

# REGIONAL FLOOD CONTROL DISTRICT



April 22, 2022

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Bureau of Water Quality Planning  
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**RE: Proposed revisions to antidegradation program, LCB Draft Proposed Regulation R119-20**

Dear Mr. Simpson:

The Regional Flood Control District (District) thanks you for this opportunity to provide comments on the proposed antidegradation regulation. We appreciate the Nevada Division of Environmental Protection's (NDEP) efforts to reach out to the affected communities and its careful consideration of responses from those communities. These comments were prepared by Larry Bazel, District environmental counsel, and are intended to identify issues raised by the proposal, and to suggest solutions. We would welcome additional meetings with NDEP and the affected communities so that there can be a two-way discussion about the comments in this letter.

## 1. Introduction

We recognize that NDEP has put a great amount of effort into the proposed regulation. If nothing else, NDEP has drafted nearly 100 pages of guidance and held three workshops. This effort has been required by the immense complexity of the proposed regulation. NDEP plainly has thought through some of the consequences of the proposal, and appears to have developed some solutions to the problems identified in those internal discussions. This comment letter may identify other problems that have not been considered, and notes at the end that because of the proposal's complexity there are undoubtedly additional problems that have not yet been identified.

This letter expresses a more general concern with the proposal. NDEP has been noteworthy for its good judgment. It focuses on real environmental issues and solves them. Whenever possible, it avoids bureaucratic dictates that do not result in real environmental benefits. The proposed regulation, however, seems to make insignificant changes in water chemistry more important than actual environmental issues. Under the guise of clear instructions, the proposed rule insists on a mechanical application that eliminates good judgment. But permit decisions should be driven by real environmental issues, not by minor measurement differences that do not affect anything that needs to be protected.

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## **2. The Proposed Regulation Would Reverse A Fundamental NDEP Policy**

One of NDEP's great virtues is that it has always distinguished between what was *important* for protecting the environment, and what was unimportant. It has put its energy into those things that were important.

This proposed regulation would reverse this policy and make unimportant issues—trivial changes in water chemistry that have no real-world consequences—the driver in permit requirements. Worse still, requirements imposed to prevent insignificant changes in water chemistry are likely to have huge effects on dischargers, who in many cases will have no ability to prevent those insignificant changes.

Surely NDEP would agree that unimportant issues should not drive permit decisions. So why is this regulation being proposed? At NDEP's workshop, two reasons were suggested. First, NDEP may feel that this regulation is necessary to comply with the Clean Water Act and Nevada statutes, and that the specifics of this regulation are constrained by those statutes and by the opinions of the Nevada Attorney General. These feelings are incorrect. Nothing requires the proposed regulation, and key choices in the specifics are not constrained. This point is discussed in sections 3 and 7 below.

Second, NDEP may feel that antidegradation is important, and that *any* negative change in water chemistry truly is degradation, no matter how small that change. But NDEP appears to recognize that *some* changes in water chemistry are insignificant, and that some parameters should be categorically excluded from antidegradation review. The regulation should also recognize that other changes in water chemistry, as determined in an individual case, can be too insignificant to be considered real degradation. This point is discussed in several sections below.

The proposed regulation requires a mechanistic determination of degradation, without any human judgment. This comment letter argues that the regulation should allow NDEP to exercise judgment so that in an individual case trivial changes in water chemistry—an unimportant consequence—can be distinguished from changes that are *important*, and that NDEP should devote its energies, as it always has, to consequences that are important for protecting the environment.

## **3. Nevada's Existing Antidegradation Program Does Not Need To Be Replaced**

During the workshops, NDEP staff noted that an antidegradation program is required by the Clean Water Act. But Nevada already has an antidegradation program, which is implemented primarily through the establishment of requirements to maintain higher quality (RMHQs). This program has been in effect for nearly 50 years. If the current program were insufficient to satisfy Clean Water Act requirements, NDEP would have heard from EPA long ago.



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Three pages from EPA's 2017 Nevada Permit Quality Review are attached as Exhibit 1. In this document, EPA says nothing negative about Nevada's current antidegradation program. It merely reports that "NDEP is currently in the process of updating their statewide antidegradation policy", and that "The goal of this updated policy is to provide clear procedures for how antidegradation reviews will be performed during NPDES permit issuance." (Exhibit 1, page 25.)

If producing clear procedures is the goal, then much of the proposed regulation is problematic. Although its mechanistic quality may allow some determinations to be so structured that anyone can ascertain their outcome, the new regulation raises so many complicated new issues that it cannot be called "clear". Its complexity is demonstrated by the nearly 100 pages of guidance documents that NDEP has prepared, by the need for three workshops to explain the proposal, and by the identification of new issues during that workshop.

NDEP may *want* a new antidegradation program, but it does not *need* a new one.

#### **4. "Degradation" Does Not Mean *Any* Change In The Chemistry Of A Water**

The word "degrade" means "to lower in grade" and "to lower to an inferior or less effective level". ([https://www.merriam-webster.com/dictionary/degrade.](https://www.merriam-webster.com/dictionary/degrade)) When things are graded, they are put into categories, which may have names like "grade A" or "grade B", or (for olives) "jumbo", "colossal" and "mammoth" (<https://www.sizes.com/food/olives.htm>). When these items are "graded" they are put into one or another of these categories.

There are, for example, 181-200 olives in a kilogram of jumbo olives. Suppose a farmer initially produces olives that each weighs 1/185 of a kilogram, then produces olives that each weighs only 1/190 of a kilogram. Has the production been degraded? The answer is no, because the *grade* has not changed. Both before and after the change, the olives are jumbo olives.

Although the word "grade" is not often used to describe water quality, "level" often is, and that word is used in the regulation. Among the definitions of level are "a step or stage in height, position, or rank" as in "She rose to the *level* of manager." ([https://www.merriam-webster.com/dictionary/level.](https://www.merriam-webster.com/dictionary/level)) Homes and buildings can have levels. Like grades, levels can be stepped rather than continuous.

Although water quality is not so neatly sorted into grades or levels, the concept is a necessary part of antidegradation. A water is not degraded when it is affected by *any* change in chemistry, only those changes that lower it to an inferior *grade* or *level*.

#### **5. The Legislature Could Not Have Intended To Prohibit All Construction And Growth In Nevada**

The concept of "grade" or "level" helps explain NRS § 445A.565(1), which specifies the antidegradation principles for Nevada:



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Any surface waters of the State whose quality is higher than the applicable standards of water quality as of the date when those standards become effective must be maintained in their higher quality. No discharges of waste may be made which will result in lowering the quality of these waters unless it has been demonstrated to the Commission that the lower quality is justifiable because of economic or social considerations.

If this section is interpreted to prohibit any change in water quality, no matter how small, then the statute will have far-ranging consequences that the Legislature could not possibly have intended. Among other things, this “any change” interpretation would appear to prohibit all construction and all municipal growth in Nevada. After all, construction sites discharge pollutants; that’s why they need discharge permits. These pollutants must change the water quality of the waters they enter, even if that change is too small to be measured. If the waters are to be protected from *any* change, then *any* increase in the discharge of pollutants must be prohibited.

But the Legislature could not possibly have intended this statute to prohibit all construction and growth in Nevada. Just as Congress “does not, one might say, hide elephants in mouseholes”<sup>1</sup>, the Nevada Legislature does not in a vague provision wipe out the construction industry statewide.

In the real world, we all recognize that adding a small amount of dirt from a construction site makes no *real* difference to the environment when it is an insignificant fraction of the dirt already in the receiving water.

NDEP must have recognized that this “any change” interpretation is incorrect. But the regulation seems to adopt something close, which may be called “no measurable change”. Conceptually, “no measurable change” suffers from the same defect as “no change”, although its unintended and harmful effects are limited by the practical difficulties of obtaining the necessary data.

So, for example, if chemists could measure the addition of one pound of dirt from a construction site, when added to one million pounds of dirt already flowing in an ambient water, then the construction site would be considered under a “no measurable change” interpretation to have degraded the ambient water, even though that one pound made no *real* difference to water quality or the environment.

To be sure, NDEP has admirably tried to avoid the unintended consequences of an ideological pure interpretation with practical interventions. It has said, for example, that the baseline

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<sup>1</sup> *Whitman v. American Trucking Associations*, 531 U.S. 457, 468 (2001).



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concentration will be set no lower than 10% of the numeric water quality criterion. This limit is a vast improvement over baselines that could conceivably be set at 1%, or 0.1%, or 0.01%. But this practical intervention proves the point: Nothing *requires* NDEP to adhere to an ideologically pure “no change” or “no measurable change” interpretation. Each practical intervention, and there are many, proves once again that NDEP is free to implement practical interventions, and that a rigid interpretation of the statute would be wrong.

Any interpretation of NRS 445A.565, therefore, should recognize that the Legislature did not intend the statute to apply rigidly to any change or any measurable change in water chemistry. The Legislature undoubtedly intended the statute to apply to changes in the grade or level a parameter or stream.

## **6. Defining Levels Of Water Quality Requires Judgment**

Despite its nods to the “no measurable change” ideology, NDEP has incorporated the concept of levels or grades into the draft regulation, which defines “baseline concentration” as “the background *level* of each parameter in the receiving water”. (Section 3.1, emphasis added; see section 10 below for more on this definition.) The “level” concept is even more explicit in section 6.2(b), which specifies that for Tier 1 parameters “the Department shall maintain and protect the *level* of water quality necessary for the designated and existing beneficial uses”. (Emphasis added.) EPA has also adopted the “level” concept in its regulations, which specify that “Where the quality of the waters exceeds *levels* necessary to support the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected....” (40 CFR § 131.12(a)(2).)

Determining a level of water quality is not easy. Water quality varies greatly in most waters, and maybe all waters. The maximum flowing load of most pollutants in a river, for example, is often 1,000 times greater or even 10,000 greater than the minimum. When the concentration or load of pollutants varies over several orders of magnitude, it is difficult to say what the true “level” of water quality is.

More to the point, the hyperfocus on water chemistry ignores the ecology of the environment at issue. Consider, for example, Las Vegas Bay and Lake Mead. Although the municipal Las Vegas Valley dischargers provide very high levels of treatment, their effluent contains more nutrients than most of nutrient-poor Lake Mead. The nutrients enter Las Vegas Bay, where they promote healthy fish, especially compared to the skinny fish in the rest of Lake Mead. For reasons that are not clear, these discharges also protect the fish in Las Vegas Bay against mercury, which is much lower in Las Vegas Bay fish than in fish elsewhere in Lake Mead. (Exhibit 2.) The “pollutants” in the municipal wastewater are therefore beneficial to the fish in downstream waters, and the ecosystem would be *degraded* if the pollutants were removed. Although nutrients may not be covered by the proposed regulation—NDEP may have used its judgment to remove them—other things in the effluent no doubt also have beneficial effects.



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Las Vegas Bay appears to have the most recovering population of endangered razorback suckers in the Colorado River system. The razorbacks are endangered principally because of predation from striped bass. In the future, recovery plans could conceivably try to improve conditions for the razorbacks by, for example, generating low dissolved oxygen, which stripers avoid but razorbacks are not particularly sensitive to, or high suspended solids. Water quality that has traditionally been considered poor could benefit the razorbacks. The point here is that the proposed regulation locks itself in to a rigid system in which real benefits and harms to the ecosystem cannot be considered. That is a dramatic change in direction for NDEP, and a turn for the worse.

The ideological problems caused by rigid interpretations of the statute can be resolved by acknowledging that the statute allows for *some* change in water chemistry, but prohibits changes that are severe enough to change the “level” of water quality.

This rationale perfectly fits the 10% rule, i.e. that background levels can never be less than 10% of the numeric criterion. The 10% rule is a judgment call, not anything required by law or science. The “level” interpretation also fits all of NDEP’s other practical interventions.

Rather than prohibiting NDEP from using its judgment, the proposed rule *requires* it in some situations. Section 6.1(a)(2)(II) prohibits, in Tier 3 waters, “[a]ny new or expanded point source discharge that occurs upstream of the classified water *if the Department determines* that the discharge would degrade the water quality of the classified water or impact an attribute of the classified water.” (Emphasis added.) The same prohibition applies to Tier 2.5 waters. These requirements contradict the “no measurable change” interpretation. If NDEP’s position that the statute prohibits it from using its judgment, this provision contradicts that interpretation too.

To be sure, this language may not be as vague as it seems. Lurking behind this requirement for the use of judgment may be a rigid structure that prohibits the use of judgment. NDEP has said, for example, that temporary discharges (such as those from construction sites) will be allowed into Tier 2.5 and Tier 3 waters, but not permanent discharges. There are at least two problems with this position.

First, this position is contrary to the announced purpose of the proposed regulation, which is to provide clear procedures. A regulation should tell the public the substance of what is required and what is prohibited. If the public needs to consult 100 pages of material that is not in the regulation to figure out whether their activities are lawful or unlawful, something is wrong.

Second, this position is contrary to a “no change” or “no measurable change” interpretation of NRS 445A.565. If the statute prohibits any change, then it prohibits *temporary* as well as permanent changes. After all, no change means no change.

NDEP should drop its overly restrictive interpretations of NRS 445A.565 and acknowledge that the Legislature did not intend the prohibitions and construction and growth that would result from a “no change” interpretation.



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The mechanistic aspects of the proposed rule suggest that NDEP may not want to use its judgment—that it may be looking for a procedure that is so straightforward and clear that it can be easily applied by anyone. But antidegradation is not susceptible to simple procedures. Judgment is essential.

### **7. The Attorney General’s Opinions Do Not Prevent NDEP From Using Its Judgment**

NDEP has kindly provided us with opinions of the Attorney General from 1979 and 1984. These opinions do not prevent NDEP from using its judgment, or from categorizing water quality by “levels”.

The 1979 opinion concludes that NRS 445A.565 does not apply to all waters of the state, only to “pristine” waters: “Accordingly, in order for [NDEP] to enforce this antidegradation policy...water quality standards must be established by the State Environmental Commission to prevent any further degradation of *those pristine surface waters* which fall within” the language of the statute. (Page 6, emphasis added.) This opinion is helpful because it supports the concept that the Legislature intended to protect pristine waters, rather than disrupting the construction industry and preventing growth throughout the state.

The 1984 opinion concludes that NRS445A.565 must be applied parameter by parameter, rather than by the “overall” quality of water. But it does not prohibit judgment, and it implicitly allows for judgment. In its most specific sentence, it says that “if the water quality standard for Total Dissolved Solids (TDS) provides for 500 mg/l and existing conditions are *defined* at 370 mg/l, no degradation beyond 370 mg/l is allowed....” (Page 3, emphasis added.) Note the word “defined”, which recognizes that NDEP determines—using its judgment—what number should be used to represent existing conditions. Note also that also the opinion says “no degradation”, but it does not define what “degradation” means. The opinion therefore does not exclude the “level” interpretation advanced above.

### **8. The Proposed Rule Is, However, Inconsistent With the Attorney General’s Opinions**

The 1984 opinion does, however, raise a serious question about the legitimacy of the proposed regulation, which blends parameter-by-parameter antidegradation with “overall” quality antidegradation for Tier 2.5 and Tier 3 waters. If “overall” quality antidegradation is not allowed, then it is not allowed, and the Tier 2.5 and Tier 3 concepts should be rewritten to conform to the law. If it is allowed, then it should be applied to all tiers—or, at the very least, this concept should be explored with the regulated community.

### **9. The Proposed Rule Usurps the Authority Of The SEC**

The proposed rule flips the relationship of NDEP and the SEC. The SEC sets water quality standards, and NDEP issues permits. The proposed rule would have NDEP setting water quality standards, and SEC issuing permits. That cannot be what the Legislature intended.



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The Legislature gave the SEC, not NDEP, the authority to set water quality standards: “The Commission shall establish water quality standards....” (NRS 445A.520(1).) The proposed rule would develop interim baseline values that are water quality standards in everything but name. Most significantly, the interim values are determined for the specific purpose of imposing the kind of permit limits that implement water quality standards. But the Legislature has not authorized NDEP to set water quality standards.

The proposed rule provides for a back-of-the-envelope calculation of existing water quality, and uses these less-than-rigorous calculations to impose permit limits. This procedure may be much easier for NDEP than the process of proposing standards to the SEC, but it is a bad idea. Proposing standards is difficult precisely because they have such important consequences for the regulated community. The formal procedures encourage NDEP to collect sufficient data so that it can present its proposal with confidence, and to work with the regulated community so that the SEC can receive the proposal without objection. The existing RMHQ process allows for a consideration of the consequences of new standards, by the local community most affected by those standards, one at a time.

The proposed rule also has the SEC issuing permits whenever there is “degradation”. Because of the severity of the “no change” interpretation, SEC might have to review the permit for every municipal expansion. (See section 11 below.)

#### **10. The Proposed Rule Allows False Baselines**

The proposed rule specifies that the baseline concentration “is equal to the 95th percentile value calculated for each parameter, using chemical data from a minimum of three samples.” (Section 3.1.) Three samples? Would NDEP tell the SEC it wanted to establish an RMHQ based on three samples?

When calculated from three samples, the 95th percentile is greatly influenced by the maximum of those three samples. But how likely is it that one of these three samples captures the true maximum? If we assume that water quality changes once per minute, there will be 2,628,000 changes over five years (which is the interval NDEP uses when it considers waters for 303(d) listing). If 3 draws are taken from a pot of 2.6 million data points, the odds of drawing the true maximum is close to 1 in a million—approximately zero. To be sure, a few of these 2.6 million data points may be excluded because they are from extreme events, but surely not enough to reduce the pot to, say, 2.5 million data points, which still leaves the odds at close to 1 in a million.

To make matters worse, the guidance calls for sampling during “non-extreme” flow conditions. (Draft Implementation Procedures<sup>2</sup>, page 10). But maximum concentrations may very well be found in extreme flow conditions. And if some of the extreme flow conditions are not

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<sup>2</sup> [https://ndep.nv.gov/uploads/water-wqs-docs/DRAFTAntidegImplementationProceduresAugust2021\\_with\\_petition.pdf](https://ndep.nv.gov/uploads/water-wqs-docs/DRAFTAntidegImplementationProceduresAugust2021_with_petition.pdf)





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considered for water quality standards, then the maximum concentrations may very well be found just inside those boundaries.

This kind of regulation encourages game-playing. An entity might very well want to go out and take unofficial samples—perhaps samples that are not analyzed by a certified lab, or samples that are in some other way inadequate for regulatory use—to get a sense of how the water quality varies, and then officially sample at times that will produce the preferred results. And if those three samples are not good enough, the entity can take more samples in the hope of getting a higher maximum. Although the guidance calls for representative samples, there cannot be any fault in trying to measure the true maximum in the hope of identifying the true 95th percentile.

NDEP, no doubt, is not asking dischargers to sample for five years because that would be extremely burdensome, and far beyond anything the Legislature envisioned when it authorized NDEP to issue permits. No doubt all discharges appreciate the restraint, but the problem arises only because NDEP is trying to push onto the dischargers what has until now been its responsibility: collecting and evaluating water quality data, and proposing water quality standards.

The calculated 95th percentile from three samples will be wrong with almost 100% certainty. But how wrong? The three samples will be insufficient to make that determination. Because water quality varies so widely, it could be off by an order of magnitude or more.

Since the calculated 95th percentile from data-poor segments will almost certainly be too low, it will result in permit limits that are also too low whenever the baseline is less than the concentration of the substance in the proposed discharge. In this way, the proposed regulation will generate improper effluent limits.

To be sure, NDEP has said that most dischargers will not need to collect samples, because there are monitoring programs for most waters into which major dischargers discharge. But then there is no reason to require dischargers to submit an antidegradation review. NDEP can do the review itself.

In any case, the proposed regulation should be redrafted to identify a better definition of “baseline”, such as the following: “‘Baseline concentration’ means the background level of each parameter in the receiving water, which can be calculated from the 95th percentile of sufficient representative data, and which shall cover at least five years of monthly samples. Additional samples may be taken if they would provide a better estimate of the true 95th percentile.”

If NDEP does not have sufficient data to do a proper antidegradation review, it should not do one.



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## **11. The Proposed Regulation Could Prevent Municipal Growth**

Municipal wastewater includes every substance that people flush or wash down the drain. Among these are substances covered by the proposed regulation, including iron (which people need to make hemoglobin). Consumer products contain countless other substances that are now subject to the proposed regulation or could be in the future—the proposed regulation will apply to every substance added to NAC 445A.11704 to 445A.2234 (Section 3.2), which in the future could include water quality standards for endocrine disrupters, pharmaceuticals and personal care products, or PFAS. Shampoos, to take a very small example, contain selenium (Selsun Blue), zinc (Head and Shoulders), and coal tar (Neutrogena T/Gel). Wastewater also contains pharmaceuticals that people take and excrete, as well as natural human hormones, some of which—such as natural and synthetic estrogens—affect fish at relatively low levels. Although much of the consumer-product load entering a treatment plant is removed, the removal rate is not 100%. That leaves small concentrations of many substances in the discharge, and modern chemistry is increasingly able to measure vanishingly small concentrations.

Treatment plants cannot realistically increase their removal rate for consumer products and substances like iron. The concentrations are just too low, and the flow of wastewater is just too great. They will therefore be unable to comply with permit limits issued in accordance with the proposed regulation.

NDEP suggests that this is not a problem because the municipalities can get special dispensation from the SEC. This suggestion does not sufficiently appreciate the problems that the proposed regulation will cause. A municipality will need to appeal to the SEC only if NDEP has determined that the municipality will cause degradation of Nevada's high quality waters. That determination will result in public opprobrium—a scarlet letter of sorts—because neither municipalities nor the public want to degrade Nevada's high quality waters. The SEC will be hard pressed to decide what NDEP is asking it to decide: that Nevada's high quality waters should be degraded. The proposed regulation, in other words, will present the SEC with a false determination of degradation (see sections 12 and 16 below), and define the issue in a way that will make it difficult for the SEC to approve.

A municipality cannot grow without adequate wastewater treatment. As a result, the proposed regulation could prohibit the growth of Nevada's municipalities, or at least severely interfere with it.

## **12. A Discharge That Greatly Improves Water Quality Does Not Degrade Water Quality**

The tributary flows in Las Vegas Valley are not pristine high quality waters. Because surfacing groundwater contains high concentrations of selenium and other substances, they could hardly be of lower quality. When treated effluent is discharged into these waters, downstream water quality greatly improves.



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But it is not clear that *every* substance in a wastewater discharge is found at lower concentrations than in these tributary flows. If, for example, iron is lower in the tributaries, then the municipalities may be labeled as degrading water quality and required to comply with permit limits they cannot realistically comply with.

The assertion that municipalities degrade water quality in Las Vegas Valley is nonsensical: They greatly improve water quality in lower Las Vegas Wash. The proposed regulation, therefore, could readily result in accusations that are false and even nonsensical. Moreover, because the process is so mechanical, there is no apparent off-ramp: NDEP will be forced to make these false accusations whether it wants to or not.

These false accusations could have real-world consequences that harm the environment. Consider the Clark County Wetlands Park. Initially, it directed tributary water through the wetlands. The tributary water was high in selenium, and the selenium accumulated in fish tissue in concentrations that would now be above regulatory levels. The park responded by changing its source of water to the effluent-dominated lower Las Vegas Wash, which provided the high-quality water it needed and produced fish-tissue concentrations well within regulatory levels.

Now suppose that instead of using Las Vegas Wash water the park had decided to use water from one of the treatment plants—or suppose that in the future the park would like to augment its flow with water from the treatment plants. That discharge, if it contains iron or some other regulated substance at levels higher than the tributaries, could be labeled as degrading the park. Would the park go to the SEC (where instead of being applauded for improving the environment it would be characterized as degrading the environment) and ask for forgiveness? Perhaps. But it might instead abandon the project. In this way, false accusations of degradation can have bad unintended consequences.

This example, moreover, highlights what may be the most significant problem with the proposed regulation: Because it allows a change in *any* substance, no matter how insignificant, to be labeled as degradation, the proposed regulation can prevent *real* improvement. NDEP should not let a false determination of degradation interfere with real environmental issues, including real improvements to water quality.

### **13. The Proposed Regulation Should Focus On True Parameters of Concern**

One way to alleviate the concerns raised in this letter is to put more judgment back into the proposed regulation. The proposal seems to call for judgment when it refers to a “parameter of concern” because the phrase “of concern” implies that some person has judged the parameter to be significant. But the definition is mechanical: “‘Parameter of concern’ means a parameter with a water quality standard set forth in NAC 445A.11704 to 445A.2234, inclusive.” (Section 3.2.)



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This definition would be greatly improved by the addition of judgment, for example if it were modified to include the following language in italics: “‘Parameter of concern’ means a parameter with a water quality standard set forth in NAC 445A.11704 to 445A.2234, inclusive, *when determined by NDEP to be of concern to the water at issue.*”

This revised definition creates a sorely needed off-ramp allowing NDEP to exit the process when it concludes that mechanical application would result in unintended consequences or would otherwise not prevent real degradation.

#### **14. The Proposed Regulation Should Specify That Not All Parameters Are Included**

NDEP may have intended to exclude some parameters from antidegradation review, such as pH and temperature. But the proposed regulation does not appear to exclude any. As a result, the regulation needs to define what degradation means for such things as pH: Is it higher, lower, or perhaps less neutral? And what about “substances attributable to domestic or industrial waste or other controllable sources”, “floating debris”, “organisms pathogenic to human beings”, or “toxic, corrosive or other deleterious substances attributable to domestic or industrial waste” all of which are identified in NAC 445A.121?

The simple answer is that these substances should not be included in an antidegradation review. If NDEP agrees, the proposed regulation should be revised to say so. Revision of the regulation itself is necessary, because guidance cannot override a regulation.

Excluding these substances also makes the point that NDEP is not nearly so restricted by the statute as it sometimes seems to think. If these substances can be removed, so can others.

#### **15. The Proposed Regulation Should Specify That It Is Truly Not Retroactive**

The proposed regulation specifies that a person does not need to submit an antidegradation review if the applicant “Does not request to expand or modify the point source discharge or the zone of mixing”. (Section 7.2(b).) But what if the person *does* want to expand the discharge—or modify it? The population of Nevada is growing, and wastewater treatment technology is improving. Although the regulation does not say how expansions and modifications are treated, it could be interpreted to require that the *entire* operation be considered as though nothing were in existence. This would lead to bad consequences.

If any expansion or modification results in an antidegradation review that would impose difficult-to-meet requirements, then a rational municipality will not expand or modify their discharge. That may prevent the municipality from *improving* its discharge. If the municipality needs to expand, it may be forced to create a new discharge, even if the next discharge is next to the old discharge—or, better yet, downstream of the old discharge, so that the municipality can define the old discharge as the baseline condition. The municipality may be forced to build



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a new plant, even if expanding the old plant makes much more sense, just to avoid the consequences of the proposed rule.

The proposed rule should not encourage municipalities to make decisions that would otherwise be economically and environmentally foolish.

Most regulations, for example building codes, apply only to new development. Old development is “grandfathered” in. The reason for grandfathering is that imposing new requirements on old developments implicates the prohibition on taking without just compensation, as well as concepts of estoppel. The old development was built in reliance on the law as it existed then. Imposing new requirements on old development can and should be prohibited.

#### **16. Baseline Samples Should Be Taken Downstream, Not Upstream**

Assume that a person wants to discharge to a water that currently has no discharges. Where should the person measure to determine what the baseline water quality is? If water quality is the same upstream and downstream of the proposed discharge site, it does not matter. But if there is a difference, then the person should measure *downstream*, because the future discharge will only affect water quality downstream.

Now assume that a municipality wants to increase its flow by 10% while keeping its effluent quality constant. If the stream is greatly effluent-dominated, then the 10% flow increase is not likely to have any real effect on water quality. In other words, there will be no *real* degradation. If the baseline water quality is measured downstream of the discharge—the water that the increased discharge will be affecting—then the antidegradation analysis will produce the correct result: that there is no degradation *from existing conditions*. But if the baseline water quality is measured upstream, then the conclusion could be anything. In this situation, baseline water quality should also be measured downstream.

Now let’s get real. Wastewater discharges from the City of Las Vegas, the Clark County Water Reclamation District, and the City of Henderson are all extremely high quality. But they are not *identical* for every substance. If the baseline water quality for the Water Reclamation District is measured upstream, then its baseline consists mostly of effluent from the City of Las Vegas plant. If the concentration of any parameter of concern is lower in the City of Las Vegas effluent, then the Water Reclamation District will be determined to have degraded lower Las Vegas Wash—and will be issued permit limits, at least in draft, that it cannot comply with. In order to avoid this result, a rational person in the position of the Water Reclamation District could try to get the City of Las Vegas to produce a *worse* effluent, so that the Water Reclamation District would not degrade it. A rational person in the position of the City of Henderson, which discharges downstream of the City of Las Vegas and the Water Reclamation District, could try to get both upstream discharges to make their discharges *worse* in order to avoid being labeled a degrader.



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None of this makes sense. Any differences among these three high-quality discharges are insignificant to any *real* environmental issue in Southern Nevada. There is no real degradation, and there is no need for an “antidegradation” program that does not solve any real problem and is likely to create real problems. Measuring the baseline upstream creates problems that are avoided by measuring downstream.

The proposed regulation should make clear that the baseline is measured in the waters that the proposed change will affect—waters *downstream* of the proposed discharge or modification.

#### **17. Studies And Additional Treatment Could Cost A Billion Dollars**

Because municipalities are likely to be found to cause degradation, they will have to conduct alternatives analyses and studies of social and economic consequences. These are expensive and time-consuming, and entirely unnecessary in the ordinary situation in which the municipal discharge is not causing any real degradation.

But the bad effects of the proposed regulation do not end there. The proposed regulation requires the municipality to impose additional treatment: the “highest and best degree of waste treatment available under existing technology that is reasonably consistent with the economic capability of the project or development”. (Section 9.4(c)(1).) Although the regulation does not explain what this means, increasing treatment for the Las Vegas Valley dischargers will certainly cost hundreds of millions of dollars, and could exceed one billion dollars.

And that increased treatment is likely to require huge amounts of energy, at a time when treatment plants will be pressed to use less energy to avoid global warming.

NDEP no doubt believes that this unnecessary waste will not occur. But it should revise the proposed regulation to make certain that it cannot occur.

#### **18. Other Unintended Consequences Should Be Identified**

As can be ascertained from the comments above, the proposed regulation will have bad unintended consequences. Comments like those in this letter are supposed to inform NDEP about what the real-world consequences of a proposed regulation are, so that NDEP can revise the proposed regulation accordingly. But we do not and cannot reasonably know what all the unintended consequences will be. The proposal is just too complex. NDEP may have worked through implementation of the regulation in internal discussions, and in one of the workshops, but more needs to be done. Because of the complexity of this proposal, additional workshops should be held in which other examples are worked through.



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### **19. Permit-Limit Statistics Should Match Baseline Statistics**

It is not clear whether NDEP has considered which statistics should be applied to an effluent limit that results from the process in the proposed regulation. Logically, however, if the goal is to prevent any change from baseline, the permit statistic should match the baseline statistic. Since the baseline statistic appears to be the 95th percentile based on five years of data, a permit limit should be phrased to prohibit the exceedance of that concentration more than 5% of the time over the last five years.

### **20. The Existing RMHQ Procedures Avoid The Problems Of The Proposed Regulation**

All this brings us back to the point made at the beginning of this letter: The new regulation is not needed. The existing RMHQ program has not been controversial. It has the great advantage of setting requirements segment by segment, so that the affected community can consider the actual numbers being proposed and evaluate the actual affects. That would be a great improvement over the proposed regulation, which because of its vagueness and complexity does not actually put local communities on notice of what will be required.

NDEP should seriously consider proceeding with the existing RMHQ program rather than creating a new program.

### **20. Conclusion**

Once again, we thank NDEP for this opportunity to comment, and for NDEP's excellent openness to comments. These comments are not intended to criticize NDEP or its programs, but rather as helpful identifications of issues that are likely to arise in the future and should be considered now.

Sincerely,

A handwritten signature in black ink that reads "Steven C. Parrish".

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STEVEN C. PARRISH, P.E.  
General Manager/Chief Engineer