STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

In the Matter of the Petition by	
THE CATSKILL CENTER FOR CONSERVATION AND DEVELOPMENT, INC., CATSKILL MOUNTAIN CHAPTER - TROUT UNLIMITED, INC., PHOENICIA FISH AND GAME ASSOCIATION, INC., AND THEODORE GORDON FLYFISHERS, INC.	DECLARATORY RULING DEC 17-03
for a Declaratory Ruling pursuant to the State Administrative Procedure Act, §204, and 6 NYCRR §619.1	

INTRODUCTION

The above petitioners have requested that the Department of Environmental Conservation ("DEC") issue a Declaratory Ruling concerning the applicability of certain State water quality standards and criteria to a state of facts for purposes of State certification, to the Federal Energy Regulatory Commission, under §401 of the Clean Water Act ("CWA"), and for purposes of the State Pollutant Discharge Elimination System ("SPDES") under §17-0803 of the Environmental Conservation Law ("ECL").

For the sole purpose of issuing this Declaratory Ruling, DEC will assume the facts as set forth in the petition to be correct, without any formal determination as to their accuracy. We take this position for two reasons. First, because the State Administrative Procedure Act ("SAPA") and DEC regulations concerning

Declaratory Rulings (6 NYCRR Part 619) provide neither authorization for nor procedures for the determination by DEC of the accuracy of facts alleged in a petition for a Declaratory Ruling.

Second, whereas §204 of SAPA leaves a response to a request for a Declaratory Ruling to the discretion of the agency, 6 NYCRR Part 619 of the DEC regulations mandates a response, presumably even when essential facts cannot be determined.

It is noted that the hearings now underway before the Federal Energy Regulation Commission ("FERC") will produce a record which FERC will and DEC can use to determine the actual facts. Paragraph 4 of the Memorandum of Understanding between PASNY and DEC, dated May 22, 1978, specifically states that a DEC hearing on the 401 certification, if any, will be held subsequent to the FERC hearing, and that any portion of the FERC hearing record relevant to the §401 certification can be offered into evidence at the DEC hearing.

FACTS

On May 26, 1977 the Power Authority of the State of New York ("PASNY") submitted a revised application to the Federal Engergy Regulatory Commission ("FERC") for a license to construct a pumped storage power project at Prattsville, New York ("Prattsville Project"). On or about May 27, 1977 PASNY applied to DEC for certification of the Prattsville Project pursuant to §401 of the CWA (33 U.S.C. §1341).

On May 22, 1978 DEC and PASNY entered into a Memorandum of Understanding that provides, in pertinent part, for DEC to postpone action on the PASNY request for Prattsville Project certification until after completion of the FERC licensing hearing.

The proposed Prattsville Project would utilize the existing Schoharie Reservoir and a new upper reservoir on Dog Hill. The Schoharie Reservoir is part of the Catskill water supply system of the City of New York. Water for the City of New York passes from the Schoharie Reservoir through the Shandaken Tunnel to the Esopus Creek, then into the Ashokan Reservoir.

During the pumping cycle, when demand for electricity is slack, water from the Schoharie Reservoir would be pumped to the Dog Hill Reservoir for storage. During the generating cycle, when demand for electricity is high, water would be allowed to run from the Dog Hill Reservoir down through a shaft, through turbines, and then be discharged from a tailrace back into the Schoharie Reservoir.

The Schoharie Reservoir is a Class A water (6 NYCRR §879.6, Item #5). The section of the Esopus Creek between the Shandaken Tunnel Outlet and the Askokan Reservoir is a Class A water (6 NYCRR §862.6, Item #555) and is subject to the Standard A(T) for trout water.

QUESTION I

Whether the discharge of water from the proposed upper (Dog Hill) reservoir during the generating cycle would be a "discharge into the navigable waters" resulting from operation of the Prattsville pumped storage facility and therefore a discharge subject to §401 certification?

The discharge from the tailrace into the Schoharie Reservoir during the operation of the Prattsville pumped storage facility is a discharge into navigable waters, and therefore a discharge subject to a §401 certification.

Two questions are apparently being asked. First, whether the Schoharie Reservoir is navigable water under the CWA. Second, whether for purposes of §401 certification, can there be any water quality determination in the absence of a discharge of a pollutant.

The answer to the first question is that the Schoharie Reservoir is a navigable water under the CWA. Section 502(7) of the CWA [33 U.S.C. §1362(7)] defines "navigable waters" broadly, and case law has sustained this interpretation, NRDC v. Callaway, 392 F. Supp. 685 (D.C., 1975). In addition, DEC and PASNY, by entering into the Memorandum of Understanding on May 22, 1978, concerning postponement of the DEC consideration of the certification, have in effect stated that the Schoharie Reservoir is a navigable water.

Second, a discharge for the purpose of a 401 certification is any discharge, not only a discharge which contains a pollutant.

The question under §401 is not whether a discharge of a pollutant will occur but whether there will be an impact on water quality standards due to a discharge.

This conclusion is reached because under §401 of the CWA, a certification is needed for "any discharge" into the navigable waterways not only the "discharge of a pollutant". The statute (33 USC §1341) states that a 401 certification is needed for "any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters...." (Emphasis added.) The use of the phrase "any discharge" indicates that all discharges fall under the 401 program not just a discharge of a pollutant. The word "discharge" is defined in §502(16) of the CWA, 33 USC §1262(16), as follows "the term 'discharge' when used without qualification includes a discharge of a pollutant, and a discharge of pollutants" (emphasis added). Thus, "discharge", when used alone, has a wider meaning than merely "discharge of a pollutant".

The result is that under a §401 certification the inquiry is not whether there is a pollutant and thus a water quality impact but whether water quality standards could be violated regardless of the mechanism of such violation.

QUESTION II

If question I is answered in the affirmative, then for purposes of certifying compliance with §§301, 302 and 303 of the Clean Water Act, would that discharge be a thermal discharge if:

A. with reference to 6 NYCRR §704.2(a)(1), it caused a disruption of the natural seasonal cycle of the Schoharie Reservoir?

B. with reference to 6 NYCRR §704.2(b)(3)(i), it caused the surface water temperature of the Schoharie Reservoir to be increased?

C. with reference to 6 NYCRR §704.2(b)(3)(ii), the Schoharie Reservoir is subject to stratification as defined in Part 652 and the discharge caused a rise in the temperature of portions of the Schoharie Reservoir other than the epilimnion?

Question II, in three variations, essentially asks whether for purposes of §401 certification the discharge from the upper reservoir to the Schoharie Reservoir would be a thermal discharge. Since there is no allegation that "heat" is contained in the discharge, the answer could depend on whether a thermal discharge is defined by its content or its effect. DEC concludes, however, that even if heat were not added to the discharge this is not determinative since a thermal discharge is defined by its effect. Consequently, this discharge from the upper reservoir, because of its effect, is a thermal discharge and the water quality standards for thermal discharges (6 NYCRR 704) apply in the §401 certification process.

"Thermal discharge", although not defined in Part 704 (Criteria Governing Thermal Discharges), is defined in 6 NYCRR §701.1(l) as "one which results or would result in a temperature change of the receiving water". Since a thermal discharge is not defined in terms of its contents or as a temperature differential between the discharge itself and the receiving stream, but is

defined in terms of its thermal effect on the receiving stream, consequently the three specific questions must be answered in the affirmative with some qualifications.

The first specific question, whether a thermal discharge would result if the discharge caused a disruption of the natural seasonal cycle of the receiving body [§704.2(a)(1)] must be answered in the affirmative, without, of course, making a factual determination at this time of what constitutes the natural seasonal cycle or that such disruption will occur in the Prattsville Project.

The second specific question under Question II, whether the discharge would be a thermal discharge if it caused the surface water of the receiving body to be increased [§704.2(b)(3)(i)] must also be answered in the affirmative since any temperature change in the surface water of the receiving body constitutes a thermal discharge. However, it must be noted that under the cited criteria, §704.(b)(3)(i), only an increase of 3°F or greater in the surface water temperature of a lake constitutes a violation of the criteria in the surface water and could lead to denial of §401 certification. Again, this constitutes no factual determination by DEC at this time that, as a result of the Prattsville Project, the surface water of the Schoharie Reservoir will be increased. It also assumes that no modification of the criteria is granted under §704.4.

The third specific question under Question II, whether the discharge would be a thermal discharge if the temperature of portions of the Schoharie Reservoir other than the epilimnion were raised, must also be answered in the affirmative. Any temperature rise in any part of a lake other than the epilimnion, regardless of its magnitude, constitutes a thermal discharge, and a violation of the specific criteria of Part 704. Again, this does not constitute a factual determination that such will happen in the Schoharie Reservoir. It also assumes that no modification of the criteria is granted.

QUESTION III

> If question I is answered in the affirmative, then for purposes of certifying compliance with §§301, 302 and 303 of the Clean Water Act, would a discharge at a temperature over 70°F (6 NYCRR §704.2(b)(2)(i)) from the Shandaken Tunnel into Esopus Creek as a result of project operation or a discharge from the Shandaken Tunnel into Esopus Creek that, as a result of project operation, raised the Esopus Creek temperature by more than 2°F (6 NYCRR §704.2(b)(2)(ii)) be an impairment of the best usage of the Esopus Creek under 6 NYCRR §701.2?

Question III is two questions -- whether the best usage (water quality standards) of the Esopus Creek would be impaired by, first, a discharge of 70°F into the Esopus and second, a rise in temperature of the Esopus of more than 2°. The answer to both questions is yes, assuming that no modification to the criteria is granted.

A consideration of the impact of a discharge on water quality standards under §401 of the CWA is not restricted only to

the water quality standard at the point of discharge, but to all water quality standards that could be impacted, and thus all downstream water quality standards. This is expressly stated in 6 NYCRR 701.2(a). Consequently if, due to the operation of the Prattsville Project, the downstream discharge from the Shandaken Tunnel is greater than 70°F or raises the Esopus Creek temperature more than 2°F (from June through September) then an impairment of the best usage of the Esopus would occur since at least the water quality criteria of Class A(T) would be violated. Whether the water quality standards are violated (thus resulting in an impairment of the best usage of the Esopus) depends upon whether or not a modification of the criteria set forth in 704.2 and 704.3 has been requested and granted as provided in 704.4.

QUESTION IV

> Whether the discharge of water from the Shandaken Tunnel into the Esopus Creek, as modified by project construction or operation, would be "a discharge into the navigable waters" resulting from construction or operation of the Prattsville pumped storage facility and therefore a discharge subject to §401 certification?

Question IV, whether the discharge of water from Shandaken Tunnel after construction and operation of the project is a discharge into navigable waters for the purpose of §401 certification, is answered in the negative as phrased. Unlike the discharge from the upper reservoir into the lower reservoir, which discharge would be created by the project, there currently exists a discharge by the City of New York through the Shandaken

Tunnel. That discharge could be modified by the Prattsville Project since the project could alter the background condition of water entering the intake of the Shandaken Tunnel in the Schoharie Reservoir. Although a discharge from the Shandaken Tunnel as modified by the Prattsville Project is technically not a discharge from the project, nevertheless, as explained in the answer to Question III, the water quality effects downstream in the Esopus must also be considered.

QUESTION V

> If question IV is answered in the affirmative, then for purposes of certifying compliance with §§301, 302 and 303 of the Clean Water Act, would the discharge of water from the Shandaken Tunnel into Esopus Creek be a thermal discharge if:
>
> A. with reference to 6 NYCRR §704.2(b)(2)(i), as a result of project operation the temperature of the discharge exceeded 70°F?
>
> B. with reference to 6 NYCRR §704.2(b)(2)(ii), as a result of project operation the discharge raised the temperature in Esopus Creek?

The first part of Question V asks whether the discharge from the Shandaken Tunnel would be a thermal discharge if as a result of project operation the discharge into the Esopus exceeded 70°F is answered in the same manner as Question IV because the downstream water quality impacts of an upstream discharge must be considered pursuant to 6 NYCRR 701.2 although technically the "discharge" itself does not extend beyond the entry point (plus mixing zone) of the receiving stream. Thus if there is any

temperature change in the Esopus then a "thermal discharge" has occurred at the tailrace of the project in the Schoharie Reservoir (since that is where the discharge enters waters of the State) and the effects of that discharge have extended downstream to the Esopus. And if, as a result of project operation, the temperature of the water exiting the Shandaken Tunnel into the Esopus exceeded 70°F, then the criteria for the thermal standard has been exceeded.

The second part of Question V, which asks whether the discharge from the Shandaken Tunnel would be a thermal discharge if as a result of project operation the discharge raised the temperature of the Esopus, is also answered in the affirmative because the downstream water quality impacts of an upstream discharge must be considered, pursuant to 6 NYCRR 701.2, although technically the "thermal discharge" itself does not extend beyond the entry point (plus mixing zone) at the receiving stream. The only qualification is that the temperature rise in the Esopus, as a result of project operation, must be at least 2°F from June through September for any violation of the thermal water quality criteria to occur.

QUESTION VI

Whether the discharge of water from the tailrace tunnels into the Schoharie Reservoir during the generating cycle would be subject to Title 8 of the Environmental Conservation Law (SPDES), and to §17-0803 in particular if:

A. with reference to 6 NYCRR §704.2(a)(1), it caused a disruption of the natural seasonal cycle of the Schoharie Reservoir?

B. with reference to 6 NYCRR §704.2(b)(3)(i), it caused the surface water temperature of the Schoharie Reservoir to be increased?

C. with reference to 6 NYCRR §704.2(b)(3)(ii), the Schoharie Reservoir is subject to stratification as defined in Part 652 and the discharge caused a rise in the temperature of portions of the Schoharie Reservoir other than the epilimnion?

Putting aside for a moment the specific question of the necessity for a SPDES permit in the presence of a thermal discharge, Question VI in a more general form asks whether a SPDES permit is necessary for the discharge of water from the tailrace tunnel of the Prattsville Project into the Schoharie Reservoir. The answer is yes.

Under the ECL, a SPDES permit is necessary under the circumstances set forth in §§17-0803 or 17-0701.1 Under an analysis of §17-0701.1.a the agency concludes that the release of water from the tailrace into the Schoharie Reservoir is a discharge of industrial waste through an outlet or point source into the waters of the State, even though the facts as presented fail to identify a specific pollutant.

Section 17-0701.1.a requires a SPDES permit to use "any outlet or point source for the discharge of sewage, industrial waste, or other wastes or the effluent therefrom, into the waters of this state...."

Consequently, the question then is whether the discharge of water from the tailrace is the discharge of "industrial waste"

and the agency concludes that it is. The definition of "industrial waste", for purpose of Title 7 of Article 17, is found in §17-0701.2.a:

> "Industrial waste" means any liquid, gaseous, solid or waste substance or a combination thereof resulting from any process of industry, manufacturing, trade, or business or from the development or recovery of any natural resources, which may cause or might reasonably be expected to cause pollution of the waters of the state.

Under this definition the water discharged from the tailrace is a liquid resulting from a process of industry or manufacturing (electric power generation). It is in essence the by-product from the process of generating electricity after extracting the power of the water.

However, the analysis is not complete, under the above definition, without a determination that the substance "may cause or might reasonably be expected to cause pollution of the waters of the state."

Pollution can be defined both generally and specifically. First of all, and generally, pollution is defined, for purposes of the ECL, as "the presence in the environment of conditions and/or contaminants in quantities of [or?] characteristics which are or may be injurious to human, plant or animal life or to property or which unreasonably interfere with the comfortable enjoyment of life and property throughout such areas of the state as shall be affected thereby." ECL §1-0303.19 (emphasis added). Pollution is thus not only defined as the presence of contami-

nants, but also the presence of conditions not previously existing and which conditions may not be related or caused by the addition of contaminants.

More specifically, when focusing on waters of the State, pollution is defined by water quality standards. Section 17-0301.4 of the ECL requires that water quality standards "shall prescribe what qualities and properties of water shall indicate a polluted condition of the waters of the state...." Consequently, an industrial waste (discarded water) which may cause or might reasonably cause a violation of water quality standards falls under SPDES regulation.

Question VI now focuses on the thermal aspects of water quality standards and the following analysis indicates that since thermal water quality standards for the Schoharie Reservoir (Class A) could potentially be violated by the discharge then SPDES applies, regardless of the existence of an identifiable pollutant.

The Schoharie Reservoir is Class A waters. The water quality standards for Class A standards are found in 6 NYCRR 701.4. Item 6 of the general standards (applicable to all classes) lists "thermal discharges" as one of the components of water quality standards, and refers to 6 NYCRR Part 704 for the specifications. Part 704 first sets forth the standards: "All thermal discharges to the waters of the State shall assure the protection and propagation of a balanced, indigenous population

of shellfish, fish and wildlife in and on the body of water." §704.1(a). Part 704 then explains through the use of criteria for various bodies of water (e.g., lakes) what contaminants (usually heat) and conditions constitute a violation of the thermal standard.

Under §704.2(b)(3) criteria are listed that would apply to a lake such as the Schoharie Reservoir, and those criteria basically state that the surface temperature of the lake shall not be increased more than 3°, that warm water should be discharged to the upper layer of the lake (hypolimnion) and that cold water should be discharged to the lower layer of the lake (epilimnion).

As discussed earlier the facts given do not indicate whether warmer or colder water is being discharged and the questions presented concentrate on the effects of the discharge regardless of how they are accomplished. From the viewpoint of DEC, it is unlikely that as a result of the FERC hearing or subsequent DEC hearing a traditional pollutant will not be found. However, even if we assume that the water being returned to the Reservoir is essentially the same water as withdrawn without any significant change in average temperature there is still a thermal discharge because, as explained earlier, thermal discharges are defined by their effect, not their content.

Consequently, any discharge which changes the receiving water temperature, regardless of how that is accomplished, is a thermal discharge. Such a discharge can occur as long as the

criteria of the thermal water quality standards are not violated, or, if the criteria are modified in an individual case, as long as the standard is not violated.

Consequently, any discharge that potentially could violate the thermal water quality criteria or standards could cause "pollution", and thus falls under the SPDES program. As stated in the only Federal case on point "no reasonable purpose would be served by admitting pollution while denying existence of a pollutant", South Carolina Wildlife Federation v. Alexander, 457 F.Supp. 118 at 126 (D.C., 1970). Under Question VI, then, if the discharge caused a disruption of the natural seasonal cycle of the Schoharie Reservoir, caused the surface water temperature of the Schoharie Reservoir to be increased (more than 3°F), or caused a rise in the temperature of a portion of the Schoharie Reservoir other than the epilimnion, a violation of the thermal water quality criteria would occur. SPDES would apply to any discharge which has the potential of causing pollution however remote that occurrence may seem.

However, although not raised by the objectors or by PASNY it must be noted that pursuant to §704.4 PASNY could apply for a modification to the criteria if it appears that any criteria could be violated. In order to obtain such a modification under 6 NYCRR §704.4 they would have to establish that one or more of the criteria are unnecessarily restrictive as to their project and that a modification is possible which would result in criteria

which would still meet the standard (balanced indigenous population).

QUESTION VII

Whether use of the Shandaken Tunnel Outlet to discharge water into the Esopus Creek would be subject to Title 8 of the Environmental Conservation Law (SPDES) and to §17-0803 in particular if:

A. with reference to 6 NYCRR §704.2(b)(2)(i), as a result of project operation the temperature of the discharge exceeded 70°F?

B. with reference to 6 NYCRR §704.2(b)(2)(ii), as a result of project operation the discharge raised the temperature of the Esopus Creek?

The first part of Question VII, whether use of the Shandaken Tunnel outlet to discharge water into the Esopus Creek would be subject to SPDES if, as a result of project operation, the temperature of the discharge exceeded 70°F, is answered in the negative if the question is interpreted to ask if a SPDES permit is necessary for the Shandaken. However, the effect on the Esopus of the discharge into the Schoharie Reservoir must be considered in evaluating the water quality impact of a discharge into the Schoharie Reservoir for the §401 certification and for the SPDES permit for the tailrace. Consequently, SPDES applies, but for the discharge from the tailrace, not the tunnel.

As discussed in response IV, the discharge in question occurs only at one point -- at the end of the tailrace where the discharge enters waters of the State. It then becomes part of the receiving stream and thus becomes a background condition for

downstream users. Downstream users are not responsible for the condition of water in their intake, only in their outlet -- they are responsible for the changes they make to the effluent and the receiving stream. However, the effect of an upstream discharge on downstream water quality standards is not ignored but must be considered in evaluating any water quality impact (6 NYCRR 701.2).

Similarly, the second part of Question VII, whether use of the Shandaken Tunnel outlet to discharge waters into the Esopus Creek would be subject to SPDES, if, as a result of project operation the discharge raised the temperature of the Esopus Creek, is also answered in the negative with the understanding that it must be addressed in the SPDES for the tailrace, and that the downstream impact must raise the temperature at least 2°F from June to September, not merely raise the temperature at anytime, for the cited criteria, 6 NYCRR 704.2(b)(2)(ii) to apply.

POSTSCRIPT

It is to be emphasized that the SPDES discussion here is applicable to the Prattsville Pumped Storage Project only, and is not applicable to every impoundment.

It is significant that the Prattsville Project is not a hydro-electric project that depends upon an impoundment of a free flowing steam. Under such a situation an impoundment is placed

in a natural watercourse which then acts to store the natural flow of a stream and to preserve its height and hydro potential. However, with a pumped storage project such as Prattsville water is physically removed from its course and, through the application of power, made to flow uphill and is totally removed from its source. It is then physically returned to the receiving stream. This process differs significantly from an impoundment which stores the water in the original stream, and then releases it. The dam retards the flow, whereas the pumped storage project removes the flow from the water body and then returns it. It is in this sense that the pumped storage project is analogous to an industrial process that removes water from a stream, changes it and then discards it back to the same stream.

In addition, although DEC concludes that a SPDES permit is necessary for the Prattsville tailrace, such a requirement adds little to this application process. With a Federal Draft Environmental Impact Statement prepared and the FERC hearing exploring the water quality issues the essential facts and conclusions on the merits of the water quality impacts are already being explored in the FERC hearing and that record, supplemented if necessary, would be used in the DEC §401 certification. The SPDES requirement will similarly use the same record to establish, if a permit

can be issued, the effluent limits, monitoring and reporting conditions, and other operational conditions that would otherwise be found in the §401 certification.

DATED: November 26, 1980

Richard A. Persico
Deputy Commissioner/General Counsel