15A NCAC 05H .XXX1 WATER ACQUISITION AND MANAGEMENT RULES FOR OIL AND GAS OPERATORS

Any person, firm, or corporation requiring water on-site for the purposes of oil and gas exploration, development and processing, must submit to the Department a detailed plan showing how water will be acquired for the site for approval as a Water Management Plan (WMP). The WMP must include any maps, charts, logs, calculations, and any other necessary documents that will be required to detail the source of water, method of withdrawal, water storage methods and structure(s), and all practices that will be utilized to minimize the impact of such activity in accordance with G.S. §113-391.

15A NCAC 05H .XXX2 DEFINITIONS

The terms used in this Subchapter shall have the definitions assigned by G.S. §113-389. In addition, the words defined in this Rule shall have the following meanings:

(1) "7Q10 conditions" when used in connection with "surface water," refers to the minimum average flow for a period of seven consecutive days that has an average occurrence of once in 10 years as referenced in 15A NCAC 2B.0206(a)(3).

(2) "Affected river reach" means the portion of a stream channel extending upstream to the first tributary contributing flows sufficient to provide enough water for any existing water withdrawals below the mouth of the tributary and upstream of a specific withdrawal site and extending downstream to the first tributary contributing flows sufficient to compensate for the quantity of withdrawal and the specific withdrawal site and any existing withdrawals downstream of the proposed withdrawal.

(3) "Flow Rate" means the volume per unit time of a fluid moving past a fixed point (15A NCAC 02C.0204).

(4) "Groundwater(s)" means those waters occurring in the subsurface under saturated conditions (15A NCAC 02C.0204)."Potable water supply" means water which is approved for drinking or other household uses.

(5) "Pumps" and "pumping equipment" means any equipment or materials utilized or intended for use in withdrawing or obtaining groundwater including well seals (G.S. 87-58).

(6) "Receptor" means any human, plant, animal, or structure which is, or has the potential to be, adversely affected by the release or migration of contaminants. Any well constructed for the purpose of monitoring groundwater and contaminant concentrations shall not be considered a receptor.

(7) "Storage Structure" means a device or structure constructed for the storage of water or other fluids.

(8) "Waste" is as defined in G.S. §143-213(18).

(9) "Water source" means any of the following:

(A.) waters of the State;

(B.) a source of water supply used by a water purveyor;

(C.) mine pools and discharges; or

(D.) any other waters that are used for drilling or completing an oil or gas well.

(10) "Water supply well" means any well intended or usable as a source of water supply, but not to include a well constructed by an individual on land which is owned or leased by him, appurtenant to a single-family dwelling, and intended for domestic use including household purposes, farm livestock, or gardens (G.S. §87-85).

(11) "Water management plan" means a plan associated with drilling or completing an oil or gas well that demonstrates that the withdrawal and use of water sources protects those sources as required by law, and protects the environment and public health, safety, and welfare.

(12) "Water or Waters of the State" is as defined in G.S. §143-212.

(13) "Well" is as defined in G.S.§87-85(14).

(14) "Withdrawal" means the removal of water or other fluids from a water body, well or other fluid storage structure.

15A NCAC 05H .XXX3 WATER MANAGEMENT PLAN APPLICATION

An application for a WMP, for the purpose of oil and gas operations, must be submitted to the Department for approval, approval with modifications, or disapproval prior to the start of any activity associated with the WMP. The applicant shall describe the potential source(s) of water, especially flowback or produced water, which should be evaluated for this application, and indicate reasons for the rejection of those sources not included in this application.

The application must be submitted as a section within the greater oil and gas permit application and shall include the following components:

(a) Name, address, phone number, and email address of the operator or the onsite manager/supervisor associated with onsite activities.

(b) Written approval to allow for the proposed activity from any real property owner(s) where any system components will be located, installed, or constructed.

(c) Address and parcel identification of the real property where any system components will be located, installed, or constructed.

(d) A water source plan showing the following:

(1) Intended use(s) of the property;

(2) Clear identification of the source(s) of water (surface water, groundwater or other). Must include proposed maximum daily use in millions of gallons per day and the total maximum quantity to be used. See section 15A NCAC 05H.XXX4 for detailed requirements per water source;

(3) Any current or proposed structures or appurtenances for the transport or storage of water ;

(4) Maps showing the location of existing receptors, including but not limited to water wells, streams, springs, wetlands, and areas with known environmental contamination (latitude and longitude, in decimal degrees);

(5) Any current or proposed utility rights-of-way associated with the project area;

(6) Alternative water sources such as flowback or produced water, and other additional alternative sources; and

(7) Alternative source(s) or practices used during times of drought.

(e) The Department may request any additional information deemed necessary for the approval of the WMP.

15A NCAC 05H .XXX4 WATER SOURCE DOCUMENTATION

Documentation of water source:

(1) Surface water source: includes but is not limited to springs, creeks, streams, rivers, ponds, lakes, and reservoirs. Applicants shall provide the following information:

a. a topographic map, soils classification map, or other documentation showing the surface water source(s) location, name, and withdrawal point with notation of latitude and longitude in decimal degrees;

b. the river basin at the point of withdrawal and the area where it will be used as defined by G.S. §143-215.122G;

c. the classification of water body at withdrawal point in accordance with 15A NCAC 02B .0301

d. the proposed maximum daily withdrawal in millions of gallons per day and the expected total maximum withdrawal;

e. if withdrawal will be from a pool of water created by an impoundment, the name of the owner of the impoundment and a copy of the agreement that authorizes the withdrawal.

f. for free flowing water source(s), indicate the owner of the land where the withdrawal will take place and if the applicant is not the owner provide a copy of the agreement authorizing the use of the land;

g. for free flowing water sources, the applicant must provide an estimate of the 7Q10 flow at the proposed intake location and explain the methodology used to derive the estimate. The Department shall review the proposed withdrawal rate and may require operator to modify intake pumping schedule and/or rate;

h. for free flowing water sources, list other existing and proposed withdrawals within the affected reach including the maximum withdrawal capacity

i. cumulative maximum instantaneous withdrawal from the affected river reach will be limited to 20% of the 7Q10 flow just upstream of the tributary defining the downstream terminus of the affected river reach;

j. documentation of a Natural Heritage Survey showing possible interactions with rare, threatened, and endangered (RTE) species or any invasive species that may be present. Indicate the presence of any rare or protected species or habitats that may be affected by the proposed withdrawal including any additional sources of information used for the determination; and

k. indicate the presence of any known noxious aquatic weeds listed in 15A NCAC 02G.0602 or other exotic and/or invasive species in the source water(s);

(2) Groundwater source: Applicant shall provide the following information:

a. a topographic map including a notation of the latitude and longitude of the locations of all groundwater wells that will provide water for drilling and development of oil or gas wells included in this application;

b. The proposed maximum daily withdrawal in millions of gallons per day and the expected total maximum withdrawal.
c. If the applicant is not the real property owner at the point of withdrawal, a copy of the agreement authorizing the withdrawal must be provided;
d. For pre-existing wells include a copy of the GW-1 form filed with the Department. For wells constructed specifically for the purposes covered by this application include a copy of the Well Drilling Permit issued by the Department as well s the GW-1 for submitted to the Department by the well-driller;
e. An aquifer pump test must be performed for each well included in this application and the results submitted as part of the WMP. The aquifer pump test must be conducted according to standard groundwater testing and modeling practices. Data presented must show the measured drawdown, and the rate of recovery. The aquifer pump test must be conducted for at least 24 hours, or longer if needed to reach equilibrium, at the proposed pumping rate. Recovery measurements should be made for a similar period or until pre-pumping water levels are attained.
f. A map clearly showing the extent of the measureable area of influence determined from the aquifer pump test at the proposed rate of withdrawal indicating the locations of all surface waters and water supply wells within the area of influence must be provided. A map showing the extrapolated cone of depression based on six months usage shall also be provided.
g. Well construction standards consistent with NCAC 15A 2C.0100, and information required under NCAC 15A 2C.0107 (j)(2)(E) and (j)(3)(D) for the construction of water supply and other wells must be followed and provided;
h. When the drought indicator well closest to the groundwater source(s) included in this application is designated as D3, indicating that water levels are at or below the 5th percentile of historic water level measurements as reported by the Division of Water Resources, withdrawals from these sources shall cease until the designation is upgraded to D1 or above, indicating water levels above the 10th percentile of historic water level measurements;

(3) Purchased water source: Applicants shall provide the following information:
a. Identification of the water supplier, including name, contact information, and appropriate facility identification and permit numbers for water to be provided by an existing water withdrawer required to report water usage under G.S. §143-355(l) or G.S. §43-215.22H;
b. Copy of a letter of commitment or contract authorizing the acquisition of water by the applicant;
c. The type of water to be provided, be that potable water, treated wastewater, reclaimed water, raw water or any other type of water to be used;
d. The proposed maximum amount of water to be provided daily in millions of gallons per day and the expected total maximum amount to be provided
e. A discussion of the proposed method of transport or transmittal of the water from the supplier to the point of use.

15A NCAC 05H.XXX4 ALTERNATIVE WATER SOURCES

(a) The applicant shall provide a review of all potential water sources, including the option of using flowback or produced water that were evaluated for this application, and indicate the reasons for rejection of those water sources not included in this application.

(1) Each review shall include the following :

(a) Current uses of each water source evaluated including a list of current withdrawers other than the applicant;

(b) Name and classification of each water source evaluated;

(c) For each source describe the current or proposed structure or appurtenances for the transport or storage of water from the source

(2) For reuse of flowback or produced water applicants shall provide the following information:

(a) The source of the flowback or produced water

(b) The proposed maximum daily use in millions of gallons per day, and the amount expected to be used; and

(c) The estimated amount of additional water needed to provide sufficient quantity for activities covered in this application.

15A NCAC 05H .XXX5 TRANSPORT AND ONSITE STORAGE OF WATER

This section will require more time to fully detail due to many areas overlapping with construction standards that will be developed by the admin of oil and gas committee.

Areas to address:

Closed loop systems vs. open pits

Pits vs tanks

Standards for pit construction and tank requirements

Protection and security features- fencing wire covering, etc.

Fresh water ponds/tanks should be considered as the main storage feature for this section and must be kept segregated from other fluids.

What types of piping will be required by operators?

15A NCAC 05H .XXX6 MONITORING AND REPORTING

(a) The operator must record and retain all monitoring records onsite related to the metering of daily water pumping schedules, received and purchased water, amounts of stored water, and quantities of flowback for recycling or reuse. The daily records must be retained onsite, or at the local company office, for at least five years and be available on at the request of the Department. The applicant shall report annually to the Department by April 1 of each year for the period of January 1st to December 31st of the prior year. The annual report must include: daily average water withdrawals from each of the surface water and groundwater source(s) included in this application for each month; maximum daily water withdrawals from each of the surface and groundwater source(s) included in this application for each month; and number of days that water was withdrawn in each month from the surface and groundwater source(s) included in this application. Data shall be submitted electronically to the Department.

(b) The applicant shall submit a monitoring plan sufficient to accurately record the amount of water used from each source included in this application on a daily basis, including schedules of maintenance to insure accurate measuring and recording of the water usage.

(c) Notification for any land disturbing activity must be sent in accordance with G.S. §113-420 at least 30 days before the desired date of entry to the property for activities described in Sections 15A NCAC 05H.XX3 through .XX5. Notice shall be given by certified mail, return receipt requested. Notification identifying the water source must be provided to the local municipality and county where the source is located.

(d) The operator must notify the Department at least 48 hours prior to first withdrawal from the approved water source(s); and

(e) Submission of the information required in sections 15A NCAC 05H.XX3 through .XX4 of this rule and compliance reporting requirements in 15A NCAC 05H.XX4 of this rule satisfies the registration requirements of G.S. §143-215.22H.