

STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
625 BROADWAY
ALBANY, NEW YORK 12233-1010

In the Matter

- of -

the Application for a Permit Pursuant
to Environmental Conservation Law ("ECL")
Article 15 and Part 601 of Title 6 of the
Official Compilation of Codes, Rules and
Regulations of the State of New York
("6 NYCRR") to Install a Public Water
Supply Well (Middleville Road No. 3) on
the South Side of Middleville Road, Town
of Huntington, Suffolk County, New York,

- by -

SUFFOLK COUNTY WATER AUTHORITY,

Applicant.

DEC Project No. 1-4700-00010/00583

DECISION OF THE COMMISSIONER

October 18, 2007

DECISION OF THE COMMISSIONER

Suffolk County Water Authority ("SCWA") filed an application for a water supply permit with the New York State Department of Environmental Conservation ("Department") for a new public water supply well on the south side of Middleville Road, in the Town of Huntington, Suffolk County, New York.

SCWA's proposed well, which has already been drilled and installed as a test well at a depth of approximately 844 feet, is located in the Lloyd Sands aquifer ("Lloyd Sands") on Long Island.¹ Pursuant to Environmental Conservation Law ("ECL") § 15-1528, the proposed well is subject to a statutory moratorium on the granting of new permits for the drilling of public water supply wells into the Lloyd Sands. The moratorium was enacted by the Legislature in 1986 to protect the waters of the Lloyd Sands and applies to all areas within the counties of Kings, Queens, Nassau and Suffolk "that are not coastal communities" (see ECL 15-1528[1] and [2]). "Coastal communities" are defined as "those areas on Long Island where the Magothy aquifer is either absent or contaminated with chlorides" (see ECL 15-1502[1]).

¹ "Lloyd Sands" is defined as "that geological strata generally known to be the deepest and oldest water-bearing layer of the Long Island aquifer system and shall not include bedrock" (see ECL 15-1502[2]).

Together with its application, SCWA seeks an exemption, pursuant to ECL 15-1528(4), to the moratorium. This is the first time that the Department has considered granting such an exemption. The statute provides that the Commissioner of the Department "may grant exemptions to the moratorium upon a finding of just cause and extreme hardship" (see ECL 15-1528[4]). The statute further provides that an adjudicatory hearing be held, and findings presented to the Commissioner, prior to the Commissioner's exercise of discretion with respect to a request for an exemption from the moratorium (see id.).

In addition to the statutory moratorium at ECL 15-1528, SCWA's proposed well is also subject to the provisions of ECL 15-1503 and part 601 of title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York ("6 NYCRR"), which set forth the requirements for applications for water supply permits and, in particular, ECL 15-1527, which governs permit applications for certain public water supply wells in Long Island counties. Pursuant to ECL 15-1527, the Department is statutorily charged with the obligation to "vigorously apply" the permitting standards of ECL 15-1503(2) before granting a water authority or water purveyor a new well permit in Long Island counties (see ECL 15-1527[4][g]).

Following a hearing, Administrative Law Judge ("ALJ") Maria E. Villa, to whom this matter was assigned, prepared the attached hearing report, in which she found that:

- SCWA's proposed well is not located in a "coastal community" as defined in the statute;
- SCWA demonstrated "just cause and extreme hardship" such that an exemption from the moratorium on drilling new wells in the Lloyd Sands may be granted for this proposal; and
- a water supply permit should be granted for SCWA's proposed well.

I directed that the ALJ's hearing report be issued as a recommended decision ("Recommended Decision") and that the hearing record be reopened for submission of comments by the parties (see memorandum dated May 7, 2007, from Chief Administrative Law Judge James T. McClymonds to the Service List).

The ALJ has prepared a detailed report that comprehensively reviews the issues that were adjudicated. Based upon my review of the record, I agree with the ALJ's conclusion that SCWA's proposed well is not in a "coastal community." However, it is my determination that the statutory requirement that an applicant demonstrate "just cause and extreme hardship"

establishes a very high threshold that SCWA has not met. Accordingly, SCWA's request for an exemption to the moratorium for a new well in the Lloyd Sands is denied.

My determination on the moratorium renders academic the issue whether water supply permit issuance standards applicable to this application have otherwise been met. For the reasons that follow, however, if I were to reach that issue based upon the record before me, I would be unable to make any determination on the water supply permit without further inquiry.

BACKGROUND

In March 2003, SCWA submitted a proposal to the Department to install Middleville Road Well No. 3 (the "proposed Well") in the Lloyd Sands at a depth of 845 feet. The screen interval for the proposed Well would be 802 to 841 feet and the proposed Well would have a capacity of 300 gallons per minute ("gpm"). According to SCWA, due to nitrate and perchlorate contamination of the upper glacial and Magothy aquifers² in its Northport Intermediate Pressure Zone ("Northport Zone"), SCWA

² "[T]here are four major underground reservoirs, or aquifers, from which the inhabitants of Long Island draw their fresh water. The uppermost aquifer is the glacial aquifer, followed in descending order by the Jameco aquifer, the Magothy aquifer, and finally the Lloyd [Sands], the deepest and purest of the four" (Matter of Town of Hempstead v Flacke, 82 AD2d 183, 184 [2d Dept 1981]).

faces a significant problem in supplying a sufficient quantity of potable water in that zone (see, e.g., Hearing Exhibit ["Exh"] 4, at 11).³

SCWA proposes to utilize a supply of water with a very low nitrate level from the Lloyd Sands to increase the available capacity at its existing Middleville Road well field. Water drawn from the Lloyd Sands by the proposed Well would be blended with SCWA's Middleville Road Well No. 1, which has been out of service for a number of years due to nitrate levels in excess of drinking water standards.⁴ If an exemption from the moratorium on drilling in the Lloyd Sands were granted, operation of the proposed Well would allow SCWA to return Middleville Road Well No. 1 to 1,400 gpm capacity. The combined capacity of Middleville Road Well No. 1 and the proposed Well would be 1,700 gpm, thereby decreasing the concentration of nitrates in the combined pumping capacity to a level below the State water quality standard (see Exh 4, at 1, 11).⁵

³ The Northport Zone encompasses portions of the Hamlets of Middleville, Vernon Valley, Fort Salonga, and Northport, and the Village of Northport (see Exh 4, at 1).

⁴ Middleville Road Well No. 1 is screened in the Magothy Aquifer at a depth of 470-540 feet below grade, with an authorized pumping capacity of 1,400 gpm per minute (see Exh 30, at 3 [Special Condition 1]).

⁵ The standard of quality for nitrates is 10 milligrams per liter (see 10 NYCRR 170.4).

Initially, SCWA stated in its application that “[h]ere there is no coastal community, as that term is defined by the ECL, that would be impacted by this application” (Hearing Exh 4, at 19). SCWA subsequently changed its position and claimed that the proposed Well is situated in a “coastal community” and, therefore, not subject to the moratorium in the first instance (see ECL 15-1528[2]). Accordingly, SCWA contended that the statute does not require a finding of just cause and extreme hardship, or an adjudicatory hearing, prior to the grant of a water supply permit for the proposed Well. In the alternative, SCWA maintained that, even if the proposed Well were subject to the moratorium, the circumstances were sufficient to demonstrate “just cause and extreme hardship” and, accordingly, the Commissioner should grant an exemption from the moratorium for the proposed Well.

Department staff referred the water supply permit application and request for moratorium exemption to the Office of Hearings and Mediation Services pursuant to ECL 15-1528(4), which requires an adjudicatory hearing on any exemption request. Department staff rejected SCWA’s revised contention that the proposed Well is located in a “coastal community.” Department staff, however, supported granting an exemption to the moratorium based upon SCWA’s showing with respect to “just cause and extreme

hardship" and, with the grant of the exemption, the issuance of a water supply permit for the proposed Well.

The procedural history of this matter is well-detailed in the ALJ's Ruling on Issues and Party Status ("Issues Ruling") dated Nov. 9, 2005 (see also Matter of Suffolk County Water Authority, Interim Decision of the Deputy Commissioner, Jan. 19, 2006 ["Interim Decision"]). In the Issues Ruling, the ALJ identified three sub-issues for adjudication relating to the determination of "just cause and extreme hardship." These sub-issues, which are also relevant to certain water supply permit issuance standards under ECL 15-1503 and 15-1527, include:

"1. Whether the proposed pumping is within the safe yield of the [Lloyd Sands]. The inquiry will include consideration of the characteristics of the [Lloyd Sands], as well as water supply needs[;]

"2. Whether the proposal poses a risk of contamination of the [Lloyd Sands] from saltwater intrusion or other constituents. This inquiry will include an examination of existing, background concentrations of chlorides in the Magothy Aquifer[; and]

"3. Whether SCWA took into account appropriate alternatives to the proposal, including alternatives to blending, and the costs associated with those alternatives" (Issues Ruling, at 34).

Parties joined for the adjudicatory hearing by the ALJ included Sarah Meyland, Rea Schnittman, Nassau County League of Women Voters, North Shore Land Alliance, Sierra Club, East Norwich Civic Association, Long Island Drinking Water Coalition, Huntington League of Women Voters, Conservation Board of the Village of Lloyd Harbor, Friends of the Bay, Residents for a More Beautiful Port Washington, and League of Women Voters of Suffolk County (collectively, "Petitioners"), SCWA, and Department staff. The ALJ granted Nassau County amicus status, but not full party status, in the proceeding.

Nassau County appealed from the ALJ's determination to deny it full party status. On appeal, the ALJ's determination was affirmed and the County's request for full party status was rejected (see generally Interim Decision). Nassau County continued to participate in the proceeding as an amicus party. No party, however, appealed from the Issues Ruling on any of the three sub-issues referenced above.

Following the adjudicatory hearing, and pursuant to my direction, ALJ Villa's hearing report was issued as a recommended decision pursuant to 6 NYCRR 624.13(a)(2)(ii). Thereafter, the parties to this proceeding submitted written comments on the Recommended Decision in June 2007, and written replies in July 2007.

In its comments dated June 14, 2007 on the Recommended Decision, SCWA maintained that the proposed Well was in a "coastal community" as that term is defined in the ECL. SCWA also moved to strike the testimony of Petitioners' witnesses Michael Alarcon and Sarah Meyland. Petitioners in their comments dated June 14, 2007 on the Recommended Decision argued that: (a) SCWA had not satisfied the "just cause and extreme hardship" standard; (b) alternatives were available to the proposed Well; and (c) the Recommended Decision improperly placed the burden on Petitioners to establish that the proposed well was not necessary and would not harm the Lloyd Sands. Department staff, in a letter dated June 14, 2007, concurred with the findings and recommendations in the Recommended Decision. SCWA in its response dated July 18, 2007 and Petitioners in their response dated July 16, 2007 opposed the points that each other had raised in their initial comments on the Recommended Decision.

DISCUSSION

The moratorium on granting new permits to drill public water supply wells into the Lloyd Sands or to permit new withdrawals of water from the Lloyd Sands applies to "all areas that are not coastal communities" (see ECL 15-1528[2]). A party seeking an exemption from the moratorium for a non-coastal community must show "just cause and extreme hardship" (see ECL 15-1528[4]).

Thus, SCWA has the burden of proof to show either that (a) the proposed Well is in a "coastal community" as defined by ECL 15-1502(1), in which case it is not subject to the moratorium in the first instance, or (b) that it has demonstrated "just cause and extreme hardship," thereby supporting an exemption to the moratorium (see 6 NYCRR 624.9[b][1]). For the reasons that follow, SCWA did not carry its burden on either requirement.

Coastal Community

As noted, "coastal communities" are defined as "those areas on Long Island where the Magothy aquifer is either absent or contaminated with chlorides" (ECL 15-1502[1]). Because it was undisputed that the Magothy aquifer is present at the site of the proposed Well, the parties to this proceeding focused their arguments upon that portion of the definition that reads "those

areas on Long Island where the Magothy aquifer is . . . contaminated with chlorides" (see id.).⁶

1. SCWA's Position on Coastal Community

In its original water supply application to the Department in March 2003, SCWA took the position that the proposed Well was not in a "coastal community." Subsequently, in response to a request for additional information by Department staff, SCWA changed its position and revised its application in October 2004 to assert that the "Middleville Road area" was, in fact, within a "coastal community" because "the Magothy aquifer is contaminated with chlorides at that location" (see Hearing Exh 7, at 2; see also Hearing Exh 7A [providing sampling results for chloride in Middleville Road Well Nos. 1 and 2]).

SCWA asserted that the levels of chloride for the Middleville Road area should be considered "contamination" under the statute, and accordingly the proposed Well was not subject to the moratorium.

⁶ While ECL 15-1528(1) directs the Department "to identify those areas of Long Island within the counties of Kings, Queens, Nassau and Suffolk which, for the purposes of this section, shall be considered coastal communities," it was established during this proceeding that the Department has not yet undertaken such identification (see Recommended Decision, at 7).

Department staff, along with Petitioners and Nassau County, opposed SCWA's revised contention that the proposed Well was in a "coastal community" (see, e.g., Hearing Exh 8, at 1 [Department staff rejected SCWA's contention because "such an interpretation of the definition of coastal communities . . . would not be consistent with either the letter or intent of the statutory moratorium"]; Petitioners' Post-Hearing Memorandum of Law dated February 8, 2007, at 50-51; Memorandum of Law dated February 8, 2007 of Nassau County [contending that chloride levels at the proposed Well site fall "far short" of contamination based on regulation and court decision and that New York State Legislature did not intend for low levels of background chloride concentrations to be considered "chloride contamination" for purposes of ECL 15-1502(1)]; see also Recommended Decision, at 9-20).

2. Comments on the Recommended Decision

SCWA, in its comments on the Recommended Decision dated June 14, 2007, agreed with the ALJ's Finding of Fact No. 5 which stated that chloride levels in the Magothy aquifer at Middleville Road Well No. 1 were approximately 22 milligrams per liter ("mg/l"), and that the generally accepted pristine or background concentration of chloride in the Magothy aquifer is less than 10 mg/l (see Recommended Decision, at 5). SCWA claimed that the

Magothy aquifer should be considered contaminated when chloride levels are above background or naturally occurring levels, regardless of the source of the chloride.

Petitioners, in their comments dated July 16, 2007, contended that the amount of chloride present at the proposed Well site is "well below the legal threshold for human consumption," and accordingly the subject location is not "contaminated" within the meaning of ECL 15-1502(1) and 15-1528.

3. Analysis

The statutory definition of "coastal communities" does not expressly limit the phrase "contaminated with chlorides" to mean contamination solely from saltwater intrusion due to overpumping, nor does it refer to chloride contamination from other sources (see ECL 15-1502[1]). On this record, however, it is unnecessary to identify the source of the chloride and determine whether only chloride contamination from saltwater intrusion is relevant to the definition of coastal communities. I concur with the ALJ here that the mere presence of chlorides at the Middleville Road well field does not establish that the proposed well is located in a coastal community, and that SCWA failed to show that the actual chloride levels there amount to "contamination."

The record indicates that the chloride level at Middleville Road Well No. 1 is approximately 22 mg/l, which amounts to slightly more than twice the naturally occurring background level of chloride concentration in the Magothy aquifer (see Pre-filed Direct Testimony [June 23, 2006] of Steven R. Colabufo, C.P.G., at 13-14).⁷ When Middleville Road Well No. 1 was first installed in the 1970's, the chloride levels were measured at 8.5 mg/l (see id., at 13; Hearing Exh 38, at 1). Because of the increase in chloride levels beyond background levels during the intervening years, SCWA argued that the well was now "contaminated with chlorides" within the meaning of the statute.

I agree with the ALJ that accepting SCWA's argument of "contaminated with chlorides" based upon chloride amounts slightly above background levels at the Middleville Road well field would undermine the broad purpose of the moratorium. While the Legislature did not establish a specific numerical limit or standard on chloride levels in defining "contaminated," references to relevant standards are nevertheless instructive here (see Concerned Citizens Against Crossgates v Flacke, 90 AD2d

⁷ The generally accepted pristine or background concentration of chloride in the Magothy aquifer is less than 10 mg/l (see Pre-filed Direct Testimony [June 23, 2006] of Steven R. Colabufo, C.P.G., at 13).

35, 38 [3d Dept 1982], lv denied 58 NY2d 607 [1983]).

The State water supply quality standard for chloride, established by the Department of Health and based upon federal regulation, is 250 mg/l (see 10 NYCRR 170.4; see also 40 Code of Federal Regulations § 143.3). Although, as the ALJ noted, these regulatory provisions are not controlling in this proceeding, based upon the Legislature's use of the words "contaminated with" rather than "presence of" in ECL 15-1502(1), at a minimum, the phrase should be read to mean an amount of chlorides in quantities that could be injurious to humans or the environment (see Matter of Duflo Spray-Chemical, Inc. v Jorling, 153 AD2d 244, 247-48 [3d Dept 1990]).

While it is not necessary in this case to interpret the term "contaminated with chlorides" to mean an amount in excess of the State water supply quality standard, i.e., 250 mg/l, based upon this record and for purposes of this proceeding, a chloride level of approximately 22 mg/l at the Middleville Road well field (which is a level less than ten percent of the State water supply quality standard) could not be deemed injurious.⁸ Therefore,

⁸ SCWA, in its comments on the Recommended Decision, objects to inferences and conclusions drawn by Petitioners and Nassau County with respect to chloride levels from other wells on Long Island and within the areas served by SCWA. However, the record indicates that a number of the areas served by SCWA currently have average chloride background

based on this record, SCWA did not establish that its existing Middleville Road well field was "contaminated with chlorides," and it cannot be considered an exempt "coastal community."⁹

Just Cause and Extreme Hardship

Because SCWA does not fall within the "coastal community" exception to the statutory moratorium, it must satisfy the "just cause and extreme hardship" standard in ECL 15-1528(4) in order to be granted an exemption from the moratorium.

The statute and legislative history accompanying the moratorium do not define "just cause and extreme hardship." This proceeding presents the first occasion for the Department to interpret the "just cause and extreme hardship" standard.

On its face and by a plain reading of the unambiguous statutory language, "just cause and extreme hardship" establishes

levels in excess of the levels present at the Middleville Road well field (see, e.g., Hearing Exh 71). This provides further support for the determination that the levels at the Middleville Road well field should not equate to an amount deemed injurious.

⁹ In the Recommended Decision, the ALJ addressed issues relating to a numerical limit on chlorides. I concur with the ALJ's conclusion that, because a numerical limit on chloride levels in order to establish contamination was not set forth in ECL 15-1528, the legislative intent was for the Department to exercise its discretion and arrive at "a reasonable, case by case interpretation of the term 'contaminated with chlorides,'" thereby allowing for consideration of the "unique circumstances of each application" in an adjudicatory hearing (see Recommended Decision, at 20).

a stringent requirement that can only be met in extraordinary circumstances. The use of the word "extreme" is significant. By definition, "extreme" means "most severe," "most stringent," or "drastic" (see, e.g., Webster's Third New International Dictionary [1966]). Former Assemblywoman May W. Neuberger, who was the New York State Assembly sponsor of the moratorium legislation, testified in this proceeding to the intended meaning of "extreme hardship" as follows:

"The 'extreme hardship' wording was our way of saying that an extreme condition, an emergency, or some unexpected condition must have arisen that put the water system at serious risk, requiring an immediate response and the Lloyd [Sands] Aquifer was the only way out. Many water systems have what they would consider difficult challenges from time to time. But, they focus their resources and talents and a solution is developed. We wanted the moratorium to be lifted only in the most serious circumstances" (Direct Testimony of May W. Neuberger, at 4).

The intended meaning of "extreme hardship" for use only in emergencies or extreme situations is further underscored by a recognition of the very limited nature of this resource. The Lloyd Sands has been estimated to contain only about nine per cent of Long Island's freshwater, and receives only about 3.1 per cent of the recharge that enters the Long Island aquifer system (see, e.g., Hearing Exh 44, at 7; see also Hearing Exhs 132 & 146). Furthermore, the Lloyd Sands is the only source of potable water for several communities along the shores of Long Island

(see Hearing Exh 146, at 18, 32).

One of the factors that the Department uses to evaluate a water supply permit application is whether a project "is justified by the public necessity" (see 6 NYCRR 601.6[b][1]; see also ECL 15-1503[2]). The necessity for a public water supply system is to be measured by immediate need, not need in the distant future (see Matter of Country Knolls Water Works, Inc. v Reid, 52 AD2d 284, 288 [3d Dept 1976]). For purposes of an exemption to the moratorium, it is significant that the State Legislature did not simply use the traditional "public necessity" standard, but rather chose to impose the requirement of "just cause and extreme hardship" which reflects a much more stringent threshold.¹⁰

Concerns relating to the vulnerability of the Lloyd Sands to contamination and salt water intrusion were central to the adoption of the moratorium. In its findings related to the enactment of the moratorium, the State Legislature stated:

¹⁰ The determination of necessity would include a consideration of the importance of the water supply source and the public's need "for the particular water supply proposed" (see Matter of Ton-Da-Lay, Ltd. v Diamond, 44 AD2d 430, 435 [3d Dept], appeal dismissed 35 NY2d 789 [1974], lv dismissed 36 NY2d 646, 856 [1975]). Again, in this instance, the "just cause and extreme hardship" standard establishes a higher standard than what would be generally required for a water supply permit application.

"due to the sensitivity of the aquifer system to pollution and to excessive water withdrawals, certain limitations in the use of portions of the aquifer are necessary in order to ensure the long term quality and quantity of the water supply" (L 1986, ch 773, § 1; see also Hearing Exh 4, at 18-19; Letter dated July 14, 1986 from Assemblywoman May W. Neuberger to Governor Mario M. Cuomo, at 2, Bill Jacket to L 1986, ch 773; Letter dated July 14, 1986 from Senator Caesar Trunzo to Evan A. Davis, id.).

Accordingly, any proposal to use water from the Lloyd Sands must demonstrate that such contamination or intrusion would not likely occur, and that the Lloyd Sands would not be significantly impaired or otherwise compromised. In light of the limited nature of this resource, extreme care must be taken in considering any withdrawal from the Lloyd Sands (see, e.g., Town of Hempstead v Flacke, 82 AD2d 183, 188 [2d Dept 1981] [pre-moratorium decision noting "need for extreme care to be taken in evaluating new water supply applications" for the Lloyd Sands]). In this regard, the feasibility of potential alternatives that can avoid depleting or otherwise impacting this limited aquifer resource must be thoroughly evaluated.

Based upon the plain meaning of the words "just cause and extreme hardship," the limited nature of the Lloyd Sands' water resources, the clear intent of the State Legislature to be extraordinarily protective of the Lloyd Sands, and this record, I determine that an extreme condition or emergency must be shown to satisfy the "just cause and extreme hardship" standard.

To determine whether the high standard of establishing "just cause and extreme hardship" for purposes of this application has been met, the following criteria are relevant: the extent to which an extreme water supply condition or emergency has been demonstrated; the potential environmental impacts of the proposed Well upon the Lloyd Sands, and the availability of technically and economically feasible alternatives to the proposed withdrawal of water from the Lloyd Sands. A review of each of these criteria follows.

1. Existence of Extreme Water Supply Condition or Emergency

In its application, SCWA contends that nitrate contamination at its Middleville Road well site must be addressed because acute health risks are associated with even short-term exposure to drinking water above the State standard for nitrates. Thus, SCWA, by its application, seeks a water supply permit for a well in the Lloyd Sands for blending purposes.

Although the presence of nitrates above the State drinking water standard is a serious and legitimate issue, nitrates can be treated and removed. Furthermore, SCWA has acknowledged that, while it has some concerns during high demand periods, it is currently able to meet its demand needs in the Northport Zone (see, e.g., Hearing Transcript, at 73-74). No

emergency or extreme water supply condition was shown. Moreover, as will be discussed below, alternatives to the withdrawal of water from the Lloyd Sands are potentially available to meet the projected demand in the Northport Zone, thereby avoiding tapping into the limited water resource of the Lloyd Sands.

2. Environmental Impacts on the Lloyd Sands

In the context of seeking an exemption from the moratorium, the issue of safe yield was raised. The ALJ concluded that SCWA had adequately demonstrated the safe yield of the aquifer based upon pump test data for an existing well located at the Northport Veterans Administration ("VA") Hospital rather than from the proposed Well itself.¹¹ Data from the pump test alone, however, did not actually demonstrate safe yield. The pump test at the VA Hospital involved pumping at a rate of 130 gallons per minute ("gpm") rather than the full-scale pumping capacity of 300 gpm being sought by SCWA (see Hearing Exh 4 -- *Lloyd Aquifer Pumping Test, Veterans Administration Hospital Well Field, Northport, New York*, prepared for SCWA by Leggette, Brashears & Graham, Inc. ["LBG Pump Test"] April 2001 [revised

¹¹ The VA Hospital has two wells that were installed in the Lloyd Sands prior to the enactment of the statutory moratorium. The wells are owned by the VA Hospital and not SCWA.

Oct. 2001])).¹²

SCWA contended that the data from the VA Hospital pump test could be used to extrapolate and infer the safe yield of the Lloyd Sands. Under the circumstances, however, I conclude this was insufficient for determining the safe yield of the Lloyd Sands as required by the Issues Ruling (see Issues Ruling, at 34). I reach this conclusion on the basis of the Department's established protocol on pump test procedures for public water supply wells.

Appendix 10 of the Division of Water's Technical Operations and Guidance Series ("TOGS") 3.2.1, dated August 31, 2005, sets forth recommended pump test procedures for public water supply permit applications.¹³ Specifically, TOGS 3.2.1 states as follows:

¹² The LBG Pump Test states that "[a] 72-hour aquifer pumping test was performed using the VA Hospital's Lloyd Well No.1. Well No. 1 was pumped at a constant rate of 130 gpm, which is the sustainable rate for this well. Drawdown was measured in the VA Hospital's other on-site Lloyd Well (No. 2) and SCWA's nearby Middleville Road Well No. 3" (see Hearing Exh 4, LBG Pump Test, at 14).

¹³ While TOGS 3.2.1 post-dates the submission of SCWA's application materials in this matter, various of the procedures contained in the protocol had been established by the Department prior to August 2005 (see, e.g., the Department's Division of Water "Recommended Pump Test Procedures for Water Supply Applications - Level One Protocol: Total well field pumping rate of 350 gallons per minute [gpm] or less" dated January 14, 2002).

"TEST PUMPING RATE - The pump test must be performed at or above the pumping rate for which approval will be sought in the water supply application. . . . To reproduce the anticipated stress on the aquifer, the pump test should be done when nearby wells normally in operation are running. Pumping of other wells in the test area should be monitored.

* * *

"OBSERVATION WELLS - At least three observation wells should be monitored during the pump test. . . . Small diameter wells are recommended because the volume of water contained minimizes time lag in drawdown changes. Existing wells can be utilized if they are in good condition and were properly installed."

(see TOGS 3.2.1[2] and [8][emphasis deleted]).

SCWA's pump test for the proposed Well was conducted at a well located at the VA Hospital, rather than at the proposed Well site, and the test involved pumping water at a lower rate of 130 gpm rather than the full-scale pumping capacity of 300 gpm being sought by SCWA. Taking into consideration the Department's protocol and the need to ensure that any use of the Lloyd Sands minimizes potential impacts, in this instance the pump test should have been conducted at the location of the proposed Well, rather than a more remote location, such as occurred here. I do not find that the record adequately demonstrates that the location at the VA Hospital that was used for the pumping test was sufficiently equivalent to using a well at the proposed Well site.

Based upon the divergence from the Department's established pump test procedures, the record is not sufficient to demonstrate that the use of the proposed Well would not negatively impair the Lloyd Sands in terms of safe yield.

Moreover, as outlined in ECL 15-1527, for a public water supply well on Long Island it shall be determined "whether the watershed, which in the case of Long Island shall mean the land surface that represents the recharge catchment area recharging water for each respective well, has been adequately protected" (see ECL 15-1527[4][g]). The record of this proceeding does not indicate that this requisite demonstration was made.

3. Availability of Alternatives

To establish just cause and extreme hardship, SCWA had the burden of demonstrating that there were no available alternatives to utilizing the proposed Well. The record indicates that SCWA considered alternatives other than the proposed Well to address water supply needs in the Northport Zone. SCWA's suggested alternatives at the hearing consisted of:

(i) locating an additional well at an existing well field within the Northport Zone;

(ii) locating an additional well outside of the

Northport Zone;

(iii) installing a nitrate treatment/removal system at the Middleville Road well field; and

(iv) adding a new water main to transport water from the Middle Island-Yaphank area to the Northport Zone (see generally Prefiled Direct Testimony of Herman J. Miller, P.E., June 23, 2006; see also Hearing Exh 4, at 15-18).

Based upon my review of this record, I conclude that SCWA failed to sufficiently explore all of the alternatives to withdrawing water from the Lloyd Sands and, from the information before me, at least one and potentially two of these represent viable alternatives to the proposed Well. In order to demonstrate "just cause and extreme hardship" so as to justify lifting the moratorium, a full evaluation of alternatives is required, and that evaluation must lead to the conclusion that there is no acceptable alternative.

a. Nitrate Removal System

One of the alternatives discussed was the installation of a nitrate removal system at the Middleville Road site. This system would treat the existing drinking water from one of the Middleville Road wells which has been out of service due to nitrate levels in excess of drinking water standards, thereby

rendering the water suitable for human consumption.

In its application, SCWA noted that it was then in the process of installing a nitrate removal system at its South Spur well field in East Northport, but indicated that impediments existed to installing this type of system to treat water in the Northport Zone (Hearing Exh 4, at 17). SCWA identified concerns with cost, noting that a system designed to handle the Middleville Road situation would require in excess of one million dollars, in contrast to the proposal to blend water from the Lloyd Sands which would only cost \$400,000 (id.). SCWA estimated that the total production cost, including operation and maintenance and amortized capital costs for treating nitrate contamination at the Middleville Road site, would be approximately \$2.59 per thousand gallons (see Prefiled Direct Testimony of Herman J. Miller, P.E., June 23, 2006, at 4). In addition, SCWA identified problems relating to space requirements for the nitrate removal system, the lack of buildable land at the Middleville Road site, visual impacts of the construction, the transport of brine resulting from the nitrate removal process to a sewage treatment plant, operating expenses, and the lack of experience with such systems (see Hearing Exh 4, at 17).

Although SCWA cited various practical difficulties with

respect to installation of a nitrate removal system, a review of the record indicates that the viability of this alternative has not been fully explored. For example, further consideration of locations for the nitrate removal system should have been undertaken (see, e.g., Hearing Transcript, at 135-136). Issues concerning visual impacts related to the construction of such a system could likely be addressed through construction design. Similarly, the fact that brine would have to be transported to an off-site location for disposal does not, on this record, appear to be a significant impediment.

Furthermore, the incrementally greater expenses related to the nitrate removal system were not so substantial that they would constitute an "extreme hardship," either to SCWA or its customers. Amortizing the cost of the nitrate removal system over its useful life would result in only a minimal increase in rates that SCWA would be obliged to charge its customers.¹⁴

¹⁴ Even assuming a cost of the nitrate removal system at the Middleville Road site comparable to that at SCWA's South Spur well field site (see Prefiled Direct Testimony of Herman J. Miller, P.E., June 23, 2006, at 4), given the number of SCWA customers and an amortization period of at least twenty years, the cost of the system for the nitrate removal system would be nominal. Petitioners, for example, calculated the increase to be less than a penny per thousand gallons (see Petitioners' comments dated June 14, 2007, on the Recommended Decision, at 11; see also Hearing Transcript, at 57-58).

b. New Water Main to Transport Water

SCWA acknowledged that it currently transports water over long distances, and that SCWA could use water from sources other than the Lloyd Sands for blending purposes at Middleville Road, albeit at additional expense (see, e.g., Hearing Transcript, at 43; Hearing Exh 4, at 16-17). SCWA identified the Middle-Island Yaphank area, where SCWA currently owns property with "adequate water quality," as the closest location for the purpose of importing water to the Northport Zone (see Prefiled Direct Testimony of Herman J. Miller, P.E., June 23, 2006, at 3).

SCWA submitted undisputed evidence that the capital cost to install a water main to bring in water for blending purposes at Middleville Road in lieu of the proposed Well would be approximately \$591,000 per mile for a 16-inch diameter water main and approximately \$792,000 per mile for a 24-inch diameter water main (see Hearing Exh 52). According to SCWA, 22 miles of water main would be required to convey water from the Middle Island-Yaphank area to the Northport Zone at a cost of \$13 to \$17 million (see Recommended Decision, at 22). SCWA would also incur additional expenses for electrical service and costs for booster stations in order to transfer water from a site outside the Northport Zone.

SCWA acknowledged that it has not analyzed the extent to which geographical or other difficulties in laying pipeline or installing related water transport infrastructure would exist (see, e.g., Hearing Transcript, at 393-94, 418-19].

With respect to the costs associated with the transport of water, even assuming a conservative amortization of twenty years on the cost of a piping system estimated by SCWA to be between \$13 and \$17 million, the annual amortized cost of such a capital improvement (at the \$13 million dollar estimate), with interest, would be approximately \$1 million. If this annual cost were spread across SCWA's customer base of approximately 378,000 customers (see Recommended Decision, at 6 [Finding of Fact No. 9]), it would result in an additional annual charge of slightly less than \$3 per customer (see, e.g., Hearing Transcript, at 56-61). Although SCWA subsequently acknowledged that an even longer period of time (75 years) could be used for purposes of amortization (based on replacement)(see Hearing Transcript, at 360), SCWA noted that other economic costs, including impact on bond rating and related infrastructure costs, in addition to the environmental impacts of constructing a water transport system, would have to be considered (see, e.g., Hearing Transcript, at 364-66). Even taking these further cost considerations into account, the estimated expense of such water transport was not

shown to be a significant economic burden on SCWA or its customers, particularly in light of the amortization periods discussed.

Based on this record, neither the nitrate removal system nor water transport was shown to be technically, practically, or economically infeasible. The practical difficulties that were discussed relative to each of the alternatives are not insurmountable. Moreover, considering the estimated costs for a nitrate removal system and for a water transport system, I cannot conclude that the costs for either alternative are so prohibitively expensive to SCWA or its customers so as to constitute "just cause and extreme hardship" to justify granting an exemption to the moratorium for the proposed well. No showing was made that the costs of these alternatives would in any way jeopardize the financial well-being of SCWA or of its customers. This is particularly true here where SCWA's water rates were shown to be below the national average (see, e.g., Hearing Transcript, at 51-52; see also Hearing Exh 148, at 2 [rates that are 40 per cent below the national average]) and also below the rates of other local municipalities (see, e.g., Hearing Transcript, at 60-61). Furthermore, although environmental impacts would result from whatever alternative might be selected, the environmental

concerns relating to the use of the Lloyd Sands are significant. In light of the limited nature of its pristine water resources and the longstanding concerns relative to potential contamination of this aquifer through its use, the Lloyd Sands has been accorded protection through a State-established moratorium. Based on this record, I see no basis to grant an exemption from the moratorium for this proposed Well.

In summary, given the absence of an emergency or extreme condition, the failure to demonstrate the safe yield of the Lloyd Sands, and SCWA's failure to demonstrate that the potential alternatives are not technically and financially feasible, I conclude that SCWA failed to meet the statutory standard of "just cause and extreme hardship."

Water Supply Permit Application

The three sub-issues identified in the Issues Ruling as relating to the determination of "just cause and extreme hardship" are also relevant to water supply permit issuance standards under ECL 15-1503(2) and 6 NYCRR 601.6.¹⁵ A review of these sub-issues demonstrates that on this record a water supply permit could not be issued to SCWA for the proposed Well, even if

¹⁵ As previously discussed, "just cause and extreme hardship" represents a more stringent standard than the traditional requirements that apply to general water supply permit applications.

SCWA had satisfied the "just cause and extreme hardship" standard.

1. Safe Yield of the Lloyd Sands

The determination of safe yield is also relevant to certain permit issuance standards found in 6 NYCRR 601.6(b). Chief among these are 6 NYCRR 601.6(b)(4) -- that the water supply will be adequate to meet the needs of the proposed service area; 6 NYCRR 601.6(b)(5) -- that there will be proper protection and treatment of the water supply and watershed; and 6 NYCRR 601.6(b)(6) -- that the proposed project is just and equitable to all affected municipalities and their inhabitants, and in particular with regard to their present and future needs for sources of water supply (see also ECL 15-1503[2]).

In light of the deficiencies previously discussed, the pump test conducted by SCWA was insufficient for determining safe yield and for making determinations under ECL 15-1503(2), 15-1527(4)(g), and 6 NYCRR 601.6(b). Because of the divergence from the Department's established pump test procedures, staff's review of SCWA's water supply permit application was not sufficiently "vigorous" to establish compliance with permit issuance standards applicable to the proposed well as set forth in ECL 15-1503(2) (see ECL 15-1527[4][g]). Furthermore, it is

not clear from the record the extent to which Department staff made any affirmative evaluation with respect to these required determinations, even if SCWA had presented them in the first instance (see ECL 15-1527[4][g]).¹⁶ I conclude that Department staff should have vigorously evaluated whether SCWA adequately documented that the Lloyd Sands would not be adversely affected by the use of the proposed Well (see ECL 15-1503[2], ECL 15-1527[4][g], and 6 NYCRR 601.6[b][4], [5], and [6]). Given this lack of affirmative evaluation in the record and deviation from the established pump test protocol, it was not adequately demonstrated that the safe yield of the Lloyd Sands would not be compromised by pumping from SCWA's proposed Well.

2. Risk of Contamination to Lloyd Sands

The issue of risk of contamination to the Lloyd Sands arising from SCWA's proposal for an exemption from the moratorium is also relevant to the following water supply permit issuance requirements: 6 NYCRR 601.6(b)(3), that all work and construction connected with the project will be proper and safe; and 6 NYCRR 601.6(b)(5), that there will be proper protection and treatment of the water supply and watershed (see also ECL 15-1503[2]). In

¹⁶ The ALJ's conclusion that Petitioners failed to present modeling experts or model results of their own on the issue of safe yield is not dispositive since it was SCWA's burden to demonstrate that its proposal was in compliance with all relevant standards and regulations (see 6 NYCRR 624.9[b][1]).

addition, ECL 15-1527 requires a determination of "whether the watershed, which in the case of Long Island shall mean the land surface that represents the recharge catchment area recharging water for each respective well, has been adequately protected" (see ECL 15-1527[4][g]). These requisite demonstrations were not made.

In addition, the draft water supply permit prepared by staff (see Hearing Exh 30), does not specifically "require as a permit condition that the water purveyor or authority prepare and submit watershed rules and regulations as described pursuant to section eleven hundred of the public health law" (see ECL 15-1527 [4][g]). In that regard, such rules and regulations for the relevant watershed do not appear in 10 NYCRR part 147 which is applicable to the Department of Health (Suffolk County), nor were they addressed in this record. Further, the permit application materials note that "no published master plan for the SCWA water supply systems" exists (see Hearing Exh 4, at 21).

3. Alternatives to Granting an Exemption from the Moratorium

The final issue identified for adjudication, whether SCWA had considered alternatives to the proposed Well, is also relevant to the permit issuance standard found in 6 NYCRR 601.6(b)(2) -- that the applicant properly considered other

sources of water supply that are or may become available (see also ECL 15-1503[2]). For this proceeding, consideration would include alternatives to SCWA's stated intent to blend water from the proposed Well, as well as an analysis of the costs associated with any alternatives to the proposed Well (see Issues Ruling, at 34).

SCWA contended that it had taken into account all appropriate alternatives to the proposed Well, and the respective costs associated therewith, in conjunction with its proposal. Although SCWA identified some reasonable alternatives to consider, as discussed previously, it failed to fully examine the potential of these alternatives. Based upon this record, at least two are potentially viable alternatives to the proposed withdrawal of water from the Lloyd Sands.

Accordingly, even if SCWA had met its burden of demonstrating that the moratorium should not apply, the record does not contain a sufficient basis to grant a water supply permit.

Moratorium Exemption Request

In sum, based upon the record, I conclude that SCWA's proposed Well is not in a "coastal community." As such, SCWA's

proposal is subject to the statutory moratorium in ECL 15-1528(2). I further conclude that SCWA did not demonstrate "just cause and extreme hardship" as required by the statute to qualify for an exemption from the moratorium.¹⁷

Compliance with Permit Issuance Standards

Because I conclude that SCWA did not demonstrate "just cause and extreme hardship" for granting an exemption from the moratorium, I need not pass on whether SCWA demonstrated compliance with the Department's water supply issuance standards.

If I were to do so, however, I would conclude that, at present, the record is insufficient to determine whether all relevant permit issuance standards have been met by SCWA's proposal. Accordingly, before I could conclude that the water supply permit may be issued, further inquiry would be necessary to resolve these questions.

¹⁷ Petitioners in their comments dated June 14, 2007 on the Recommended Decision argue that the ALJ improperly shifted the burden of proof to the Petitioners on the issues whether the proposed Well is needed and whether it would harm the Lloyd Sands. Based upon my review of the record, including but not limited to a review of the ALJ's Recommended Decision and the Issues Ruling, Petitioners' argument is rejected.

SCWA'S APPEAL OF RULING ALLOWING TESTIMONY

Pursuant to 6 NYCRR 624.8(d)(1), SCWA in its post-hearing brief appealed a ruling of the ALJ made during the adjudicatory hearing allowing the testimony of Petitioners' witnesses, Michael Alarcon and Sarah Meyland.

Following a discussion and analysis of the parties' respective arguments on the appeal of this ruling, the Recommended Decision concludes that SCWA's appeal should be rejected (see Recommended Decision, at 45-51).

SCWA, in its comments dated June 14, 2007 on the Recommended Decision, requests that the Commissioner reject that portion of the Recommended Decision that allows for the testimony of Mr. Alarcon and Ms. Meyland and to strike that testimony from the record.

For the reasons set forth in the Recommended Decision, I concur with and hereby adopt the ALJ's recommendation that SCWA's appeal be rejected. The testimony of Mr. Alarcon and Ms. Meyland shall remain part of this record.

CONCLUSION

Accordingly, SCWA's request for an exemption from the moratorium on the granting of a permit for a public water supply well into the Lloyd Sands is denied. The water supply permit application is dismissed as academic.

For the New York State Department
of Environmental Conservation

By: _____ /s/
Alexander B. Grannis
Commissioner

Albany, New York
October 18, 2007

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