



May 11, 2011

Carol Collier, Executive Director
Pam Bush, Commission Secretary
Commission Members
Delaware River Basin Commission
25 State Police Drive
P.O. Box 7360
West Trenton, NJ 08628-0360

**Re: Public Comment – XTO Energy, Inc.
Draft D-2010-022-1**

Dear Ms. Collier, Secretary Bush and Commissioners:

We submit the following comments on behalf of Delaware Riverkeeper Network (“DRN”) regarding draft docket D-2010-022-1 (surface water withdrawal). DRN proposes that the Delaware River Basin Commission (the Commission) not approve the above-referenced draft docket.

As publicly noticed on the Commission website, this is an application for approval of a Surface Water Withdrawal project to supply up to 0.25 mgd or 7.50 mgm of water for the applicant’s natural gas exploration and production activities in Broome and Delaware Counties in the State of New York. Surface water will be withdrawn at a site on Oquaga Creek within the Oquaga Creek Watershed in the Town of Sanford, Broome County, New York. Oquaga Creek drains to the West Branch Delaware River. The withdrawal site is located within the drainage area of the section of the non-tidal Delaware River known as the Upper Delaware, which is classified as Special Protection Waters.

Water Resources and Special Protection Waters Impacts

The Commission is governed by several requirements in regards to the XTO Energy application.

Section 3.8 of the Delaware River Basin Compact requires that

No project having a substantial effect on the water resources of the basin shall hereafter be undertaken by any person, corporation, or governmental authority unless it shall have been first submitted to and approved by the commission,

Delaware Riverkeeper Network
300 Pond Street, Second Floor
Bristol, PA 19007
tel: (215) 369-1188
fax: (215) 369-1181
drkn@delawareriverkeeper.org
www.delawareriverkeeper.org

subject to the provisions of Sections 3.3 and 3.5. The Commission shall approve a project whenever it finds and determines that such project would not substantially impair or conflict with the Comprehensive Plan and may modify and approve as modified, or may disapprove any such project whenever it finds and determines that the project would substantially impair or conflict with such Plan. The Commission shall provide by regulation for the procedure of submission, review and consideration of projects, and for its determinations pursuant to this section. Any determination of the Commission hereunder shall be subject to judicial review in any court of competent jurisdiction.

See also 18 C.F.R. § 401.32.

The Comprehensive Plan is established by Article 13.1 of the Compact:

The commission shall develop and adopt, and may from time to time review and revise, a comprehensive plan for the immediate and long range development and use of the water resources of the basin. The plan shall include all public and private projects and facilities which are required, in the judgment of the commission, for the optimum planning, development, conservation, utilization, management and control of the water resources of the basin to meet present and future needs.

The DRBC implements the Delaware River Basin Compact through the Delaware River Basin Water Code (W.C.), 18 C.F.R. Part 410, as well as the Delaware River Basin Administrative Manual: Rules of Practice and Procedure.

W.C. Section 2.30.4 states: “All projects involving a transfer of water into or out of the Delaware Basin must be submitted to the Commission for review and determination under Section 3.8 of the Compact, and inclusion within the Comprehensive Plan.”

An exportation of water is defined as: “[W]ater taken from within the Delaware River Basin and transferred or conveyed to an area outside the drainage area of the Delaware River and its tributaries, including the Delaware Bay, and not returned to the Delaware River Basin.” W.C. Section 2.30.1.

Exportations of water are a form of consumptive use. Consumptive use is “loss of water from a groundwater or surface water source through a manmade conveyance system . . . due to transpiration by vegetation, incorporation into products during their manufacture, evaporation, diversion out of a basin, or any other process to the extent that the water withdrawn is not returned to the waters of a basin.”

W.C. Section 2.30.2 establishes the “Policy of Protection and Preservation”:

The waters of the Delaware River Basin are limited in quantity and the Basin is frequently subject to drought warnings and drought declarations due to limited water supply storage and streamflow during dry periods. Therefore, it shall be the policy of the Commission to discourage the exportation of water from the Delaware River Basin.

W.C. Section 2.30.3 (“Safeguard Public Interest”) requires the DRBC’s “review and consideration of any public or private project involving the importation or exportation of water

[to] be conducted pursuant to this policy and shall include assessments of the water resource and economic impacts of the project and of all alternatives to any water exportation or wastewater importation project.”

The Oquaga Creek is located within the drainage area of an area designated as Special Protection Waters. The Commission is legally required to ensure that the XTO water withdrawal from the Oquaga Creek will result in “no measurable change” to existing water quality at “Boundary and Interstate Control Points” for these exceptional waters. W.C. Section 3.10.3.A.2.b.1.

As stated in the draft docket, “The SPW designation and associated regulations are designed to protect waters with exceptional value including without limitations existing high water quality in applicable areas of the Delaware River Basin”.¹

The Commission’s Executive Director Determination dated May 19, 2009 stated that “as a result of water withdrawals, wastewater disposal and other activities, natural gas extraction projects ... may individually or cumulatively affect the water quality of Special Protection Waters [SPW]...” Oquaga Creek flows to the West Branch of the Delaware River and is located within the drainage area of SPW.

W.C. Section 3.10.3.A.2.b.1 applies to Special Protection Waters and requires that the commission must review and condition approvals based on insuring that no measureable change to existing water quality “occurs at Boundary and Interstate Control Points” for these waters.

By regulation, the Commission requires permit applicants to address the impact of their proposed projects on the basin. Specifically, “applications before the Commission should address the impact of the withdrawal, use and disposal of water on the water resources of the basin.” Rules of Practice and Procedure Section 2.3.7(A).

If the DRBC approves the draft XTO docket, it is likely to have substantial effects on the water resources of the Delaware River Basin by reducing the flow in the stream and/or depleting the groundwater; removing the natural flow regime, which will adversely impact fish and aquatic life and their habitats; by adding, discharging, or causing the release of pollutants into the groundwater or surface water, or by other means. The draft docket violates the Commission’s requirements under SPW.

Procedural Concerns

The DRBC must require XTO to meet all of the requirements of the Rules of Practice and Procedure Section 2.3.8(A) governing the information and exhibits that must be included with a docket application. Based on the information we have reviewed in the file, XTO has not submitted the full information required. This is inadequate to comply with the requirements of DRBC’s regulations and procedures.

XTO Energy has failed to fully comply with Requirement 4 of the R.P.P., “maps, drawings, specifications and profiles of any proposed structures or a description of the specific effects of a non-structural project”. The application provides a single drawing of an “intake diagram” for

¹ D-2010-022-1, XTO Oquaga Creek SWWD, Draft, 4.28.2011, 10:00 AM, p. 5

“conceptual purposes only and not to be used for construction”². At a later date, 9.9.2010, an email was submitted stating “attached are two photographs of a water withdrawal point that is similar to the one proposed in the XTO application for Oquaga Creek”. Two “Sample Withdrawal Point Photographs” were attached with annotation “example from Susquehanna R.B.; approved by SRBC”.³ The details of construction required by Requirement 4 are missing including but not limited to specific drawings, specifications, and profiles of any proposed structures including but not limited to the flow back prevention mechanism and a design of the proposed infrastructure. The draft docket states that final plans and specifications must be submitted prior to construction commencing as per Condition e., making it clear the application submission was not adequate.⁴ The docket allows the Executive Director of the DRBC to review and approve the final plans and specifications, removing this aspect of the docket from the public input process.

Requirement 4 is not met due to the lack of details for a stream flow gauge in the application. There was no stream flow gauge design submitted by the applicant. Condition o. of the Draft Docket specifies “The withdrawal site shall be fitted by the docket holder with a gage (the XTO Oquaga Creek gage) or another gage or other instrumentation...and calibrated to the downstream Deposit gage station flow data”⁵, making it clear the application submission was not adequate. The Executive Director is expressly allowed to approve “...another gage or alternate instrumentation...”⁶, removing this aspect of the docket from the public input process.

Requirement 4 is not met due to the lack of an intake design. There was no water intake design submitted by the applicant. Condition p. in the draft docket requires “Before commencing construction on the surface water withdrawal site, the docket holder shall first obtain the approval of the intake design from the Executive Director, NYSDEC, the USACE and the U.S. Fish and Wildlife Service”⁷, making it clear the application submission was not adequate. The Executive Director is expressly allowed to approve the intake design,⁸ removing this aspect of the docket from the public input process.

Requirement 4 was not met due to the lack of automatic continuous recording device specifications. There were no specifications for automatic continuous recording device submitted by the applicant. Condition u. in the draft docket requires “The docket holder shall meter the project surface water withdrawals with an automatic continuous recording device that measures to within 5 percent of actual flow”⁹, making it clear the application submission was not adequate. No requirement for approval of the design or specifications of the automatic continuous recording device is required in the draft docket. The metering device is necessary to monitor flows in the stream to assure compliance with the pass-by flow requirements in the draft docket, as further discussed in Condition t. of the draft docket.¹⁰

² Application for Ground or Surface Water Withdrawal Project in the Delaware River Basin, XTO Energy, Indiana, PA, Scott Huntington, Regulatory Analyst, 5.7.2010, Figure 2.

³ Delaware River Basin Commission XTO Energy Water Withdrawal file, file review by Tracy Carluccio, 5.2.2011

⁴ D-2010-022-1, XTO Oquaga Creek SWWD, Draft, 4.28.2011, 10:00 AM, p. 9

⁵ D-2010-022-1, XTO Oquaga Creek SWWD, Draft, 4.28.2011, 10:00 AM, p. 11

⁶ Ibid.

⁷ Ibid.

⁸ Ibid.

⁹ D-2010-022-1, XTO Oquaga Creek SWWD, Draft, 4.28.2011, 10:00 AM, p. 12

¹⁰ Ibid.

It appears that XTO Energy has also failed to fully comply with Requirement 5 of the R.P.P., Sec. 2.3.8(A), “written report of the applicant’s engineer showing the proposed plan of operation of a structural project”. No Operation Plan was submitted by the applicant. The draft docket Condition t. requires “At least 90 days prior to the scheduled initiation of any site clearing or construction and prior to commencement of any withdrawal operations at the withdrawal site, the docket holder shall submit an Operation Plan...”,¹¹ making it clear the application submission was not adequate. The Executive Director is expressly allowed to approve the Operation Plan,¹² removing this aspect of the docket from the public input process.

Requirement 5 was not met due to the lack of an Operation Plan that shows how the docket holder will account for the distribution of the withdrawn water. Condition v. requires “...the docket holder shall meter, record, and report the volume of surface water withdrawn from the withdrawal site as it is distributed to the hauling vehicles”,¹³ making it clear the application submission was not adequate. The Executive Director is expressly allowed to approve the Operation Plan and various aspects of the transportation recordkeeping,¹⁴ removing this aspect of the docket from the public input process.

It appears that XTO Energy may have failed to fully comply with Requirement 6 of the R.P.P., Sec. 2.3.8(A), “map of any lands to be acquired or occupied”. There was a site location map of the withdrawal site (Figure 1) and an aerial photograph showing the truck access area (Figure 4) and current tax parcels (Figure 6)¹⁵ but the significance of these maps in terms of Requirement 6 is unexplained in the application and not mentioned in the draft docket. It is stated that the Town of Sanford owns the land (apparently it used to be a bridge crossing) that the project will be constructed upon and it is implied that the Town's access is all that is needed. While there is a “license agreement” between the Town of Sanford and the applicant for use of the town’s road to gain access to the Creek, there is no lease agreement or property acquisition or rental of property mentioned in the “license agreement”. It is unclear if any privately owned land will be acquired or occupied by the project. The lack of construction specifications for the facility clouds this issue further.

It appears that XTO Energy may have failed to fully comply with Requirement 7 of the R.P.P., Sec. 2.3.8(A), “estimate of the cost of completing the proposed project, and sufficient data to indicate a workable financial plan under which the project will be carried out.” The applicant’s statement provided in the application provides an estimated project cost (\$17,700) but it does not provide details as to the source of the cost or the financial plan under which the project will be carried out.¹⁶ There is no mention in the draft docket of any additional information required to be submitted by the applicant.

It also appears that XTO Energy may have failed to fully comply with Requirement 8 of the R.P.P., Sec. 2.3.8(A), “analyses and conclusions of regional water supply and wastewater investigations.” This requirement will be discussed *infra*.

¹¹ Ibid.

¹² Ibid.

¹³ Ibid.

¹⁴ Ibid.

¹⁵ Application for Ground or Surface Water Withdrawal Project in the Delaware River Basin, XTO Energy, Indiana, PA, Scott Huntington, Regulatory Analyst, 5.7.2010, Figures 1, 4, 6

¹⁶ Application for Ground or Surface Water Withdrawal Project in the Delaware River Basin, XTO Energy, Indiana, PA, Scott Huntington, Regulatory Analyst, 5.7.2010, “Applicant’s Statement – Project Review Fee”, 5.5.2010.

Section 3.8 of the DRB Compact states that "No project having a substantial effect on the water resources of the basin shall hereafter be undertaken by any person, corporation or governmental authority unless it shall have been first submitted to and approved by the commission..." Several Commission regulations incorporate the mandate that permit applicants address the impact of their proposed projects on the Basin. For example, R.P.P. Sec. 2.3.7(A) states that "[a]pplications before the Commission should address the impact of the withdrawal, use and disposal of water on the water resources of the Basin." These impacts have not been adequately discussed; the application is substantively deficient.

Out of Basin Transfer

First, while XTO Energy avers that the water use is "100% consumptive," the project also entails transfers out of the Delaware River basin. The two uses are not mutually exclusive. Consumptive use is "loss of water from a groundwater or surface water source through a manmade conveyance system . . . due to transpiration by vegetation, incorporation into products during their manufacture, evaporation, diversion out of a basin or any other process to the extent that the water withdrawn is not returned to the waters of a basin." An out-of-basin transfer is "an exportation of water [] taken from within the Delaware River Basin and transferred and conveyed to an area outside the drainage area of the Delaware River and its tributaries, including the Delaware Bay, and not returned to the Delaware River Basin." Water Code (W.C.) Sec. 2.30.1. It is a form of consumptive use.

XTO Energy's application materials and the draft docket also make clear that wastewater will be processed and discharged in locations outside of the Delaware River Basin; this amounts to an out-of-basin transfer.

W.C. Section 2.30 applies to the draft XTO docket because the project entails a transfer of water out of the Delaware River Basin. XTO must provide the DRBC with all of the information required by W.C. Section 2.30.4 governing applications for dockets entailing transfers of water out of the Delaware River Basin. W.C. Sec. 2.30 and subsections are applicable.

W.C. Sec. 2.30.4 requires XTO Energy to address eight issues:

- A. Efforts to first develop or use and conserve the resources outside of the Delaware River Basin.
- B. Water resource impacts of each alternative available including the "no project" alternative.
- C. Economic and social impacts of the importation or exportation and each of the available alternatives including the "no project" alternative.
- D. Amount, timing and duration of the proposed transfer and its relationship to passing flow requirements and other hydrologic conditions in the Basin, and impact on instream uses and downstream waste assimilation capacity.
- E. Benefits that may accrue to the Delaware River Basin as a result of the proposed transfer.
- F. Volume of the transfer and its relationship to other specified actions or Resolutions by the Commission.
- G. Volume of the transfer and the relationship of that quantity to all other diversions.
- H. Any other significant benefit or impairment which might be incurred to the Delaware River Basin as a result of the proposed transfer.

Upon information and belief, no such information was provided to the Commission by the applicant. There is no statement regarding XTO Energy's efforts, if any, to use resources from

outside the Basin in its project. No documents in the application file address the “no project” alternative, as required by sections B and C. Impacts on downstream uses have not been adequately addressed. The significant benefits and impairments the project may cause have not been presented.

W.C. Sec. 2.30.3 “Safeguard Public Interest” requires “review and consideration of any public or private project involving the importation or exportation of water [to] be conducted pursuant to this policy and shall include assessments of the water resource and economic impacts of the project and of all alternatives to any water exportation or wastewater importation project.”¹⁷

The draft docket contains no such determination, and indeed, this project cannot be determined to be in the public interest on the information currently available. XTO Energy has not proven that its projects meet all the criteria listed above, so the Commission *must* fully weigh the impacts of the project and find it to be in the public interest if a permit is to issue.

No long-term economic impact studies have been performed in the Oquaga Creek area. A projection based on the Barnett Shale project in Texas, which was written by Timothy W. Kelsey of the Penn State Cooperative Extension,¹⁸ posits that “[u]nder current [Pennsylvania] law, natural gas will not significantly increase the local tax base, and thus local tax revenues” because natural gas is not subject to local taxation. The costs borne by local governments and school districts, while not specified, are nevertheless deemed “significant.” Kelsey acknowledges that there are “opportunities and benefits for the construction industry, retail trade, and others” but that “[t]he size of these economic impacts . . . depend critically upon whether such businesses exist within the Pennsylvania communities affected by natural gas; the more spending that occurs outside the community, less economic benefit will accrue locally.”

A working paper by Susan Christopherson of Cornell University, New York, cautions that local and regional communities bear costs that must be considered in forecasting economic impacts from shale gas development,¹⁹ “The cumulative impacts include many of the costs we have described as being borne by communities in gas drilling regions – new demands on government services, traffic congestion, noise, and social disruption. But as the boom-bust cycle works its way through localities in a gas play, there are also regional cumulative impacts that need to be considered in assessing costs and benefits.”

¹⁷ In a different context, DRBC considers “A project that is in the public interest is one that, at a minimum, provides housing, employment, and/or public facilities needed to accommodate the adopted future population, land use, and other goals of a community and region without causing deleterious impacts on the local and regional environment and economy. In general, such a project would be one that conforms to a locally-adopted growth management plan which is undergoing active implementation by local officials, is supported by the larger community as a whole, and is compatible with national, state and regional objectives as well. For a project not fully meeting the above criteria, the Commission will weigh the positive and negative impacts to determine public interest. Water Code § 3.10.2(A)(2)(a)(5).

¹⁸ Available at <http://naturalgaslease.pbworks.com/f/Potential+Economic+Impacts+of+Marcellus+Shale.pdf>. See also Marcellus Shale: What Local Government Officials Need to Know, at <http://downloads.cas.psu.edu/naturalgas/pdf/MarcellusShaleWhatLocalGovernmentOfficialsneedtoknow.pdf>.

¹⁹ “How Should We Think About the Economic Consequences of Shale Gas Drilling?”, Working Paper Series, A COMPREHENSIVE ECONOMIC IMPACT ANALYSIS OF NATURAL GAS EXTRACTION IN THE MARCELLUS SHALE, Susan Christopherson and Ned Rightor, May, 2011

A detailed and particularized study, not hypothetical projection, is necessary in order to determine whether this project is in the public interest or not. The potential public interest considerations to be addressed should involve, at a minimum, the costs of increased demand for medical care, schools, and other municipal services without corresponding tax revenue or fees to pay for them; the dangers of increased truck traffic and industrial activity to travelers on roadways and to use of public lands; whether permanent jobs will be created or not and the likelihood that local residents will be employed because of the project; the extent to which local businesses will benefit or be negatively impacted from the increased activity; the loss of fresh water flows from the Basin and the hydrologic cycle; the change in stream habitat due to loss of natural flow regime; the impact on recreational and ecotourism activities; and the contaminants produced with the shale such as natural radioactivity, hydrocarbons, heavy metals, high amounts of salt, and polluting air emissions and the impacts these might have on the environment, water supplies, and on human health.

Nor should public interests at the municipal level be overlooked. With highway repair costs reaching millions of dollars for even short stretches of roadway, bonding provisions must give adequate protection from heavy use by XTO Energy, subcontractors and related services to transport equipment, fresh water, wastewater, and other related materials. The small roads that would be used for this project will be directly impacted and must be paid for by the applicant, not the local taxpayer.

W.C. Sec. 2.30.2 requires implementation of the Commission's Policy of Protection and Preservation, which discourages the exportation of water from the Delaware River Basin due to frequent drought and limited quantity of waters. This requirement has not been strictly applied to the draft docket because of the lack of specificity and the large number of requirements that have been transformed into after-the-fact docket conditions, including concerning water conservation, leak detection and flow considerations. The after-the-fact docket conditions also allow the applicant to escape the requirements of R.P.P., Sec. 2.3.8(A), Exhibits to Accompany the Application as discussed above, and remove the reliability of the project to meet water conservation and management and Special Protection Waters requirements as discussed *infra*.

XTO Energy has failed to address the impact of its project on the water resources of the Basin and on the local community, and therefore the Commission cannot consider this project to be within the public interest or in keeping with the policy of protection and preservation at this point. XTO Energy should not be allowed to operate under a DRBC-issued docket until each required issue is adequately addressed. The Commission has the power and the duty to require such answers from XTO, and should require this information prior to issuing any docket.

Non-Point Source Pollution from the Withdrawal Site

W.C. Sec. 3.10.3A.2.e.1 and 2 of the *WQR, Administrative Manual – Part III* requires projects subject to review under Section 3.8 of the compact that are located in the drainage area of SPW to submit for approval a non-point source pollution control plan (NPSPCP) that controls new or increased non-point source loads generated within the portion of the docket holder's service area which is also located within the drainage area of Special Protection Waters. The Oquaga Creek is located in an area designated as SPW, a NPSPCP is required and should address both post-construction stormwater controls and erosion and sediment control. No NPSPCP was submitted by the applicant.

The draft docket Condition i. requires “The docket holder shall submit a Non-Point Source Pollution Control Plan (NPSPCP) for the withdrawal site in accordance with Section 3.10.3.A.2.e, of the DRBC Water Quality Regulations to the Executive Director of the DRBC at least 45 working days prior to the scheduled initiation of any site clearing or construction at the site. The NPSPCP and erosion and sedimentation control plan shall be designed in accordance with the more stringent of Commission and NYSDEC requirements. Prior to commencing any site clearing or construction work at the withdrawal site, the docket holder shall obtain Executive Director’s written approval for the NPSPCP, as well as, any other necessary federal, state, and local authorizations. The NPSPCP shall describe erosion and sedimentation controls to be implemented at the site and shall include measures to control stormwater both during and post construction. The post-construction portion of the plan shall describe the final site conditions including a pre- and post-construction project hydrograph analysis, permanent facilities, equipment, access roads, and all sediment and erosion and stormwater control structures necessary after final site restoration has been achieved.”²⁰

The inclusion of this condition makes it clear the application did not contain this information and that this requirement has not been satisfied. The Executive Director is expressly allowed to approve the NPSPCP.²¹ This is inadequate to comply with the requirements of the Commission’s regulations and procedures. This also removes this aspect of the docket from the public input process.

Non-Point Source Pollution Control Planning in the area served is further discussed in this Comment under “Area/wells Served” (page 14).

The DRBC is mandated by W.C. Section 3.10.3.A.2.e.1 and W.C. Section 3.10.3.A.2.e.2 to require that XTO Energy submits for approval a NPSPCP to control new or increased non-point source loads, including erosion and sediment controls as well as post-construction stormwater controls. DRBC may not approve the XTO docket conditionally and allow XTO to submit its NPSPCP after the fact.

Build Out and Future Approvals

W.C. Sec. 3.10.3.A.2.e.2 requires that “Approval of a new or expanded water withdrawal and/or wastewater discharge project will be subject to the condition that any new connect to the project system only serve an area(s) regulated by a non-point source pollution control plan which has been approved by the Commission.” This means that, to the extent XTO Energy’s NPSPCP does not encompass all its leaseholdings and expected future wells, the area served as defined in Section A 3 of the draft docket must limit the area and the estimate of water withdrawal needs in the draft docket must cap the amount for purposes of future approvals.

Operations Plan

The draft docket, as discussed above, suggests that an Operation Plan will be a condition of approval. However, the operation plan is not yet complete, and must be completed and subject to public review as part of a draft docket, not as an after-the-fact condition.

The Commission is requiring metering and flow gauges but the Commission, as part of the project’s Operations Plan, should require XTO Energy to perform ongoing and/or routine stream flow sampling at key locations that will accurately measure the flows of the Oquaga Creek and its subwatershed. Suggested stream monitoring requirements follow. For more

²⁰D-2010-022-1, XTO Oquaga Creek SWWD, Draft, 4.28.2011, 10:00 AM, p. 10

²¹ Ibid.

details see DRN's comment on Draft DRBC Natural Gas Development Regulations,²² which is provided as **Attachment 1** and is fully incorporated herein, including all Attachments and expert reports.

Baseline: All stream data for all parameters including water chemistry (real time and grab samples), benthics, fish, mussels, must be commenced at least one full year before withdrawal can begin in order to have good baseline data. This includes both shorter lived (benthics/macroinvertebrates) and longer lived (fish and mussels) species. Permanent monitoring stations (sondes) and monitoring probes should also be installed at least one year before withdrawal to monitor temperature, dissolved oxygen, flow, conductivity, specific conductivity, and turbidity. These stations should be located on the Creek and also in the West Branch to monitor changes in temperature and other habitat parameters that may result from the withdrawal. Macroinvertebrate testing to be done by trained biologists and habitat and station selection to be done based on established protocol. This is necessary to establish habitat and species.

Ongoing: Flow monitoring at the withdrawal location by installation of a permanent gauge; the USGS downstream gauge should be reinstated. Continuous monitoring device to be installed in representative water wells or a newly installed monitoring well (at the expense of the applicant) at and downstream of the withdrawal site, depending on hydrogeologic analysis of the potential of impacts to groundwater.

Reporting: All data to be reported to the Commission and made public on the Commission's website. Lag time from data collection to data sharing with the Commission and the public cannot be in excess of 30 days and spreadsheets of this data should be made available on the Commission website.

Pass-by Flow

The Commission is requiring a pass-by flow of 8 cfs and a withdrawal rate of 500 gpm with a total withdrawal volume not to exceed 0.25 mgd. A "day" is defined as the 24-hour period between 12:00 AM and 12:00 AM on the following day. The methods of metering, recording, and reporting the pass-by flow and for complying with the pass-by flow are not detailed and Condition t. of the draft docket allows for after-the-fact submission of this plan.²³ This is inadequate to comply with the requirements of the Commission's regulations and procedures.

The Commission is required to ensure this project does not have a deleterious effect on the water resources of the Basin and its more specific duty under W.C. Sec. 2.20.5 to protect water recharge areas. The Commission concludes that "The project does not conflict with the Comprehensive Plan and is designed to prevent substantial adverse impact on the water resources related environment, while sustaining the current and future water uses and development of the water resources of the Basin."²⁴ Yet, the pass-by flow requirement does not protect Oquaga Creek and threatens the Creek and the water resources of the Delaware River Basin in several ways.

Pass-by Flows, the habitat of the Oquaga Creek and the need for an ecological flow regime are discussed in this Comment under the "On-site Findings" section of the draft docket (p. 21-22).

²² Delaware Riverkeeper Network Comment, DRBC Draft Natural Gas Development Regulations, April 15, 2011.

²³ D-2010-022-1, XTO Oquaga Creek SWWD, Draft, 4.28.2011, 10:00 AM, p. 12

²⁴ D-2010-022-1, XTO Oquaga Creek SWWD, Draft, 4.28.2011, 10:00 AM, p. 9

Wastewater and Unused Water

The draft docket requires under Condition r. “The docket holder shall not allow any unused water withdrawn from the withdrawal site, fresh or otherwise, to be discharged to waters of the DRB without the advance written approval of the DRBC and the appropriate state agency or outside the DRB without the written approval of the appropriate state agency. The docket holder shall convey all wastewater created as a result of natural gas development and extraction activities undertaken with water withdrawn from the withdrawal site to treatment and disposal facilities approved by the DRBC and by the appropriate state and or federal agency (if in the DRB and subject to Commission approval), or if outside the DRB, by the appropriate state and/or federal agency.”²⁵

The Application submitted includes a list of three facilities where the wastewater would be transported for disposal, all located outside of the Delaware River Basin (there are no in-basin facilities available at this time).²⁶ In addition to Attachment B, page 12 of XTO Energy’s application describes two of the facilities, PA Brine in Josephine, PA and PA Brine in Franklin, PA. It appears that both of these facilities are operating at full design capacity and load.²⁷ The Commission is required to address the impact of the use and disposal of the water withdrawn. Rules of Practice and Procedure Section 2.3.7(A). The Commission should be satisfied that the facilities listed can indeed accept and process the wastewater that will be generated by the gas wells the water withdrawal will fuel. Yet according to documentation submitted by XTO, it seems that these facilities are operating at capacity and there is no assurance that these loads will be accepted at these facilities. Further, there is no evidence in the file that the Commission performed any independent analysis of the treatment capabilities of the named facilities.

Further, Hart Resource Technologies is named as the third treatment facility in Attachment B. Hart Resource Technologies in Creekside PA is another older “brine” plant (operating since 1984) that has been “grandfathered” by PADEP to allow the facility to escape new effluent standards for Total Dissolved Solids, chlorides and sulfates. This is the reason it and the other PA Brine plants can still operate even though they only dilute the gas drilling wastewater and discharge it to already-overloaded waterways. Hart, according to its website, is the “management company for Pennsylvania Brine Treatment www.pabriner.com”.²⁸

The rivers that these facilities discharge to are grossly impacted by these high-TDS, contaminant laden waters. As exposed in a report by Dr. Conrad Volz of the University of Pittsburgh, the Josephine Facility is a point source of pollution that is resulting in significant adverse impacts to water resources.²⁹ This facility has recently been put on notice as the subject of a citizen’s Clean Water Act lawsuit. The Commission should evaluate the quality of

²⁵ D-2010-022-1, XTO Oquaga Creek SWWD, Draft, 4.28.2011, 10:00 AM, p. 11

²⁶ Application for Ground or Surface Water Withdrawal Project in the Delaware River Basin, XTO Energy, Indiana, PA, Scott Huntington, Regulatory Analyst, 5.7.2010, Attachment B

²⁷ PA Brine, Josephine PA: Design Capacity: 0.155 mgd, Current Operating Load: 0.155 mgd; PA Brine, Franklin, PA: Design Capacity: 0.205 mgd, Current Operating Load: 0.205 mgd as per Application for Ground or Surface Water Withdrawal Project in the Delaware River Basin, XTO Energy, Indiana, PA, Scott Huntington, Regulatory Analyst, 5.7.2010, p. 12

²⁸ <http://www.hartresourcetech.net/>

²⁹ Volz et.al., Executive Summary, “Containment Characterization of Effluent from PA Brine Treatment Inc., Josephine Facility Being Released into Blacklick Creek, Indiana County, PA: Implications for Disposal of Oil and Gas Flowback Fluids from Brine Treatment Plants”, March 25, 2011.

the treatment that would be provided for these wastewaters to assure that the water that is withdrawn and used for gas development from the Delaware River basin will not result in pollution when it is disposed. The Commission should require a no-discharge policy for wastewaters produced by gas drilling operations due to the highly toxic properties of the wastewater, which should not be discharged to waterways.³⁰ At the very least, for equity, the Commission should apply the same standards that it has proposed in its draft natural gas development regulations for wastewater facilities within the Delaware River Basin.

The draft docket under Condition x. states it encourages water conservation and includes “the reuse and recycling of flow-back waters for well stimulation activities to the greatest extent economically and technically feasible at natural gas well drilling sites.”³¹ Yet the Commission applies no water quality standards to the reuse of flowback waters, encouraging the injection of untreated polluted wastewater that would otherwise be required under the Clean Water Act to be removed to a permitted wastewater facility.

This Commission policy, enacted in this draft docket, will result in the storage, handling, and use of contaminant-laden waters at gas drilling sites with no water quality standards for treatment before these waters are reused. The lack of water quality standards that would apply to the quality of the reused water will not provide needed protection of groundwater, surface water and the environment.

The result will be an increase in the severity of a pollution event and will increase the toxicity levels of wastewater that must eventually be disposed of after being reused as much as is “technically feasible”. The reuse will “...generally increase the contaminant load of produced water in the subsequent well, both from additives and the other contaminants because there will be no dilution of the contaminants. If a leak occurs in the top few hundred feet in the well being fractured, the leak will contain very contaminated water under high pressure, and even a small leak can release large amounts of contaminants that can degrade useable domestic water,” according to Miller.³² The reuse of flowback waters adds to the risk of pollution of the water resources of the Basin and adds to the level of toxicity of the eventually disposed wastewater and solids that will have to be processed. Yet the Commission has no plans or policies for how this increased pollutant load will be managed and how degradation of water resources can be avoided under these heightened-hazard circumstances.

Use of Water Withdrawn for Natural Gas Well Development, including Hydraulic Fracturing

The Commission is required to address the impact of the use of water withdrawn on the water resources of the basin. Rules of Practice and Procedure Section 2.3.7(A). The Commission fails to address the impacts of the use of the water for well drilling and stimulation, including hydraulic fracturing. According to experts retained by DRN to review the Commission’s Draft Natural Gas Development Regulations, hydraulic fracturing exposes the water resources of the basin to pollution and degradation (reports provided as Attachment 1).³³ The Commission must analyze and address these adverse impacts. The failure of the Commission to address how the use of water in gas development will impact the basin’s water resources is a violation

³⁰ Glenn C. Miller, Ph. D., Comments to Delaware Riverkeeper Network on the Delaware River Basin Commission’s Draft Proposed Natural Gas Development Regulations, 2011, p.2-3.

³¹ D-2010-022-1, XTO Oquaga Creek SWWD, Draft, 4.28.2011, 10:00 AM, p. 12-13

³² Glenn C. Miller, Ph. D., Comments to Delaware Riverkeeper Network on the Delaware River Basin Commission’s Draft Proposed Natural Gas Development Regulations, 2011, p.3

³³ See Adams, Bishop, Demicco, Harvey, Miller, Parasiewicz, and Rubin, April 2011.

of the Commission's regulations and procedures. This analysis should be done as part of a cumulative impact analysis and comprehensive environmental review prior to the issuance of any permits for natural gas related activities, including the draft XTO docket.

Miscellaneous

Sections 2.1.4 and 2.5.2 of the W.C., as well as certain portions of the 1982 Good Faith Agreement require the Commission to require conservation efforts. The portions of the XTO Energy draft docket lack the level of detail to evaluate the nature and sufficiency of measures required of XTO Energy.

W.C. Sec. 2.150.1 requires sound practices of watershed management within the Basin. This requirement has not been strictly applied to the draft docket because of the lack of specificity and the large number of requirements that have been transformed into after-the-fact docket conditions.

W.C. Sec. 2.200 requires the Commission to maintain the quality of basin waters in a safe and satisfactory condition for wildlife, fish, and other aquatic life. This requirement has not been strictly applied to the draft docket because of the lack of specificity and the large number of requirements that have been transformed into after-the-fact docket conditions, especially as concerning water conservation, drought, and flow requirements and wastewater and reuse requirements.

Section by Section Comments

Proceedings

The draft docket states that the water withdrawal will be used to support XTO's natural gas exploration and production activities within the Delaware River Basin in Broome and Delaware Counties, in the State of New York. Upon information and belief, there are no applications for or permits issued to XTO Energy for natural gas drilling in the Delaware River Basin. Therefore, there is no justification of need for the water withdrawal and the application should be denied until justification can be substantiated.

Further, under On-Site Findings, Withdrawal Site and Operations, it is stated that "Unused surface water from any of the docket holder's Commission and state approved natural gas development and extraction site activities may be transported to and used at other Commission and state-approved natural gas development and extraction site activities controlled by the docket holder in the DRB, with the written approval of the Executive Director. Such transfers shall also be reported to the Commission."³⁴ This seems to contradict the restriction of the use of the withdrawal for locations within Broome and Delaware Counties and no information is provided in the application or docket about other gas drilling site locations outside of Broome and Delaware Counties. It opens up the question of where the water will actually be used. Can this water be taken to the Delaware River Basin in Pennsylvania? It also removes public participation in the decisionmaking process regarding where the water withdrawn will be used. These project uncertainties, missing information, and lack of transparency make the draft docket inadequate and out of compliance with the requirements of DRBC's regulations and procedures.

³⁴D-2010-022-1, XTO Oquaga Creek SWWD, Draft, 4.28.2011, 10:00 AM, p. 6

The draft docket states that notification was given to the Towns of Deposit and Sanford, Broome and Delaware Counties, New York. There is no proof of notification in the file or in XTO Energy's application.

A. DESCRIPTION

1. Purpose. Again, it is not clear that the withdrawn water will only be used in Delaware and Broome Counties, New York. As stated above, it seems that the water can be taken to other Counties and states such as Pennsylvania for gas drilling and fracturing. The "area served" is unclear and specific information is missing about where the water will be used.

2. Location. The draft docket states the withdrawal site is located on land owned by the Town of Sanford and mentions that an access agreement has been executed between the applicant and the Town of Sanford. There are two problems presented. First, it is unclear that all activities will take place on the parcel owned by the Town of Sanford because mapping provided in the application submitted by XTO Energy is not complete and does not identify exact parcels that will be used. Second, Attachment E, Access Agreement, seems to only address the road access, not the use of Town property. The amount listed for this access is \$1000, which seems unusually low, and it is not clear if this is a onetime payment or an annual payment. The resolution included in Attachment E is not signed or dated by the Town of Sanford so it is unclear if this Agreement was publicly executed or the subject of a public process locally. Therefore, it is unclear if all necessary agreements and land to be used are identified and secured by the applicant.

3. Area/Wells Served. The draft docket states "The surface water withdrawals from the withdrawal site shall only be used to support XTO's natural gas exploration and production activities within the drainage area of Special Protection Waters within the DRB in the Counties of Delaware and Broome, in the State of New York."³⁵ It also states "For the purpose of defining Area Served, the Application is also incorporated herein by reference consistent with conditions contained in the Decision section of this docket and without expanding the limitations or service area as set forth above."³⁶

Yet, as discussed above, it states later in the draft docket that "unused" water, with approval, can be used elsewhere in the Delaware River Basin at XTO sites. Discussed in this Comment later under Condition k., this issue is further confused. This lack of clarity is a basic problem that recurs as a theme in this application.

The Area Served is not properly identified since there are no well permits issued to XTO and no applications submitted. All wells that would use the water from this site must be mapped in order to identify the Area Served accurately. The Area/Wells Served section is supposed to be defined in a water withdrawal application in the drainage area of SPW. One of the reasons the Area Served is to be defined is because a Non-Point Source Pollution Control Plan (NPSPCP) is to be submitted for the project service area located within the drainage area of SPW (Water Code Article 3.10.3.A.2.e.1) and 2)). The draft docket only requires a NPSPCP for the area where the facilities for the water withdrawal project is to be constructed and that plan itself is missing from the application. But even if the NPSPCP for the withdrawal site were complete the Area Served is not defined and no NPSPCP in place for those areas, so the draft docket does not meet Commission requirements. Section 1) referenced above makes it clear that the

³⁵ D-2010-022-1, XTO Oquaga Creek SWWD, Draft, 4.28.2011, 10:00 AM, p, 2

³⁶ Ibid.

service area for a withdrawal is the area to be served by that withdrawal, not just the withdrawal site. Section 2) further reinforces this by requiring that when a project is expanded, the system can only serve an area regulated by a Non-Point Source Pollution Control Plan approved by the Commission. The Commission must require the applicant to prepare a NPSPCP for all well sites that will be served by the withdrawal. Further, the NPSPCP must be reviewed publicly now as part of the public review of the proposed Docket and not allowed to be submitted after the fact for approval by the Executive Director. The NPSPCP must be subject to public review, examination and comment in a public participation process that provides opportunity for public input into decisionmaking by the Commission.

4. Physical Features. The draft docket states that the docket holder says the water will mainly be used to stimulate horizontal and/or vertical natural gas wells by hydraulic fracturing. Yet on the application submitted by XTO, it is stated that the water will be used “100%” for “Other, Natural Gas Exploration”.³⁷ This discrepancy must be explained.

a. Surface Water Source Design Criteria. There are no construction plans or specifications in the application file or the docket. The lack of design criteria and details overwhelm the scant information provided about what “will” be designed. This section contains vague references to best management practices, no mention of best available technology, and there is no discussion of the specifics of the project at this site. The Executive Director should not be able to approve the core of this project without public participation. The construction plans and specifications must be subject to public review, examination and comment.

B. FINDINGS

Oquaga Creek is classified as “...C (T) waters-supporting trout...”.³⁸ The docket states, “NYSDEC applies special requirements to sustain waters that support these valuable and sensitive fisheries resources. Oquaga Creek is therefore a “protected stream” and is subject to the stream protection provisions of the NYSDEC Protection of Waters regulations.”³⁹

New York State Department of Environmental Conservation (NYSDEC) regulations recognize specific attributes and uses for the State’s waterways and apply classifications that require certain protections⁴⁰:

Chapter X Division of Water

Part 701: Classifications-Surface Waters and Groundwaters

(Statutory authority: Environmental Conservation Law, §§ 1-0101, 3-0301 [2][m], 15-0313, 17-0101, 17-0301, 17-0303, 17-0809)

§701.8 Class C fresh surface waters

The best usage of Class C waters is fishing. These waters shall be suitable for fish, shellfish, and wildlife propagation and survival. The water quality shall be suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes.

Certain discharge restrictions and other restrictions apply to the various classifications.

³⁷ Application for Ground or Surface Water Withdrawal Project in the Delaware River Basin, XTO Energy, Indiana, PA, Scott Huntington, Regulatory Analyst, 5.7.2010, Section C: Water Demands, p. 4

³⁸ D-2010-022-1, XTO Oquaga Creek SWWD, Draft, 4.28.2011, 10:00 AM, p. 3

³⁹ Ibid.

⁴⁰ <http://www.dec.ny.gov/regs/4592.html>

NYSDEC states:

§701.25 Trout waters (T or TS)

(a) The symbol (T), appearing in an entry in the "standards" column in the classification tables of Parts 800 through 941 of this Title, means that the classified waters in that specific Item are trout waters. Any water quality standard, guidance value, or thermal criterion that specifically refers to trout or trout waters applies.

(b) The symbol (TS), appearing in an entry in the "standards" column in the classification tables of Parts 800 through 941 of this Title, means that the classified waters in that specific Item are trout spawning waters. Any water quality standard, guidance value, or thermal criterion that specifically refers to trout, trout spawning, trout waters, or trout spawning waters applies.

While the Oquaga Creek is classified as (T) and not (TS), the Creek is a trout spawning stream for brook trout as well as brown trout. NYSDEC stocks brown trout in a portion of the Creek and it is therefore classified as Bs. Oquaga Creek is a very popular fishing location with guides that take people fishing there and in the downstream West Branch. There is public access provided to Oquaga Creek as discussed below.

Piotr Parasiewicz Report is provided as **Attachment 2** and its findings are incorporated fully herein.

As stated by Parasiewicz :

“Oquaga Creek represents one of the very productive brook and brown trout streams in the area, which is very important for watershed ecology and recreational fishing. It is one of the last larger tributaries of the West Branch with independent flows not affected by the Cannonsville Dam, which blocks the passage for upstream spawning grounds of trout. Therefore, Oquaga Creek offers important reproductive resources for these fish species in an almost 10 mile long section of the West Branch downstream of the reservoir.”⁴¹

NYSDEC verifies that native and stocked trout are present in the stream and provides maps showing public fishing rights exist at the withdrawal location as well as above and below the project site.⁴²

“Description of Fishery: Oquaga Creek is located in Broome County near the town of McClure. There are 4.2 miles of Public Fishing Rights (PFR’s) on Oquaga Creek and 0.04 miles on Fly Creek a tributary of Oquaga Creek. **Wild brown trout and brook trout are present in both streams**, brown trout being more common. Oquaga Creek is also stocked annually with around 3,400 one year-old brown trout (8-9”), and 370 two year-old brown trout (12-15”). Fly Creek is not stocked.”⁴³ (*emphasis added*)

NYSDEC’s Public Fishing Rights Map is provided as **Attachment 3**. NYSDEC’s trout stocking schedule is provided as **Attachment 4**. A news article in the Binghamton Fly Fishing Examiner discussing the stocking program for the Creek and the current fishing activity is provided as **Attachment 5**.

The news article states:⁴⁴

⁴¹ Review of Ecological Impacts of XTO Energy, Inc. , Draft Docket D-2010-022-1, Surface Water Withdrawal, Piotr Parasiewicz, PhD., Rushing Rivers Institute, 5.9.11, p. 1

⁴² NYSDEC, Oquaga Creek and Fly Creek Description and maps, 4 pages.

⁴³ http://www.dec.ny.gov/docs/fish_marine_pdf/r7oquaflypfr.pdf

⁴⁴ <http://www.examiner.com/fly-fishing-in-binghamton/april-trout-stocking-full-swing-ny-s-southern-tier-part-i>

“In fact, the stocking schedule is so heavy in April, that this topic will be covered in two parts. Besides the sheer numbers of brown and rainbow trout, April is also the time when the “two-year-olds”, trout ranging from 12” to 15”, will start calling Southern Tier waters home.

Continue reading on Examiner.com: [April trout stocking in full swing in NY's Southern Tier – Part I - Binghamton fly fishing | Examiner.com http://www.examiner.com/fly-fishing-in-binghamton/april-trout-stocking-full-swing-ny-s-southern-tier-part-i#ixzz1Ly6PhPXz](http://www.examiner.com/fly-fishing-in-binghamton/april-trout-stocking-full-swing-ny-s-southern-tier-part-i#ixzz1Ly6PhPXz)

- Oquaga Creek, Sanford - 410 Brown Trout 12 -15 inches
- Oquaga Creek, Sanford - 2700 Brown Trout 8 - 9 inches”

There is evidence that rainbow trout may also live and spawn in the Creek, according to local fishing reports. The (T) classification does include “wildlife propagation” as a use, which should include trout propagation. The Commission should require the applicant to research all surveys and other ecological and fish analyses that have been conducted on the Oquaga Creek by all agencies and non-governmental organizations that may have this information in order to document the full uses of the stream and the habitat conditions. Benthic analyses are also key to establishing habitat needs that could be impacted by the withdrawal. The Commission should also require an up to date survey of fish, aquatic life, flora and fauna of the Creek before allowing the project to move ahead. This survey, as discussed earlier in this Comment, should be done for a year prior to the withdrawal in order to establish current conditions and habitat in and associated with the Oquaga Creek.

The draft docket states that the water withdrawn is restricted to certain uses and locations (see this Comment above). While the Commission states the docket does not approve gas drilling and that the Commission is not approving gas wells while it is developing its natural gas rules, the Commission states that water withdrawals are being processed under the Commission’s existing water withdrawal regulations. It further states that the docket holder is “proceeding at its own risk” since the Commission and NYSDEC could make determinations that affect XTO’s plans for gas wells. The draft docket then addresses certain aspects of the project that are unique to natural gas development activities and includes some conditions in the draft docket relative to these aspects.

Some of these provisions in the draft docket have already been addressed in this Comment, such as the lack of critical parts of the application required by the Commission’s regulations that have been unaddressed or relegated to after-the-fact approval by the Executive Director or Commission. DRN cautions that the Commission should not approve this application because it is wholly deficient. In regard to consideration of this application under existing water withdrawal rules, there are several crucial differences addressed in the Commission’s Draft Natural Gas Development Regulations and in DRN’s Comment on the draft regulations.

Piotr Parasiewicz states:

“The Delaware River Basin Commission is currently developing Natural Gas Development Regulations. At this time, I strongly believe that such regulations should be set in place before the permit is issued, especially because of suggested improvements to the draft gas rules suggested in Delaware

Riverkeeper Network's Comment and in my report on the Draft Regulations: Piotr Parasiewicz, Ph.D., Ecological review of the DRBC Draft Natural Gas Development Regulations, 2011.⁴⁵

The Commission should not approve this water withdrawal while its Draft Natural Gas Development Regulations are under consideration. The Public Comment period closed on April 15 and the agency is in the process of reviewing the comments and preparing a response; the Commission will then decide how to proceed in regards to the proposed rulemaking.

Section 7.4 "Water Sources for Uses Related to Natural Gas Development" of the Draft Natural Gas Development Regulations, pertains to water withdrawals such as this XTO Energy application. Areas covered include: Types of Water Sources allowed to be used; the removal of customary review thresholds; special conditions regarding sources of water, such as importation and exportation of water and Approval by Rule and normal review processes; reporting and monitoring; invasive species control; pass-by flow requirements; nonpoint source pollution control plans; natural diversity inventory requirements; site plan and operation requirements; limits to approvals; floodplain requirements; drought emergency requirements; hydrogeologic reports; the use of flowback waters; and discharge of waste.

DRN submitted extensive comment on these aspects of the proposed rule. Tens of thousands of comments were submitted by the public regarding the draft rules. DRN suggested many changes to Section 7.4 of the draft gas rules to improve the water withdrawal regulations, as did several other commenters. The Commission has not responded to DRN or the public regarding these suggested improvements and final rulemaking has not occurred. Action by the Commission to approve the draft docket assumes that the existing rules are adequate to govern the withdrawal and that the draft rules may not be substantially different. While the draft docket states, as quoted above, that the applicant is "proceeding at its own risk", it does not expressly state that the water withdrawal conditions could change based on the Commission's natural gas regulations once they are adopted in final form. And while the Commission states in Condition hh. "The Executive Director may modify or suspend this approval or any condition thereof, or require mitigating measures pending additional review, if in the Executive Director's judgment such modification or suspension is required to protect the water resources of the Basin,"⁴⁶ there is no direct statement about the effect of the Commission's Natural Gas Development Regulations on the draft docket. Further, there is no specific statement about NYSDEC's water withdrawal regulatory regime, which itself may change due to proposed State legislation.

It is reasonable to consider that water withdrawal applications may be subject to changed regulation in the near future as a result of the Commission's Natural Gas Development Regulations and New York's current consideration of its rulemaking related to the Draft Supplemental Generic Environmental Impact Statement and proposed water withdrawal legislation. It is premature for the Commission to approve this water withdrawal under these uncertain and changing conditions. There is no compelling reason for the Commission to act at this time as there is no injury to any party if consideration of the draft docket is put off until after regulations are adopted that apply to this activity. Indeed, action by the Commission may very well foreclose the application of improved regulation of this activity. Based on the deficiency of the draft docket, approval as drafted would result in substantial damage to the

⁴⁵Review of Ecological Impacts of XTO Energy, Inc. , Draft Docket D-2010-022-1, Surface Water Withdrawal, Piotr Parasiewicz, Ph.D., Rushing Rivers Institute, 5.9.11, p. 2

⁴⁶ D-2010-022-1, XTO Oquaga Creek SWWD, Draft, 4.28.2011, 10:00 AM, p. 14

water resources of the Basin and locally to Oquaga Creek and the West Branch of the Delaware River. And yet the Commission is setting in stone a bad project that will likely be grandfathered if it is approved as proposed in the Draft docket.

Off-site Natural Gas Development and Extraction Activities.

The draft docket states, “Off-site Natural Gas Development and Extraction Activities. The recommendation to approve the water allocation under this docket is based on the docket holder’s projected water demand to support XTO’s natural gas development and extraction activities as described in Section A.3. Area/Wells Served in the Description section.”⁴⁷ In other words, the approval is recommended not based on what the Oquaga Creek requires for protection or the water resources of the Delaware River Basin require but on what the applicant wants and has stated is needed. There is no analysis that justifies this amount of water.

The “Area Served” must include all wells that would use this water for development; that information is missing from the application and the draft docket. A calculation must be done regarding the number of wells and the amount of water to be used in each well in order to justify the allocation of 0.25 mgd to XTO Energy. Other uses of this water will be disallowed once XTO Energy has this approval, granting XTO Energy the water, with conditions. But the water will no longer be available for uses such as water supply, agriculture, or for habitat and ecosystem uses or other public uses related to the Creek and downstream waterways. Without justification of need for the water, XTO Energy should not be allowed to control it and remove it from public and other private uses. The approval of a water withdrawal with no proven need is not in compliance with the Commission’s requirements.

Also, as discussed above in this Comment, the issue of where the water will ultimately be used is obfuscated by conflicting provisions in the draft docket.

Further, in this section it is implied that the project can be constructed as soon as certain conditions are met. Water cannot be withdrawn until approvals are received from the Commission and NYSDEC for gas drilling and development but it appears that the project can be constructed. This allows substantial investment by the docket holder in these water rights which could result in extenuating circumstances in the future should regulations and water needs change. There is no benefit to the public or the Commission to approve this draft docket considering that substantial investment by XTO Energy can now accrue; the approval is a slippery slope that works against public interest.

Off-site Non-Point Source Pollution Control Plans.

As stated above in this Comment, we do not agree that addressing the NPSPCPs for natural gas well development sites at a later date when those permits are considered meets the Commission’s requirements. The plans must be considered as part of the water withdrawal application.

Off-site Wastewater Generation and Disposal.

The draft docket requires that disposal of the wastewater within the Delaware River Basin will require Commission approvals. Wastewater that is not reused must be disposed of at facilities approved by the Commission (if within the DRB) and applicable state and federal laws. Reuse of the flowback is again “encouraged” by the Commission. As stated earlier in this Comment

⁴⁷ D-2010-022-1, XTO Oquaga Creek SWWD, Draft, 4.28.2011, 10:00 AM, p. 4

under “Wastewater and Unused Water”, DRN does not consider this to be adequate management of these wastewaters and opposes the reuse of flowback waters for drilling, stimulation and hydraulically fracturing.

DRN adds here that the stated intention of XTO Energy to “reuse/recycle 100% of the wastewater generated from any well stimulation process” is not reasonably believable. The Commission should require an analysis of the handling, storage, treatment and processing of fluids that XTO Energy proposes to use in order to capture and reuse the flowback waters. As DRN stated earlier in the Comment, because there are no standards or regulations governing the reuse of flowback waters there is no accountability for how these waters will be used. And claims of 100% recycling are accepted on their face without any independent verification or technical analysis illustrating the volumes, percentages, or quality of the flowback or the stimulation/hydraulic fracturing constituents. This lack of oversight and control violates the requirements of the Commission to prevent the degradation and pollution of the water resources of the Basin. Again, this information cannot be put off to a later approval of gas well sites by the Commission; the Commission requires an accounting and management plan for the wastewater that will be produced by the use of the water withdrawn, as per its Water Code. The statement “Specific conditions for wastewater disposal will be included in any docket that may be issued for natural gas well site development and extraction activities”⁴⁸ does not satisfy the Commission’s existing regulations.

On-site Findings

Special Protection Waters

See DRN Comments earlier, pages 1-3.

Withdrawal Site and Operations

In addition to DRN Comments made earlier under Description of the project, page 12, the location of the floodplain is not clear on the document provided. Figure 5 in the application appears to show the 100 year floodplain encroaching onto the project site, including the truck access area. The resolution of the flood map and the scale are so poor that it is unclear if the project is located within the regulated floodplain or the floodway. The Commission should require a higher resolution map and more accurate scale to answer this question. It is possible that the proposed project violates FEMA and DRBC flood regulations.

DRN does not support the construction of any portion of this project within the regulated floodplain and, as per our comments on the draft gas regulations, there should be a substantial setback and buffer of any structure from the floodplain and riparian area. See Delaware Riverkeeper Network Comment, DRBC Draft Natural Gas Development Regulations, April 15, 2011.

The Commission should require that the intake at the withdrawal site be approved by the applicable agencies prior to action by the Commission on the draft docket. NYSDEC, USACE, US Fish and Wildlife and nongovernmental organizations that have expertise in intake design should be consulted in the specifications and design of the intake structure so that adverse impacts on fish, fishlife, aquatic life, and wildlife are avoided. This should not be done after the approval of the docket. The advice of these agencies could change the project in unanticipated ways; the location, for instance, may need to be changed. Approval of the

⁴⁸ D-2010-022-1, XTO Oquaga Creek SWWD, Draft, 4.28.2011, 10:00 AM, p. 4

docket prior to the expert review of these agencies sets up a *fait accompli* in regard to certain critical aspects of the proposed project (such as location). Further, review as part of the draft docket process prior to action by the Commission provides the opportunity for public review and input.

The description in the draft docket of the truck hauling procedures is inadequate; see Delaware Riverkeeper Network Comment, DRBC Draft Natural Gas Development Regulations, April 15, 2011. Metering is required by a continuous recording device, which is necessary, an additional recordkeeping is required. But GPS tracking should also be required and is easily and inexpensively available today. This would provide more accountability and would manifest more fully the transport of the water.

As stated earlier in this Comment, the discussion of “unused water” is confusing and seems to allow, with approval, the removal of the water from the locations specified in Condition k. The Commission must clarify this. Again, DRN opposes the reuse of flowback water for gas well development, as stated in this Comment and in Delaware Riverkeeper Network Comment, DRBC Draft Natural Gas Development Regulations, April 15, 2011. DRN supports that flowback water is not used for other purposes, such as road spreading. The water cannot be discharged, according to the draft docket, “except in accordance with written approvals from the Commission and/or the appropriate state agency”. It is unclear what the limits and conditions of this use are if they are outside the discussion within this draft docket. This must be clarified.

As stated earlier in this Comment, there are public fishing rights that are mapped on Attachment 3 that may be blocked by the project, depending on the final plans and specifications and fencing that is discussed in this section of the draft docket. Public Fishing Rights cannot be interfered with by this private project. The Commission should clarify this issue to assure public rights are not being violated.

Pass-by Flow

The pass-by flow is not adequate to protect the stream and can be expected to cause direct harm to the habitats and water quality of the Oquaga Creek and West Branch of the Delaware River and to the Delaware River main stem. The effect of the withdrawal, set using the Q7-10, is that the stream’s flow will be “flattened” and the natural flow regime and seasonality will be disrupted. This will change the flow regime of the Oquaga Creek, adversely impacting instream habitat and the living resources—fish, fishlife, aquatic life, amphibians, wildlife—that rely on the stream’s natural variability and specific characteristics in order to live, reproduce and thrive. This violated the Commission’s requirements.

DRN opposes and objects to the use of a formula based on the Q7-10 to compute the pass-by flow in a stream where a water withdrawal project is proposed. The Draft Rules incorrectly rely on the Q7-10 as the planning mechanism for stream flow protection.

The nationally recognized Instream Flow Council explains that the Q7-10 is not an instream flow method; it is a flow statistic designed to be used to set the volume of water needed in a stream to meet point discharge water quality standards. It was never meant to be used as a method to set safe minimum stream levels, despite the fact that some States use it. The Instream Flow Council states “The hydrologic statistic has often been misused as a minimum

flow for keeping fish alive”.⁴⁹ They go on to point out “This method should only be used to determine wastewater discharge criteria...This method does not protect aquatic life (Camp Dresser and McKee 1986) and its use as a standard to do so is inappropriate...The 7Q10 should never be used to make instream flow prescriptions for riverine stewardship...the 7Q10 drought flow is inadequate to conserve aquatic life or ecological integrity.”⁵⁰ They further explain that “Fish communities can generally withstand near-drought conditions that occur infrequently and for short periods. However, setting such a flow as a long-term condition will not sustain them. The influence of flow on aquatic organisms includes more than just magnitude and frequency, duration and season are also important. Making such a low flow the norm is like recommending the sickest day of your life as a satisfactory level for future well-being. Use of the 7Q10 persists because it favors off-stream uses. However, it does so by sacrificing the fish and wildlife resources that belong to the public and over which government has a stewardship responsibility.”⁵¹

The aquatic life of the stream, fish, the ecological flow needs, water quality, and the stream’s hydrology need to be adequately protected in order to avoid degradation. An alternative method of setting a pass-by flow that takes these factors into account must be developed.

Piotr Parasiewicz reports:

“This permit is inconsistent with the DRBC policy to protect and maintain healthy aquatic populations, which is declared as the goal in the Water Resources Plan. Oquaga Creek represents one of the very productive brook and brown trout streams in the area, which is very important for watershed ecology and recreational fishing. It is one of the last larger tributaries of the West Branch with independent flows not affected by the Cannonsville Dam, which blocks the passage for upstream spawning grounds of trout. Therefore, Oquaga Creek offers important reproductive resources for these fish species in an almost 10 mile long section of the West Branch downstream of the reservoir. Being in close proximity to the dam, the water from Oquaga contributes to the reduction of flow impacts of the reservoir operation; any flow modification in the Oquaga Creek has the potential for creating damage not only to the creek, but also to the West Branch of the Delaware River.”⁵²

Parasiewicz continues:

“The proposed pass-by flow is not based on sound science and does not take into account seasonal needs of the flora and fauna. The proposed withdrawal represents more than 10% of the pass-by flow, while the cumulative effect of all current and future withdrawals is ignored. Since the creek hydrology is very flashy, the compliance will require continuous flow monitoring and is deemed to be technically very difficult and costly. Additionally, impacts from global climate change are not being considered. The pass-by flow must be set based on an ecological flow regime that protects habitat and water quality in Oquaga Creek and the downstream West Branch of the Delaware River.”⁵³

Therefore, the pass-by flow must be recalculated to protect the habitat and species that use the Creek based on an ecological flow regime. The proposed pass-by flow of 8 cfs does not

⁴⁹ Instream Flows for Riverine Resource Stewardship, Instream Flow Council, Cheyenne, Wyoming, 2004, page 178

⁵⁰ Ibid.

⁵¹ Instream Flows for Riverine Resource Stewardship, Instream Flow Council, Cheyenne, Wyoming, 2004, page 178-179

⁵² Review of Ecological Impacts of XTO Energy, Inc. , Draft Docket D-2010-022-1, Surface Water Withdrawal, Piotr Parasiewicz, PhD., Rushing Rivers Institute, 5.9.11, p. 2

⁵³ Review of Ecological Impacts of XTO Energy, Inc. , Draft Docket D-2010-022-1, Surface Water Withdrawal, Piotr Parasiewicz, PhD., Rushing Rivers Institute, 5.9.11, p. 2

provide required protection of the ecological resources of the Basin, as is required by the Commission. This is simply the flow requested by the applicant, XTO Energy, and accepted by the Commission with no apparent technical analysis of how the pass-by flow will affect the stream, stream life and related water resources. This does not comply with Commission requirements. These requirements are discussed at length in Delaware Riverkeeper Network Comment, DRBC Draft Natural Gas Development Regulations, April 15, 2011 and the attached expert reports, including the Parasiewicz report.

Peter Demicco Report is provided as **Attachment 6** and its findings are incorporated fully herein.

Peter Demicco, geologist, reports:

“The 8 cfs value as a pass by flow is not considered an appropriate value based on the overall stream gage data and the relatively arbitrary selection of 10 times the Q7-10. Our Figure 1 presents the daily flow from the gage at Deposit for the period of record. The flow of 8 cfs occurs less than 14 percent of the time at the Deposit Gage. This flow occurs during the dry season and is commonly referred to as base flow. Upstream of the withdrawal, there will be no effect. Downstream, however, some additional discharge from the aquifer will have to occur to make up the loss of stream flow from the withdrawal. This additional base flow will be contributed by groundwater that provides base flow at and downstream of the withdrawal site. The impacts on aquifers that supply drinking water downstream of the site need to be evaluated by the Commission before approval is granted. The proposed withdrawal presents the potential for loss of groundwater reserves that will discharge into the Oquaga Creek to maintain base flow discharge lost to the proposed withdrawal.”⁵⁴

Operations Plan

DRN does not agree that the project is designed to conform to the requirements of the *Water Code* and *WQR* of the DRBC, as discussed in this Comment. In addition, the Operations Plan is missing from the application and draft docket and must be provided to assure compliance.

As discussed earlier in this Comment, the water withdrawal is 100% consumptive but it is also an Out of Basin Transfer and, as such, does not meet the requirements of the Commission’s regulations.

See Delaware Riverkeeper Network Comment, DRBC Draft Natural Gas Development Regulations, April 15, 2011 for further comments on consumptive use, and water supply charges. For reasons discussed earlier in this Comment, DRN does not agree with the statement in the draft docket: “The project does not conflict with the Comprehensive Plan and is designed to prevent substantial adverse impact on the water resources related environment, while sustaining the current and future water uses and development of the water resources of the Basin.”⁵⁵

C. Decision

DRN already addressed in this Comment the Conditions in the draft docket but additional comments are added here.

⁵⁴ “Review of XTO Energy Oquaga Creek Withdrawal, DRBC Docket D-2010-022-1”, Peter Demicco, Demicco and Associates, 5.9.11

⁵⁵ D-2010-022-1, XTO Oquaga Creek SWWD, Draft, 4.28.2011, 10:00 AM, p. 9

Condition d. In addition to the lack of readable scale and resolution of the map provided, the flood plan should be completed prior to consideration of the draft docket by the Commission; there was no such plan submitted to the Commission. Flood emergency plans also should be completed as part of the application, not as an after-the-fact approval. It is unclear if the Commission will need to vote on the approval of these plans since it is not expressly stated if the Executive Director will be reviewing and approving. This must be clarified; DRN advocates that these plans be approved by public vote as part of a public input process.

Condition h. State and local erosion and sediment control and nonpoint source pollution controls are not adequate as discussed at length in Delaware Riverkeeper Network Comment, DRBC Draft Natural Gas Development Regulations, April 15, 2011, including the Michele Adams Report. NPSPCPs must be completed for the site and all related gas well activities in order to meet Commission Water Code requirements under the Special Protection Waters program. State stream bank disturbance permits should be granted before the Commission considers the draft docket to assure that the standards applied meet the goals and requirements of the Commission to maintain existing water quality and achieve “no measurable change” to the exceptional water quality of the Upper Delaware River. Local floodplain requirements, similarly, must be applied and evaluated to assure that the standards of the Commission’s floodplain regulation program are achieved. As discussed at length in Delaware Riverkeeper Network Comment, DRBC Draft Natural Gas Development Regulations, April 15, 2011, floodplain disturbance must be avoided and buffers to riparian areas established to protect water quality and stream integrity and the water resources of the Basin.

Condition s. It is unclear how it will be decided if an invasive species control plan (ISCP) will be required. The ISCP is included in the Commission’s draft gas rules and DRN commented on that aspect of the proposed regulations, as did many other commenters. The Commission’s adopted regulations could differ from the short description of the ISCP in the draft docket. The Commission should adopt Natural Gas Development Regulations before considering this application.

Conditions t, u, and v. The Executive Director should not review and approve conditions of this docket, as stated earlier in this Comment. All aspects of this project should be subject to public review and the public should be able to participate in the decisions made.

Condition w. of the draft docket requires “In accordance with DRBC Resolution No. 87-6 (revised), the docket holder shall continue to implement to the satisfaction of the Executive Director, the systematic program to monitor and control leakage within the water supply system”.⁵⁶ There is no plan or specification for a leak detection system that meets these requirements in the application submitted by the applicant. According to the draft docket, the docket holder must satisfy the Executive Director with the leakage control and monitoring program.⁵⁷ This removes this aspect of the docket from the public input process.

Condition x. of the draft docket requires “The docket holder shall implement to the satisfaction of the Executive Director, the continuous program to encourage water conservation in all types of use within facilities served by this docket approval”.⁵⁸ There is no water conservation program submitted by the applicant. The only reference to water saving is the reuse of flowback waters, which is discussed not as a conservation measure but as a wastewater

⁵⁶ D-2010-022-1, XTO Oquaga Creek SWWD, Draft, 4.28.2011, 10:00 AM, p. 12

⁵⁷ Ibid.

⁵⁸ Ibid.

disposal issue.⁵⁹ Water Conservation Plan is listed as N/A on the Checklist for the Application,⁶⁰ despite its inclusion in Condition x.

Conditions aa and bb. Drought emergencies and plans should be based on definitions of nonessential uses that are protective of water resources above all other uses.

Condition ee. The Commission needs to modernize Section 14.178 of the Compact to reflect reasonable penalties that will deter violations and correct harms.

Conditions ff and gg. See Delaware Riverkeeper Network Comment, DRBC Draft Natural Gas Development Regulations, April 15, 2011 for extensive comment on violations, harms to domestic or other existing wells, monitoring for problems, response to reported pollution events and water quality and environmental problems, etc. There needs to be a robust response capability by the Commission; staff must be provided to enforce and regularly inspect and investigate all Commission approved projects. There are no plans for an oversight and enforcement program that have been publicly discussed by the Commission. This needs to be done prior to approval of gas related projects.

The docket will be in force until 2016, five years. This is far too long for any water withdrawal project for natural gas development since it is unknown when and how this industrial activity will commence and how it will impact the water resources of the Delaware River Watershed.

Thank you for the opportunity to comment.

Sincerely,

Maya K. van Rossum
The Delaware Riverkeeper

Tracy Carluccio
Deputy Director

Attachments:

Attachment 1 Delaware Riverkeeper Network Comment, DRBC Draft Natural Gas Development Regulations, April 15, 2011

Attachment 2 "Review of Ecological Impacts of XTO Energy, Inc. , Draft Docket D-2010-022-1, Surface Water Withdrawal", Piotr Parasiewicz, PhD., Rushing Rivers Institute, 5.9.11

Attachment 3 NYSDEC, Oquaga Creek and Fly Creek Description and maps

Attachment 4 NYSDEC Spring 2011 Trout Stocking for Broome County

Attachment 5 "April trout stocking in full swing in NY's Southern Tier Part 1", www.examiner.com

Attachment 6 "Review of XTO Energy Oquaga Creek Withdrawal, DRBC Docket D-2010-022-1", Peter Demicco, Demicco and Associates, 5.9.11

⁵⁹ Application for Ground or Surface Water Withdrawal Project in the Delaware River Basin, XTO Energy, Indiana, PA, Scott Huntington, Regulatory Analyst, 5.7.2010, p. 12

⁶⁰ Application for Ground or Surface Water Withdrawal Project in the Delaware River Basin, XTO Energy, Indiana, PA, Scott Huntington, Regulatory Analyst, 5.7.2010, p. 1