



State of New Jersey

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M E M O R A N D U M

**TO:** Bradley M. Campbell, Commissioner

**THROUGH:** Ernest Hahn, Assistant Commissioner *ETH*  
Land Use Management

**THROUGH:** Leslie McGeorge, Administrator *LMcG*  
Water Monitoring Management

**FROM:** Alfred Korndoerfer, Chief *AK*  
Bureau of Freshwater & Biological Monitoring

**SUBJECT:** Rulemaking Launch Memorandum  
N.J.A.C. 7:9B Surface Water Quality Standards  
Proposed Amendments

**DATE:** October 11, 2002

The Water Monitoring Management Element (WMM) is preparing revisions to the existing Surface Water Quality Standards (SWQS) (N.J.A.C. 7:9B). This memorandum is to update you and Senior Staff on the status of this rule. While the SWQS are set to expire on April 17, 2003 this proposal will amend the current rule, not readopt the entire rule. The Department is preparing a request for waiver to the sunset date for the reasons set forth in the issues sections of this memorandum. In accordance with past discussions and direction, this proposal includes the following amendments:

- 1) Upgrading the antidegradation designations of fifteen (15) waterbodies based either upon their exceptional ecological significance or their exceptional water supply significance. The waterbodies were referenced in the Governor's press release on Earth Day 2002 (see attachment 1);
- 2) Reclassifying twelve (12) waterbodies based upon stream sampling data from the Division of Fish and Wildlife indicating the suitability of the waters to support trout populations, (this includes reclassifications of portions of Lopatcong Creek and Peckman River from FW2-NT to FW2-TM) of which nine are being upgraded to a higher classification (see attachment 2). The stream classification upgrades of Lopatcong Creek

- and Peckman River are based upon the Bureau of Freshwater Fisheries' resampling efforts, which have confirmed that trout maintenance is an existing use in these waters;
- 3) Proposal, for the first time in New Jersey, of wildlife criteria for DDT, Mercury, and PCB's (0.000004, 0.000530, and 0.000072 parts per billion ( $\mu\text{g/L}$ ) respectively, applicable to all surface water classifications as maximum allowable concentrations, as per the Department's agreement with the U.S. Fish and Wildlife Service and the USEPA);
  - 4) Adding definitions for "bioaccumulation factor" and "bioconcentration factor"; and,
  - 5) Some minor changes to the rule in order to clarify language.

In January 2002, amendments to the SWQS, which had been proposed December 2000, were adopted. However, not all of the proposed amendments were adopted at that time. The proposed revisions to the antidegradation policies of the SWQS could not be adopted since they were too closely linked to portions of the proposed Watershed Rules, which were ultimately not adopted. Likewise, as a result of comments received on the proposal, several other portions of the proposal, such as changes to the implementation of the arsenic criterion, were not adopted. Based upon the comments received on the December 2000 proposal, and as part of the Department's continuing efforts to restore, maintain, and enhance the chemical, physical and biological integrity of New Jersey's waters, to protect scenic and ecological values, and enhance the domestic, municipal, recreational, and other reasonable uses of the State's waters, the WMM anticipates recommending additional amendments to the SWQS as part of the readoption of the SWQS. The following is a list of known components of the SWQS that, will be reviewed and as necessary, revised, as part of the readoption of the SWQS:

- Review and revise antidegradation policies
- Review and, as necessary, revise human health and aquatic criteria
- Review TDS, Nitrate, and Cyanide criteria as discussed in the 2002 Response Document
- Consider longer averaging periods for acute aquatic life protection criteria for metals
- Consider prohibition of discharges in areas supporting Threatened and Endangered species

The SWQS Program anticipates reviewing these SWQS components and drafting a proposal for readoption with amendments of the entire SWQS for publication in the NJ Register late in calendar year 2003.

**a. N.J.A.C. Citation and Title of Rule**

N.J.A.C. 7:9B, Surface Water Quality Standards.

**b. Statutory Authority**

The New Jersey Water Pollution Control Act (N.J.S.A. 58:10A-1 *et seq.*), the Water Quality Planning Act (N.J.S.A. 58:11A *et seq.*) and the Department of Environmental Protection Act of 1970 (N.J.S.A. 13:1D-1 *et seq.*) authorize the development and implementation of New Jersey's Surface Water Quality Standards. The Water Quality Planning Act specifically states that one of its goals is to maintain the quality of those surface and ground waters that are better than standards.

**c. Purpose of Rule**

The SWQS support the restoration and maintenance of the chemical, physical, and biological integrity of the State's surface water resources by identifying the quality of water needed to

support the various uses of the State's waters. In addition, the SWQS are utilized in setting discharge standards for site remediation decisions and regulated discharges to surface water. The achievement of these goals will provide protection of public health and the enhancement of domestic, municipal, recreational, industrial and other uses of surface water.

d. **Who Will Be Affected By The Rule And How They Will Be Affected**

The revisions to the rule will apply to all point and nonpoint dischargers to surface water, and all persons or activities adversely affecting, or potentially affecting water quality or designated uses for the waters of the State. More specifically, NJPDES permitted dischargers currently holding Discharge to Surface Water (DSW) permits located on the waters proposed for reclassification to a higher classification or antidegradation designation which will need to expand, or applicants for new discharges to these waters, will be affected by this proposal.

Reclassifications to reflect the proper trout status will ensure that the existing trout uses of the waterbodies are reflected in the designated uses and that the appropriate criteria are used in establishing regulatory limits. (When a waterbody is reclassified from nontrout (FW2-NT) to trout maintenance (FW2-TM) or trout production (FW2-TP), more stringent criteria apply for dissolved oxygen (DO), temperature, ammonia, and total suspended solids. When a waterbody is reclassified from FW2-TM to FW2-TP, more stringent criteria apply for DO and temperature.) The trout based reclassifications will also ensure that if permits are issued for wetlands, appropriate transition areas are required to protect adjacent wetlands. Designation of waters as C1 will result in a higher level of antidegradation protection. Potentially all parameters will be affected in NJPDES permits when a waterbody is designated as Category One (C1). Category One waters are to be protected from measurable or calculable changes in water quality for all pollutants.

If the proposed trout reclassifications are adopted, affected permits could be reopened (immediately or at renewal) and more stringent permit limitations issued if the discharge is causing, or has the potential to cause, an instream violation of the more stringent criteria.

If the proposed reclassifications to FW2-TP are adopted, the conditions in a freshwater wetlands permit, such as the size of wetlands transition areas, applicability of certain general permits, and waiver standards for wetlands of exceptional resource value may be affected. Waters classified as trout production waters are considered waters of exceptional resource value under the Freshwater Wetlands Act Protection Rules (N.J.A.C. 7:7A).

The proposed reclassifications will also affect the implementation of the Water Quality Management Planning Rule utilized by the Watershed Management Element. If adopted, the upgraded stream classifications will be applied when application is made to the Department to amend a Water Quality Management Plan (WQMP) for either new construction or the expansion of an existing facility.

The addition of new Wildlife Criteria will potentially affect new and existing NJPDES permit holders with water quality based effluent limits for DDT, mercury, and PCBs. However, the implementation of the wildlife criteria will necessarily have to take into account the quantitation limits for each of the three parameters (see Table 1).

Table 1. Comparison of New Jersey based Wildlife Values, Human Health Criteria, and Quantitation Limits (QLs; in micrograms per liter, µg/L)

<u>Compound</u>	<u>Wildlife Value</u> (µg/L)	<u>Human Health Criteria</u> (µg/L)	<u>QLs (µg/L)<sup>1</sup></u>	<u>EPA Method</u>
DDT	0.000004 (sum of DDT + DDE + DDD)	DDT: 0.000588 DDD: 0.00083 DDE: 0.000588	0.02	508
Total Hg	0.00053	0.14	0.0005	1631
Total PCBs	0.000072	0.00017	0.00005 - 0.001 (congener specific)	1668A

<sup>1</sup>EPA Method 1668 (PCB Congeners): Minimum Levels of Quantitation range from 0.00005 to 0.001 µg/L for individual congeners when common laboratory contaminants are present. Without interferences, the quantitation level is 0.00001 µg/L for aqueous samples. EPA Method 1631 (Mercury): Minimum Level of Quantitation is 0.0005 µg/L.

e. Programs Affected

The SWQS are utilized by:

- **NJPDES Discharge to Surface Water Program** - Serve as the basis for development of Water Quality-Based Effluent Limitations (WQBELs) to protect or improve the existing water quality and designated uses.
- **NJPDES Ground Water Permitting Program** - Basis for regulating ground water discharges flowing to surface water to prevent adverse impacts to surface water quality and designated uses.
- **Site Remediation Program** - Basis for the Remediation Standards (for sites potentially impacting surface water) and for regulating ground water discharges flowing to surface water to prevent adverse impacts to surface water quality and designated uses.
- **Land Use Regulation Program** – As per the Freshwater Wetlands Act Protection Rules, reclassification to FW2-TP will result in the surrounding wetlands being protected as fresh water wetlands of exceptional resource value. This will initiate regulatory actions appropriate for the protection of these wetlands.
- **Bureau of Freshwater Fisheries** - Identification and protection of fishery resources.
- **Water Supply Program** - Protecting source waters to provide raw water at a quality desired for the public health and welfare.
- **Watershed Management Element** - Implements the Water Quality Management Planning rule which is responsible for development of Water Quality Management Plans which establish requirements that are intended to result in surface waters that are in compliance with the SWQS.

f. Policy Issues

The following policy issues pertain to implementation issues identified by various DEP programs during the development of this rule proposal. The issues identified are not being addressed in this SWQS Rule Proposal, but are expected to be discussed further as part of the future SWQS Readoption rule making effort:

**(1) Will the Implementation of the Proposed C1 Antidegradation Designations Reduce / Eliminate the Transfer of Waters to Reservoirs?**

Implementation of the antidegradation protections afforded by designating reservoirs as C1 may restrict the transfer of water into the reservoirs. Inherent in changing the reservoir classifications to C1 is a decision that the quality of the water in the reservoirs must be protected from degradation. Transfers of water to these reservoirs have, in many cases, been part of the basis for the safe yield calculations and regular operation of these reservoirs. Any limitation on existing transfers would exacerbate the water shortages resulting from the ongoing drought. The antidegradation provisions of the SWQS are intended to protect the quality of water existing on the date that the waterbody is designated as C1. Under this provision, those diversions which have been made prior to the C1 designation would be allowed to continue as long as the quality of the water being diverted does not measurably degrade the quality of the water in the reservoir. It should be noted that the Department currently does not generally monitor water quality in the reservoirs proposed to be upgraded. In order to implement the new antidegradation provisions into the water diversion process, the Department will need to determine how it will evaluate existing water quality in the reservoirs. New or increased diversions would have to be evaluated pursuant to the requirements for C1 waters and might not be allowable. This would be a new practice of the Department, because antidegradation provisions have not previously been applied to diversions. However, without application of the antidegradation provisions to new or expanded diversions, the water supply reservoirs would be susceptible to degradation.

**(2) In Implementing the C1 protections for the proposed waterbodies, how will the Department deal with the impacts of “un-utilized wastewater flow”?**

Historically most dischargers with “un-utilized” permitted flow, have been ‘grandfathered’ from having to evaluate the water quality consequences of going from their current discharge levels to their permitted discharge levels. If dischargers are allowed to increase the loading to the proposed C1 waterbodies, without first performing an antidegradation analysis, the existing water quality in those C1 waterbodies may not be protected. If the quality of water in water supply reservoirs is to be maintained, these previously permitted, but unutilized flows must meet the SWQSs antidegradation requirements. However, requiring these discharges to conduct antidegradation analyses and maintain the actual, existing water quality may be perceived as taking away a property right imparted to them by the State, as well as imposing a “defacto” building ban on contributing communities.

In discussing this issue with the affected programs, it was suggested that facilities having significant unutilized flow would have two primary options in complying with the antidegradation provisions. The first option would be to maintain their current loading level as their flows increased. Maintaining loadings while increasing flows would satisfy the SWQS antidegradation provisions. The second option would be for them to do the necessary water quality studies to show that going to their permitted flow/increased loading could be done without degrading water quality. Implementation of these options may require changes to the antidegradation policies and the planning rules, which are not the subject of this rulemaking.

A related issue concerns the impact to upstream dischargers of designating the reservoirs as C1. Under existing the SWQS rule, any new or expanding discharger located either upstream of a reservoir, or upstream of a diversion to a reservoir, designated as C1 would

have to conduct a water quality analysis to demonstrate "no measurable change" at the C1 boundary condition (be it the inlet into the reservoir or the point of diversion). Again, the impact of complying with the "no measurable change" in water quality may be significant. This is a separate issue from the prohibition in the current SWQS against designating regulatory mixing zones within 1500 feet upstream and 500 feet downstream of any potable water supply intakes, regardless of the antidegradation designation of the water body.

**(3) In implementing the C1 antidegradation provisions of the SWQS, how will the Department factor in water allocation permits?**

The water allocation process has not historically included any antidegradation analysis. However, water allocations, by reducing the quantity of water available for dilution, and thus increasing the concentration of pollutants in the water, can have just as significant an impact on water quality as an increase in pollutant loading. Increased water allocations, by reducing the quantity of water in a waterbody, can result in the need to recalculate TMDLs, and therefore to adjust wasteload allocations (WLAs) and load allocations (LAs). This may result in permits being reopened and new limitations being incorporated into those permits. If the water quality in the proposed C1 waterbodies is to be protected, this issue needs to be addressed.

**(4) Are the SWQS applicable to Non-Point sources of pollution?**

Guidance from the NJ Attorney General's Office indicates that while the Department has sufficient statutory authority to apply antidegradation concepts to NPS, the Dept has, to date, not exercised such authority and has relied on a Best Management Practices (BMP) approach to managing NPS. Accordingly, if the SWQS-C1 antidegradation provisions are to be made applicable to non-point sources, an amendment to the SWQS, clarifying how the antidegradation provisions apply to non-point sources of pollution and addressing how the demonstration / analysis will be done, would have to be drafted, proposed and adopted. The Department will also need to provide a justification for applying the antidegradation provisions to NPS as part of the federal standards analysis. Please note that this action is likely to raise the issue of how the Department intends to implement antidegradation of C2 waters related to non-point sources.

**g. Legal Issues**

**(1) Can the SWQS be readopted before the sunset date?**

The SWQS expire on April 17, 2003. If a proposal to readopt the SWQS is filed before the expiration or "sunset" date, under the APA the expiration date would automatically be extended by 180 days to October 14, 2003. In order to accomplish the upgrade of these water bodies to C1 as expeditiously as possible, this proposal does not include readoption of the SWQS. Accordingly, the Water Quality Standards Program will be seeking the Commissioner's support in applying to the Governor's Office for an extension of the expiration date for a period of two years. In addition to simplifying the adoption of these amendments, this will allow the Department time to further study and discuss potential amendments to the rules for inclusion as part of the readoption. Issues currently being considered for amendment as part of the readoption of the SWQS include: Implementation procedures for antidegradation policies; Antidegradation policies for wetlands; Use attainability analysis for the Delaware Estuary (Philadelphia - Camden area) and the NY/NJ Harbor Estuary because these waters are not classified for primary (swimming) and secondary (fishing) contact recreation; Criteria for Wetlands; Review/revision of criteria

for temperature, total dissolved solids, nitrates, cyanide and dissolved oxygen; and, Review and as necessary revise aquatic and human health protection-based criteria.

**(2) Potential comment on lack of inclusion of the Paulins Kill River for reclassification on the basis of Threatened and Endangered species**

During proposal of amendments to the Surface Water Quality Standards the Department received comment from the US Department of Interior, Fish and Wildlife Service, suggesting that the failure to include in those amendments reclassification of portions of the Paulins Kill watershed, Sussex County which harbors one of the few known populations in New Jersey of the Federally endangered dwarf wedgemussel was inappropriate. The Fish and Wildlife Service has previously requested that this waterbody be reclassified. The Fish and Wildlife service has assisted with population surveys and other information supporting reclassification. The Service asserted that it, along with Department Fish and Wildlife personnel, had been assured that the Paulins Kill would be reclassified. The Department, in response to this comment and comments regarding the Peckman River and Lopatcong Creek, did not commit to reclassification of the Paulins Kill, but indicated that the requests for these water bodies were pending consideration. (see 34 N.J.R. 582, January 22, 2002). Reclassification of the Paulins Kill is not included in this proposal. It is likely that further comment will be received. A prime factor for classification of several waterbodies in this proposal is the presence of threatened/endangered species. Should some group challenge the Department for failure to include the Paulins Kill for reclassification, it may be difficult to justify why that waterbody should not be included in light of its extraordinary water dependent threatened/endangered resource value.

**(3) Justification for upgrading antidegradation designation of targeted water supply reservoirs**

During initial discussions in review of the proposal, concern has been raised regarding the justification for designating nine water supply reservoirs for upgrade on the basis of population served alone. The Attorney General's office has expressed concern that, absent further justification, there is some litigation risk. Further, assuming the reclassification of the reservoirs withstands any challenge that may be made, there is concern that there is no basis to differentiate the larger reservoirs from all other reservoirs and that the Department would have a difficult time if it were inclined to deny petitions for rulemaking that could be filed to have all reservoirs of any size similarly upgraded.

**h. Experience of Other States**

Through the Great Lakes Initiative, wildlife criteria have been promulgated by the states bordering the Great Lakes. In addition, some of the Great Lakes states have adopted wildlife criteria on a statewide basis (e.g. -New York). Other states, not bordering the Great Lakes, have also adopted wildlife criteria (e.g. - California, Washington).

**i. Members of the Rule Writing Team**

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**j. Promulgation Schedule**

May 20, 2002	Assignment of Rule Manager
May 31, 2002	Designation of Rule Writing Team
August 1, 2002	Launch meeting of affected programs held, and determine if Interested Party Review needed
October 11, 2002	Rule Launch Memo released
October 11, 2002	Draft rule finalized and forwarded to the Office of Legal Affairs, and DAG for review
October 15, 2002	Completion of DAG, and OLA review
October 15, 2002	Revisions to Proposal language completed
October 15, 2002	Rule package to Commissioner for review.
October 17, 2002	Commissioner signs rule proposal
October 17, 2002	Rule to Office of Administrative Law
November 18, 2002	Rule public noticed in New Jersey Register beginning of 60-day comment period (State)
December 10, 2002	Public hearing
December 18, 2002	Public hearing
January 17, 2003	Close of 60 day Public comment Period, beginning of preparation of response to comments document.



March 21, 2003	Response to comments document and draft adoption document completed and forwarded to Program Managers, DAG, and OLA for review.
April 11, 2003	Review completed by the Program Managers, DAG, and OLA of the draft adoption document; with comments returned to Rule Manager.
April 28, 2003	Final revisions to the Rule Package completed and forwarded to the Senior Staff.
May 12, 2003	Rule package to Commissioner for review.
May 26, 2003	Commissioner sign-off, rule to Office of Administrative Law.
June 23, 2003	Rule Adoption

**k. Resource Needs**

Approximately \$2,000 needed for rule related operational costs to cover the cost of legal advertisements, public hearing(s), and stenographer(s).

**l. Interested Party Review**

Not applicable

**m. Consultation with Outside Groups/Interests**

No additional consultation anticipated. An inter-agency committee, comprised of representatives of the NJDEP, USEPA, and USFWS, worked on derivation of the water quality criteria for the protection of wildlife.

**Distribution:**

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Kurt Powers, DFG&W, Bureau of Freshwater Fisheries

**Waters Determined To Be Of Either Exceptional Ecological Significance or  
Exceptional Water Supply Significance**

<b>Basin</b>	<b>Waterbody</b>	<b>Current Classification</b>	<b>Proposed Classification</b>
Atlantic River Basin	Doughty Reservoir (Atlantic City)	FW2-NT	FW2-NT(C1)
	Glendola Reservoir (Glendola)	FW2-NT	FW2-NT(C1)
	Manasquan Reservoir (Oak Glen)	FW2-NT	FW2-NT(C1)
Delaware River Basin	Assiscunk Creek (Columbus) - Head waters to confluence with Barkers Brook, including all tributaries	FW2-NT	FW2-NT(C1)
	Pequest River (Townsbury) - Lehigh and Hudson River railway bridge to the northern boundary of Pequest Wildlife Management Area	FW2-NT	FW2-NT(C1)
	(Townsbury) - Upstream boundary of Pequest Wildlife Management Area boundary to the downstream boundary (segment that is not C1 already)	FW2-TM	FW2-TM(C1)
	Flat Brook - Flatbrook-Roy Wildlife Management Area boundary to Delaware River (portions that are currently designated as C2)	FW2-TM	FW2-TM(C1)
Passaic, Hackensack, and New York Harbor Complex Basin	Boonton Reservoir / Jersey City Reservoir (Boonton)	FW2-TM	FW2-TM(C1)
	Charlotteburg Reservoir (Charlotteburg)	FW2-TM	FW2-TM(C1)
	Oradell Reservoir (Oradell)	FW2-NT	FW2-NT(C1)
	Wanaque Reservoir	FW2-TM	FW2-TM(C1)
Raritan River Basin	Beaver Brook (Annandale) - Beaver Avenue bridge downstream to the lower most I-78 bridge	FW2-TM	FW2-TP(C1)
	South Branch Rockaway Creek (Clinton) - Headwaters to Lake Cushetunk, including all tributaries	FW2-TM	FW2-TM(C1)
	Round Valley Reservoir (Clinton)	FW2-TP	FW2-TP(C1)
	Sidney Brook (Grandin) - Headwaters to its confluence with South Branch Raritan River, including all tributaries	FW2-NT	FW2-NT(C1)
	Swimming River Reservoir (Red Bank)	FW2-NT	FW2-NT(C1)

## Reclassifications Recommended by the Bureau of Freshwater Fisheries

Basin	Waterbody	Current Classification 1	Proposed Classification
Delaware River	Tunnel Brook (Oxford Mtn.) Entire length	[FW2-TM]	FW2-TP(C1)
	Lopatcong Creek (Phillipsburg) From a point 560 feet upstream of Penn Central railroad track to Delaware River	FW2-NT	FW2-TM
	Pequest River trib. (Janes Chapel) - Headwaters and tributaries downstream to the boundary of Pequest Wildlife Management Area	[FW2-TM]	FW2-TM
	Bowers Brook (Hackettstown) Source downstream to Rt. 517	[FW2-TM]	FW2-TP(C1)
Passaic River	Macopin River (Newfoundland) Echo Lake dam downstream to Pequannock River	FW2-TM	FW2-TP(C1)
	Mill Brook (trib.) (N. of Union Hill) Entire length	[FW2-TM]	FW2-TP(C1)
	Peckman River (Verona) From a point 1,300 feet (straight line distance) upstream of Ozone Avenue bridge to Main Street bridge	FW2-NT	FW2-TM
	Pequannock River (Charlotteburg) Outlet of Charlotteburg Reservoir downstream to, but not including, Macopin Reservoir	FW2-TM	FW2-TP(C1)
	Wallace Brook (Randolph) Source downstream to, but not including, Hedden Park Lake	[FW2-NT]	FW2-TP(C1)
Raritan River	Raritan River (S/Br.) (trib.) (E. of Budd Lake) Entire length	FW2-NT	FW2-TM
	Raritan River (S/Br.) (trib.) (W. of Budd Lake) Entire length	[FW2-NT]	FW2-NT
	Raritan River (S/Br.) (trib.) (High Bridge) Entire length	[FW2-TM]	FW2-TM

<sup>1</sup> Brackets around a current classification indicate that the waterbody is not specifically named or listed in the Surface Water Quality Standards and has therefore, by default, assumed the classification given herein.