Strengthening New Jersey's Anti-Degradation Regulations

By

Douglas O'Malley

Clean Water Associate

New Jersey Public Interest Research Group

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I. Executive Summary

New Jersey's anti-degradation laws need to be updated and strengthened. The Surface Water Quality Standards, which document the designation status of all New Jersey's surface waters, were last fully approved in April of 1998. They were last revised in the early 1990s. In that time, the need to protect New Jersey's waters has grown tremendously, as the state has grown at unprecedented levels, and in rural areas and pristine watersheds unaccustomed to rapid development.

Our waterways throughout the state, from small creeks to our largest rivers and reservoirs, provide us with our drinking water, habitat for the state's threatened and endangered species and unique recreational and ecological opportunities. Currently, none of these important criteria and uses are explicitly protected under the anti-degradation regulations of the state. The current New Jersey regulations do not specifically define these criteria, as opposed to our neighboring state's policies that explicitly include and define public drinking water sources, habitat for endangered and threatened species and areas of ecological significance.

New Jersey's neighbors, while they do not have perfect programs, have attempted to link designating protection for sensitive waterways with these three crucial criteria. New York links its anti-degradation standards of its drinking water sources with public health concerns, citing it as key criteria for limiting discharge. Both Pennsylvania and New York directly link the habitat of waterways that serve endangered and threatened species as a trigger for anti-degradation protections. While New Jersey's regulations say they consider exceptional ecological significance, there is no biological assessment standard set, despite the fact the state conducts thousands of tests annually. Both Pennsylvania and New York have biological benchmarks and waterway reference points listed as criteria for higher levels of anti-degradation protection.

New Jersey's regulations, even when they attempt to offer stringent anti-degradation protections, are not specific enough to give them any weight. And they leave off their list of criteria some of the most important reasons to ensure waterways are protected – their status as drinking water sources and the habitat they provide for endangered and threatened species.

The state needs to promulgate regulatory changes to its anti-degradation program in the near future, and specifically it needs to strengthen the criteria for the state's Category One waters to include drinking water supply, habitat for threatened and endangered species and the ecological health of the stream. The state also needs to institute well-defined regulations that do not leave every protection decision at the discretion of the Department. The state needs to require a provision that the Department "shall" upgrade to Category One if a waterway segment fulfills all three criteria below:

a. **The water segment serves as a source for public water supply**
b. **The water segment is located in an area of Special Concern or above on the Landscape Project's Threatened and Endangered Species Habitat Map.**
c. **The water segment possesses significant natural features, and is a Federally designated as "Wild and Scenic," located in an area identified as 'Special Concern' by the State Planning Commission or drains to any National Wildlife Refuge or any other federal public land.**

The state should also strongly consider adding biological assessment as one of the criteria that would trigger an increased level of protection. The state could use its extensive biological assessment network of stream and river testing sites to protect pristine, biologically diverse waterways before they get polluted instead of identifying them when they have already become degraded.

Beyond merely altering the regulations, the state must ensure that these changes are enforced. The state DEP must be pro-active in enforcing discharge restrictions for these Category One waters, which on the Federal level are Tier 2.5 waters, and in regulating non-point source pollution through the pollution permitting program in the same way point source pollution is permitted and regulated. The Department must conduct discharge and non-point source reviews for proposed projects and rigorously review permit once they have issued. **Most of all, the Department must ensure that the state's anti-degradation regulations offer strict guidance, not just mere suggestion, to protect the state's most vital and pristine waterways.**

II. Problem

The spread of new development has made New Jersey the most densely populated state in the nation. Between 1982 and 1997, development increased by 34 percent, the highest rate in the nation. From a land use perspective, the spread of impervious surfaces and new homes increasingly places more stress on water quantity and water quality. In a study released by the Center for Remote Sensing and Spatial Analysis at Rutgers University in November, 2001, which used a New Jersey DEP land use/land cover digital database and contains detailed landscape change information from 1986 to 1995, the pure acreage growth and loss of ecologically sensitive areas is immense. Annually, New Jersey adds nearly 16,000 acres of new development while losing more than 9,600 acres of farmland, 4,200 acres of forest and 2,600 acres of wetlands. Impervious surface is being created at the rate of 4,200 acres per year. Total new development was equal to 135,764 acres, or an area equal to Union and Essex counties combined, and more rural counties with sensitive rivers and reservoirs experienced the fastest growth rate, starting with Burlington County and then Ocean, Monmouth and Gloucester Counties, in descending growth rates.

This incredible growth in development does much more than alter our rural and suburban landscape. It taxes dwindling water quantities with increasing numbers of users who diminish recharge capacities for our natural cycle of water supply. Increased development also poses a very direct problem to water quality. As we increasingly build closer to our waterways, we are exposing them to higher and higher levels of run-off, or non-point source, pollution from everything from dumped motor oil to fertilizers on our lawn to accumulated grime on our roads. **The New Jersey Department of Environmental Protection [DEP] cited non-point source pollution as significant a factor to declining water quality as point sources in 63 percent of the sites tested and a more significant factor in 16 percent of the sites tested, in a 2000 report.**

In a recently released study in February, 2002, entitled "U.S. Drinking Water Challenges in the Twenty-First Century," a joint study by researchers from the Harvard School of Public Health, Harvard Medical School, the U.S. Geological Study and the Natural Resources Defense Council, addressed the issue of long-term vitality for the nation's drinking water supply. The study urged drinking water source protection as a long-term solution for protecting drinking water quality and reducing the need for treatment. The study cited the 1996 amendments to the Safe Drinking Water Act as placing a spotlight on ensuring the protection of drinking water sources. The study also cited the recent Executive Order of New York Governor George Pataki to mandate increased protection for the Croton Watershed (which provides water to New York City) by designating it as a Critical Natural Resource. "An interesting case study of land use issues, including competing needs and externalized costs, is New York City's recent decision to invest in upgraded protection of its Catskills watershed to avoid the high costs of building a filtration plant. The city estimated that building the filtration plant would cost $6 billion to $8 billion in capital, with annual operating expenses of about $300 million….New York City chose to invest in the protection of its drinking water source, a decision supported, at least in the short run, by a scientific review by the National

Research Council." (Environmental Health Perspectives, Feb. 2002, p. 49) **The report's conclusions emphasize that the benefits of instituting protections for drinking water sources will provide long-term health and public benefits.**

Currently, the state of New Jersey's watersheds is deteriorating. From 1997 to 2000, 57 percent of New Jersey watersheds have declined in quality and nearly all New Jersey waterways are vulnerable to even more decline in the future, according to EPA date from last year. There is a clear need to revise the state's anti-degradation laws to ensure that the goal of the anti-degradation policy "to restore, maintain and enhance the chemical, physical and biological integrity of its waters, to protect the public health, to safeguard the aquatic biota [and] protect scenic and ecological values" (N.J.A.C. 7:BB-1.5 (a)(2) is being earnestly implemented for the state's most pristine and sensitive waterways. New Jersey, which faces so many pressures, should be a leader in the region with its active protection of valuable water sources. **Yet, New Jersey's anti-degradation laws lag behind its neighbors, including Pennsylvania, New York and Massachusetts who have taken steps in the last few years to update and expand their regulations and to move proactively to protect drinking water sources.**

III. Drinking Water and Public Health

New Jersey's anti-degradation regulations, especially those pertaining to the most sensitive and pristine waterways, do not adequately account for their status as major sources of drinking water for state's residents. **The state does not give the highest level of protection possible under the Clean Water Act to the state's reservoirs nor rivers that provide drinking water. Nor does it explicitly list drinking water as a criteria for receiving the second highest level of protection, Category One, and does not upgrade waterways because they provide drinking water.**

In the definition in the Surface Water Quality Standards of Category One waters, it lists multiple broad criteria to be considered that will ensure "no measurable changes in water quality characteristics because of their clarity, color, scenic setting, other characteristics of aesthetic value, exceptional ecological significance, exceptional recreational significance, exceptional water supply or exceptional fisheries resource." [N.J.A.C. 7:9B-1.5] But the more specific criteria do not articulate how to define these broad definitions or enforce them.

The five specific Category One criteria only focus on three areas: park land waters, trout streams and shellfish waters. Drinking water is not listed as a criteria. The criteria include [N.J.A.C. 7:9B-1.5 (d)]:

1. Waters that originate wholly in Federal, interstate, state, county or municipal parks, forests, fish and wildlife lands, or flow through or border these lands.

2. Trout streams [trout production streams] and their tributaries, and trout maintenance streams that are upstream

3. Shellfish waters of exceptional value

But 14 of the state's 15 largest drinking water reservoirs [by acreage] do not receive Category One protection. The only reservoir that currently has Category One protection – Monksville in North Jersey – had previously received the designation because it was a trout production area before it was dammed off to form the reservoir. Seemingly, "exceptional water supply" does not seem to apply to the state's largest drinking water reservoirs.

New Jersey lags behind its neighbors in setting standards for drinking water protections. Massachusetts requires the highest level of protection for its public drinking water sources.

This lack of inclusion of drinking water in anti-degradation criteria differs greatly with our neighboring states in the Mid-Atlantic and New England. In Massachusetts, the highest level of protection is required for public drinking water sources, and their

Department of Environmental Protection is also required to maintain strict standards for a significant number of chemical and biological factors that indicate degradation including dissolved oxygen, temperature, pH, fecal coliform, bacteria, solids, color and turbidity, oil and grease, taste and odor. (314 CMR: Division of Water Pollution Control, 4.05 (3); Inland Water Classes) While New Jersey monitors these factors in drinking water supplies, it does not give the highest level of protection for drinking water sources.

New York directly links anti-degradation protection to public health standards, and establishes discharge restrictions explicitly to protect reservoirs and public drinking water sources.

In New York, anti-degradation protection is also specifically extended to drinking water supplies. State reservoirs generally receive a designation as Class AA or Class A waters, which means they receive a higher level of protection because of their drinking water status. It is also instrumental to note that the classification is dependent on New York State Department of Health standards. This connection between anti-degradation and health standards is a constant theme in New York's regulations. (NYCRR 701.6)

This connection between public health and anti-degradation is seen most prominently in New York's "discharge restriction categories." These standards apply to a broad category of areas, including discharges that provide a public health concern. It should be noted that the regulations clearly delineate and define each area of protection.

For waters of particular public health concern, the regulations clearly define four areas of qualification, two of them specifically monitoring the quality of surface drinking water and one concerning the quality of groundwater. (NYCRR 701.20)

> (1) waters within a 60-day water time-of-travel of unfiltered public water supply intake points;
>
> (2) public water supply watersheds with reservoirs experiencing accelerated eutrophication;
>
> (3) groundwaters requiring such protection as specified in watershed rules and regulations or wellhead protection programs; and
>
> (4) marine waters certified by the department for taking of shellfish.

The protections for implementing discharge restrictions also allow the Department to take in basic considerations that would be excellent indicators of how the waterway and the watershed would be affected by the discharge. Included in this list of basic factors are the size of the waterway, the use and quality of the waters and the habitat of the surrounding watershed. The Department will also weigh the impact of the discharge restrictions in actually meeting the protection goals, and incorporate potential harm of

intentional and unintentional discharge from new facilities and their biological impact. (NYCRR 701.21)

New Jersey has recognized the need to more explicitly set standards for water quality and public drinking water sources.

This focus has not entirely escaped the focus of the New Jersey Department of Environmental Protection. During the attempted rule proposal in 2000 for the Surface Water Quality Standards, the Department tried to make the regulatory language more well-defined and to explicitly include drinking water sources as a criteria for anti-degradation.

The Department tried to codify a standard to define a measurable decline in water quality by defining any fall outside of the 95 percent confidence interval of the mean water quality qualified as a measurable decline. The Department also acknowledged the need to protect drinking water sources by including, in the rule proposal, a draft to protect reservoir water quality along with additional protection of stream areas within 1,500 feet upstream of a surface water intake and 500 feet downstream. (This particular proposal was part of the approved December 2001 regulations).

New York codifies health standards to protect the best usages of the waters by scientifically setting limits for chemical cancer risks in drinking water.

New York goes beyond merely instructing its regulations to protect drinking water sources that are already threatened. Instead, it codifies the importance of maintaining drinking water quality by listing it as one of the six standards "to protect the best usages of the waters." (NYCRR 702.1) But even more telling it is not drinking water that is listed. Two of the criteria monitor "Health": one in water sources and the other in fish consumption.

These "Health" standards are based on a consumption level of two liters a day to monitor for oncogenic (tumor-causing) and chronic nononcogenic effects, and for one liter a day for acute nononcogenic effects. The scientific standards are explicit, and the health standard that is used as the bar is a cancer risk threshold of one in one million for an average adult (70 kg). (NYCRR 702.2)

New York Governor George Pataki has used federal designation to explicitly protect New York City's drinking water system of upstate reservoirs.

New York has also used federal designations to broadly protect its most crucial drinking water resource: the intricate system of pristine reservoirs that provide drinking water for New York City. In late December of 2001, New York Gov. George Pataki designated the Croton Watershed, which provides 9 million residents of New York City and Westchester County with drinking water, as a "Critical Resource Water." This designation adds a comprehensive environmental review process by the Army Corps of

Engineer to any projects in the watershed that might affect water quality and an investigation of feasible alternatives.

The 2000 Federal Register (Vol. 65, No. 47, 25, Th. March 9, 2000) does not explicitly list drinking water as a criteria for being a Designated Critical Resource Waters. However, among the criteria of covering marine sanctuaries and habitat for threatened and endangered species, it lists "outstanding national resource waters or other waters officially designated by a State as having particular environmental or ecological significance." New York's action shows explicitly that protecting a watershed for environmental reasons also directly correlates with protecting it for public health reasons.

New Jersey's anti-degradation protections fail to account for public drinking water sources. It lags behind its neighbors in correlating drinking water protection with anti-degradation. Massachusetts gives drinking water the highest protection possible. New York directly links public health standards and discharge restrictions with protecting reservoirs and other drinking water sources. New Jersey has previously acknowledged the need to increase protections for drinking water sources. New Jersey needs to include sources of public drinking water, including reservoirs and rivers, as criteria for an increased level of anti-degradation protection as Category One waters.

IV. Endangered and Threatened Species

Implicitly, New Jersey anti-degradation policies recognize the importance of protecting endangered and threatened species and their immediate habitat that is crucial for their survival. The strict definition of criteria for Category One waterways that should be granted "protection from measurable changes in water quality characteristics" includes waters of "exceptional ecological significance." (N.J.A.C. 7:9b-1.5d)

In addition, New Jersey's anti-degradation regulations include a section on criteria for reclassifying specific segments for more restrictive uses, or upgrading the level of protection. The second criteria listed is as follows: "A reclassification for more restrictive uses may be made when: it is demonstrated to the satisfaction of the Department that a more restrictive use is necessary to protect a unique ecological system or threatened/endangered species." (N.J.A.C. 7:9B-1.11)

New Jersey's anti-degradation policies fail to define protection for endangered and threatened species. Despite the fact Category One regulations say they protect areas of "exceptional ecological significance," the habitat for endangered and threatened species is not included as a criteria. While the need to protect endangered and threatened species is noted in the regulations (see above) and in recent rule proposals that ban mixing zones in the habitat for endangered and threatened species (January 22, 2002, New Jersey Register), this priority is ignored in the anti-degradation protections. The regulations currently are contradictory: it says it protects waters of "exceptional ecological significance" but fails to include habitat for species that are in danger of extinction.

New Jersey's protections directly contradict the policies of our neighboring states of Pennsylvania and New York. Pennsylvania has altered its anti-degradation regulations from protecting habitat for endangered and threatened species in high quality waterways to protecting habitat and existing water quality in all waterways.

The biggest distinction between Pennsylvania's and New Jersey's anti-degradation policies is Pennsylvania's ability to integrate land-use issues into the anti-degradation protections. Most notable is the wide leeway that is granted for endangered and threatened habitat under the Pennsylvania regulations. Formerly restricted to the highest tiers of protection, now habitat in rivers and streams and their surrounding banks that serves endangered and threatened species is mandated to have protection.

> "The Department will ensure that all water quality-related activities it permits or approves will not impair a T and E species, its critical aquatic habitats or any surface water upon which it critically depends. Critical habitat or dependence issues must be adequately documented by the natural resource agency so that protective provisions to be included in the permit or approval may be determined." (Pennsylvania Draft Guidance, Chapter 3, Threatened and Endangered Species)

Regardless of water quality, if a discharge or development will harm the habitat of a federally mandated threatened and endangered species, it will not be allowed. The ability to document where such high-sensitive areas exist is realized through the efforts of Department of Fish and Wildlife and the Department of Conservation along with work of private researchers. The anti-degradation regulations capitalize on the combined ability to track the habitat of federally listed endangered and threatened species and the mutual goal of protecting habitat by explicitly providing nearly universal protection for species that are in danger of extinction.

New York's anti-degradation protections, which list specific discharge restriction categories, protect "significant recreational and ecological waters" (NYCRR 701.20c) just like New Jersey. But New York regulations define these water with eight specific criteria, including the presence of endangered and threatened species.

New York anti-degradation regulations include similar provisions like New Jersey for protection of state park waters and state and federal wildlife management area waters. But the New York regulations not only define what a significant ecological waters constitute, but also apply this ecological criteria to broader land-use policy and to the most logical of recipients: endangered and threatened species and their habitat.

Out of the eight criteria listed to protect "significant recreational and ecological waters," the first two directly deal with protecting the habitat of watersheds that would serve endangered or threatened species: (NYCRR 701.20 (c)

1) Wild and scenic rivers, as designated in the New York regulations

2) Critical aquatic habitat for fishes, amphibians, or aquatic invertebrates listed as endangered, threatened, or of special concern in the New York regulations

The protections for "ecologically significant waters" are directly tagged to areas that are already clearly delineated in the New York state regulations, whether it is a wild and scenic river or an endangered aquatic species. There is little flexibility in Department discretion in deciding what waters qualify as ecologically significant or public questioning because the waters to be protected are already pegged to established standards. The state also directly includes this criteria – Wildlife – as one of the six standards used to monitor the best uses of the waterway, directly linking protection standards with the health of its natural wildlife. (NYCRR 702.13)

New Jersey has the capacity to highlight the exact habitats and general locations of the state's over 50 endangered and threatened species. Using the recently released Landscape of Habitat for Endangered and Threatened Species by the Division of Fish and Wildlife, the DEP can directly link the crucial habitat and vulnerable waterways.

The map was the product of the Landscape Project and was begun in 1994 by the Division of Fish and Wildlife's Endangered and Nongame Species Program (ENSP). It breaks the state up into separate land areas or "landscape regions" that are ecologically similar with regard to their habitat. Linking a database with rare species location information and land cover data, the project helps the state pinpoint the areas of critical habitat for endangered and threatened species in each landscape region.

This project gives the New Jersey the ability to pinpoint crucial watersheds that serve as habitat for our state's endangered and threatened species, from the bog turtle to the bald eagle. And it was specifically established for its interdisciplinary uses by other state agencies, as cited in its mission statement: "Critical habitat were designed for use by anyone, but especially those individuals and agencies who have the responsibility for making land-use decisions."

New Jersey's anti-degradation protections include "exceptional ecological significance" as a criteria for increased protection. A department of the Division of Fish and Wildlife worked for seven years to provide a comprehensive map charting the habitat of endangered and threatened species with land use throughout the state. But New Jersey's anti-degradation regulations do not include habitat for endangered and threatened species as a direct criteria for protection. Both Pennsylvania and New York make this link between protecting waters of "ecological significance" and increased protections for waterways that support endangered and threatened species. New Jersey's anti-degradation regulations need to include a criteria for endangered and threatened species that will be a factor in triggering a Category One level of protection.

V. Biological Assessment

New Jersey tracks the biological health of its streams and waterways through the Water Monitoring Department in the DEP. This collection of data, known as biological assessment, is used by the Department to identify impaired waterways. However, the Department does not use this biological assessment to identify exceptional areas of ecological significance for increased levels of protection. **The DEP raises its warning flag when biological species are dying, but does nothing to protect pristine biologically thriving and diverse waterways from becoming degraded.**

The Department of Water Monitoring Management in the DEP states its goals in a very objective light: it exists to collect and provide water quality data. It lists its mission statement simply: "The mission of the Water Monitoring Management is to provide monitoring support by collecting, analyzing, assembling and distributing quality data and information."

The Bureau has two departments: the Bureau of Marine Water Monitoring and the Bureau of Fresh Water and Biological Monitoring. The latter bureau is in charge of monitoring water quality for inland surface water and conducting biological assessments. The Bureau collects samples on a regular basis through a statewide ambient network consisting of 115 surface water monitoring stations, 771 biological stream monitoring stations and 22 ground water locations. The bureau also operates a biological biomonitoring laboratory. Information collected by the Bureau is used by the DEP to identify impaired waterways, as federally mandated by the Clean Water Act, and listing them on the state's 303 (d) list. **But biological assessments that identify an especially significant ecological vibrant waterway, or a trend of declining ecological health, trigger no sort of increased level of protection.**

The failure of states to fully implement the Clean Water Act and account for the biological health of waterways as a trigger for declining water quality is not a new story. Dr. James Karr, the noted University of Washington aquatic ecologist states simply**:** "The Clean Water Act has been implemented as if crystal clear distilled water running down concrete conduits were enough. We must begin to track the condition of aquatic systems the way Wall Street tracks the economy, with gauges like the index of leading economic indicators." (Biocriteria in Action, *The Clean Water Act: An Owner's Manual*, p. 65) New Jersey's neighbors not only track the biological health of their waterways, but also use biological assessments as a trigger for increased level of protections.

Pennsylvania uses an EPA-approved national standard to track biological health and uses it as a crucial standard for granting waterways its Category One equivalent level of protection – High Quality waterways.

To qualify as a High Quality waterway in Pennsylvania, comparable to New Jersey's Category One, the Pennsylvania defines two well-delineated requirements that waters must attain:

1. The first requirement is that there must be at least one year of data of water quality that supports levels necessary to support the propagation of fish by surpassing water criteria for dissolved oxygen, iron, dissolved copper, temperature, dissolved arsenic, dissolved lead, aluminum, dissolved nickel, dissolved cadmium, pH, ammonia nitrogen, dissolved zinc.

2. The second requirement is that there must be some biological qualifier for establishing a baseline of aquatic life. Technically called **the Rapid Bioassessment Protocols (RBP) for use in streams and rivers, it measures benthic macroinvertebrate levels and compares it to a reference stream, and the nominated stream must score at least 83% of the reference stream standard.**

First, the Department requires that the chemical composition of the stream reach a minimum baseline where it can successfully sustain a healthy ecosystem for fish reproduction. Second, the Department requires that the biological health of the stream be compared to biological standard, which is modeled after an EPA standard, and then sustain a similar level of biological life as a similar High Quality waterway.

Pennsylvania's current draft guidance regulations strictly lay out the requirements for the biological assessment protocol. The selection of the reference site, the number of benthic samples which are taken from the waterway, the distinction between water and field chemistry and the number of tests are all clearly identified and strictly defined. (*Pennsylvania Draft Guidance*, Chapter 5: Qualifying as High Quality or Exceptional Value Waters)

New York includes the aquatic life of its waterways as two of the six criteria it uses to ensure its water quality and its uses are being protected.

The New York anti-degradation regulations codify the importance of maintaining aquatic life, for both fish propagation and for broader biological health, by listing it as two of the six standards "to protect the best usages of the waters." (NYCRR 702.1) The first standard, Aquatic (Chronic), focuses on the long-term viability and propagation ability for larger aquatic animals, including fish. The second standard, Aquatic (Acute) focuses on smaller forms of biological life, including insects and benthic crustaceans (NYCRR 702.9 and 706.1 Appendix for Section 702.9.). Tests for algae and other plant matter, while not required, are listed as desirable.

New Jersey has a similar institutionalized system for conducting biological assessment, from nearly 800 DEP-run biological monitoring stations to similar programs with affiliated groups.

Currently, the New Jersey DEP, along with the Bureau of Water Monitoring Management, hires Watershed Ambassadors in its distinct Watershed Management Planning Areas to conduct similar biological assessments. The Department also coordinates with an AmeriCorps program, New Jersey Community Waterwatch, to help with the process of collecting biological assessment data. This is in addition to the 771

biological stream monitoring stations run by the Department, which provide constant data on the biological health of their waterways. But this data is not used to identify impending water quality threats, and act proactively to protect them before they become degraded. Instead, New Jersey biological assessment is only used to highlight the problem once it has already happened, as required by federal mandate.

New Jersey anti-degradation regulations do not account for the biological health of the waterways when listing criteria for increased levels of protection. The state already has a bureau that conducts thousands of biological assessments annually. This failure to account for the biological health of waterways is a direct contradiction of the current mandate to grant Category One level of protection for waterways of "exceptional ecological significance." Our neighboring states, Pennsylvania and New York, use a federally-approved EPA standard or their own system to trigger anti-degradation protection for biologically significant waterways. While New Jersey uses biological assessments to identify impaired waterways, it does not proactively protect biologically sensitive waterways before they become degraded. New Jersey should include a biological assessment threshold in its anti-degradation regulations to trigger Category One level of protections for ecologically thriving waterways.

VII. Conclusion

On March 1, 2002, three of the top environmental organizations in New Jersey – New Jersey PIRG, the Sierra Club and the New Jersey Environmental Federation – sent a letter to DEP Commissioner Brad Campbell recommending Category One upgrades for a list of twelve threatened rivers and reservoirs by Earth Day on April 22, 2002, a broad regulatory proposal introduced by late June to strengthen the criteria used to select Category One waterways and full implementation of anti-degradation proposals as federally mandated by the Clean Water Act.

The recommendations offer a broad and ambitious program for strengthening anti-degradation regulations throughout the state, and providing immediate increased protections for threatened rivers and reservoirs. The underlying intent of the recommendations is to strengthen New Jersey's anti-degradation criteria for the long-term by working with the DEP to promulgate a rule change and to provide the much-needed implementation of these rules.

This report has focused on the weakness of the New Jersey's anti-degradation regulations, especially for Category One waters, to fully provide defined guidance for protecting pristine waters. The regulations are expansive and should be lauded for attempting to encompass all sensitive and valued waters in the state. The regulations define Category One waters as requiring "no measurable changes in water quality characteristics because of their clarity, color, scenic setting, other characteristics of aesthetic value, exceptional ecological significance, exceptional recreational significance, exceptional water supply or exceptional fisheries resource." [N.J.A.C. 7:9B-1.5] But they fail to fully define these criteria, leaving the state with a very limited scope of protection.

Our neighboring states provide a clear template on how to fully define criteria and to protect water for its most valuable resources: its ability to provide drinking water and its ability to provide habitat for rare species. New York directly links its anti-degradation protections to sources of public water supply. Massachusetts provides the highest level of protection possible for public drinking water sources. Both New York and Pennsylvania directly link the habitat of waterways that serve endangered and threatened species as a trigger for anti-degradation protections. As well as triggering protections for endangered and threatened species, both Pennsylvania and New York both grant increased protections for certain biological benchmarks that truly ascertain "ecological significance."

The state needs to write new regulations that are more inclusive of these important criteria and more defined. New Jersey needs to protect waterways for the most important reasons and it needs to provide a clear blueprint of what will trigger higher protections. Specifically, it needs to strengthen the criteria for the state's Category One waters to include drinking water supply, habitat for threatened and endangered species and the ecological health of the stream. The state also needs to institute well-defined regulations that do not leave every protection decision at the

discretion of the Department. **The state needs to require a provision that the Department "shall" upgrade to Category One if a waterway segment fulfills all three criteria below:**

d. The water segment serves as a source for public water supply
e. The water segment is located in an area of Special Concern or above on the Landscape Project's Threatened and Endangered Species Habitat Map.
f. The water segment possesses significant natural features, and is a Federally designated as "Wild and Scenic," located in an area identified as 'Special Concern' by the State Planning Commission or drains to any National Wildlife Refuge or any other federal public land.

If a waterway only fulfills two of the three criteria, then the Department should have the discretion on whether to grant increased protections. The state should also strongly consider adding biological assessment as one of the criteria that would trigger an increased level of protection. The state could use its extensive biological assessment network of stream and river testing sites to protect pristine, biologically diverse waterways before they get polluted instead of identifying them when they have already become degraded.

However, the need to alter the regulatory criteria should not diminish the importance of implementation. **Any regulation is merely on paper until the state government backs it up, with a staff committed to implementation and enforcement**. The state DEP must be pro-active in enforcing discharge restrictions for these Category One waters and in regulating non-point source pollution through the pollution permitting program in the same way point source pollution is permitted and regulated. The Department must conduct discharge and non-point source reviews for proposed projects and rigorously review permit once they have issued. Without an active Department, strengthening regulations will only grant the appearance of better protections for our state's most precious resource.

While residents of this state may not see these regulatory changes as noteworthy, it is imperative to stress that these regulatory changes and the ensuing implementation will directly improve protection for our most pristine waterways. If the Department responds to these recommendations and starts the process of strengthening the state's anti-degradation regulations by early this summer, it will be reaffirming its commitment to the anti-degradation policies it currently has enacted. A well-defined rule proposal will help protect the parts of New Jersey that are crucial for the sustainability of its residents and its habitat: public drinking water sources, habitat for endangered and threatened waterways and areas that possess significant natural features. **The Department must ensure that the state's anti-degradation regulations protect these resources by offering strict guidance, not just mere suggestion, to ensure the future of New Jersey's pristine waterways.**