual waste is prohibited in the following areas: within 100 feet of an intermittent or perennial stream;⁵⁸ within 300 feet of a water source unless the current owner of this water source provides written waiver;⁵⁹ within 100 feet of a sinkhole;⁶⁰ in or within 100 feet of an exceptional value wetland;⁶¹ and within 300 feet measured horizontally from an occupied dwelling, unless the owner provides a written waiver.⁶² Water source is defined as “the site or location of a well, spring or water supply stream intake which is being used for human

⁵³ 35 P.S. §§ 6018.101 et seq. (1980)

⁵⁴ Department of Housing and Urban Development, 1999, *Valuation Analysis for Single Family One-to Four-Unit Dwellings*. Chapter 2: Site Analysis.

⁵⁵ Id.

⁵⁶ Id.

⁵⁷ 25 Pa. Code § 291.202

⁵⁸ Id. at § 291.202(a)(1)

⁵⁹ Id. at § 291.202(a)(2)

⁶⁰ Id. at § 291.202(a)(3)

⁶¹ Id. at § 291.202(a)(4)

⁶² Id. at § 291.202(a)(5)

consumption.”⁶³ Occupied dwelling is defined as “a permanent building for fixed mobile home that is being used on a regular or temporary basis for human habitation.”⁶⁴

Oil and gas operators must control and dispose of residual wastes, including contaminated drill cuttings, in accordance with Chapter 78 and with the statutes under which Chapter 78 was promulgated. The provisions of Chapter 78 were issued and amended in part under the Authority of the Solid Waste Management Act.⁶⁵ Therefore, it is quite surprising that the Department has chosen to adopt different siting criteria for the land application of residual waste in the oil and gas context. Even more concerning, the Department has decided to relax the siting restrictions for water supplies and buildings.⁶⁶ Section 78.63(a)(8) prohibits the land application of residual waste “within 200 feet of a water supply.”⁶⁷ Similarly, Section 78.63(a)(6) prohibits the land application of residual waste “within 200 feet measured horizontally from an existing building, unless the current owner thereof has provided a written waiver.”⁶⁸

It is not clear whether the Department intended the discrepancy and if so, for what reason.⁶⁹ Regardless, the Department has a duty to implement and enforce the waste management laws and regulations,⁷⁰ and the Board has a duty to promulgate rules and regulations as are necessary for the proper performance of the work of the Department.⁷¹ Therefore, Section 78.63(a) must be amended to prohibit the land application of residual waste within 300 feet of water supply and within 300 feet from a building.

B. The Board must deny the Department’s proposed permit-by-rule approval for the beneficial use of brine from conventional wells.

The Department appears determined to allow brines to be spread on roads without complying the safeguards set forth in the Department’s waste management regulations. Section 78.70 of the Proposed Rulemaking would authorize the beneficial use of brine from conventional wells for dust control and road stabilization. This proposed amendment to the Chapter 78 oil and gas regulations must be rejected.

⁶³ *Id.* at § 287.1

⁶⁴ *Id.* at § 287.1

⁶⁵ *See* 25 Pa. Code Chapter 78 authority

⁶⁶ The Department completely ignores the siting restriction that applies to sinkholes in the Chapter 78 regulations.

⁶⁷ 25 Pa. Code § 78.63(a)(8)

⁶⁸ *Id.* at § 78.63(a)(6)

⁶⁹ The Department has not provided any explanation for why it feels that residual waste generated by oil and gas operators should be treated differently than residual waste generated by other industries. In fact, the STRONGER report states that oil and gas “waste is not managed in Pennsylvania in a manner that varies from the management of any other residual wastes generated by any other industry.” (pg. 111)

⁷⁰ 35 P.S. §§ 6018.101 – 6018.1003.

⁷¹ 71 P.S. § 510-20(b).

In Pennsylvania, oil and gas well brines are a residual waste under the SWMA. Pennsylvania has adopted regulations set forth at 25 Pa. Code Chapter 287 that establish a process whereby residual wastes can be approved for beneficial uses, such as road-spreading for dust control or road stabilization, if the waste and uses for that waste meet certain conditions.⁷² Among other things, the wastes must have the same or substantially similar physical character and chemical composition, and it must be possible for the Department to regulate their beneficial use using standardized conditions “without harming or presenting a threat of harm to the health, safety or welfare of the people or environment of this Commonwealth.”⁷³

First, The beneficial use of brine for dust suppression and road stabilization has never been approved under Chapter 287. In fact, in the September 17, 2011 *Pennsylvania Bulletin* the Department proposed and solicited public input on the renewal and modification of General Permit Number WMGR064 to include the beneficial use of natural gas well brines for dust suppression and road stabilization. However, as a result of concerns about health and water quality impacts, the Department decided to withdraw the proposed renewal and modification of WMGR064 in November 2012.⁷⁴ Now, the Department’s proposed revisions to the Chapter 78 oil and gas regulations would allow precisely what was attempted with the failed WMGR064. The Board must deny these proposed revisions, however, because they would establish an unlawful permit-by-rule approval process. Chapter 287 does not allow permit-by-rule approvals for a new beneficial use of a residual waste.

Second, under 25 Pa. Code § 287.611(a)(3), the Department may only issue a general permit for the beneficial use of residual waste if it can be used without harming or presenting a threat of harm to the environment. Brine spread on roadways for dust suppression and road stabilization presents the threat of environmental harm. Brine can make its way into nearby waterways and wetlands through stormwater runoff, which may result in degradation of water quality and impairment of water uses. The Commonwealth’s antidegradation policy mandates that “existing instream water uses and the water quality necessary to protect those uses be maintained and protected.”⁷⁵ Furthermore, Chapter 93 of the Department’s water quality regulations states, in relevant part, “water may not contain substances attributable to point or nonpoint source discharges in concentration or amount sufficient to be inimical or harmful to the water uses to be protected or to human, animal, plant or aquatic life.”⁷⁶ It is clear that Sections 93.6(a) and 93.4a(b) are meant to be comprehensive in the sense that they

⁷² 25 Pa. Code § 287.601(a) (“This subchapter sets forth requirements for the processing and beneficial use of residual waste.”)

⁷³ 25 Pa. Code § 287.611(a)(1)-(3)

⁷⁴ 42 Pa.B. 7175 (Saturday, November 24, 2012).

⁷⁵ 25 Pa. Code § 93.4a(b)

⁷⁶ 25 Pa. Code § 93.6(a)

require the Department to protect waters of the Commonwealth from all pollutants, including those found in natural gas brine, which might impair the use of that water.

* * *

The Board should deny the Department's proposed revisions to the Chapter 78 oil and gas regulations relating to the disposal and beneficial use of residual waste to the extent that they are contrary to the Solid Waste Management Act and associated regulations. As to the disposal of residual waste at the well site, CCJ urges the Board to act quickly to adopt more protective regulations that are consistent with the Department's solid waste management program, and that are adequate to protect the public and the environment. As to the beneficial use of brine for dust suppression and road stabilization, the Board should deny this proposed revision. The Board has already promulgated regulations that establish a process whereby residual wastes can be approved for beneficial uses.⁷⁷ The Department must utilize this process if it wants to approve the beneficial use of gas well brine for dust control and road stabilization.

4. The Board should amend Section 78.53 of the Proposed Rulemaking to better protect waters of the Commonwealth from pollution caused by oil and gas construction activities.

In 2005, a legislative change under the federal Clean Water Act exempted most stormwater discharges associated with oil and gas construction activities from permitting requirements under the National Pollutant Discharge Elimination System ("NPDES") program. The Department has established a state-specific regulatory program for such discharges under the Pennsylvania Clean Streams Law. At the heart of this program is Department's Erosion and Sediment Control General Permit for Earth Disturbance Associated with Oil and Gas Exploration, Production, Processing, or Treatment Operations or Transmission Facilities, or the ESCGP permit. However, this program has proven ineffective. A February 2012 report by the Penn Environment Research and Policy Center documented 3,355 citations for environmental violations at Pennsylvania oil and gas wells between January 1, 2008, and December 31, 2011.⁷⁸ Many of these violations were related to erosion and sedimentation control. There are a variety of reasons, some of which are outlined below, for why the Department's program has been unsuccessful in protecting water quality from surface discharges.

First, the Department reviews applications for coverage under ESCGP-2 (and its predecessor, ESCGP-1) through an "expedited review process" that does not allow for a

⁷⁷ 25 Pa. Code Chapter 287

⁷⁸ Staaf, Erika, Penn Environment Research & Policy Center, *Risky Business: An Analysis of Marcellus Shale Gas Drilling Violations in Pennsylvania 2008-2011*, February 2012, http://pennenvironmentcenter.org/sites/environment/files/reports/Risky_Business_Violations_Report_0.pdf

meaningful technical review. For most projects, the Department grants permit coverage within 14 business days as long as an application is deemed administratively complete and is certified by a professional. This timeframe is simply not long enough to allow Department staff to conduct the comprehensive technical review that an ESCGP-2 application associated with unconventional oil and gas production activities necessitates. Despite the fact that there have been so many erosion and sedimentation control violations, Governor Corbett's Executive Order 2012-11 directed the Department to process permit applications "as expeditiously as possible" and even made "compliance with the review deadlines a factor in any job performance evaluation." As a result, the ESCGP-2 process, whether expedited or not expedited, operates with limited or no technical review and oversight by the Department.

Second, the ESCGP-2 program does not provide any public participation opportunities. Notice is not published in the Pennsylvania Bulletin or anywhere else when an operator applies for coverage under ESCGP-2. Public notice is only provided after the Department grants the permit. Even if members of the public are aware that an application for ESCGP-2 authorization has been submitted, the Department's expedited review period makes it nearly impossible for the public to review an operator's plan before the Department grants coverage under the general permit. As a result, the Department must make a decision, often within 14 days, without the benefit of public input.

Third, the Department's regulations do not require a post-construction stormwater management ("PCSM") plan for any projects disturbing fewer than five acres. Under § 102.5(c), ESCGPs are required only for oil and gas activities occupying at least five acres, and PCSM is required only as part of the ESCGP. This approach is inadequate to protect water quality. Sites smaller than five-acres may pose a risk to water quality, particularly if there are numerous small sites located in one watershed.

Fourth and finally, under 25 Pa. Code § 102.14(d)(vii), oil and gas activities that include site reclamation or restoration are exempt from the riparian buffer requirements so long as the "riparian buffer is undisturbed to the extent practicable." However, there has been no guidance on how that standard should be applied. As a result, riparian buffer waivers may be granted for oil and gas activities without requirements to minimize the buffer disturbance or to provide adequate restoration.

CCJ urges the board to revise Chapter 78 to address these deficiencies. Failure to meet erosion and sedimentation control requirements can harm public natural resources, especially waters of the Commonwealth. CCJ recommends that the Board revise the Proposed Rulemaking to provide a public participation process, include guidance and requirements related to riparian buffer protection and restoration, and require full compliance with Chapter 102, notwithstanding the provisions of §102.8(n).

5. The Board should establish meaningful standards for restoration of gas-related sites.

Act 13 requires two stages of restoration for well sites. First, Section 3216(c) requires partial restoration after the conclusion of drilling and fracturing operations. Second, Section 3216(d) requires final restoration after the last well on the site has been plugged. The Department's proposal for implementing these sections in the Proposed Rulemaking is inadequate. Proposed regulation Section 78.65 provides that a well site will be considered restored if it is returned to "approximate original conditions, including reconstruction contours" and if it "can support the original land uses to the extent practicable." Similar language appears in the Department's proposed regulations for freshwater impoundments and centralized wastewater impoundments.

A return to original condition, contours and uses is a laudable goal for the restoration of well and impoundment sites. Unfortunately, because the proposed regulations do not require the submission of a baseline assessment of the original land characteristics and ecological value, this standard is largely meaningless.

First, the Department's proposed regulations fail to require any description of the baseline environmental quality or characteristics of the site where oil and gas operations are proposed. If the Department's objective is to restore original land uses, then it must actually determine what those uses are before any earth disturbance activity begins. One of the uses the Department must evaluate is the area's ecological function. The Department of Conservation and Natural Resources ("DCNR") defines restoration as "the return of a functioning ecosystem to its original state... [m]erely recreating the landscape without ecosystem functions does not constitute restoration."⁷⁹ Without information about the pre-construction condition of the area that will be impacted, the Department and the permit applicant are essentially saying that the original ecological value will be restored, without ever actually determining what the baseline ecological value is.

Establishing a baseline inventory of existing conditions including soil quality, water quality, plants and wildlife using the site, and any other information that may be relevant for restoration is crucial. The Department and a permit applicant must consider the extent of potential impacts to each site and identify conditions that will need repaired following disturbance activity. Soil compaction, erosion and sedimentation, and vegetation removal will adversely impact sites in varying degrees. The level of restoration should be commensurate with the degree of impact to the site. This necessarily requires a site-specific analysis.

⁷⁹ Department of Conservation and Natural Resources, *Guidelines for Administering Oil and Gas Activity on State Forest Lands* (2013).

CCJ urges the board to require oil and gas operators to obtain baseline measurements on such parameters that may be relevant during restoration. This must be conducted prior to earth disturbance because sites may not begin restoration activities for many, many years after initial earth disturbance. The Board should require oil and gas operators to document pre-construction parameters to facilitate effective restoration. The parameters that should be documented to facilitate effective restoration include: the quality of habitat; the community structure (woodland, forest, etc.), life form (herbaceous, perennial, succulent, shrub, etc.), predominant taxonomic categories (coniferous, graminaceous, etc.) and moisture conditions; the distribution of vegetation types and age classes; a review of available habitats; habitat conditions; current forest community type; wildlife species and plant communities currently using the area and those with the potential to use the area based on the habitat present, including species of special concern; ecologically important features such as vernal pools or wetlands; water quality; PNDI review for species of special concern that may be impacted by disturbance and/or restoration activities; and soil quality and type.⁸⁰

Second, without a baseline assessment the Department will have no basis for judging whether or not the site has actually been restored to its original condition. In order to provide a basis for a final inspection, the applicant must submit a baseline assessment and a written plan for restoration. Sites must be evaluated for restoration success using empirical data and routinely monitored so that long-term ecological goals are met.

Third and finally, the proposed regulations do not do enough to mitigate the impact of oil and gas activities prior to final restoration. The proposed restoration requirement puts off complete restoration while wells are still producing. This means that a particular site may sit only partially restored for tens of years. Furthermore, the 9-month period that the Department allows for partial restoration does not begin until the last well on a site is completed, which is often some number of years after the well pad is built. Additionally, under Act 13 operators can request restoration extensions of up to two years. Ecological restoration may take years or even decades to accomplish, especially after this kind of disturbance. This means that it is absolutely essential to look at every step in the process as an opportunity for restoration and enhancement of habitat. Throughout construction, operation, and partial and complete restoration, opportunities for habitat enhancement should be utilized whenever possible, especially for species of special concern.

* * *

Gas development and drilling activities disturb and fragment areas that provide important ecological value and habitat. The Department's goal must be to reduce the impact of fragmentation and gas development by restoring sites to their original ecological value or by creating other suitable habitat for plants and wildlife. Long term

⁸⁰ Id. Appendix: Restoration

restoration goals must be developed early in the site planning process and objectives for site restoration should be formulated based on a baseline assessment of the site's quality, soil function, community type, natural features, and plant and wildlife species. Without proper planning and effective, thoughtful implementation, suitable habitat for many species of plants and wildlife will be lost. The objective must be to restore the site to a self-sustaining natural community that provides ecological benefits and the Department must ensure that restoration goals are met.

6. The proposed amendments to Section 78.51, Protection of Water Supplies, are inadequate.

Natural gas development has the potential to adversely affect the quality or quantity of a drinking water sources. It is simply not practical to expect that all, or even most, citizens will be able to afford to hire an attorney to advise them of their rights and the well operator's obligations if oil and gas operations adversely affect a drinking water source. As a result, it is essential that the regulations governing well operators' duties to replace a restore affected water supplies be absolutely clear so that citizens can inform and enforce their rights without representation to the greatest extent possible. Equally as important, the Department's duty to investigate the cause of water supply pollution or diminution must be comprehensive and the Department should make a determination based on its investigation as quickly as possible.

A. The proposed revisions to Section 78.51(b) and Section 78.51(c) should be amended to include all oil and gas operations.

A discrepancy currently exists between the language establishing the Department's duty to respond to a claim that oil and gas activities adversely affected a water supply and the Department's proposed definition of "oil and gas operations." Proposed Section 78.51(b) provides:

A landowner, water purveyor or affected person suffering pollution or diminution of a water supply **as a result of well construction, well drilling, altering, or operating activities** may so notify the department and request that an investigation be conducted.

The emphasized language appears to make the Department's duty to investigate dependent upon whether the landowner believes that the pollution or diminution of a water supply was as a result of well construction, well drilling, altering or operating activities. Based on the proposed language, the Department may not have a duty to investigate a landowner's claim that water withdrawals caused the diminution of a water supply. Equally as concerning, it appears that the Department may not have a duty to investigate a claim that residual waste processing or water and other fluid

management caused the pollution of a water supply, despite the fact these activities pose a real threat to ground and surface waters.

Similarly, Section 78.51(c) provides:

Within 10 calendar days of the receipt of the investigation request, the Department will investigate the claim and will, within 45 calendar days of the receipt of the request make a determination. If the Department finds that **pollution or diminution was caused by the well site construction, drilling, alteration, or operation activities** or if it presumes the well operator responsible for polluting the water supply of the landowner or water purveyor under section 3218(c) of the act, the Department will issue orders to the well operator necessary to assure compliance with this section.

The emphasized language appears to limit the Department's authority to make a determination that oil and gas activity caused the pollution or diminution of a water supply. For example, if the Department did investigate a landowner's claim and found that the well operator's water withdrawals or residual waste processing and management caused the pollution or diminution of a water supply, it is not clear that the Department would actually have the authority to require an operator to replace the affected water supply. The proposed amendments to Section 78.51(c) appear to make the Department's ability to issue an order dependent upon whether or not the pollution or diminution was caused by well site construction, drilling, alteration, or operation.

The Department's proposed definition of "oil and gas operations" is much more broad. The Proposed Rulemaking defines "oil and gas operations" to include:

well location assessment, seismic, operations, construction, drilling, hydraulic fracturing, completion, production, operation, alteration, plugging, site restoration, water withdrawals, residual waste processing, water and other fluid management and storage used exclusively for the development of oil and gas wells; construction, installation, use, maintenance and repair of oil and gas pipelines, natural gas compressor stations, and natural gas processing plants or facilities performing equivalent functions; construction, installation, use, maintenance and repair of all equipment directly associated with activities; and finally earth disturbance associated with oil and gas exploration, production, processing, or treatment operations or transmission facilities.

It is not clear why the Department is proposing to potentially limit its own duty to investigate water supply claims and potentially limit its ability to take enforcement actions to protect Pennsylvania citizens impacted by natural gas development. Despite the fact that all of the activities listed in the Department's proposed definition of "oil and gas operations" may either be relevant to the Department's investigation or have the potential to cause water supply pollution or diminution, the Department's proposal might limit its duty to investigate a landowner's claim and its authority to order an operator to provide a replacement water supply to only four of those activities.

The proposed revisions to Sections 78.51(b) and 78.51(c) are fundamentally flawed. CCJ commends the Department and the Board for amending Section 78.51(d)(2) to require an operator to provide a replacement water supply that meets Safe Drinking Water Act Standards. However, this requirement is only as effective as the Department's duty to investigate water supply claims and its authority to require the operator to replace an affected water supply. Therefore, Section 78.51(b) and Section 78.51(c) must be amended to include all of the activities listed in the proposed definition of oil and gas operations.

B. The proposed revisions to Section 78.51(c) do not actually change the Department's duty to investigate a claim.

The proposed Chapter 78 amendments would not change 25 Pa. Code § 78.51(c), which allows the Department to take as many as ten (10) days to investigate a claim that a water supply has been adversely affected by oil and gas operations and as many as forty-five (45) to make a determination based on its investigation. It may be the case that the Department typically responds to such claims in a shorter amount of time; however, the possibility of leaving an individual or a family without a potable water supply for up to forty-five (45) days while waiting for the Department to make a determination is simply unconscionable. Therefore, CCJ urges the Board to amend Section 78.51(c) to require the Department to investigate reports that drinking water supplies have been adversely affected by oil and gas operations within three days of the Department's receipt of a complaint and make a determination within fifteen (15) days.

C. The Board should require oil and gas operators to identify a replacement water supply in their applications.

The regulations governing coal mining in Pennsylvania require applicants for coal mining permits to "identify the extent to which the proposed surface mining activities may result in contamination, diminution or interruption of an underground or surface source of water within the proposed permit or adjacent area for domestic, agricultural, industrial, or other legitimate use. If contamination, diminution, or interruption *may* result, then the description shall identify the means to restore or replace the affected

water supply.”⁸¹ CCJ urges the board to amend Chapter 78 to require oil and gas operators to similarly describe the extent to which their operations might pollute or diminish nearby underground or surface water sources and also identify how the well operator will replace a water supply if pollution or diminution does occur. This permit application requirement would allow the Department to fulfill its obligation to protect groundwater and surface water by denying permits or augmenting permits with special conditions for drilling activity that may be likely to cause water pollution and ensure that well operators are able to meet their duty to provide a replacement water supply where pollution or diminution does occur.

7. The proposed regulations related to abandoned wells are insufficient to protect citizens and the environment.

Pennsylvania is pockmarked by old abandoned wells, some known and some unknown. The existence of these wells presents a possible migratory pathway for harmful hydraulic fracturing fluids, drilling fluids, and gas. While CCJ appreciates the Department’s effort to address the issue of abandoned and orphaned wells in Pennsylvania, the proposed regulations do not go far enough to protect citizens and the environment.

The proposed regulations require well operators to identify the location of orphaned or abandoned wells prior to hydraulic fracturing within 1,000 feet measured horizontally from the vertical well bore and within 1,000 feet measured from the surface above the entire length of a horizontal well bore.⁸² If an abandoned or orphaned well is identified and it is likely that the abandoned or orphaned well penetrates a formation that the operator intends to stimulate, then the operator is required to “visually monitor” the orphaned or abandoned well during hydraulic fracturing.⁸³ If the well operator “alters” the orphaned or abandoned well during hydraulic fracturing, then the operator must plug the orphaned or abandoned well.

The Board’s proposal is unlawfully inadequate. Pollution caused by improperly abandoned wells in Pennsylvania was documented in a 2009 report prepared by the Department. The Department’s report listed 27 cases where improperly abandoned wells have been the source of groundwater contamination.⁸⁴ The requirement to identify and evaluate orphaned and improperly abandoned wells must be expanded to include

⁸¹ 25 Pa. Code § 87.47 (emphasis added)

⁸² Proposed Section 78.25a(a)

⁸³ Proposed Section 78.73(c)

⁸⁴ *Stray Natural Gas Migration Associated with Oil and Gas Wells* Draft Report. PADEP, Bureau of Oil and Gas Management. October 28, 2009. Cases include: Independent Valley News Migration, Allegheny County, March 2009; Versailles Migration, Versailles, Allegheny County, 2007 through 2008; Childers Migration, Washington County, June 2005; Groshek Migration, Keating Twp., McKean County, 2008; and Skinner Migration, Columbus Twp., Warren County.

identification and evaluation prior to all oil and gas operations, including but not limited to seismic testing, site disturbance and construction, and drilling.

A. The Department has neither explained how a well operator must visually monitor abandoned wells during hydraulic fracturing nor what would constitute altering an improperly abandoned well.

The Department has neither defined what the operator must do to visually monitor the improperly abandoned well nor what constitutes altering an improperly abandoned well, thereby triggering the requirement that the operator plug the old well. “Visually monitor” and “alter” could have a variety of different meanings and merely using these labels is not sufficient to inform the public of well operators’ duties related to improperly abandoned wells. Furthermore, these labels without definitions do not even inform the operators of their duties related to improperly abandoned wells. It is difficult, if not impossible, to comment on the Department’s proposal without any indication of what these standards entail and how they will be implemented in practice.

It is conceivable that by the time the operator becomes aware that an improperly abandoned well has been altered by hydraulic fracturing, the damage may already be done. If, for example, the operator is required to visually monitor the improperly abandoned gas well from the surface, there is at the very least a reasonable probability that by the time the operator notices a problem at the surface, there has already been an adverse affect on the public health, safety, welfare or the environment. Therefore, the Department’s proposal is not sufficient to fulfill its duty under the Oil and Gas Act.⁸⁵ Additionally, the Department’s proposal requires operators to take steps to prevent the pollution of waters of the Commonwealth if it alters an improperly abandoned well. Again, by the time an operator notices that an improperly abandoned well has been altered, there is at the very least a reasonable probability that there has already been an unlawful discharge of industrial waste into groundwater. The Board must deny this proposed amendment because the Department has a duty to *prevent* the pollution or diminution of fresh groundwater.⁸⁶

B. The Department cannot issue a permit that would violate the Oil and Gas Act.

The Pennsylvania Oil and Gas Act is the primary law that governs the permitting and operation of gas wells. Prior to significant amendments in 2012, the governing statute was the Oil and Gas Act of 1984. One of the purposes of Act 13 is to “[p]rotect the natural resources, environmental rights and values secured by the Constitution of Pennsylvania.”⁸⁷

⁸⁵ 58 Pa. C.S.A. § 3259.

⁸⁶ 35 P.S. § 691.1 (emphasis added).

⁸⁷ 58 Pa. C.S.A. § 3202(4)

No person may drill a well without an appropriate well permit from the Department.⁸⁸ Furthermore, any operation of a gas well must adhere to specific standards that relate to environmental protection and to well drilling and operation.⁸⁹ Section 3259 of Act 13 states, in relevant part, that it is unlawful to “conduct an activity related to drilling for or production of oil and gas...*in any manner* as to create a public nuisance or *adversely affect public health, safety, welfare, or the environment.*”⁹⁰ Act 13 and the oil and gas regulations contain numerous environmental protection standards. For example, casing and cementing activities must, among other things, “[p]revent the migration of gas or other fluids into sources of fresh groundwater” and must “[p]revent pollution or diminution of fresh groundwater.”⁹¹ Additionally, well activities must allow for the control of various solid and fluid material “in a manner than prevents pollution of waters of this Commonwealth[.]”⁹²

The Department may deny a permit for many reasons, including whether the “well site for which a permit is requested is in violation of any provision of this chapter or issuance of the permit would result in a violation of this chapter or other applicable law[.]” or whether the applicant is “in continuing violation of this chapter[.]”⁹³ Upon issuing a permit, the Department “may impose permit terms and conditions necessary to assure compliance with this chapter and other laws administered by [it].”⁹⁴ When the Department is considering whether or not to deny a permit or augment it with certain terms and conditions, it must, according to the purposes and intent of the Oil and Gas Act as well as the express language of its provisions that govern permitting and unlawful activity, ensure that the permit will not violate applicable laws or adversely affect the environment, water supplies, public health and safety.

The Proposed Rulemaking would require well operators to identify orphaned or improperly abandoned wells prior to hydraulic fracturing, not prior to drilling. However, the identification of orphaned or improperly abandoned wells must be taken into account when the Department is considering whether or not to deny a permit or augment it with certain terms and conditions. There is at the very least a reasonable probability that without this information, the Department may issue a permit that would result in a violation of the Oil and Gas Act. Drilling, hydraulic fracturing, and completing natural gas wells in the vicinity of improperly abandoned wells present risks to public health, safety, welfare, or the environment. The improperly abandoned wells could provide a conduit for stray gas that may cause pollution and endanger safety. The fractures caused by hydraulic fracturing of the lateral wellbore could interact with

⁸⁸ 58 Pa. C.S.A. § 3211(a).

⁸⁹ 25 Pa Code Ch. 78 Subch. C, 25 Pa. Code Ch. 78 Subch. D

⁹⁰ 58 Pa. C.S.A. § 3259 (emphasis added).

⁹¹ 58 Pa. C.S.A. § 3217(b); 25 Pa. Code § 78.81(a)(2),(3).

⁹² 58 Pa. C.S.A. § 3217(a); 25 Pa. Code § 78.60(a)

⁹³ 58 Pa. C.S.A. § 3211(e.1)(1),(5).

⁹⁴ 58 Pa. C.S.A. § 3211(e)

fractures connected to the old wells, which may lead to the migration of gas and fluids to groundwater and to the surface, thus adversely affecting the environment and public safety. When reviewing the lateral drilling plans in well permit applications, the Department must consider whether or not there are any old abandoned wells within the footprint of the proposed horizontal wells. Without knowing the location, depth, and possibly other characteristics of the abandoned wells in the vicinity of the proposed drilling activity, the Department cannot possibly issue a permit that would affirmatively avoid adverse impacts to the public health, safety, welfare or the environment.

The Department must deny a well permit if the issuance of the permit will result in a violation of the Oil and Gas Act.⁹⁵ Pursuant to the Oil and Gas Act, it is unlawful to “in any manner...adversely affect public health, safety, welfare or the environment.”⁹⁶ In order to ensure that authorized activity will not result in a violation of the Oil and Gas Act, the Department must consider improperly abandoned wells in the vicinity of the proposed drilling activity before it issues a drilling permit, not after.

C. The Department cannot issue a permit that would violate the Clean Streams Law.

The Department must also deny a well permit if the issuance of the permit would result in a violation of an applicable law.⁹⁷ The Clean Streams Law is an applicable law and protects against, among other things, the pollution of groundwater.⁹⁸ It is unlawful for any person to discharge industrial wastes into groundwater without the appropriate permit.⁹⁹ The Clean Streams Law even anticipates instances when there mere potential of pollution may trigger the need for a permit.¹⁰⁰ Drilling in the vicinity of orphaned or improperly abandoned wells creates a potential for pollution because it could cause the discharge of industrial wastes and other pollutants into groundwater and even possibly into surface waters. Without knowing the location, depths, and other characteristics of the old abandoned wells within the radius of the most far-reaching lateral wellbores, the Department is unable to issue a well permit that would affirmatively avoid the discharge of industrial waste and other pollutants into waters of the Commonwealth.

D. The Department must impose necessary terms and conditions to assure compliance with the Oil and Gas Act and the Clean Streams Law.

Adversely affecting, in any manner, the public health, safety, welfare or the environment, would be a violation of the Oil and Gas Act.¹⁰¹ Discharging an industrial

⁹⁵ 58 Pa. C.S.A. § 3211(e.1)(1)

⁹⁶ 58 Pa. C.S.A. § 3259.

⁹⁷ 58 Pa. C.S.A. § 3211(e.1)(1).

⁹⁸ 35 P.S. § 691.1

⁹⁹ 35 P.S. § 691.301

¹⁰⁰ 35 P.S. § 691.402.

¹⁰¹ 58 Pa. C.S.A. § 3259

waste into groundwater without the appropriate permit would be a violation of the Clean Streams Law.¹⁰² The Department must exercise its authority to impose certain necessary terms and conditions in a permit to ensure that the authorized activities will comply with the Oil and Gas Act's prohibition against adversely affecting the public health, safety, welfare, or environment, and with the Clean Streams Law's prohibition against discharging industrial wastes and other pollutants into groundwater without a permit.

Given the number of orphaned and improperly abandoned wells in Pennsylvania, the Department should require an applicant to identify old abandoned wells that are located in the vicinity of the proposed activity, and to evaluate whether and how the vertical or lateral drilling, and hydraulic fracturing could be conducted in a way that does not adversely affect public health, safety, welfare, or the environment and in a way that does not cause a discharge of industrial waste without a permit into a water of the Commonwealth. In order for the Department to determine whether or not it must strengthen the permit with necessary terms and conditions, it must consider this information at the application stage, not after the Department has issued the permit and after the operator has drilled the vertical and horizontal wellbores. If the Department finds that improperly abandoned wells in the vicinity of the proposed drilling activity present a risk of harm to public health, safety, welfare or the environment, then the Department should either deny the permit or require the applicant to properly abandon the old gas wells. If the Department finds that improperly abandoned wells in the vicinity of the proposed drilling activities create the potential for an unlawful discharge of industrial waste into groundwater, then the Department should deny the permit or require the applicant to properly abandon the old gas wells.

* * *

The issuance of drilling permits that will result in a violation of the Oil and Gas Act or the Clean Streams Law would result in the failure to eliminate the threat of pollution and injury to the public. The Department has a duty to prevent adverse impacts to the public health, safety, welfare, and the environment under the Oil and Gas Act, and a duty to prevent pollution of ground water and surface water under the Clean Streams Law. As a result, the Department's Proposed Rulemaking is inadequate and must be amended to require well operators to identify and evaluate orphaned and improperly abandoned wells at the application stage.

8. Requiring an operator to restore an affected water supply to Pennsylvania Safe Drinking Water Act standards is reasonable and opponents of this requirement have not offered any evidence that such a requirement would be unduly burdensome on industry operators.

¹⁰² 35 P.S. § 691.301

Section 78.51(d)(2) states that the quality of a restored or replaced water supply will be deemed adequate if it meets the standards established by the Pennsylvania Safe Drinking Water Act (“SDWA”), or it is comparable to the quality of the water supply before it was affected by the operator if that water supply exceeded those standards.

In a letter dated July 16, 2013, the Pennsylvania Oil and Gas Technical Advisory Board (“TAB”) stated that the Department’s decision to require an operator to restore a water supply to a minimum of SDWA standards is unreasonable because “many water supplies do not meet SDWA standards in areas not served by public water utilities because there is no legal requirement for a Pennsylvania homeowner to treat his or her private water supply to SDWA standards.” TAB went on to say that it “believes it is unreasonable to require the oil and gas industry to upgrade a private water supply, at industry expense, beyond that which existed pre-drilling. No other industry is required to do this.” Finally, TAB stated that the new restoration obligation would have a “significant impact” on the industry. Many industry representatives that provided testimony at the various public hearings reiterated TAB’s comments. These arguments are not persuasive.

First, it is difficult to imagine how the new water supply replacement obligation would have a “significant impact” on the oil and gas industry. Well operators must conduct all oil and gas operations in manner than prevents pollution or diminution of a water supply. If the industry complies with the various regulations designed to protect public and private water supplies, then only in the most rare and extreme circumstances would the industry actually be required to restore the affected water supply to Safe Drinking Water Act standards.

Second, neither TAB nor any of the industry representatives provided any evidence or explanation for why the new restoration requirement is “unreasonable” or how it would “significantly impact” industry. The new requirement does not mandate that well operators replace the affected water supply with a new public water supply, which could be very expensive. Instead, the new requirement allows the well operator and landowner to decide how to best replace the affected water supply with a water supply that meets Safe Drinking Water Act standards. In many cases a well operator could simply install an adequate treatment system or drill another water well.

The Board must include this requirement in the final rulemaking. Section 3218(a) of Act 13 states that when a “well operator affects a public or private water supply by pollution or diminution” the well operator “shall restore or replace the affected water supply with an alternate source of water adequate in quantity and quality for the purposes served by the water supply,” and the Department must “ensure that the quality of a restored or replaced water supply meets the standards established

under...the Safe Drinking Water Act.”¹⁰³ The Board is required to promulgate the regulations necessary to meet this requirement.¹⁰⁴

9. Conclusion

In light of the foregoing comments, CCJ believes that significant improvements must be made to the Proposed Rulemaking. We agree with the Department and the Board that an imminent need exists for the adoption of revised environmental protection performance standards. The Board can promptly meet that need by promulgating standards that are consistent with existing law and reflective of the current state of scientific knowledge.

Once again, thank you for the opportunity to submit this comment and for your consideration of it. If you have any questions or concerns regarding any of the proceeding, please do not hesitate to contact us.

Respectfully submitted by,



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¹⁰³ 58 Pa.C.S. § 3218(a)

¹⁰⁴ Id.; see also 71 P.S. § 510-20(b).