

DOCKET NO. D-2010-022-1

DELAWARE RIVER BASIN COMMISSION

Special Protection Waters

XTO Energy

Surface Water Withdrawal for Natural Gas Exploration and Development Projects

Oquaga Creek Withdrawal Site

Town of Sanford, Broome County, New York

PROCEEDINGS

This docket is issued in response to an Application submitted to the Delaware River Basin Commission (DRBC or Commission) by XTO Energy (XTO) on May 12, 2010 for review of a surface water withdrawal from Oquaga Creek. The withdrawal will be used to support XTO's natural gas exploration and production activities within the Delaware River Basin (DRB) in Broome and Delaware Counties, in the State of New York.

The Application was reviewed for approval under Section 3.8 of the *Delaware River Basin Compact*. The Broome County Department of Planning and Economic Development, the Delaware County Planning Department and the Towns of Deposit and Sanford, Broome and Delaware Counties, New York have been notified of pending action on this docket. A public hearing on this project was held by the DRBC on May 11, 2011.

A. DESCRIPTION

1. Purpose. The purpose of this project is to withdraw up to 0.25 million gallons per day (mgd) of surface water from Oquaga Creek to support XTO's natural gas exploration and production activities within the DRB in Delaware and Broome Counties, in the State of New York.

2. Location. The XTO Oquaga Creek surface water withdrawal site (withdrawal site) is located on property owned by the Town of Sanford, Broome County, New York. XTO has an access agreement with the Town of Sanford under which it will conduct its water withdrawal

operations. The withdrawal site is located in the Oquaga Creek Watershed along Route 41, near the intersection with Farnham Road on the former location of a bridge across Oquaga Creek. The Oquaga Creek Watershed drains to the West Branch Delaware River. Specific latitude and longitude location information of the withdrawal point has been withheld for security reasons.

3. Area/Wells Served. 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. For the purpose of this docket, natural gas exploration and production activities include or are associated with: mud rotary/air rotary natural gas well drilling, hydraulic fracturing well stimulation, mixing cement for well construction, mixing drilling mud/fluid, support vehicle tire cleaning, pipeline hydrostatic testing, dust control and site construction and reclamation on associated well pad sites and access roads within XTO's lease holdings in the New York portion of the DRB as described above. Subject to the limitations in this docket, the surface water withdrawals under this docket shall only to be used to support XTO's natural gas exploration and production activities at sites that have the applicable approvals by the DRBC and the NYSDEC (See discussion in Findings section and Conditions in the Decision section of the docket). 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.

4. Physical Features. The docket holder estimates that the majority of the withdrawn surface water will be used to stimulate horizontal and/or vertical natural gas wells by hydraulic fracturing. The remaining withdrawn water will be used for mixing cement for well construction, mixing drilling mud/fluid, support vehicle tire cleaning, dust control, pipeline hydrostatic testing, and site construction and reclamation on associated well pad sites and access roads within XTO's lease holdings described in Section A.3. Area/Wells Served.

a. Surface Water Source Design Criteria. Water will be pumped from the creek via a semi-permanent pipe fitted with floating intake screens (e.g., Megator Dolphin floating Suction Strainers) to prevent the uptake of stones. The screen(s) will be designed in such a way as to minimize impacts on aquatic organisms. The pipe will be secured to the ground to prevent theft and the land-side terminus will be capped and locked when not in use. A valve will be fitted to the pipe and set to limit the instantaneous flow to 500 gallons per minute (gpm) and to restrict the total daily surface water withdrawal to 0.25 million gallons. The pipe will be connected to a truck fitted with a pump to remove water from the creek. The flow will be gauged with a meter as it is pumped into the truck. In addition, the pipe will be fitted with a check valve to prevent backflow and installed in a manner to minimize interference with other uses of the creek (e.g., boating, fishing), the land (e.g., farming) or traffic. Operations within the withdrawal area will use appropriate best management practices for erosion and sedimentation controls. Water will be transported to the project areas by truck.

The withdrawal site will be restricted to the operations associated with the function of water withdrawal. Prior to any construction at the withdrawal site, the docket holder will submit final plans and specifications for the withdrawal site to the Commission. No construction shall commence at the withdrawal site until the final plans and specifications have been submitted to

the Commission and approved by the Executive Director in accordance with Condition e. in the Decision section.

The water withdrawal system on this site will not be interconnected with any public or private water supply system and withdrawn water will only be used for the purposes defined in Section A.3 Area/Wells Served.

b. Cost. The overall cost of this project is estimated to be \$17,700. This cost includes planning design, and construction of the surface water withdrawal intake, staging area, and associated appurtenances.

B. FINDINGS

The Commission issued a Notice of Application Received for this project to all interested parties on August 23, 2010.

On May 5, 2010, the Commissioners directed Commission staff to draft regulations for natural gas well pad projects in shale formations in the DRB. The Commissioner's indicated that they will not consider specific natural gas well pad applications until after the regulations are approved by the Commission. The Commissioners also indicated that applications for water withdrawals associated with natural gas well pad activities within the DRB should continue to be processed since such applications are similar to water withdrawal applications for other uses in the DRB.

Oquaga Creek is classified by New York State Department of Environmental Conservation (NYSDEC) as C(T) waters-supporting trout, and suitable for non-contact activities. 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.

This docket restricts the sites to which the water withdrawn from the withdrawal site may be transported to and used (the receiving sites), but does not address the limitations needed to conform activities at these receiving sites to the Commission's Comprehensive Plan. This docket does not approve nor should it imply the Commission or any NYSDEC determinations of the natural gas development and extraction receiving sites or the activities conducted at those sites. The Delaware River Basin Commission (DRBC) at its May 5, 2010 public business meeting directed commission staff to draft regulations for natural gas well pad projects in shale formations in the Delaware River Basin. The Commissioners will consider specific natural gas well pad applications after the regulations are approved. The Commissioners also indicated that the review of pending or future proposed water withdrawals to be used to supply water to natural gas extraction projects, will proceed in accordance with existing DRBC regulations. In proceeding with the project under this docket, the docket holder is proceeding at its own risk relative to the Commission and any NYSDEC determinations yet to be made at such receiving sites.

In the review of this Application, Commission staff has also considered the following on-

and off-site natural gas development and extraction site activities:

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. Condition k. in the Decision section of this docket requires that surface water withdrawals from the withdrawal site shall only be used to support XTO's natural gas development and extraction activities described in Section A.3. The condition also requires that such sites must be approved by the Commission and NYSDEC prior to the withdrawal of water under this docket. Condition m. in the Decision section provides that no water withdrawal from the withdrawal site shall commence until the docket holder has received approvals by the Commission and NYSDEC for natural gas development and extraction activities to receive water as described in Section A.3.

Off-site Non-Point Source Pollution Control Plans. Off-site natural gas well development and extraction activities as described in Section A.3. require a separate NPSPCP which will be addressed within the Commission approval for those sites

Off-site Wastewater Generation and Disposal. The Commission's review of all water withdrawal requests includes an evaluation of the wastewaters generated from the approved withdrawals to ensure that the wastewater will be adequately treated and disposed. No water that is withdrawn from the withdrawal site (see Condition q. in the Decision section of this docket) may be discharged within the DRB, except as provided for in this docket or in accordance with future Commission issued natural gas development and extraction site approvals. XTO must demonstrate that all water withdrawn from the withdrawal site that becomes wastewater as a result of natural gas development and extraction site activities (e.g. flowback and production water that cannot be reused in the well stimulation process, etc.) shall be conveyed to treatment and disposal facilities approved by the DRBC (if in the DRB and subject to Commission approval) as well as by the applicable state/Federal agency (if inside or outside of the DRB). The docket holder is encouraged to use flowback from previous well stimulations for future well stimulations on other wells in accordance with Condition v. in the Decision section.

To date, the Commission has not approved any in-basin disposal facilities to accept non-domestic wastewater from natural gas development and extraction activities. In support of its application, the docket holder indicates that it currently intends to reuse/recycle 100% of the wastewater generated from any well stimulation process. Any wastewater that cannot be reused/recycled will be transported to approved treatment facilities outside the DRB. The docket holder has provided the Commission with the names and addresses of these facilities. Commission staff is satisfied that plans exist for treatment of wastewaters generated as a result of this withdrawal approval. The determination that any of these facilities or alternative facilities can accept the volume and quality of the wastewaters from natural gas development and extraction site activities will also be reviewed when natural gas well site specific applications are submitted to the Commission. Specific conditions for wastewater disposal will be included in any docket that may be issued for natural gas well site development and extraction activities.

On-site Findings

Special Protection Waters

The project is located in the area of the Delaware River Basin that is designated by the Commission as Special Protection Waters as set forth in the DRBC *Water Quality Regulations* (WQR). 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. Article 3.10.3A.2.e.1). and 2). of the *WQR, Administrative Manual - Part III*, requires that projects subject to review under Section 3.8 of the Compact that are located in the drainage area of Special Protection Waters must submit for approval a Non-Point Source Pollution Control Plan (NPSPCP) that controls the 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. One exception to the NPSPCP requirement is for projects that are located above major surface water impoundments listed in Section 10.3.A.2.g.5) where time of travel and relevant hydraulic and limnological factors preclude a direct impact on Special Protection Waters (Section 10.3.A.2.e.1. c).

The docket holder's surface water withdrawal point is located within the drainage area to Special Protection Waters. The NPSPCP plan requirement is applicable to this project. This project includes the construction of a surface water intake, staging area, and associated appurtenances. No site construction activities or water withdrawals approved by this docket shall take place at the withdrawal site until a site specific NPSPCP including measures to control stormwater both during and post construction on the site has been submitted to the Commission and approved by the Executive Director (Condition i.) and any other necessary federal, state, and local authorizations have been issued.

Withdrawal Site and Operations

Portions of the project site are located in the 100 year flood plain as delineated on the Federal Emergency Management Agency maps. Facilities at the withdrawal site shall be designed and constructed in accordance with Commission Flood Plan Regulations (FPR) (e.g. lowest operating floor of such facility is above the Flood Protection Elevation (as defined in the FPR), or the facility is flood proofed according to plans approved by the Commission nor unless emergency plans and procedures for action to be taken in the event of flooding are prepared). (See Condition d. in the Decision section.)

The intake proposed at the withdrawal site shall be constructed in accordance with a design approved by NYSDEC, USACE and U.S. Fish & Wildlife Service that in the agencies' view minimizes to the greatest extent possible, impingement and entrainment impacts in the vicinity of the withdrawal site (Condition p. in the Decision section of the docket).

Surface water withdrawal is restricted to the intake structure to be located in Oquaga Creek as provided for in this docket and as described in the Application and supporting materials. All surface water shall be conveyed directly to the hauling vehicles. The proposed

surface water withdrawal apparatus shall include controls that restrict the surface water withdrawal rate to an instantaneous flow not to exceed 500 gpm and 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 the following day. At any time during the day, when the total volume withdrawn from Oquaga Creek reaches 0.25 million gallons, the apparatus shall automatically prohibit flow, not permitting any additional withdrawals from the source to continue until the start of the following day.

Surface water withdrawals from the withdrawal site shall be metered through a metering plan designed to meet the DRBC metering, recording and reporting requirements of the Commission’s Water Code, this docket, and the docket holder’s approved Operations Plan described below. The volume of water withdrawn from the withdrawal site shall be metered and recorded by means of an automatic continuous recording device, or flow meter, and shall be measured to within 5% of actual flow (Condition u. in the Decision section of the docket). The amount of water withdrawn from the withdrawal site shall be automatically metered and recorded daily and shall be available for inspection. The docket holder shall report average daily withdrawal rate and daily and monthly totals of the withdrawal to the Commission on a monthly basis beginning with the 5th calendar day of the month following the month in which the water withdrawals commence in accordance with Condition u. in the Decision section of the docket. Any withdrawals that exceed the allocation provided for in Condition n. of the Decision section of the docket will be reported to the Commission within 48 hours of the exceedance in accordance with Condition ff. of the Decision section of the docket.

In addition to the metering and recording above, the docket holder shall maintain water transportation records for all water transferred from the withdrawal site. There shall be no direct transfer of water from the withdrawal site to a water hauling vehicle without metering and recording. Records maintained by the docket holder and kept at the withdrawal site (or at an alternative site approved in writing by the Executive Director) will include the trucking company name, license plate, name of the driver, amount of water transferred, date and time of transfer and destination of the transported water. Surface water withdrawals from the withdrawal site shall only be used to support XTO’s projects as described in Section A.3. (Condition k. in the Decision section of this docket).

All water withdrawn from the withdrawal site will be treated as necessary to prevent the spread of potentially invasive, harmful, or nuisance species from entering other watersheds in the DRB as required in the approved Invasive Species Control Plan (ISCP) described in Condition r. in the Decision section of this docket.

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. The Commission encourages the reuse of flow back and production water; however, reuse must be in accordance with the terms and conditions contained in natural gas well pad dockets that may be issued within the DRB. Any reuse shall also be reported to the Commission in accordance with docket conditions for such

sites. No flowback or production water shall be used for any purpose other than hydraulic fracturing at natural gas wells.

No water, fresh or otherwise (e.g. cement mixer wash-out, truck wash water, etc) shall be discharged to waters of the DRB except in accordance with written approvals from the Commission and/or the appropriate state agency (Condition q. in the Decision section of this docket).

The withdrawal location will have restricted access, through use of fencing and signage or other similar means. The withdrawal site location will be restricted to operations associated with the function of water withdrawal. These areas will not be used as staging areas for chemical additives, except as necessary as part of the ISCP, or fuels above what is likely needed to run an emergency generator if one is used.

Pass-by Flow

The withdrawal shall allow at all times of the year, a minimum flow of water in Oquaga Creek to pass-by as measured below the intake at the withdrawal site. The withdrawal site shall be fitted by the docket holder with a gage (the XTO Oquaga Creek gage) or another gage or other instrumentation approved by the Executive Director and calibrated to the downstream Deposit gage station (USGS Gage No. 01426000) flow data. The installed gage shall be a real-time monitoring and recording gage.

Low flow and average daily flow (ADF) was established from available data from the Deposit gage station operated by the United States Geologic Survey (USGS). The gage is located approximately 4.7-miles downstream of the proposed withdrawal site. As of March 31, 2009, data collection at this stream gage has been discontinued due to funding reductions from partner agencies. For the period of record from 1941 to 1971, the lowest average, consecutive 7-day flow that would occur with a frequency or recurrence interval of one in ten years (7Q10) for the 67.5 square mile drainage area at the Deposit gage is 1.7 cubic feet per second (cfs). The proportional 7Q10 statistic for the 34.8 square mile drainage area at the withdrawal site is 0.9 cfs. The average daily flow (ADF) over the period of record from 1941 to 2008 is approximately 118.6 cfs at the Deposit gage and 61.1 cfs at the withdrawal site. The docket holder requested a minimum pass-by flow of 8 cfs or approximately nine times the calculated 7Q10 flow at the withdrawal site.

The pass-by flow at the withdrawal site shall be a minimum of 8 cfs as measured at the XTO Oquaga Creek gage. Daily withdrawal rates shall be reduced as appropriate to ensure that a minimum of 8 cfs passes by the XTO Oquaga Creek gage (Condition o). Withdrawals shall cease entirely if the 24-hour average flow at the XTO Oquaga Creek gage, less the withdrawal, is 8 cfs or less. The pumps shall be shut off, not permitting any additional withdrawals from Oquaga Creek until the flow as measured at the XTO Oquaga Creek gage is at least 8.4 cfs for a 24 hour period. The monitoring and metering of the withdrawal activities at the Oquaga Creek withdrawal site shall be described in the Operations Plan. Pass-by flows for the Oquaga Creek withdrawal site are summarized in the table below:

STREAM WITHDRAWAL IDENTITY	NEAREST USGS STREAM GAGE	7Q10 AT DEPOSIT GAGE (DATA YEARS 1941-1971)	INTAKE PUMP CAPACITY	MINIMUM PASS-BY FLOW REQUIRED AT WITHDRAWAL SITE
XTO Oquaga Creek Intake	Deposit, NY Gage #01426000	1.7 cfs	500 gpm	8 cfs

The XTO Oquaga Creek gage shall be periodically calibrated by the docket holder. The calibration schedule will be based on the same frequency used by the USGS to re-calibrate its stream gaging stations. The Operations Plan shall establish the calibration schedule. The data from the XTO Oquaga Creek gage will be converted to daily average flow data for reporting and pass-by flow compliance monitoring. The XTO Oquaga Creek gage must be checked daily on days when water is withdrawn and also a minimum of 24 hours prior to the initiation of withdrawal to establish that the pass-by flow meets the minimum requirement. No water withdrawal may be initiated at the withdrawal site until an operating gage is established and a monitoring and reporting program is in effect in accordance with the requirements of the Operations Plan and conditions of this docket.

Operations Plan

In accordance with Condition t. of the Decision section of the docket, at least 90 days prior to the scheduled initiation of any site clearing or construction at the withdrawal site, the docket holder shall submit an Operations Plan (OP) for the withdrawal site to the Executive Director. The OP shall include the specifics of the site operations, which shall include, at a minimum, the procedures necessary to comply with the conditions in the Decision section of this docket. In accordance with Condition s. in the Decision section of the docket, no withdrawal of surface water from the withdrawal site is permitted until the OP is approved by the Executive Director in writing and all systems and equipment required to comply with this docket are operational.

The project is designed to conform to the requirements of the *Water Code* and *WQR* of the DRBC. Commission staff has imposed requirements and limitations to protect the water resources of the basin. For on-site water withdrawal actions and activities related to the water withdrawal actions, Commission staff has included conditions in the Decision section of this docket.

The DRBC considers all water withdrawn from Oquaga Creek under this docket as 100 percent consumptive use. The DRBC definition of consumptive use is defined in Article 5.5.1.D of the *Administrative Manual – Part III – Basin Regulations – Water Supply Charges*. This withdrawal is not at present subject to water supply charges as the point of withdrawal is located above the USGS stream gaging station at Montague, NJ. The docket holder will be subject to any future water supply charges applicable to water withdrawals resulting from promulgation of

Natural Gas Development Regulations by the Commission.

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.

C. DECISION

Effective on the approval date for Docket No. D-2010-022-1 below the project and appurtenant facilities as described in Section A “Description” are approved pursuant to Section 3.8 of the *Compact*, subject to the following conditions:

a. The project and the appurtenant facilities described in Section A “Description” shall be added to the Natural Gas Well & Withdrawal Database maintained by the DRBC.

b. Docket approval is subject to all conditions, requirements, and limitations imposed by the NYSDEC, and such conditions, requirements, and limitations are incorporated herein, unless they are less stringent than the Commission’s.

c. Nothing herein shall be construed to exempt the docket holder from obtaining all necessary permits and/or approvals from other State, Federal or local government agencies having jurisdiction over this project or activities associated with this project.

d. No new construction, addition or modification shall be permitted unless the lowest operating floor of such facility is above the Flood Protection Elevation, or the facility is flood proofed according to plans approved by the Commission, nor unless emergency plans and procedures for action to be taken in the event of flooding are prepared. Plans shall be filed with the Delaware River Basin Commission and the concerned state or states. The emergency plans and procedures shall provide for measures to prevent introduction of any pollutant or toxic material into the flood water or the introduction of flood waters into potable supplies.

e. Final construction plans and specifications must be submitted by the docket holder and be approved by the Executive Director of the DRBC before any water withdrawal, site clearing, site preparation, or construction commences at the withdrawal site.

f. Upon completion of construction of the approved project, the docket holder shall submit a statement to the DRBC, signed by the docket holder’s engineer or other responsible agent, advising the Commission that the construction has been completed in compliance with the approved plans, and stating the final construction cost of the approved project and the date the project is placed in operation.

g. This docket approval shall expire three years from Approval Date set fourth below unless prior thereto the docket holder has commenced operation of the subject project or has expended substantial funds (in relation to the cost of the project) in reliance upon this docket approval.

h. The docket holder shall follow sound practices of excavation, backfill and reseeded at the withdrawal site to minimize erosion and prevent non-point source pollutants from leaving the site. The docket holder shall abide by all state and local erosion and sediment control, state stream bank disturbance permits, local floodplain development requirements and post-construction storm water management control requirements.

i. 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.

j. Nothing herein shall be construed to grant the docket holder Commission approval or permission to commence any natural gas well development and extraction activities in the Delaware River Basin including, but not limited to; preparing any natural gas well sites, drilling any natural gas well, stimulating any natural gas well, or storing, transporting, or disposing of any natural gas well hydraulic fracturing fluid, flowback, or production water.

k. This surface water withdrawal shall only be used in support of the docket holder's natural gas development and extraction activities described in Section A.3. Area/Wells Served in the Description section of this docket for which both the Commission and the NYSDEC have issued approvals. The docket holder must obtain the Commission modification of this docket before using any water withdrawn from the withdrawal site beyond the locations and/or outside of the scope of activities described in Section A.3. Area/Wells Served.

l. The docket holder shall make the surface water withdrawal location, associated natural gas well pad sites, associated natural gas wells, and operational records associated with any water withdrawal at the withdrawal site (or at an alternative site approved in writing by the Executive Director) available at all times for inspection by the DRBC and NYSDEC as appropriate.

m. No water withdrawal from Oquaga Creek shall commence until the docket holder has received approval of the Commission and the NYSDEC for those projects to receive water as described in Section A.3. Area/Wells Served in the Description section of this docket

n. Total surface water withdrawals from the withdrawal site shall not exceed 0.25 mgd. The instantaneous rate of withdrawal from the withdrawal site shall not exceed 500 gpm. Withdrawals are subject to the limitations in Condition o. below. A "day" is defined as the 24-hour period between 12:00 AM and 12:00 AM the following day.

o. The project withdrawal must not cause the stream flow in Oquaga Creek to be less than 8 cfs at the point of taking at the XTO Oquaga Creek gage. The withdrawal site shall be fitted by the docket holder with a gage (the XTO Oquaga Creek gage) or another gage or other instrumentation approved by the Executive Director and calibrated to the downstream Deposit gage station flow data. The installed gage shall be a real-time monitoring and recording gage. Daily withdrawal rates shall be reduced as appropriate to ensure that the project withdrawal does not cause the stream flow in Oquaga Creek to be less than 8 cfs as measured at the XTO Oquaga Creek gage. Whenever the 24-hour average stream flow at the XTO Oquaga Creek gage, less the XTO Oquaga Creek water withdrawal, is less than or equal to this amount, no withdrawal shall be made and the entire stream flow must be allowed to pass. Withdrawals from the withdrawal site shall not resume until the flow as measured at the XTO Oquaga Creek gage is at least 8.4 cfs for a 24 hour period. The docket holder is required to check the XTO Oquaga Creek flow gage daily on days when water is withdrawn and a minimum of 24 hours prior to the withdrawal to establish that the pass-by flow meets the minimum requirements.

p. Before commencing construction on the surface water withdrawal intake at the withdrawal site, the docket holder shall first obtain the approval of the intake design from the Executive Director, NYSDEC, the USACE and U.S. Fish & Wildlife Service. The intake shall be designed to minimize to the greatest extent possible, impingement and entrainment impacts in the vicinity of the withdrawal site. The docket holder shall provide the Commission with a copy of the intake design, and shall provide the Commission with copies of all correspondence between the docket holder and the other government agencies reviewing the intake design at the time the correspondence is sent or received.

q. Water withdrawn from the withdrawal site shall only be transported in water hauling tanks that are free of contaminants (except for the chemicals added as part of the Invasive Species Control Plan (ISCP)). Prior to the transfer of any water to a water hauling vehicle, the operator shall verify that the water tank interior is clean and that the tank is dedicated for the use of hauling fresh water.

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.

s. If determined to be applicable, the docket holder shall submit to the DRBC an Invasive Species Control Plan (ISCP) with the Operation Plan required in Condition t. below. The ISCP shall include the management and treatment program that the docket holder will implement to ensure that all water withdrawn from the withdrawal site prior to distribution to the transportation vehicles is managed or treated to prevent the spread of potentially invasive, harmful, or nuisance species from entering other watersheds in the DRB. The docket holder shall comply with the ISCP approved by the Executive Director.

t. 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 to the Executive Director. No withdrawal, site clearing or construction shall commence until the docket holder has received the Executive Director's written approval of the Operation Plan. The docket holder shall comply with the Operation Plan approved by the Executive Director. The Operation Plan shall include a procedures for metering, recording, and reporting the pass-by flow and for complying with the pass-by flow requirements, as well as, procedures for monitoring, reporting and recording the usage, transport, and destination of all water withdrawn from the site. The Executive Director may require real time monitoring, reporting and recording as part of the Operation Plan.

u. 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. An exception to the 5 percent performance standard, but no greater than 10 percent, may be granted if maintenance of the 5 percent performance is not technically feasible or economically practicable. A record of average daily flow rate and daily and monthly totals of the withdrawal shall be maintained. Unless the approved Operation Plan provides otherwise, the docket holder shall at a minimum, submit an electronic copy of this record monthly to the Commission by the 5th calendar day of the month following the month in which water withdrawal operations commence. In addition the docket holder shall make such record(s) available at any time to the Commission or the NYSDEC if requested in writing by the Executive Director. The docket holder shall also submit an Annual Water Withdrawal Report to the NYSDEC Division of Water in accordance with ECL Article 15 Title 33 - § 15-3301. Water Withdrawal Reporting.

v. Unless the approved Operation Plan provides otherwise, 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. Records maintained by the docket holder shall be kept at the withdrawal site (or at an alternative site approved in writing by the Executive Director). The records shall include the trucking company name, license plate number, name of the driver, amount of water transferred, date and time of transfer and destination of the transported water. Daily records of the amounts of the water withdrawals shall be automatically metered and recorded by the flow meter. The docket holder shall report this information to the Commission at the same frequency as provided in Condition u. above. In addition the docket holder shall make the withdrawal site records available at any time to the Commission and NYSDEC for inspection, when requested in writing by the Executive Director.

w. 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. The program shall at a minimum include: periodic surveys to monitor leakage, enumerate unaccounted-for water and determine the current status of system infrastructure; recommendations to monitor and control leakage; and a schedule for the implementation of such recommendations. The docket holder shall proceed expeditiously to correct leakages and unnecessary usage identified by the program.

x. 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 the facilities served by this docket approval. This 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. The docket holder shall report annually to the Executive Director on the actions taken pursuant to this program and the impact of those actions.

y. A complete application for the renewal of this docket, or a notice of intent to cease the operations (withdrawal, discharge, etc.) approved by this docket by the expiration date, must be submitted to the DRBC, to the attention of the Project Review Section, at least 12 months prior to the expiration date below (unless written permission has been granted by the Executive Director for submission at a later date), using the appropriate DRBC application form. In the event that a timely and complete application for renewal has been submitted and the DRBC is unable, through no fault of the docket holder, to reissue the docket before the expiration date below, the terms and conditions of this docket will remain fully effective and enforceable against the docket holder pending the grant or denial of the application for docket approval.

z. The issuance of this docket approval shall not create any private or proprietary rights in the water of the Basin.

aa. Drought Plan - 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 to the Executive Director, a drought emergency plan for review and approval.

bb. Drought Emergencies - For the duration of any drought emergency declared by either New York or the Commission, water service or use by the docket holder pursuant to this approval shall be subject to the prohibition of those nonessential uses specified by the Governor of New York, to the extent that they may be applicable, and to any other emergency resolutions or orders adopted hereafter by the Commission.

cc. The Commission has determined that the review of the reports and submissions developed under the above docket conditions, inspections and any amendments or changes thereto will continue to cause the Commission to expend exceptional efforts and costs. As such, Commission staff will continue to maintain a record of all time and expenses associated with the post-docket approval reviews of the project and associated deliverables. A fee in the amount of 100% of these costs will be assessed on a quarterly basis and the docket holder shall pay the amount assessed within thirty days of the date of the assessment. In the event of a docket amendment or renewal, the larger of actual project review costs or the calculated project review fee will be charged.

dd. The docket holder and any other person aggrieved by a reviewable action or decision taken by the Executive Director or Commission pursuant to this docket may seek an administrative hearing pursuant to Articles 5 and 6 of the Commission's *Rules of Practice and Procedure*, and after exhausting all administrative remedies may seek judicial review pursuant to Article 6, section 2.6.10 of the *Rules of Practice and Procedure* and section 15.1(p) of the Commission's *Compact*.

ee. Failure to comply with any of the terms and conditions of this docket may result in sanctions by the Commission in accordance with Section 14.17 of the Compact and the Commission's regulations including without limitation its Rules of Practice and Procedure.

ff. The docket holder shall report to the Commission Project Review Section Supervisor any violation of the docket conditions within 48-hours of the occurrence or upon the docket holder becoming aware of the violation. In addition, the docket holder shall report in writing any violations of the pass by requirements, the daily or monthly water allocations, the approved operations plan or any other docket conditions to the Commission Project Review Section Supervisor within three days of the violation. The docket holder shall also provide a written explanation of the causes of the violation within 30 days of the violation and shall set forth the action(s) the docket holder has taken to correct the violation and protect against a future violation.

gg. If the surface water withdrawal operations associated with this docket approval significantly affects or interferes with any domestic or other existing wells or surface water supplies, or if the docket holder receives a complaint by any user of wells or surface water supplies, the docket holder shall immediately notify the Executive Director of any such affects, interferences or complaints and unless excused by the Executive Director, shall investigate such affects, interferences or complaints. The docket holder shall also advise the complainants that they may also direct their phone call notifications of potential interference complaints to the DRBC Project Review Section at 609-883-9500, extension 216. Oral notification by the docket holder must always be followed up in writing or via email directed to the Executive Director. In addition, the docket holder shall provide written notification to all complainants of the docket holder's responsibilities under this condition. Any well or surface water supply which is substantially adversely affected, or otherwise rendered unusable as a result of the docket holder's project withdrawal, shall be repaired, replaced or otherwise mitigated at the expense of the docket holder. The docket holder shall prepare a report of investigation and/or mitigation plan prepared by a qualified professional and shall submit the report to the Executive Director as soon as practicable or as directed by the Executive Director. The Executive Director shall make the final determination, subject to the right of appeal, regarding the validity of such complaints, the scope or sufficiency of such investigations, and the extent of appropriate mitigation measures, if required.

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.

ii. The docket holder shall pay any water supply charges that become applicable to the withdrawal authorized by this Docket as a result of promulgation of Natural Gas Development Regulations by the Commission.

BY THE COMMISSION

APPROVAL DATE:

EXPIRATION DATE: May 11, 2016